# CITY COUNCIL AGENDA

## Monday, July 1, 2024

***No Public Comment allowed at Work Sessions per the Rules of Decorum***

**COUNCIL WORK SESSION, 6:00 P.M.**

**Council Chambers (not televised)**

1. Call to Order and Roll Call
2. Setting the Agenda: Addition or Deletion of Agenda Items
3. Madinah Lakes PUD Concept Plan, Katie Larsen
4. EAB Update and Forestry Budget Amendment, Michael Grochala
5. Shenandoah Park Water Quality Improvement Project, Michael Grochala
6. RCWD/VLAWMO Boundary Adjustments, Michael Grochala
7. Notices and Communications, City Council
8. Labor Negotiations Strategy – Closed Meeting pursuant to Minnesota Statutes §13D.03

**ADJOURNMENT**

# CITY COUNCIL
# WORK SESSION STAFF REPORT
# ITEM NO. 3

**STAFF ORIGINATOR:** Katie Larsen, City Planner

**WORK SESSION DATE:** July 1, 2024

**TOPIC:** Madinah Lakes PUD Concept Plan

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**BACKGROUND**

REVIEW DEADLINE:

| | |
|---|---|
| Complete Application Date: | April 25, 2024 |
| 60-Day Review Deadline: | June 24, 2024 |
| 60-Day Extension Deadline: | August 23, 2024 |
| Environmental Board Meeting: | May 29, 2024 |
| Park Board Meeting: | June 5, 2024 |
| Planning & Zoning Board Meeting: | June 12, 2024 |
| City Council Work Session: | July 1, 2024 |
| City Council Meeting: | N/A |

**BACKGROUND**

The applicant, Zikar Holdings, is proposing a master planned development located on the Robinson sod farm property south of CSAH 14 (Main Street) and east of CR 53 (Sunset Avenue). The development contains 4 parcels totaling approximately 156 gross acres and consists of mix of residential housing types, commercial development, and a religious building. The proposed development is called Madinah Lakes.
The Land Use Application is for the following:

- PUD Concept Plan/Concept Plan (“concept plan”)

Future land use applications may include:

- Environmental Assessment Worksheet (EAW) or Alternative Urban Areawide Review (AUAR)

- Rezone property from R, Rural to PUD, Planned Unit Development
- PUD Preliminary Plan/Preliminary Plat
- PUD Final Plan/Final Plat

This staff report is based on the following submittals:

- Narrative prepared by Zikar Holding dated April 17, 2024
- Concept Plan prepared by Sathre-Bergquist, Inc. dated April 22, 2024
- Yield Plan prepared by Sathre-Bergquist, Inc. dated April 22, 2024
- Resource Inventory prepared by Sathre-Bergquist, Inc. dated April 22, 2024

This Council staff report provides edits to the June 12, 2024 Planning & Zoning staff report. Changes are either narratively described or shown as ~~strikethrough~~ (deletions) or <u>underline</u> (additions).

## ANALYSIS

### History

*Robinson Lakes*

In October 2006, a concept plan for Robinson Lakes submitted by Lino Lakes Development, LLC was reviewed at a Council Work Session. The concept plan included 680 acres of Robinson property located both north and south of Main Street. The plan included a residential mix of single family homes, multi-family and active adult multi-family. Lakes, open space and greenway system with parks and trails were incorporated throughout the development.

This project did not move forward due to the onset of a housing recession.

*Promenade*

In February 2022, a concept plan for Robinson Property submitted by Integrate Properties, LLC was reviewed at a Council Work Session. The concept plan included 157 gross acres south of CSAH 14 (Main Street) and consisted of a mix of housing types totaling 707 housing units.

In October 2022, the Council approved a Record of Decision and Making a Negative Declaration on the Need for an Environmental Impact Statement for Robinson Sod Farm EAW. The EAW evaluated two (2) development scenarios, the PUD Concept Plan with 557 dwelling units and the Yield Plan with 707 dwelling units.

In November 2022, a revised concept plan was reviewed by the Planning & Zoning Board. The proposed development was renamed Promenade.

This project did not move past concept plan review.

*Moratorium*

On April 1, 2024 and May 28, 2024, the City Council discussed the consideration of a development moratorium in light of two potential projects proposed in the northwest quadrant of the City. These projects, Pulte/Del Webb and Madinah Lakes, include approximately 400 acres of the existing sod farm area north and south of Main Street.

The Planning & Zoning Board held a public hearing and considered the proposed interim ordinance (moratorium) at the June 17, 2024 special meeting. The Board unanimously recommended approval to proceed with the interim ordinance to complete a master plan and prepare an Alternative Urban Areawide Review (AUAR) covering approximately 980 acres in the northwest quadrant of the City.

The City Council has a public hearing and 1st reading scheduled for June 24, 2024. The 2nd reading is scheduled for July 8, 2024. No moratorium has been adopted by the City Council at this time. The City will continue to review this PUD Concept Plan application. If a moratorium is adopted, review may be discontinued.

The City's review and comments on the proposed concept plan's relation to the Comprehensive Plan and development regulations does not grant any rights to the applicant to develop the property as depicted by the concept plan. These are high level comments and depending on the outcome of the proposed moratorium, the concept plan may change.

**Current Proposal**

Please see the attached applicant's narrative for a detailed description of the project.

*Residential*

The applicant is proposing the following mix and number of housing types:

| Housing Type | Lot Width | # Units |
|---|---|---|
| Single Family Lots = | 75 ft | 33 |
| Single Family Lots = | 65 ft | 91 |

| | | |
|---|---|---|
| Single Family Lots = | 55 ft | 81 |
| Townhomes (row) = | | 101 |
| Apartment Units<br>(2 Buildings x 42 units)= | | 84 |
| Townhomes (back to back) = | | 44 |
| | **TOTAL =** | **434** |

Single family detached home neighborhoods are located in the northwest section and southeast quadrant of the site. The townhome neighborhood is located in the northeast quadrant. Trails, sidewalks, stormwater ponds and lakes are included throughout the development. A 1.6 acre park is shown with pavilion, pickleball courts and tot lot.

*Commercial*

The applicant is proposing approximately 4.8 acres of commercial development in the northeast quadrant of the site adjacent to CSAH 14 (Main Street). The concept plan shows a commercial building (20,460sf footprint) with restaurant/coffee shop/retail on the first floor and banquet hall on the second floor, a standalone grocery store (7,450 sf, and a daycare (5,500 sf) with play area.

*Religious Building*

The applicant is proposing a 48,400sf mosque in the center of the site.

**Existing Conditions**

The predominant existing land use is agricultural related to Robinson Sod Farm. The MLCCS classification is sod on hydric soils. Public ditch ACD 10-22-32 and private ditches drain the site south. Wetlands appear to be located along the ditch corridors. A majority of the site is in the floodplain and mitigation will be utilized for stormwater management (lakes and ponds), creation of a multi-functional greenway system (parks and trails) and providing fill for house pads, streets and other upland areas. A 100ft wide pipeline easement and a 90ft wide transmission utility bisects the southeast quadrant of the site.

**Surrounding Zoning and Land Use**

| Direction | Zoning | Current Land Use | 2040 Future Land Use |
|---|---|---|---|

| | | | |
|---|---|---|---|
| North | R, Rural | Agricultural | Mix of Residential Densities |
| South | PUD (Century Farm North) | Agricultural | Medium Density |
| East | R, Rural | Rural Residential | High Density & Low Density |
| West | FR, Farm Residence (City of Blaine) | Wetland/Open Space | LDR, Low Density Residential |

Surrounding land uses include medium density single family detached homes and townhomes to the south in Century Farms North. Larger rural residential lots exist to the east and to the southeast along Carl Street.

**Comprehensive Plan**

*Land Use*

The 156 acre site has multiple land use designations per the City's 2040 Comprehensive Plan creating somewhat of a checkerboard patterned look. These land uses include low density, medium density, high density and planned residential/commercial. The checkerboard areas are not intended to be strict land use and density boundaries but should be considered somewhat flexible in order to accommodate development.

Per the 2040 Comprehensive Plan, the site is located in Planning District 2 and includes Planned Residential/Commercial areas. The Comprehensive Plan states:

- "Planning District 2 includes Planned Residential/Commercial areas.
    - The Robinson Farm and Main Street site is planned to accommodate an 80/20 percent mix of residential and commercial. While allowed in all areas, commercial development will be required in at least one quadrant. To ensure implementation the City may choose to rezone land to a compatible neighborhood commercial zoning district upon completion of a corridor plan. A Master Plan for the Main Street Corridor between Sunset Avenue and 4th Avenue should be completed."

It is important to note the 80/20 percent mix is related only to the approximate 40 acres of land guided for Planned Residential/Commercial. The Robinson Farm and Main Street site referenced in the Comprehensive Plan includes property on both the north and south side of

Main Street. The proposed development is only on the south side of Main Street. It includes 20 acres of land guided for Planned Residential/Commercial which would support 4 acres of commercial development (20 acres x 20% = 4 acres.) The proposed development includes 4.8 acres of commercial which is consistent with the 2040 Comprehensive Plan.

*Density*

The following chart summarizes the site's general density range per gross and net acres:

| | | | Allowed Units per Acre | | Allowed # Units | |
|---|---|---|---|---|---|---|
| **Comp Plan** | **Gross Acres** | **Net Acres** | **Low** | **High** | **Low** | **High** |
| Low Density Res | 76.16 | 54.25 | 1.6 | 3.0 | 87 | 163 |
| Medium Density Res | 23.84 | 20.73 | 4.0 | 6.0 | 83 | 124 |
| High Density Res | 39.44 | 28.67 | 6.0 | 8.0 | 172 | 229 |
| Planned Res / Comm | 16.30 | 5.21 | 8.0 | 10.0 | 42 | 52 |
| | | | | | | |
| **TOTAL** | **155.73** | **108.86** | | | **383** | **569** |
| **GROSS DENSITY** | | | | | **2.5** | **3.7** |
| **NET DENSITY** | | | | | **3.5** | **5.2** |

The preliminary net density ranges would be 3.5 to 5.2 units per net acre which equates to a range of 383 to 569 housing units. The applicant is proposing 434 housing units which is consistent with the density range. It should be noted that net acreage will be re-calculated based on post-development during the preliminary plat process.

*Gateway*

The intersection of Main Street and Sunset Avenue is identified as a Gateway location in the City's 2040 Comprehensive Plan. Guidance for Planning District 2, states that a gateway should be planned and created at this location. The City undertook a gateway planning process in 2023. The Sunset and Main Street intersection was included in this process and a preferred concept was completed. The intersection is proposed to have a landscaped roundabout and Lino Lakes monument sign. A seating area is also proposed in the southeast corner of the

intersection adjacent to the planned greenway connection. With the exception of a utility conduit running to the RAB, no improvements are included in the current reconstruction project. The existing rural section of roadway limited placement of new facilities at this time. A more comprehensive design will need to be completed as development is considered north and south of the intersection.

*Growth Management Strategy*

Page 3-17 of the 2040 Comprehensive Plan details the City's Growth Management Strategy. The strategy works in conjunction with the City's utility staging plan.

One strategy criterion is that the City will plan to accommodate an annual average of 230 units per year over each 5-year phasing period not to exceed 345 units in any one year. From 2010 to 2023, the City's average annual number of units is 118. This is less the allowed 230 unit annual allocation.

**Current Zoning and Land Use**

| | |
|---|---|
| **Current Zoning** | R, Rural |
| **Current Land Use** | Agricultural |
| **Future Land Use per 2040 Comp Plan** | Low Density, Medium Density, High Density and Planned Residential/Commercial |
| **Utility Staging Area** | Stage 1A (2018-2025)<br>Stage 1B (2025-2030) |

**Rezoning**

The property is currently zoned R, Rural. The R, Rural zoning is a holding district until municipal water and sanitary sewer are available to the site and the property owner is interested in having the property developed. The property would need to be rezoned to PUD, Planned Unit Development in order to allow flexibility for lot widths and lot sizes and create a mixed used development.

**PUD Land Use and Conventional Zoning District Guidelines**

City Code Section 1007.024 details the PUD, Planned Unit Development requirements. The purpose of the PUD is to provide a zoning district that grants flexibility from certain conventional zoning regulations in order to achieve public benefits that may not otherwise be obtained under standard zoning regulations. These public benefits are detailed in City Code Section 1007.024(2) and discussed later in this report.

City Code Section 1007.024(4) details the PUD Land Use and correlating conventional zoning district standards. These conventional zoning district standards serve as guidelines but may be departed from to accomplish public value purposes.

A summary of PUD public benefit vs PUD flexibility is provided at the end of this staff report.

Staff Comments:

1. The applicant may need to provide additional public benefit in order to be considered for PUD zoning. Examples could be more open space, enhanced greenway corridor, wetland restoration, additional wetland buffers, higher architectural & building standards etc.

*Residential*

Lot Size and Width

The attached PUD Land Use and Conventional Zoning District Guidelines Chart details the PUD Land Use and correlating conventional residential zoning district. The chart also compares the proposed development to these guidelines.

The proposed lot widths for the detached single family homes are 75ft, 65ft and 55ft. Lot depths appear to vary. PUD flexibility would be required for the 55ft and 75ft wide single family lots and potentially varying lot depths.

Staff recommends establishing minimum lot width and lot depth requirements for the single family homes. As discussed during the previous Promenade concept plan and implemented in Lennar's Watermark development, the following minimum lot sizes could be established:

- Lot Size = Lot Width x 130 ft Lot Depth
    - Example: 55 ft lot width x 130 ft = 7,150 sf
      65 ft lot width x 130 ft = 8,450 sf
      75 ft lot width x 130 ft = 9,750 sf

Watermark also allowed for 120 ft lot depths on lots abutting open space. Per the attached Madinah Lakes concept plan, these lots could be those abutting larger storm water ponds if on wider greenways

Per the subdivision ordinance, minimum lot area for urban lots shall consist of buildable land exclusive of utility transmission easements or water course easements that encumber lot development. The minimum lot areas shall also consist of buildable land exclusive of oversized easements or buffers.

The proposed townhomes and multi-family lot housing types appear to meet minimum lot size and width requirements as detailed on the chart.

Setbacks

The following charts compare the conventional City ordinance requirements to the proposed setbacks.

| Residential Single Family | City Ordinance Requirement | Proposed Setbacks | PUD Flexibility Required? |
|---|---|---|---|
| Street ROW | R-1 = 30 ft<br>R-2 = 25 ft | 30 ft | No |
| Rear Lot Line | R-1 = 30 ft<br>R-2 = 25 ft | 30 ft | No |
| Side Lot Line | R-1 & R-2 =<br>5 ft garage/<br>10 ft house | 7.5 ft and 7.5 ft | Yes |

| Townhomes | City Ordinance Requirement | Proposed Setbacks | PUD Flexibility Required? |
|---|---|---|---|
| Private Street | R3 = 25 ft<br>R4 = 25 ft<br>R5 = 25 ft | 30 ft | No |
| Rear Lot Line | R3 = 30 ft<br>R4 = 30 ft<br>R5 = 30 ft | 30 ft | No<br>(deck/patio cannot extend into setback) |
| Side Lot Line | R3 =10 ft<br>R4 = 20 ft<br>R5 = 20 ft | 30 ft | No |

| Multi-Family | City Ordinance Requirement | Proposed Setbacks | PUD Flexibility Required? |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Street ROW | R4 = 30 ft<br>R5 = 30 ft | 74 ft | No |
| Rear Lot Line | R4 = 30 ft<br>R5 = 30 ft | 46 ft | No |
| Side Lot Line | R4 = 20 ft<br>R5 = 20 ft | 40 ft | No |

PUD flexibility would be required to allow for reduced side lot line setbacks on the single family lots.

Staff Comments:

1. City Code Section 1007.024(6) further details Urban Residential Planned Unit Development requirements in regards to municipal water and sanitary sewer services, density, open space, neighborhood performance standards and yards. The applicant shall demonstrate these requirements are met.
2. The townhome decks/patios cannot extend into street setback.
3. A minimum 50-foot wide buffer shall be provided in compliance with § 1007.049 on the single family and townhome lots abutting CSAH 14 (Main Street) and CR 53 (Sunset Ave).
4. A minimum 20-foot wide buffer shall be provided in compliance with § 1007.049 on the townhome lots abutting the street extending to the east lot line and on the single family lots abutting Carl Street.

*Commercial*

City Code Section 1007.024(4) details the PUD Land Use and correlating conventional zoning district Development Standards. Land guided Planned Residential/Commercial uses the conventional R-5 zoning district as guidelines.

Per City Code Section 1007.115(11) R-5,

| | **R-5 Requirements Commercial** | **Proposed Commercial** | **PUD Flexibility Required?** |
|---|---|---|---|
| **Min. Lot Size** | 20,000 sf | 4.25 acres (base lot) | No |
| **Min. Lot Width (base lot)** | 100 ft | 400+ ft | No |
| **Min. Lot Depth** | No minimum | NA | NA |

| | | | |
|---|---|---|---|
| **Building Setback** | | | |
| **From Streets**<br>CSAH 14 (Arterial Collector) | 40 ft | 50 ft | No |
| Local and<br>Minor Collector Streets | 30 ft | 30 ft | No |
| **Rear Yard** Principal Structure | 30 ft | 50 ft | No |
| **Side Yard** Principal Structure | 20 ft | 60 ft | No |
| **Impervious Surface** | 75% | TBD | TBD |

Lot size and setbacks appear to meet requirements. PUD flexibility is not required for the commercial development.

Staff Comments:

1. City Code Section 1007.024(7) details Commercial or Industrial Planned Unit Development in regards to municipal water and sanitary sewer services, open space, and design standards that shall be met.

*Religious Building*

The Religious Land Use and Institutionalized Persons Act ("RLUIPA") is a federal law that was passed in 2000. It was enacted to address perceived problems in local governments using land use authority in a manner that discriminated against places of worship, and that imposed burdens on religious exercise. RLUIPA applies to all religions.

Per City Code Section 1007.001, religious buildings are defined as:

***PUBLIC, EDUCATIONAL, AND RELIGIOUS BUILDINGS.*** Public or semi-public recreational buildings and neighborhood or community centers; limited to nursery, elementary, junior high and senior high schools; and religious institutions such as churches, chapels, temples, mosque, and synagogues

Religious buildings are permitted by conditional use in the City's rural and residential zoning districts.

The mosque is generally located on land guided Planned Residential/Commercial. City Code Section 1007.024(4) details the PUD Land Use and correlating conventional zoning district Development Standards. Land guided Planned Residential/Commercial uses the conventional R-5 zoning district as guidelines.

Per City Code Section 1007.115(11) R-5,

| | R-5 Requirements | Proposed Mosque | PUD Flexibility Required? |
|---|---|---|---|
| **Min. Lot Size** | 20,000 sf | 7.45 acres | No |
| **Min. Lot Width (base lot)** | 100 ft | 600+ ft | No |
| **Min. Lot Depth** | No minimum | NA | NA |
| **Building Setback** | | | |
| **From Streets** CSAH 14 (Arterial Collector) | 40 ft | NA | NA |
| Local and Minor Collector Streets | 30 ft | 200+ ft | No |
| **Rear Yard** Principal Structure | 30 ft | 50 ft | No |
| **Side Yard** Principal Structure | 50 ft (per CUP) | 200 ft | No |
| **Impervious Surface** | 75% | TBD | TBD |

The conditional use permit for the religious building (mosque) would be processed as part of the PUD. City Code Section 1007.115(11)(f) further details specific conditional use permit requirements such as 50 ft side yard setback, adequate screening, and adequate off-street parking.

Lot size and setbacks appear to meet requirements. PUD flexibility is not required for the religious building.

Staff Comments:

1. The mosque should be located closer to CSAH 14 (Main Street) to minimize traffic impacts and conflicts through the residential neighborhoods on Century Trail and Robinson Drive.

**Yield Plan**

As required per City Code Section 1001.026(4), the applicant submitted the attached yield plan. The yield plan shows the maximum number of dwelling units that would be permitted given the

minimum lot size and lot widths for conventional subdivisions and other requirements of the Lino Lakes Zoning and Subdivision Chapters.

The submitted yield plan indicates 127 single family lots (80ft wide), 362 townhomes, and 132 rowhomes for a total of 621 housing units.

The proposed concept plan is 434 housing units.

Staff Comments:

1. Under the Yield Plan Data chart, 84 apartment units are listed but the yield plan does not include apartments. The chart shall be revised.

**Building Design Standards and Other Performance Standards**

Building and architectural design standard review is not required at concept plan level. City Code Section 1007.043 details minimum residential, commercial and institutional building design standard requirements. The conventional residential zoning districts also provide addition requirements.

Performance standards (architecture, parking spaces, lighting, landscaping, etc.) will be fully evaluated in with the complete submittal of PUD Preliminary Plan/Preliminary Plat.

Staff Comments:

1. Staff suggests the applicant could submit preliminary architectural plans for concept plan review.

**Subdivision Ordinance**

*Blocks and Lots*

The proposed development provides a mix of residential and commercial uses and a religious building. The single family residential lots vary in width, depth, and lot size as may be allowed per the PUD flexibility. Outlots would contain wetlands, buffers, stormwater ponds etc.

Per City Code Section 1001.097 (1) *Length*. The maximum length of blocks shall be 1,500 feet and the minimum length 400 feet. Blocks over 900 feet long may require pedestrianways at least ten feet wide at their approximate center. The use of additional pedestrianways to schools, parks and other destinations may be required.

Pedestrian connection and trails to Sunset Avenue are provided at the street and northwest corner of the site.

The existing house at 7902 Sunset Avenue should be incorporated into the development as large 2 acre lot. A ghost plat shall be submitted as part of the preliminary plat process. Connection of the existing house to municipal utilities shall be evaluated.

Staff Comments:

1. A minimum 30-40ft wide pedestrianway/trail connection shall be made to CSAH 14 (Main Street) to break up the block.

*Streets and Alleys*

CSAH 14 (Main Street) is Principal Arterial road. CR 53 (Sunset Avenue) is a Major Collector road. Anoka County is constructing a roundabout at the intersection of CSAH 14 and CR 53. Internal streets consist of local streets and private streets intended to serve the site. Sidewalks are provided along streets.

Per the City's 2040 Transportation Plan and Planning District 2:

- Plan for the extension of Sunset Road (CR 53) north to Pine Street.

Development of the Robinson property to the north of Main Street will need to consider this extension.

- Continue to implement the Main Street (CSAH 14) Access Management Study.
- Work with Anoka County on the creation of a new full-access intersection on Main Street at a new road at the 200 block.

A new full-access intersection will be constructed at this location.

- An east/west minor collector road extending to 4th Avenue is required.

Per the 2040 Transportation Plan and the Access Management Plan, Robinson Drive is shown to extend east to 4th Avenue as the east/west minor collector. This serves as an important backage road to CSAH 14 (Main St), provides connectivity and efficient emergency response between neighborhoods, and distributes traffic throughout the area. Under the proposed plan, Robinson Drive is not a continuous roadway. It terminates at an intersection with another street that extends to the east lot line. However, due a large wetland complex, connection to

4th Avenue at this location may not be viable and it may have to shift north or south. The City completed a wetland delineation on property to the east in 2023. These factors should be reviewed as part of the street alignment evaluation.

A secondary east/west connection to 4th Avenue shall be evaluated at Carl Street. The connection of local streets and neighborhoods is a standard transportation design practice and has been implemented throughout the City. For example, with the Saddle Club development and the connection of Fox Road and the St. Clair Estates connection to Hokah Drive and Sioux Lane.

The Carl Street connection is also supported by Lino Lakes Public Safety-Police Division and Fire Division in order to provide faster and more direct emergency response to the entire area.

Street connectivity is further supported by the following City Code Sections:

**§ 1001.096 LAND REQUIREMENTS.**

(2) Proposed subdivisions shall be coordinated with surrounding properties and/or neighborhoods so that the city as a whole may develop efficiently and harmoniously.

**§ 1001.100 STREETS AND ALLEYS.**

(3) *Streets, continuous*. Except for cul-de-sacs, streets shall connect with streets already dedicated in adjoining or adjacent subdivisions or provide for future connections to adjoining unsubdivided tracts, or shall be a reasonable projection of streets in the nearest subdivided tracts. The arrangement of thoroughfares and collector streets shall be considered in their relation to the reasonable circulation of traffic, to topographic conditions, to runoff of storm water, to public convenience and safety, and in their appropriate relation to the proposed uses of the area to be served.

Private streets are proposed in the townhome neighborhoods. City Code Section 1007.054 Private Streets details private street requirements that shall be met.

Based on comments received during the Main Street/Sunset Roundabout design process Anoka County is planning a reconstruction of Sunset from Main Street to 109th. The design of these improvements may have an impact on traffic patterns within the adjacent developments. The internal and external collector system will need to be evaluated in light of this project.

Staff Comments:

1. Local road right-of-way shall be a minimum of 60 ft wide.
2. Cul de sacs shall not exceed 500 ft in length and bulbs shall meet City standards.
3. Private streets shall be a minimum of 26 ft wide.

4. Private streets shall not exceed 300 ft in length.
5. Driveways onto private streets shall be a minimum of 25 ft in length.
6. The alignment of the internal local street and street accessing CR 53 shall be evaluated.
7. The location of the street extension to 4th Avenue shall be evaluated due to wetlands and ditch.
8. Access to CSAH 14 (Main Street) at Century Trail is required.
9. The access spacing from CSAH 14 (Main Street) to the local street and religious building driveway shall be evaluated.
10. Access and connection to Carl Street shall be evaluated.
11. A traffic study shall be required.
12. A noise study shall be required.
13. Lots shall not directly access Robinson Drive which is a minor collector street.

*Easements*

Staff Comments:

1. Standard drainage and utility easements at least 10 feet wide shall be provided along all lot lines.
2. Drainage and utility easements shall also be dedicated over stormwater management facilities.
3. Conservation easements and wetland buffers shall be required over wetlands, ditches, and greenway corridors.

*Stormwater Management and Erosion and Sediment Control*

The concept plan shows 10 stormwater ponds throughout the development. A multi-purpose greenway corridor incorporating trails, stormwater management, floodplain, ditches, open space has been incorporated into the development.

Staff Comments

1. Deeper rear yard buffers along the stormwater ponds and lake shall be incorporated.
2. Public ditch ACD 10-22-32 shall have an average 50 ft wide (minimum 25ft wide) buffer from top of bank.
    a. This buffer shall be platted in an outlot owned and maintained by an HOA.

*Utilities*

Public water, sanitary, and storm sewer utilities will be installed within the development. Utilities exist along Robinson Drive and Century Trail.

The site is located in Sanitary Sewer District 2 (Sub-district 2I). Flow is collected southward to MCES Meter M211 and Gravity Interceptor 8361 along North Road which passes southwest through Circle Pines.

The site is located in Utility Staging Area 1A (2018-2025) and 1B (2025-2030). By resolution, the Council may move the one (1) parcel from Stage 1B (2025-2030) to Stage 1A (2018-2025).

The site is proposed to be served by the municipal water system. The City's 2040 Comprehensive Plan anticipates expansion of the system to serve this property and infrastructure is planned to accommodate the increased demand. However, ongoing litigation and water appropriation permit restrictions, related to White Bear Lake, have placed limitations on the system expansion and the City's ability to implement its water supply plan. Dry weather conditions have placed greater than expected demands on the City's production system over the past three years. Water quality concerns related to high level of manganese have resulted in plans to construct a water treatment plant and the need for replacement of well no. 2 Each of these factors must be considered when evaluating expansion of municipal utilities.

The site provides opportunity to implement a stormwater reuse system for irrigation purposes. The system should be evaluated and implemented to the extent feasible to offset the use of municipal water for irrigation.

The attached WSB City Engineer memo details additional information.

*Parks, Greenways and Trail Plan*

Per the June 5, 2024 Park Board staff report:

Figure 10-2, Neighborhood Service Areas of the 2040 Comprehensive Plan depicts Century Farm North Park to serve as the neighborhood park for this area. The City acquired approximately 6.3 acres of park back in 2011 when the Century Farm North development was platted.

The 2040 Comprehensive Plan identifies a proposed Greenway System extended across the subject site. The PUD process provides the opportunity for the creation of a multi-functional greenway corridor that incorporates many attributes into one comprehensive design, including:

- Interconnected trail system and parks
- Protected open space and natural areas
- Wetlands, including Wetland Management Corridor and buffers

- Major and minor drainage routes and other elements of the local surface water management system (including stormwater ponds)
- Floodplain management

A greenway/park system was initially established to the south of the development site with the Century Farm North subdivision. That system was stubbed to the north from Robinson Drive and to the east from Century Trail.

The developer has attempted to expand this system throughout the project. Opportunities for enhancement of the greenway system remain. The County Ditch corridor is the priority component of this greenway system. A connection should be made from the Century Trail connection across the County ditch.

An Anoka County regional trail is planned to run along Main Street. This needs to be accommodated as part of the project development, as well as a trail on Sunset Avenue. Trail connections to the existing internal trail system should be provided. The developer has incorporated a link from the northwest corner of the site. Connections will also need to be added mid-block of the north road running parallel to Main Street, from Century Trail to the trail section shown running along the gas line easement, and to the eastern perimeter of the site.

It should also be noted that a public value gained with a PUD is more fees collected through negotiated parkland dedication. Typically, in a PUD, only parkland dedication and trail construction costs are credited back to the developer. The actual land costs of trail corridor land is not credited back to the developer. This results in more parkland dedication fees collected by the City to be utilized in developing the park system.

<u>Staff Comments:</u>

1. The June 5, 2024 Park Board staff report details recommendations.
2. The trail shall loop around the larger stormwater ponds on the west side of the development.
3. Trail corridors should be a minimum 30-40 feet in width above the high water level of ponds.

*Tree Preservation and Landscaping*

A Tree Preservation Plan and Landscape Plan in compliance with Section 1007.043 (17), Required Screening, Landscaping and Buffer Yards shall be submitted. Additional landscaping may be required as a condition of the PUD.

Staff Comments:

1. A berm and landscaping will be required along the perimeters shared with Main Street, Sunset Avenue and Carl Street.
2. A noise study will be required with the PUD Preliminary Plan/Preliminary Plat.
3. Berm and/or any noise mitigation requirements shall be measured from rear yard ground elevation near the house to top of berm or fence.

**Environmental Review Record**

An Environmental Assessment Worksheet (EAW) is required. The threshold computation of 205 unattached units and 229 attached units is greater than one (1).

As discussed at the May 28, 2024 Work Session regarding a potential moratorium on residential development, an Alternative Urban Areawide Review (AUAR) and master plan for the greater northwest quadrant of the City is being considered. This AUAR would replace the need for an individual EAW.

**Wetlands**

Per the May 29, 2024 Environmental Board staff report:

There are wetlands indicated on the proposed project site. A wetland delineation will be required. Any wetland impacts related to the project will be mitigated for per Rice Creek Watershed District rules.

The large wetland complex east of this project does extend onto the proposed project parcels and is part of the Wetland Management Corridor. A vegetated buffer with an average width of 50 ft. and a minimum width of 25 ft. will be required per Rice Creek Watershed District rules.

A 50-foot buffer should be included adjacent to the County ditch system.

Filling and mitigating for the private ditches running along the north and south perimeters even with Robinson Drive should be considered. These ditches are likely low quality wetlands, and this space could be utilized to better effect by adding the space to the greenway system components.

The proposed east/west collector street stubbed to the eastern property line appears to run into a large wetland complex that lies off-site on the rural lots. This road should be rerouted to run south of the wetland to minimize impacts to this Wetland Management Corridor.

**Floodplain**

The 2015 FEMA Floodplain Map indicates Zone A flood plain on a large portion of the site. Floodplain management shall be incorporated into the overall design of the site. The site will need to accommodate the same volume of flood storage currently on the site. Floodplain mitigation will be achieved through the construction of stormwater ponds and through raising site elevations. Floodplain impacts are subject to both City and Rice Creek Watershed District requirements.
Staff Comments:

1. A Base Flood Elevation is required to be determined, using detailed methods acceptable by the Federal Emergency Management Agency (FEMA).
2. A FEMA CLOMR and LOMR are required for development.
3. A FEMA CLOMR shall be submitted with a PUD Preliminary Plan application.

**Shoreland District**

The subject property is not located within the Shoreland Management Overlay District.

**Additional City and Government Agency Review Comments**

*Anoka County*

Anoka County Highway Department comments are provided in the attached letter.

Anoka County Parks Department recommends the regional trail along the south side of Main Street be installed with this development.

*School Districts*

The Forest Lake Area School district comments are provided in the attached letter.

*Lino Lakes Public Safety*

Police Division comments are provided in the attached letter.

Fire Division comments are provided in the attached letter.

*City Engineer*

City Engineer comments are provided in the attached memo.

*Environmental Board*

The Environmental Board reviewed the concept plan on May 29, 2024. Board recommendations are provided in the attached memo.

*Park Board*

The Park Board reviewed the concept plan on June 5, 2024. Board recommendations are park dedication cash in lieu of land and additional trail connections throughout the development.

*Planning & Zoning Board*

The Planning & Zoning Board reviewed the concept plan on June 12, 2024. Board comments include:

- Applicant should have neighborhood meeting
- Shift the mosque closer to Main Street
- Provide public access to lake
- Mixed support for density
- Mixed support for lot widths and lot sizes
- Mixed support for proposed natural buffers in side yards

**PUD Preliminary Plan/Preliminary Plat**

The City's review and comments on the concept plan's relation to the Comprehensive Plan and development regulations does not grant any rights to the applicant to develop the property as depicted by the concept plan.

A land use application for PUD Preliminary Plan/Preliminary Plat shall be required. If required by the City Council, the developer shall have a neighborhood meeting prior to submittal of a PUD Preliminary Plan/Preliminary Plat.

**PUD Public Benefit vs PUD Flexibility Summary**

Per City Code Section 1007.024:

(2) The PUD, by allowing deviation from the strict provisions of this ordinance related to setbacks, heights, lot area, width and depths, yards, etc., may be considered by the City when it would result in one or more of the following public benefits:

(a) Implementation of a master plan consistent with the Planning District objectives of the Comprehensive Plan.

*The need for a master plan for the Main Street Corridor between Sunset Avenue and 4$^{th}$ Avenue is identified in the 2040 Comprehensive Plan. At the May 28, 2024 Work Session, Council directed staff to initiate the process to consider a residential moratorium which could include an Alternative Urban Areawide Review (AUAR) and master plan for the greater northwest quadrant of the City.*

(b) Innovations in development that address growing demands for all styles of economic expansion, greater variety in lot size, configuration, home type, design, enhanced architectural standards, and siting of structures through the conservation and more efficient use of land in such developments.

*The commercial component supports economic expansion.*

*The development proposes a mix of residential housing types on a greater variety of lot sizes. The housing consists of single family houses, townhomes, rowhomes, and apartments. This variety in housing types supports life-cycle housing.*

*The flexible site design configuration allows for the construction of an extensive greenway corridor and storm water management system and provides for a more efficient use of land.*

(c) Preservation and enhancement of desirable site characteristics such as wildlife habitat, unique natural resources, existing vegetation, natural topography, geologic features and reduction of negative impacts on the environment.

*The site has limited natural desirable site characteristics. Topography is flat agricultural land with poorly drained hydric soils, private ditches, and minimal significant trees. The existing public ditch and associated wetlands will be enhanced into an extensive multi-purpose greenway corridor and storm water management system. The corridor will also be protected by a vegetative buffer.*

*The applicant is proposing green infrastructure and phytoremediation to further reduce negative impacts on the environment.*

(d) Creative use of land and related physical development which allows a phased and orderly transition of varying land uses in close proximity to each other.

*The applicant is proposing 55-65ft wide single family detached lots adjacent to existing 62ft wide single family lots in Century Farm North. Adjacent to the larger rural residential lots along Carl Street, 55ft wide lots are proposed; however, a landscaped berm and buffer provide separation from the varying land uses. Townhomes and apartments are proposed in the northeast section of the development near arterial and collector roads.*

(e) Efficient use of land resulting in smaller networks of utilities and streets thereby lowering development costs and public investments.

*Allowing lot widths to be based on the specific housing products versus a one size fits all lot width provides an efficient use of land and lowers development and public costs. Private streets also result in efficient, smaller networks of utilities and streets.*

(f) Mix of land use types.

*The development proposes a mix of residential housing types, commercial development, and a religious building.*

(g) Provision of a housing type or target housing price that is desirable to the City.

*The housing consists of single family houses on varying lot sizes, townhomes, rowhomes, and apartments. This variety in housing types supports life-cycle housing that is desirable to the City.*

(h) Other public benefits and values as recognized in the City's Comprehensive Plan.

Per the 2040 Comprehensive Plan, page 3-3 of the Land Use Plan: Goal 1, Policy e. details the following additional public values that are achieved in the Madinah Lakes concept plan:

- Preserving open space, providing park dedication and trails, and/or providing stormwater management areas, in excess of minimum standards to implement the Greenway System, as amended, and Rice Creek Watershed District's Lino Lakes Resource Management Plan, as amended
- Using "Green" building and low impact development techniques
- Restoring/enhancing ecological systems
- Managing stormwater using natural filtration and other ecologically based approaches
- Providing life-cycle and affordable housing
- Diversifying the tax base to lessen the tax burden on residential properties

Summary

*Public Benefit Gained:*

1. Economic expansion
2. Greater variety of lot sizes and home types
3. Multi-functional greenway corridor and storm water management system
4. Vegetative buffer along public ditch
5. Landscaped berm and buffer separation from existing land uses
6. Efficient use of land and private streets resulting in smaller network of utilities and streets
7. Mix of residential and commercial land uses
8. Life-cycle housing supported by variety of housing types
9. Creation of more open space that is accessible to the public
10. More parkland dedication fees available for park development
11. Less dense residential development
12. Wider landscape buffers and trail corridors

*Flexibility Provided:*

1. Lot Sizes < 10,800 sf (R-1) and 7,500 sf (R-2)
2. Lot Widths < 80ft (R-1) and 60ft (R-2)
3. Lot Depths < 135ft
4. Building Side Lot Line Setbacks (7.5 ft side)

**REQUESTED COUNCIL DIRECTION**

Staff is requesting feedback from the City Council.

1. Thoughts on PUD flexibility for lot widths, lot sizes, setbacks?
2. Should the applicant hold a neighborhood meeting prior to PUD Preliminary Plan/Preliminary Plat submittal?

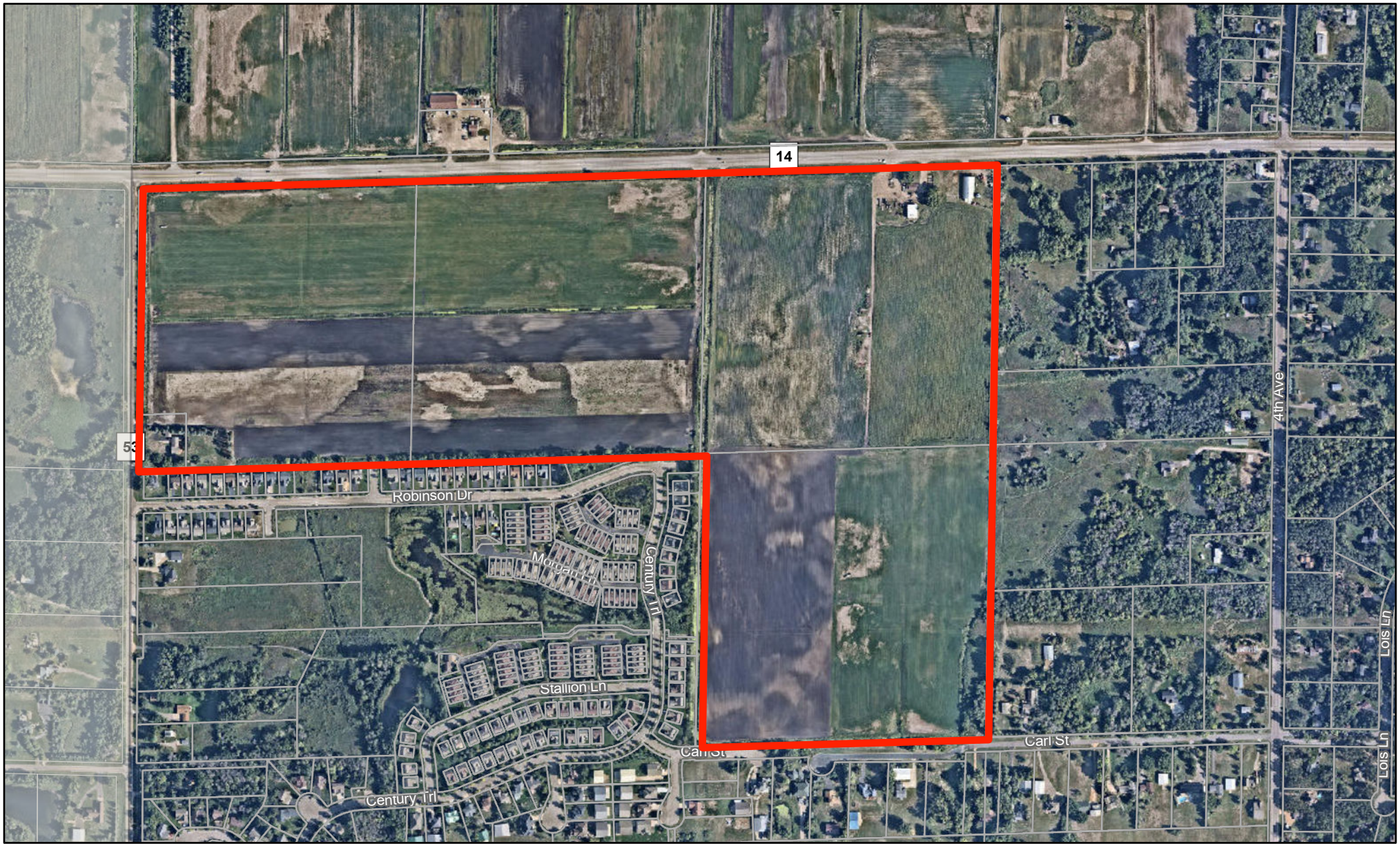
**ATTACHMENTS**

1. Site Location and Aerial Map
2. Applicant's Narrative
3. 2040 Future Land Use Plan Map
4. Concept Plan, Surrounding Area Aerial Map, & Phasing Plan
5. Land Use Plan and Areas

6. Yield Plan
7. PUD Land Use and Conventional Zoning District Guidelines Chart
8. City Engineer Memo dated June 6, 2024
9. Environmental Coordinator Memo dated May 30, 2024
10. Fire Division Memo dated June 5, 2024
11. Police Division Memo dated June 5, 2024
12. Anoka County Transportation Division-Highway letter dated June 6, 2024
13. Forest Lake Area School District letter received April 26, 2024

Attachment 1: Site Location & Aerial Map

# Madinah Lakes Site Location & Aerial Map




1 in = 600 Ft

Parcels

City Mask

CITY OF LINO LAKES

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June 5, 2024

Map Powered By Datafi

wsb

# "Madinah Lakes" - Vision for Development

Nestled within the picturesque landscape of Lino Lakes lies a visionary community known as Madinah Lakes. Spanning approximately 156 acres, this development promises to redefine modern living by seamlessly blending residential, commercial, and communal spaces.

The cornerstone of Madinah Lakes is its commitment to fostering a sense of belonging and community spirit. At its heart stands a magnificent Mosque, serving as a symbol of unity and faith for all Lino Lakes' residents and visitors alike. Surrounding this focal point, a carefully curated mix of detached single-family homes, townhomes, rowhomes, and apartment buildings offer diverse housing options to suit every lifestyle, including senior living accommodations.

In addition to thoughtfully designed residences, Madinah Lakes boasts an array of amenities aimed at promoting an active and vibrant lifestyle. A sprawling public park invites all Lino Lake's residents to reconnect with nature, while interior trails and sidewalks encourage leisurely strolls and invigorating bike rides. By integrating these recreational spaces seamlessly into the fabric of the community, Madinah Lakes cultivates a sense of harmony between modern living and natural beauty.

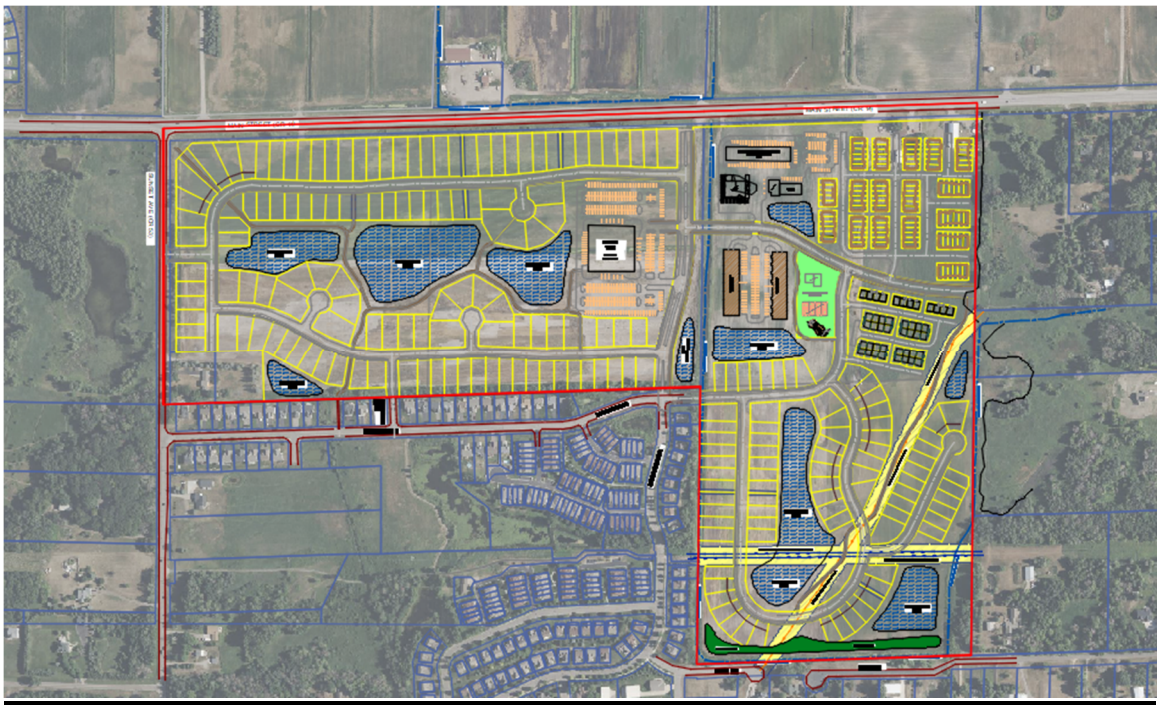
Central to the community's ethos is the vibrant commercial area, offering an array of amenities that meet the needs of both residents and the greater Lino Lakes community. Here, charming restaurants, inviting coffee shops, and essential services such as daycare and a grocery store create a bustling hub of activity. Additionally, a spacious banquet space provides a much-needed venue for gatherings and events, serving as a cornerstone of community life.

Furthermore, Madinah Lakes is committed to environmental stewardship, evidenced by the conscientious restoration of the land. Currently the Robinson Sod Farm, the site's transformation includes the filling of private ditches and the preservation of vital wetlands, ensuring the preservation of local ecosystems. Notably, the preservation of public ditch 10-22-32 underscores the development's dedication to responsible land management and sustainable growth.

Strategically situated within the thriving municipality of Lino Lakes, Madinah Lakes offers residents the best of both worlds: a tranquil retreat from the bustle of city life, coupled with unparalleled access to urban conveniences. With seamless connectivity to the region's transportation network, residents enjoy effortless commutes and convenient access to a myriad of amenities, both local and regional.

In essence, Madinah Lakes represents more than just a residential development; it embodies a vision of inclusive, sustainable living where community, culture, and nature converge. Welcome to Madinah Lakes, where every day unfolds as a celebration of harmony, diversity, and possibility.

*"Madinah Lakes"*



***Development Team***:

Developer –
**Zikar Holdings**
Faraaz Yussuf
12301 Central Ave NE, #205
Blaine, Minnesota 55449
Telephone: 651-497-7937
Email: Faraaz@zikarholdings.com

Civil Engineering, Surveying & Land Planning –
**Sathre-Bergquist, Inc.**
Eric Johnson, P.E.
Colyn Tvete, P.L.S.
14000 25th Ave N
Plymouth, Minnesota 55447
Telephone: 952-476-6000
Email: ejohnson@sathre.com

***Property Ownership***:
The property is currently owned by Robinson Landscaping Inc, a company unaffiliated with the Developer, Zikar Holdings.

***Zoning/ Comprehensive Plan / Guiding***

This land is currently zoned Rural.

The developer is requesting to submit a Planned-Unit Development (PUD zoning) for the site that aligns with City's Comprehensive Plan/guiding.

The land is currently guided 4 different uses (Low Density Residential, Medium Density Residential, High Density Residential, and Planned Residential/Commercial) in the 2040 Comprehensive Plan. The developer plans to develop the property to include aspects from each of the 4 guided land uses.

***Lot Sizes and Setbacks***
Single Family Residential Lots
There are 3 sizes of single family lots proposed:
75'+ - 33 Lots
65' – 91 Lots
55' – 81 Lots
Townhome Units – 101
Back to Back/Rowhome Units – 44
Apartment units – 84

Total = 434

Side Yard Setback: 7.5'/7.5' (to garage and living). The Developer is proposing 7.5-foot and 7.5-foot side yard setbacks rather than 5' and 10' side yard setbacks in 3 Zoning.
Front Yard Setback: 30 feet
Corner Yard Setback: 30 feet
Rear Yard Setback: 30 feet

***Site Analysis:***
The site is currently being used as a sod farm as part of Robinson Landscaping, Inc. The site is bordered on the north by Main Street (CSAH 14) and on the west is Sunset Ave (CR53). To the south is Century Farms (single family neighborhood). The property is also bordered to the south & east by larger lot residential properties.

The site currently has existing buildings that service the Robinson Landscaping, Inc business, that access Main Street (CSAH14). As part of the development the office & buildings will be removed.

Based on the USDA Web Soil Survey. The site has the following soils:

**Anoka County, Minnesota (MN003)**

Anoka County, Minnesota (MN003)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| Iw | Isanti fine sandy loam | 20.3 | 12.9% |
| LnA | Lino loamy fine sand, 0 to 4 percent slopes | 8.9 | 5.7% |
| Ma | Markey muck, occasionally ponded, 0 to 1 percent slopes | 51.7 | 32.9% |
| Rf | Rifle mucky peat | 75.1 | 47.8% |
| ZmB | Zimmerman fine sand, 1 to 6 percent slopes | 1.1 | 0.7% |
| **Totals for Area of Interest** | | **157.1** | **100.0%** |




4/17/2024

A full geotechnical evaluation will be completed on site to determine what soils and how deep the water table is on site. This will be completed prior to the Preliminary Plat application.

Being the site is currently being used as a sod farm, there will be minimal cutting/clearing of trees on the property. A tree inventory will be completed at the time of the Preliminary Plat application to determine the removal of trees and the required replacement per the City of Lino Lakes.

***Street Design:***
The proposed project will have local public streets that will be 30' back to back within a 60' ROW and 46.0'R cul-de sac within a 60' ROW. Century Trail is proposed to be a Parkway with 80' ROW and a median divided street section. A portion of the development includes private streets (24' back to back) for the townhome/rowhome units. All streets will be constructed to the City of Lino Lakes standard street section. Parking lot areas are proposed for the Mosque, Commercial buildings, and apartment buildings.

***Utility Services:***
City sanitary sewer & water is available to service the proposed development through the existing Century Farms neighborhood.

***Stormwater:***
Stormwater modeling and a Stormwater Management Plan (SWMP) will be prepared to satisfy City of Lino Lakes & Rice Creek Watershed District requirements. Runoff from the site will be directed to storm sewer inlet locations, collected, and conveyed to the proposed treatment pond(s) and retention/filtration area(s). The ponds and filtration areas/basins will provide temporary storage of stormwater runoff, treatment of stormwater and sediment removal.

***Wetlands:***
Per the National Wetland Inventory (NWI), there are 2 wetlands on site, a series of private ditches, and a public ditch (10-22-32). The concept plan shows impacts to the wetland and private ditch areas. The public ditch 10-22-32 will remain intact and provide the required buffer/access needed. A wetland delineation report will be completed to determine the actual wetland areas on site. The impacts will be made accordingly after the report.


***Traffic:***

The Developer notes that a traffic study will be prepared/provided for review as part of the development process.

***Landscape Plan, Monuments, & Entrance:***

The Developer will work with the City to provide a landscape plan that meets City requirements and provides an aesthetically pleasing neighborhood. The project also includes a possible landscaped center median that will divide Century Trail.

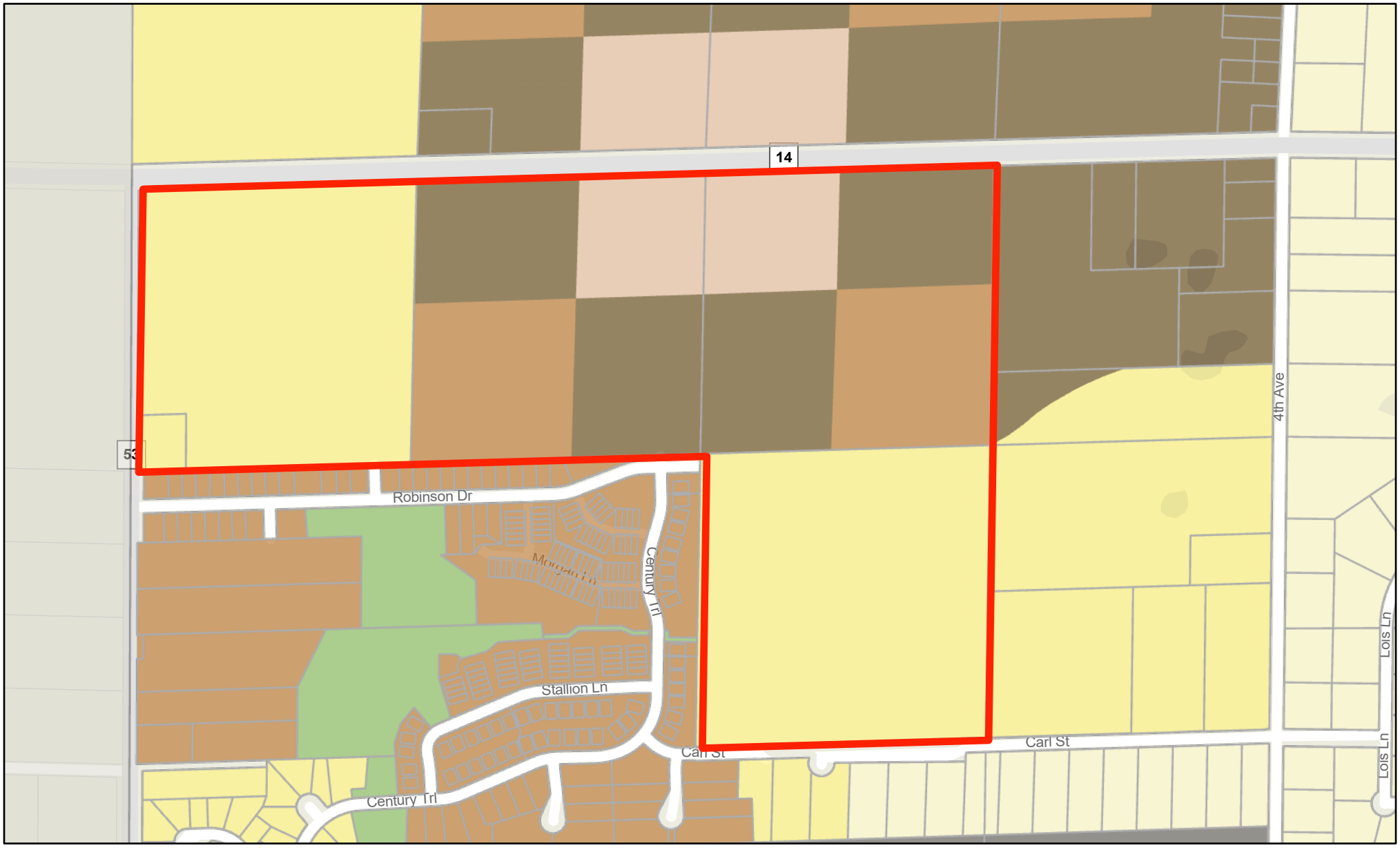
***Homeowner's Association and Restrictive Covenants:***

A Homeowners Association (HOA) will be created for this development. The Developer will prepare restrictive covenants and standards that will apply to the entire neighborhood during both the initial development and the overall operation of the subdivision once future homeowners control the HOA Board. A select group of builders will participate in the community. The restrictive covenants will be tailored to the Developer's vision of the project. Each builder will be required to meet the specifics of building types, landscaping, and overall goals of the development.

The developer is asking for feedback from City staff, based on the provided documents included in the Concept Plan Application package.

Attachment 3: 2040 Future Land Use Plan Map

# Madinah Lakes-2040 Future Land Use Plan




1 in = 600 Ft

- Parcels
- Urban Reserve
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Planned Residential / Commercial
- Parks and Open Space
- Private Airfield
- City Mask

CITY OF LINO LAKES

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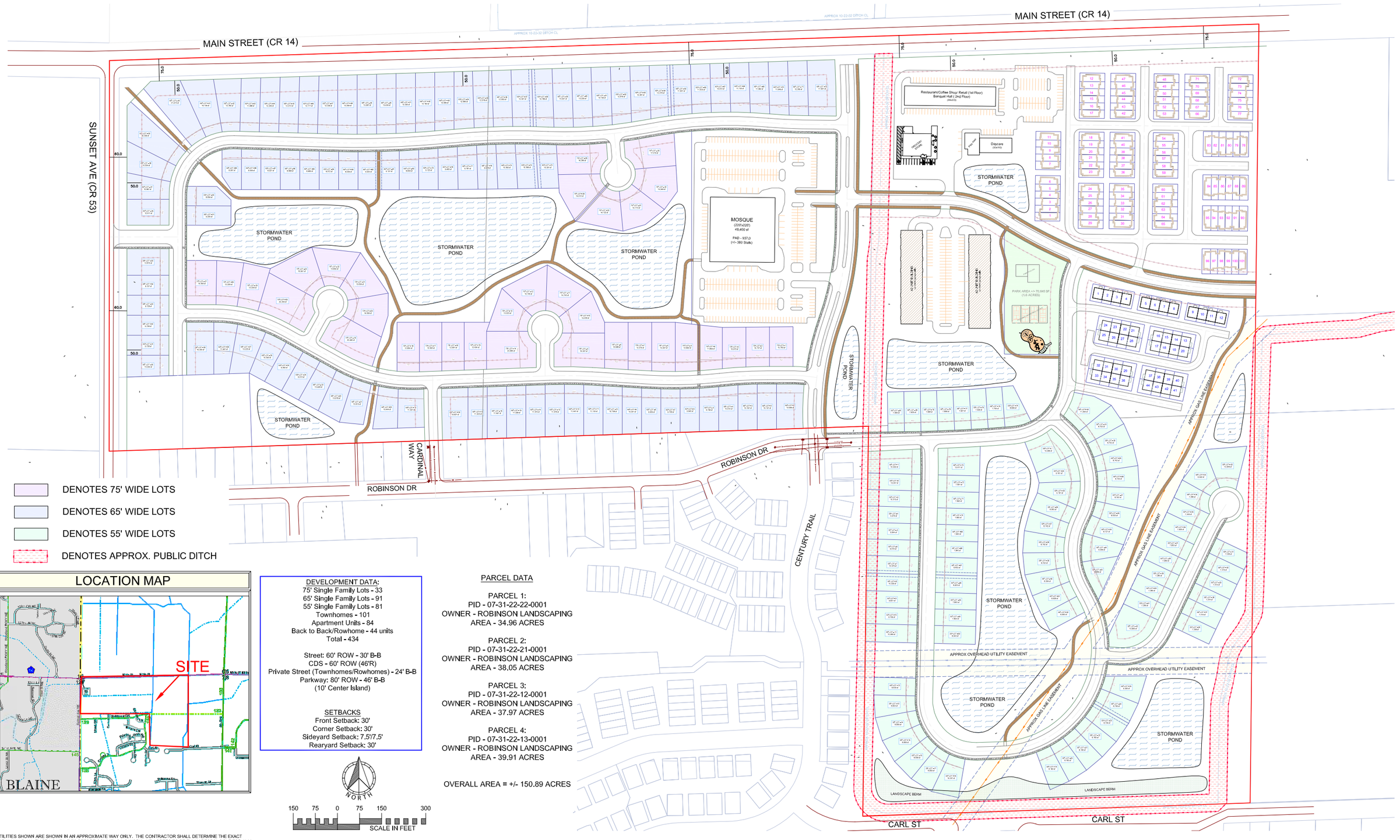
June 5, 2024

Map Powered By Datafi

wsb

Attachment 4: Concept Plan, Surrounding Area Aerial Map & Phasing Plan




DENOTES 75' WIDE LOTS

DENOTES 65' WIDE LOTS

DENOTES 55' WIDE LOTS

DENOTES APPROX. PUBLIC DITCH

## LOCATION MAP




DEVELOPMENT DATA:
75' Single Family Lots - 33
65' Single Family Lots - 91
55' Single Family Lots - 81
Townhomes - 101
Apartment Units - 84
Back to Back/Rowhome - 44 units
Total - 434

Street: 60' ROW - 30' B-B
CDS - 60' ROW (46'R)
Private Street (Townhomes/Rowhomes) - 24' B-B
Parkway: 80' ROW - 46' B-B
(10' Center Island)

SETBACKS
Front Setback: 30'
Corner Setback: 30'
Sideyard Setback: 7.5'/7.5'
Rearyard Setback: 30'

PARCEL DATA

PARCEL 1:
PID - 07-31-22-22-0001
OWNER - ROBINSON LANDSCAPING
AREA - 34.96 ACRES

PARCEL 2:
PID - 07-31-22-21-0001
OWNER - ROBINSON LANDSCAPING
AREA - 38.05 ACRES

PARCEL 3:
PID - 07-31-22-12-0001
OWNER - ROBINSON LANDSCAPING
AREA - 37.97 ACRES

PARCEL 4:
PID - 07-31-22-13-0001
OWNER - ROBINSON LANDSCAPING
AREA - 39.91 ACRES

OVERALL AREA = +/- 150.89 ACRES

NORTH

150 75 0 75 150 300
SCALE IN FEET

EXISTING UTILITIES SHOWN ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES ARISING OUT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.

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| DRAWN | | | | |
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| CHECKED | | | | |
| XXX | | | | |
| DATE | | | | |
| 04/22/2024 | | | | |



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

Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

ENGINEERS SURVEYORS DESIGNERS PLANNERS

SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

CITY PROJECT NO.
--

LINO LAKES, MINNESOTA

CONCEPT PLAN 04/17/24
MADINAH LAKES
ZIKAR HOLDINGS

FILE NO.
59898-005

C1


EXISTING UTILITIES SHOWN ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES ARISING OUT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.

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| **DATE** | | | | |
| 04/22/2024 | | | | |



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Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

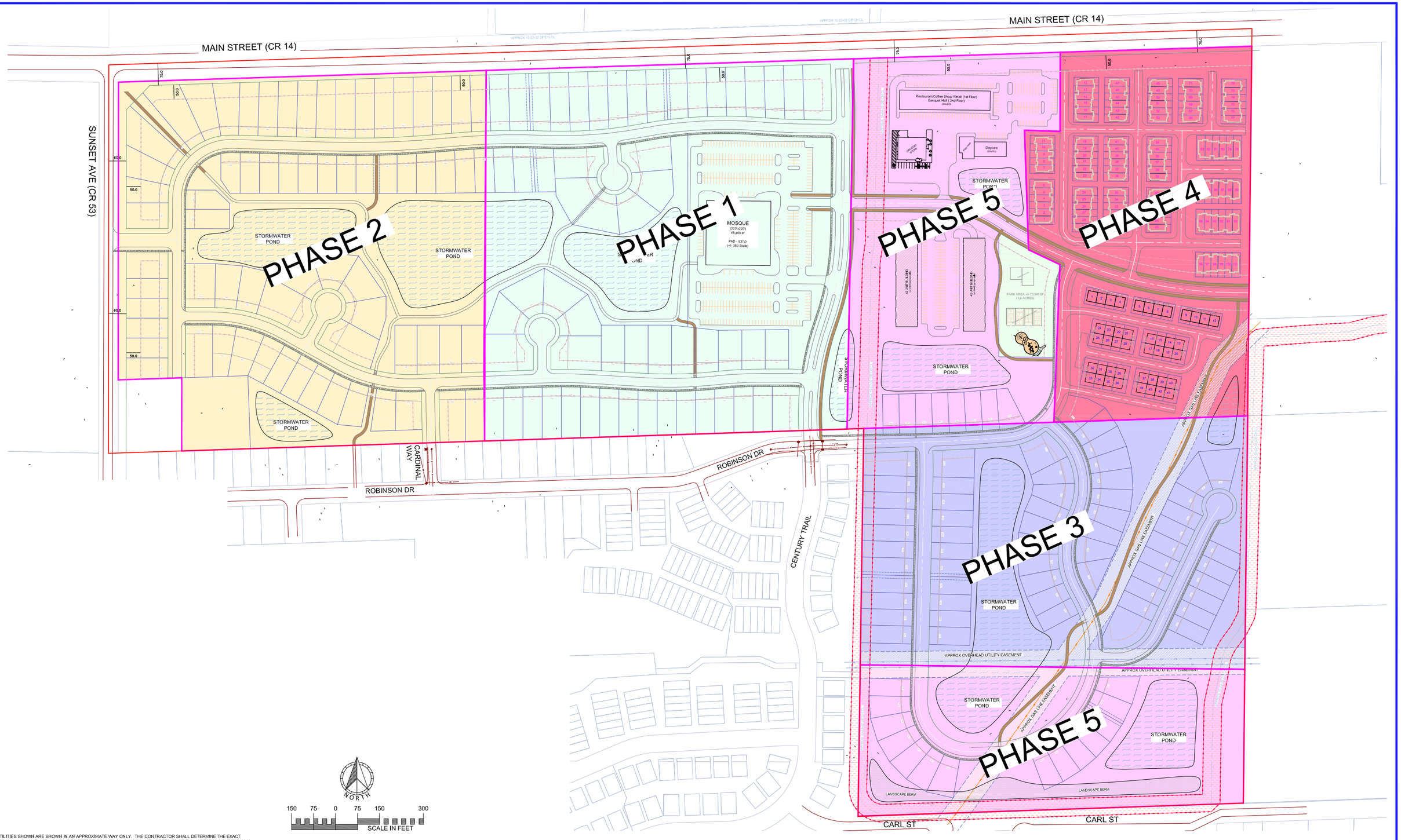
CITY PROJECT NO.
--

LINO LAKES, MINNESOTA

# CONCEPT PLAN 04/17/24
## MADINAH LAKES
## ZIKAR HOLDINGS

FILE NO.
59898-005

C1-A




NORTH

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SCALE IN FEET

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| DATE | | | | |
| 04/22/2024 | | | | |



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Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

ENGINEERS SURVEYORS DESIGNERS PLANNERS

SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

CITY PROJECT NO.
--

LINO LAKES, MINNESOTA

# CONCEPT - PHASING PLAN

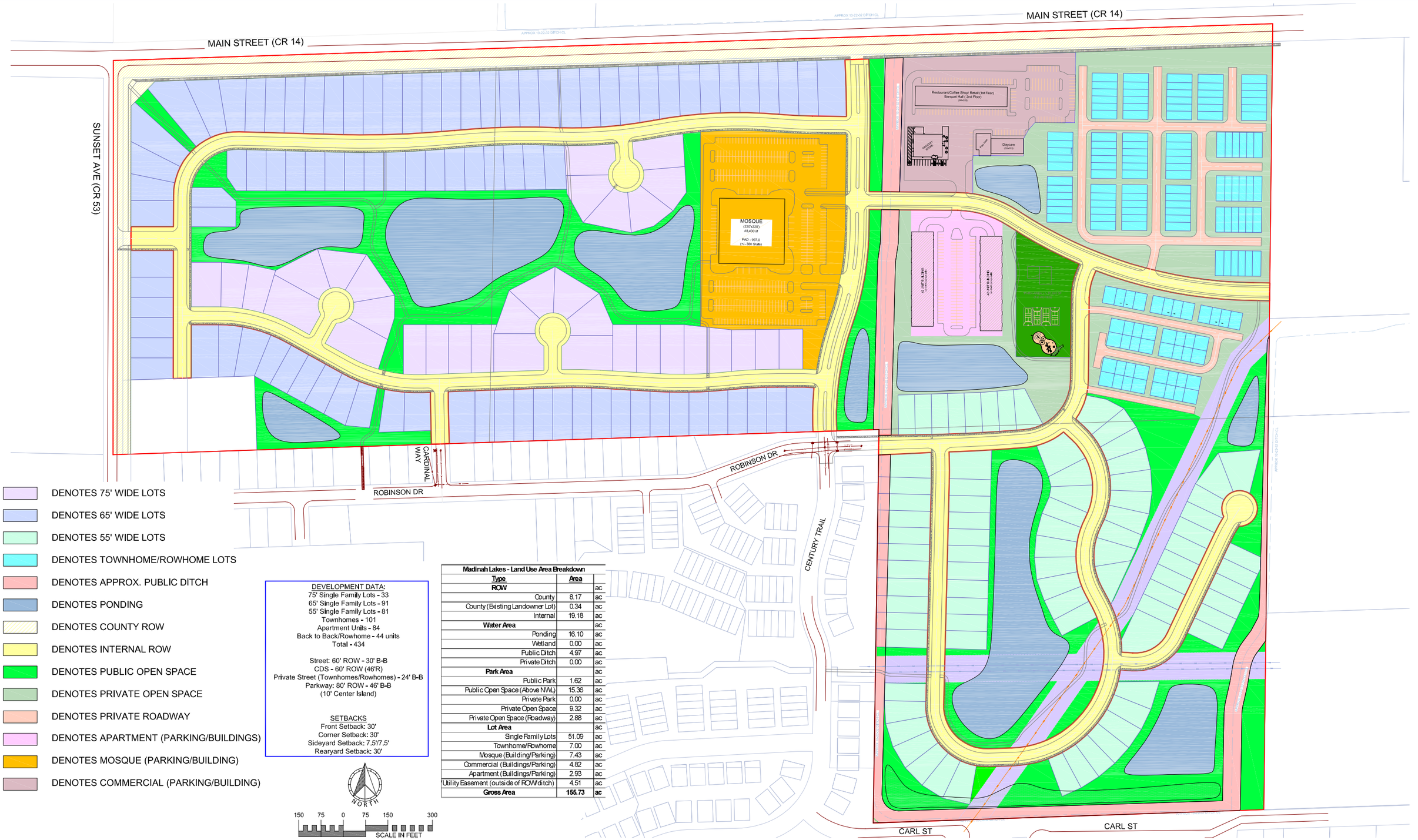
MADINAH LAKES

ZIKAR HOLDINGS

FILE NO.
59898-005

C1-P

Attachment 5: Land Use Plan & Areas




- DENOTES 75' WIDE LOTS
- DENOTES 65' WIDE LOTS
- DENOTES 55' WIDE LOTS
- DENOTES TOWNHOME/ROWHOME LOTS
- DENOTES APPROX. PUBLIC DITCH
- DENOTES PONDING
- DENOTES COUNTY ROW
- DENOTES INTERNAL ROW
- DENOTES PUBLIC OPEN SPACE
- DENOTES PRIVATE OPEN SPACE
- DENOTES PRIVATE ROADWAY
- DENOTES APARTMENT (PARKING/BUILDINGS)
- DENOTES MOSQUE (PARKING/BUILDING)
- DENOTES COMMERCIAL (PARKING/BUILDING)

DEVELOPMENT DATA:
75' Single Family Lots - 33
65' Single Family Lots - 91
55' Single Family Lots - 81
Townhomes - 101
Apartment Units - 84
Back to Back/Rowhome - 44 units
Total - 434

Street: 60' ROW - 30' B-B
CDS - 60' ROW (46'R)
Private Street (Townhomes/Rowhomes) - 24' B-B
Parkway: 80' ROW - 46' B-B
(10' Center Island)

SETBACKS
Front Setback: 30'
Corner Setback: 30'
Sideyard Setback: 7.5'/7.5'
Rearyard Setback: 30'

NORTH

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SCALE IN FEET

| Madinah Lakes - Land Use Area Breakdown | | |
|---|---|---|
| **Type** | **Area** | |
| **ROW** | | ac |
| County | 8.17 | ac |
| County (Existing Landowner Lot) | 0.34 | ac |
| Internal | 19.18 | ac |
| **Water Area** | | ac |
| Ponding | 16.10 | ac |
| Wetland | 0.00 | ac |
| Public Ditch | 4.97 | ac |
| Private Ditch | 0.00 | ac |
| **Park Area** | | ac |
| Public Park | 1.62 | ac |
| Public Open Space (Above NWL) | 15.36 | ac |
| Private Park | 0.00 | ac |
| Private Open Space | 9.32 | ac |
| Private Open Space (Roadway) | 2.88 | ac |
| **Lot Area** | | ac |
| Single Family Lots | 51.09 | ac |
| Townhome/Rowhome | 7.00 | ac |
| Mosque (Building/Parking) | 7.43 | ac |
| Commercial (Buildings/Parking) | 4.82 | ac |
| Apartment (Buildings/Parking) | 2.93 | ac |
| Utility Easement (outside of ROW/ditch) | 4.51 | ac |
| **Gross Area** | **155.73** | **ac** |

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| DRAWING NAME | NO. | BY | DATE | REVISION |
|---|---|---|---|---|
| CONCEPT | 1 | ERJ | 6/3/2024 | UPDATE TRAILS (PARK BOARD RECOMMEND) |
| **DRAWN** | | | | |
| XXX | | | | |
| **CHECKED** | | | | |
| XXX | | | | |
| **DATE** | | | | |
| 04/22/2024 | | | | |



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

Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

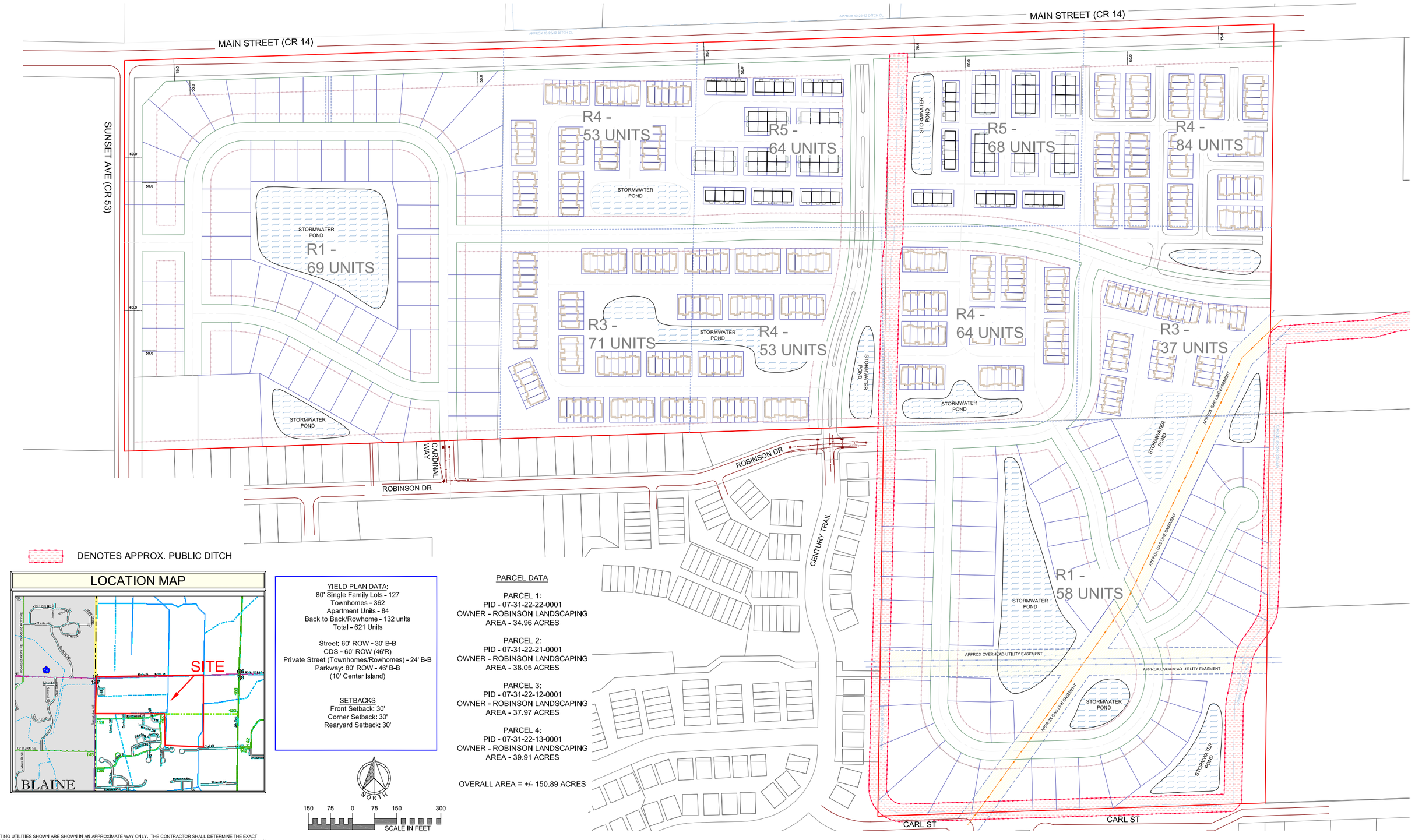
SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

CITY PROJECT NO.
--
LINO LAKES, MINNESOTA

LAND USE PLAN
MADINAH LAKES
ZIKAR HOLDINGS

FILE NO.
59898-005
L1

Attachment 6: Yield Plan




DENOTES APPROX. PUBLIC DITCH

## LOCATION MAP




YIELD PLAN DATA:
80' Single Family Lots - 127
Townhomes - 362
Apartment Units - 84
Back to Back/Rowhome - 132 units
Total - 621 Units

Street: 60' ROW - 30' B-B
CDS - 60' ROW (46'R)
Private Street (Townhomes/Rowhomes) - 24' B-B
Parkway: 80' ROW - 46' B-B
(10' Center Island)

SETBACKS
Front Setback: 30'
Corner Setback: 30'
Rearyard Setback: 30'

PARCEL DATA

PARCEL 1:
PID - 07-31-22-22-0001
OWNER - ROBINSON LANDSCAPING
AREA - 34.96 ACRES

PARCEL 2:
PID - 07-31-22-21-0001
OWNER - ROBINSON LANDSCAPING
AREA - 38.05 ACRES

PARCEL 3:
PID - 07-31-22-12-0001
OWNER - ROBINSON LANDSCAPING
AREA - 37.97 ACRES

PARCEL 4:
PID - 07-31-22-13-0001
OWNER - ROBINSON LANDSCAPING
AREA - 39.91 ACRES

OVERALL AREA = +/- 150.89 ACRES

NORTH
150 75 0 75 150 300
SCALE IN FEET

EXISTING UTILITIES SHOWN ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES ARISING OUT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.

| DRAWING NAME | NO. | BY | DATE | REVISION |
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| CONCEPT | 1 | | | |
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| CHECKED | | | | |
| XXX | | | | |
| DATE | | | | |
| 04/22/2024 | | | | |



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Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

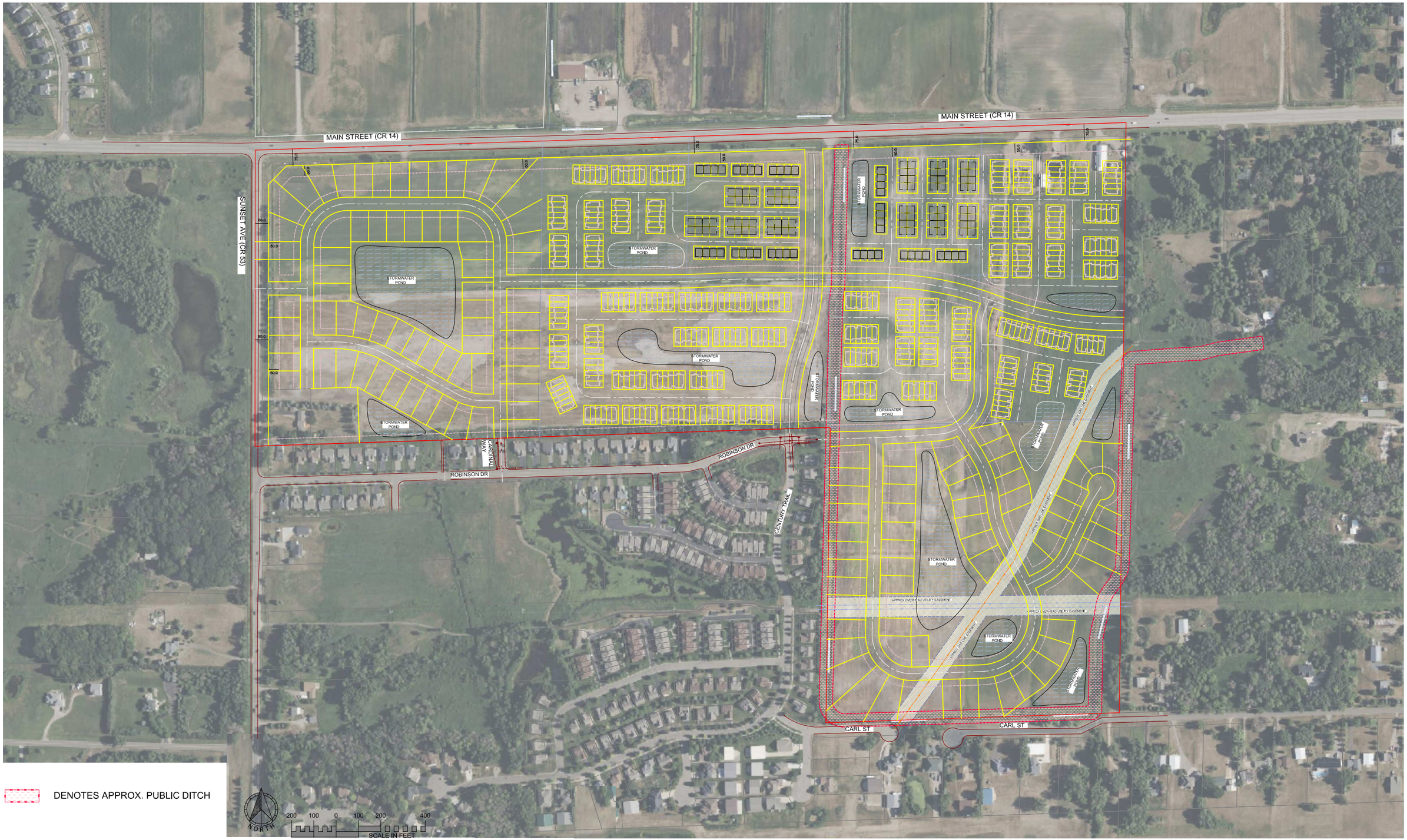
CITY PROJECT NO.
--

LINO LAKES, MINNESOTA

YIELD PLAN
MADINAH LAKES
ZIKAR HOLDINGS

FILE NO.
59898-005

Y1

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| DRAWING NAME | NO. | BY | DATE | REVISION |
|---|---|---|---|---|
| CONCEPT | 1 | | | |
| **DRAWN** | | | | |
| XXX | | | | |
| **CHECKED** | | | | |
| XXX | | | | |
| **DATE** | | | | |
| 04/22/2024 | | | | |



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

Eric R Johnson

Eric R Johnson, P.E.
Date: 04/22/2024 Lic. No. 56659

ENGINEERS SURVEYORS DESIGNERS PLANNERS

SATHRE-BERGQUIST, INC.
14000 25TH AVE N #120 PLYMOUTH, MN. 55447 (952) 476-6000

CITY PROJECT NO.
--

LINO LAKES, MINNESOTA

# YIELD PLAN - AERIAL
## MADINAH LAKES
## ZIKAR HOLDINGS

FILE NO.
59898-005

Y1-A

**MADINAH LAKES**
**PUD Land Use and Conventional Zoning District Guidelines**
**PUD Concept Plan dated April 22, 2024**

| | | | Development Standards/Guidelines | | | Proposed Development | | | |
|---|---|---|---|---|---|---|---|---|---|
| PUD Land Use | Correlating Conventional Zoning District | Housing Type | Lot Width (ft) | Lot Depth (ft) | Lot Size (sf) | Lot Width (ft) | Lot Depth (ft) | Lot Size (sf) | PUD Flexibility Required? |
| Low Density Res | R-1, Single Family | single family | 80 | 135 | 10,800 | 75 | 130 | 9,750 | Yes |
| | R-1X, Single Family Executive | single family | 90 | 135 | 12,825 | | | | |
| | R-2, Two Family Residential | single family | 60 | 125 | 7,500 | 65 | 130 | 8,450 | No |
| | R-2, Two Family Residential | single family | 60 | 125 | 7,500 | 55 | 130 | 7,150 | Yes |
| | R-2, Two Family Residential | two-family (unit lot) | 50 | 150 | 7,500 | | | | |
| | | | | | | | | | |
| Medium Density Res | R-2, Two Family Residential | single family | 60 | 125 | 7,500 | 65 | 130 | 8,450 | No |
| | R-2, Two Family Residential | single family | 60 | 125 | 7,500 | 75 | 130 | 9,750 | No |
| | R-2, Two Family Residential | two-family (unit lot) | 50 | 150 | 7,500 | | | | |
| | R-3, Medium Density Residential | two-family (unit lot) | 50 | NA | 7,000 | | | | |
| | R-3, Medium Density Residential | max. 8 unit townhome (base) | 100 | NA | 24,000 | 500+ | NA | 10 acres | No |
| | | | | | | | | | |
| High Density Res | R-4, High Density Residential | two-family (unit lot) | 50 | NA | 6,000 | | | | |
| | R-4, High Density Residential | townhome or other multi-family (base) | 100 | NA | 20,000 | 300-600 | NA | 3-9 acres | No |
| | | | | | | | | | |
| Planned Res/Comm | R-5, High Density Residential and Business | townhomes (base) | 100 | NA | 14,000 | 300+ | NA | 1 acre | No |
| | R-5, High Density Residential and Business | multi-family (base) | 100 | NA | 20,000 | | | | |
| **TOTAL =** | | | | | | | | | |

# Memorandum

**To:** **Katie Larsen, Lino Lakes City Planner**

**From:** **Kris Keller PE, WSB**
**Diane Hankee PE, Lino Lakes City Engineer**

**Date:** **June 6, 2024**

**Re:** **Madinah Lakes**
**Concept Plan Review**
**025482-000**

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As requested by City staff, WSB reviewed the Concept Plans for the Madinah Lakes Addition for a PUD prepared by Sathre-Bergquist and received April 29, 2024. The site is located south of Main Street (CSAH 14), east of Sunset Avenue (CSAH 53), and north of Robinson Drive and Carl Street. An Environmental Assessment Worksheet was not provided and should be completed for this site. Our comments were made on the following documents:

- Madinah Lakes Concept Plan prepared by Sathre-Bergquist, received April 23, 2024.

## Engineering

- **Grading**

The Madinah Lakes development site grading will include grading for roads, stormwater facilities and rough lot grading. Site grading will need to meet all City requirements and match into the existing elevations of the surrounding County roads and private parcels.

Comments:

1. Provide development grading plan meeting City requirements with preliminary plat submittal
2. There is a significant elevation difference between the northern lots and Main Street (CSAH 14) that will impact the required screening and affect the proposed grading plan lot depth.

- **Stormwater Management**

The proposed Madinah Lakes development is drained by a series of private ditches and roadway ditches west of Sunset Avenue (CSAH 53) and south of Main Street (CSAH 14) that tie into Anoka County public ditch 10-22-32 (ACD 10-22-32). ACD 10-22-32 flows south through the proposed Madinah Lakes development to Carl Street. ACD 10-22-32 continues south under Carl Street and ultimately discharges to Marshan Lake.

Anoka County and Rice Creek Watershed District should review the preliminary drainage design concurrent to the City's preliminary plat reviews.

178 E 9TH STREET | SUITE 200 | SAINT PAUL, MN | 55101 | 651.286.8450 | WSBENG.COM

This would include coordinating with Anoka County with regards to the proposed roundabout at Sunset Avenue (CSAH 53) and Main Street (CSAH 14) at the northwest corner of the site and integrating the associated stormwater management features (ponds, ditches, etc.) into the design of the development.

Most of the site is within the City's General Floodplain District (FEMA Zone A) and, according to a previous Geotechnical Report, groundwater levels range from 4-feet to 9-feet in depth. The applicant will be required to meet all City of Lino Lakes ordinances and RCWD rules for surface water management.

The proposed Madinah Lakes development is in the Marshan Resource Management Unit (RMU) according to the City of Lino Lakes 2018 Local Water Management Plan (WMP). The WMP noted several issues within the Marshan RMU, including the following issue pertinent to the then Robinson Property: "*ACD 10-22-32 is ineffective for future urban runoff volumes." (*Appendix B). A strategy for mitigating this issue specific to the Robinson Property noted in the WMP was: "*Proposed master community plan for sod fields"* (Appendix B). In addition, the WMP identified existing and future flooding and pollutant loading concerns within the RMU, including Marshan Lake and adjacent wetlands and ACD 10-22-32 (Table 2-21).

WMP Goal 4.1 is to *"Provide adequate storage and conveyance of runoff to protect public safety and minimize property damage."* To address the City's flooding concerns in accordance with this goal, implementing stormwater rate and volume control practices where feasible throughout the Robinson Property will be critical. Sufficient freeboard must be provided for proposed structures above the seasonal high groundwater levels and floodplain elevations in compliance with City Ordinance Chapter 1102 (Stormwater, Erosion and Sediment Control) and RCWD Rule C (Stormwater Management). Ditch conveyance capacity along Sunset Avenue (CSAH 53) and Main Street (CSAH 14) should be maintained and street entrance ditch crossings should utilize large and/or multiple pipe or box culverts. City and RCWD regulatory floodplain management requirements will also need to be met (See *Floodplain* below).

WMP Goal 7.2 is to *"Ensure that well-planned, quality residential...development accommodates the City's projected growth needs and occurs in a manner that also conserves and enhances the City's natural resources and amenities."* To assist the City in meeting this goal, the applicant should provide the following for the proposed stormwater ponds and lakes: 1) shoreline geometry that more closely resembles natural bodies of water, 2) buffers for natural vegetation and high-water level bounce, 3) areas for future maintenance activities (e.g., pond/lake dredge material removal and dewatering) and 4) differentiation of the water quality and quantity function, goal, and design of both.

Comments:

1. Based on groundwater levels, infiltration basins are not likely on site, filtration or sedimentation basins appear to be more appropriate. Care should be taken to design systems that avoid floatation concerns within the high groundwater levels.

2. All stormwater features must be easily accessible for future maintenance, the current concept plan shows an isolated basin on the far east side of the site that would require either access through a private road or via a long overland distance to a public road.

3. The City anticipates that a stormwater reuse system will need to be installed as part of the project which will require a water balance study be included with the next submittal.

- **Water Supply**

The City's water supply system well firm capacity should meet or exceed its maximum day demand. This criteria is currently constrained by poor water quality in some wells, the White Bear Lake court orders and ongoing litigation, and annual variability in water use due to drought and other factors. Based on the water supply capacity and well trigger analysis completed in April 2024, excluding Well No. 2 due to poor water quality, if the City is able to add Well No. 7 then the system could serve approximately 7,300 households (about 1,400 households more than the existing 5,900 households) before Well No. 8 is needed. The final number of available households will need to be determined as the project progresses.

The City has begun conversations with the Minnesota Department of Natural Resources (DNR) about permitting Well No. 7 and is awaiting confirmation whether it can be constructed at this time given the ongoing White Bear Lake litigation.

The existing properties are identified as a Stage 1A and 1B Planned Service Areas in the 2040 Comprehensive Plan. The City will need to evaluate the timing of expansion particularly into service area 1B. There is existing 12-inch diameter ductile iron pipe (DIP) water main along Robinson Drive and Century Trail south of the site and a 8-inch DIP water main on Carl Street (west cul-de-sac). There is a 10-inch DIP water stub for the Robinson Property off of Cardinal Way and two 12-inch diameter DIP water main stubs at the intersection of Robinson Drive and Century Trail.

Applicant to verify water pressure is adequate for all locations within the development including commercial and multifamily locations. The watermain will need to be looped through the site, and the watermain will need to include a 12-inch diameter trunk watermain as identified in the Comprehensive Plan. All proposed units are required to be on the municipal water supply.

Comments:

1. Provide development utility plan meeting City requirements with preliminary plat submittal

- **Sanitary Sewer**

The 2040 Comprehensive Plan identifies future 10-inch diameter and 15-inch diameter trunk lines within the site. The 2040 Comprehensive Plan also identifies future forcemain along Sunset Avenue (CSAH 53) to the west of the site and future 10-inch and 12-inch trunk lines along Main Street (CSAH 14) north of the site.

The existing properties are identified as a Stage 1A and 1B Planned Service Areas in the 2040 Comprehensive Plan and they are located in the 2I sanitary sub-district. There is existing 12-inch diameter polyvinyl chloride (PVC) sanitary sewer along Robinson Drive and 15-inch diameter PVC sanitary sewer along Century Trail. A sewer stub extends to the north from the manhole at the intersection of Robinson Drive and Century Trail with an invert of 879.78. There is a sanitary manhole at the north end of Cardinal Way with an

invert of 883.18. The sanitary sewer on Cardinal Way is 10-inch diameter PVC. Inverts are according to record plans for the Century Farms North development.

Existing gravity sewers and lift stations downstream of the site whose capacity is largely consumed by existing flows would require additional evaluation. This would include at a minimum survey data to confirm elevations, flow meters to obtain accurate flows, and lift station pump runtime data to determine the residual capacity in these facilities in the near term. As identified in 2040 Comprehensive Plan Table 8-12, these sewers will require improvements to support future flows. Current computer modeling of the sanitary sewer system, which should be corroborated with the additional evaluation described above, suggests that the existing system would have capacity for 300-500 more units in the entire Sanitary Sewer District 2.

The 2040 Comprehensive Plan includes a West Side Relief interceptor to serve the northwest portions of Sanitary Sewer District 2. If the additional evaluation described above determines that additional capacity is needed for this development, the West Side Relief interceptor or additional downstream improvements may be considered with this project.

All proposed units will be required to connect to the City's sanitary sewer system.

- **Transportation**

The Robinson Property is located south of Main Street (CSAH 14), east of Sunset Avenue (CSAH 53) north of Robinson Drive and east of Century Trail. The concept plan includes an extension of Century Trail from Robinson Drive to Main Street (CSAH 14), extension of Robinson Drive to the east property line, a connection from the site to Robinson Drive at Cardinal Way and a new street access to Sunset Avenue (CSAH 53) between Robinson Drive and Main Street (CSAH 14).

- A Traffic Study is required.
    - Traffic Study should highlight the following:
        - Segment and intersection operational and safety impacts of the proposed development.
        - Determine the type of accesses and connections to existing arterial and collector roadways
        - Intersection traffic control and the need for turn lanes and appropriate storage lengths at the adjacent intersections and site access streets.
    - Additional commercial and religious uses should be directed to Main Street to limit impacts to existing and proposed local roads.
        - Primary access to high traffic generators should be from higher classification roads.
        - As a high traffic generator, the location of the religious use within the proposed site should be evaluated further.
    - Phasing of roads will need to be incorporated into the study
- Need to ensure there is ample storage area on collector streets that access arterial. Provide necessary spacing between arterial and parallel local roadways.
- Address all comments in the Anoka County review letter for Madinah Lakes dated June 6, 2024.
    - Note, Anoka County is planning on improving Sunset Avenue (CSAH 53) which may impact the traffic patterns and available access to the Madinah Lakes site.

- Previous reviews of the area by Anoka County indicated they would restrict access to Sunset Avenue (CSAH 53) south of Main Street (CSAH 14) by eliminating or reducing service to right-in/right-out.
- Robinson Drive should be extended to 4th Avenue as shown in Figure 6.5 of the City's 2040 Comprehensive Plan.
    - Robinson Drive extension shall be aligned further south to avoid wetlands in the adjacent property. A conceptual alignment will need to be developed to 4th Avenue.
- Carl Street connection from Century Trail through to 4th Avenue should occur regardless of development
- Offset north and south connections to the multi-family area and adjacent to the park is not desired.
- Additional access to the multi-family area may be necessary dependent on the traffic study.

**Trails and sidewalks**

Trails and sidewalks are shown extending on at least one side of all public streets with a series of trails crossing around the central stormwater ponds.

Comments:

1. City Parks and Planning departments to review all trail corridors
2. Sidewalks will be required on all streets. Whether sidewalks are required on both sides will be determined based on traffic volumes.
3. Anoka County advises that construction of a trail should be considered along both CSAH 14 and CR 53 for the length of the site and that the City consider further trail construction.

- **Wetlands and Mitigation Plan**

An approved wetland delineation will be required. The applicant will need to work with Rice Creek Watershed District for Wetland Conservation Act regulations.

The site includes wetlands along the ditches and in the area north of Carl Street. There is a large wetland complex east of this project does extend onto the proposed project parcels and is part of the Wetland Management Corridor. A vegetated buffer with an average width of 50 ft. and a minimum width of 25 ft. will be required per RCWD rules.

A wetlands and mitigation plan will be reviewed during the Preliminary Plat and approved through RCWD.

- **Landscaping**

The landscaping will be reviewed by staff and the City's Environmental Coordinator with future submittals. The Environmental Coordinator will provide separate comments.

Comments with Preliminary Plat submittal:

1. Consideration for the required screening from Main Street (CSAH 14) and the significant elevation difference with northern lots
2. Trees shall not be placed over utility pipes. Applicant to review boulevard tree locations to make sure they are planted an adequate distance (ideally 10 ft) from water and sanitary services.
3. Elevated landscaping (fences, trees, shrubs, etc.) will need to be kept out of the sight triangles at each of the intersections

- **Floodplain**

Most of the site is within FEMA's General Floodplain District (FEMA Zone A). A Base Flood Elevation will need to be determined and approved by FEMA. A CLOMR and subsequent LOMR will be required. RCWD will require floodplain mitigation. The applicant will need to provide a detailed floodplain mitigation plan to demonstrate compliance with RCWD Rule E.

- **Drainage and Utility Easements**

Comments with Preliminary Plat submittal:

1. Per City Code, the City requires 10-ft wide drainage and utility (D&U) easements along plat boundaries and along lot lines. Drainage and utility easements along lot lines are allowed to be centered on common rear and side lot lines.
2. All trails will be required to be within easements at the time of platting. Separate trail easements will need to be documented after the plat has been approved.
3. The right-of-way for local collector roadways, Century Trail and Robinson Drive, shall be a minimum 66-ft wide depending on the function and pedestrian amenities. All other local roads shall have designated right-of-way that is 60-ft wide.
4. Additional drainage and utility easement will need to be provided for Anoka County Ditch (ACD) 10-22-32

- **Development Agreement**

A development agreement will be required with the final platting process.

- **Stormwater Maintenance Agreement**

A Stormwater Maintenance Agreement will be required with the final plat. Public facilities will be covered by the City's Programmatic Maintenance Agreement.

- **Permits Required**

1. NPDES General Construction Permit
2. City of Lino Lakes Zoning Permit for Grading
3. Minnesota Pollution Control Agency Sanitary Sewer Extension Permit
4. Minnesota Department of Health
5. Rice Creek Watershed District Permit

6. Anoka County Right-of-Way and Access Permit
7. USACE for Wetland Alteration
8. FEMA CLOMR/LOMR
9. Additional permits may be required as part of the development process.

If you or the applicant have any questions regarding these comments, please contact Kris Keller at (612) 419-3083 or kkeller@wsbeng.com. You may also contact Diane Hankee at (651) 982-2430 or dhankee@linolakes.us.

# Environmental Memo

To: Katie Larsen

From: Andy Nelson

Date: 5/30/24

Re: Environmental Comments/Madinah Lakes PUD Concept Plan

---

Environmental Board had the following comments at the 5/29/24 EB meeting:

1. The project meets the mandatory threshold for an Environmental Assessment Worksheet. This document must be completed prior to submittal of a preliminary plat application.

2. Native plants should be utilized wherever feasible to maximize habitat benefits and promote biodiversity. In areas where native plants may not be suitable, low-maintenance alternative turfgrass types should be considered that minimize water consumption needs.

3. Existing hydric soils on the site should be salvaged for utilization on site, particularly in open space areas seeded or planted with native species.

4. A Natural Heritage Information System request must be submitted to the Minnesota Department of Natural Resources to identify any rare, threatened, or special concern species documented in the vicinity of the project. Because any required survey work may be seasonal and time-sensitive, it is recommended that the NHIS request be submitted as soon as possible.

5. The Information for Planning and Consultation tool should be utilized to streamline the United States Fish and Wildlife Service environmental review process. It is recommended to perform this step as early as possible. The Northern long-eared bat (*Myotis septentrionalis)* range is in this area, which may impact tree removal timelines and necessitate additional surveys.

6. Stormwater pond design should incorporate forebays or other pretreatment means for water discharging to them.

7. Incorporate a stormwater reuse system for irrigation to minimize water consumption.

8. Native vegetation buffers should be included around all ponds, preserved wetlands, and the County ditch.

9. Floodplain management shall be incorporated into the project design that meets City and Rice Creek Watershed District requirements. Also, a Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) are required for this site.

10. Greenway system components/Trail Connections to incorporate into the design:

    - Trail corridors should be a minimum of 30-40 feet in width above the high water level of ponds. The slope to ponds should be minimized where possible and not exceed 3:1, but 6:1 would be preferable.
    - Connection is needed from Century Trail to the trail segment running along the gas line easement.
    - A connection to the future Anoka County regional trail is needed midblock of the north road running along Main Street.
    - A trail is needed along Sunset Avenue.
    - The County Ditch corridor is the priority component of the greenway system. Stormwater filtration and wildlife habitat should be incorporated in a 50-foot buffer running along the ditch. This buffer should be on both sides of the ditch, for 100-ft. total buffer width.

11. The private ditches running along the north and south perimeters of the site even with Robinson Drive should be filled and mitigated. This space could be used to better effect for greenway system components.

12. The proposed east/west collector street stubbed to the eastern property line appears to run into a large Wetland Management Corridor component. This road should be shifted south to minimize impacts.

13. A Tree Survey, Tree Preservation and Mitigation Plan, and Landscape Plan must be submitted with a preliminary plat application.

14. A berm and landscaping will be required along the perimeters shared with Main Street and Sunset Avenue.

15. An Alternative Urban Areawide Review (AUAR) should be performed for the entire Northwest quadrant of Lino Lakes, an area defined as west of 4th Avenue, south of Pine Street, north of Carl Street and east of Sunset Avenue.

Attachment 10: Fire Division Memo dated June 5, 2024

PUBLIC SAFETY
CITY OF LINO LAKES
DEPARTMENT

*One Vision. One Mission.*

Date: June 5, 2024

To: Katie Larsen, AICP
City Planner
600 Town Center Parkway
Lino Lakes, MN 55014

From: Daniel L'Allier
Deputy Director of Public Safety-Fire Division
640 Town Center Parkway
Lino Lakes, MN 55014

Subject: Madinah Lakes – Concept Plan Fire Division Concerns

I have listed the concerns that we have found with the Madinah Lakes – Concept Plan. Feel free to contact us with questions.

1. A traffic study should be completed to determine traffic volumes

2. A second entrance/exit from the commercial area (grocery store, restaurant, and daycare).

3. A second entrance/exit for the multi-family area in the north east area of the project. This area is to the east of the commercial/retail area.

4. We have concerns with the length of the cul-de-sac in the south east area of the project.

5. The two sections of Carl Street need to be connected.

Attachment 11: Police Division Memo dated June 5, 2024

**LINO LAKES**
**PUBLIC SAFETY DEPARTMENT**

**POLICE DIVISION**

TO: Katie Larson, City Planner
FROM: William Owens, Captain
DATE: June 5, 2024
RE: Madinah Lakes – Concept Plan Review

---

City Planner Larson,

I've received the concept plans for the Madinah Lakes project and have the following recommendations from the police division:

1. Traffic study on Main Street and Sunset Ave to better understand impacts of the development.
    a. The addition of 434 residential units will increase the amount of vehicular traffic in the area on a regular basis. Also, the addition of commercial buildings within the development will likely increase the amount of vehicular traffic, not only from residents, but also visitors. One of the commercial buildings is a religious service building and will likely draw an increase in vehicular traffic during service times. A traffic study will help us better understand anticipated increases in vehicular traffic in the area and specific times of any influx in traffic volumes. With this knowledge we can better make recommendations for road improvements and speed limit considerations to accommodate the increase in vehicular traffic and leverage road design to mitigate crashes and traffic safety related injuries.
2. Establish a direct connection to the development from the southeast.
    a. The concept plans don't include any direct access to the development from the east or the southeast. This has the potential to delay a police response to any emergency within the development, but specifically the southeast portion. A direct connection to Century Trail from 4th Ave could be accomplished by connecting Carl Street. Additionally, a direct access to the southeast portion of the development from Carl Street should be considered for a more expedited response to the homes there in the event of a police emergency

Attachment 12: Anoka County Transportation Division-Highway letter dated June 6, 2024

Anoka County
TRANSPORTATION DIVISION
Highway

Katie Larsen
City of Lino Lakes
600 Town Center Pkwy.
Lino Lakes, MN 55014

June 6, 2024

RE: Concept Plan – Madinah Lakes

Dear Katie,

We have reviewed the Concept Plan for Madinah Lakes to be located south of CSAH 14 (Main Street) and east of CR 53 (Sunset Avenue) within the City of Lino Lakes, and I offer the following comments:

- The proposed right of way along CSAH 14 is 75 feet south of centerline which should be sufficient for future reconstruction purposes. The proposed right of way along CR 53 is 60 feet east of centerline which should be sufficient for future reconstruction purposes. If Century Tail connects into Main St., we would like to see a roundabout put in at this location with a chamfer of ROW on each corner similar to what is at the intersection of Main St. and Sunset Ave.

- As proposed, the plat will introduce two new street access points onto county roads. The proposed street access onto CR 53 will need to be RI/RO with a NB right turn lane and concrete porkchop restricting the access.

- No other access points onto CSAH 14 or CR 53 will be permitted for this plat and the right of access along CSAH 14 and CR 53 should be dedicated to Anoka County with the exception for the proposed new street access points. Any existing driveways and field entrances shall be removed, and the ditch section restored to match existing depth, slope, and grades.

- Any utility relocation on the CSAH 14 or CR 53 right of way, will be required to be coordinated directly by the city/developer.

- Please note that no plantings or private signs will be permitted within the county right of way and care must be exercised when locating private signs, building, structures, plantings, berms, etc. outside of the county right of way, so as not to create any new sight obstructions for this section of CSAH 14 and CR 53.

Thank you for the opportunity to comment. Feel free to contact me if you have any questions regarding this review.

Sincerely,

Logan Keehr
Traffic Engineer II

Attachment 13: Forest Lake Area School District letter received April 26, 2024

**FOREST LAKE AREA SCHOOLS**
6100 N 210th St • Forest Lake MN 55025
(651) 982-8100 • www.flaschools.org

*Superintendent* *Dr. Steven D. Massey*
*Administration & Human Resources* *Donna M. Friedmann*
*Business Services* *Chrissy Rehnberg-Eide*
*Community Education* *Corey J. McKinnon*
*Special Education* *Kelly J. Wilson*
*Teaching & Learning* *John-Paul R. Jacobson*

City of Lino Lakes
Katie A. Larsen, AICP, City Planner

Dear Ms. Larsen,

As superintendent of Forest Lake Area Schools, I continually monitor housing developments and population trends that influence school enrollment. Along with my staff, we are grateful for the prior meetings and conversations we have had with the Lino Lakes planning team. You have been extremely gracious in sharing information regarding potential residential housing growth in Lino Lakes that may have an impact on enrollment at Lino Lakes Elementary School.

I have taken the opportunity to review both the Madinah Lakes Development project and the Natures Refuge and Natures Refuge North projects. The Forest Lake Area School District supports both of these projects and the potential student enrollment growth that may come with this development. As the projects move forward in the planning process, we welcome the opportunity to collaborate with the City and the project developers to support families in transitioning to a new school.

Lino Lakes Elementary offers a dynamic and innovative learning environment rooted in STEM education. Students also have the opportunity to enroll in the school's Spanish Immersion Plus program. Additionally, the school playground and outdoor recreational space provides exciting play spaces for children and families. Additional school district information can be found at flaschools.org.

In partnership,

Steve Massey, Ed.D.,
Superintendent

# CITY COUNCIL
# WORK SESSION STAFF REPORT
# ITEM NO. 4

**STAFF ORIGINATOR:** Michael Grochala, Community Development Director

**WORK SESSION DATE:** July 1, 2024

**TOPIC:** EAB Update and Forestry Budget Amendment

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**BACKGROUND**

The City has been proactive in preparing for Emerald Ash Borer (EAB) by completing a plan in early 2010 and beginning a methodical annual ash tree treatment and removal process. Tree removals due to Emerald Ash Borer (EAB) has significantly increased as the infestation has reached it peak. This has strained the City staff's ability to keep up with problem trees. The 2024 Forestry Budget for removals and replacements, increased to $50,000 in 2023, has already been expended. Additional problem areas continue to be identified.

Staff currently prioritizes removals based on proximity to structures, places of congregation and roadways/trails. Depending on the degree of difficulty, removals are completed either by City staff or contracted out.

To continue management of this issue staff is proposing the following actions:

1) Amend the Forestry Budget to increase contracted services by $50,000.
2) Add an additional seasonal employee (4 months) at cost of $13,200.
3) Delayed replacement of boulevard trees. Tree replacement is generally completed concurrent with removals or the following year. This reduces funding for removals by approximately 60 - 70%. Under this scenario a priority list would be created, and replacement would be completed when funding becomes available.

With the proposed increase staff would be able to target multiple high priority areas and complete additional removals in 2024. Staff is proposing to fund the changes through two avenues. Due to other unforeseen hiring priorities the Community Development Specialist position has not been filled as of July 1st. Staff is proposing to use unspent personnel funding in the Community Development Department for the Forestry adjustments. Any shortfall would be covered by reserves.

## REQUESTED COUNCIL DIRECTION

Staff is requesting City Council direction regarding the proposed budget adjustments and consideration of delaying boulevard tree replacement.

## ATTACHMENTS

None.

# CITY COUNCIL
# WORK SESSION STAFF REPORT
# ITEM NO. 5

**STAFF ORIGINATOR:** Michael Grochala, Community Development Director

**WORK SESSION DATE:** July 1, 2024

**TOPIC:** Shenandoah Park Water Quality Improvements Project

---

**BACKGROUND**

In 2022 the City Council authorized a partnership with the Rice Creek Watershed District to identify potential water quality improvements to reduce volume and sediment/nutrient loading to Rice Lake. Rice Lake is designated by the Minnesota Pollution Control Agency (MPCA) as an impaired water. The study evaluated potential improvements to Shenandoah Park.

A private ditch system maintained by the City runs through the park, under Birch Street, and discharges into Rice Lake. The ditch serves as the primary stormwater outlet for the residential neighborhood extending south to Coyote Trail. Most of the park area is comprised of partially drained wetland. Staff is of the opinion that opportunity exists for a restoration project that would enhance water quality and provide an improved greenway element to the park.

The final report was completed in December of 2022. The report included four alternatives of which 2, options 3 and 4 were recommended by the Environmental Board for future consideration. Each of the concepts provided water quality and volume improvements, ecological restoration, and floodplain mitigation. Options for future trail connections were also evaluated. Due to the estimated cost of the projects, it was recommended that the City pursue grant funding through RCWD or other agencies. The City's 5-year Capital Improvement Plan identified this project for implementation in 2025.

The Board of Water and Soil Resources (BWSR) has established the Watershed Based Implementation Funding (WBIF) Grant Program. The grant program allocates funding to each watershed area for allocation in a collaborative local process. City staff and RCWD have proposed the Shenandoah project for funding through this program. We are currently seeking funding that would include alternative selection and preparation of plans and specifications, estimated at $55,000. Once design is completed, the City and RCWD would pursue additional construction funding through the program. Depending on the alternative selected total project costs could range from $250,000 to $500,000.

## REQUESTED COUNCIL DIRECTION

Staff is requesting City Council concurrence for staff to pursue funding and act as the lead party in cooperation with Rice Creek Watershed District for the project.

## ATTACHMENTS

1. Shenandoah Park Feasibility Study.
2. Shenandoah Greenway Concept.

# Shenandoah Improvements Feasibility Report

December 7, 2022

Prepared for:
City of Lino Lakes
600 Town Center Parkway
Lino Lakes, MN 55014

WSB PROJECT NO. 018901-000

# Table of Contents

# 1.0 Introduction

This report provides the City of Lino Lakes and the Rice Creek Watershed District (RCWD) with a series of four (4) conceptual designs and associated water quantity and quality models for implementation of best management practices (BMPs) within Shenandoah Park. These designs address water quality within an aged part of the City of Lino Lakes' stormwater conveyance system draining to Rice Lake (AUID 02-0008-00) which was listed as impaired for nutrients (total phosphorous) in 2010.

Shenandoah Park was identified as a location for the installation of BMP retrofits to improve stormwater quality and reduce the volume of stormwater runoff as part of the Rice Lake Subwatershed Stormwater Retrofit Assessment completed in 2010. While this assessment provided site specific information and load reductions, the assessment report indicated that additional modeling was required for the Shenandoah Park stormwater improvements.

In addition to developing the conceptual designs discussed in this report, WSB also updated the existing InfoSWMM model used by RCWD, developed a P8 model, generated construction estimates for each of the four (4) concepts, and drafted a list of required permits from local, state, and federal entities.

Through a series of meetings with City and Watershed District staff, WSB developed the four (4) concepts discussed in this report to meet the following goals:

1. Reduce total phosphorous (TP) and total suspended solids (TSS) loading within the ditch system and to downstream waterbodies, specifically Rice Lake.
2. Enhance the amenities, aesthetics, and recreational opportunities within the park.
3. Increase floodplain volume within the subwatershed.
4. Restore and rehabilitate park vegetation that will provide wetland functional lift.

# 2.0 Project Location

The proposed improvements are located within the City owned parcels for Shenandoah Park, in the southwestern corner of Lino Lakes. The street addresses for the parcels containing the proposed work are 475 Arrowhead Dr on the south and 498 Birch St on the north. The surrounding properties are either residential or public right of way, with the exception of an existing stormwater pond east of the park. The project location is within the watershed for Rice Lake, which is situated approximately 1,800 feet north of the park.

# 3.0 Site Description

The project is proposed on City park property. Currently the southern portion of the site is largely mowed turfgrass with a play area to the east and a grove of trees to the north. Beyond this grove of trees, the majority of the site is vegetated with reed canary grass and nettle. A stormwater BMP was constructed in the upland northern portion of the project location to treat runoff from the reconstruction of Birch St in 2021.

The site is relatively flat, with an elevation difference of approximately 4 feet across the areas of proposed work. A main feature of the site, and driver of this project, is a drainage ditch that flows across the site from south to north. The ditch comes in from a culvert under Arrowhead Dr and takes multiple 90 degree turns, running north, east, north, west, and finally north to a culvert under Birch St. The channel is well vegetated and there don't appear to be any major areas of slope failure or excessive erosion. The upstream culvert from Arrowhead Dr comes in at an elevation of 886.15 feet while the downstream culvert under Birch St has an elevation of 886.05 feet. The 0.1 foot elevation difference across the ditch means it functionally behaves as flat and the drainage in it is essentially ponded and draws down as such.

A site visit in September 2022 was used to record the existing natural resources and vegetation conditions of the site. The land north of the east-west portion of the ditch within the project area consists of a Type 2 Fresh Wet Meadow wetland dominated by cattails, likely narrow-leaved (*Typha angustifolia*). Reed canary grass (*Phalaris arundinacea*) is dominant along the ditch and banks. The land south of the east-west portion of the ditch within the project area is a Type 1/2 Seasonally Flooded/Fresh Wet Meadow wetland dominated by stinging nettle (*Urtica dioica*). An *Aster spp.* was also observed in low abundance throughout the site. The southeast stretch of the ditch has native red-osier dogwood (*Cornus sericea*) along it in moderate density. Overall, the herbaceous layer within the project area has little diversity. A map of the delineated wetland is below.


The very south end of the project area consists of a manicured turf area adjacent to a play structure. Just north of the play structure is an area of mounded soil (of an unknown origin) and mature tree growth.

To the west of this mound is an area containing tree species typical of a transition zone such as aspen (*Populus tremuloides*). These trees are distressed and rotting. The west side of the turf area has large conifers that provide a screen from the adjacent residential home. Along the west edge of the project area are some existing box elder trees (*Acer negundo*) and silver maple (*Acer saccharinum*) and other small to medium sized diverse trees in good condition.

# 4.0 Identification of Issues

The project area is sited at the intersection of a number of issues facing the City and RCWD. The proposed improvements can be leveraged to address multiple problems at once, the solutions provided by the project will balance the needs of these issues and provide a well-rounded benefit.

## 4.1 Lino Lakes Chain of Lakes TMDL

Many of the lakes connected by Rice Creek in Lino Lakes fall under a TMDL for excess nutrients. This includes a 2010 TMDL for Rice Lake, the receiving water downstream of the project location. This TMDL estimates a 68-80 percent reduction in TP loading to meet desired nutrient levels. This comes to an approximate reduction of over 9,300 pounds of TP. Much of this loading improvement may come from addressing upstream or internal phosphorous loading, however any reduction in TP is a net positive. As proposed, this project will result in a considerable reduction of TP loading to Rice Lake.

## 4.2 Invasive/Nuisance Vegetation

The existing wetlands within the project area are dominated by monotypic stands of cattails (likely invasive or hybrid) or stinging nettle with very low diversity and species richness. Along the ditch, invasive reed canary grass has prevented the growth of native vegetation.

## 4.3 Inefficient Use of Space

The project space is currently very segmented, with the ditch, wetland, and park components separate from each other. There exists a great opportunity for a multifaceted approach at this site for water quality, ecological, floodplain, recreational, and educational benefits. However, these benefits are either not being realized or only realized on an individual basis as-is.

One major issue outlined by the City is a lack of connection between the well-developed trail system to the south and the trail system along Birch St to the north. Connecting these systems would also allow for better pedestrian access through the City and help to achieve its planning goals.

## 4.4 Floodplain

As the downstream end of a stormwater system serving over 200 acres of drainage area, the site has high potential for flooding. As modeled in existing conditions, the 100-year flood elevation is 892.15 feet. This high-water level approaches the lowest floor elevations of homes on Totem Trl. and Arrowhead Dr., putting these homes at risk of flooding. Proposed project basins would lower this high-water level and decrease the risk of homes flooding.

## 5.0 Modeling Methodology

One of the major components of stormwater design for this project is hydrologic and hydraulic modeling. This consists of modeling to understand how much water is flowing through the site, what the peak rates and velocities of the flow reaches are, and how high flood levels will be. InfoSWMM software was used for this modeling in the project. RCWD has developed an InfoSWMM model for the project location and upstream stormwater infrastructure. A part of this project was updating the model based on City as-builts and stormwater system updates since its original creation.

There were two existing ponds added to the model. BAL-012-A and an unnamed pond in Birchwood Acres Park. BAL-012-A was assumed to flow west to Baldwin Lake but based on City as-builts it actually outlets south to pond RLA-012-A and ultimately reaches Shenandoah Park and Rice Lake. The unnamed pond does not have as-built documents, so storage was estimated based on Anoka County LiDAR data flown in 2011. Another update to model existing conditions was a change to the outlet of the Shenandoah ditch under Birch St. The 36 inch RCP in the model was changed to reflect the 24 inch RCP that is there currently. Other smaller changes included updating basin storage based on as-built contours if available or 2011 LiDAR data otherwise. An overview map of the model area in question is below.


InfoSWMM modeling was also generated for the proposed project improvements. This was done to understand the benefits to outflow rates and flood levels in the pond system that may be realized as a result of this project. Generally, it was found that adding storage downstream in Shenandoah Park resulted in flow rate decreases under Birch St and reductions in flood levels through the system. These flood

elevation reductions were greatest at the project location but decreased in effect for ponds further upstream.

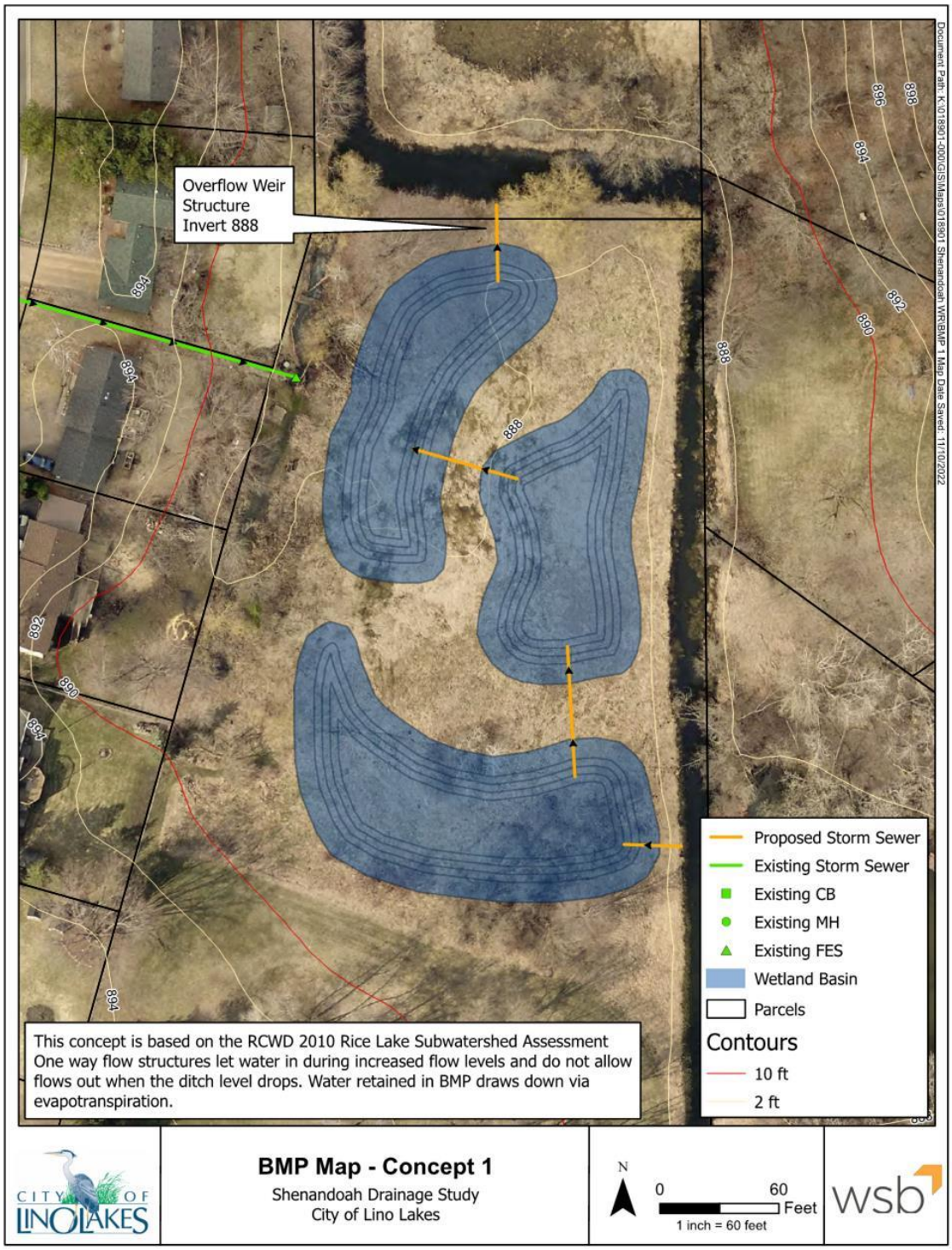
The other major component of stormwater design for this project was in water quality improvements. This modeling seeks to understand what pollutant loading and removals can be expected based on the watershed characteristics and stormwater basins in the system. P8 software was used for water quality modeling. This involved creating an existing conditions P8 model from scratch as there was not one already generated for this drainage area. Pollutant loading was determined based on subwatershed areas and impervious surface fractions. Pollutant removals were determined based on pond as-built conditions. Under existing conditions, the drainage system upstream of the ditch removes nearly 22,500 lb of TSS and approximately 48.5 lb of TP each year.

For proposed conditions, the P8 models were updated to include the proposed improvements with each concept. For the sake of water quality modeling, these BMPs were assumed to function as infiltration basins, where captured pollutant volumes are fully removed from the stormwater system. Existing soils onsite are likely silty sands, providing an infiltration rate of approximately 0.45 in/hr based on the MN Stormwater Manual.

However, based on past soil borings and County groundwater data, it is assumed inconsistent and minimal infiltration will be achievable in the basins due to the shallow depth of the water table in the area. Modeling conservatively assumed an infiltration rate of 0.01 in/hr, the minimum allowable in P8. Actual infiltration averaged over the year may be higher than this based on water table fluctuations. Additionally, P8 modeling does not factor in pollutant removals from evapotranspiration and vegetation uptake, both of which will be emphasized with proposed improvements. Therefore, it is likely that pollutant removals, TP in particular, will be higher than the results given but are difficult to quantify. The results of the modeling described above are summarized in the proposed concepts below.

## 6.0 Concept 1

Concept 1 is based directly on the proposed improvements from the 2010 Rice Lake Subwatershed Assessment developed by the Anoka Conservation District. There are three wetland basins of roughly similar sizes that receive water from the ditch during medium to high flow events. Water is allowed to equalize between the basins and draws down very slowly over time via evapotranspiration and slow infiltration through the hydric soils. Captured water is kept in the basins after ditch levels draw down by virtue of one-way flap gates or duckbill valves on the inlets from the ditch.




This system is not optimized for the full benefits that the site has to offer. It does not use all the space available that the City has to work with and does not provide any improvements to the ditch system.

It does afford space for a pathway between the wetlands and educational interaction points. Concept 1 generally works, but can be improved upon to achieve the greatest site benefits.

## 6.1 Modeling Results

| TSS Removal (lb/yr) | TP Removal (lb/yr) | Ditch 100-yr HWL | HWL Decrease (ft) |
|---|---|---|---|
| 758 | 4.21 | 891.43 | 0.72 |

The results above are based on the P8 and InfoSWMM modeling for this project. The proposed wetland basins provided water quality improvements in accordance with their footprint and volume, TSS and TP removals shown are increases over existing modeled pollutant removals. The drop in ditch high water level is also a function of basin volume. As such, Concept 1 shows the least benefits of all options due to its smaller basin footprint.

## 6.2 Construction Estimate

The main driver of costs for all the provided concepts are excavation costs. Concept 1 calls for approximately 3000 cubic yards of excavation, driving about 50 percent of the construction costs. Other major costs include the construction of associated storm sewer and vegetation restoration across the site. The total estimated concept cost, including a 20 percent cost contingency, is $170,250.

Monitoring and maintenance of the site's natural resources will be key to establishing a diverse, native plant community. Site maintenance includes a minimum of two site visits (spring and fall) for five years to conduct mowing and herbicide spot treatments, and supplemental seeding during one of the recommended five years. The cost of maintenance for five years as described is $34,380. Monitoring the vegetation each year would provide the City with an adaptive management approach to maintenance. The cost of monitoring one time per year for five years is $8,500.

**Construction Cost - Option 1**

| Description | Units | Contract Quantity | Unit Price | Total Price | Comments |
|---|---|---|---|---|---|
| MOBILIZATION | LS | 1 | $10,000 | $10,000 | ~10% of total budget |
| COMMON EXCAVATION | C Y | 3000 | $17.50 | $52,500 | Essentially all cut and removal from site |
| RANDOM RIPRAP CL III | C Y | 20 | $120.00 | $2,400 | For inlets |
| 12" RCP | L F | 190 | $90 | $17,100 | Based on OneOffice |
| 12" RCP APRON | EACH | 2.00 | $1,500 | $3,000 | Based on OneOffice |
| FLAP GATE/DUCKBILL VALVE | EACH | 2.00 | $3,000 | $6,000 | Based on OneOffice, no duckbill estimate |
| STABILIZED CONSTRUCTION ENTRANCE | EACH | 1.00 | $1,500 | $1,500 | Likely off Arrowhead Dr |
| SILT FENCE | L F | 810 | $3.50 | $2,835 | Need around grading + 40' to double up at culvert outlet |
| EROSION CONTROL BLANKET | S Y | 3000 | $3 | $9,000 | Placed on all pond slopes (top contour area - bottom contour area) |
| SEEDING | ACRE | 1.4 | $2,000 | $2,800 | Assume seeding occurs within full limits of disturbance plus over access route |
| SEED MIX 25-151 | LB | 24 | $10 | $240 | Seeding over access road |
| SEED MIX 34-261 | LB | 40 | $75 | $3,000 | Seeding wetland/pond areas |
| 1.5" CAL TREE - BALLED AND BURLAPPED | TREE | 60 | $400 | $24,000 | Based on OneOffice |
| SHRUB - 5 GAL POT | SHRB | 100 | $75 | $7,500 | Based on OneOffice |
| 5 YEAR MONITORING/MAINTENANCE | LS | 1 | $42,880 | $42,880 | |
| | | | 20% Contingency | $28,375 | |
| | | | **Total:** | **$170,250** | |

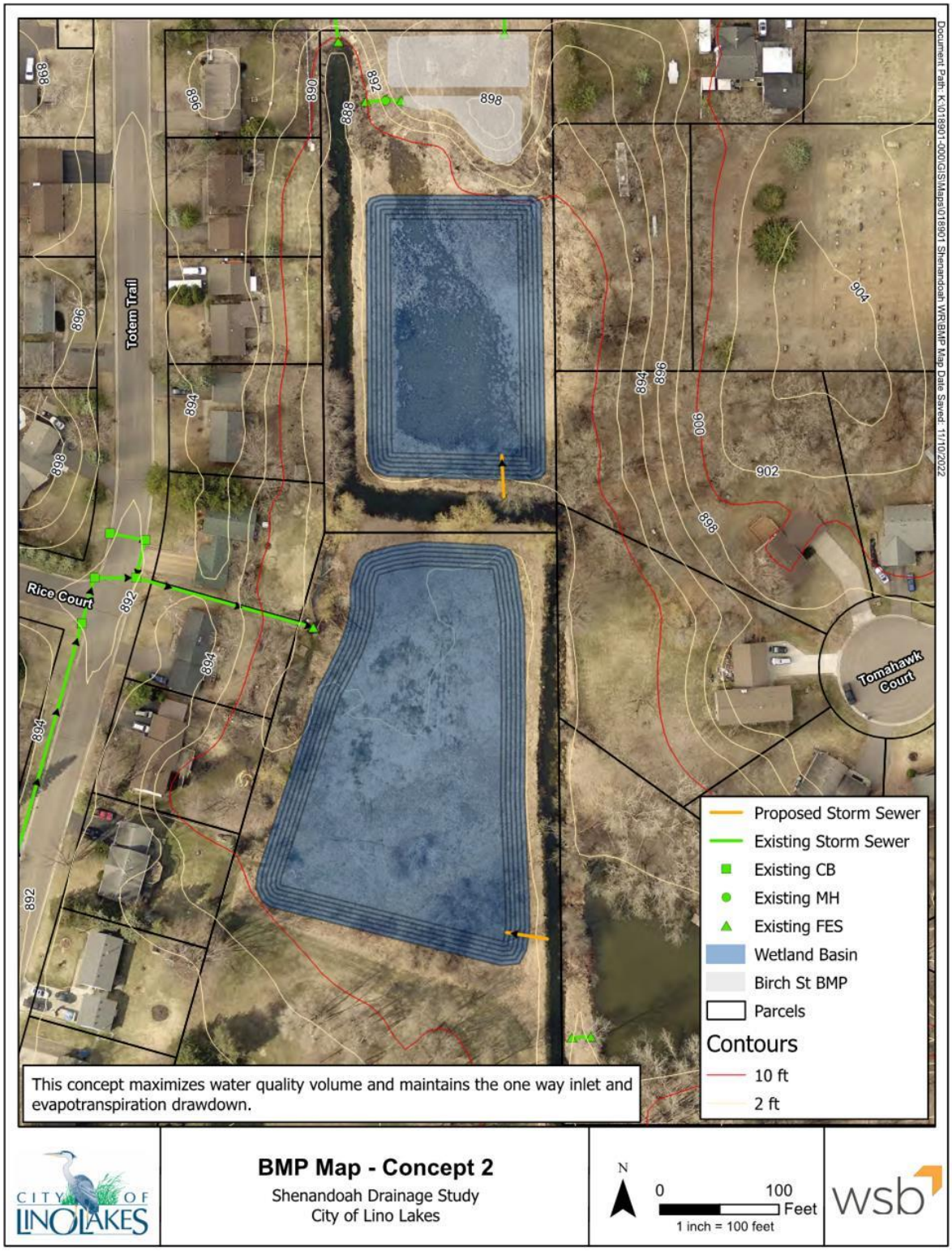
## 6.3 Permit Table

| Permit | Agency | Timeline to Approval |
|---|---|---|
| *Federal* | | |
| Section 404 NWP 27 | US Army Corps | 60-90 days |
| *Local* | | |
| Rice Creek Watershed District Permit | Rice Creek Watershed District | 40 days |
| Wetland Conservation Act No Loss | Rice Creek Watershed District | 60 days |

# 7.0 Concept 2

Concept 2 builds on the wetland basins described in Concept 1, but with an emphasis on maximizing water quality benefits. The proposed basins are maximized to fill as much of the available space and provide the largest area for evapotranspiration and infiltration. One-way inlets are again proposed to allow water to flow in from the ditch but prevent backflow once water levels draw back down in it. The ditch channel is not proposed to be shifted in this concept.

This concept results in the greatest pollutant removal and increase in floodplain capacity. However, that comes at the cost of losing educational and recreational opportunities with the basins. In addition, maximizing basin volume does not provide much diversity in potential wetland improvements as much of it will consist of wet marsh conditions.


Totem Trail
Rice Court
Tomahawk Court
This concept maximizes water quality volume and maintains the one way inlet and evapotranspiration drawdown.
Proposed Storm Sewer
Existing Storm Sewer
Existing CB
Existing MH
Existing FES
Wetland Basin
Birch St BMP
Parcels
Contours
10 ft
2 ft
BMP Map - Concept 2
Shenandoah Drainage Study
City of Lino Lakes
N
0
100
Feet
1 inch = 100 feet
wsb

## 7.1 Modeling Results

| TSS Removal (lb/yr) | TP Removal (lb/yr) | Ditch 100-yr HWL | HWL Decrease (ft) |
|---|---|---|---|
| 1,416 | 9.05 | 891.28 | 0.87 |

The results above are based on the P8 and InfoSWMM modeling for this project. The proposed wetland basins provided water quality improvements in accordance with their footprint and volume, TSS and TP removals shown are increases over existing modeled pollutant removals. The drop in ditch high water level is also a function of basin volume. As such, Concept 2 shows the greatest benefits of all options due to its largest basin footprint.

## 7.2 Construction Estimate

Again, the main driver of costs is excavation, even more so for this concept since basin size is maximized. Concept 2 calls for nearly 15,000 cubic yards of excavation, driving about 80 percent of the construction costs. As with Concept 1, other major costs include the construction of associated storm sewer and vegetation restoration across the site. The total estimated concept cost, including a 20 percent cost contingency, is $410,000.

Monitoring and maintenance of the site's natural resources will be key to establishing a diverse, native plant community. Site maintenance includes a minimum of two site visits (spring and fall) for five years to conduct mowing and herbicide spot treatments, and supplemental seeding during one of the recommended five years. The cost of maintenance for five years as described is $34,380. Monitoring the vegetation each year would provide the City with an adaptive management approach to maintenance. The cost of monitoring one time per year for five years is $8,500.

**Construction Cost - Option 2**

| Description | Units | Contract Quantity | Unit Price | Total Price | Comments |
|---|---|---|---|---|---|
| MOBILIZATION | LS | 1 | $20,000 | $20,000 | ~10% of total budget, slightly lower b/c simpler |
| COMMON EXCAVATION | C Y | 14750 | $17.50 | $258,125 | Essentially all cut and removal from site |
| RANDOM RIPRAP CL III | C Y | 10 | $120.00 | $1,200 | For inlets |
| 12" RCP | L F | 70 | $90 | $6,300 | Based on OneOffice |
| 12" RCP APRON | EACH | 2.00 | $1,500 | $3,000 | Based on OneOffice |
| FLAP GATE/DUCKBILL VALVE | EACH | 2.00 | $3,000 | $6,000 | Based on OneOffice, no duckbill estimate |
| STABILIZED CONSTRUCTION ENTRANCE | EACH | 1.00 | $1,500 | $1,500 | Likely off Arrowhead Dr |
| SILT FENCE | L F | 1,060 | $3.50 | $3,710 | Need around grading + 40' to double up at culvert outlet |
| EROSION CONTROL BLANKET | S Y | 3620 | $3 | $10,860 | Placed on all pond slopes (top contour area - bottom contour area) |
| SEEDING | ACRE | 2.6 | $2,000 | $5,200 | Assume seeding occurs within full limits of disturbance plus over access route |
| SEED MIX 25-151 | LB | 24 | $10 | $240 | Seeding over access road, 120 lb/ac |
| SEED MIX 34-261 | LB | 80 | $75 | $6,000 | Seeding wetland/pond areas, 31.5 lb/ac |
| 1.5" CAL TREE - BALLED AND BURLAPPED | TREE | 30 | $400 | $12,000 | Based on OneOffice |
| SHRUB - 5 GAL POT | SHRB | 100 | $75 | $7,500 | Based on OneOffice |
| 5 YEAR MONITORING/MAINTENANCE | LS | 1 | $42,880 | $42,880 | |
| | | | 20% Contingency | $68,327 | |
| | | | **Total:** | **$409,962** | |

## 7.3 Permit Table

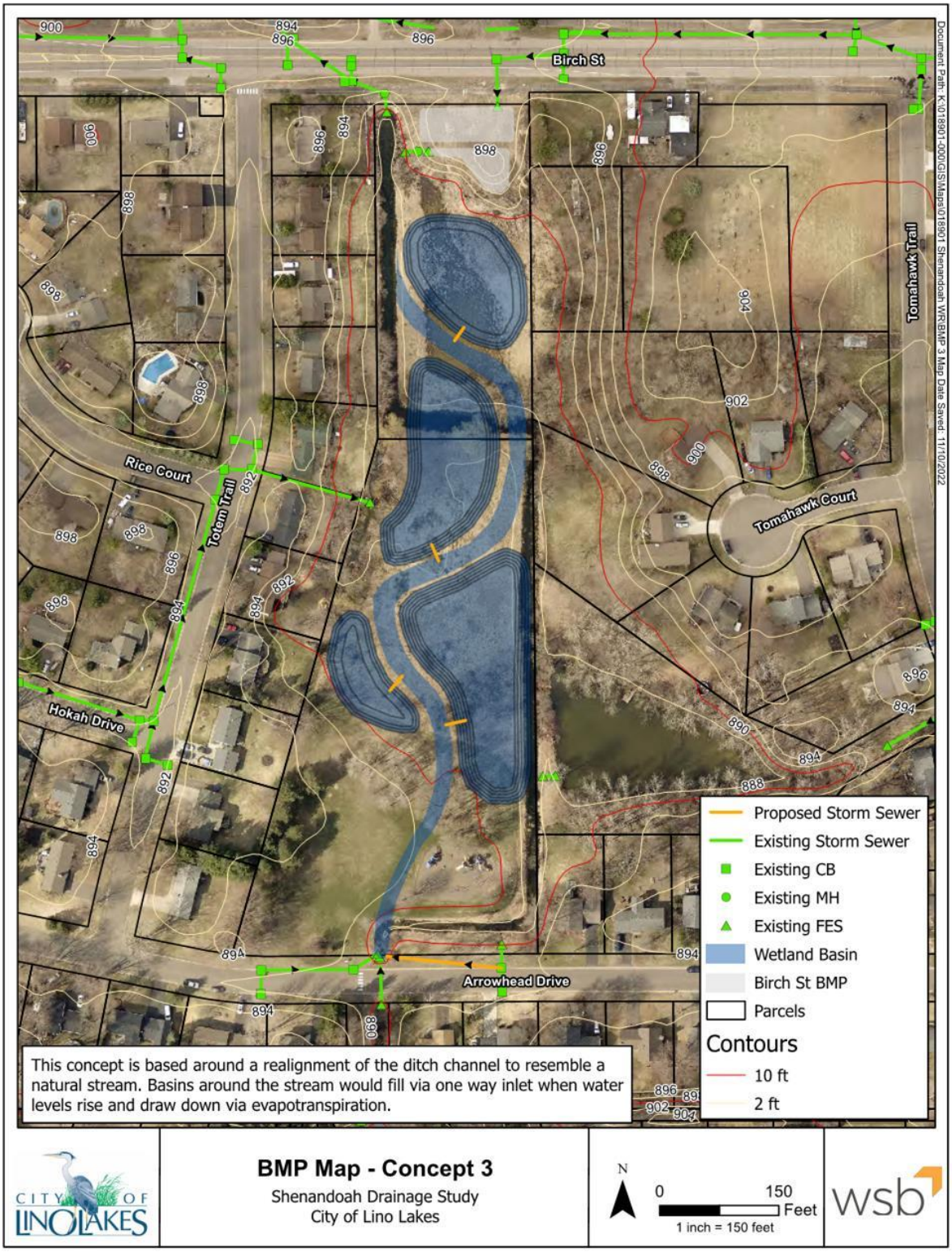
| Permit | Agency | Timeline to Approval |
|---|---|---|
| *Federal* | | |
| Section 404 NWP 27 | US Army Corps | 60-90 days |
| *Local* | | |
| Rice Creek Watershed District Permit | Rice Creek Watershed District | 40 days |
| Wetland Conservation Act No Loss | Rice Creek Watershed District | 60 days |

# 8.0 Concept 3

Concept 3 involves the most holistic improvements for the project, providing benefits to water quality, floodplain management, site ecology, recreation, and education. There are four proposed basins of varying size and depth, providing a variety of wetland environments and water levels. As with the other concepts, water is proposed to enter the basins via one-way inlets. The larger basins are proposed to be of greater depth, allowing for increased water quality volumes to be treated and further reductions in flood elevations.

Another major component of this concept is the realignment of the ditch channel through the park. The proposed channel would be approximately the same length, but follow a more natural and winding route instead of the sharp 90 degree turns, reducing drastic velocity changes and the associated potential erosion.

Concept 3 would also allow for the playground area in the park to be more easily accessible to Arrowhead Trail and also potentially afford some parking spaces in the space freed up by the ditch realignment. The concept also has potential space for boardwalks or trails through much of the park, providing recreational and educational opportunities through the large and varying spaces of restored wetlands, and providing a pedestrian connection from Arrowhead Tr. to Birch St.


Birch St
Tomahawk Trail
Rice Court
Totem Trail
Tomahawk Court
Hokah Drive
Arrowhead Drive
This concept is based around a realignment of the ditch channel to resemble a natural stream. Basins around the stream would fill via one way inlet when water levels rise and draw down via evapotranspiration.
Proposed Storm Sewer
Existing Storm Sewer
Existing CB
Existing MH
Existing FES
Wetland Basin
Birch St BMP
Parcels
Contours
10 ft
2 ft
BMP Map - Concept 3
Shenandoah Drainage Study
City of Lino Lakes
N
0
150
Feet
1 inch = 150 feet
CITY OF LINO LAKES
wsb
Document Path: K:\018901-000\GIS\Maps\018901 Shenandoah WR\BMP 3 Map Date Saved: 11/10/2022

## 8.1 Modeling Results

| TSS Removal (lb/yr) | TP Removal (lb/yr) | Ditch 100-yr HWL | HWL Decrease (ft) |
|---|---|---|---|
| 1,297 | 8.37 | 891.30 | 0.85 |

The results above are based on the P8 and InfoSWMM modeling for this project. The proposed wetland basins provided water quality improvements in accordance with their footprint and volume, TSS and TP removals shown are increases over existing modeled pollutant removals. The drop in ditch high water level is also a function of basin volume. As such, Concept 3 shows the slightly decreased benefits compared to Concept 2, but they are still significant.

## 8.2 Construction Estimate

Excavation costs still dominate the estimate project total under this concept, but less so than Concept 2. 12,500 cubic yards of excavation are proposed, but this would be slightly offset with the proposed embankment volumes to fill in the old ditch channel. Earthwork estimates account for about 70 percent of total improvement costs. The total estimated concept cost, including a 20 percent cost contingency, is $455,350. It should be noted the construction estimate does not include potential recreational improvements such as a boardwalk or trail.

Monitoring and maintenance of the site's natural resources will be key to establishing a diverse, native plant community. Site maintenance includes a minimum of two site visits (spring and fall) for five years to conduct mowing and herbicide spot treatments, and supplemental seeding during one of the recommended five years. The cost of maintenance for five years as described is $34,380. Monitoring the vegetation each year would provide the City with an adaptive management approach to maintenance. The cost of monitoring one time per year for five years is $8,500.

**Construction Cost - Option 3**

| Description | Units | Contract Quantity | Unit Price | Total Price | Comments |
|---|---|---|---|---|---|
| MOBILIZATION | LS | 1 | $30,000 | $30,000 | ~10% of total budget |
| COMMON EXCAVATION | C Y | 12500 | $17.50 | $218,750 | Essentially all cut and removal from site |
| COMMON EMBANKMENT | C Y | 600 | $17.50 | $10,500 | Fill old channel |
| RANDOM RIPRAP CL III | C Y | 20 | $120.00 | $2,400 | For inlets |
| 12" RCP | L F | 240 | $90 | $21,600 | Based on OneOffice |
| 12" RCP APRON | EACH | 5.00 | $1,500 | $7,500 | Based on OneOffice |
| FLAP GATE/DUCKBILL VALVE | EACH | 4.00 | $3,000 | $12,000 | Based on OneOffice, no duckbill estimate |
| STABILIZED CONSTRUCTION ENTRANCE | EACH | 1.00 | $1,500 | $1,500 | Likely off Arrowhead Dr |
| SILT FENCE | L F | 400 | $3.50 | $1,400 | Need around grading + 40' to double up at culvert outlet |
| EROSION CONTROL BLANKET | S Y | 9500 | $3 | $28,500 | Placed on all pond slopes (top contour area - bottom contour area) |
| SEEDING | ACRE | 3.6 | $2,000 | $7,200 | Assume seeding occurs within full limits of disturbance plus over access route |
| SEED MIX 25-151 | LB | 55 | $10 | $550 | Seeding over access road and old channel, 120 lb/ac |
| SEED MIX 34-261 | LB | 100 | $75 | $7,500 | Seeding wetland/pond/channel areas, 31.5 lb/ac |
| LIVE STAKES | EACH | 210 | $3 | $544 | Stabilization along erosive edge of realigned ditch |
| 1.5" CAL TREE - BALLED AND BURLAPPED | TREE | 55 | $400 | $22,000 | Based on OneOffice |
| SHRUB - 5 GAL POT | SHRB | 100 | $75 | $7,500 | Based on OneOffice |
| 5 YEAR MONITORING/MAINTENANCE | LS | 1 | $42,880 | $42,880 | |
| | | | 20% Contingency | $75,889 | |
| | | | **Total:** | **$455,333** | |

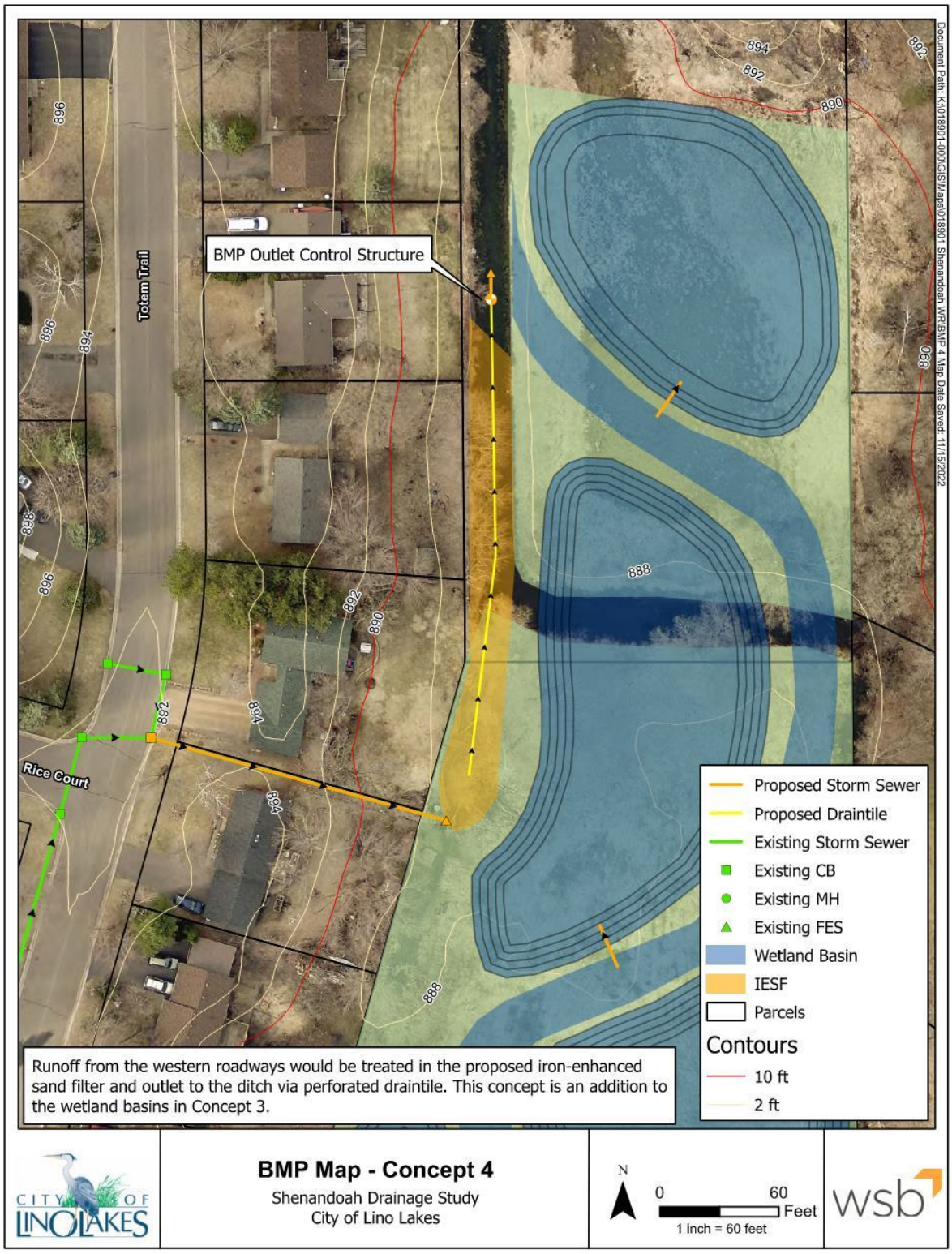
## 8.3 Permit Table

| Permit | Agency | Timeline to Approval |
|---|---|---|
| *Federal* | | |
| Section 404 NWP 27 | US Army Corps | 60-90 days |
| *Local* | | |
| Rice Creek Watershed District Permit | Rice Creek Watershed District | 40 days |
| Wetland Conservation Act No Loss | Rice Creek Watershed District | 60 days |

# 9.0 Concept 4

Concept 4 would consist of improvements largely focused on water quality benefits. Improvements would involve construction of an iron-enhanced sand filter (IESF) to treat the currently untreated runoff from Totem Tr., Hokah Dr., and Rice Ct., west of Shenandoah Park. This concept is proposed in conjunction with Concept 3, but it could also work in a modified capacity on its own or with Concept 1 or 2. All removals, floodplain benefits, and cost estimates factor in Concept 3 base elements and the IESF.

As proposed, the IESF BMP would cover approximately 5,000 square feet with a basin bottom elevation of 887.4 feet. This elevation is based on a slightly raised invert of the outlet pipe for drainage coming off the roadway. Incoming stormwater would gravity flow through the filter media and outlet to the ditch via draintile. The manhole upstream of this outlet pipe is proposed with a 3 feet sump to provide pretreatment prior to flows reaching the IESF.


BMP Outlet Control Structure
Totem Trail
Rice Court
Runoff from the western roadways would be treated in the proposed iron-enhanced sand filter and outlet to the ditch via perforated draintile. This concept is an addition to the wetland basins in Concept 3.
Proposed Storm Sewer
Proposed Draintile
Existing Storm Sewer
Existing CB
Existing MH
Existing FES
Wetland Basin
IESF
Parcels
Contours
10 ft
2 ft
BMP Map - Concept 4
Shenandoah Drainage Study
City of Lino Lakes
N
0
60
Feet
1 inch = 60 feet
CITY OF LINO LAKES
wsb
Document Path: K:\018901-000\GIS\Maps\018901 Shenandoah WR\BMP 4 Map Date Saved: 11/15/2022

## 9.1 Modeling Results

| TSS Removal (lb/yr) | TP Removal (lb/yr) | Ditch 100-yr HWL | HWL Decrease (ft) |
|---|---|---|---|
| 5,688 | 19.75 | 891.30 | 0.85 |

The results above are based on the P8 modeling for this project. The IESF is proposed primarily for water quality benefits, as proposed it would have a negligible impact on floodplain volumes and water levels and therefore, they were unchanged from Concept 3. As shown in the results, this concept would greatly increase TSS and TP removals while taking up a relatively small footprint within the overall project area. Combined with Concept 3, TP removals are near 20 pounds per year.

## 9.2 Construction Estimate

As with Concept 3, excavation costs still dominate the estimated project. Earthwork quantities are slightly increased with the proposed IESF, but its volume is much less than the other wetland basins. Other major costs include the specialized iron-enhanced filter media and replacement of storm sewer. The total estimated concept cost, including a 20 percent cost contingency, is $601,000. Again, this construction estimate does not include potential recreational improvements such as a boardwalk or trail. Refer to the budget table at the end of this section for the base construction cost line item breakdown.

Monitoring and maintenance of the site's natural resources will be key to establishing a diverse, native plant community. Site maintenance includes a minimum of two site visits (spring and fall) for five years to conduct mowing and herbicide spot treatments, and supplemental seeding during one of the recommended five years. The cost of maintenance for five years as described is $34,380. Monitoring the vegetation each year would provide the City with an adaptive management approach to maintenance. The cost of monitoring one time per year for five years is $8,500.

Current design standards assume an approximate 10-year lifespan for effective pollutant capture of an IESF BMP. This lifespan can be extended with filter media replacement. The estimated cost of replacement is $45,000. This includes costs for removal of old media, installation of new iron-enhanced sand, and a 20 percent contingency.

**Construction Cost - Option 4**

| Description | Units | Contract Quantity | Unit Price | Total Price | Comments |
|---|---|---|---|---|---|
| MOBILIZATION | LS | 1 | $50,000 | $50,000 | ~10% of total budget |
| COMMON EXCAVATION | C Y | 13000 | $17.50 | $227,500 | Essentially all cut and removal from site |
| COMMON EMBANKMENT | C Y | 850 | $17.50 | $14,875 | Berm and old channel fill |
| SELECT GRANULAR BORROW | C Y | 100 | $30.00 | $3,000 | Filter sand |
| FILTER MEDIA SPECIAL | C Y | 170 | $175.00 | $29,750 | 5% by weight iron enhanced sand |
| RANDOM RIPRAP CL III | C Y | 30 | $120.00 | $3,600 | For inlets/outlets |
| 6" PERF HDPE PIPE | LF | 250 | $24.00 | $6,000 | BMP underdrain |
| 6" PERF HDPE PIPE CLEANOUT | EACH | 2 | $500.00 | $1,000 | Underdrain cleanout |
| 12" RCP | L F | 250 | $90 | $22,500 | Based on OneOffice |
| 12" RCP APRON | EACH | 6 | $1,500 | $9,000 | Based on OneOffice |
| 30" RCP | L F | 148 | $150.00 | $22,200 | Based on OneOffice, replace pipe from Totem |
| 30" RCP APRON | EACH | 1 | $2,500 | $2,500 | Based on OneOffice |
| FLAP GATE/DUCKBILL VALVE | EACH | 4 | $3,000 | $12,000 | Based on OneOffice, no duckbill estimate |
| 48" OCS | EACH | 1 | $7,500 | $7,500 | Based on OneOffice, IESF outlet |
| 60" MH | L F | 7 | $1,000 | $7,000 | Based on OneOffice, replace in Totem |
| GEOTEXTILE FABRIC | S Y | 800.00 | $3 | $2,400 | Between IE sand and regular sand |
| STABILIZED CONSTRUCTION ENTRANCE | EACH | 1 | $1,500 | $1,500 | Likely off Arrowhead Dr |
| SILT FENCE | L F | 900 | $3.50 | $3,150 | Around filter and downstream of grading |
| EROSION CONTROL BLANKET | S Y | 10000 | $3 | $30,000 | Placed on graded slopes |
| SEEDING | ACRE | 3.6 | $2,000 | $7,200 | Assume seeding occurs within full limits of disturbance plus over access route |
| SEED MIX 25-151 | LB | 55 | $10 | $550 | Seeding over access road and old channel, 120 |
| SEED MIX 34-261 | LB | 100 | $75 | $7,500 | Seeding wetland/pond/channel areas, 31.5 lb/ac |
| LIVE STAKES | EACH | 210 | $3 | $544 | Stabilization along erosive edge of realigned ditch |
| 1.5" CAL TREE - BALLED AND BURLAPPED | TREE | 55 | $400 | $22,000 | Based on OneOffice |
| SHRUB - 5 GAL POT | SHRB | 100 | $75 | $7,500 | Based on OneOffice |
| 5 YEAR MONITORING/MAINTENANCE | LS | 1 | $42,880 | $42,880 | |
| | | | 20% Contingency | $100,154 | |
| | | | **Total:** | **$600,923** | |

## 9.3 Permit Table

| Permit | Agency | Timeline to Approval |
|---|---|---|
| *Federal* | | |
| Section 404 NWP 27 | US Army Corps | 60-90 days |
| *Local* | | |
| Rice Creek Watershed District Permit | Rice Creek Watershed District | 40 days |
| Wetland Conservation Act De Minimis Exemption and No Loss | Rice Creek Watershed District | 60 days |

# 10.0 Summary/Recommendation

All concepts described in this report provide improvements to the existing site vegetation, water quality, and floodplain levels. However, each concept strikes a difference balance of the above in addition to providing potential consideration to recreational benefits for residents on Lino Lakes. The site stormwater benefits are summarized for consideration in the table below.

| BMP Option | Ditch 100-yr HWL | HWL Decrease (ft) | TSS Removal (lb/yr) | TP Removal (lb/yr) |
|---|---|---|---|---|
| Existing | 892.15 | N/A | N/A | N/A |
| Concept 1 | 891.44 | 0.72 | 758 | 4.21 |
| Concept 2 | 891.29 | 0.87 | 1,416 | 9.05 |
| Concept 3 | 891.31 | 0.85 | 1,297 | 8.37 |
| Concept 4 | 891.31 | 0.85 | 5,688 | 19.75 |

A major component of assessing BMP cost efficiency is the estimated cost divided by the provided pounds of TP removal. The proposed improvements were evaluated with a 25-year lifespan. Costs over the lifetime included full construction cost, 5 years of vegetation maintenance, annual BMP maintenance, and any major maintenance costs. These costs and the price per pound of TP are summarized in the table below.

| BMP Option | Annual TP Removal (lb) | Construction Cost | 5-year Vegetation Maintenance Cost | Annual BMP Maintenance Cost | Major O&M Cost | 25-year Cost/Pound TP |
|---|---|---|---|---|---|---|
| Concept 1 | 4.21 | $170,250 | $42,880 | $100 | $0 | $2,049 |
| Concept 2 | 9.05 | $410,000 | $42,880 | $200 | $0 | $2,024 |
| Concept 3 | 8.37 | $455,350 | $42,880 | $200 | $0 | $2,405 |
| Concept 4 | 19.75 | $601,000 | $42,880 | $300 | $45,000 | $1,410 |

All concepts proposed provide improvements in varying degrees. Concept 1 provides lower benefits but comes at a lower cost and would entail a smaller amount of disturbance to existing site conditions. Concept 2 maximizes basin size and associated pollutant removals, but at an increased cost and with no broader improvements to the park. Concept 3 provides large basin sizes, ditch realignment similar to a natural channel, and potential recreational benefits, but with a greater cost and major site disturbance. Concept 4 provides similar benefits in addition to the best cost per pound of TP removal, but at a significant upfront cost and higher long term maintenance needs.

This report recommends the City consider the improvements in Concept 4. The proposed work would allow for high degrees of wetland improvements in large basins that would also serve to reduce flood levels. Ditch realignment would further serve to enhance these natural resources benefits while also providing options for a greenway trail system and educational opportunities around the merits of stormwater treatment and wetland ecosystems. Finally, the proposed IESF would provide exceptional pollutant treatment and the best price per pound of TP removed. With the wide degree of benefits and greatest price-quantified water quality improvement, Concept 4 would also be a strong candidate to receive grant funding to help the City offset its construction costs. However, WSB will be happy to support the City in pursuing further design of any concept proposed.

BIRCH STREET

TRAIL

COUNTY STORM WATER BASIN

TOTEM TRAIL

RICE CT

IRON ENHANCED SAND FILTER

WETLAND BASIN (TYP)

PROPOSED CHANNEL ROUTE

PROPOSED HIGH WATER LEVEL ELEVATION 891.31

BOARDWALK

HOKAH DR

SHENANDOAH PARK

EXISTING POND

TRAIL

EXISTING PLAY AREA

ARROWHEAD DRIVE

# Shenandoah Drainage Concept Plan

Lino Lakes, MN

September 15, 2023 | WSB Project number: 018901-000

0′ 25′ 50′ 100′

Scale in Feet

wsb

K:\018901-000\Graphics\018901-000 Shenandoah

# CITY COUNCIL
# WORK SESSION STAFF REPORT
# ITEM NO. 6

**STAFF ORIGINATOR:** Michael Grochala, Community Development Director

**WORK SESSION DATE:** July 1, 2024

**TOPIC:** RCWD/VLAWMO Boundary Adjustments

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## BACKGROUND

In 2022 the Rice Creek Watershed District (RCWD) undertook a hydrologic boundary review within Ramsey, Anoka and Hennepin Counties. The purpose of the review was to align the jurisdictional boundary more closely to the hydrological boundary between the respective water management organizations.

The process identified boundary discrepancies in need of modification. A total of 38 parcels, 3 of which are owned by the City of Lino Lakes, will be effected by the boundary adjustments. 12 parcels will switch from RCWD to VLAWMO and the balance will revert to RCWD jurisdiction. In each case the determination is that more than 50% of the property drains to RCWD jurisdiction.

State law requires that RCWD submit and petition for the change to the Board of Water and Soil Resources (BWSR). The petition must be accompanied by letters of concurrence from the individual local units of government. RCWD has requested a letter of concurrence by August 9, 2024. Public notice of the proposed boundary adjustment is provided by BWSR upon receipt of the petition from RCWD. Staff has requested additional information on the notification process.

City comments, coordinated with VLAWMO, appear to have been incorporated into the proposed boundary adjustment. VLAWMO is completing a final review and is anticipating consideration in August. Staff anticipates bringing the item for consideration by the City Council in late July or early August.

## REQUESTED COUNCIL DIRECTION

Staff is requesting City Council discussion and comments regarding the proposed adjustments.

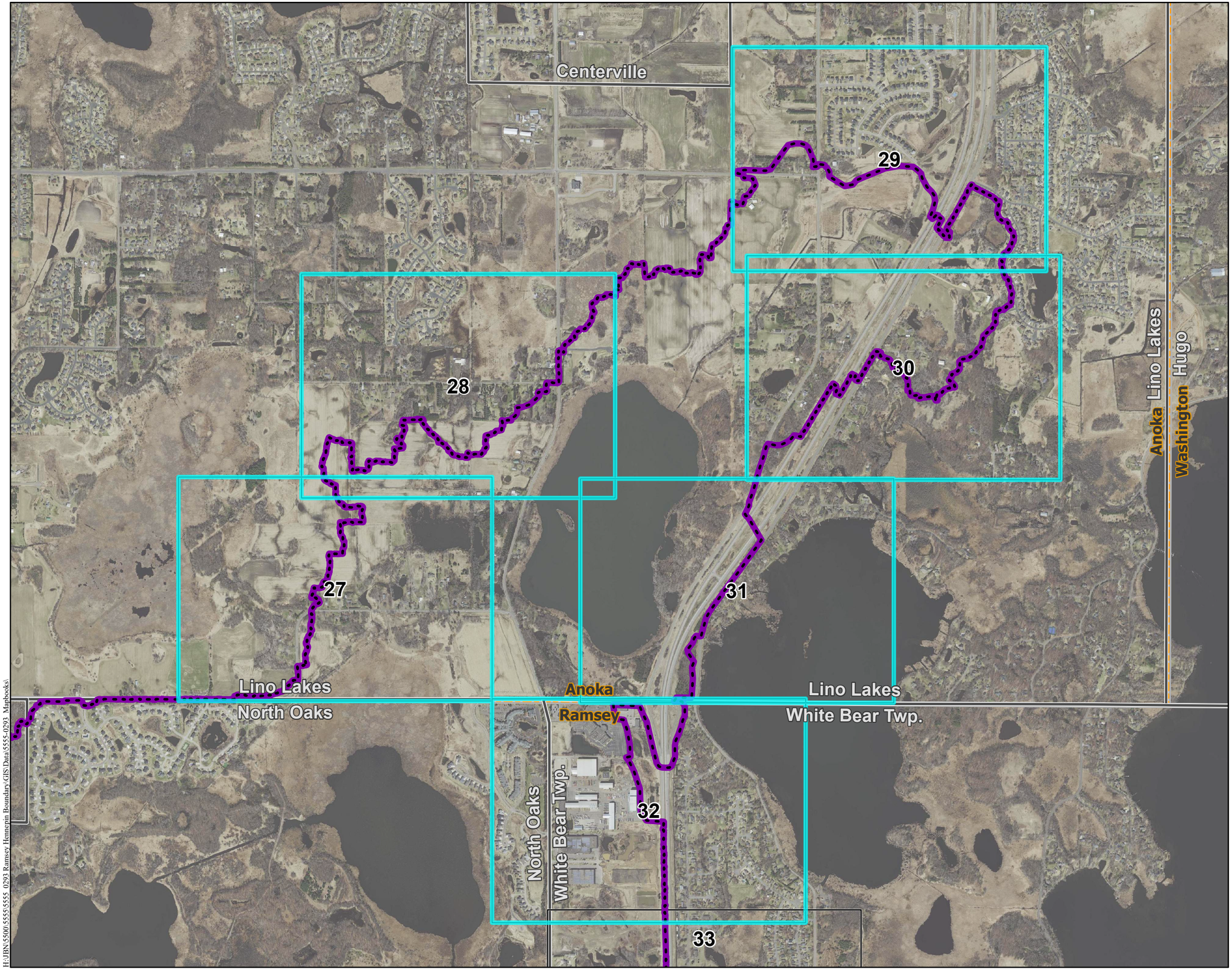
**ATTACHMENTS**

1. Lino Lakes Changing Parcel List
2. Lino Lakes Map Book

| PIN | Owner | Address | City | Old District | New District | Reasoning | Mapbook Page | Map ID |
|---|---|---|---|---|---|---|---|---|
| 353122140005 | BERGMAN JOHN M & SUSANNE A | 6364 20TH AVE | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 30 & 31 | 1320 |
| 363122220003 | PETERSON, BRANDON | 2090 64TH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 30 | 1321 |
| 363122220002 | LINDQUIST MATTHEW W | 2098 64TH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 30 | 1322 |
| 363122210008 | AVILES ROLANDO & NANCY M | 2116 64TH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 30 | 1323 |
| 363122210005 | BULLIS S J & FELLMAN P C | 2112 64TH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 30 | 1324 |
| 353122220010 | KRONZER MICHAEL JOSEPH | 1624 HOLLY DR | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1325 |
| 353122220009 | GOIFFON DENISE C | 1620 HOLLY DR E | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1326 |
| 353122220008 | RICHTER TRUSTEE, ARLEN J | 1616 HOLLY DR E | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1327 |
| 353122220007 | WANDERSEE GLENN E | 1608 HOLLY DR | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1328 |
| 353122220006 | BORYCZKA ELIZABETH W |  | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1329 |
| 353122220005 | RENNER, RODERICK M | 1621 HOLLY DR | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1330 |
| 353122220004 | GONDEK, JAMES P | 6391 CENTERVILLE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1331 |
| 353122220003 | HOULE MARLENE A | 6389 CENTERVILLE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1332 |
| 353122220002 | AMES TRUSTEE, DORIS A | 1631 HOLLY DR | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1333 |
| 353122220001 | MICKLE, BRENDA | 6383 CENTERVILLE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 28 | 1334 |
| 343122430002 | EDDY, VICTORIA A | 6097 ASH ST | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 27 | 1335 |
| 343122420004 | BACHMAN SR, WARREN D | 1487 ASH ST | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 27 | 1336 |
| 343122420003 | WRUCK, GARY D | 1443 ASH ST | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 27 | 1337 |
| 263122140100 | LINO LAKES CITY OF | 600 TOWN CENTER PARKWAY | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1338 |
| 263122140099 | PETERSON TIMOTHY | 1962 WILLIAM LN | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1339 |
| 263122140098 | CHAPMAN DAVID | 1958 WILLIAM LN | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1340 |
| 263122140081 | PALKOVICH ERIC | 6652 HERITAGE AVE | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1341 |
| 263122140008 | NU DAH | 1969 BIRCH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1342 |
| 263122140007 | HECK JAMES | 6625 20TH AVE | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1343 |
| 263122140005 | HART MICHAEL E | 1989 BIRCH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1344 |
| 263122140004 | SCHLUNDT, ROBERT | 1997 BIRCH ST | Lino Lakes | Rice Creek WSD | Vadnais Lake Area WMO | <50% in RCWD, hydro boundary change | 29 | 1345 |
| 253122420086 | LINO LAKES CITY OF | 600 TOWN CENTER PKWY | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1346 |
| 253122420081 | HELSETH, BRENDA L | 2224 TART LK RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1347 |
| 253122420080 | LARSON, KELLIE | 2230 TART LK RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1348 |
| 253122420079 | GERDES, TRINETTA M | 6545 LANGER LN | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1349 |
| 253122420078 | JARVIS PATRICK T & VOSS JANA L | 6539 LANGER LN | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1350 |
| 253122420077 | RILEY THOMAS & PAMELA | 6533 LANGER LANE | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1351 |
| 253122420076 | HAIDER, JON | 6527 LANGER LN | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1352 |
| 253122420007 | POWELL JEFFREY | 2231 TART LAKE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1353 |
| 253122420006 | KRUSE TRUSTEE JIMMY | 2225 TART LAKE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1354 |
| 253122420005 | ARMSTRONG, ANDREW M | 2219 TART LAKE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1355 |
| 253122310013 | LINO LAKES CITY OF | 600 TOWN CENTER PKWY | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 29 | 1356 |
| 353122430002 | BJORK, BONNIE L | 6206 OTTER LAKE RD | Lino Lakes | Vadnais Lake Area WMO | Rice Creek WSD | >50% drains to RCWD, hydro boundary change | 31 & 32 | 1357 |

RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review




Surrounding WMO Hydrologic Boundaries
RCWD Hydrologic Boundary
County Boundary
City Boundaries

N
W E
S

0 0.13 0.25 0.5 Miles

**Legal Boundary Review - Page 1 of 41**

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:16,487 | KRB | CCO | 5555-0293 | 5/8/2024 | 1 of 41 |

HOUSTON engineering, inc.

H:\JBN\5500\55555555_0293 Ramsey Hennepin Boundary\GIS\Data\5555-0293_Mapbooks\

RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review

RICE CREEK WATERSHED DISTRICT

1336

1337

1335

Anoka

Ramsey

Lino Lakes

North Oaks

- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD

N

W E

S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 27 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
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| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 27 of 41 |

HOUSTON engineering, inc.

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RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review

RICE CREEK WATERSHED DISTRICT

1329 1330 1331 1332 1333 1334 1325 1326 1327 1328

- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD

N W E S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 28 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 28 of 41 |

HOUSTON engineering, inc.

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RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review

Centerville

RICE CREEK WATERSHED DISTRICT

1340 1339 1341 1343 1342 1338 1344 1345

1356 1346 1355 1354 1353 1347 1348 1349 1350 1351 1352

- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD
- VLAWMO

N
W E
S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 29 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 29 of 41 |

HOUSTON engineering, inc.

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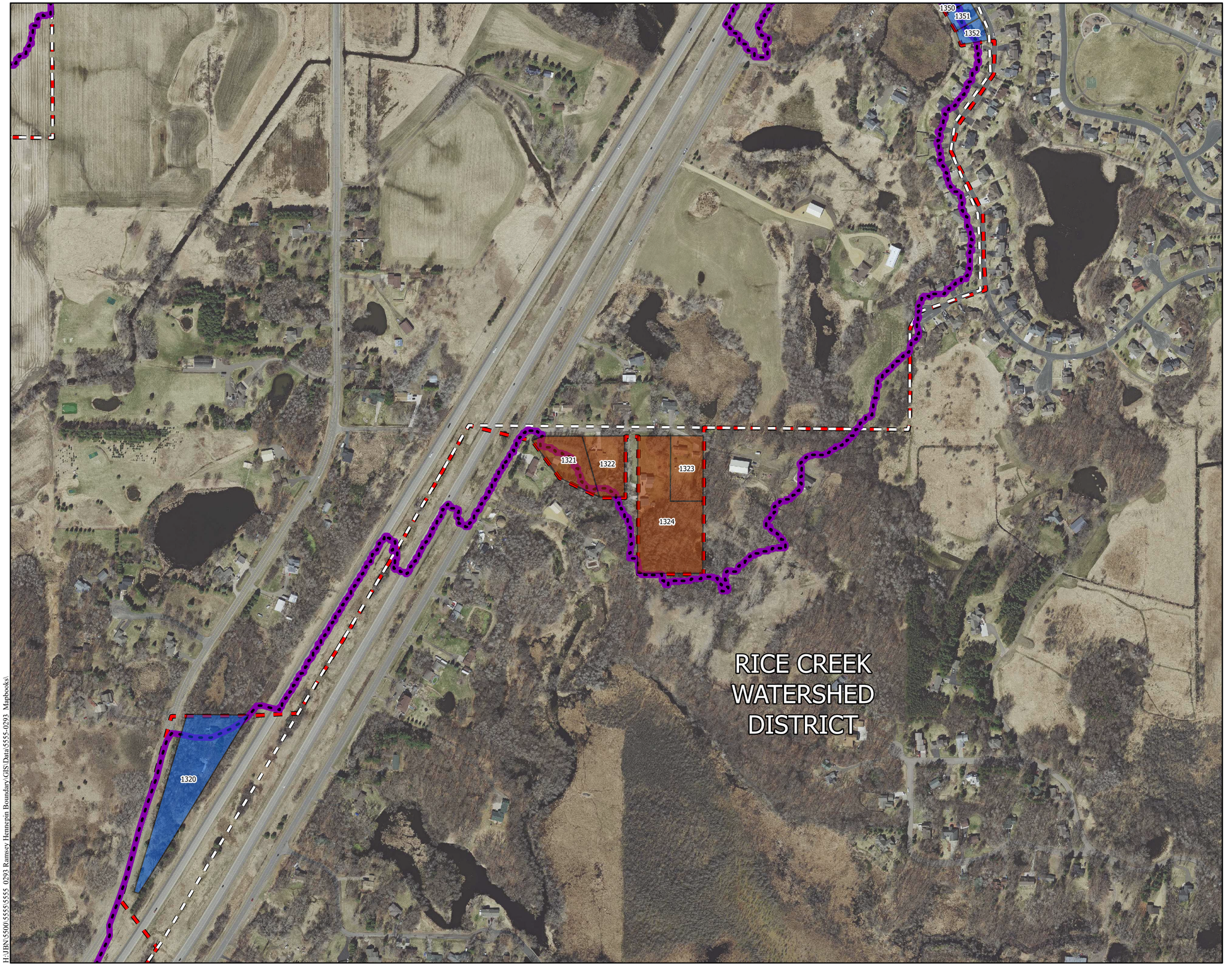
RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review




- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD
- VLAWMO

N
W E
S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 30 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 30 of 41 |

HOUSTON engineering, inc.

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RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review

RICE CREEK WATERSHED DISTRICT

1320
1357
786
428
981
430
979
1313

Lino Lakes
White Bear Twp.
Anoka
Ramsey

- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD

N
W
E
S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 31 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 31 of 41 |

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RCWD
RICE CREEK WATERSHED DISTRICT

# Legal Boundary Review

Lino Lakes
North Oaks
Lino Lakes
White Bear Twp.
Anoka
Ramsey
North Oaks
White Bear Twp.
RICE CREEK WATERSHED DISTRICT

1357
786
428
981
430
979
1313
386
381
426
442
488
451
452
453
494
427
443
489
444
429
502
508
509
510
718
554
533
536
541
559
523
524
427
525
531
532
557
553
544
938

- Areas Called Out in Memo
- RCWD Hydrologic Boundary
- Current RCWD Legal Boundary
- Recommended RCWD Legal Boundary
- City Boundaries
- County Boundary

New Watershed

- RCWD

N
W E
S

0 0.05 0.1 0.2 Miles

Legal Boundary Review Page 32 of 41

| Scale: | Drawn by: | Checked by: | Project No : | Date: | Sheet: |
|---|---|---|---|---|---|
| 1:5,000 | KRB | CCO | 5555-0293 | 5/8/2024 | 32 of 41 |

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