**Agenda**
**Planning Commission**
**City Of Edina, Minnesota**
**City Hall, Council Chambers**

**Wednesday, November 17, 2021**
**7:00 PM**

**Watch the meeting on cable TV or at EdinaMN.gov/LiveMeetings or Facebook.com/EdinaMN.**

**To participate in Public Hearings:**
**Call 800-374-0221.**
**Enter Conference ID 7375703.**
**Give the operator your name, street address and telephone number.**
**Press *1 on your telephone keypad when you would like to get in the queue to speak.**
**A City staff member will introduce you when it is your turn.**

**Or attend the meeting to provide testimony, City Hall Council Chambers, 4801 W. 50th St.**

I. Call To Order

II. Roll Call

III. Approval Of Meeting Agenda

IV. Approval Of Meeting Minutes

A. Minutes: Planning Commission October 27, 2021

V. Community Comment

*During "Community Comment," the Board/Commission will invite residents to share relevant issues or concerns. Individuals must limit their comments to three minutes. The Chair may limit the number of speakers on the same issue in the interest of time and topic. Generally speaking, items that are elsewhere on tonight's agenda may not be addressed during Community Comment. Individuals should not expect the Chair or Board/Commission Members to respond to their comments tonight. Instead, the Board/Commission might refer the matter to staff for consideration at a future meeting.*

VI. Public Hearings

A. B-21-32 Setback Variance for a Freestanding Sign at 5050 France Avenue

B. PUBLIC HEARING: Conditional Use Permit - 5701 Benton Avenue

(Countryside School)

C. PUBLIC HEARING: Zoning Ordinance Amendment - Impervious Surface, Basement, 1-foot rule and Setback Definitions.

VII. Reports/Recommendations

A. Sketch Plan Review - 5780 Lincoln Drive (Londonderry Apartments)

B. Sketch Plan Review - 4701 77th Street West

VIII. Chair And Member Comments

IX. Staff Comments

X. Adjournment

The City of Edina wants all residents to be comfortable being part of the public process. If you need assistance in the way of hearing amplification, an interpreter, large-print documents or something else, please call 952-927-8861 72 hours in advance of the meeting.

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov

**Date:** November 17, 2021

**Agenda Item #:** IV.A.

**To:** Planning Commission

**Item Type:**
Minutes

**From:** Liz Olson, Administrative Support Specialist

**Item Activity:**
Action

**Subject:** Minutes: Planning Commission October 27, 2021

---

**ACTION REQUESTED:**
Approve the minutes from the October 27, 2021 Planning Commission.

**INTRODUCTION:**

**ATTACHMENTS:**

Minutes Planning Commission October 27, 2021

Draft Minutes ☒
Approved Minutes ☐
Approved Date: ___, 2021

Minutes
City Of Edina, Minnesota
Planning Commission
Edina City Hall Council Chambers
October 27, 2021

## I. Call To Order

Chair Agnew called the meeting to order at 7:00 PM.

## II. Roll Call

Answering the roll call were: Commissioners Miranda, Berube, Strauss, Bennett, Hayward, Barberot and Chair Agnew. Staff Present: Cary Teague, Community Development Director, Kris Aaker, Assistant Planner, Addison Lewis, Residential Redevelopment Coordinator, Liz Olson, Administrative Support Specialist.

Absent from the roll call: Commissioners Olsen, Bartling, and Alkire.

## III. Approval Of Meeting Agenda

**Commissioner Berube moved to approve the October 27, 2021, agenda. Commissioner Strauss seconded the motion. Motion carried.**

## IV. Approval Of Meeting Minutes

### A. Minutes: Planning Commission, October 13, 2021

**Commissioner Miranda moved to approve the October 13, 2021, meeting minutes. Commissioner Bennett seconded the motion. Motion carried.**

## V. Community Comment

None.

## VII. Reports/Recommendations

### A. Sketch Plan Review – 6016 Vernon Avenue

Director Teague presented the request of 6016 Vernon Avenue for a Sketch Plan Review.

Staff answered Commission questions.

### Appearing for the Applicant

Mr. Marty Collins and Mr. Chris Davis, applicants addressed the Commission and answered questions.

The Commission reviewed the sketch plan and offered the following comments:

- Concern with the number of seats available in the restaurant with fewer parking spaces available
- Concern with the hours of operation
- Liked the sketch plan but there is no parking
- Could be made into a cafe so parking would not be needed
- Vision for Vernon is to make it into a nice corridor for walking and biking
- Kernel of a brilliant idea but the details are wrong
- Liked on street parking idea
- Single story building with surface parking is not the best use of the property
- Likes that the proposal is not a drive through operation
- Likes the idea of having something that will be walkable
- Having a gathering space would be great
- Great place for a restaurant/gathering area
- Difficult space for anything

### A. Cahill District Area Plan – Working Group Greenprint

Director Teague presented Cahill District Area Plan. Staff recommended approval of the Working Group Greenprint. He introduced Edina's Residential Redevelopment Coordinator Addison Lewis to the Commission.

Mr. Lewis addressed the Commission.

Chair Agnew explained what the Working Group Greenprint entails.

The Commission asked questions of staff about the Cahill District Area Plan.

**Motion**

**Commissioner Berube moved that the Planning Commission approve the Working Group Greenprint as presented. Commissioner Strauss seconded the motion. Motion carried.**

## VIII. Correspondence and Petitions

None.

## IX. Chair and Member Comments

Received.

## X. Staff Comments

Received.

## XI. Adjournment

**Commissioner Berube moved to adjourn the October 27, 2021, Meeting of the Edina Planning Commission at 8:14 PM. Commissioner Strauss seconded the motion. Motion carried.**

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov


**Date:** November 17, 2021

**Agenda Item #:** VI.A.

**To:** Planning Commission

**Item Type:**
Report and Recommendation

**From:** Emily Bodeker, Assitant City Planner

**Item Activity:**
Action

**Subject:** B-21-32 Setback Variance for a Freestanding Sign at 5050 France Avenue

---

**ACTION REQUESTED:**
Approve the 10-foot setback variance for a freestanding sign at 5050 France Avenue South as requested.

**INTRODUCTION:**
The applicant is requesting a setback variance for a freestanding sign at 5050 France Avenue South. The proposed sign is located within an existing planting bed approximately 10 feet from the curb along France Avenue. The City's sign code requires freestanding signs to be setback 20 feet from the traveled portion of the street, which is interpreted as the curb. The size and height of the proposed sign is compliant with the City's Sign Ordinance.

**ATTACHMENTS:**

Staff Report
Site Location Map
Applicant Submittal
Better Together Public Hearing Comment Report

# STAFF REPORT

**Date:** November 17, 2021

**To:** PLANNING COMMISSION

**From:** Emily Bodeker, Assistant City Planner

**Subject:** B-21-32, A 10-foot setback variance for a freestanding sign located 10 feet from the traveled portion of the street at 5050 France Avenue South

**Information / Background:**

The applicant is requesting a setback variance for a freestanding sign at 5050 France Avenue South. The property is located on the west side of France Avenue, at the northwest corner of the intersection of France Avenue South and 51st Street West.

The proposed sign is located within an existing planting bed approximately 10 feet from the curb along France Avenue. The City's sign code requires freestanding signs to be setback 20 feet from the traveled portion of the street, which is interpreted as the curb. The applicant has indicated that there is no intent to add tenants to the proposed monument sign and the sign will be dedicated to the University of Minnesota Physicians' sole use for the duration of their lease and renewals. The size and height of the proposed sign is compliant with the City's Sign Ordinance.

**Surrounding Land Uses**

| | |
|---|---|
| Northerly: | Commercial building zoned PCD-2 and guided Mixed Use Center. |
| Easterly: | Commercial building, City of Minneapolis |
| Southerly: | Multifamily building zoned PRD-4 and guided Mixed Use Center. |
| Westerly: | Multifamily building zoned PRD-4 and parking garage zoned APD, Automotive Parking District and guided Mixed Use Center. |

**Existing Site Features**

The 26,857 square foot lot (.62 acres) is located on the west side of France, at the northwest corner of the intersection of France Avenue South and 51st Street West. There is a two-story office building and associated parking on site.

**Planning**

| | |
|---|---|
| Guide Plan designation: | Mixed Use Center |
| Zoning: | PCD-2, Planned Commercial District |

**Compliance Table**

| | Sign Standards in PCD-2 | Proposed |
|---|---|---|
| Setback – | 20 feet to the traveled portion of the street | **10 feet*** |
| Square footage- Freestanding Sign | 80 square feet | 29.33 square feet |
| Height– | 8 feet | 8 feet |

***Requires a variance.**

**The 20-foot setback requirement for freestanding signs is consistent across all zoning districts.**

## PRIMARY ISSUES & STAFF RECOMENDATION

### Primary Issues

### Is the proposed variance justified?

Yes, Staff believes the requested setback variance is justified. If the proposed sign was placed 20 feet from the traveled portion of the street, it would be placed within the existing parking stalls. The proposed sign location doesn't interfere with any sight lines or the sidewalk along France Avenue.

### Minnesota Statues and Edina Ordinances required that the following conditions must be satisfied affirmatively to grant a variance. The proposed variance will:

***1) Relieve practical difficulties that prevent a reasonable use from complying with ordinance requirements.***

The practical difficulty is that the existing layout of the site. The site is compact and doesn't allow for a freestanding sign to be placed on the east frontage of the site without a variance. The proposed location will not interfere with sight lines or the sidewalk along France Avenue.

***2) There are circumstances that are unique to the property, not common to every similarly zoned property, and that are not self-created?***

There are limited lots in the 50th & France District that allow for freestanding signage because the majority of the buildings in the district encompass the lot in which they are on. The subject property is one of the few lots where that is not the case and is unique in the fact that there is

parking available on site. The freestanding sign will help with wayfinding and identification of the building and available parking on site.

Similar variances have been granted in the general vicinity of the subject property. There was a variance granted for Gateway Bank at 4530 France Avenue, near 44th & France, in 2016 to locate their freestanding sign 10 feet back from the traveled portion of the road. A setback variance was granted in 2019 for a freestanding sign at Tufford-Hughes, 4536 France Avenue, to allow for the sign to be placed 13.67-feet from the traveled portion of the street.

An eight-foot setback variance was granted in 1993 for the freestanding sign located at Lunds & Byerlys, 3945 50th Street W.

***3) Will the variance alter the essential character of the neighborhood?***

No, the proposed variance does not alter the essential character of the neighborhood. There are signs in the general vicinity that have a similar setback. With the exception of the setback, the proposed sign meets code requirements.

## Staff Recommendation

Approve the requested variance to allow the freestanding sign at 5050 France Avenue South to be located 10-feet from the traveled portion of the street based on the following findings:

1. The proposed sign complies with zoning standards, with exception of the setback.

2. The existing layout of the site does not allow for the sign to be placed to meet the required setback. Relocating the sign to meet the required setback would put the sign in the middle of existing parking.

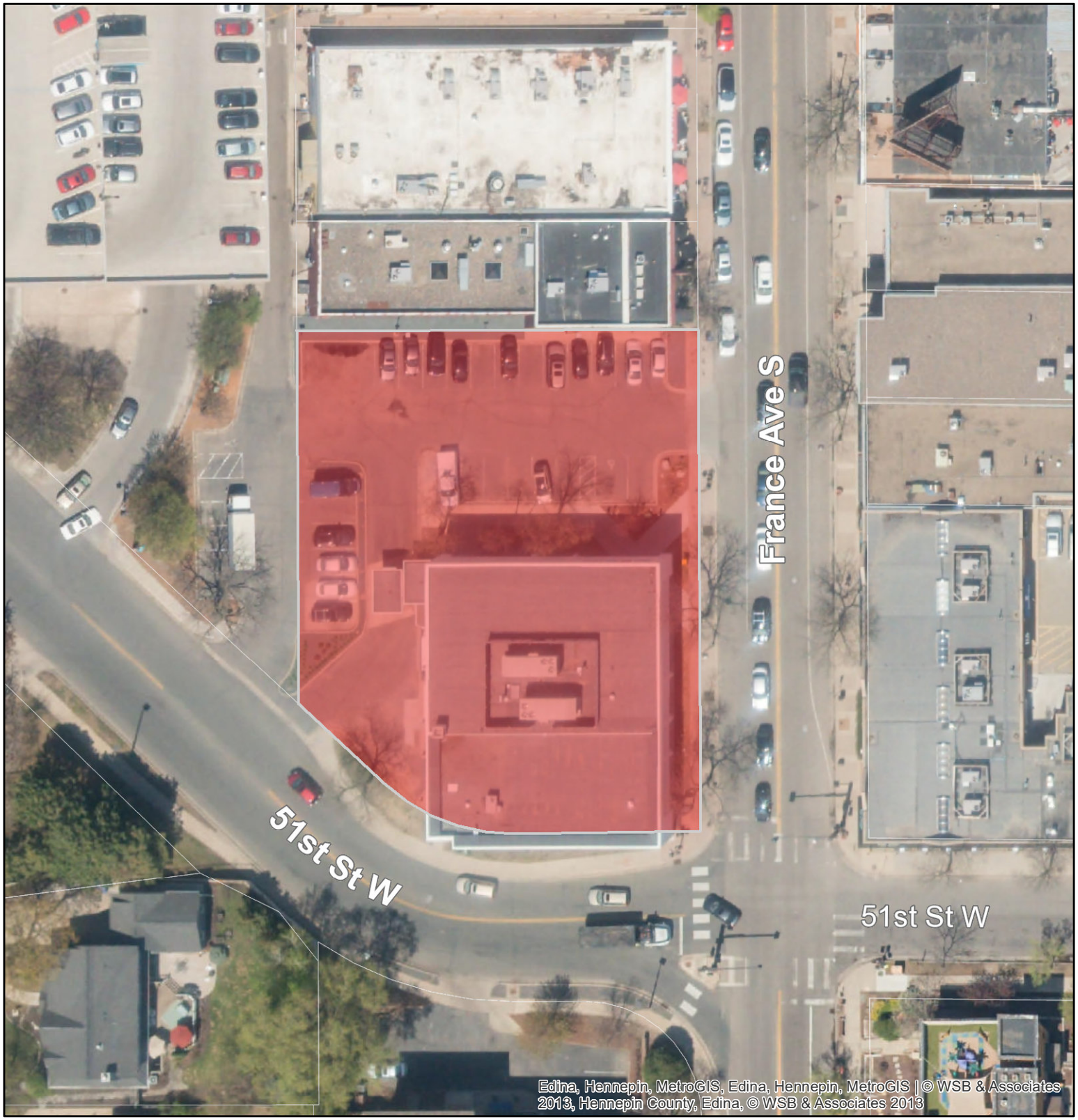
3. The proposed sign fits the character of the neighborhood. The sign is appropriate in size and scale.

4. Similar setback variances have been granted for properties in the area. Gateway Bank at 4530 France Avenue in 2016; Tufford-Hughes at 4536 France Avenue South; and Lunds & Byerlys at 3945 50th Street West in 1993.

Approval is subject to the following conditions:

1. The site must be developed and maintained in conformance with the following plans:
    - Sign plans and elevations date stamped October 8, 2021.

# 5050 France Ave S




1 in = 50 ft

The CITY of EDINA

N
W E
S

October 27, 2021

## Variance Request
## University of Minnesota Physicians

### Relieve practical difficulties in complying with the zoning ordinance and that the use is reasonable.

The sign code requires a 20 ft setback for a free-standing monument sign from the traveled portion of a road. There is no location on this property that would enable the 20 ft setback. The proposed location along France Avenue would allow for visibility of the sign while not interfering with driver's vision.

Allowing this monument sign would increase clinic identification and ease of navigating for vehicle traffic, to reduce potential traffic congestion in the surrounding neighborhood. Vehicle traffic would be directed to the private and dedicated off-street surface parking lot spaces, resulting in less use of high demand public street parking.

### Correct extraordinary circumstances applicable to this property but not applicable to other property in the vicinity or zoning district.

The area around 50th and France is a highly dense urban environment with little room for setback of signs. Most of the sites within a similar zoning district have ample room for the 20 ft sign setback.

### Be in harmony with the general purposes and intent of the zoning ordinance.

The intent of the ordinance is to prevent a sign from interfering with a driver's field of vision while navigating the streets. The proposed monument sign would only partially block a driver's vision of the building itself and the parking lot. The sign does not block any traffic control signs. Additionally, the 11 ft lane directly adjacent to the west sidewalk of France Avenue is for parking only and not an active "traveled portion" of the street. This buffer, when included, would allow for a 20+ foot setback of the sign from the traveled portion of France Avenue.

### Not alter the essential character of a neighborhood.

The proposed design of the monument sign is contemporary in style and will not alter the essential character of the area.

**PHYSICIANS**
UNIVERSITY OF MINNESOTA

**Executive Offices**
720 Washington Ave SE
Suite 200
Minneapolis, MN 55414



October 8, 2021

To: Whom It May Concern at the City of Edina
Fr: Joel Schurke, VP Real Estate & Facility Operations, University of Minnesota Physicians

RE: Request for Set-back Variance for Monument Sign

University of Minnesota Physicians (UMP) is relocating and expanding the Hilger Face Clinic currently located at 7373 France Avenue, Edina, MN to 5050 France Avenue, Edina, MN. The new location at 5050 France was selected over a number of other site options due to the visibility and the availability and ease of access to dedicated surface parking for our patients.

A significant part of UMP's mission for the Hilger Face Clinic is facial reconstructive surgery and service to patients who are at a higher level of acuity and impairment (some with sight impairments) increasing the need for highly visible signage.

As an academic medical services provider, UMP continually seeks ways to provide the most effective care. UMP's research into wayfinding and signage found effective signage to be a major contributor to reducing the stress of patients arriving to their clinical visits – especially in a high traffic areas. To address this, UMP retains Engrafik for our clinic projects to assess wayfinding and to define the most effective exterior signage for our patients. Clarity of the exterior signage was a design goal for the exterior signage and this monument sign is critical to patients in easily finding the new clinic location.

This monument sign means:

1. vehicle traffic expediently gets to the right place reducing traffic congestion in the surrounding neighborhood, and
2. vehicle traffic is directed to our private and dedicated off street surface parking lot spaces resulting in less use of high demand public street parking.

The monument sign proposed is a key component to the success of our wayfinding plan and to the satisfaction of our patients at this new location.

I respectfully request approval of the variance request to the setback requirements to allow the monument sign as proposed.

My sincere appreciation for consideration of this request.

Joel Schurke
VP Real Estate & Facility Operations, University of Minnesota Physicians

OSP O'BRIEN-STALEY PARTNERS

October 7, 2021

To: Whom It May Concern at the City of Edina

Fr: Adam Bernier, Managing Director/Chief Operating Officer, O'Brien-Staley Partners

RE: Letter of Support for UMP's Monument Sign Set-back Variance Request at 5050 France Ave S.

I represent the owners of the BMO building and surface parking lot at 5050 France Avenue S and serve as landlord to University of Minnesota Physicians (UMP) as my tenant for their Hilger Face Clinic.

The Hilger Face Clinic is a welcome addition to the area and brings a long term, stable tenant providing medical services to the current mix of retail uses.

The monument sign will serve to clearly mark the entrance to the private parking spaces within the 5050 France Avenue surface lot and the tasteful, streamlined design of the sign works well with the overall aesthetics of my property.

I am writing to express my full support for and encourage the City of Edina to approve UMP's request for a set-back variance for their monument sign at 5050 France Ave S.

Sincerely,

Adam Bernier
612-770-7050 cell

# Ⓑ Sign Specifications: Hilgar Center Monument Sign

**Internally Illuminated (LED)**
**Double Faced Monument Sign**
**with Routed Aluminum Face**
**and Push Thru Letters**

Fabricated aluminum frame

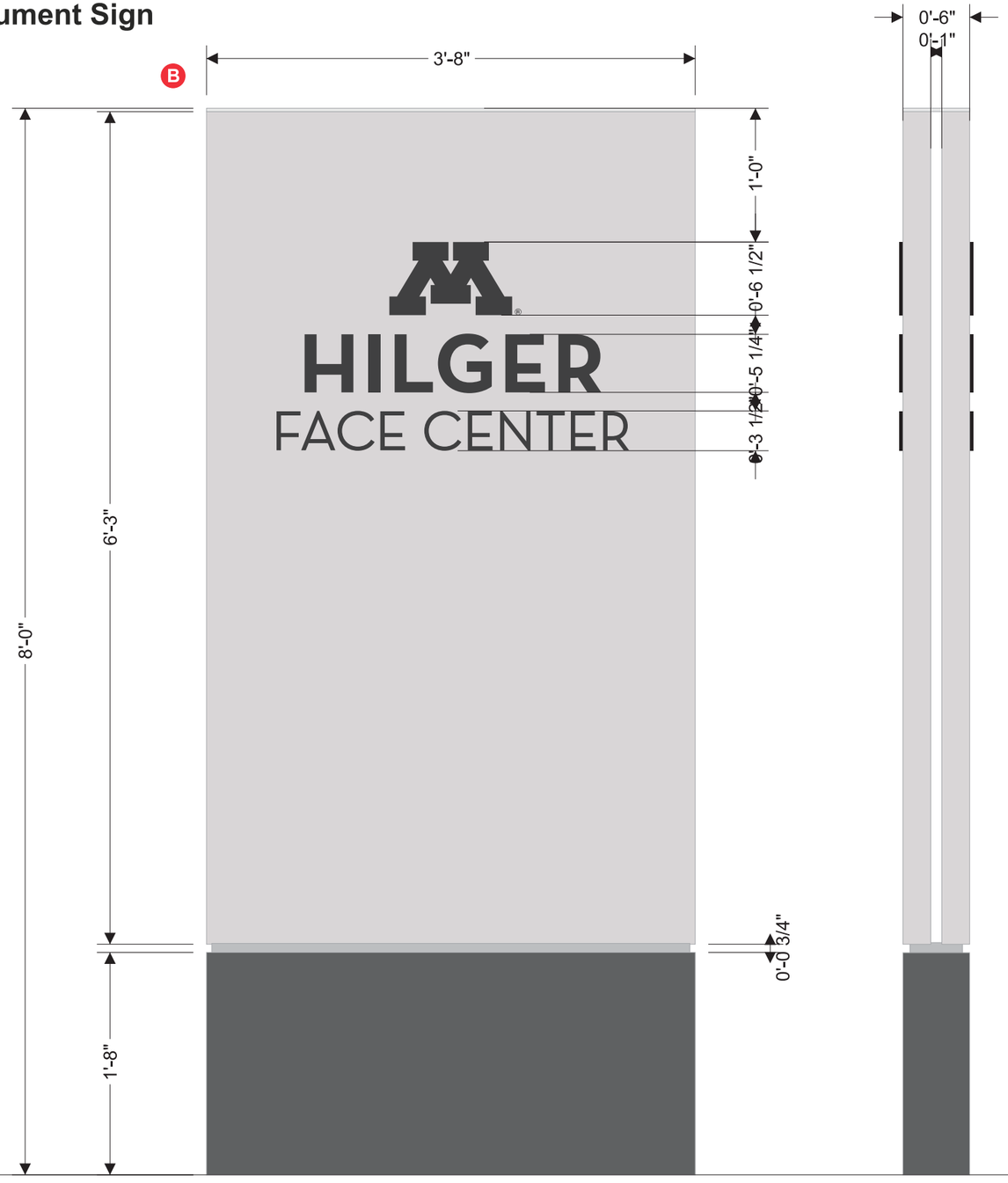
**Faces:**
Routed and painted (MP 41-342SP Brushed) aluminum faces
with transparent acrylic "Push-Thru" ½" letters
and applied 3M Day/Night vinyl (3M Translucent 3635-0171) overlay

Side to have embedded Illuminated accent strip with frosted acrylic

**Base:**
Aluminum Clad Base Painted Hilgar Grey (MP 03849)

**Colors:**

- **MP 41-342SP Brushed Aluminum**
- **Hilgar Grey (MP 03849)**
- **3M Translucent 3635-0171 Day/Night Vinyl**




**SCALE: 1" = 1'-0"**

**Sign Area: 29.33 sq. ft.**

## CUSTOMER INFORMATION

*Customer:* **Hilgar Face Clinic**

*Address:* **Edina, MN**

*Sales:* **Jesse Yungner**

## DRAWING INFORMATION

*File Name:* **Hilgar Face Clinic Monument Sign REV A 9-30-21**

*Date:* REV A 9-30-21

*Revisions:*

*Scale:* 1" = 1'-0" at 11" x 17"

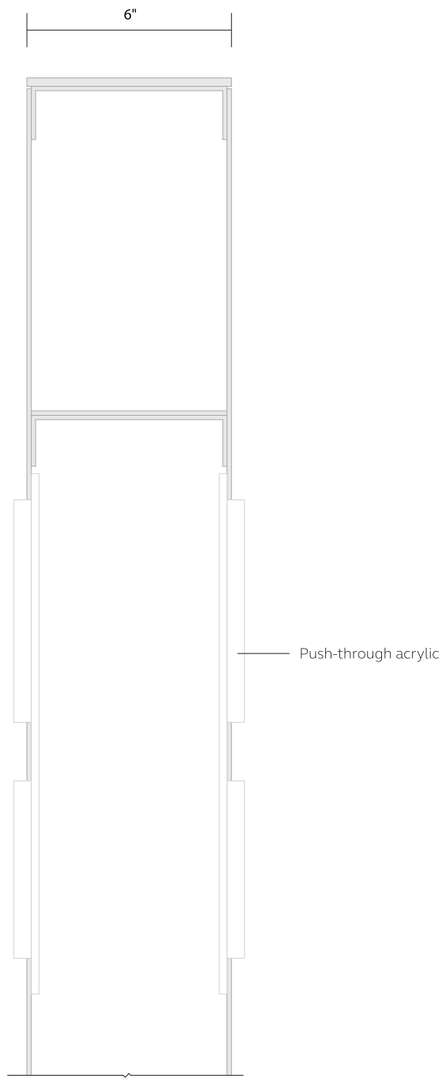
*Page:* 1 of 4

*Designer:* Jeff L

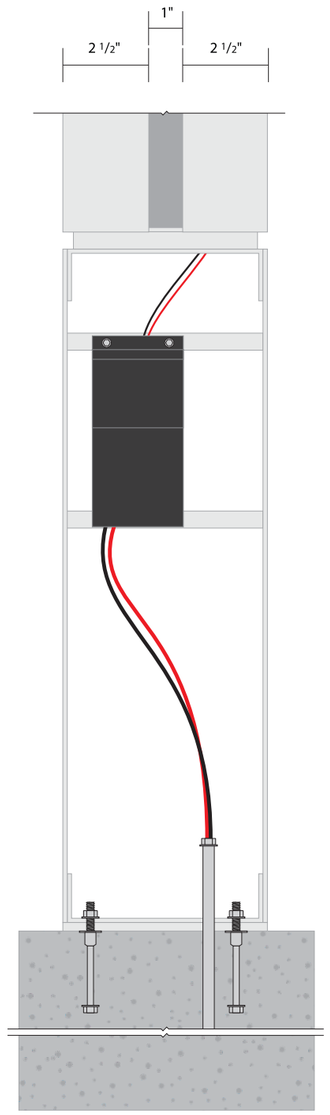
*Customer/ LL Approval:*

**SignArt Company**
**Eau Claire, WI**
715-834-5127
800-235-5178
**St. Paul, MN**
651-688-0563
800-699-0563
**www.signartusa.com**

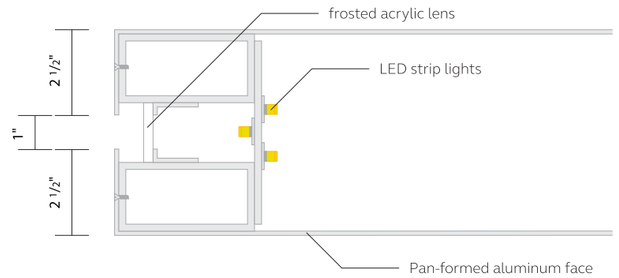
# Section Details




2 **MNT | Exterior Monument Sign**
Construction detail | scale 1-1/2" = 1'-0"




2 **MNT | Exterior Monument Sign**
Construction detail | scale 1-1/2" = 1'-0"




2 **MNT | Exterior Monument Sign**
Construction detail | scale 1-1/2" = 1'-0"

## CUSTOMER INFORMATION

*Customer:* **Hilgar Face Clinic**

*Address:* **Edina, MN**

*Sales:* **Jesse Yungner**

## DRAWING INFORMATION

*File Name:* **Hilgar Face Clinic Monument Sign REV A 9-30-21**

*Date:* REV A 9-30-21

*Revisions:*

*Scale:* NA

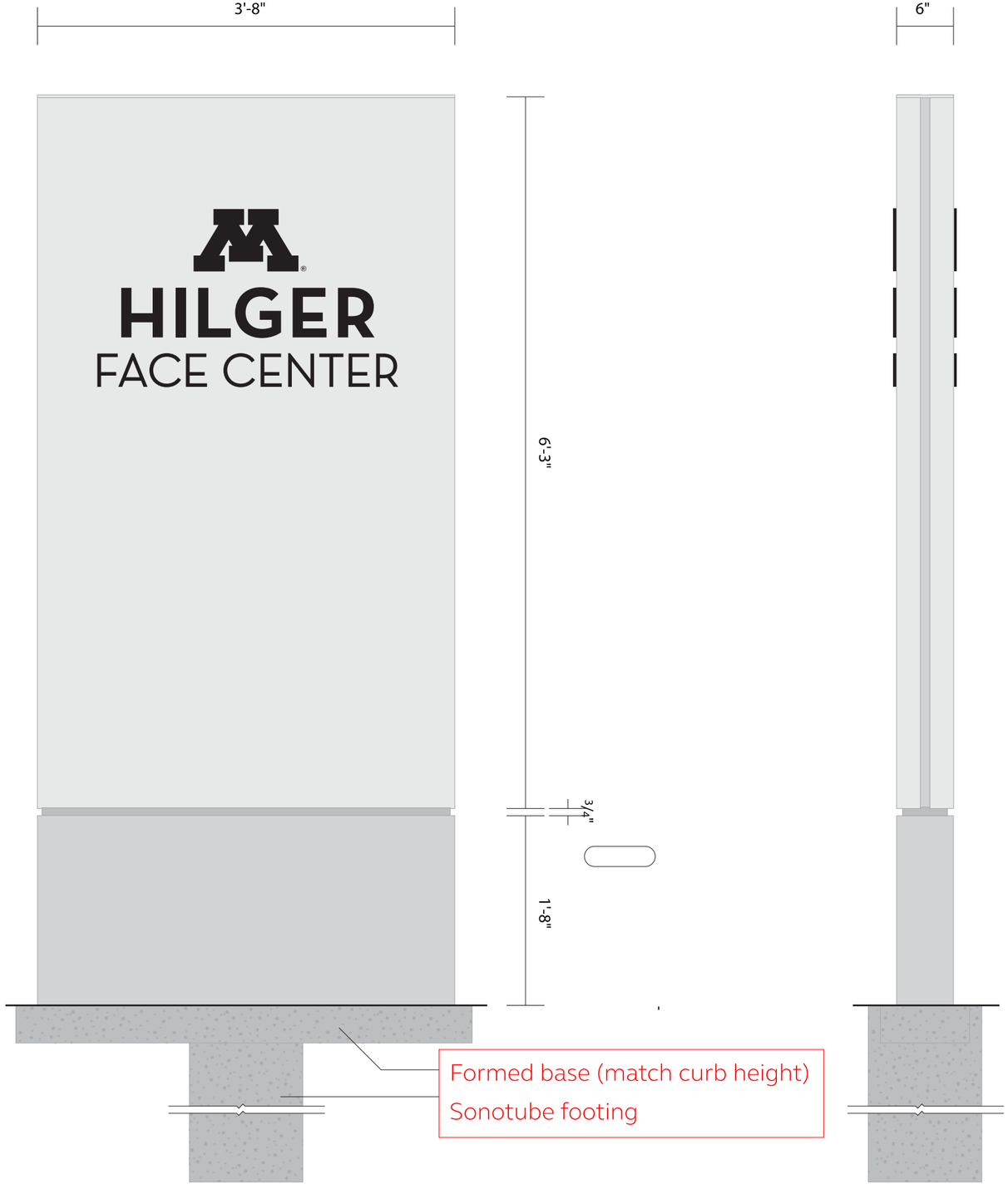
*Page:* 2 of 4

*Designer:* Jeff L

*Customer/ LL Approval:*

**SignArt Company**
**Eau Claire, WI**
715-834-5127
800-235-5178
**St. Paul, MN**
651-688-0563
800-699-0563
**www.signartusa.com**

## Sign View with footing details




**INSTALLATION**
Pour sonotube footing with formed slab at grade
Bolt to concrete footing

**CUSTOMER INFORMATION**

*Customer:* **Hilgar Face Clinic**

*Address:* **Edina, MN**

*Sales:* **Jesse Yungner**

**DRAWING INFORMATION**

*File Name:* **Hilgar Face Clinic Monument Sign REV A 9-30-21**

*Date:* REV A 9-30-21

*Revisions:*

*Scale:* NA

*Page:* 3 of 4

*Designer:* Jeff L

*Customer/ LL Approval:*

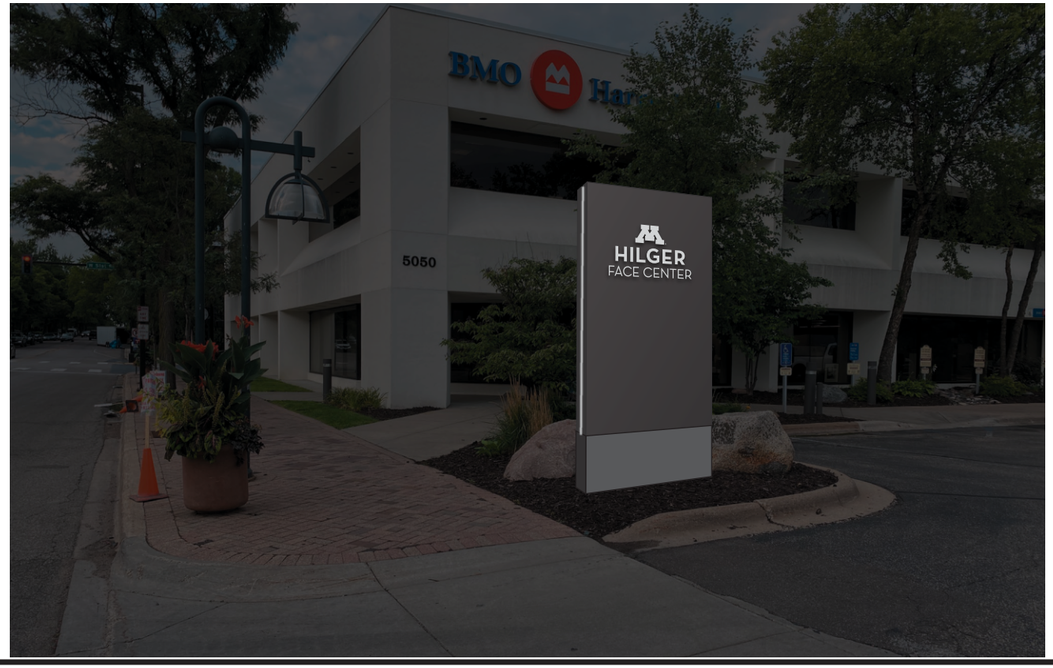
**SignArt Company**
**Eau Claire, WI**
715-834-5127
800-235-5178
**St. Paul, MN**
651-688-0563
800-699-0563
**www.signartusa.com**

## B Photograph with Sign Location: Hilgar Center Monument Sign

**INSTALLATION INSTRUCTIONS:**
Install the new monument in the space as shown

**Daytime View**


**Nighttime View**




**SCALE: NA**

**CUSTOMER INFORMATION**

*Customer:* **Hilgar Face Clinic**

*Address:* **Edina, MN**

*Sales:* **Jesse Yungner**

**DRAWING INFORMATION**

*File Name:* **Hilgar Face Clinic Monument Sign REV A 9-30-21**

*Date:* REV A 9-30-21

*Revisions:*

*Scale:* NA

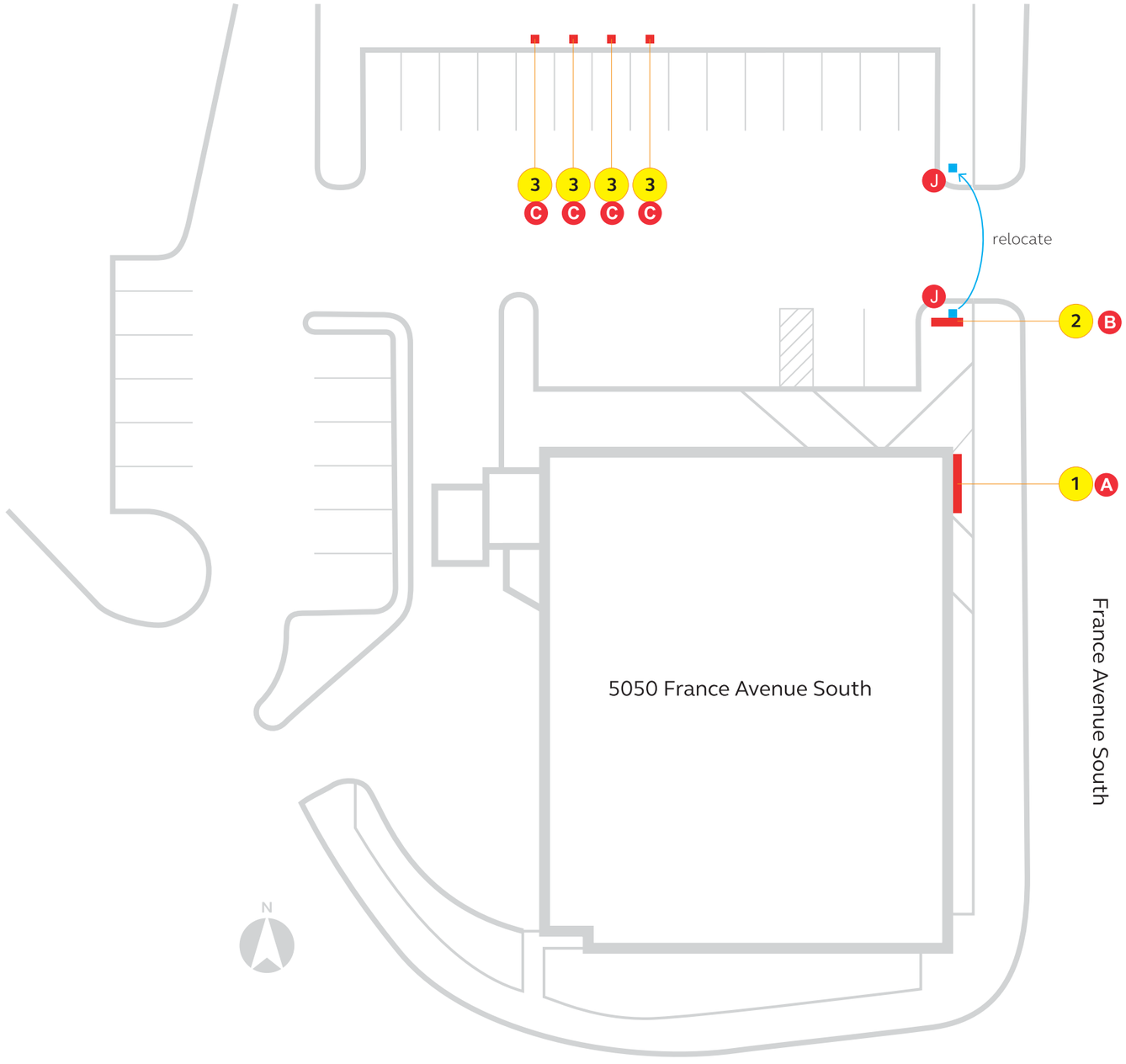
*Page:* 4 of 4

*Designer:* Jeff L

*Customer/ LL Approval:*

**SignArt Company**
**Eau Claire, WI**
715-834-5127
800-235-5178
**St. Paul, MN**
651-688-0563
800-699-0563
**www.signartusa.com**

# Architect Provided Site Plan - Exterior




LOCATION PLAN

A 1. CHN Channel Letter Sign

B 2. MNT Freestanding Monument Sign

C 3. STL Reserved Parking Stall Sign

The street address of this project is

5050 France Avenue South,
Edina, MN 55410.

**SCALE: NA**

## CUSTOMER INFORMATION

*Customer:* **Hilger Face Clinic**

*Address:* **Edina, MN**

*Sales:* **Jesse Yungner**

## DRAWING INFORMATION

*File Name:* **Hilger Face Clinic Site Plan REV A 10-1-21**

*Date:* REV A 10-1-21

*Revisions:*

*Scale:* NA

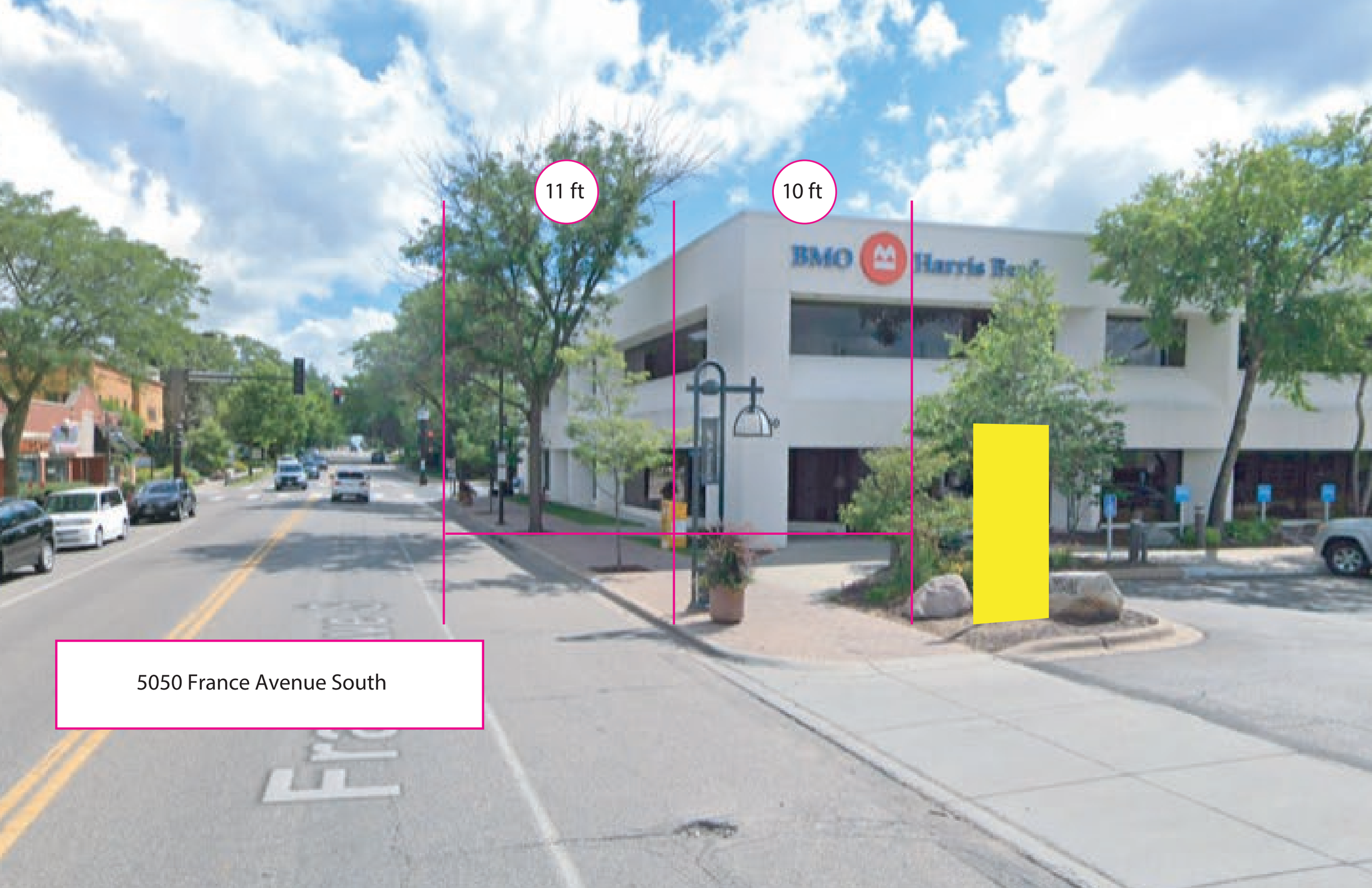
*Page:* 1 of 2

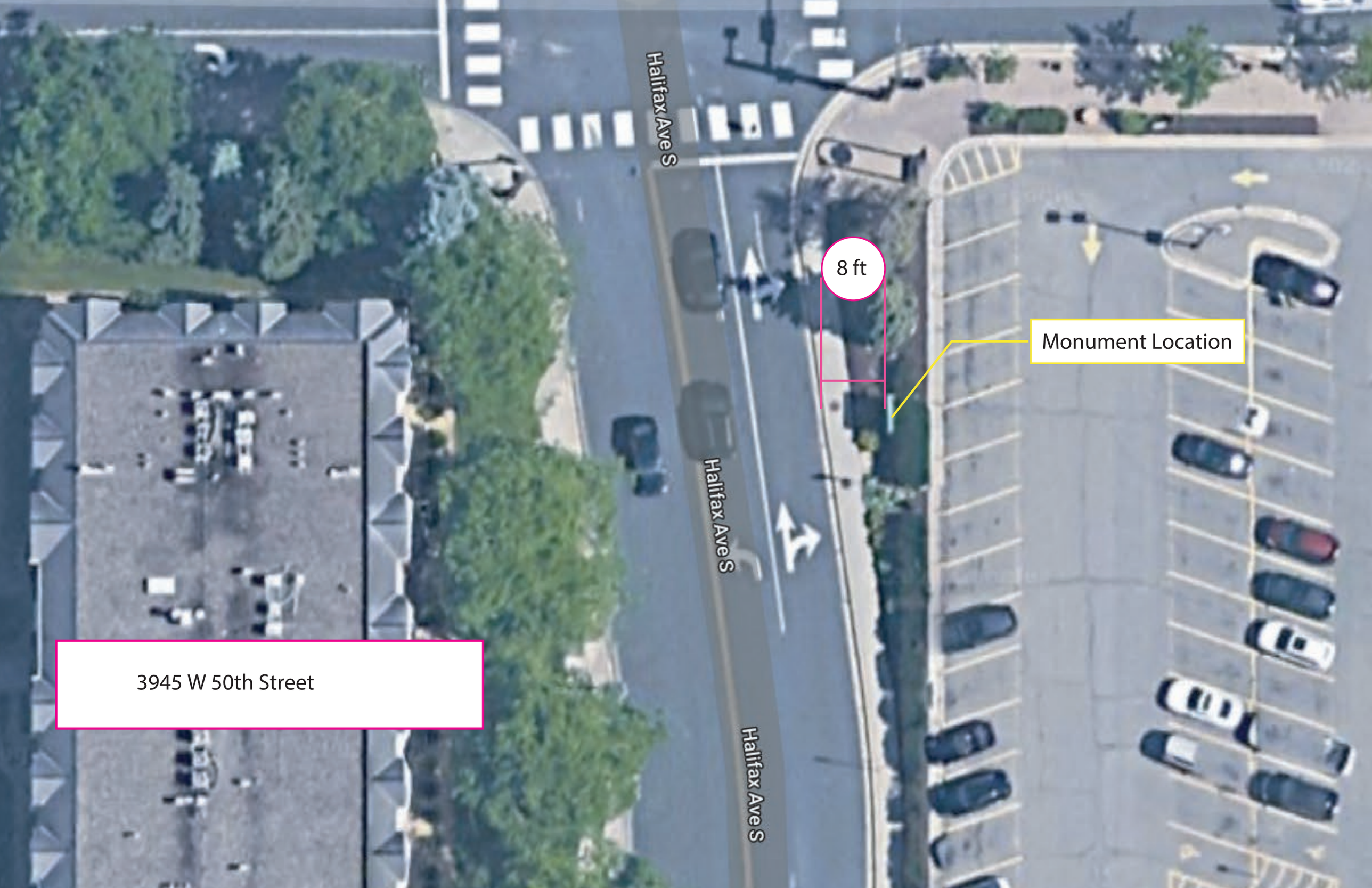
*Designer:* Jeff L

*Customer/ LL Approval:*

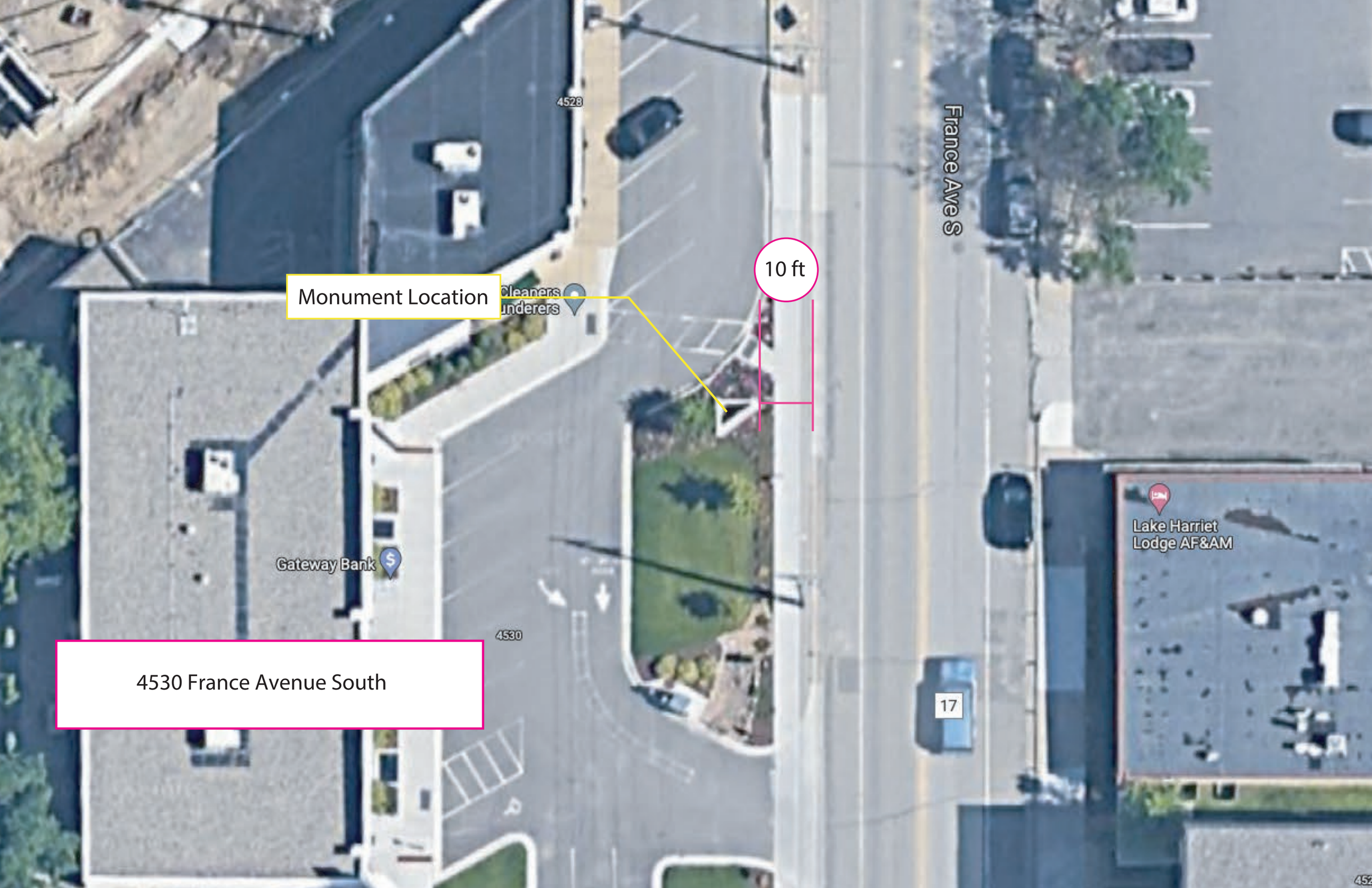
**SignArt Company**
**Eau Claire, WI**
715-834-5127
800-235-5178
**St. Paul, MN**
651-688-0563
800-699-0563
**www.signartusa.com**


Monument Location
10 ft
11 ft
PARKING LANE
France Ave S
17
Chuck & Don's Pet Food & Supplies
Delivery
MINQ
Hydrate IV Therap
Your CBD Store - Edina, MN
France Nails & Spa
BMO Harris Bank
5050 France Avenue South


11 ft
10 ft
BMO Harris Bank
5050 France Avenue South


Halifax Ave S
Halifax Ave S
Halifax Ave S
8 ft
Monument Location
3945 W 50th Street


8 ft
Halifax Ave S
3945 W 50th Street


Monument Location
10 ft
France Ave S
4528
Cleaners
Gateway Bank
4530
17
Lake Harriet
Lodge AF&AM
4530 France Avenue South


4530 France Avenue South

Survey Responses

30 January 2019 - 11 November 2021

# Public Hearing Comments- 5050 France Avenue South

## Better Together Edina

Project: Public Hearing: a 10-foot setback variance for a freestanding monument sign at 5050 France Avenue South

BANG THE TABLE engagementHQ

| VISITORS | | | | | |
|---|---|---|---|---|---|
| 0 | | | | | |
| CONTRIBUTORS | | | RESPONSES | | |
| 0 | | | 0 | | |
| 0 Registered | 0 Unverified | 0 Anonymous | 0 Registered | 0 Unverified | 0 Anonymous |

No Responses

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov


**Date:** November 17, 2021

**Agenda Item #:** VI.B.

**To:** Planning Commission

**Item Type:**
Report and Recommendation

**From:** Cary Teague, Community Development Director

**Item Activity:**
Action

**Subject:** PUBLIC HEARING: Conditional Use Permit - 5701 Benton Avenue (Countryside School)

---

**ACTION REQUESTED:**
Recommend the City Council approve the Conditional Use Permit.

**INTRODUCTION:**
The Edina Public Schools are proposing to expand their parking lot and reconfigure their bus pick-up and drop-off area at Countryside School located at 5701 Benton Avenue. The purposed of the request is to separate bus and student drop off traffic for improved on-site safety.

The number of parking spaces would increase from 94 to 122 stalls by expanding and restriping the lot on the east side of the building. The bus pick-up and drop-off area would be reconfigured on the east side of the building and a new access to the site would be added off Tracy Avenue. (See attached plans.) Buses would now enter and exit the site off Tracy Avenue rather than Benton Avenue. The parent drop off would now occur in the north parking lot.

The request requires a conditional use permit for the expansion of parking spaces on the east side of the building.

**ATTACHMENTS:**

Staff Report
Better Together Public Hearing Comment Report
Proposed Plans
Applicant Narrative
Site Location

# STAFF REPORT

**Date:** November 17, 2021

**To:** Planning Commission

**From:** Cary Teague, Community Development Director

**Subject:** Conditional Use Permit – 5701 Benton Avenue (Countryside School)

## Information / Background:

The Edina Public Schools are proposing to expand their parking lot and reconfigure their bus pick-up and drop-off area at Countryside School located at 5701 Benton Avenue. The purpose of the request is to separate bus and student drop off traffic for improved on-site safety.

The number of parking spaces would increase from 94 to 122 stalls by expanding and restriping the lot on the east side of the building. The bus pick-up and drop-off area would be reconfigured on the east side of the building and a new access to the site would be added off Tracy Avenue. (See attached plans.) Buses would now enter and exit the site off Tracy Avenue rather than Benton Avenue. The parent drop off would now occur in the north parking lot. The new driveway would only be for buses and staff.

The request requires a conditional use permit for the expansion of parking spaces on the east side of the building.

## SUPPORTING INFORMATION

### Surrounding Land Uses

Northerly: Single-family homes; zoned and guided low-density residential.
Easterly: Single-family homes; zoned and guided low-density residential.
Southerly: Single-family homes; zoned and guided low-density residential.
Westerly: Single-family homes; zoned and guided low-density residential.

## Existing Site Features

The existing 14.6-acre site contains the school, parking areas, play fields a wetland and a scattering of mature trees. (See page A3.)

## Planning

| | |
|---|---|
| Guide Plan designation: | Public/semi-public |
| Zoning: | R-1, Single Dwelling Unit District |

## Conditional Use Permit

Per Section 36-305, the City Council shall not grant a Conditional Use Permit unless it finds that the establishment, maintenance, and operation of the use:

***1. Does not have an undue adverse impact on governmental facilities, utilities, services or existing or proposed improvements.***

The project would not have an adverse impact on the above. Both police and fire would be able to access the site off of Benton as they do today, and now off of Tracy with the new access point. There would be no change to utilities by the project. The existing utilities are adequate to serve the proposed use.

***2. Will generate traffic within the capacity of the streets serving the property.***

The improvements would not generate any increase in traffic or increase usage of school facilities. There are no expansions proposed for the school. The new driveway would only be for buses and staff. Parent drop-offs would continue off Benton Avenue. The south exit onto Tracy Avenue will not be a one-way exit. Staff and buses will be able to enter and exit from both Tracy Ave and Countryside Rd. The application would not require larger infrastructure improvements related to the streets around the school. Engineering staff has reviewed the left-hand turn movements on Tracy Avenue and feel there would be adequate sight lines. Staff believes the timing of student crossings compared to staff entering and exiting the site will be different and thus not create additional issues for crossing of Tracy. If the project is implemented, city staff can monitor the number of crossings of Tracy at the crosswalk to determine if pedestrian flashers are warranted to add extra notification of crossings. Staff feels there is adequate sight lines of the crosswalk today. The project would not change those sightlines. The school may also consider crossing guards to assist with crossings.

***3. Does not have an undue adverse impact on the public health, safety, or welfare.***

Staff does not believe the project would have an adverse impact on public health, safety, or welfare. The separation of buses and parent drop off should improve on-site safety. Engineering staff does not believe any roadway improvements would be necessary.

4. ***Will not impede the normal and orderly development and improvement of other property in the vicinity.***

The proposed improvements would not impede development in the area.

5. ***Conforms to the applicable restrictions and special conditions of the district in which it is located as imposed by this Section.***

The proposed project meets all city code provisions. Schools and expansion parking lots are conditionally permitted uses within the R-1 Zoning District.

6. ***Is consistent with the Comprehensive Plan.***

As mentioned previously, parking lot expansions are a conditionally permitted use within the R-1 zoning district. The proposed use is consistent with the Comprehensive Plan.

## Landscaping

New landscaping is proposed along Tracy Avenue to help screen the expanded parking area. (See attached landscape plan) Additionally, there is an accessory building that would be relocated as part of the parking expansion. Techney Arborvitae would be planted surrounding the building as planted around the building currently.

The city forester has reviewed the proposed landscape plan and has recommended additional landscaping along Tracy Avenue to provide better screening of the parking lot. A landscape plan would need to be submitted as part of the grading permit, subject to approval of the city forester.

## Grading/Drainage/Utilities

The city engineer has reviewed the proposed plans and found them to be acceptable. Any approvals of this project would be subject to review and approval of the Minnehaha Creek Watershed Districts, as they are the City's review authority over the grading of the site.

## Lighting

The parking lots would be required to meet all minimum standards for lighting as follows:

> "All exterior lighting and illuminating devices shall be provided with lenses, reflectors or shades so as to concentrate illumination on the property of the owner or operator of the lighting or illuminating devices. Rays of light or illumination shall not pass beyond the property lines of the premises utilizing the lights or illumination at an intensity greater than 0.5 footcandle measured at property lines abutting property zoned residential and one footcandle measured at property lines abutting streets or property zoned nonresidential. No light source, lamp or luminaire shall be directed beyond the boundaries of the lighted or illuminated premises."

A lighting plan has been submitted and demonstrates the foot candle power generated from the lights, would meet city code requirement.

**Compliance Table**

| | City Standard | Proposed |
|---|---|---|
| Front – Benton Avenue | 20 feet | 20 & 35 feet |
| Side Street – Tracy Avenue | 20 feet | 30 & 60 feet |
| Side Street – Stuart Avenue | 20 feet | 20 feet (existing) |
| Side – South | 10 feet | 100+ feet |
| Parking Stalls | 83 (1/3 the seating capacity of the gym which is 250) | 111 |
| Over-story Trees | 98 trees required (number is based on the perimeter of the site) | 187 trees existing and proposed on the site |

## PRIMARY ISSUES/STAFF RECOMMENDATION

### Primary Issue

- **Is the Conditional Use Permit (CUP) criteria met?**

  Yes, staff believes the criteria is met.

  1. The proposal meets the Conditional Use Permit findings. As demonstrated on pages 2-3 of this report, the findings for a conditional use permit would be met.

  2. The proposal meets all minimum Zoning Ordinance standards. All setback requirements and lighting standards would be met.

  3. The proposal would improve traffic and circulation on the site. The number of parking stalls remains in compliance the Zoning Ordinance. The new driveway would only be for buses and staff. Parent drop-offs would continue off Benton Avenue. Staff and buses will be able to enter and exit from both Tracy Ave and Countryside Rd. Engineering staff has reviewed the left-hand turn movements on Tracy Avenue and feel there would be adequate sight lines. Staff believes the timing of student crossings compared to staff entering and exiting the site will be different and thus not create additional issues for crossing of Tracy. If the project is

implemented, city staff can monitor the number of crossings of Tracy at the crosswalk to determine if pedestrian flashers are warranted to add extra notification of crossings. Staff believes there is adequate sight lines of the crosswalk today. The project would not change those sightlines. The school may also consider crossing guards to assist with crossings.

4. The plan includes landscaping and trees planted along Tracy Avenue and around the re-located maintenance building to provide partial screening. Staff does recommend additional plantings along Tracy to provide additional screening of the parking lot.

## Staff Recommendation

Recommend that the City Council approve the Conditional Use Permit to expand the parking area for Countryside School at 5701 Benton Avenue.

Approval is based on the following findings:

1. The proposal meets the Conditional Use Permit conditions per Chapter 36 Sec. 36-305 of the Edina Zoning Ordinance.

2. The proposal meets all applicable Zoning Ordinance requirements.

3. The proposed project meets all city code provisions and is consistent with the Comprehensive Plan. Public schools and associated parking lots are a conditionally permitted use within the R-1 Zoning District.

Approval is subject to the following conditions:

1. The site must be developed and maintained in conformance with the following plans:

    - Site plan date stamped October 13, 2021.
    - Grading and drainage plan date stamped October 13, 2021.
    - Landscaping plan date stamped October 13, 2021.
    - Geometric plan date stamped October 13, 2021.
    - Utility and erosion control plan date stamped October 13, 2021.

2. A grading permit is required for the improvements.

3. A lighting plan must be submitted with the grading plan and must meet all minimum zoning ordinance requirements.

4. Additional landscaping must be provided along Tracy Avenue to provide more screening of the parking lot. Therefore, prior to issuance of a grading permit, a landscape plan would need to be submitted, subject to approval of the city forester.

5. Submit a copy of the Nine Mile Creek Watershed District permit. The City may require revisions to the approved plans to meet the district's requirements.

**Deadline for a city decision:** February 1, 2022

Survey Responses

30 January 2019 - 11 November 2021

# Public Hearing Comments-Countryside Elementary

## Better Together Edina

Project: Public Hearing: 5701 Benton Avenue (Countryside Elementary) Conditional Use Permit

BANG THE TABLE engagementHQ

| VISITORS | | | | | |
|---|---|---|---|---|---|
| 13 | | | | | |
| CONTRIBUTORS | | | RESPONSES | | |
| 11 | | | 11 | | |
| 0 Registered | 0 Unverified | 11 Anonymous | 0 Registered | 0 Unverified | 11 Anonymous |

**Respondent No:** 1
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 08, 2021 15:59:19 pm
**Last Seen:** Nov 08, 2021 15:59:19 pm
**IP Address:** n/a

Q1. **First and Last Name** Tom Kluis

Q2. **Address** 5611 Countryside Road Edina MN 55436

Q3. **Comment**

I live on Countryside Road, 3 houses in from Tracy. We have a wonderful neighborhood with kids, dogs, and active families. Generally more than two dozen people walk down Countryside to get to school each morning. However, there are two times during the day when Countryside Road is dangerous to kids, dogs, and families - school drop off and school pick up. Unfortunately, parents who are in a rush to drop off or get their kids sometimes use Countryside Road as a cut through, or they make U-turns in driveways without really looking for the kids or animals around them. Luckily, the majority of the school drop-off and pick-up traffic happens from Benton or says on Tracy so we only get a dozen or so cars every day who make our neighborhood street hazardous. The proposed plan will make our street dramatically more dangerous - specifically the exit onto Tracy/Countryside Road. The new exit will greatly increase the number of cars shooting down Countryside Road to get to eastbound Benton, pulling into driveways, or making middle-of-the-road U-Turns. The additional traffic is dangerous and not what is intended for Countryside Road, a quiet neighborhood street. My recommended modification: angle the exit driveway to ONLY allow vehicles to proceed south on Tracy. Tracy is a major thoroughfare and accommodating to the school's traffic. There are sidewalks on Tracy, Countryside Road has none. There are bike lanes on Tracy. Countryside Road has none. There is a center stripe and lane markings on Tracy, Countryside Road has none. I urge you to modify the exit for this project for the safety of the families in the Countryside neighborhood. Regards, Tom and Kristin Kluis

**Respondent No:** 2
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 13:36:29 pm
**Last Seen:** Nov 10, 2021 13:36:29 pm
**IP Address:** n/a

Q1. **First and Last Name** Lindsay Atherton-Ely

Q2. **Address** 5501 countryside rd

Q3. **Comment**

This plan, if I am understanding it correctly, would have cars leaving directly from the parking lot to countryside road. I have multiple concerns, first being this exit is in the middle of a hill with decreased visibility. Add to that an already slippery intersection during the winter and you're asking for accidents. Furthermore, there are dozens of kids that walk home via countryside rd and we already face a large issue with parents parking on both sides of the street to pick up their kids. Add to that a huge increase in traffic and no sidewalks or bike lanes, the snow piles that grow during winter, and it creates a very congested and unsafe area for kids that walk home that route. Secondly, while Tracy and Benton are set up to handle an increase of traffic flow, countryside rd is not. You're not only placing the families that live on that road in danger, but you're also going to risk them having increased assessments to pay for road damage caused by a huge influx of traffic. How will you compensate the families that recently paid a huge assessment for road improvements? Third, how will the traffic flow if you're cutting off a main artery with a parking lot exit? Congestion from Tracy to Vernon will be a nightmare, not to mention a Tracy to Olinger/62. Fourth, the intersection of crescent and countryside rd has been begging for years to have stop signs installed because people race through those intersections. Now there is a potential for many more cars flying down our streets and risking lives. Are you going to get stop signs and speed bumps put in? This seems like an idea that hasn't been well thought out and puts kids and roads at a huge risk. While I agree the parking lot situation needs some help, I strongly feel having an exit to countryside rd is NOT a solution. Thanks! Lindsay Atherton Mother of 3 boys (2 at countryside, one attending next year) ages 8, 6 and 4.

**Respondent No:** 3
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 14:23:38 pm
**Last Seen:** Nov 10, 2021 14:23:38 pm
**IP Address:** n/a

Q1. **First and Last Name** Katie Mahlum

Q2. **Address** 5616 Countryside Rd

Q3. **Comment**

I am very surprised by this plan and oppose it. Countryside Road at Tracy is already a high traffic intersection and heavy pedestrian crossing. Additionally, to subject a neighborhood to less green space and headlights seems like a hasty solution to a parking lot issue. I would like to see the city use ingenuity to incorporate a solution to the longtime unsafe and asymmetrical intersection at Benton and Tracy, while incorporating a resolution to the Countryside Elementary School parking lot issue. An exit to a roundabout could alleviate the parking lot issue while addressing the heavy traffic flow of adjacent streets. Furthermore, I believe there is a Vernon Avenue project in the works. I hope the potential increase of traffic from that project, to the Tracy Benton area, is also being considered. I hope for the safety of kids in this neighborhood, that the city is doing its due diligence, and truly listening to public commentary and weighing all possible options before proceeding to make permanent changes to green space on school grounds.

**Respondent No:** 4
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 16:40:19 pm
**Last Seen:** Nov 10, 2021 16:40:19 pm
**IP Address:** n/a

Q1. **First and Last Name** Jerry Groven

Q2. **Address** 5716 Benton Ave

Q3. **Comment**

Hello, I can only see one option when I look at the site this evening. I am excited to see the rest of the options soon. The plan I did see, added the entrance/exit on Tracy Avenue which I believe is a great idea. I do have one suggestion that would improve the safety for the residents living to the North of the school. Currently kids and parents have to walk in the street (Benton Ave), next to cars to access the crosswalk at the intersection. This stretch of Benton directly North of the school is extremely busy during school hours and unsafe for elementary age children to walk in my opinion. It gets extremely dangerous as the streets narrow and get slippery in the winter time. I would like to see a sidewalk along the North side of Benton from Tracy to Staurt. Also, on the East side of Stuart from Benton to Grove would be helpful as well. Thank you for all of your hard work on this, Jerry Groven

**Respondent No:** 5
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 17:09:42 pm
**Last Seen:** Nov 10, 2021 17:09:42 pm
**IP Address:** n/a

Q1. **First and Last Name** Natalie Hunter

Q2. **Address** 5420 Countryside Rd

Q3. **Comment**

We currently have a son in K at Countryside who walks to school and crosses right where the proposed new entry/exit will be. I can't imagine the traffic nightmare that would be created by this opening. Kids trying to cross the street, cars going up and down the hill, cars turning left and right. It would be impossible for all of this to occur fluidly and safely. I also worry about the burden this puts on the crossing guards to try and manage kids crossing, cars driving past and cars trying to leave the parking lot. It seems more parking space can easily be made available as the plans propose, but keep the current entry and exit points.

**Respondent No:** 6
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 17:24:05 pm
**Last Seen:** Nov 10, 2021 17:24:05 pm
**IP Address:** n/a

Q1. **First and Last Name** Connor Houlihan

Q2. **Address** 5517 Countryside Rd Edina, MN 55436

Q3. **Comment**

I live at the corner of Countryside Rd and Tracy Ave. You can image how disappointed and genuinely upset our family and neighbors are learning of this. Tracy is already a VERY dangerous street and this will increase that - and also promote more traffic down Countryside Rd and our Neighborhood. This put the students walking to and from school at more danger - and also other children and people that live in the area. I hope the City is thinking about this additional risk and lawsuit(s) waiting to happen. Are you also familiar with the downhill pitch of Tracy avenue when heading south by the school? Cars slide on the snow and ice regularly during the winter - or can't make it up the hill heading north. Anyone turning left out of the new proposed exit would experience this. The current entry and exit path is not only completely fine - but also much more safe. You have the intersection of Benton and Tracy (a four way stop) to slow and regulate traffic. Lastly, this is also going to materially impact all of our home values. I hope someone is thinking about that - or maybe you're not since you don't live in the neighborhood.

**Respondent No:** 7
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 17:42:31 pm
**Last Seen:** Nov 10, 2021 17:42:31 pm
**IP Address:** n/a

Q1. **First and Last Name** Kristin Kluis

Q2. **Address** 5611 Countryside Road

Q3. **Comment**

While Countryside Elementary is in need of additional parking, the current school exit plans and communication of that plan raise concerns and need for additional communication from the planning council. My concerns with the plan include: 1. The increased traffic on residential Countryside Road with no sidewalks or bike lanes and many kids walking to or from school. Tracy was designed to handle the traffic, but not Countryside Road is not. 2. Students crossing Tracy safely is already a problem at Countryside Road and Tracy Ave, this plan increases additional cars and traffic to the area 3. Due to the crest of the Tracy Ave hill, drivers can't see the Countryside crosswalk from the north. Additionally, Countryside drivers often cannot see cars coming south on Tracy. This makes the new intersection even more dangerous and is compounded with icy roads in the winter. 4. The traffic turning left (North onto Tracy) at the same time as parents are leaving drop off will delay any exit from the school. I believe further research and/or communication from the planning commission is needed around: 1. What improvements are planned at the top and bottom of the hill for pedestrian safety? 2. What input was sought from the neighbors, kids walking to school and the safety patrol on the plans? 3. This will be a new burden on the school staff to direct car and pedestrian traffic with cars leaving the lot turning left/straight will hold up all traffic. EHS and VVMS have traffic problems today that the school struggles to solve. What is the school's plan to keep kids safe and keep traffic moving? 4. At what time of day and season did the planning commission do site visits to understand the impact of this change? Where are those findings? As a parent at Countryside Elementary, I welcome the addition of parking spaces. As a parent living on Countryside Road – I have great concern for the safety of our children without additional information from the Council on their plan and research to have created that plan. Thank you.

**Respondent No:** 8
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 10, 2021 20:26:29 pm
**Last Seen:** Nov 10, 2021 20:26:29 pm
**IP Address:** n/a

Q1. **First and Last Name** Trent Jaeger

Q2. **Address** 5604 Countryside Road

Q3. **Comment**

I've reviewed the plans for a new parking lot at Countryside Elementary and the proposed driveway location is mystifying. No competent designer could think putting the lot exit on Tracy directly across from Countryside Road, on that hill is a good idea. This area already has poor sightlines for SB Tracy traffic and WB Countryside driver, often resulting in dangerous conditions for pedestrians, children crossing the street, and drivers. The hill and retaining walk on the NE corner limit drivers' vision. In slippery conditions, it's even worse because traffic coming down the hill has more trouble stopping and traffic coming off Countryside has a difficult time making that turn to get up the hill AND crossing NB Tracy to make a left turn. In fact, it is already difficult for WB Countryside traffic to get onto Tracy, slippery conditions or not. Left turns are particularly difficult due to traffic speeding down the hill. Traffic exiting the school lot at that location would exacerbate these dangerous conditions to an unacceptable degree, as SB drivers now have traffic entering from both sides of the street and WB drivers have to contend with traffic coming right at them in order to negotiate their turn. In addition, this design encourages more traffic to take Countryside EB rather than Benton , which is the natural through street. Countryside does not have sidewalks and carries a high volume of pedestrians and children that play near and on the roadway. Countryside already gets increased traffic from people trying to avoid the 4 way stop at Benton. These drivers often don't live in our neighborhood and drive too fast for the conditions. The proposed location of the driveway would make these conditions worse by directing drivers straight onto Countryside. Common sense dictates that if an additional parking lot exit has to empty onto Tracy, the driveway should be extended such that cars enter Tracy well south of Countryside, which would give SB Tracy traffic more time to see and avoid that traffic, give WB Countryside traffic a fighting chance to get onto Tracy, and eliminate the tendency for cars to exit directly onto Countryside. I oppose the current plan and encourage that the exit be eliminated or at least redesigned to intersect with Tracy further to the south. If someone involved in the project would like to speak to a Countryside resident about the plan, feel free to reach out to me.

**Respondent No:** 9
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 11, 2021 04:37:33 am
**Last Seen:** Nov 11, 2021 04:37:33 am
**IP Address:** n/a

Q1. **First and Last Name** Matthew Huss

Q2. **Address** 5529 Countryside Rd

Q3. **Comment**

I understand additional parking and better routing for buses and child drop-off are needed but the plan needs to be altered, specifically the proposed exit at Tracy Ave facing Countryside Road. Countryside Road is already a 'cut through' street for traffic to avoid the congested intersection of Benton Ave and Tracy Ave and traffic is busy, especially for a residential street. Being a cut through street leads to drivers not observing local speed limits and not being focused on the residents of the street. The addition of the exit in that location will further increase already heavy traffic on the street and add to an already congested street. Unlike Tracy Ave or Valley View Road, Countryside Road is a residential street and was not designed to handle the amount of traffic it currently handles, especially during mornings and afternoons. The proposed exit facing the street will be a natural go to for parents and buses dropping or picking up kids at the school. What additional improvements or enhancements will be made to Countryside Road to make the street safer with the increased traffic? Will the city ensure vehicles will utilize Tracy Ave as the main exit? What will the be done to ensure pedestrians (students and neighbors) are safe with the increased traffic? I highly encourage the city to address the intersection of Benton Ave and Tracy Ave and alter the plans to add the additional exit in that area. I understand the elevations are different in that area but without addressing the mess at the 4 way stop any additional development will send more traffic onto the residential streets. What has the city done to observe traffic in the area? I seems the plans are designed on the elevations and what works best for the city. I encourage city officials to spend a week (mornings and afternoons) observing traffic patterns in the area and watching driving behaviors (both buses and cars) to see how dangerous and detrimental the proposed exit will be for the neighborhood and it's residents.

**Respondent No:** 10
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 11, 2021 07:16:36 am
**Last Seen:** Nov 11, 2021 07:16:36 am
**IP Address:** n/a

Q1. **First and Last Name** Kathryn Matchinsky

Q2. **Address** 5504 Countryside Road, Edina, MN

Q3. **Comment**

My main concerns with this addition have to do with traffic flow patterns. 1. Just north of the new proposed parking lot entrance on Tracy Avenue is a hill. There is already a significant problem with cars, heading south on Tracy, coming down that hill and not seeing people/children at the crosswalk. It gets worse during winter when that hill is icy/snowy and it becomes difficult to make any sort of quick stop. When I think about more traffic coming out right at Countryside Road - right at the location of that hill - I am very nervous for the safety of the buses, cars and students walking. 2. How will the traffic be handled coming out of this lot? Will there be traffic directors to ensure safe turns in an out of the lot? 3. There are a significant amount of students that walk to and from school in the coutryside neighborhood. I am certain that this will result in more traffic coming down Countryside Road (which does not have sidewalks) and I am VERY concerned with the safety of those students. I live on this street and see it first hand. We plead with parents doing pick up to watch for kids walking every year. It is a real issue. I have had children at Countryside for the last decade. I am aware of the need for additional parking and don't necessarily have an issue with parking being added - BUT - I just want to be sure all angles of the traffic patterns, cars, buses and pedestrians is THOROUGHLY vetted before moving forward with the project. I do have a lot of concern for the safety of all coming in and out of that entrance.

**Respondent No:** 11
**Login:** Anonymous
**Email:** n/a

**Responded At:** Nov 11, 2021 08:17:49 am
**Last Seen:** Nov 11, 2021 08:17:49 am
**IP Address:** n/a

Q1. **First and Last Name** Tom Matchinsky

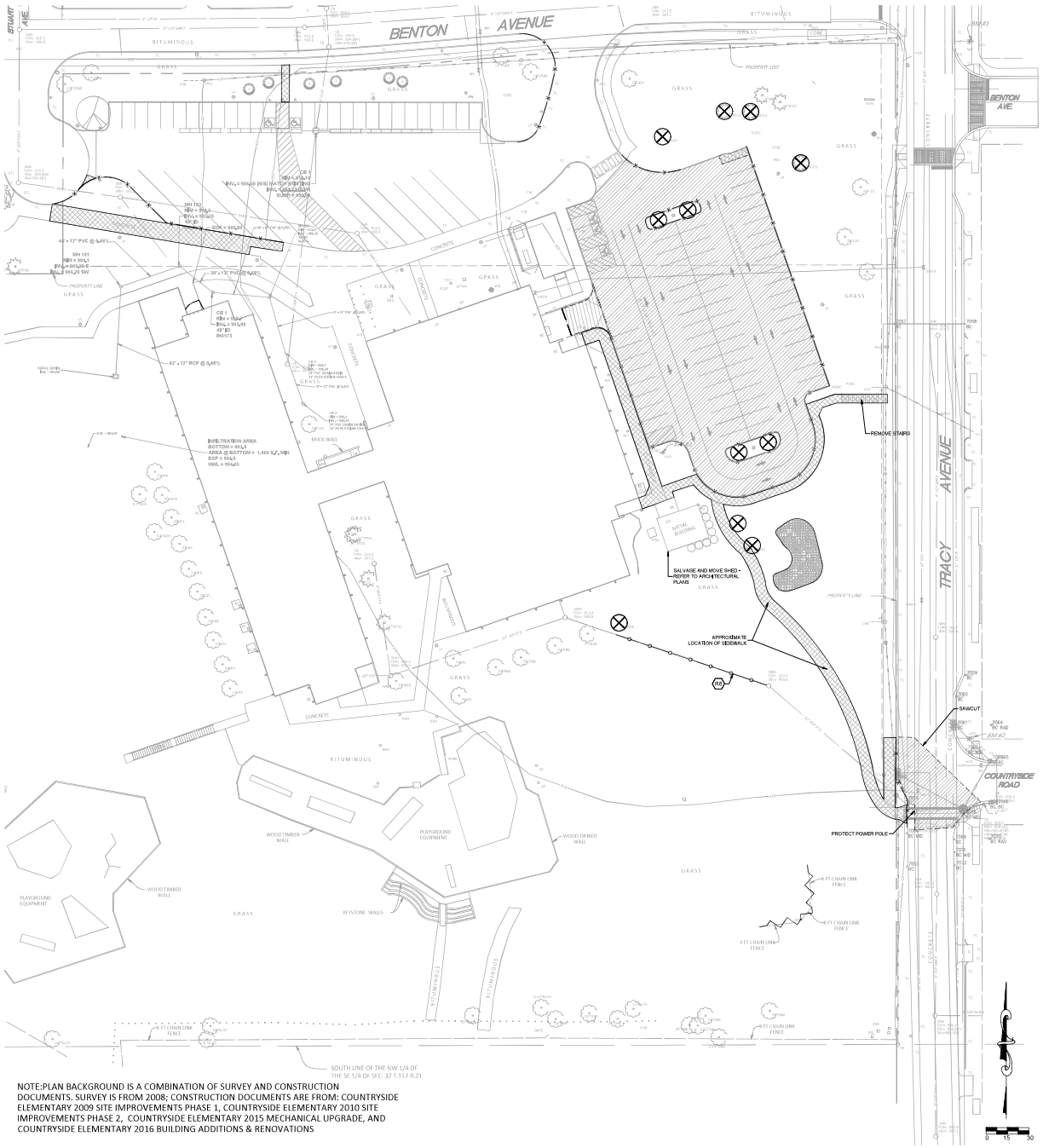
Q2. **Address** 5504 Countryside Rd, Edina

Q3. **Comment**

Good morning, I'm writing to express my concerns over the proposed Countryside Elementary parking lot exit at Tracy Ave and Countryside Rd. I agree that parking is an issue at the school but the design is where I have issues: 1 - The Intersection of Countryside Road and Tracy Avenue is already a difficult one for pedestrians to navigate, especially Countryside students going to and from school. Even with crossing guards in place, there have been too many close calls because of all of the traffic in that area. 2 - There are already issues with school related traffic in the mornings and afternoons on Countryside Road, which has no sidewalks or bike lanes. There are a large number of school aged children in the neighborhood who all walk to and from school and are put at even greater risk by increased vehicle traffic. 3 - The hill on Tracy Avenue at Countryside Road already poses safety issues. It is difficult to see the intersection coming southbound on Tracy and vehicles get up to and over the speed limit very quickly. In addition, winter weather can pose even greater hazards, even with no cross traffic currently. 4 - It seems almost certain that there will be even greater traffic issues on Tracy Avenue north of the intersection. If cars are stopped while vehicles exit the parking lot, it could conceivably back all the way up into the Benton Avenue intersection. Moreover, there are pick up/drop off turn outs on both the east and west side of Tracy That would be affectively blocked in by traffic. Again, I agree that there's a shortage of parking at Countryside elementary. But I think this design, as it stands, presents more issues than it solves, most notably the safety of our kids. If it is determined that the intersection must be at Countryside Road, could it be an exit only, right turn only onto southbound Tracy? Could there be pylons placed in the middle of the road preventing a vehicle exiting the parking lot from going north on Tracy or onto Countryside Road? What sort of traffic controls will be in place at that intersection, primarily for when kids are going to and from school, but also more broadly for anyone attempting to cross Tracy? Thank you for the opportunity to provide feedback on this proposal. I urge you to take a step back, gather more feedback and input from residents and Countryside elementary staff and rethink this design. Respectfully submitted, Tom Matchinsky 5504 Countryside Road

Myken Edwards
5524 Countryside Road

I have a child at Valley View and a child at Countryside. I am wondering where the parking lot will be located. We seem to get a lot of parent traffic on Countryside and we have a lot of walkers. I'm just looking out for the safety of the walkers and wondering if our street is going to be used as like a cut through or they're encouraging the buses and traffic to turn on to Countryside Road after they exit this new parking lot. My concern is about the safety of the walkers we have that use Countryside Road to get to school and the crosswalk that is there also. -Transcribed by City Staff (voicemail received 11-9-21 8:12 am)




NOTE:PLAN BACKGROUND IS A COMBINATION OF SURVEY AND CONSTRUCTION DOCUMENTS. SURVEY IS FROM 2008; CONSTRUCTION DOCUMENTS ARE FROM: COUNTRYSIDE ELEMENTARY 2009 SITE IMPROVEMENTS PHASE 1, COUNTRYSIDE ELEMENTARY 2010 SITE IMPROVEMENTS PHASE 2, COUNTRYSIDE ELEMENTARY 2015 MECHANICAL UPGRADE, AND COUNTRYSIDE ELEMENTARY 2016 BUILDING ADDITIONS & RENOVATIONS

## NOTES:

1. REFER TO SHEET C1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING VEGETATION AND SITE FEATURES (CURBS, WALKS, PAVEMENTS, OVERHEAD AND UNDERGROUND UTILITIES, SIGNAGE, FENCING, ROADWAYS, ETC.) WHICH ARE TO REMAIN.
3. REPAIR OR REPLACE EXISTING PROPERTY AND SITE FEATURES, INCLUDING GRASS AND VEGETATION, WHICH IS TO REMAIN THAT IS DAMAGED BY THE WORK, TO OWNER'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.
4. VISIT THE SITE PRIOR TO BIDDING; BE FAMILIAR WITH ACTUAL CONDITIONS IN THE FIELD. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR CONDITIONS WHICH COULD HAVE BEEN DETERMINED OR ANTICIPATED BY EXAMINATION OF THE SITE, THE CONTRACT DRAWINGS AND THE INFORMATION AVAILABLE PERTAINING TO EXISTING SOILS, UTILITIES AND OTHER SITE CHARACTERISTICS.
5. THE CONTRACTOR SHALL HIRE THE SERVICES OF A UTILITY LOCATOR COMPANY TO LOCATE ALL PRIVATELY OWNED UTILITIES THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS.

## LEGEND

- CONCRETE PAVEMENT REMOVALS
- CONCRETE CURB AND GUTTER REMOVALS
- BITUMINOUS PAVEMENT REMOVALS
- FENCING REMOVALS
- UTILITY REMOVALS
- TREE REMOVALS
- MASS SHRUB / LANDSCAPE REMOVALS
- SAWCUT
- (X1) REMOVALS KEY NOTE
- PROPERTY LINE

## KEY NOTE LEGEND

- (X1) REMOVE CONCRETE PAVEMENT TO NEAREST JOINT
- (X2) REMOVE CONCRETE CURB AND GUTTER / VALLEY GUTTER
- (X3) REMOVE BITUMINOUS PAVEMENT
- (X4) REMOVE FENCING (INCLUDING FOOTINGS AND GATES)
- (X5) REMOVE TRAFFIC CONTROL SIGN AND POST
- (X6) REMOVE STORM SEWER
- (X7) REMOVE STORM SEWER STRUCTURE
- (X8) REMOVE WATERMAIN
- (X9) REMOVE HYDRANT
- (X10) REMOVE GATE VALVE
- (X11) REMOVE TREE
- (X12) REMOVE LANDSCAPING (MULCH, SHRUBS, ETC.)
- (X13) SAWCUT
- (P1) PROTECT CONCRETE PAVEMENT
- (P2) PROTECT CONCRETE CURB AND GUTTER / VALLEY GUTTER
- (P3) PROTECT BITUMINOUS PAVEMENT
- (P4) PROTECT FENCING (INCLUDING FOOTINGS AND GATES)
- (P5) PROTECT TRAFFIC CONTROL SIGN AND POST
- (P6) PROTECT BOLLARD AND FOOTING
- (P7) PROTECT RETAINING WALL
- (P8) PROTECT STORM SEWER
- (P9) PROTECT STORM SEWER STRUCTURE
- (P10) PROTECT SANITARY SEWER
- (P11) PROTECT SANITARY SEWER STRUCTURE
- (P12) PROTECT WATERMAIN
- (P13) PROTECT HYDRANT
- (P14) PROTECT UNDERGROUND UTILITY
- (P15) PROTECT TREE
- (P16) PROTECT LANDSCAPING (MULCH, SHRUBS, ETC.)
- (X1) REFER TO SHEET C1.41 - UTILITY AND EROSION CONTROL PLANS FOR TREATMENT
- (X2) REFER TO ARCHITECTURAL PLANS FOR TREATMENT
- (X3) REFER TO ELECTRICAL PLANS FOR TREATMENT

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

# EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION

5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA
DAVID A. REY
Registration Number 40180 Date 10/21/2021

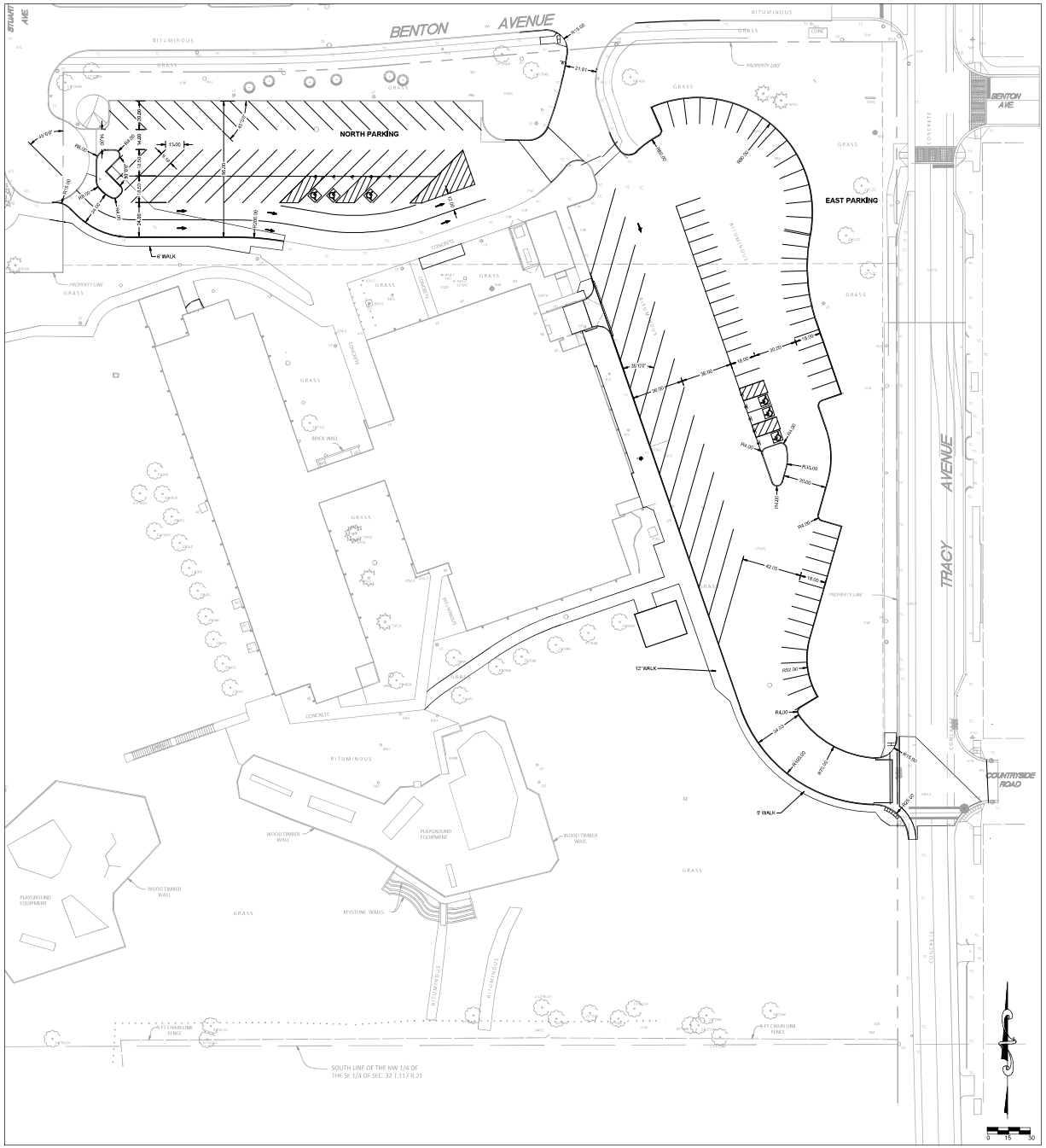
| Revisions | | |
|---|---|---|
| Description | Date | Num |

Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR
North

## REMOVALS PLAN

Scale: 1"=30'

**C1.11**




## NOTES:

1. REFER TO SHEET C1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, CENTERLINE OF FENCE, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
3. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
4. SIGNAGE SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

## LEGEND

- BASELINE FOR DIMENSIONS
- PI — POINT OF INTERSECTION
- PT — POINT OF TANGENCY
- PCC — POINT OF COMPOUND CURVATURE
- BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA

DAVID A. REY
Registration Number 40180 Date 10/21/2021

| Remarks | | |
|---|---|---|
| Description | Date | Num |
| | | |

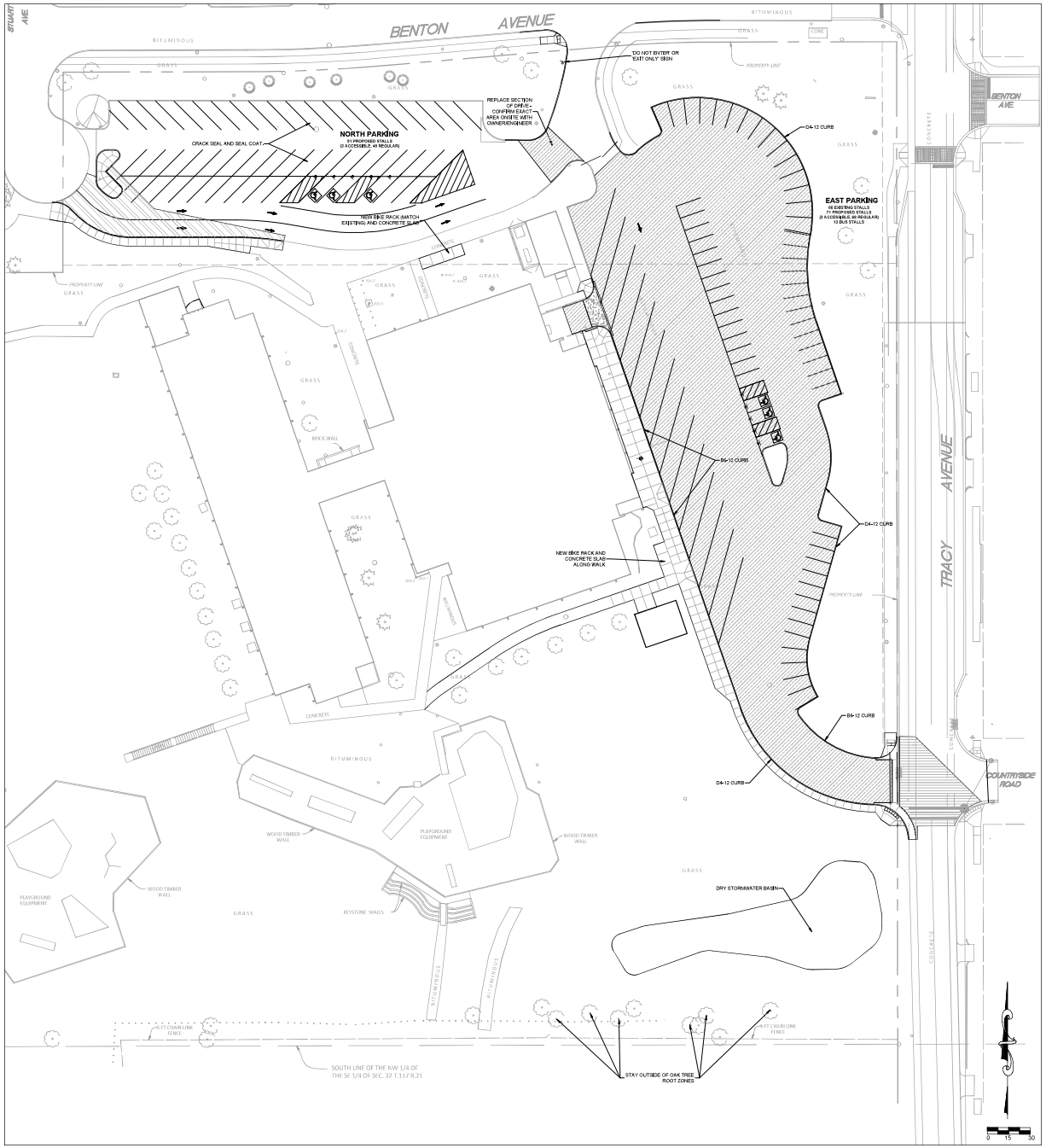
Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR
North

**GEOMETRIC PLAN**

Scale: 1"=30'

**C1.21**

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**




## NOTES:

1. REFER TO SHEET C1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
3. SIGNAGE SHALL GENERALLY BE INSTALLED 18" BEHIND THE BACK OF CURB.
4. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED OR SEEDED.
5. WHERE NEW SOD MEETS EXISTING TURF, EXISTING TURF EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.
6. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SOD OR RE-SEED ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.

## SITE STATISTICS:

EXISTING PARKING COUNTS (94 TOTAL STALLS):
CAR PARKING = 94 STALLS
BUS PARKING = 12 STALLS

PROPOSED PARKING COUNTS (122 TOTAL CAR STALLS):
CAR PARKING = 122 STALLS
BUS PARKING = 13 BUS STALLS

ACCESSIBLE PARKING STALL REQUIREMENTS = 6 STALLS
ACCESSIBLE PARKING STALLS PROVIDED = 6 STALLS

## LEGEND

- REFERENCE KEY TO SITE DETAILS (DETAIL ID NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED CONCRETE WALK
- PROPOSED CONCRETE SLAB
- PROPOSED BITUMINOUS PAVEMENT CRACKSEAL / SEALCOAT
- PROPOSED MEDIUM DUTY BITUMINOUS PAVEMENT
- PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT
- PROPOSED STREET BITUMINOUS PAVEMENT
- PROPOSED WOOD MULCH PLANTING BED
- PROPOSED TRAFFIC CONTROL SIGN
- PAINTED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED SURGE BASIN (SB)
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA

DAVID A. REY
Registration Number 40180 Date 10/21/2021

| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

Comm: XXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR

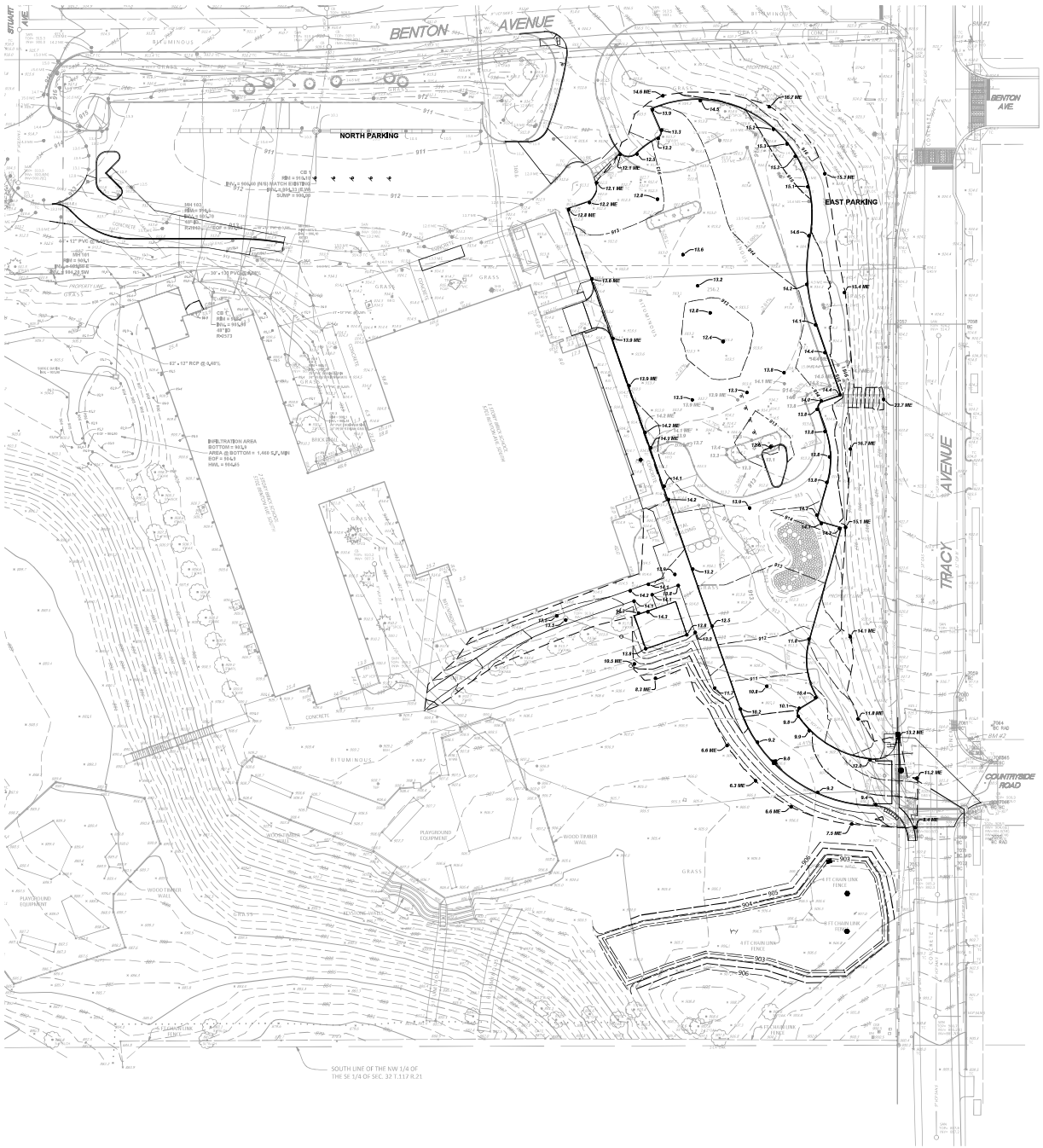
North

**FINISHING PLAN**

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

Scale: 1"=30'

**C1.21**




## GENERAL NOTES

1. ALL CONSTRUCTION MUST COMPLY WITH APPLICABLE STATE AND LOCAL ORDINANCES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR AND SHALL PAY FOR ALL CONSTRUCTION STAKING / LAYOUT.
3. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL RELATED CONSTRUCTION PERMITS, INCLUDING THE NPDES PERMIT FROM THE MPCA. SUBMIT A COPY OF ALL PERMITS TO THE CITY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL SIGNAGE (CONSTRUCTION ZONES) NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS. ALL SIGNAGE LAYOUTS MUST BE DESIGNED BY THE CONTRACTOR AND APPROVED BY LOCAL AUTHORITIES.
5. INSTALL CONTROL FENCING AND BARRICADING AS NECESSARY TO PROTECT THE PUBLIC.
6. INSPECT SITE AND REVIEW SOIL BORINGS TO DETERMINE EXTENT OF WORK AND NATURE OF MATERIALS TO BE HANDLED.
7. REFER TO SPECIFICATIONS FOR DEWATERING REQUIREMENTS.
8. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
9. REFER TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE, PART OF SECTION 01 89 13, FOR EROSION CONTROL REQUIREMENTS. SECTION 31 00 00 SHALL BE RESPONSIBLE FOR FULL IMPLEMENTATION OF THE SWPPP.
10. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
11. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
12. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND LOCAL REGULATIONS.
13. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING SITE FEATURES (INCLUDING TURF AND VEGETATION) WHICH ARE TO REMAIN.
14. PROPOSED CONTOURS AND SPOT ELEVATIONS ARE SHOWN TO FINISH GRADE UNLESS OTHERWISE NOTED.
15. PROPOSED ELEVATIONS SHOWN TYPICALLY AS 13,1 OR 13 SHALL BE UNDERSTOOD TO MEAN 913,1 OR 913.
16. SPOT ELEVATIONS SHOWN IN PARKING LOTS, DRIVES AND ROADS INDICATE GUTTER GRADES, UNLESS NOTED OTHERWISE. SPOT ELEVATIONS WITH LABELS OUTSIDE THE BUILDING PERIMETER INDICATE PROPOSED GRADES OUTSIDE THE BUILDING. SPOT ELEVATIONS WITH LABELS INSIDE THE BUILDING PERIMETER INDICATE PROPOSED FINISH FLOOR ELEVATIONS.
17. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL AS REQUIRED. ALL COSTS ASSOCIATED WITH IMPORTING AND EXPORTING MATERIALS SHALL BE INCIDENTAL TO THE CONTRACT.
18. NO FINISHED SLOPES SHALL EXCEED 4' HORIZONTAL TO 1' VERTICAL (4:1), UNLESS OTHERWISE NOTED.
19. ALL DISTURBED AREAS WHICH ARE NOT DESIGNATED TO BE PAVED, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED OR SODDED. REFER TO SHEET L1.11, LANDSCAPING PLAN, FOR SOD AND SEED LOCATIONS.
20. WHERE NEW SOD MEETS EXISTING SOD, EXISTING SOD EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.
21. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SEED OR RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.
22. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MN), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
23. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
    a. IN ACCORDANCE WITH MINNESOTA PLUMBING CODE, PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
    b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
    i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
    ii. PRESS-SEAL WATERSTOP GROUTING RINGS"
    iii. OR APPROVED EQUAL.
24. ANY MANHOLE, CATCH BASIN, STORM SEWER, DRAINTILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MINNESOTA PLUMBING CODE. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR).
25. LOCATE ALL EXISTING UTILITIES, VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. VERIFY LOCATIONS, SIZES AND ELEVATIONS OF SAME BEFORE BEGINNING CONSTRUCTION.
26. CONTRACTOR SHALL STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS AND MANHOLES. MANHOLE LOCATIONS SHALL BE ADJUSTED TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. CURB AND GUTTER SHALL BE STAKED TO ALLOW CURB INLET TYPE CATCH BASINS TO BE PROPERLY LOCATED IN LINE WITH CURBING.

## LEGEND

- REFERENCE KEY TO SITE DETAILS (DETAIL LD NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION (ME = MATCH EXISTING, EOF = EMERGENCY OVERFLOW)
- PROPOSED GRADING LIMITS
- APPROXIMATE SOIL BORING LOCATION
- PROPOSED STORM SEWER
- PROPOSED DRAINTILE / FINGER DRAIN
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED SURGE BASIN (SB)
- PROVIDE MINIMUM 18" VERTICAL SEPARATION AT CROSSING - PROVIDE VERTICAL BENDS AS REQUIRED TO ACCOMPLISH. CENTER ONE LENGTH WATERMAIN PIPE ON CROSSING.
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA
DAVID A. REY
Registration Number 40180 Date 10/21/2021

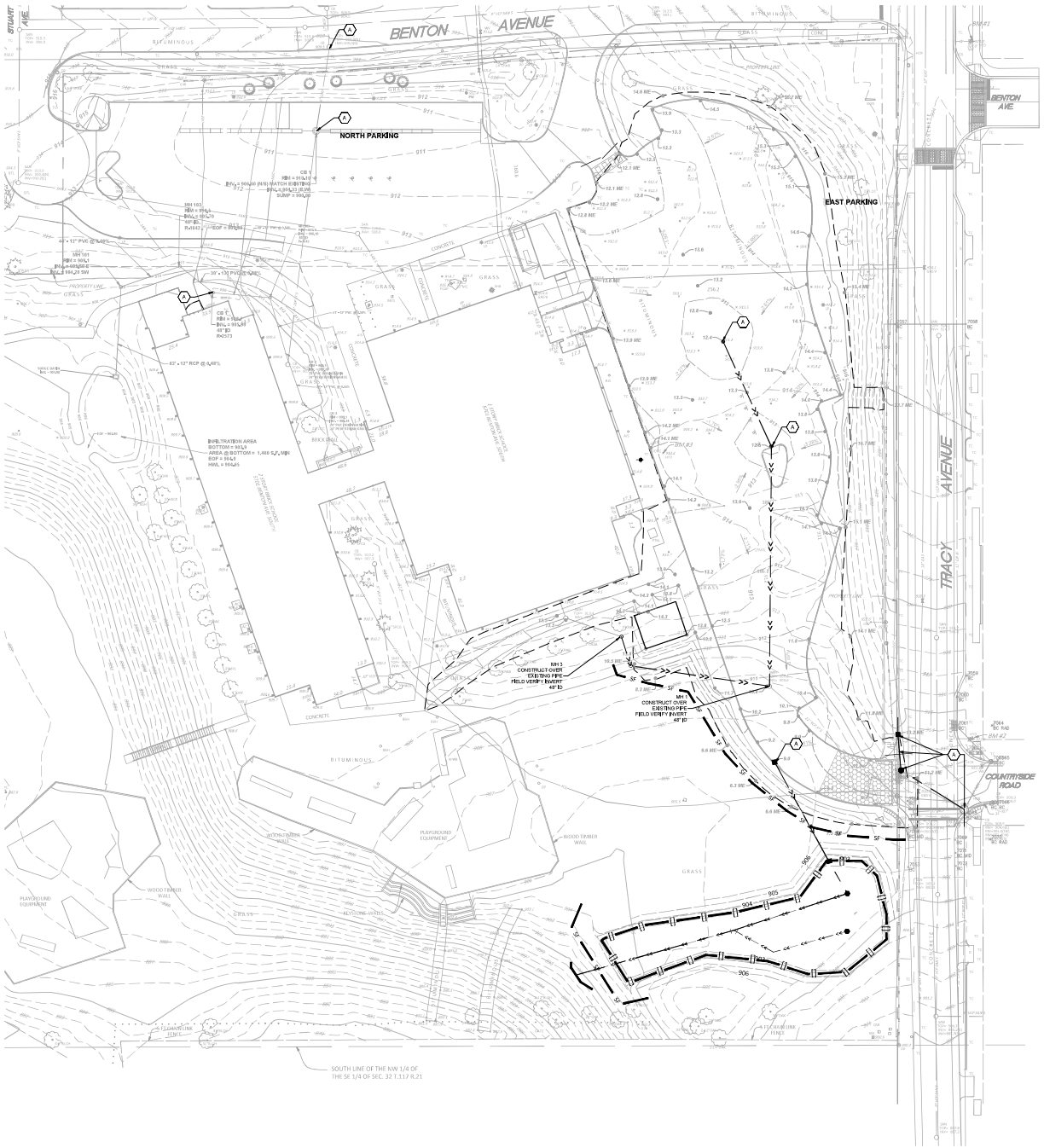
| Revisions | | |
|---|---|---|
| Description | Date | Num |

Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR
North

**GRADING AND DRAINAGE PLAN**

Scale: 1"=30'

**C1.31**




## NOTES

1. REFER TO SHEET C1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MIN.), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
3. ALL WATERMAIN PIPE SHALL BE DIP, CLASS 52. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE). DIP SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO ASTM D 1248-84(89).
4. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
   a. IN ACCORDANCE WITH MINNESOTA PLUMBING CODE, PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
   b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
      i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
      ii. PRESS-SEAL, WATERSTOP GROUTING RINGS"
      iii. OR APPROVED EQUAL.
5. ANY MANHOLE, CATCH BASIN, STORM SEWER, DRAINTILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MINNESOTA PLUMBING CODE. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR).
6. LOCATE ALL EXISTING UTILITIES, VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. VERIFY LOCATIONS, SIZES AND ELEVATIONS OF SAME BEFORE BEGINNING CONSTRUCTION.
7. CONTRACTOR SHALL STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS AND MANHOLES. GATE VALVE AND MANHOLE LOCATIONS SHALL BE ADJUSTED TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. CURB AND GUTTER SHALL BE STAKED TO ALLOW CURB INLET TYPE CATCH BASINS TO BE PROPERLY LOCATED IN LINE WITH CURBING.
8. REFER TO SWPPP NARRATIVE (SECTION 01 89 13) FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.
9. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
10. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
11. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND OTHER LOCAL REGULATIONS.
12. IF EROSION AND SEDIMENT CONTROL MEASURES TAKEN ARE NOT ADEQUATE AND RESULT IN DOWNSTREAM SEDIMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OUT DOWNSTREAM STORM SEWERS AS NECESSARY, INCLUDING ASSOCIATED RESTORATION.
13. INLET PROTECTION DEVICE AT STORM SEWER INLETS. AT THE INLETS TO ALL STORM SEWER STRUCTURES, PROVIDE A PRODUCT FROM THE FOLLOWING LIST. APPROVED PRODUCTS:
   a. ROAD DRAIN "TOP SLAB", MANUFACTURED BY WIMCO
   b. ROAD DRAIN "CURB & GUTTER", MANUFACTURED BY WIMCO
   c. INFRASAFE "SEDIMENT CONTROL BARRIER", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   d. INFRASAFE "DEBRIS COLLECTION DEVICE", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   e. INFRASAFE "CULVERT INLET PROTECTOR", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   f. DANDY SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   g. DANDY CURB SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   h. OR APPROVED EQUAL.
14. PRIOR TO CONSTRUCTION, DELINEATE TURF AND VEGETATED AREAS NOT TO BE DISTURBED WITH ORANGE SNOW FENCE. NO CONSTRUCTION TRAFFIC, EQUIPMENT OR MATERIALS SHALL BE PERMITTED TO UTILIZE, ACCESS, OR OTHERWISE ENTER THE AREAS DESIGNATED NOT TO BE DISTURBED. MINIMIZE SOIL COMPACTION AND DISRUPTION OF TOPSOIL IN AREAS OUTSIDE THE CONSTRUCTION LIMITS TO COMPLY WITH MN CONSTRUCTION STORMWATER GENERAL PERMIT.

## LEGEND

- REFERENCE KEY TO SITE DETAILS (DETAIL I.D NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION (ME = MATCH EXISTING, EOF = EMERGENCY OVERFLOW)
- PROPOSED GRADING LIMITS
- APPROXIMATE SOIL BORING LOCATION
- PROPOSED STORM SEWER
- PROPOSED DRAINTILE / FINGER DRAIN
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED SURGE BASIN (SB)
- PROVIDE MINIMUM 18" VERTICAL SEPARATION AT CROSSING - PROVIDE VERTICAL BENDS AS REQUIRED TO ACCOMPLISH. CENTER ONE LENGTH WATERMAIN PIPE ON CROSSING.
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPOSED SILT FENCE
- PROPOSED SEDIMENT CONTROL LOG
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET
- INLET PROTECTION DEVICE AT STORM SEWER INLET
- PROPERTY LINE
- PROPOSED HYDRANT (HYD)
- PROPOSED GATE VALVE (GV)

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

# EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION

5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA

DAVID A. REY
Registration Number 40180 Date 10/21/2021

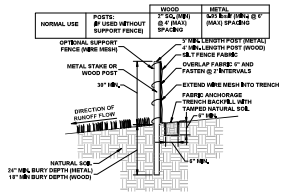
| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR
North

# UTILITY AND EROSION CONTROL PLAN

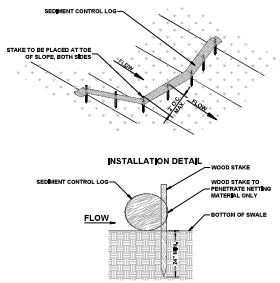
Scale: 1"=30'

**C1.41**

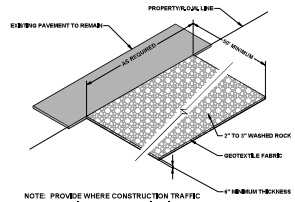



NOTE: DEPENDING UPON CONFIGURATION, ATTACH TO WIRE MESH WITH HOG RINGS, STEEL POSTS WITH TIE WIRES, OR WOOD POSTS WITH STAPLES

**SILT FENCE**

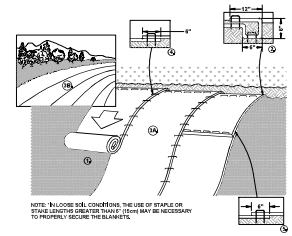



**SEDIMENT CONTROL LOG**




NOTE: PROVIDE WHERE CONSTRUCTION TRAFFIC ENTERS OR EXITS THE CONSTRUCTION SITE

**ROCK CONSTRUCTION ENTRANCE**




① PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

② BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKETS.

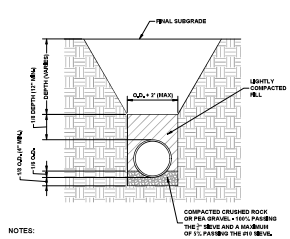
③ ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS SHALL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLING DIAGRAMS. WHEN USING OPTIONAL DOT SYSTEM, STAPLE/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

④ THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET BEING INSTALLED ON TOP EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.

⑤ CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

⑥ BLANKET SHALL BE STAPLED AS PER MANUFACTURER'S RECOMMENDATION.

**EROSION CONTROL BLANKET**

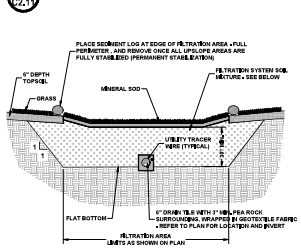



NOTES:

TRENCH SIDEWALLS TO MEET O.S.H.A. REQUIREMENTS.

UPPER 3 FT. OF BACKFILL SHALL BE COMPACTED TO AT LEAST 100% STANDARD PROCTOR DRY DENSITY, BELOW THIS ELEVATION, BACKFILL SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY.

**PIPE BEDDING - RCP**



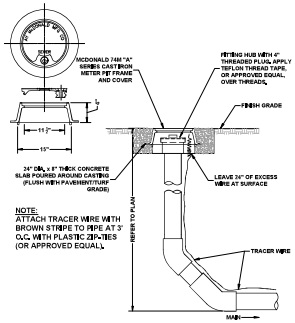

SEE NOTE 7 OF 11 / C7.1 FOR ENGINEERED SOIL MIXTURE

**TYPICAL SECTION THRU FILTRATION AREA**

FILTRATION AREA CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:

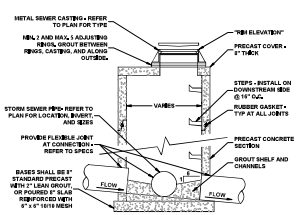
1. FILTRATION AREA LIMITS SHALL BE SURVEYED AND A VISUAL BARRIER, SUCH AS ORANGE SNOW FENCE, SHALL BE PLACED AROUND THE PERIMETER OF THE FILTRATION AREA TO PREVENT ENTRY OF EQUIPMENT AND MATERIAL. STOCKPILES OUT OF THE PROPOSED FILTRATION AREA. THE VISUAL BARRIER MUST BE INSTALLED BEFORE NEW CONSTRUCTION BEGINS AND SHALL BE MAINTAINED THROUGH THE DURATION OF THE PROJECT.
2. DELIVERY SAMPLE MATERIALS ONSITE FOR PRIOR APPROVAL, PRIOR TO BEGINNING THE INSTALLATION, SUFFICIENT MATERIAL QUANTITIES SHALL BE ONSITE TO COMPLETE THE INSTALLATION AND STABILIZED EXPOSED SOIL AREAS WITHOUT DELAY.
3. CARE MUST BE TAKEN TO AVOID CONTAMINATION OF ENGINEERED SOILS WITH SEDIMENT, INSITU OR TOPSOIL DURING AND AFTER INSTALLATION, MATERIALS MUST BE SEGREGATED.
4. INSTALLATION WITH DRY SOIL CONDITIONS IS CRITICAL TO PREVENT COMPACTION. SCHEDULE WORK SO THAT SOIL IS PLACED AND PLANTED DURING A DRY PERIOD. DO NOT PLACE SOIL WHEN IT IS SATURATED OR FROZEN. IF RAIN IS FORECAST, DO NOT PLACE SOIL. PROTECT FILTRATION AREA SOILS WITH TARPS. SOD MUST BE COMPLETED BEFORE THE NEXT PRECIPITATION EVENT. TURF SOD PLACED IN FLOW PATHS SHALL BE SECURED WITH PLT CLEAT 6 STAKES PER SQUARE YARD, PLACE STAKES ALONG UPHILL SEAM EDGES TO PREVENT UNDERMINING FLOWS UNTIL SOD ROOTS ESTABLISH.
5. DO NOT LEAVE STORMWATER AREAS AND / OR PERIMETER SLOPES EXPOSED OVERNIGHT, SECURE THE SITE FROM RISK OF PRECIPITATION DAMAGES AT THE END OF EVERY WORK DAY, IN THE EVENT OF RAIN, TAKE ACTION TO DIVERT STORMWATER AWAY FROM THE WORK AREA AND TEMPORARILY COVER OF ALL EXPOSED SOILS WITH FILTER FABRIC OR BIODEGRADABLE SHEETING.
6. FIELD OBSERVATION OF EXCAVATION AND SOIL PLACEMENT IS REQUIRED. NOTIFY GEOTECHNICAL ENGINEER PRIOR TO DIGGING, USE BACKHOE WITH TOOTH BUCKET FOR CELL EXCAVATION TO AVOID COMPACTING OR SMEARING OF SOILS. DO NOT USE SKID STEER FOR EXCAVATION WITHIN THE CELLS. USE EXCAVATION BUCKET TO PLACE MATERIALS. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED INTO THE STORMWATER AREAS. LEVELING AND FINAL GRADING WITHIN THE CELL MUST BE COMPLETED BY HAND.
7. FILTRATION AREA SOIL MIX SHALL BE MINNESOTA STORMWATER MANUAL 4.2 MN IS: ENHANCED FILTRATION BLEND (MCL), BLENDED MIXTURE OF 70% ASTM C33 COARSE WASHED SAND (MNDOT 3355 AND 3% MNDOT 3891 GRADE 2 LEAF LITTER COMPOST. THE MATERIAL FURNISHED SHALL PROVIDE DOCUMENTATION THAT THE COMPOST HAS BEEN TESTED AND MEETS THE REQUIREMENTS OF MNDOT 3891.7 FOR ORGANIC MATTER CONTENT. THE BLENDED SOIL OF FILTRATION BASINS, SHALL HAVE A SINGLE TEST RESULT WITHIN THE WARNED RANGE. THE ENGINEERED SOIL SHALL NOT CONTAIN ANY TOPSOIL OR TILTER AGGREGATE WITHIN FINES.
8. INSTALL PLANTINGS BY HAND.
9. INSTALLED SOD AND PLANTINGS REQUIRE A TOTAL OF 1" OF WATER PER WEEK AND ACTIVE WIRED MAIN GERMINT UNTIL WELL ESTABLISHED, WATERING COSTS ARE CONSIDERED INCIDENTAL TO SOD AND PLANTING INSTALLATION, CONSTRUCT A TEMPORARY IRRIGATION SYSTEM, CONSISTING OF ABOVE GROUND HOSES, HYDRO VALVES, ETC., FOR WATERING UNITS. VEGETATIONS ESTABLISHED, DO NOT USE A WATER TRUCK AS THE FORCE OF THE WATER WILL ADVERSELY AFFECT THE STORMWATER AREA SOILS.
10. REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS SHALL BE DONE BY HAND OR LIF SELF-PROPELLED EQUIPMENTIS REQUIRED. FROM OUTSIDE THE PERIMETER OF THE FILTRATION AREAS.

**FILTRATION AREA CONSTRUCTION NOTES**

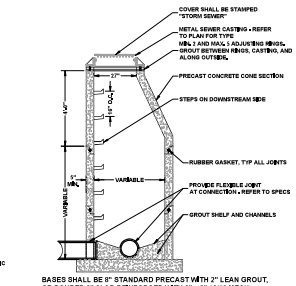



NOTE:
ATTACH TRACER WIRE WITH BROWN STRIPE TO PIPE AT 3' O.C. WITH PLASTIC ZIP-TIES (OR APPROVED EQUAL).

**CLEANOUT ASSEMBLY**

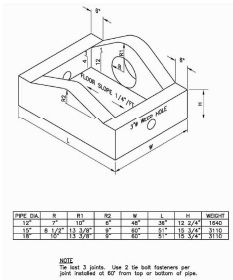



**CATCH BASIN**



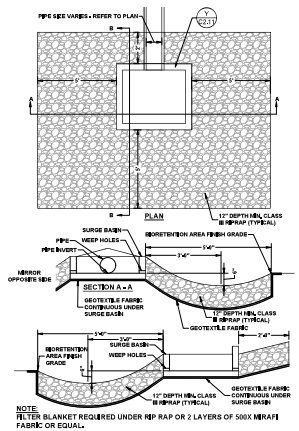

BASES SHALL BE 8" STANDARD PRECAST WITH 2" LEAN GROUT, OR POURED 8" SLAB REINFORCED WITH 6" x 6" 10/10 MESH

**STORM SEWER MANHOLE**



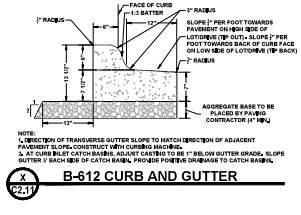

NOTE
Tie last 3 joints. Use 2 tie bolt fasteners per joint installed at 60° from top or bottom of pipe.

**SURGE BASIN**



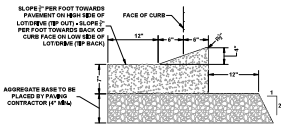

NOTE:
FILTER BLANKET REQUIRED UNDER RIP RAP OR 2 LAYERS OF 500X MIRAFI FABRIC OR EQUAL.

**RIPRAP AT SURGE BASIN**



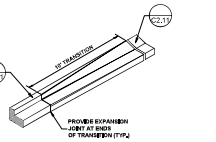

NOTE:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE TO MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE. CONSTRUCT WITH CURBING MACHINE.
2. AT CURB INLET CATCH BASINS, ADJUST CASTING TO BE 1" BELOW GUTTER GRADE, SLOPE GUTTER 3' EACH SIDE OF CATCH BASIN, PROVIDE POSITIVE DRAINAGE TO CATCH BASIN.

**B-612 CURB AND GUTTER**

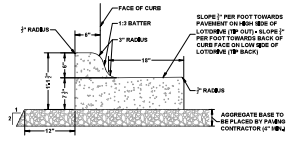



NOTE:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE TO MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE. CONSTRUCT WITH CURBING MACHINE.

**D-412 CURB & GUTTER**

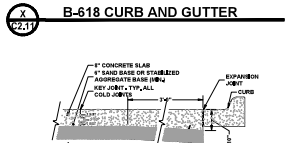



**CURB TRANSITION D-412 TO B-612**

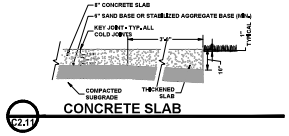



NOTE: DIRECTION OF TRANSVERSE GUTTER SLOPE TO MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.

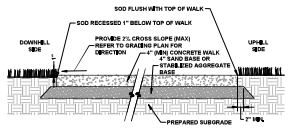
**B-618 CURB AND GUTTER**



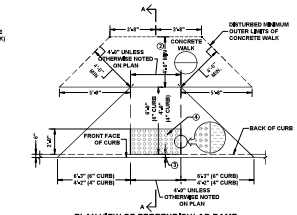

**CONCRETE SLAB**



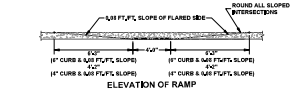

**CONCRETE SLAB**



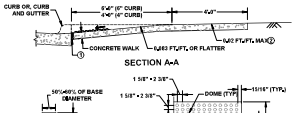

**CONCRETE WALK/SLAB**

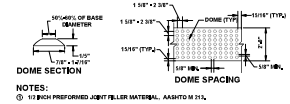



PLAN VIEW OF PERPENDICULAR RAMP



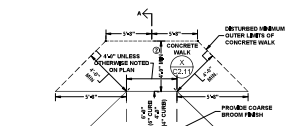

ELEVATION OF RAMP



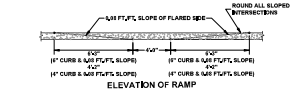




NOTES:
① 1/2 INCH PREFORMED JOINT FILLER MATERIAL, AASHTO M 213.
② PROVIDE A PATH OF TRAVEL 4'-0" WIDE BEHIND THE PEDESTRIAN RAMP. A RELATIVELY FLAT 4' X 4' LANDING WILL ALLOW WHEELCHAIRS TO NAVIGATE AROUND THE PEDESTRIAN RAMP.
③ 6" TO 8" IS THE REQUIRED OFFSET OF THE DETECTABLE WARNINGS/ TRUNCATED DOME AREA FROM THE FRONT FACE OF CURB, OR PLACE THE DETECTABLE WARNINGS AT THE BACK OF CURB.
④ ADA REQUIRED TRUNCATED DOME AREA SHALL BE 2' 0" MIN. IN DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH (4' 0" TYP.) OF THE CURB RAMP. THIS 2' 0" BY 4' 0" WIDTH (TYP.) TRUNCATED DOME AREA SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE. THE ENTIRE TRUNCATED DOME AREA SHALL BE A LIGHT COLOR (LIGHT GRAY, WHITE, OR YELLOW) WHEN THE ADJACENT SIDEWALK IS A DARK COLOR. THE ENTIRE TRUNCATED DOME AREA SHALL BE A DARK COLOR (RED, BLACK, DARK GRAY, OR BRIGHT YELLOW) WHEN THE ADJACENT SIDEWALK IS A "WHITE" OR LIGHT GRAY CEMENT COLOR.

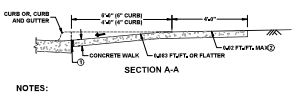
**PEDESTRIAN CURB RAMP**




PLAN VIEW OF PERPENDICULAR RAMP



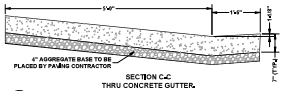

ELEVATION OF RAMP



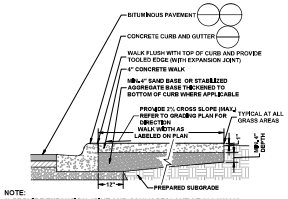

NOTES:
① 1/2 INCH PREFORMED JOINT FILLER MATERIAL, AASHTO M 213.
② PROVIDE A PATH OF TRAVEL 4'-0" WIDE BEHIND THE PEDESTRIAN RAMP. A RELATIVELY FLAT 4' X 4' LANDING WILL ALLOW WHEELCHAIRS TO NAVIGATE AROUND THE PEDESTRIAN RAMP.

**PEDESTRIAN CURB RAMP**




**CONCRETE ENTRANCE SLAB**




NOTE:
1) PROVIDE EXPANSION JOINT AND CAULK SEALANT AT ALL WALK, BUILDING, AND STOOP JOINTS, REFER TO SPECS.

**CONCRETE WALK**

# CITY SUBMITTAL NOT FOR CONSTRUCTION

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA

DAVID A. REY
Registration Number 40180 Date 10/21/2021

| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

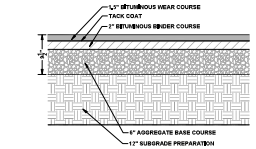
Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: DAR

North

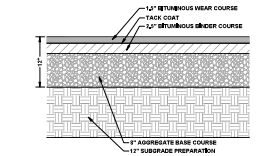
Scale: 1"=30'

**DETAILS**

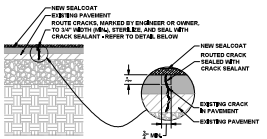
**C2.11**



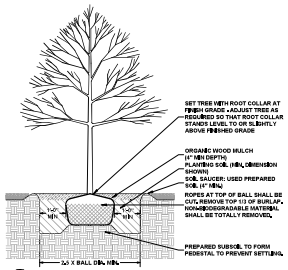

X C2.12 MEDIUM DUTY PAVEMENT



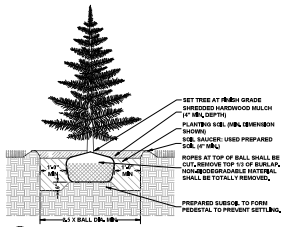

X C2.12 HEAVY DUTY PAVEMENT



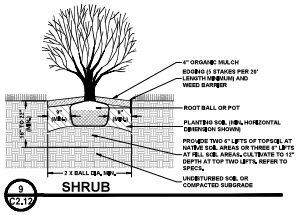

X C2.12 CRACK SEAL AND SEAL COAT



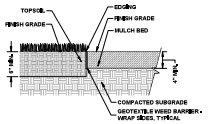

7 C2.12 DECIDUOUS TREE




X C2.12 CONIFEROUS TREE




9 C2.12 SHRUB




10 C2.12 SHRUB BED EDGING

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


Wold

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101

woldae.com | 651.227.7773

BOLTON & MENK
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed LANDSCAPE ARCHITECT under the laws of the State of MINNESOTA

LAURA K. DETZLER
Registration Number 53753 Date 10/21/2021

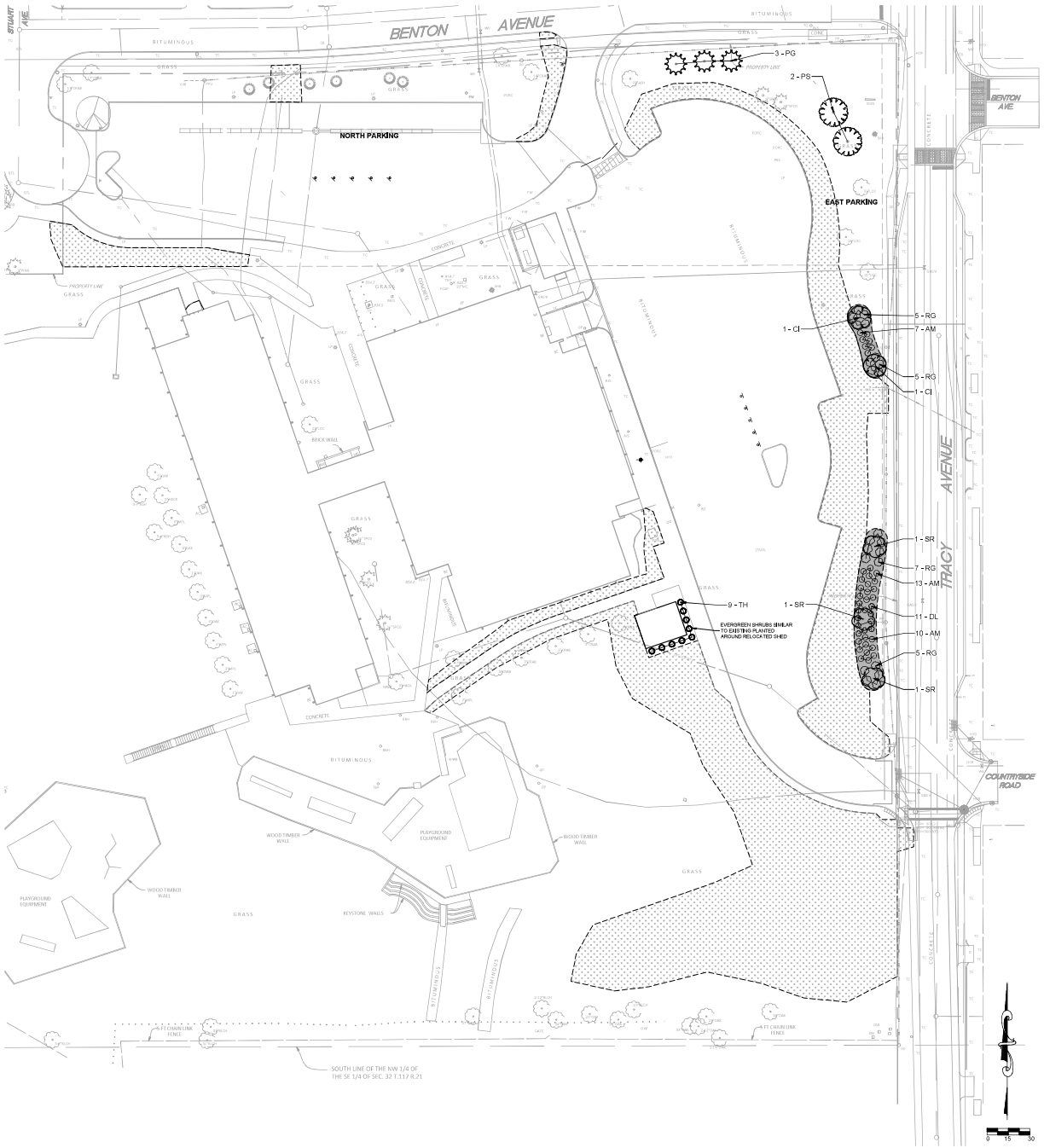
| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

Comm: XXXXX
Date: 10-12-2021
Drawn: LJD
Check: LJD
North

**DETAILS**

Scale: 1"=30'

**C2.12**




## NOTES:

1. REFER TO SHEET C1.01, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. REFER TO SWPPP NARRATIVE FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.
3. LANDSCAPE ARCHITECT MUST INSPECT AND APPROVE FINISH GRADING BEFORE CONTRACTOR PROCEEDS WITH SODDING.
4. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED.
5. WHERE NEW SOD MEETS EXISTING TURF, EXISTING TURF EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.
6. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.
7. BEGIN TURF ESTABLISHMENT IMMEDIATELY AFTER SODDING. REFER TO SPECIFICATION FOR PROCEDURE.
8. ALL TREES TO BE BALLED AND BURLAPPED.
9. ALL TREES AND SHRUBS SHALL RECEIVE 4" DEPTH OF CLEAN SHREDDED HARDWOOD MULCH, UNLESS OTHERWISE SPECIFIED.
10. ALL PLANT MATERIALS SHALL BE NO. 1 QUALITY, NURSERY GROWN AND SPECIMENS MUST BE MATCHED. ALL OVERSTORY TREES ADJACENT TO DRIVE AND IN PARKING LOT SHALL BEGIN BRANCHING NO LOWER THAN 6'.

## PLANT SCHEDULE

| CONIFEROUS SHRUBS | CODE | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|---|---|---|---|---|---|---|
| | TH | THUJA OCCIDENTALIS 'HOLMSTRUP' | HOLMSTRUP ARBORVITAE | 10 GAL. | | 9 |
| **EVERGREEN TREES** | **CODE** | **BOTANICAL NAME** | **COMMON NAME** | **SIZE** | **CONTAINER** | **QTY** |
| | PG | PICEA GLAUCA | WHITE SPRUCE | 6' B&B | | 3 |
| | PS | PINUS SYLVESTRIS | SCOTCH PINE | 6' B&B | | 2 |
| **ORNAMENTAL TREES** | **CODE** | **BOTANICAL NAME** | **COMMON NAME** | **SIZE** | **CONTAINER** | **QTY** |
| | CI | CRATAEGUS CRUS-GALLI INERMIS | THORNLESS COCKSPUR HAWTHORN | 1.5" CAL. | B&B | 2 |
| | SR | SYRINGA RETICULATA | JAPANESE TREE LILAC | 1.5" CAL. | B&B | 3 |
| **SHRUBS** | **CODE** | **BOTANICAL NAME** | **COMMON NAME** | **SIZE** | **SPREAD** | **QTY** |
| | AM | ARONIA MELANOCARPA 'MORTON' TM | IROQUOIS BEAUTY BLACK CHOKEBERRY | #5 CONT. | | 30 |
| | DL | DIERVILLA LONICERA | DWARF BUSH HONEYSUCKLE | #5 CONT. | | 11 |
| | RG | RHUS AROMATICA 'GRO-LOW' | GRO-LOW FRAGRANT SUMAC | #5 CONT. | | 22 |

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


**WOLD ARCHITECTS AND ENGINEERS**
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651.227.7773

**BOLTON & MENK**
Real People. Real Solutions.
7575 GOLDEN VALLEY ROAD, SUITE 200
GOLDEN VALLEY, MINNESOTA 55427
Phone: (763) 544-7129
Email: goldenvalley@bolton-menk.com
www.bolton-menk.com


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
**LANDSCAPE ARCHITECT**
under the laws of the State of **MINNESOTA**
LAURA K. DETZLER
Registration Number **53753** Date **10/21/2021**

| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

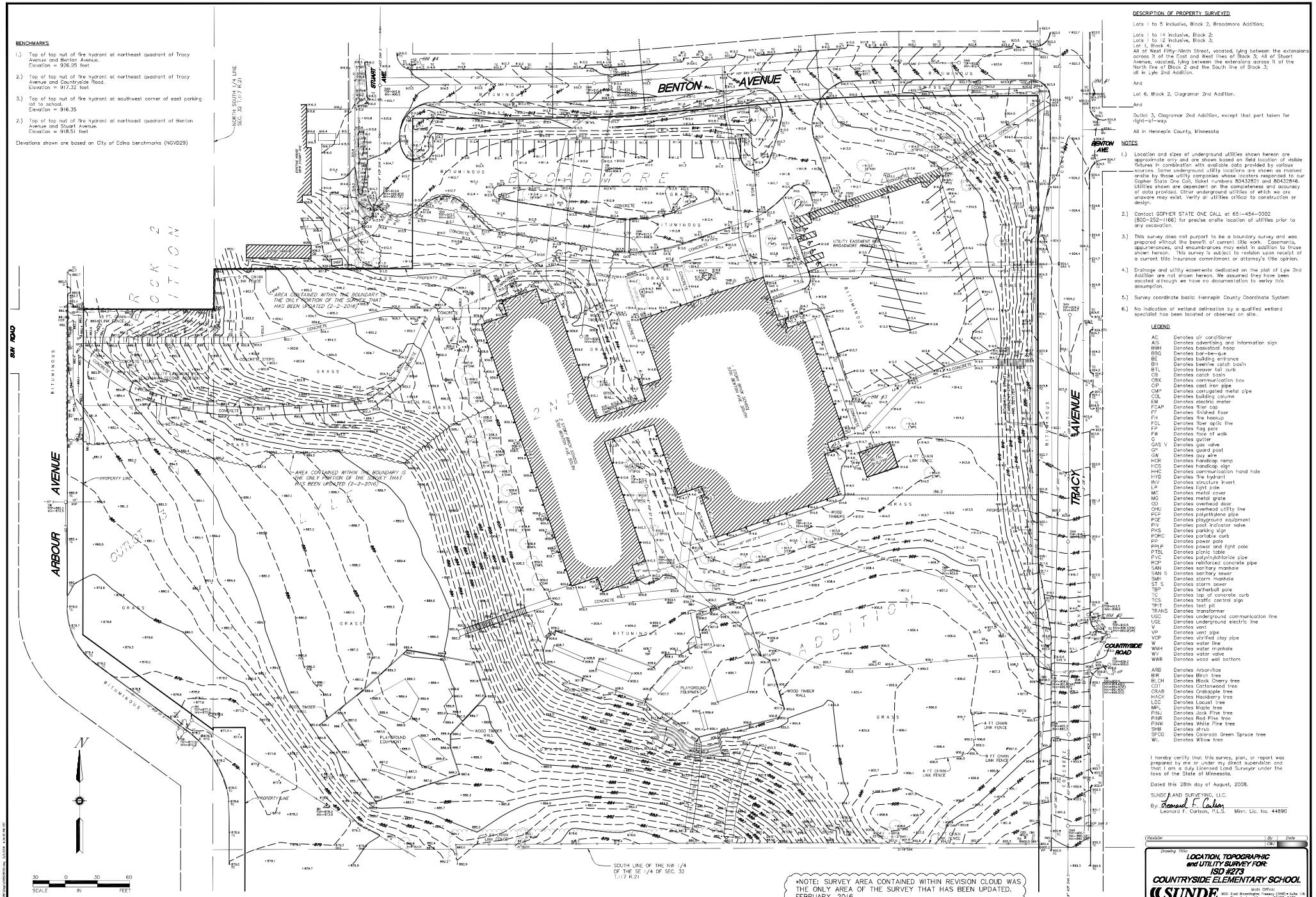
Comm: XXXXXX
Date: 10-12-2021
Drawn: LJD
Check: LJD
North

**LANDSCAPE PLAN**

**CITY SUBMITTAL**
**NOT FOR CONSTRUCTION**

Scale: 1"=30'

**L1.11**




DESCRIPTION OF PROPERTY SURVEYED

Lots 1 to 5 inclusive, Block 2, Broadmore Addition;

Lots 1 to 14 inclusive, Block 2;
Lots 1 to 12 inclusive, Block 3;
Lot 1, Block 4;
All of West Fifty-Ninth Street, vacated, lying between the extensions across it of the East and West lines of Block 3; All of Stuart Avenue, vacated, lying between the extensions across it of the North line of Block 2 and the South line of Block 3;
all in Lyle 2nd Addition.

And

Lot 6, Block 2, Clagramar 2nd Addition.

And

Outlot 3, Clagramar 2nd Addition, except that part taken for right-of-way.

All in Hennepin County, Minnesota

NOTES

1.) Location and sizes of underground utilities shown hereon are approximate only and are shown based on field location of visible fixtures in combination with available data provided by various sources. Some underground utility locations are shown as marked onsite by those utility companies whose locators responded to our Gopher State One Call, ticket numbers 80432821 and 80432846. Utilities shown are dependent on the completeness and accuracy of data provided. Other underground utilities of which we are unaware may exist. Verify all utilities critical to construction or design.

2.) Contact GOPHER STATE ONE CALL at 651-454-0002 (800-252-1166) for precise onsite location of utilities prior to any excavation.

3.) This survey does not purport to be a boundary survey and was prepared without the benefit of current title work. Easements, appurtenances, and encumbrances may exist in addition to those shown hereon. This survey is subject to revision upon receipt of a current title insurance commitment or attorney's title opinion.

4.) Drainage and utility easements dedicated on the plat of Lyle 2nd Addition are not shown hereon. We assumed they have been vacated although we have no documentation to verify this assumption.

5.) Survey coordinate basis: Hennepin County Coordinate System

6.) No indication of wetland delineation by a qualified wetland specialist has been located or observed on site.

LEGEND

| | |
|---|---|
| AC | Denotes air conditioner |
| ASI | Denotes advertising and information sign |
| BBH | Denotes basketball hoop |
| BBQ | Denotes bar-be-que |
| BE | Denotes building entrance |
| BH | Denotes beehive catch basin |
| BTL | Denotes beaver tail curb |
| CB | Denotes catch basin |
| CBX | Denotes communication box |
| CIP | Denotes cast iron pipe |
| CMP | Denotes corrugated metal pipe |
| COL | Denotes building column |
| EM | Denotes electric meter |
| FCAP | Denotes filler cap |
| FF | Denotes finished floor |
| FH | Denotes fire hookup |
| FOL | Denotes fiber optic line |
| FP | Denotes flag pole |
| FW | Denotes face of walk |
| G | Denotes gutter |
| GAS V | Denotes gas valve |
| GP | Denotes guard post |
| GW | Denotes guy wire |
| HCR | Denotes handicap ramp |
| HCS | Denotes handicap sign |
| HHC | Denotes communication hand hole |
| HYD | Denotes fire hydrant |
| INV | Denotes structure invert |
| LP | Denotes light pole |
| MC | Denotes metal cover |
| MG | Denotes metal grate |
| OD | Denotes overhead door |
| OHU | Denotes overhead utility line |
| PEP | Denotes polyethylene pipe |
| POE | Denotes playground equipment |
| PIV | Denotes post indicator valve |
| PKS | Denotes parking sign |
| PORC | Denotes portable curb |
| PP | Denotes power pole |
| PPLP | Denotes power and light pole |
| PTBL | Denotes picnic table |
| PVC | Denotes polyvinylchloride pipe |
| RCP | Denotes reinforced concrete pipe |
| SAN | Denotes sanitary manhole |
| SAN S | Denotes sanitary sewer |
| SMH | Denotes storm manhole |
| ST S | Denotes storm sewer |
| TBP | Denotes telephone pole |
| TC | Denotes top of concrete curb |
| TCS | Denotes traffic control sign |
| TPIT | Denotes test pit |
| TRANS | Denotes transformer |
| UGC | Denotes underground communication line |
| UGE | Denotes underground electric line |
| V | Denotes vent |
| VP | Denotes vent pipe |
| VCP | Denotes vitrified clay pipe |
| W | Denotes water line |
| WMH | Denotes water manhole |
| WV | Denotes water valve |
| WWB | Denotes wood wall bottom |
| ARB | Denotes Arborvitae |
| BIR | Denotes Birch tree |
| BLCH | Denotes Black Cherry tree |
| COT | Denotes Cottonwood tree |
| CRAB | Denotes Crabapple tree |
| HACK | Denotes Hackberry tree |
| LOC | Denotes Locust tree |
| MPL | Denotes Maple tree |
| PINJ | Denotes Jack Pine tree |
| PINR | Denotes Red Pine tree |
| PINW | Denotes White Pine tree |
| SHB | Denotes shrub |
| SPCG | Denotes Colorado Green Spruce tree |
| WIL | Denotes Willow tree |

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

Dated this 28th day of August, 2008.

SUNDE LAND SURVEYING, LLC.
By: Leonard F. Carlson
Leonard F. Carlson, P.L.S. Minn. Lic. No. 44890

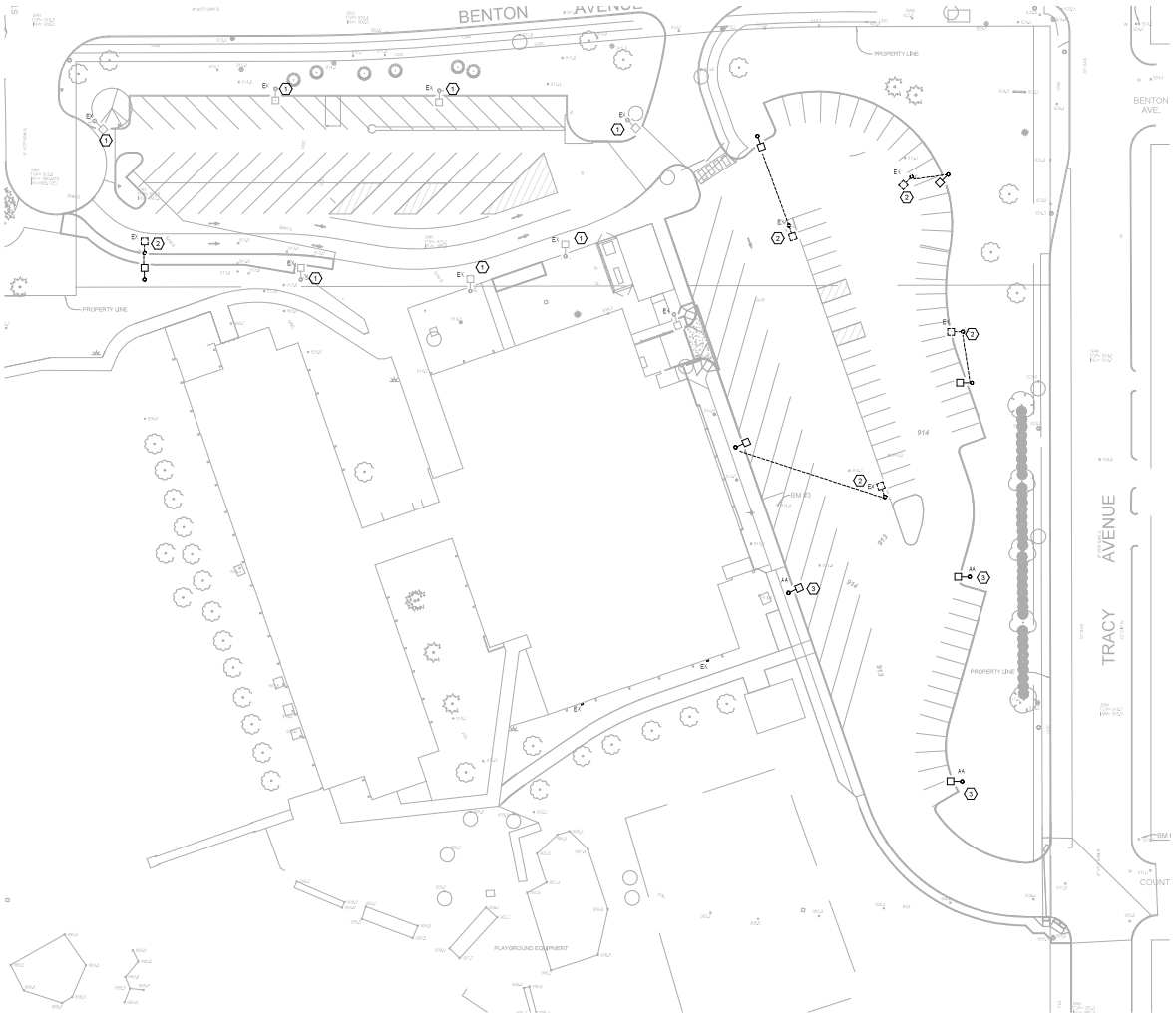
*NOTE: SURVEY AREA CONTAINED WITHIN REVISION CLOUD WAS THE ONLY AREA OF THE SURVEY THAT HAS BEEN UPDATED. FEBRUARY, 2016. NO OTHER UPDATES WERE PERFORMED AS PART OF THIS SURVEY.

| Revision | By | Date |
|---|---|---|
| | CW | |

Drawing Title:
**LOCATION, TOPOGRAPHIC and UTILITY SURVEY FOR:**
**ISD #273**
**COUNTRYSIDE ELEMENTARY SCHOOL**


SUNDE LAND SURVEYING
Main Office: 901 East Bloomington Freeway (35W) • Suite 118 Bloomington, Minn. 55420-1435 952-881-2465 (Fax: 952-888-9526)
North Office: Brooklyn Park, Minn. 763-784-9346
www.sunde.com


| | |
|---|---|
| Project: 2008-228-C | By/Fig: 729/24 |
| Township: 117 Range: 21 Section: 32 | Date: 02/02/2016 |
| File: 2008228C001.dwg | Sheet: 1 of 1 |




E1 SITE PLAN - ELECTRICAL
1" = 30'-0"

| MARK | LUMINAIRE TYPE | LUMENS/WATTS | VOLTAGE | MOUNTING | LENS/LOUVER | OTHER REQUIREMENTS | MANUFACTURERS' SERIES | NOTES | MARK | SPARE |
|---|---|---|---|---|---|---|---|---|---|---|
| AA | LED LIGHT POLE ASSEMBLY TYPE IV WITH HOUSE SIDE SHIELD | 15628/134 | MVOLT | SEE POLE BASE DETAIL, TOTAL HEIGHT TO EQUAL 25-FT | CLEAR | DLC CERTIFIED, MINIMUM 5-YEAR WARRANTY, 4000K COLOR TEMP, SQUARE STRAIGHT ALUMINUM POLE WITH DARK BRONZE FINISH | DSX0 LED-P6-40K-T4M-MVOLT-SPA-HS<br>BEACON VIPER SERIES<br>MCGRAW-EDISON GLEON GALLEON SERIES<br>NLS NV SERIES<br>OR APPROVED EQUAL | | AA | |
| BB | LED LIGHT POLE ASSEMBLY TYPE II WITH HOUSE SIDE SHIELD | 8025/49 | MVOLT | SEE POLE BASE DETAIL, TOTAL HEIGHT TO EQUAL 20-FT | CLEAR | DLC CERTIFIED, MINIMUM 5-YEAR WARRANTY, 4000K COLOR TEMP, SQUARE STRAIGHT ALUMINUM POLE WITH DARK BRONZE FINISH | DSX0 LED-P3-40K-T2M-MVOLT-SPA-HS<br>BEACON VIPER SERIES<br>MCGRAW-EDISON GLEON GALLEON SERIES<br>NLS NV SERIES<br>OR APPROVED EQUAL | | BB | |
| EX | LED LIGHT POLE ASSEMBLY TYPE IV WITH HOUSE SIDE SHIELD | 15628/134 | MVOLT | SEE POLE BASE DETAIL, TOTAL HEIGHT TO EQUAL 25-FT | CLEAR | DLC CERTIFIED, MINIMUM 5-YEAR WARRANTY, 4000K COLOR TEMP, SQUARE STRAIGHT ALUMINUM POLE WITH DARK BRONZE FINISH | DSX0 LED-P6-40K-T4M-MVOLT-SPA-HS | | EX | |

F1 LUMINAIRE SCHEDULE
12" = 1'-0"

**GENERAL SHEET NOTES**

A. ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
B. ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.
C. SET BACK CENTER OF POLE BASES 6 FEET FROM FACE OF CURB OR SIDEWALK.
D. HANDHOLES AND PULLBOXES MAY NOT BE INDICATED ON PLANS. PROVIDE AS REQUIRED FOR INSTALLATION.

**KEYED SHEET NOTES**

1. EXISTING LIGHT POLE. PROTECT DURING SITE WORK.
2. RELOCATE EXISTING LIGHT POLE AS SHOWN.
3. PROVIDE NEW LIGHT POLE AND CONNECT TO EXISTING SITE LIGHTING CIRCUIT AND CONTROLS. REFER TO LUMINAIRE SCHEDULE.

**EDINA COUNTRYSIDE ELEMENTARY PARKING AND DRIVE ADDITION**
5701 BENTON AVENUE SOUTH
EDINA, MN 55436

**INDEPENDENT SCHOOL DISTRICT #273**
5701 NORMANDALE ROAD
EDINA, MN 55424


**WOLD ARCHITECTS AND ENGINEERS**
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
wold.com | 651 227 7773


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed **PROFESSIONAL ENGINEER** under the laws of the State of **MINNESOTA**

License Number: **BRADLEY R. JOHANNSEN** **43936** Date: **Issue Date**

| Revisions | | |
|---|---|---|
| Description | Date | Num |
| | | |

Comm: XXXXXX
Date: Issue Date
Drawn: Author
Check: Checker
North

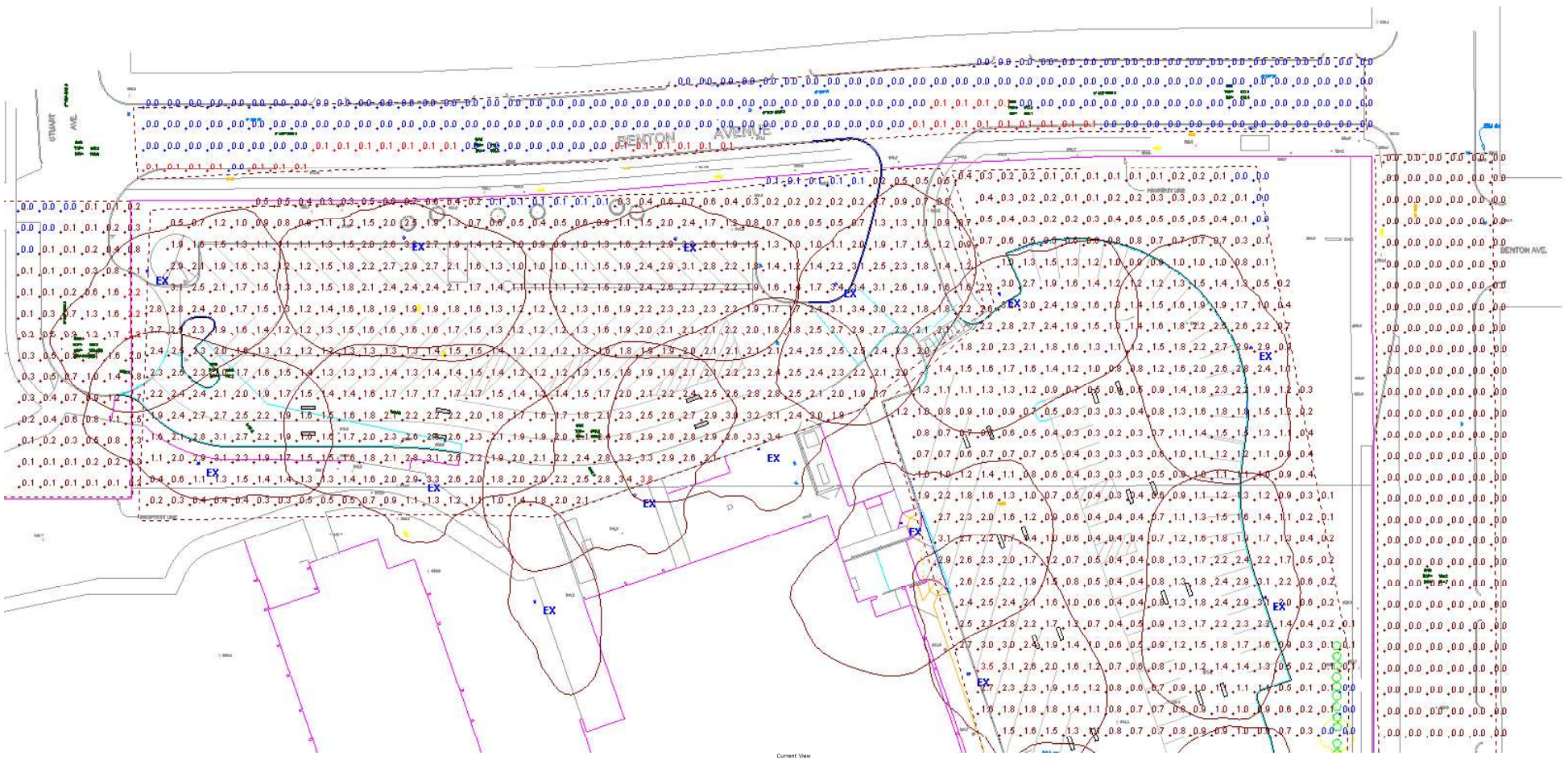
**ELECTRICAL SITE PLAN**

Scale: As indicated

**E0.02**

MN

E




Current View

**Schedule**

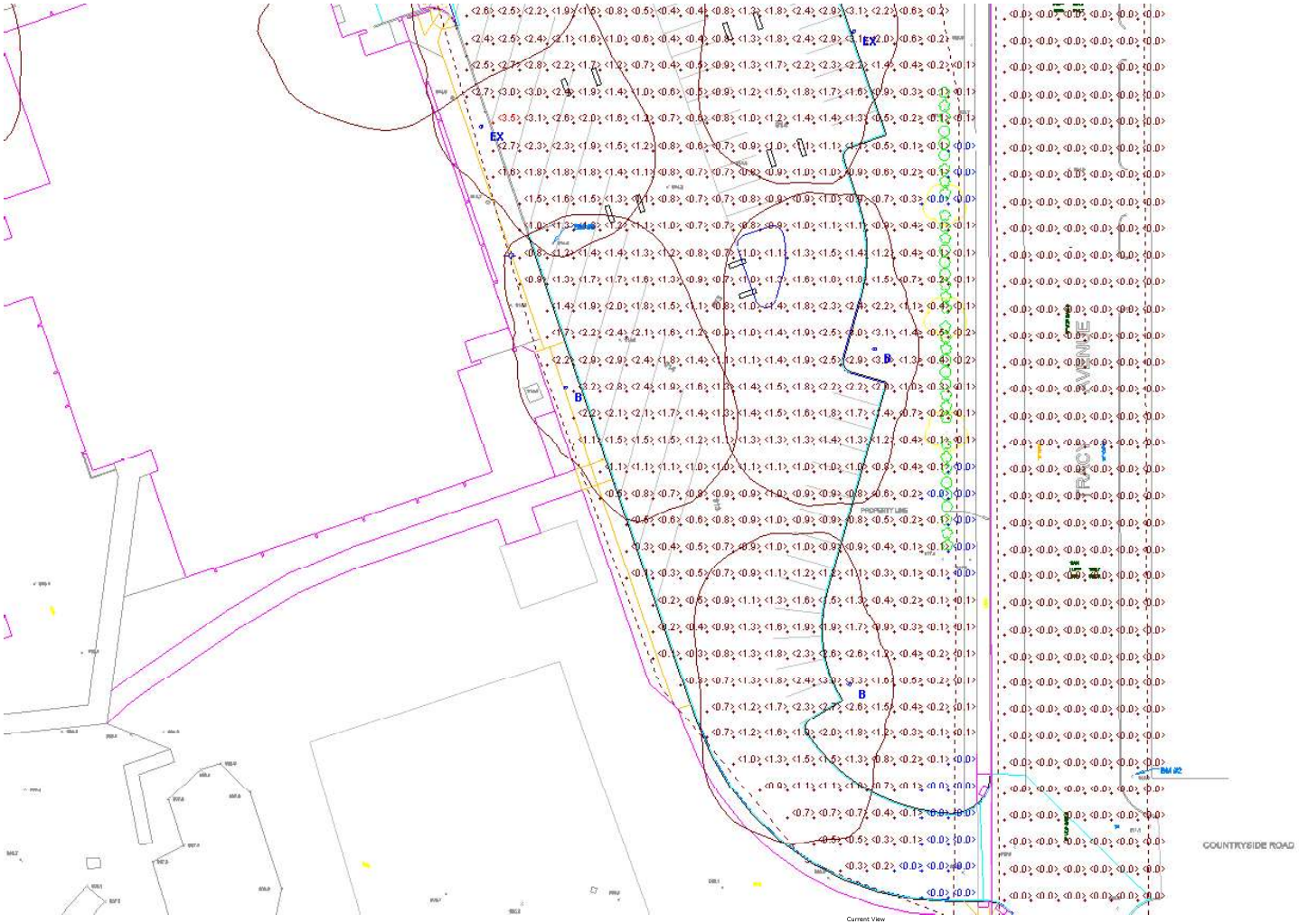
| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Lamp | Number Lamps | Filename | Lumens Per Lamp | Light Loss Factor | Wattage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | EX | 4 | Lithonia Lighting | DSXO LED P4 40K T4H HVOLT | DSXO LED P4 40K T4H HVOLT | LED | 1 | DSXO_LED_P4_40K_T4H_HVOLT.ies | 13607 | 1 | 134 |
| | EX | 1 | Lithonia Lighting | DSXO LED P2 40K T2H HVOLT | DSXO LED P2 40K T2H HVOLT | LED | 1 | DSXO_LED_P2_40K_T2H_HVOLT.ies | 5994 | 0.85 | 46 |
| | EX | 9 | Lithonia Lighting | DSXO LED P4 40K T4H HVOLT HS | DSXO LED P4 40K T4H HVOLT with houseside shield | LED | 1 | DSXO_LED_P4_40K_T4H_HVOLT_HS.ies | 12128 | 1 | 134 |

**Statistics**

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| BENTO AVE | + | 0.2 fc | 0.1 fc | 0.0 fc | N/A | N/A |
| EAST PARKING | + | 1.1 fc | 3.2 fc | 0.0 fc | N/A | N/A |
| NORTH PARKING | + | 1.7 fc | 3.8 fc | 0.1 fc | 38.0:1 | 17.0:1 |
| TRACT AVE | + | 0.2 fc | 0.2 fc | 0.0 fc | N/A | N/A |

Countryside ES 2022 Site Improvements - Lighting Photometrics North

| | |
|---|---|
| Designer | Peter Baldwin |
| Date | 10/13/2021 |
| Scale | Not to Scale |
| Drawing No. | |
| Summary | |




Current View

**Schedule**

| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Lamp | Number Lamps | Filename | Lumens Per Lamp | Light Loss Factor | Wattage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | EX | 4 | Lithonia Lighting | DSXO LED P6 80K T4M HVOLT | DSXO LED P6 80K T4M HVOLT | LED | 1 | DSXO_REV_2_40K_T4M_HVOLT.ies | 15627 | 1 | 134 |
| | B | 3 | Lithonia Lighting | DSXO LED P6 80K T4M HVOLT HS | DSXO LED P6 80K T4M HVOLT with housesie shield | LED | 1 | DSXO_REV_2_40K_T4M_HVOLT_HS.ies | 12128 | 1 | 134 |

**Statistics**

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| EAST PARKING | + | 5.1 fc | 5.5 fc | 0.2 fc | 11.4 | N/A |
| TRACY AVE | + | 0.1 fc | 0.5 fc | 0.0 fc | 11.4 | N/A |

Countryside ES 2022 Site Improvements - Lighting Photometrics South East

| | |
|---|---|
| Designer | Peter Baldwin |
| Date | 10/13/2021 |
| Scale | Not to Scale |
| Drawing No. | |
| Summary | |

**MEMORANDUM**

**To:** Cary Teague, City of Edina

**From:** Maria Kennedy | MK

**Date:** October 13, 2021

**Comm. No:** 212137

---

**Subject:** Independent School District #273 -Edina Public Schools
Countryside Parking Expansion
Written Description for Conditional Use Permit Submittal

Independent School District #273, Edina Public Schools, passed a successful referendum in May of 2021 to replace and expand the existing parking lot at Countryside Elementary. The project will also include required upgrades to create a dedicated bus loop. The existing storm water management system as a result of the site modifications. The main goal of this project is to provide a safe division between the bus and parent drop off and pick up to meet district safety standards. The project will also provide additional parking spots to serve daily staff parking needs as well as supplement event parking.

The site currently has one combined entry for buses and parent drop off, creating traffic management challenges and safety issues for students who need to cross the parent drop off lines to get to school. The main goal of this project is to create a new, separate entrance off Tracy Avenue dedicated for staff parking and buses. The existing site entry off Benton Avenue will be dedicated to student drop off, allowing students to be safely dropped off at the school's main entry on the north side of the building. This allows parent traffic to continue accessing the site from the same streets and direction as currently is in practice, meaning there will not be noticeable changes to area residents. This aligns with best practices for school site traffic safety, and responds to the existing building's entry locations in a logical way. This improvement to site safety also allows expansion of the school's parking stall count by 28 to accommodate the school's staff and visitor parking needs. The existing parking capacity is 94 parking stalls and the project will increase this capacity to 122 stalls in total, providing needed parking for staff who currently park on grass areas, as well as for community events at the school.

New parking lot lighting will be LED, and will be provided with shields to minimize light transmission to the surrounding neighborhood. The project will also include landscaping modifications to maintain the number of trees currently on site. Landscaping will screen the parking lot and existing storage shed from surrounding neighborhood streets. The attached photometric lighting diagrams and landscape drawings provide more information on these features.

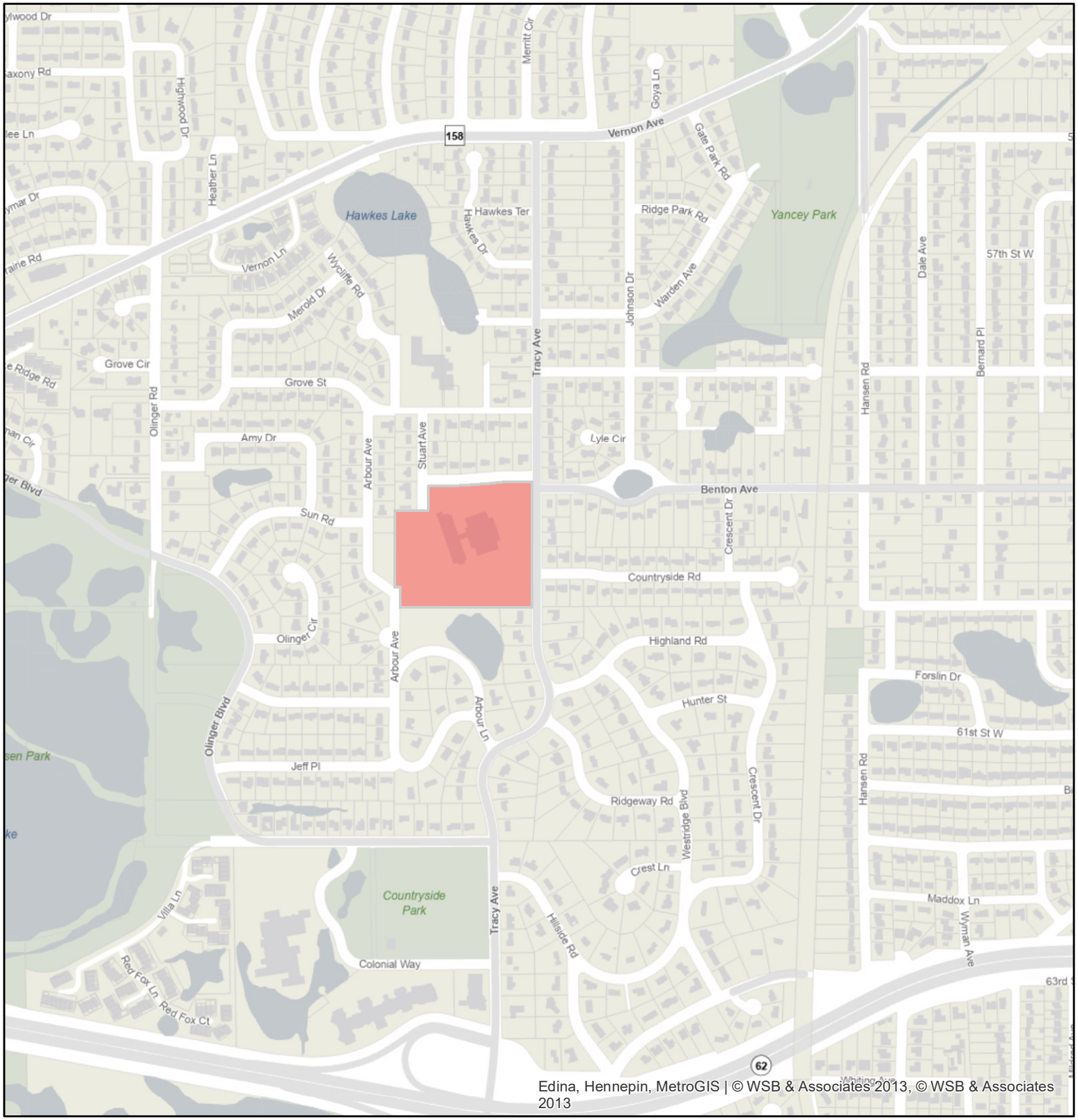
**Wold Architects and Engineers**
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
woldae.com | 651 227 7773

PLANNERS
ARCHITECTS
ENGINEERS

Wold Architects and Engineers is a client and public environment focused firm that has worked in the community for over 50 years. Our firm has a robust portfolio of projects that address school site safety and traffic flow, and have worked on project of a similar scope to modify existing sites. We have implemented this approach at other ISD #273 school facilities, and are currently working on projects to integrate these safety standards at the District's remaining sites, including Countryside Elementary.

TD/ISD_273/212137/crsp/oct21

# Site Location




1 in = 752 ft

The CITY of EDINA

N
W E
S

November 12, 202

# Site Location


1 in = 188 ft

The CITY of EDINA

N
W E
S

November 12, 202

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov


**Date:** November 17, 2021

**Agenda Item #:** VI.C.

**To:** Planning Commission

**Item Type:**
Report and Recommendation

**From:** Cary Teague, Community Development Director

**Item Activity:**
Action

**Subject:** PUBLIC HEARING: Zoning Ordinance Amendment - Impervious Surface, Basement, 1-foot rule and Setback Definitions.

---

**ACTION REQUESTED:**
Recommend the City Council approved the proposed Ordinance Amendment.

**INTRODUCTION:**
As part of the 2021 Planning Commission Work Plan, the Commission has been working on Zoning Ordinance Amendments to establish an impervious surface requirement, eliminate the requirement for basements, amend the one-foot rule for tear down rebuilds when a low water table is present and amend setback definitions. Attached is the final draft to be considered as recommended by the Planning Commission.

**ATTACHMENTS:**

Staff Report
Draft Ordinance
Better Together Public Hearing Comment Report
Morningside Impervious Surface Study
Imperviousness Surface Background information
Coverage Survey of Cities

CITY OF EDINA

**City Hall** • Phone 952-927-8861

Fax 952-826-0389 • www.CityofEdina.com

# MEMO

**Date:** November 17, 2021

**To:** Planning Commission

**From:** Cary Teague, Community Development Director

**Re:** Zoning Ordinance Amendment – Impervious Surface, Basement, 1-foot rule, and Setback definitions.

As part of the 2021 Planning Commission Work Plan, the Commission has been working on the above Ordinance Amendments. Attached is the final draft to be considered as recommended by the Planning Commission.

The following provides a summary of each Section within the proposed Amendment.

Section 1. Definitions.

- Impervious Surface is defined.
- The definition of "setback" is revised to include the new measurement method for setbacks from buildings to curbs in the Greater Southdale Area. This form of measurement was adopted into the Zoning Ordinance last summer.

Section 2 & 5 – Building Coverage is clarified, and an Impervious Surface Lot coverage regulation is created. Building coverage is clarified to eliminate patios and recreations facilities like tennis courts. Patios, tennis courts or similar uses would now be regulated under the impervious surface regulations, and not building coverage. The proposed impervious surface requirement is 50% as recommended by the work group of the planning commission (Commissioners Strauss, Miranda and Bennett) and staff.

Section 3 & 4 – Basements and First Floor Elevation. The requirement to install a basement with any new single-family home is eliminated. Additionally, the "One-Foot Rule" is revised to allow an increase to the one-foot rule only if there is a flood plain or high-water elevation issue. (the first-floor elevation of a new home may not exceed the first-floor elevation of the previous home by more than one-foot)

The Planning Commission has experienced over the past several years that the current ordinance conflicts with the City's requirement for the low floor elevation of new homes to be 2 feet above a flood elevation. This amendment would not impact the overall height of new homes as they would still be required to meet the overall height requirement, which is measured from existing grade. The amendment also would not impact site's that do not have a flood plain or high water table issue.

Section 6 – Setbacks. The section simply clarifies the Zoning Ordinance regarding how setbacks in the Greater Southdale District are measured. This issue came up at a recent City Council meeting regarding the 4040 70th Street project.

## STAFF RECOMMENDATION

Recommend the City Council adopt the proposed Ordinance Amendment.

**ORDINANCE NO. 2021-__**
**AN ORDINANCE AMENDMENT REGARDING IMPERVIOUS SURFACE LOT COVERAGE, SETBACKS, BASEMENTS AND THE 1-FOOT RULE**

THE CITY COUNCIL OF EDINA ORDAINS:

**Section 1.** Sec. 36-10 Definitions is amended as follows:

*Building coverage* means the percentage of the lot area occupied by principal and accessory buildings and structures. ~~including, without limitation, patios~~.

*Impervious surface: A* constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to placement. Examples include, but are not limited to, buildings, decks, rooftops, cantilevers or overhangs greater than 5', sidewalks, patios, permeable pavers, and concrete, asphalt, or gravel driveways.

*Setback, front street,* means the shortest horizontal distance from the forward most point of a building or structure to the nearest point on the front lot line. Within the Greater Southdale District, front street setbacks shall be measured from the forward most point of a building or structure to curb per Section 36-1276.

*Setback, interior side yard,* means the shortest horizontal distance from any part of a building or structure to the nearest point on an interior side lot line.

*Setback, rear yard,* means the shortest horizontal distance from any part of a building or structure to the nearest point on a rear lot line.

*Setback, side street,* means the shortest horizontal distance from any part of a building or structure to the nearest point on a side lot line that adjoins a street. Within the Greater Southdale District, side street setbacks shall be measured from the forward most point of a building or structure to curb per Section 36-1276.

**Section 2.** Subsection 36-438 of the Edina City Code. Requirements for building coverage, setbacks and height Special Requirements are amended to add the following:

**Sec. 36-438. - Requirements for building coverage, impervious surface lot coverage, setbacks and height.**

The minimum requirements for building coverage, impervious surface lot coverage, setbacks, and height in the Single Dwelling Unit District (R-1) are as follows:

*(1) Building Coverage.*

a. Lots 9,000 square feet or greater in area. Building coverage shall be not more than 25 percent for all buildings and structures. On lots with an existing conditional use, if the combined total area occupied by all accessory buildings

and structures, excluding attached garages, is 1,000 square feet or greater, a conditional use permit is required.

b. Lots less than 9,000 square feet in area. Building coverage shall be not more than 30 percent for all buildings and structures; provided, however, that the area occupied by all buildings and structures shall not exceed 2,250 square feet.

c. Combined total area. The combined total area occupied by all accessory buildings and structures, excluding attached garages, shall not exceed 1,000 square feet for lots used for single dwelling unit buildings.

d. Building coverage shall include all principal or accessory buildings, including, but not limited to:

1. Decks ~~and patios~~. The first 150 square feet of an unenclosed deck ~~or patio~~ shall not be included when computing building coverage.
2. Gazebos.
3. Balconies.
4. Breezeways.
5. Porches.
~~6. Accessory recreational facilities constructed above grade, such as paddle tennis courts.~~

~~e. The following improvements shall be excluded when computing building coverage:~~

~~1. Driveways and sidewalks, but not patios, subject to subsection (1)d.1 of this section.~~
~~2. Parking lots and parking ramps.~~
~~3. Accessory recreational facilities not enclosed by solid walls and not covered by a roof, including outdoor swimming pools, tennis courts and shuffleboard courts.~~
~~4. Unenclosed steps and stoops less than 50 square feet.~~
~~5. Overhanging eaves and roof projections not supported by posts or pillars.~~

(2) *Impervious Surface Lot coverage.* Impervious surface lot coverage shall be limited to a maximum of Fifty percent (50%).

~~(2)~~ (3) *Setbacks.*

~~(3)~~ (4) *Height.*

**Section 3. Sec. 36-439. (3) (7) AND (8). Special Requirements is amended as follows:**

~~(3) *Basements.* All single dwelling unit buildings shall be constructed with a basement having a gross floor area equal to at least 50 percent of the gross floor area of the story next above. The floor area of accessory uses shall not be included for purposes of this subsection.~~

(7) *Additions to, or replacement of, single dwelling unit buildings and buildings containing two dwelling units.* For additions, alterations and changes to, or rebuilds of, existing single dwelling unit buildings and buildings containing two dwellings, the first-floor elevation may not be more than one foot above the existing first floor elevation, unless one of the conditions in (8) below exists on the site. If a split-level dwelling is torn down and a new home is built, the first-floor elevation of the dwelling unit being torn down is deemed to be the lowest elevation of an entrance to the dwelling, excluding entrance to the garage and entrances that do not face a street.

(8) ~~Additions to, or replacement of, single dwelling unit buildings with a first-floor elevation of more than one foot above the existing first floor elevation of the existing dwelling unit building require a variance per [article II], division 3. Such additions to, or replacements of, single dwelling unit buildings must meet one or more of conditions a–c and always meet condition d.:~~ If one of the conditions below exist on site, the one-foot requirement in (7) above could be increased to the minimum extent possible, as long as the low floor elevation is no higher than 2.5 feet above the low water elevation and the basement ceiling height is not taller than 9 feet.

a. ~~The first floor elevation may be increased to the extent necessary to elevate the lowest level of the dwelling to an elevation of two feet above the~~ There is a 100-year flood elevation, as established by the Federal Emergency Management Agency (FEMA), or the city's comprehensive water resource management plan; or

b. The first-floor elevation may be increased to the extent necessary to reasonably protect the dwelling from groundwater intrusion. Existing and potential groundwater elevations shall be determined in accordance with accepted hydrologic and hydraulic engineering practices. Determinations shall be undertaken by a professional civil engineer licensed under Minn. Stats. ch. 326, or a hydrologist certified by the American Institute of Hydrology. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval; or

c. The first-floor elevation may be increased to the extent necessary to allow the new building to meet the state building code, this Code or other statutory requirements.

d. An increase in first floor elevation will only be permitted if the new structure or addition fits the character of the neighborhood in height, mass and scale.

**Section 4. Sec. 36-467. (b) (3) - Special requirements is amended as follows:**

~~(3) *Basements*. All double dwelling unit buildings shall be constructed with a basement having a gross floor area equal to at least 50 percent of the gross floor area of the story next above. The floor area of accessory uses shall not be included for the purposes of this subsection.~~

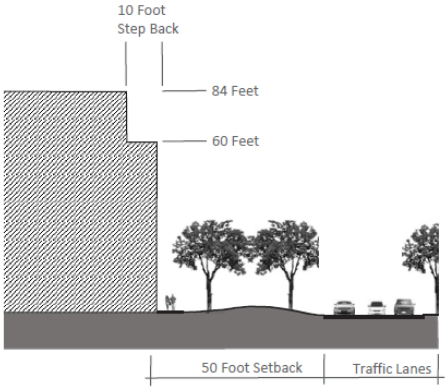
**Section 5. Sec. 36-1259. – Building Coverage Computation; exclusion and inclusions are amended as follows:**

(a) ~~The following structures and improvements shall be excluded when computing building coverage:~~
~~(1) Driveways and sidewalks, but not patios.~~
~~(2) Parking lots and parking ramps.~~
~~(3) Accessory recreational facilities not enclosed by solid walls and not covered by a roof, including outdoor swimming pools, tennis courts and shuffleboard courts; but facilities which are constructed above grade, such as paddle tennis courts, shall be included when computing building coverage.~~
~~(4) Unenclosed and uncovered steps and stoops less than 50 square feet.~~
~~(5) Overhanging eaves and roof projections not supported by posts or pillars.~~

~~(b) Building coverage computations, however, shall include all other principal or accessory buildings, including, but not limited to:~~
~~(1) Decks and patios, subject to allowances provided by this chapter.~~
~~(2) Gazebos.~~
~~(3) Balconies.~~
~~(4) Breezeways.~~
~~(5) Porches.~~
~~(6) Accessory recreational facilities constructed above grade, such as paddle tennis courts.~~

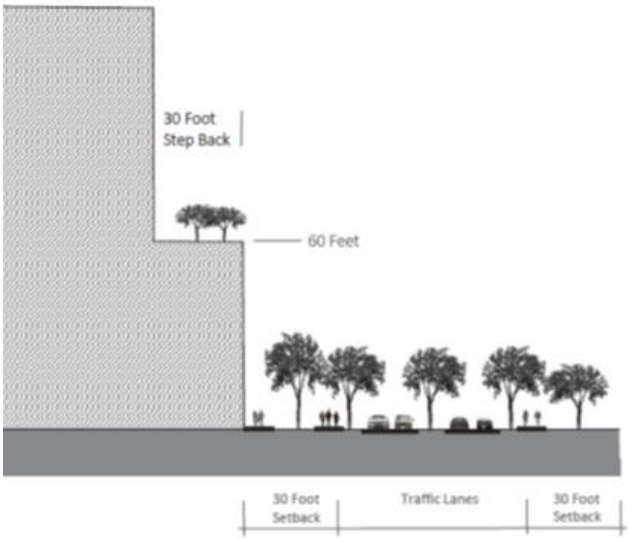
**Section 6. Sec. 36-1276. – Setbacks in the Greater Southdale District is amended as follows:**

(a) Front Street Setbacks on France Avenue between Highway 62 and Minnesota Drive and the on York Avenue between 66th Street and 78th Street: A 50-foot setback is required from the face of the curb to the face of building. Above a building height of 60-feet the additional height must step back 10 feet from the face of the building.




France Avenue

(b) Front Street Setbacks on streets other than France Avenue and York Avenue: A 30-foot setback is required from the face of curb to the face of building. ~~with a building podium height of 60 feet.~~ Above the 60-foot height limit, additional height should step back 30 feet from the face of the building, to a maximum height of 105 feet. Any height about 105 feet should step back and additional 10 feet from the face of the building.




Existing East West Streets

**Section 7.** This ordinance is effective immediately upon its passage.

First Reading:
Second Reading:
Published:

Attest _____ _____

Sharon Allison, City Clerk James B. Hovland, Mayor

Survey Responses

30 January 2019 - 11 November 2021

# Public Hearing Comments-Ch 36 Ordinance Amendments

## Better Together Edina

Project: Public Hearing: Zoning Ordinance Amendments – Impervious Surface, Basement, 1-foot rule, and Setback definitions.

BANG THE TABLE engagementHQ

| VISITORS | | | | | |
|---|---|---|---|---|---|
| 0 | | | | | |
| CONTRIBUTORS | | | RESPONSES | | |
| 0 | | | 0 | | |
| 0 Registered | 0 Unverified | 0 Anonymous | 0 Registered | 0 Unverified | 0 Anonymous |

No Responses

# Morningside Impervious Surfaces

Impervious surface area includes primary and accessory structures, driveways, private paths, decks, patios, and pool decks.

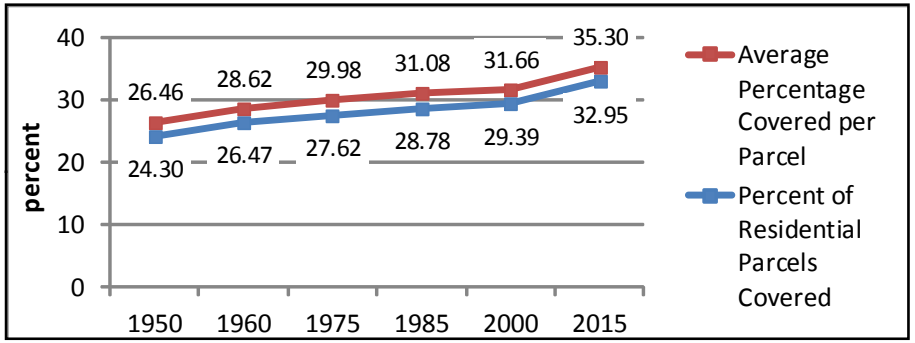
Average percent covered per parcel (2015): 35.30%
Average impervious area per parcel (2015): 3,419.03 sq ft
Minimum percent covered: 0.34%
Maximum percent covered: 65.74%

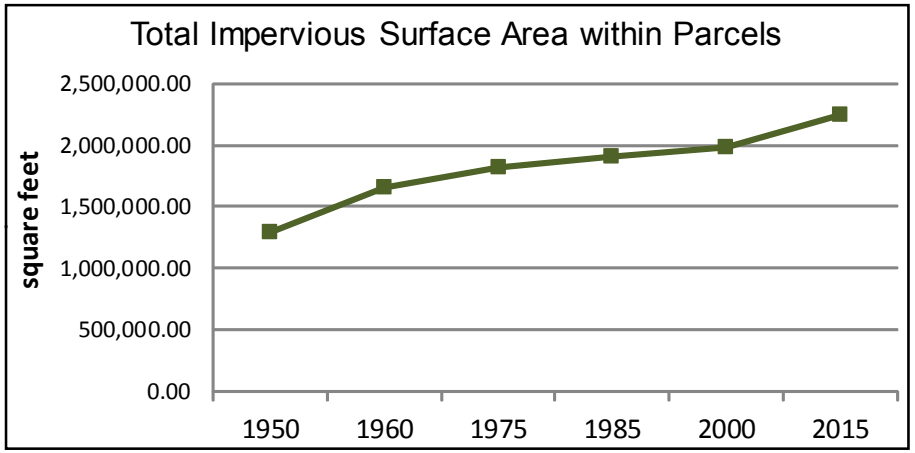
**Percent Impervious Surface**

- 0-10
- 10-20
- 20-30
- 30-40
- 40-50
- 50-60
- 60-70

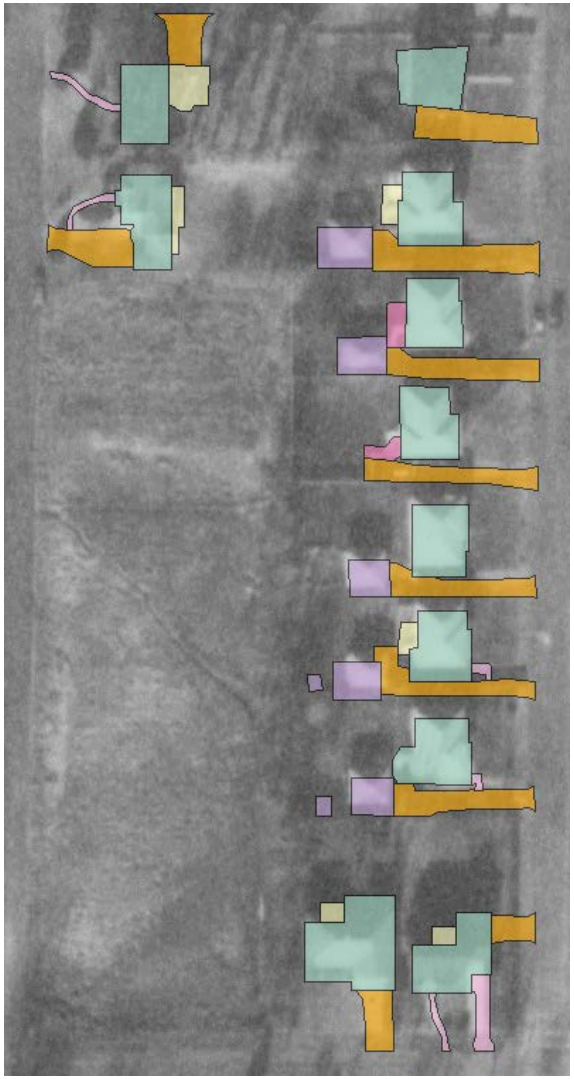
Morningside Neighborhood Boundary

2015 Impervious Surfaces

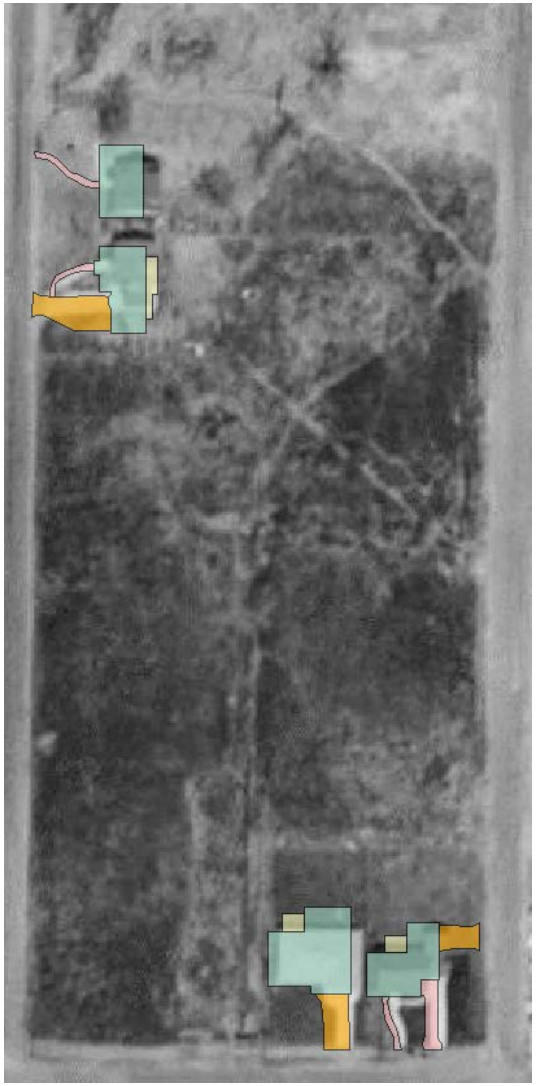


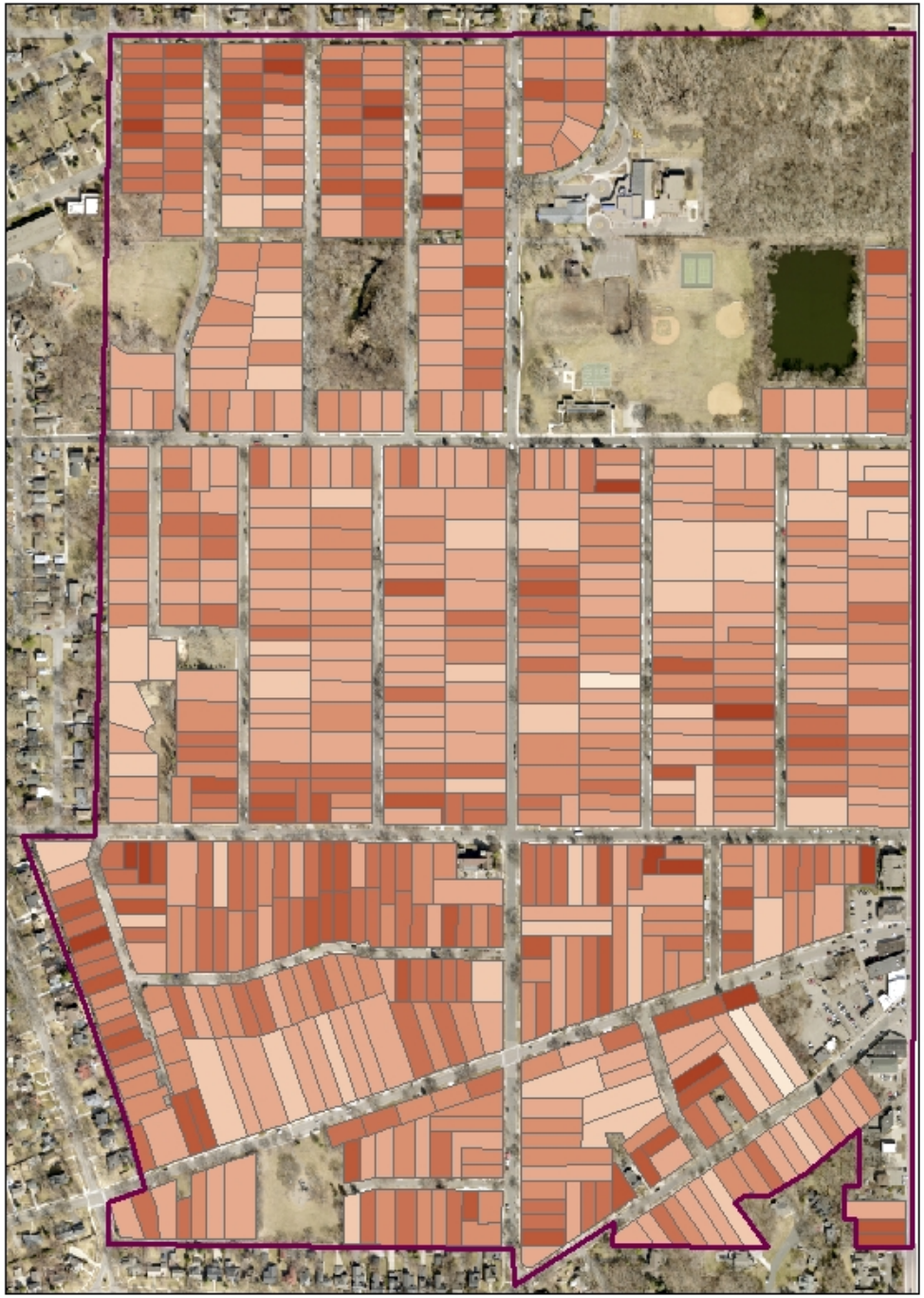
2015



1960



1950



# Morningside Impervious Surfaces

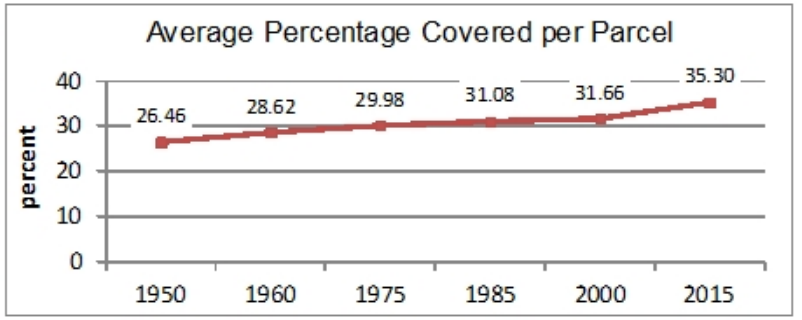
Impervious surface area includes primary and accessory structures, driveways, private paths, decks, patios, and pool decks.

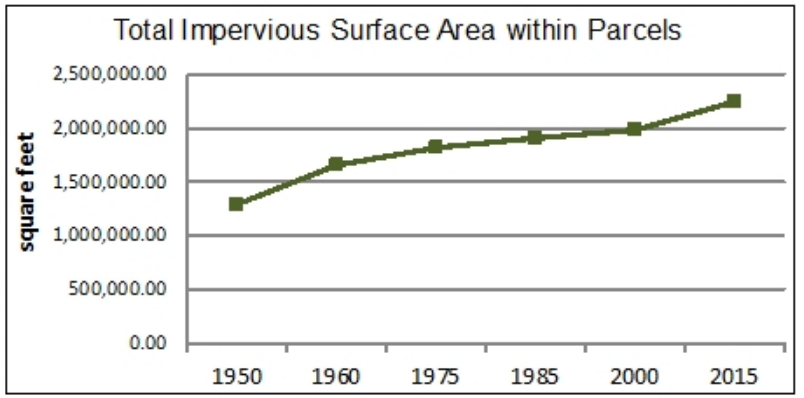
Average percent covered per parcel (2015): 35.30%
Average impervious area per parcel (2015): 3,419.03 sq ft
Minimum percent covered: 0.34%
Maximum percent covered: 65.74%

**Percent Impervious Surface**

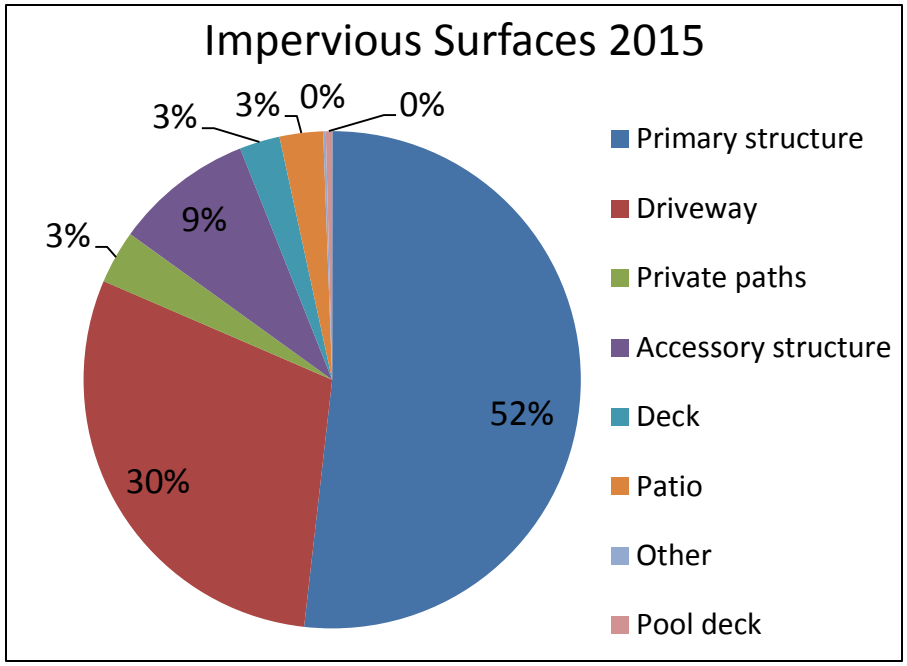
- 0-10
- 10-20
- 20-30
- 30-40
- 40-50
- 50-60
- 60-70

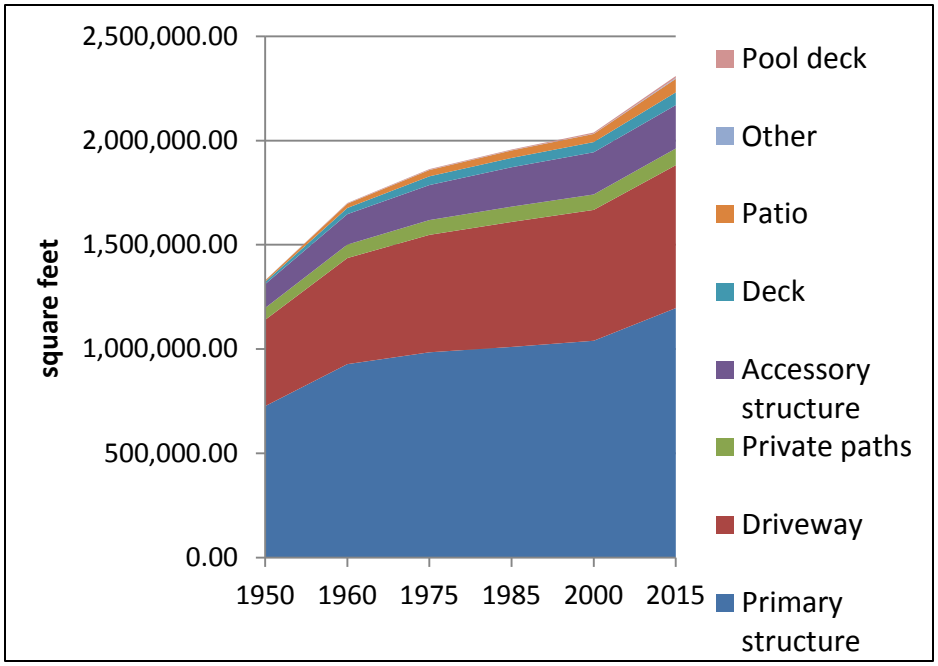
Morningside Neighborhood Boundary

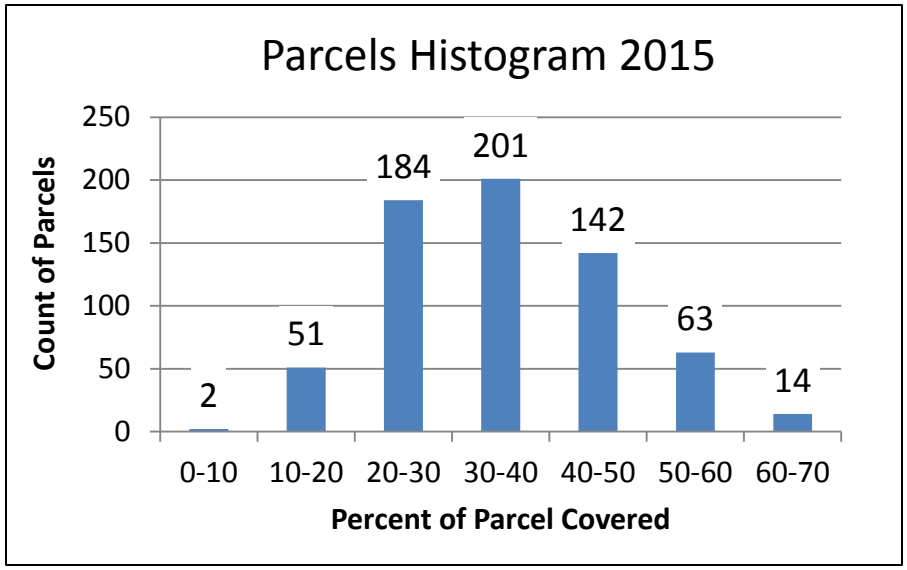


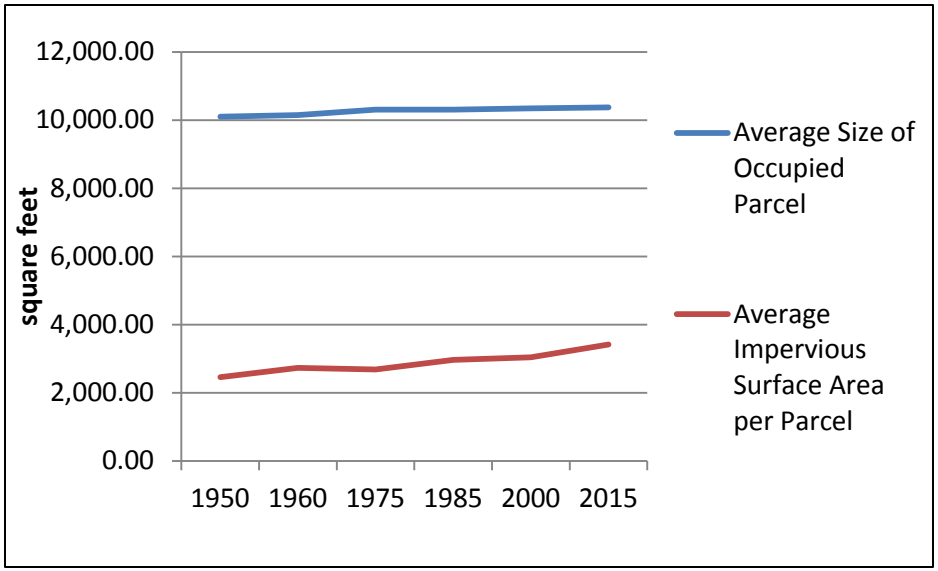



Average impervious surface area per parcel increased 39% from 1950 to 2015. Average size of occupied parcels increased by 3%.
Average impervious surface area per parcel increased 12% from 2000 to 2015. Average size of occupied parcels increased by <1%.



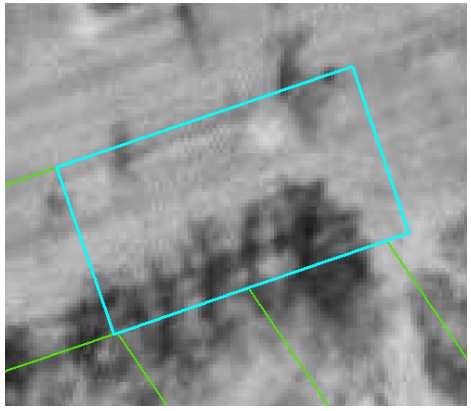



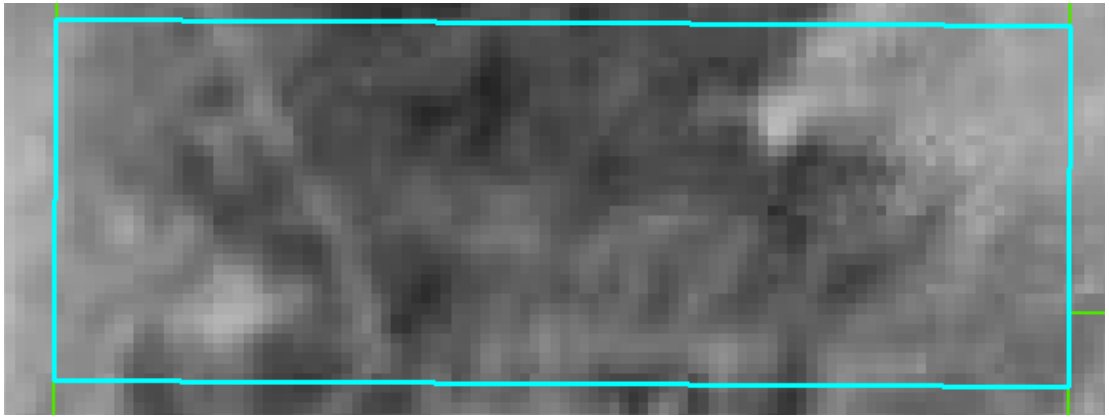



65.74%

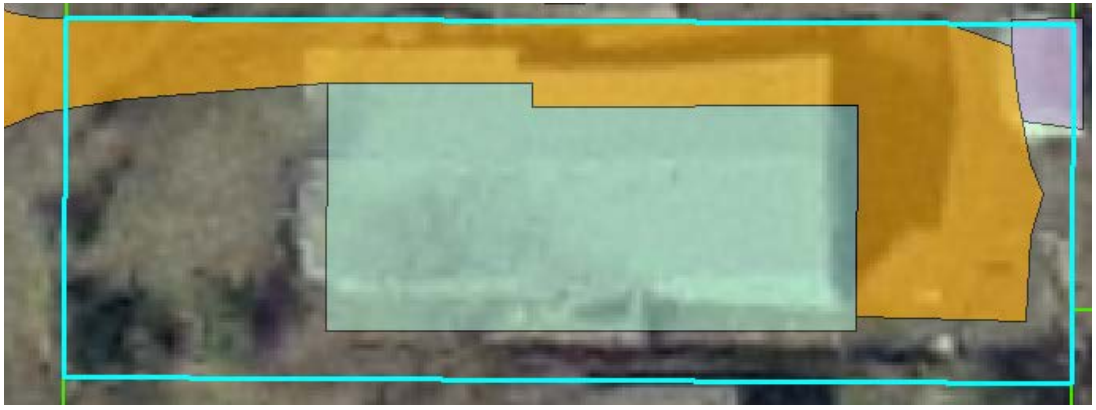
64.46%

1950

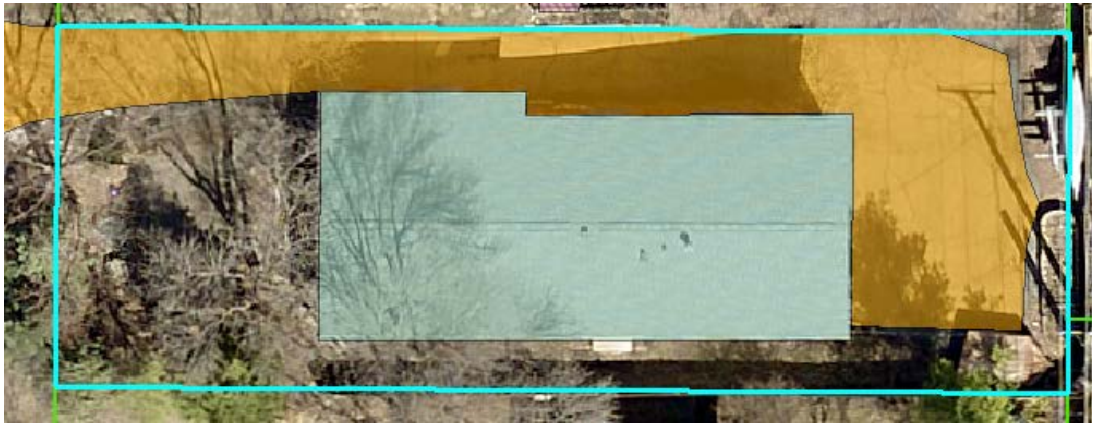




2000



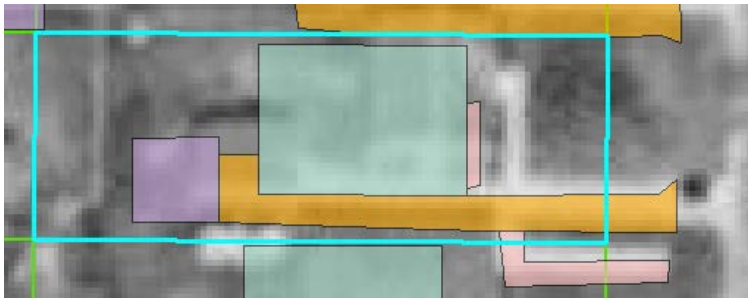
2015

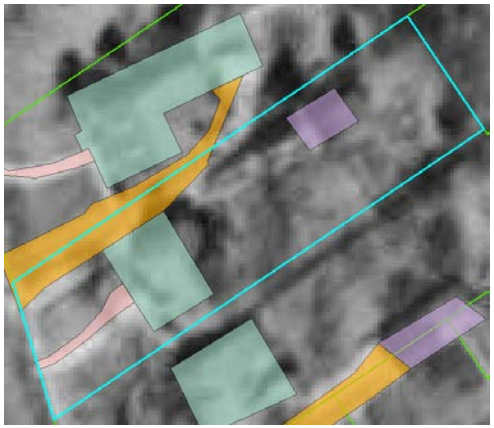


63.44%

62.17%

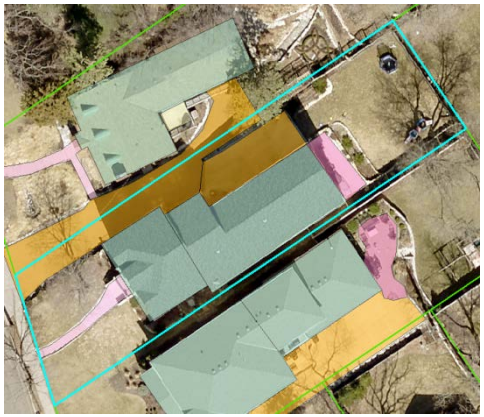
1950





2000

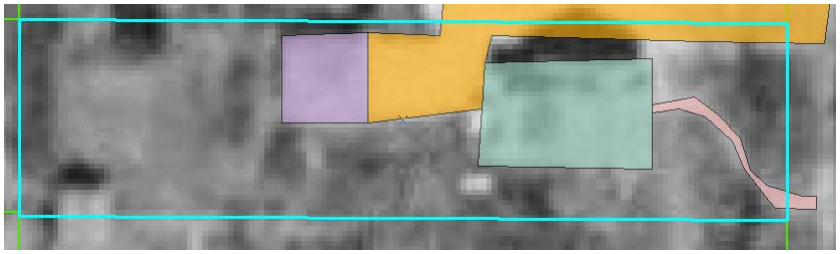
2015

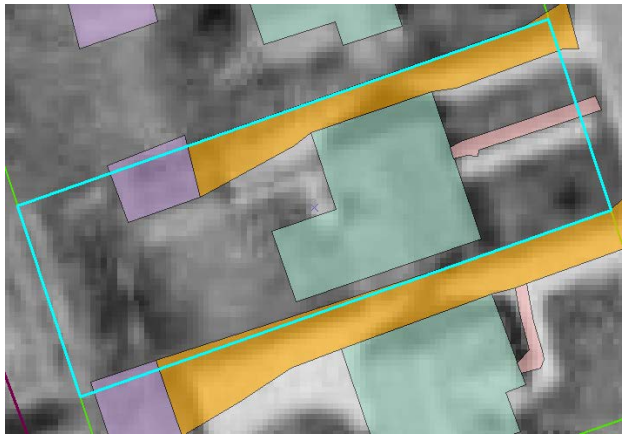


61.1%

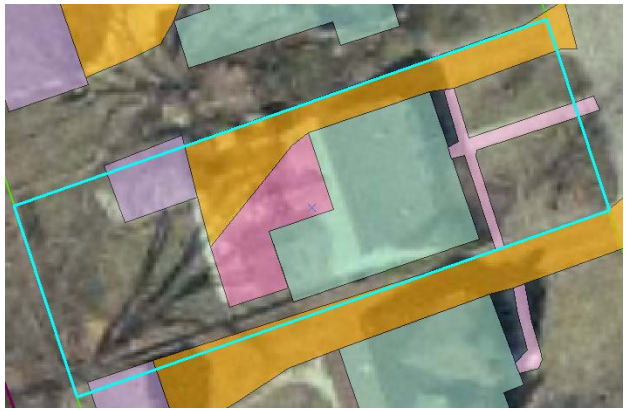
60.79%

1950





2000



2015

# Sec. 36-438. - Requirements for building coverage, setbacks and height.

The minimum requirements for building coverage, setbacks and height in the **Single Dwelling Unit District (R-1)** are as follows:

(1) *Building coverage.*

a. **Lots 9,000 square feet or greater** in area. Building coverage shall be **not more than 25 percent** for all buildings and structures. On lots with an existing conditional use, if the combined total area occupied by all accessory buildings and structures, excluding attached garages, is 1,000 square feet or greater, a conditional use permit is required.

b. **Lots less than 9,000 square feet** in area. Building coverage shall be **not more than 30 percent** for all buildings and structures; provided, **however, that the area occupied by all buildings and structures shall not exceed 2,250 square feet.**

c. Combined total area. The combined total area occupied by all accessory buildings and structures, excluding attached garages, shall not exceed 1,000 square feet for lots used for single dwelling unit buildings.

d. Building coverage shall include **all principal or accessory buildings, including, but not limited to:**

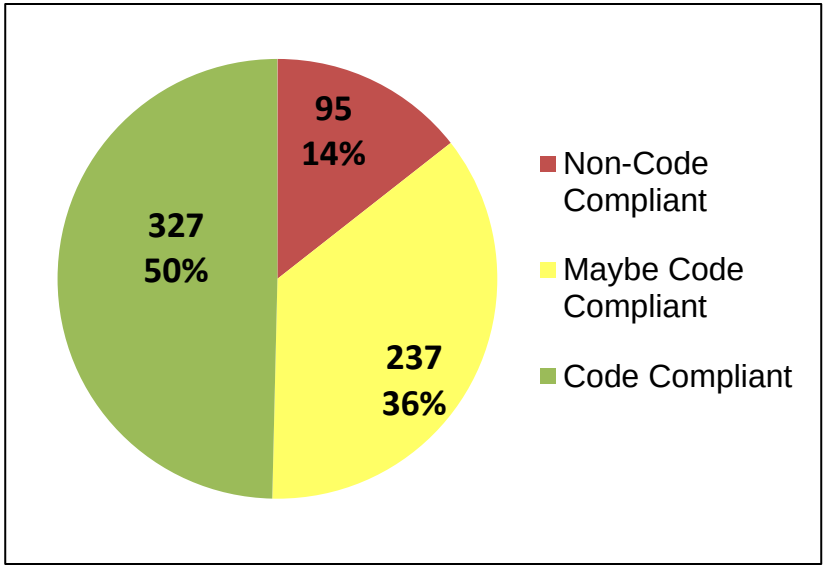
1. **Decks and patios**. The first 150 square feet of an unenclosed deck or patio shall not be included when computing building coverage.
2. **Gazebos**
3. **Balconies.**
4. **Breezeways.**
5. **Porches.**
6. **Accessory recreational facilities** constructed above grade, such as paddle tennis courts.

e. The following improvements **shall be excluded** when computing building coverage:

1. **Driveways and sidewalks**, but not patios, subject to subsection (1)d.1 of this section.
2. Parking lots and parking ramps.
3. Accessory recreational facilities not enclosed by solid walls and not covered by a roof, including **outdoor swimming pools**, tennis courts and shuffleboard courts.
4. Unenclosed steps and stoops less than 50 square feet.
5. Overhanging eaves and roof projections not supported by posts or pillars.

Parcels with red boundaries are non-code compliant based on building structure area (greater than 2,250 sq ft) despite being within 5% of their coverage limit (30%).

*2,250 sq ft limit only applies to parcels under 9,000 sq ft.



CITY OF EDINA

**City Hall** • Phone 952-927-8861
Fax 952-826-0389 • www.CityofEdina.com

# MEMO

**Date:** October 23, 2019 – Planning Commission Work Session

**To:** Planning Commission

**From:** Cary Teague, Community Development Director

**Re:** Zoning Ordinance Amendment – Impervious Surface Requirement

One of the 2019 Planning Commission work plan items is to consider establishing an impervious surface ordinance requirement. To accomplish that goal, planning and engineering staff have put together some background information for the Planning Commission to consider and discuss.

The most significant take away from the engineering study (attached) is that impervious surface increases in the city is not the main contributing factor causing flooding/drainage concerns, rather it is climate changes. A secondary driver is service level of the design is not up to current standards (This can be thought of as past climate change, changing the goalposts) and the final driver is impervious surface change.

The information included in the packet is as follows:

- 2019 Morningside Impervious Surface analysis (post and slide deck)
    - This is a historic review that was done to create a poster presentation for the Minnesota Water Resources Conference.

- 2018 CWRMP appendix A
    - This is an analysis of imperviousness rates citywide to set the stormwater model parameter for various land uses.
    - In past models, we used 40% total impervious and 20% directly connected impervious for single family areas (LDR).
    - Section 4 has a good discussion of the variability in neighborhoods for LDR.
    - Section 5 and 6 have good discussion of why this trend matters for stormwater.
    - As a result of this we changed LDR impervious modeled value to 40% total, 25% directly connected.

- 2014 SWPPP Appendix G
    - An example of site by site treatment to make volumes and rates of stormwater

- Survey of Cities
    - How other cities regulate impervious surface

- Impervious surface examples of existing lots with the Country Club District. (An area of large houses on small lots with detached garages (long driveways) in the rear yard.

The next steps in this process could be for staff to draft an ordinance amendment to address the issue based on the feedback from the Planning Commission at the work session. Staff could also provide the commission with any additional information that may be needed. We would then continue discussion of the issue at a regular Planning Commission meeting.

**Appendix G**
**Small Site Stormwater Evaluation**

WSB & Associates, Inc.
engineering • planning • environmental • construction

701 Xenia Avenue South
Suite 300
Minneapolis, MN 55416
Tel: 763-541-4800
Fax: 763-541-1700

# *Memorandum*

***To:*** ***Ross Bintner, City of Edina***
***Laura Adler, City of Edina***

***From:*** ***Jesse Carlson***
***Bob Barth***

***Date:*** ***May 13, 2014***

***Re:*** ***Ordinance Update – Small Site Policy and BMP Evaluation***
***WSB Project No. 2092-65***

---

## Overview

The City of Edina's Code, Section 411 – Demolition Permit and Building Permits for Single and Two Family Dwelling Units, requires a stormwater and erosion control plan showing how the applicant will control stormwater to prevent damage to adjacent property and adverse impacts to the public stormwater drainage system. The ordinance does not currently stipulate technical requirements to prevent these adverse impacts. To bridge this gap, this memorandum identifies policy options to address the increased runoff generated by single lot residential reconstruction projects.

The City maintains a stormwater utility whereby residents pay a quarterly fee for the service that the stormwater system provides. City staff and policy-makers should consider whether properties that implement the new requirements explored herein should obtain a credit toward their utility bill to the extent the improvements are adequately maintained.

## Policy Introduction

The additional impervious surface created by residential reconstruction projects increases runoff and thereby affects the service other residents obtain from the stormwater system. These adverse impacts include:

- Localized flooding (lot to lot)
- Neighborhood flooding
- Subwatershed flooding
- Water quality impacts to streams, lakes and wetlands

Substantial precedent exists for regulating increased impervious surface due to redevelopment. However, we find very little precedent for regulating increased impervious surface at the scale of a single residential lot. Consequently, a model for the City's smaller scale policy comes not from similar policies in other communities, but rather from policies used throughout the Twin Cities to regulate the redevelopment of larger parcels.

The policies presented here each have a distinct perspective. The differences are in how much mitigation occurs through private implementation versus public implementation.

Policy Options 1through 3 require mitigation for all new and disturbed impervious on a lot. This includes existing impervious that is rebuilt, plus all new impervious. The differences among these policies concern the amount of mitigation required. Policy Option 4 considers the existing site impervious as exempt from the requirements and looks for mitigation for new impervious only. To avoid confusion with wetland mitigation, we will use the term credits in lieu of mitigation for this policy discussion.

Credits occur through the construction of on-site practices that capture and hold runoff. These include:

- **Retention**: depressions within the landscape
- **Bioretention**: depressions within the landscape that include special soils and vegetation to improve pollutant removal and infiltration
- **Pervious Pavement or Pavers**: underlying gravel bed provides storage
- **Underground Storage**: tanks, pipes or cisterns that capture runoff. Captured water can be used for irrigation. These systems require a small pump.
- **Rainbarrels**: Due to their small size, these do not generate enough credits for most sites.

**Policy Discussion**

When discussing each policy we consider its impact to the private system and the public system. The private system consists of the practices that occur on the lot while the public system consists of the catch-basins, storm sewer, streets, ponds, streams, lakes and wetlands that occur within the neighborhood and subwatershed.

The policies presented here each have a distinct perspective. They are:

*Policy #1: Protect water quality*

Private system impact: On-site credits maintain downstream discharge of pollutants and decrease runoff from small rainfalls (< 1.5 inches, single event).

Public system impact: Increased runoff for moderate (1.5 to 3.0 inches, single event) and large rainfalls (3.0 to 6.0 inches, single event) create the potential for increased neighborhood and subwatershed flooding.

*Policy #2: Protect water quality, maintain flood control for moderate rainfalls*

Private system impact: On-site credits maintain downstream discharge of pollutants and decrease runoff from small and moderate rainfalls.

Public system impact: Increased runoff for large rainfalls creates the potential for increased neighborhood and subwatershed flooding.

*Policy #3: Protect water quality, maintain flood control for large rainfalls*

Private system impact: On-site credits maintain downstream discharge of pollutants and decrease runoff from large rainfalls.

Public system impact: No impact according to current design standards. For extreme rainfall events (beyond current design standards) there could be an increased potential for neighborhood and subwatershed flooding.

*Policy #4: Same as policy #3 except that existing lot impervious is exempt from having to provide credits.*

Table 1 presents design standards that achieve the desired policy goals. Essentially, the policies require the project to provide storage (credits required in Table 1). The storage can be calculated in two ways: 1) a depth of runoff over the regulated impervious surface or 2) a volume of runoff for each square foot of regulated impervious. The two methods calculate the same number of credits.

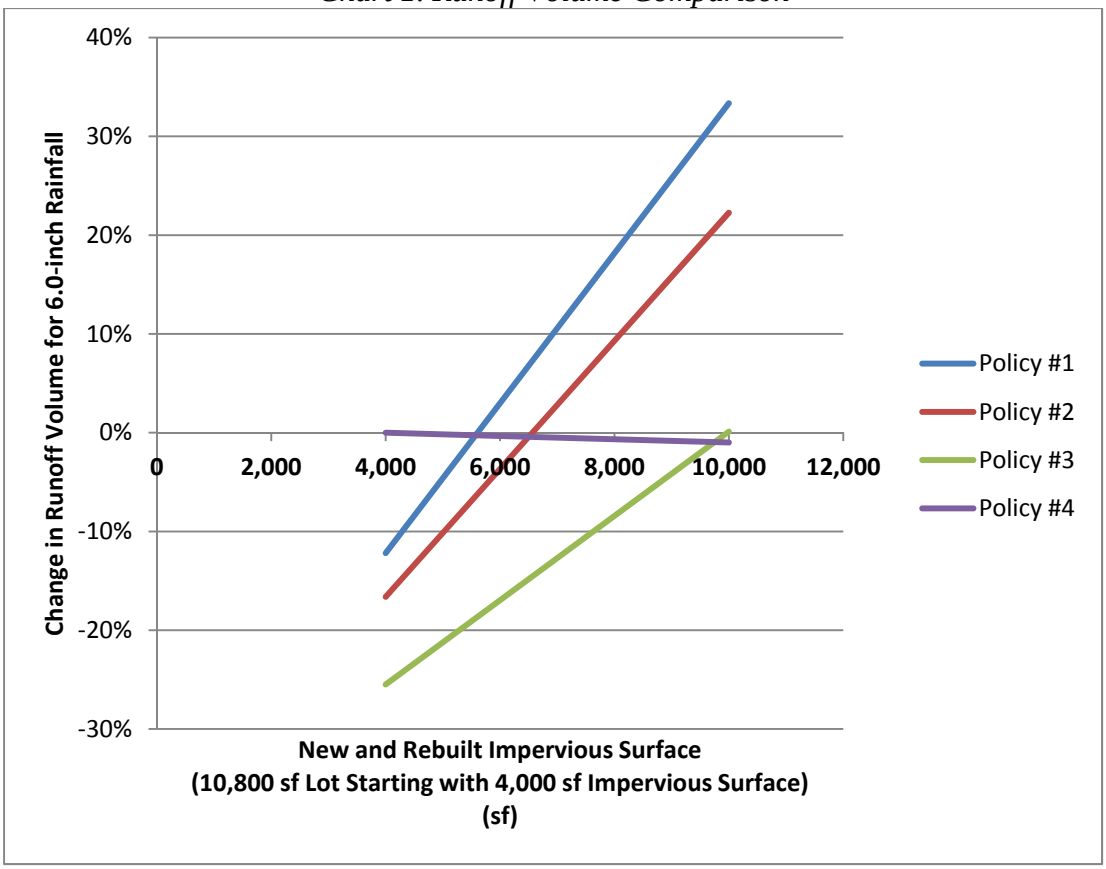
*Table 1 – Design Standards*

| | **Credits Required** | |
|---|---|---|
| | **(inches x impervious)** | **(cubic feet/square foot impervious)[1]** |
| Policy #1 | 1.1 | 0.09 |
| Policy #2 | 1.5 | 0.13 |
| Policy #3 | 2.3 | 0.19 |
| Policy #4 | 3.9 | 0.33 |

1. Policy #1 through #3 for new and rebuilt impervious. Policy #4 for new impervious only.

Chart 1 shows the relationship between new and rebuilt impervious and runoff for a 6.0-inch rainfall event. The chart shows the change in runoff as a percentage of runoff generated by a base condition, which is assumed to be a 10,800 square foot lot with 4,000 square feet of impervious surface.

*Chart 1. Runoff Volume Comparison*




## Cost Summary

The cost for credits varies considerably depending on the type of practice used. Table 2 presents typical costs for four different practices.

*Table 2 - Cost Comparison*

| **Practice** | **Unit Cost** |
|---|---|
| Retention | $0.40/CF |
| Bioretention | $1.10/CF |
| Pavers/Pervious Pavement[1] | $4.50/CF |
| Rain Barrel | $12.00/CF |

[1] Pervious pavement cost is representative of the additional cost to install vs. a typical driveway installation.

Most likely, homeowners would create credits by constructing simple retention. To cover the complete set of options homeowners might use, an average cost of $1.00/CF will be used in the subwatershed comparisons presented below.

**Private Implementation at the Subwatershed Scale**

Implementing credits on site, in the private system, may be the only option in certain subwatersheds. To understand the magnitude of the cost difference between the different policies, we have prepared a subwatershed analysis for the options presented here. Table 3 summarizes this analysis.

*Table 3 – Cost Impacts of Private Implementation*

| Subwatershed LP-20 | Area | Impervious Area | | | Cost to Implement | | | |
|---|---|---|---|---|---|---|---|---|
| | | Existing | Potential[1] | Change | Policy #1 0.09 cf/sf | Policy #2 0.13 cf/sf | Policy #2 0.19 cf/sf | Policy #4 0.33 cf/sf |
| | (ac) | (%) | (%) | (sf) | ($) | | | |
| Existing | 14 | 20% | NA | NA | NA | NA | NA | NA |
| Case 1 | 14 | 20% | 27% | 40,276 | 14,445 | 20,865 | 30,495 | 13,291 |
| Case 2 | 14 | 20% | 33% | 79,950 | 14,445 | 20,865 | 30,495 | 26,384 |
| Case 3 | 14 | 20% | 40% | 120,226 | 14,445 | 20,865 | 30,495 | 39,674 |

[1] Potential increase in impervious based on 3 different redevelopment cases.

The potential change in subwatershed impervious coverage is estimated based on three different redevelopment cases

- Case 1 impervious increase is 6.7% (1/3 redeveloped).
- Case 2 impervious increase is 13.3% (2/3 redeveloped).
- Case 3 impervious increase is 20% (3/3 redeveloped).

**Conclusion**

Private implementation of on-site practices can eliminate adverse impacts due to increased impervious surface on residential lots. Different policy options can accomplish different objectives. Policy Options 1 and 2 are similar in that they reduce runoff volume for small changes but allow impacts to the public system (through increased runoff) when the total post project impervious surface increases beyond 5,500 and 6,500 square feet, respectively. Policy Option 3 sets this threshold for adverse impact at 10,000 square feet post project impervious. Policy Option 4 exempts existing impervious and holds impacts to very near existing conditions for any future impervious condition. Since the analysis is based on an old definition of the 100-year storm, the City of Edina may consider whether it wants to increase these numbers to reflect the newly published definition of a 100-year storm in which case approximately 50% should be added to credit calculation for each policy option.

# Appendix A

## City of Edina Imperviousness Assumptions for Stormwater Modeling

resourceful. naturally.
engineering and environmental consultants

BARR

# Technical Memorandum

**To:** Jessica Wilson and Ross Bintner
**From:** Cory Anderson, Sarah Stratton, and Janna Kieffer
**Subject:** City of Edina Imperviousness Assumptions for Stormwater Modeling
**Date:** October 25, 2016
**Project:** 23/27-0354.00 BCO 160

## 1.0 Introduction

Redevelopment throughout the City of Edina (City), particularly the rebuilding of older homes with newer, larger homes, has raised questions about the imperviousness assumptions used for stormwater modeling. Therefore, as directed by the City, Barr evaluated the most recent imperviousness data throughout different neighborhoods of the city to help determine if the assumptions that were previously used for stormwater modeling are representative of current conditions. This memo documents the findings of this imperviousness assessment, referred to herein as the "2016 analysis".

There are two forms of imperviousness: (1) "Total Impervious" which represents the total area of impervious surfaces such as pavement, roof tops, etc., and (2) "Directly Connected Impervious" which represents the area of impervious surface from which water flows directly into storm sewer or water bodies. The Directly Connected Impervious area is the area that is most important for hydrologic modeling. The majority of this memo discusses the Total Impervious, and Section 5.0 discusses methods for converting from Total Impervious area to Directly Connected Impervious area. Table 1 provides a summary of the imperviousness assumptions used for modeling associated with both the 2003 and 2011 CWRMPs (2003/2011 CWRMPs).

**Table 1 Imperviousness assumptions from the 2003/2011 CWRMPs**

| Land Use Type | Total Impervious % | Directly Connected Impervious % | Ratio of Directly Connected to Total |
|---|---|---|---|
| **Commercial** | 90% | 80% | 0.889 |
| **Developed Park** | Not previously used | Not previously used | N/A |
| **Golf Course** | 5% | 2% | 0.400 |
| **High Density Residential** | 70% | 40% | 0.571 |
| **Highway** | 50% | 50% | 1.000 |
| **Industrial/Office** | 90% | 80% | 0.889 |
| **Institutional** | 40% | 20% | 0.500 |
| **Institutional - High Imperviousness** | 70% | 50% | 0.714 |
| **Low Density Residential** | 40% | 20% | 0.500 |
| **Medium Density Residential** | 55% | 30% | 0.545 |
| **Natural/Park/Open** | 2% | 0% | 0.000 |
| **Open Water** | 100% | 100% | 1.000 |

| Land Use Type | Total Impervious % | Directly Connected Impervious % | Ratio of Directly Connected to Total |
|---|---|---|---|
| **Other** | Not previously used | Not previously used | N/A |
| **Very Low Density Residential** | 12% | 8% | 0.667 |
| **Wetland** | 100% | 100% | 1.000 |

## 2.0 Data Sources

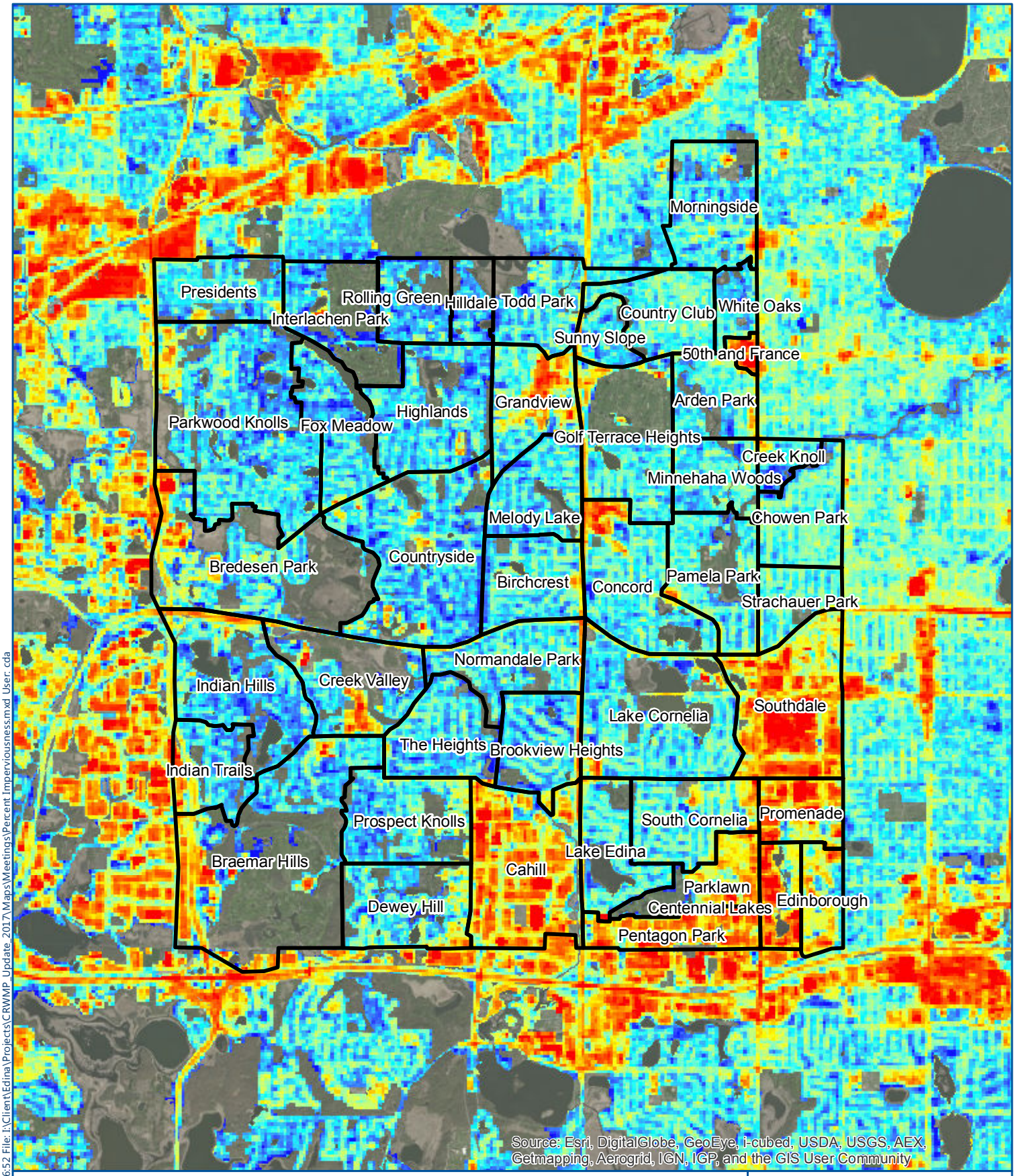
The main data source for this 2016 analysis is the 2011 Twin Cities impervious surface area dataset developed by the University of Minnesota (reference [1]). This geographic information system (GIS) dataset is a 30-meter resolution raster (grid) of impervious surface classification for the seven-county Twin Cities Metropolitan Area. The values in this GIS layer represents total imperviousness, not directly connected imperviousness. The impervious surface classification was created using a combination of multi-temporal Landsat (satellite) data and Light Detection and Ranging (LiDAR) data. This raster data set is shown in Figure 1.

Barr analyzed the imperviousness data by land use type and neighborhood. This approach allowed us to review the range of results by neighborhood for imperviousness of each land use type. A neighborhood analysis was performed (as opposed to a parcel analysis) due to the larger grid size of the imperviousness raster dataset (i.e., the U of M's imperviousness data is too coarse for a parcel-level analysis). The City provided the neighborhood GIS layer containing 45 neighborhoods throughout the city (Figure 2 (reference [2]).

The land use data utilized for this analysis was the same land use data provided by the City for the 2003/2011 CWRMPs (reference [3]). Using the same land use data allowed us to analyze results with the understanding that changes were strictly based on the changing imperviousness within the city. The land use data is shown in Figure 3.

## 3.0 Analysis Methods

The neighborhood and land use type polygon GIS layers were intersected to define smaller polygons of land use type within each neighborhood. Zonal statistics were then used to calculate the average raster cell value for each land use type within each neighborhood (Table 2). Additionally, the area of each land use type within each neighborhood was calculated to understand which land use types are more prevalent in each neighborhood (Table 3). The data from Table 2 and Table 3 were then used to create a histogram of imperviousness and a cumulative area function to understand the range of imperviousness for each land use type. Figure 4 also shows the average and range of the resulting imperviousness values of all neighborhoods by land use type. These results are presented and discussed in Section 4.0.




**Percent Imperviousness**

High : 100

Low : 0

Edina Neighborhoods

Note: Raster grid cells with 0% imperviousness are transparent and the background imagery is visible.

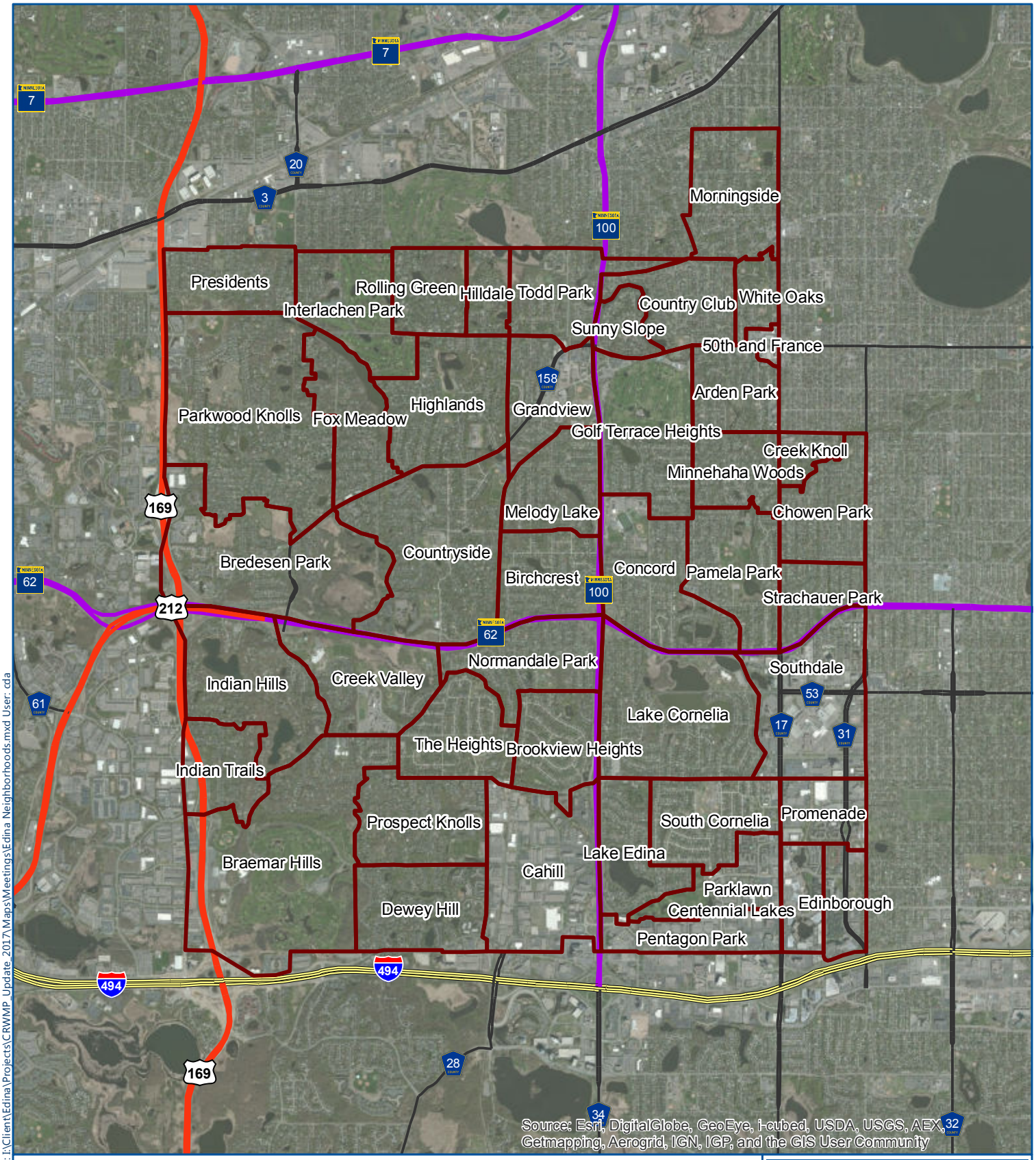
1 0 1

Miles

PERCENT IMPERVIOUSNESS
2011 U OF M DATASET
Imperviousness Analysis
City of Edina

FIGURE 1

Barr Footer: ArcGIS 10.4, 2016-09-16 16:52 File: I:\Client\Edina\Projects\CRWMP_Update_2017\Maps\Meetings\Percent Imperviousness.mxd User: cda




Edina Neighborhoods

**Streets and Highways**

- Interstate Highway
- US Highway
- State Trunk Highway
- County State-Aid Highway

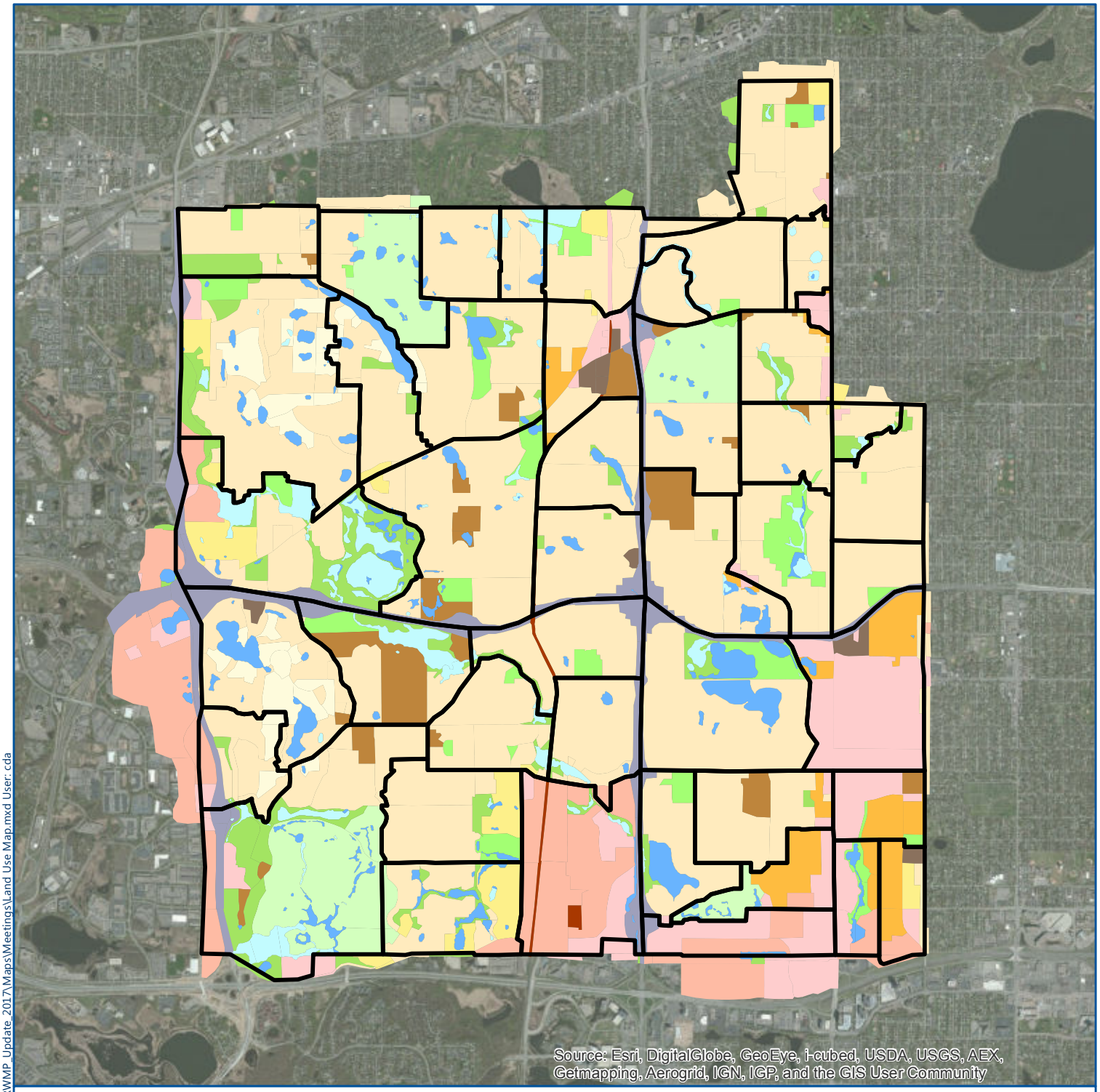
1 0 1

Miles

EDINA NEIGHBORHOODS
Imperviousness Analysis
City of Edina

FIGURE 2

Barr Footer: ArcGIS 10.4, 2016-09-16 16:24 File: I:\Client\Edina\Projects\CRWMP_Update_2017\Maps\Meetings\Edina Neighborhoods.mxd User: cda




Edina Neighborhoods

**Land Use**

- Natural/Park/Open
- Developed Parkland
- Golf Course
- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Institutional
- Institutional - High Imperviousness
- Highway
- Commercial
- Industrial/Office
- Other
- Open Water
- Wetland

N

1 0 1

Miles

LAND USE TYPE
Imperviousness Analysis
City of Edina

FIGURE 3

Barr Footer: ArcGIS 10.4, 2016-09-16 16:44 File: I:\Client\Edina\Projects\CRWMP_Update_2017\Maps\Meetings\Land Use Map.mxd User: cda

**Table 2 - Mean total imperviousness by land use type within each neighborhood**

| | Commercial | Developed Park | Golf Course | High Density Residential | Highway | Industrial/ Office | Institutional | Institutional - High Imperviousness | Low Density Residential | Medium Density Residential | Natural/Park/ Open | Open Water | Other | Very Low Density Residential | Wetland | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50th and France | 87.3 | | | 72.6 | | | 52.0 | | | 61.8 | | | | | | 86.5 |
| Arden Park | 64.6 | 0.0 | 34.3 | 63.4 | | | 39.4 | | 32.6 | 65.6 | 7.3 | | | | 100.0 | 36.6 |
| Birchcrest | | | | | 48.9 | | | 68.1 | 32.8 | | 18.4 | 100.0 | 21.0 | | | 36.9 |
| Braemar Hills | 66.7 | | 3.5 | | 63.3 | 69.3 | 54.8 | | 27.9 | | 14.2 | 100.0 | | 12.5 | 100.0 | 29.7 |
| Bredesen Park | 72.2 | 4.6 | | | 40.9 | 61.8 | | | 33.7 | 42.1 | 5.6 | 100.0 | | | 100.0 | 46.4 |
| Brookview Heights | | | | | 71.8 | 59.7 | | | 30.9 | | 12.6 | 100.0 | 21.3 | | 100.0 | 37.9 |
| Cahill | 72.4 | | | | 49.9 | 74.1 | | | 60.4 | 63.5 | 24.3 | 100.0 | 41.9 | | 100.0 | 70.5 |
| Centennial Lakes | 88.0 | 41.3 | | 60.0 | | 83.0 | | | | | | 100.0 | | | | 76.9 |
| Chowen Park | | 42.2 | | | | | | | 38.9 | | 7.7 | | | | 100.0 | 38.6 |
| Concord | 53.2 | | | 38.6 | 53.6 | | 60.6 | | 35.3 | | 19.4 | 100.0 | | | 100.0 | 45.5 |
| Country Club | | 33.8 | | | 65.6 | | | | 38.0 | | | | | | 100.0 | 41.1 |
| Countryside | | 22.3 | | | 37.7 | | 32.7 | | 28.6 | 49.1 | 25.7 | 100.0 | 18.8 | | 100.0 | 32.0 |
| Creek Knoll | 62.2 | | | | | | | | 34.2 | 76.7 | 14.9 | | | | 100.0 | 36.9 |
| Creek Valley | | 12.8 | | | 39.6 | | 30.8 | | 27.7 | | 2.0 | 100.0 | | | 100.0 | 36.9 |
| Dewey Hill | | | 6.5 | | | 65.5 | | | 32.0 | 41.2 | 11.8 | 100.0 | | | 100.0 | 39.3 |
| Edinborough | 64.5 | 63.1 | | 57.9 | | 64.5 | | 76.3 | 34.0 | 47.9 | | | | | | 57.0 |
| Fox Meadow | | | 19.6 | | | | | | 28.9 | 51.4 | 6.9 | 100.0 | | 21.6 | | 37.4 |
| Golf Terrace Heights | 65.6 | 27.5 | 7.2 | | 68.3 | | 61.3 | | 35.1 | | | 100.0 | | | | 28.7 |
| Grandview | 80.0 | 42.0 | | 46.8 | 59.0 | | 46.5 | 66.6 | 37.7 | 54.0 | | 100.0 | 44.7 | | | 50.4 |
| Highlands | | 12.5 | 26.0 | | | | 35.3 | | 28.4 | | 10.7 | 100.0 | | 27.8 | 100.0 | 31.8 |
| Hilldale | | 0.0 | | | | | | | 21.5 | | | 100.0 | | | 100.0 | 39.7 |
| Indian Hills | | | | | 62.8 | | 30.5 | 56.3 | 27.6 | | | 100.0 | | 18.1 | 100.0 | 38.0 |
| Indian Trails | 65.8 | | | | 56.0 | 71.7 | | | 28.6 | | 4.6 | | | 13.3 | 100.0 | 33.5 |
| Interlachen Park | | 57.5 | 6.6 | | | | | | 25.8 | | | 100.0 | | | 100.0 | 17.6 |
| Lake Cornelia | 60.2 | 34.1 | | 60.6 | 48.1 | | | | 33.5 | | 11.3 | 100.0 | | | 100.0 | 45.2 |
| Lake Edina | 90.7 | 9.2 | 0.0 | | 62.4 | | | | 34.6 | | 15.2 | 100.0 | | | 100.0 | 43.9 |
| Melody Lake | | | | | 53.4 | | 44.5 | | 30.3 | | 3.1 | 100.0 | 23.7 | | | 33.7 |
| Minnehaha Woods | 56.2 | 4.4 | | | | | 16.7 | | 34.6 | 71.5 | 34.7 | 100.0 | | | 100.0 | 35.4 |
| Morningside | 68.2 | 15.2 | | | | | 45.1 | | 32.1 | 2.7 | 15.4 | 100.0 | | | 100.0 | 32.3 |
| Normandale Park | | 10.0 | | | 53.5 | | 43.0 | | 31.6 | | 10.0 | 100.0 | 24.5 | | 100.0 | 34.0 |
| Pamela Park | 72.0 | 8.4 | | 59.0 | 59.2 | | | | 37.1 | | 28.0 | 100.0 | | | 100.0 | 35.9 |
| Parklawn | 77.2 | | 6.7 | 61.9 | | 72.8 | | | 26.7 | | | 100.0 | | | | 51.6 |
| Parkwood Knolls | 66.4 | 19.7 | | | 47.5 | 59.0 | | | 29.5 | 51.7 | 3.6 | 100.0 | | 22.1 | 100.0 | 31.7 |
| Pentagon Park | 78.0 | | 40.4 | | 60.5 | 71.3 | | | | | 0.0 | 100.0 | | | | 75.2 |
| Presidents | | 13.8 | | | 63.1 | | 56.5 | | 29.5 | | 24.8 | 100.0 | | | | 29.1 |
| Promenade | 80.2 | 52.8 | | 63.6 | | | 73.8 | | | | | | | | | 71.9 |
| Prospect Knolls | 57.4 | 17.1 | 34.3 | | | 52.2 | | | 27.4 | 45.7 | 0.4 | 100.0 | | | 100.0 | 29.7 |
| Rolling Green | | | 17.4 | | | | | | 21.4 | | | 100.0 | | | 100.0 | 27.1 |
| South Cornelia | 76.9 | | | 58.2 | | | 34.3 | | 39.0 | | 30.7 | | | | | 41.0 |
| Southdale | 81.2 | 67.7 | | 59.0 | 60.7 | | | 84.5 | 49.9 | | | 100.0 | | | | 76.1 |
| Strachauer Park | | 7.1 | | | 55.5 | | | | 39.7 | | | | | | | 39.1 |
| Sunny Slope | | | 39.8 | | 68.7 | | 75.0 | | 29.4 | | | | | | 100.0 | 41.0 |
| The Heights | 64.0 | 15.2 | | | | 74.3 | 39.2 | | 30.9 | 45.1 | 8.6 | | 16.0 | | 100.0 | 33.3 |
| Todd Park | 37.4 | 12.5 | | | 60.9 | | | | 31.0 | 39.0 | 22.8 | 100.0 | | | 100.0 | 37.2 |
| White Oaks | 40.6 | | | | | | 44.5 | | 30.3 | 47.8 | | 100.0 | | | 100.0 | 36.0 |

| | Commercial | Developed Park | Golf Course | High Density Residential | Highway | Industrial/ Office | Institutional | Institutional - High Imperviousness | Low Density Residential | Medium Density Residential | Natural/Park/ Open | Open Water | Other | Very Low Density Residential | Wetland |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum | 90.7 | 67.7 | 40.4 | 72.6 | 71.8 | 83.0 | 75.0 | 84.5 | 60.4 | 76.7 | 34.7 | 100.0 | 44.7 | 27.8 | 100.0 |
| Minimum | 37.4 | 0.0 | 0.0 | 38.6 | 37.7 | 52.2 | 16.7 | 56.3 | 21.4 | 2.7 | 0.0 | 100.0 | 16.0 | 12.5 | 100.0 |
| Average | 77.6 | 18.7 | 5.4 | 58.7 | 53.8 | 71.7 | 41.7 | 71.6 | 31.7 | 42.6 | 10.5 | 100.0 | 31.3 | 20.1 | 100.0 |

| % Impervious Legend |
|---|
| 100.0 |
| 90.0 |
| 80.0 |
| 70.0 |
| 60.0 |
| 50.0 |
| 40.0 |
| 30.0 |
| 20.0 |
| 10.0 |
| 0.0 |

**Table 3 - Area (acres) of each land use type within each neighborhood**

| | Commercial | Developed Park | Golf Course | High Density Residential | Highway | Industrial/ Office | Institutional | Institutional - High Imperviousness | Low Density Residential | Medium Density Residential | Natural/Park/ Open | Open Water | Other | Very Low Density Residential | Wetland | Total Acres of Neighborhood |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50th and France | 18.91 | | | 0.97 | | | 0.004 | | | 0.06 | | | | | | 20 |
| Arden Park | 8.87 | 0.003 | 0.60 | 4.40 | | | 2.48 | | 114.16 | 1.98 | 12.47 | | | | 6.20 | 151 |
| Birchcrest | | | | | 25.23 | | | 3.95 | 150.04 | | 2.73 | 4.76 | 3.91 | | | 191 |
| Braemar Hills | 31.69 | | 263.86 | | 28.79 | 32.89 | 23.17 | | 134.46 | | 91.91 | 23.33 | | 4.42 | 43.16 | 678 |
| Bredesen Park | 2.72 | 12.57 | | | 44.07 | 40.70 | | | 125.31 | 52.99 | 104.13 | 17.25 | | | 97.77 | 497 |
| Brookview Heights | | | | | 13.80 | 5.28 | | | 144.99 | | 2.56 | 3.01 | 2.51 | | 5.88 | 178 |
| Cahill | 64.78 | | | | 26.48 | 255.13 | | | 0.26 | 0.03 | 7.41 | 4.52 | 14.58 | | 5.43 | 379 |
| Centennial Lakes | 38.64 | 13.35 | | 17.48 | | 18.10 | | | | | | 10.05 | | | | 98 |
| Chowen Park | | 1.26 | | | | | | | 176.30 | | 4.25 | | | | 1.33 | 183 |
| Concord | 1.87 | | | 3.97 | 28.21 | | 48.29 | | 192.44 | | 1.15 | 17.91 | | | 1.38 | 295 |
| Country Club | | 5.74 | | | 1.49 | | | | 164.24 | | | | | | 8.68 | 180 |
| Countryside | | 35.12 | | | 14.79 | | 42.68 | | 355.49 | 5.11 | 1.98 | 17.09 | 4.60 | | 4.05 | 481 |
| Creek Knoll | 2.83 | | | | | | | | 33.47 | 1.05 | 13.15 | | | | 4.27 | 55 |
| Creek Valley | | 18.36 | | | 21.55 | | 97.42 | | 73.60 | | 18.11 | 0.95 | | | 35.28 | 265 |
| Dewey Hill | | | 16.17 | | | 12.15 | | | 111.44 | 60.86 | 16.00 | 20.62 | | | 1.48 | 239 |
| Edinborough | 8.36 | 0.39 | | 43.10 | | 16.01 | | 6.79 | 10.32 | 12.70 | | | | | | 98 |
| Fox Meadow | | | 0.25 | | | | | | 132.88 | 5.58 | 10.21 | 27.29 | | 20.89 | | 197 |
| Golf Terrace Heights | 5.92 | 5.57 | 127.51 | | 18.80 | | 7.81 | | 130.09 | | | 10.04 | | | | 306 |
| Grandview | 25.54 | 0.13 | | 28.21 | 9.59 | | 23.51 | 20.87 | 77.02 | 1.32 | | 0.40 | 3.17 | | | 190 |
| Highlands | | 13.72 | 0.30 | | | | 12.26 | | 226.84 | | 19.85 | 16.89 | | 10.81 | 4.34 | 305 |
| Hilldale | | 0.74 | | | | | | | 59.42 | | | 5.42 | | | 12.99 | 79 |
| Indian Hills | | | | | 28.33 | | 3.83 | 6.20 | 166.68 | | | 42.64 | | 88.49 | 0.98 | 337 |
| Indian Trails | 5.69 | | | | 13.63 | 14.02 | | | 88.52 | | 4.76 | | | 22.82 | 0.18 | 150 |
| Interlachen Park | | 1.96 | 153.62 | | | | | | 53.14 | | | 13.46 | | | 0.88 | 223 |
| Lake Cornelia | 0.12 | 30.50 | | 0.15 | 29.27 | | | | 289.09 | | 14.18 | 66.43 | | | 8.32 | 438 |
| Lake Edina | 2.06 | 14.78 | 0.07 | | 11.31 | | | | 112.77 | | 7.03 | 25.43 | | | 0.58 | 174 |
| Melody Lake | | | | | 6.72 | | 0.31 | | 157.97 | | 4.35 | 8.51 | 3.00 | | | 181 |
| Minnehaha Woods | 0.02 | 1.06 | | | | | 3.69 | | 132.39 | 1.14 | 0.67 | 1.06 | | | 1.58 | 142 |
| Morningside | 7.90 | 12.08 | | | | | 7.79 | | 192.01 | 10.28 | 6.02 | 3.15 | | | 0.82 | 240 |
| Normandale Park | | 14.07 | | | 31.98 | | 0.05 | | 155.17 | | 6.51 | 0.79 | 4.75 | | 3.71 | 217 |
| Pamela Park | 4.98 | 51.10 | | 0.01 | 3.89 | | | | 153.82 | | 0.08 | 4.08 | | | 10.94 | 229 |
| Parklawn | 28.42 | | 38.14 | 58.45 | | 7.95 | | | 0.77 | | | 4.91 | | | | 139 |
| Parkwood Knolls | 11.34 | 20.33 | | | 4.76 | 3.68 | | | 369.33 | 18.96 | 42.00 | 30.65 | | 118.87 | 4.30 | 624 |
| Pentagon Park | 86.52 | | 0.26 | | 6.88 | 49.05 | | | | | 0.18 | 2.53 | | | | 145 |
| Presidents | | 5.11 | | | 1.24 | | 2.89 | | 135.05 | | 35.08 | 0.77 | | | | 180 |
| Promenade | 59.92 | 8.69 | | 42.49 | | | 9.46 | | | | | | | | | 121 |
| Prospect Knolls | 0.17 | 19.23 | 0.56 | | | 0.67 | | | 174.03 | 36.74 | 10.25 | 4.13 | | | 0.51 | 246 |
| Rolling Green | | | 0.26 | | | | | | 126.78 | | | 4.65 | | | 5.31 | 137 |
| South Cornelia | 8.75 | | | 11.01 | | | 22.24 | | 167.28 | | 2.71 | | | | | 212 |
| Southdale | 248.23 | 0.15 | | 61.71 | 12.39 | | | 13.86 | 8.14 | | | 3.24 | | | | 348 |
| Strachauer Park | | 5.89 | | | 7.85 | | | | 101.19 | | | | | | | 115 |
| Sunny Slope | | | 0.35 | | 6.11 | | 0.07 | | 55.82 | | | | | | 8.01 | 70 |
| The Heights | 0.03 | 7.83 | | | | 0.05 | 4.06 | | 171.32 | 2.15 | 6.00 | | 1.35 | | 10.07 | 203 |
| Todd Park | 8.58 | 15.52 | | | 6.41 | | | | 129.88 | 14.22 | 0.33 | 0.05 | | | 16.02 | 191 |
| White Oaks | 0.19 | | | | | | 0.05 | | 61.87 | 1.33 | | 0.23 | | | 4.95 | 69 |

| | Commercial | Developed Park | Golf Course | High Density Residential | Highway | Industrial/ Office | Institutional | Institutional - High Imperviousness | Low Density Residential | Medium Density Residential | Natural/Park/ Open | Open Water | Other | Very Low Density Residential | Wetland |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum | 248 | 51 | 264 | 62 | 44 | 255 | 97 | 21 | 369 | 61 | 104 | 66 | 15 | 119 | 98 |
| Minimum | 0.02 | 0.003 | 0.07 | 0.01 | 1.24 | 0.05 | 0.004 | 3.95 | 0.26 | 0.03 | 0.08 | 0.05 | 1.35 | 4.42 | 0.18 |
| Total Acres in Edina | 683 | 315 | 602 | 272 | 404 | 456 | 312 | 52 | 5416 | 227 | 446 | 396 | 38 | 266 | 309 |

# 4.0 Results

The average imperviousness for each land use type and the range of imperviousness among neighborhoods is shown in Figure 4. The imperviousness values assumed for the 2003/2011 CWRMPs are also shown in Figure 4. For some land use types such as Golf Course, Highway, Institutional, and Institutional – High Imperviousness, the 2016 analysis average value matches very closely with the 2003/2011 CWRMPs assumed value. For others, such as Commercial, High Density Residential, and Industrial/Office, the 2003/2011 CWRMPs assumed value is substantially higher when compared to the results of this 2016 analysis. For a few other land use types, such as Natural/Park/Open and Very Low Density Residential, the 2003/2011 CWRMPs assumptions appear to be low compared to the results of the 2016 analysis.

Low and Medium Density Residential land use types both have wide ranges of imperviousness based on the 2016 analysis, and the 2003/2011 CWRMPs assumptions are on the high end of these new results. Open Water and Wetland land use types are 100% in both the 2003/2011 CWRMPs and this 2016 analysis; those will not change. Land use types Developed Park and Other were not used previously.

The following figures (Figure 5 through Figure 17) show the resulting histograms of each of the land use types.

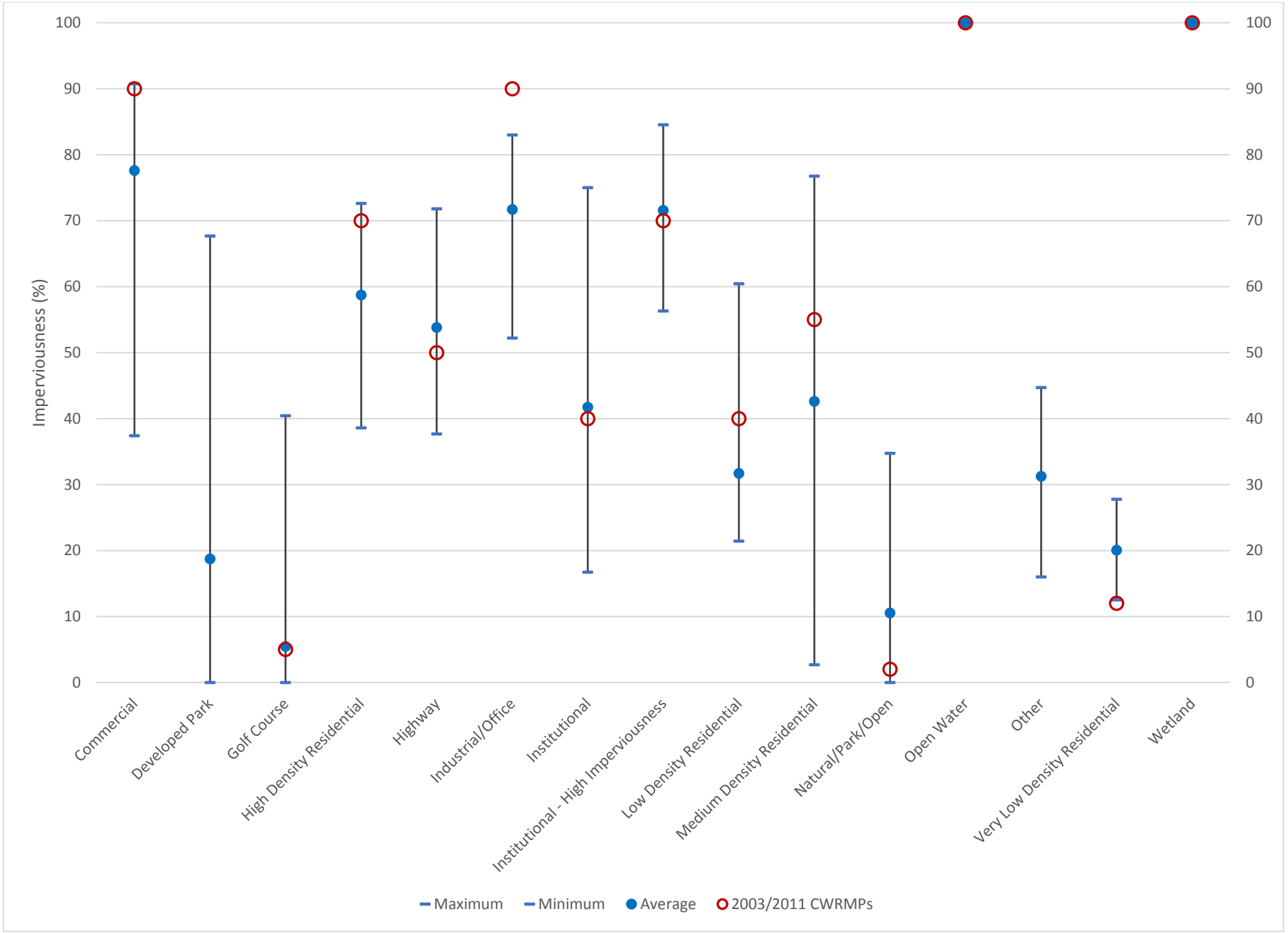



**Figure 4 - Average and range of imperviousness within all neighborhoods by land use type**

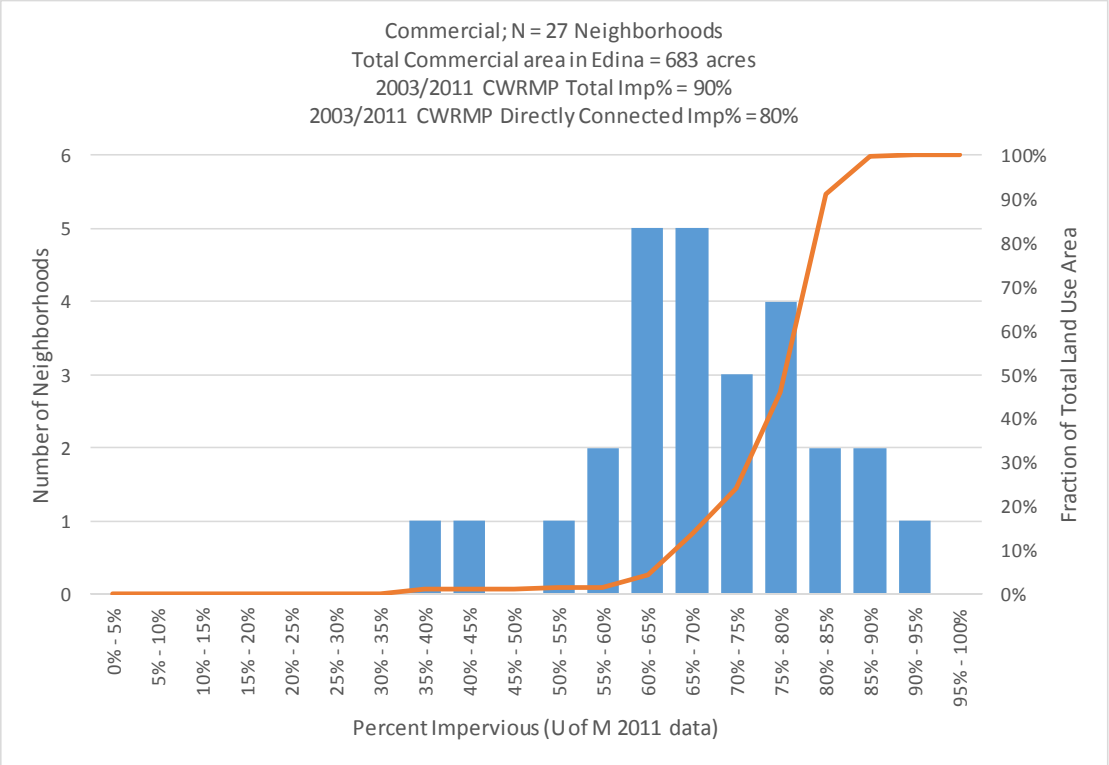



**Figure 5 Percent impervious histogram of the Commercial land use type**

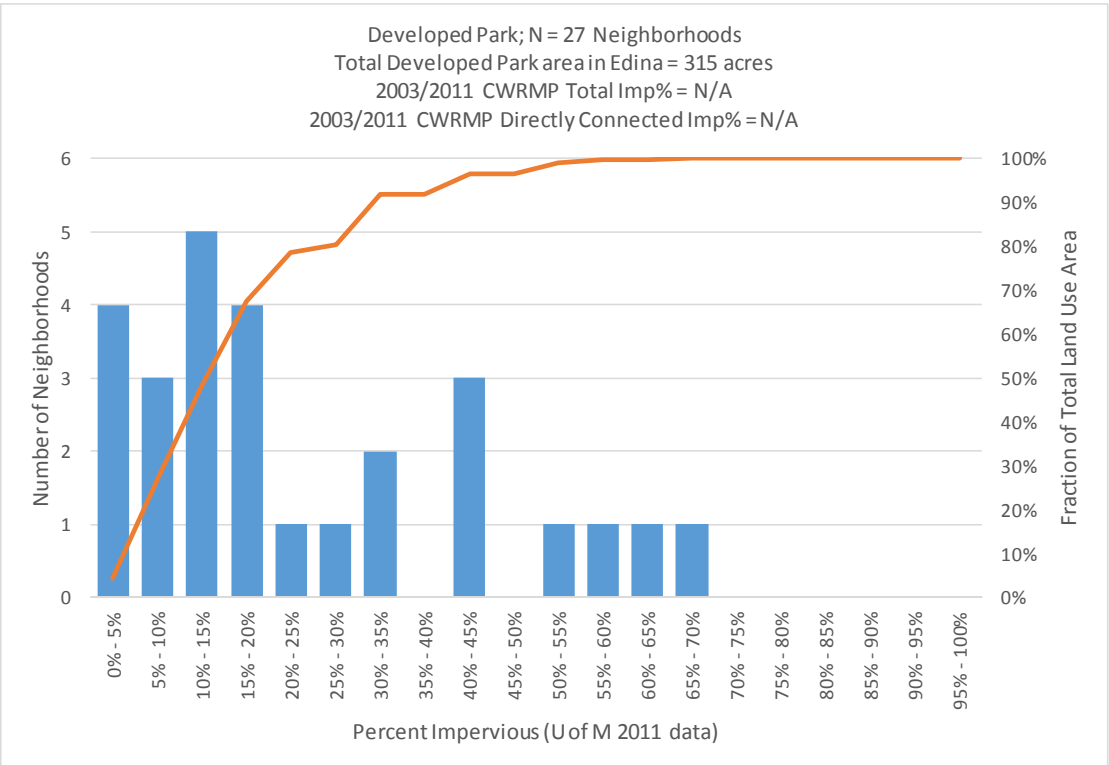



**Figure 6 Percent impervious histogram of the Developed Park land use type**

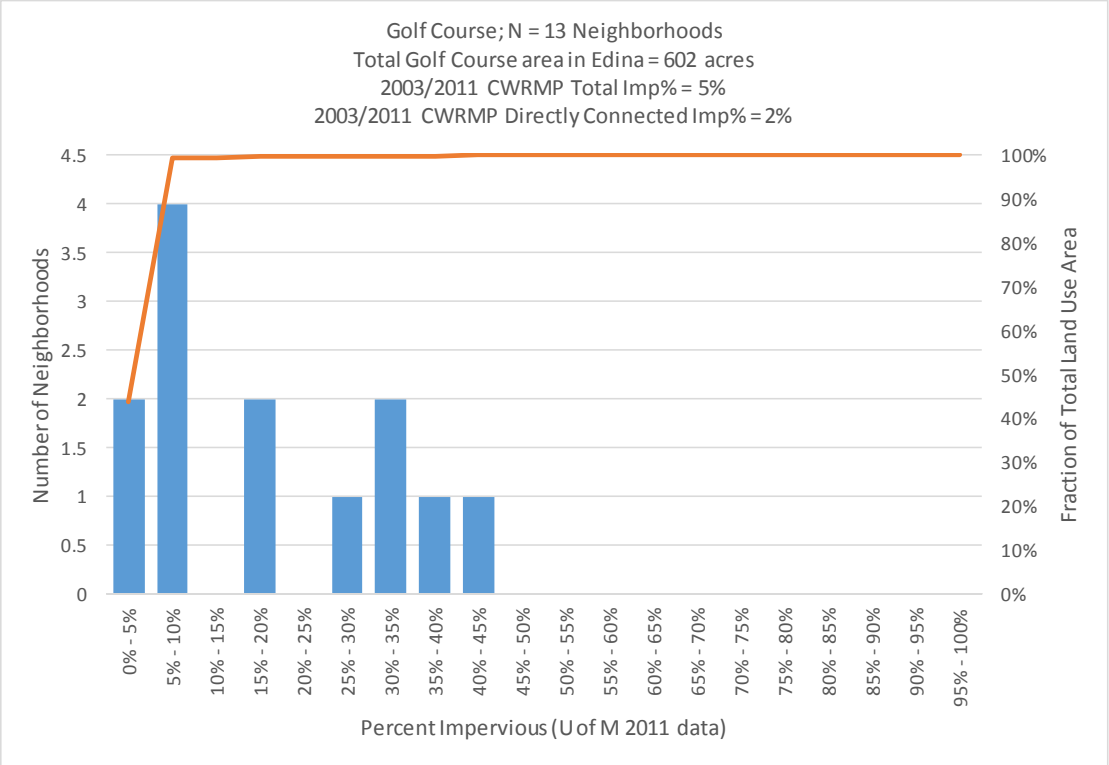



**Figure 7 Percent impervious histogram of the Golf Course land use type**

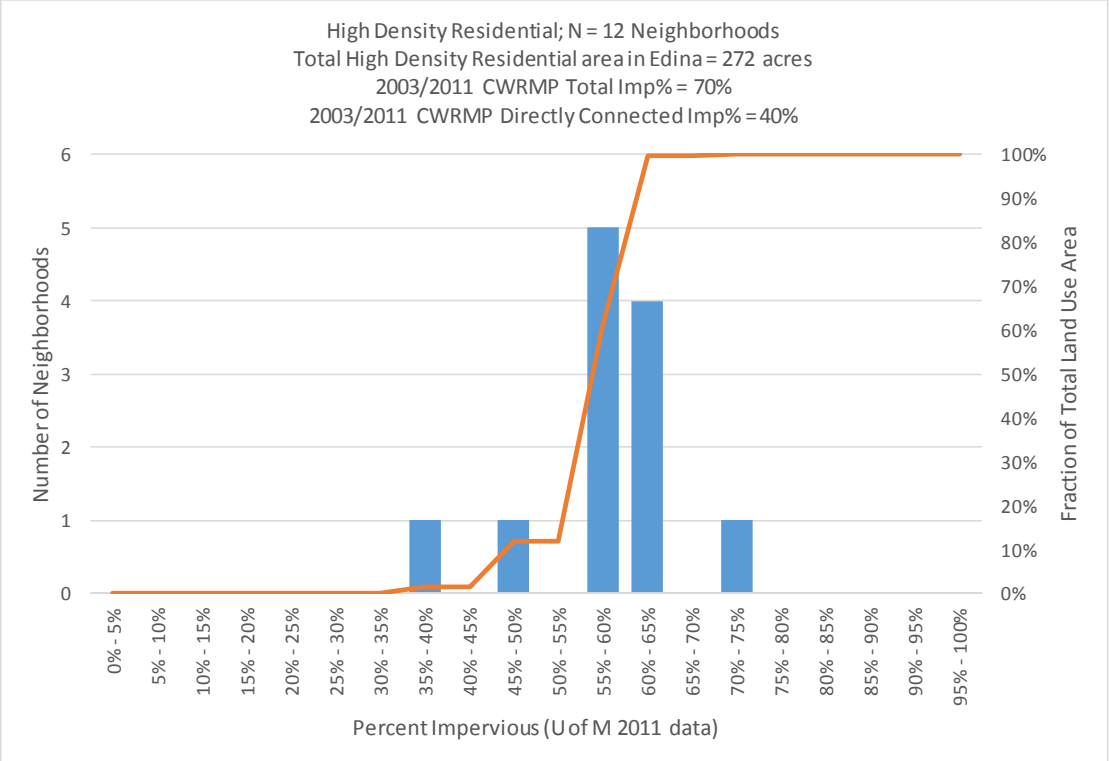



**Figure 8 Percent impervious histogram of the High Density Residential land use type**

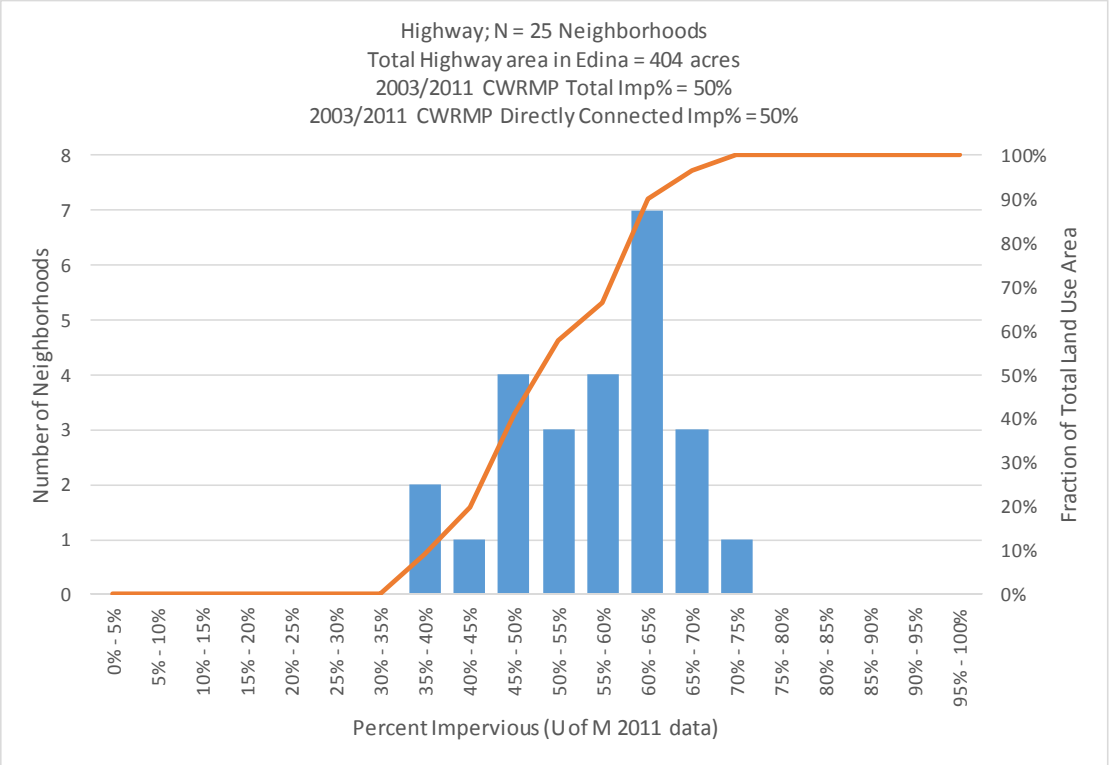



**Figure 9 Percent impervious histogram of the Highway land use type**

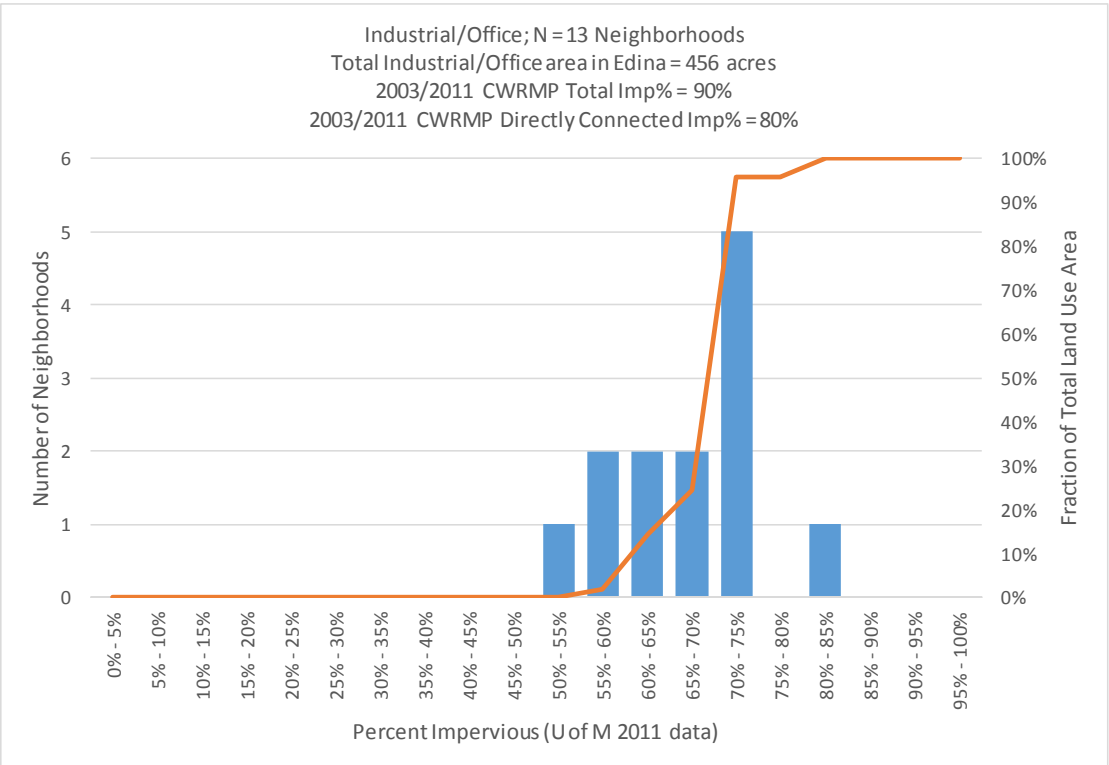



**Figure 10 Percent impervious histogram of the Industrial/Office land use type**

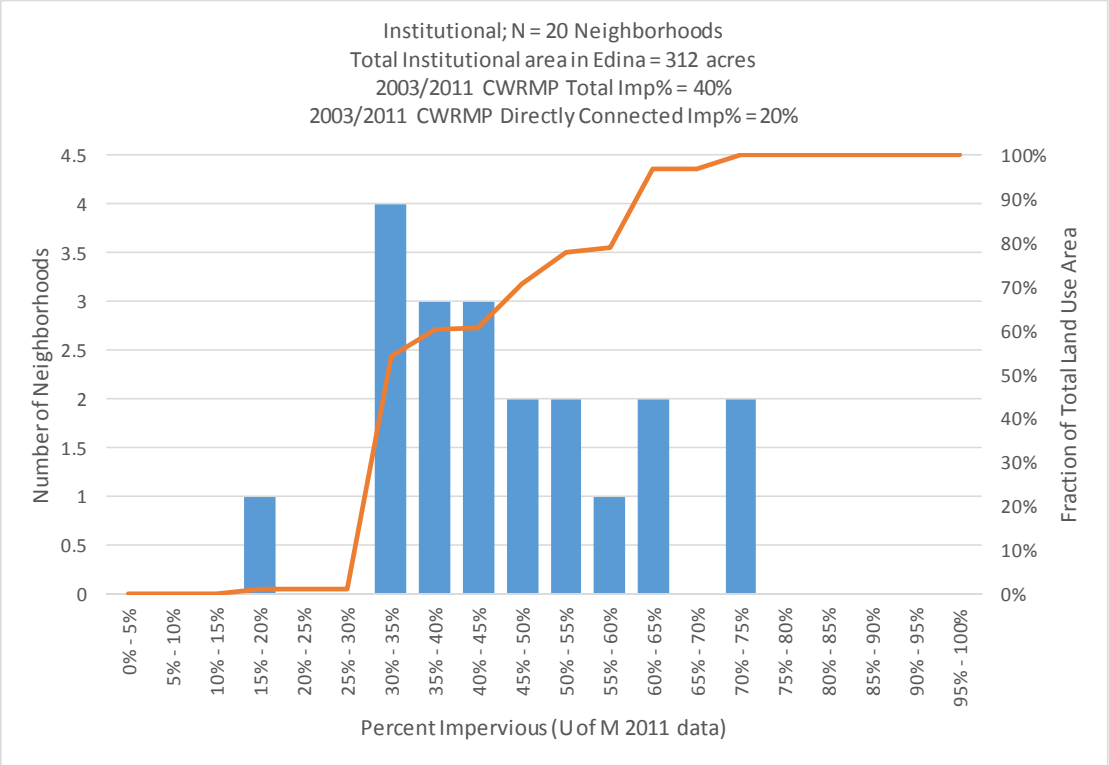



**Figure 11 Percent impervious histogram of the Institutional land use type**

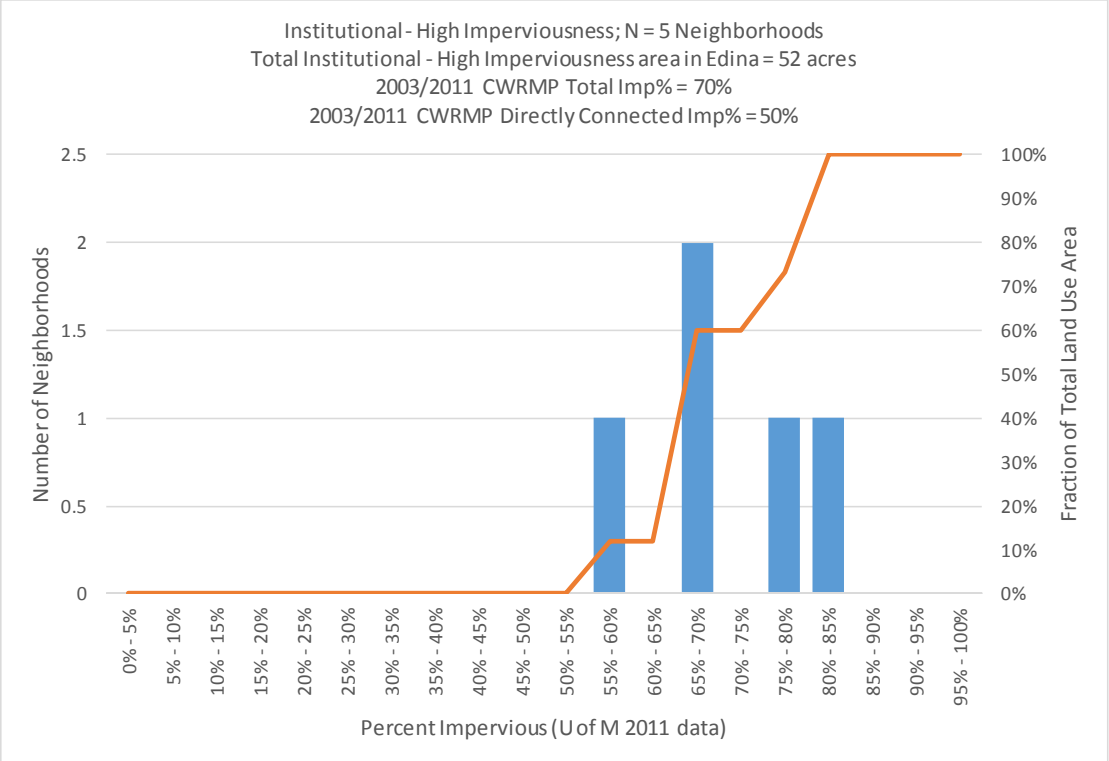



**Figure 12 Percent impervious histogram of the Institutional – High Imperviousness land use type**

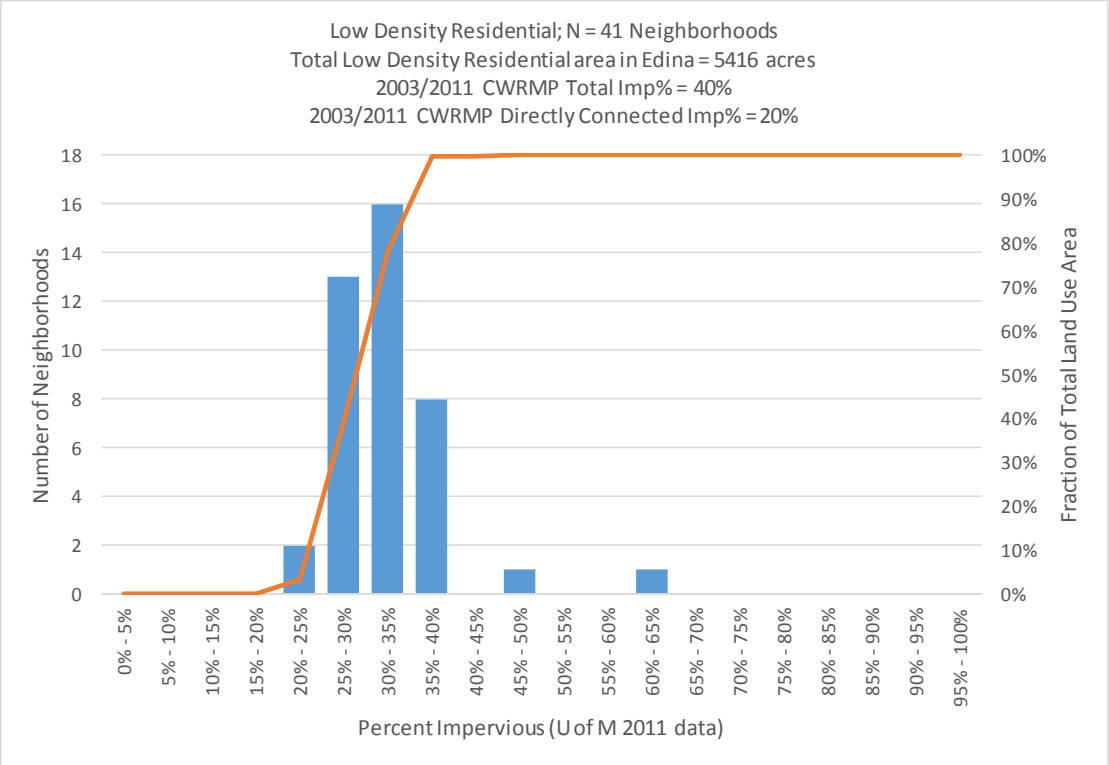



**Figure 13 Percent impervious histogram of the Low Density Residential land use type**

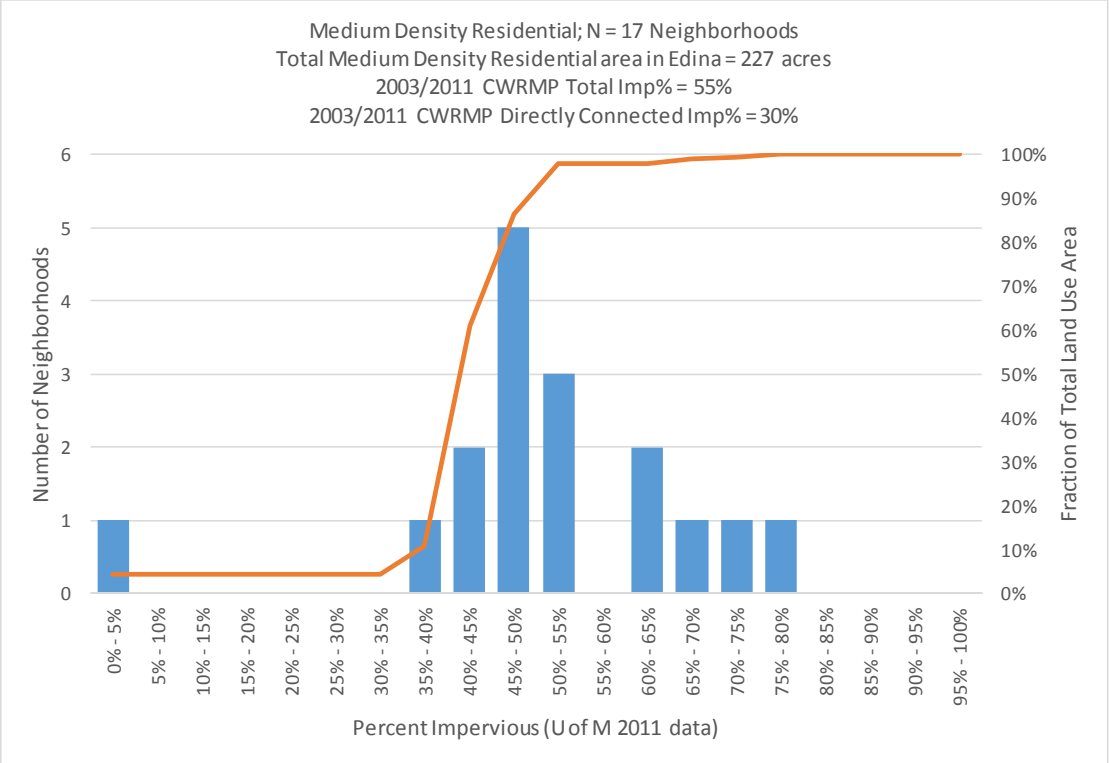



**Figure 14 Percent impervious histogram of the Medium Density Residential land use type**

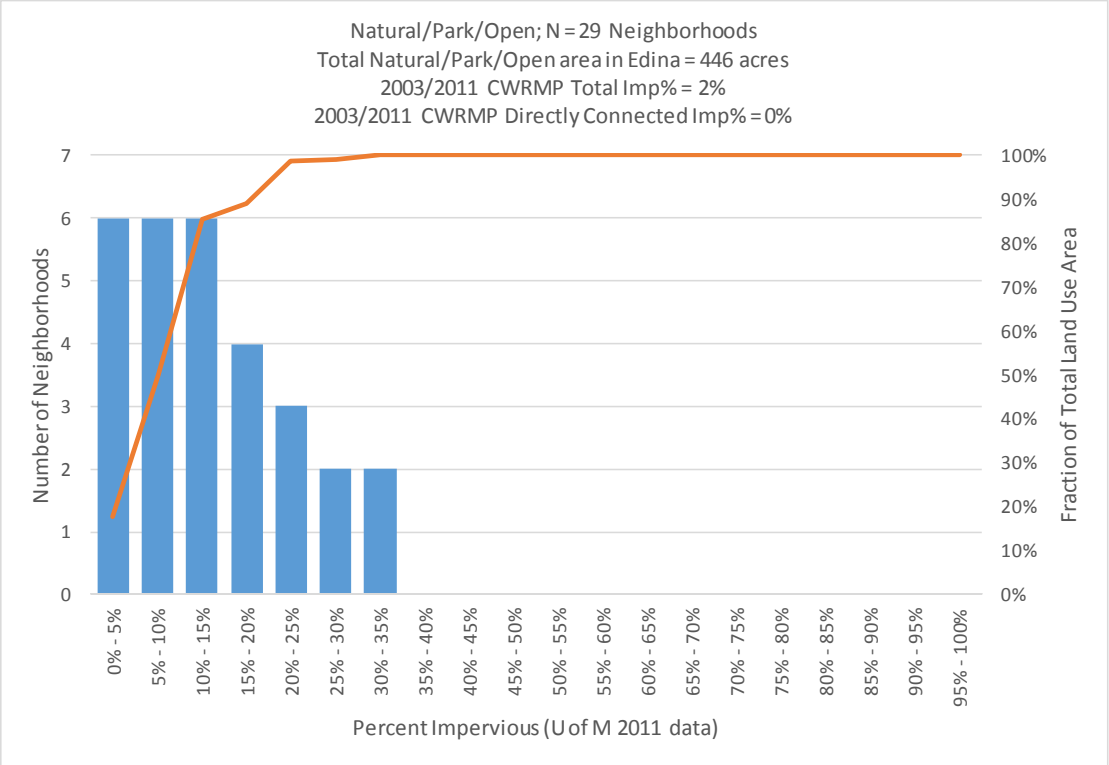



**Figure 15 Percent impervious histogram of the Natural/Park/Open land use type**

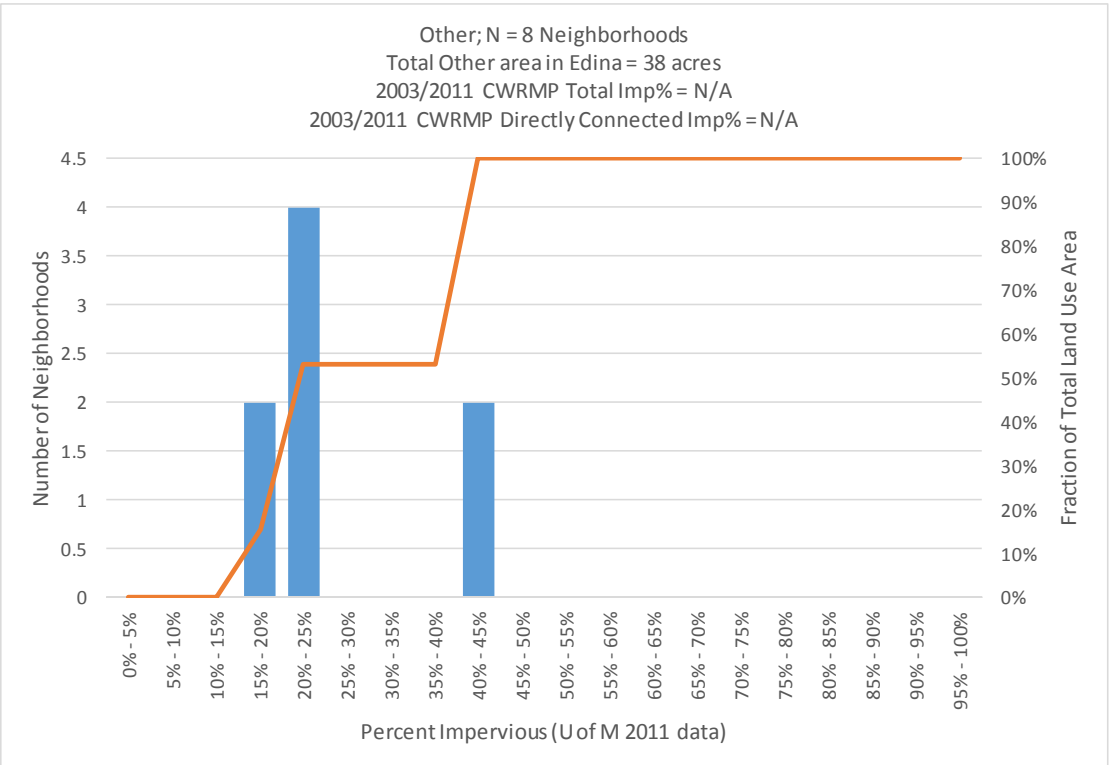



**Figure 16 Percent impervious histogram of the Other land use type**

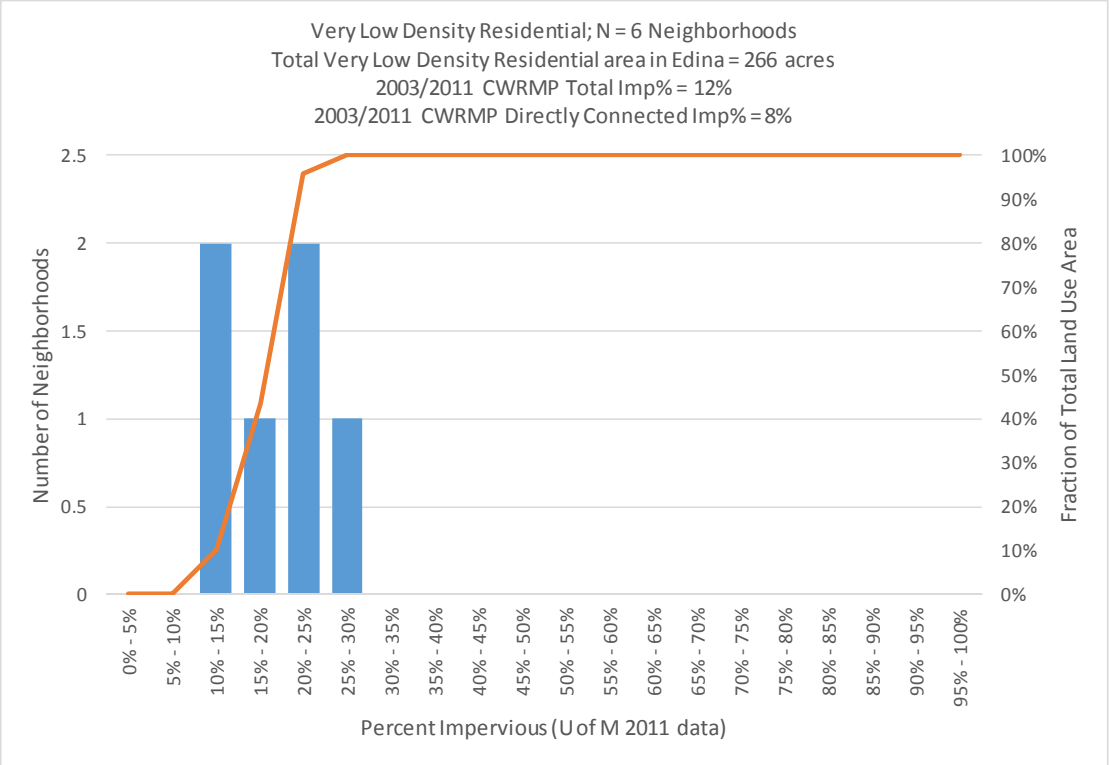



**Figure 17 Percent impervious histogram of the Very Low Density Residential land use type**

Table 4 shows the fraction of the area throughout the city in which the imperviousness from this 2016 analysis is below the assumptions used for the 2003/2011 CWRMPs. In other words, high numbers in Table 4 suggest that the previously used assumptions are conservative with respect to runoff volume because they may be overestimating the imperviousness of the land use type in some areas within Edina. Percentages in Table 4 around 40% to 50% suggest that imperviousness is underestimated for about half the area, and therefore, overestimated for the other half of the area. Low percentages in Table 4 (e.g., Very Low Density Residential) suggest that the previous assumptions in the 2003/2011 CWRMPs for associated land use types may be too low, and consideration should be given for increasing those imperviousness values.

**Table 4 Percent of total area of Edina where new average imperviousness value is below 2003/2011 CWRMP values**

| Land Use Type | Percent of Area below 2003/2011 CWRMP Imperviousness value |
|---|---|
| **Commercial** | ~100% |
| **Developed Park** | Not previously used |
| **Golf Course** | ~44% |
| **High Density Residential** | ~100% |
| **Highway** | ~41% |
| **Industrial/Office** | ~100% |
| **Institutional** | ~60% |

| Land Use Type | Percent of Area below 2003/2011 CWRMP Imperviousness value |
|---|---|
| **Institutional - High Imperviousness** | ~60% |
| **Low Density Residential** | ~100% |
| **Medium Density Residential** | ~98% |
| **Natural/Park/Open** | < 18% |
| **Open Water** | ~100% |
| **Other** | Not previously used |
| **Very Low Density Residential** | < 10% |
| **Wetland** | ~100% |

A discussion of the results for four different land use types is presented here to provide guidance for interpreting the results.

- Open Water: This land use type, by definition is 100% impervious. Therefore, the imperviousness values of this 2016 analysis match the 2003/2011 CWRMPs and do not need to be adjusted.
- Commercial: There are 27 neighborhoods that contain the Commercial land use type. The total area of Commercial land use is about 680 acres, with nearly 250 acres of Commercial land use falling within the Southdale neighborhood. There are five neighborhoods with imperviousness less than 60%, and there is one neighborhood with imperviousness greater than 90%. However, those extremes comprise only about 13 acres of the 680 total acres of Commercial land use. Close to 50% of the area of Commercial land use is less than 80% impervious, and about 90% of the Commercial land use area is below 85% impervious. Finally, essentially all of the Commercial land use area is less than 90% impervious. Therefore, the assumption of 90% impervious used in the 2003/2011 CWRMPs for Commercial land use may be overestimated. Alternatively, 90% impervious can be thought of as a conservative assumption with respect to runoff volume.
- Institutional: There are 20 neighborhoods that contain the Institutional land use type. The total area of Institutional land use is about 310 acres, with nearly 190 acres of Institutional land use within the Concord, Countryside, and Creek Valley neighborhoods. There is one neighborhood with imperviousness less than 20%, and there are two neighborhoods with imperviousness greater than 70%. However, those extremes comprise only about 13 acres of the 310 total acres of Institutional land use. Roughly 60% of the area of Institutional land use is less than 40% impervious. Therefore, the assumption of 40% impervious used in the 2003/2011 CWRMPs for Institutional land use is right in the middle of the imperviousness results of the 2016 analysis.
- Very Low Density Residential: There are six neighborhoods that contain the Very Low Density Residential land use type. The total area of Very Low Density Residential land use is almost 270 acres, with about 230 acres of Very Low Density Residential land use within the Indian Hills, Indian Trails, and Parkwood Knolls neighborhoods. The three neighborhoods between 15% and 25% impervious make up about 85% of the Very Low Density Residential area. Close to 50% of the total area of Very Low Density Residential land use is less than about 20% impervious, and about

95% of the Very Low Density Residential land use area is below 25% impervious. There are no neighborhoods with imperviousness less than 12%. Therefore, the assumption of 12% impervious used in the 2003/2011 CWRMPs for Very Low Density Residential land use may be underestimated which is consistent with the assumption that increasing development has impacted imperviousness. However, the increase in imperviousness does not appear to be significant enough to make the imperviousness values for this land use type consistent with the imperviousness values for the Low Density Residential land use type. There is still a difference in the imperviousness values of these two land use types.

# 5.0 Conversion from Total Imperviousness to Directly Connected Imperviousness

Sections 1.0 – 4.0 of this memo have discussed total imperviousness for each land use type. However, what is important for hydrologic modeling is the directly connected imperviousness which is similar to effective impervious area. A July 2015 report on effective impervious area suggests that these terms are slightly different (reference [4]). The report describes how the effective impervious area is usually less, about 80% to 90% of the directly connected impervious area. Two possible approaches for converting from total to directly connected imperviousness are listed below.

First, the simplest approach for converting the total imperviousness described in Section 4.0 to directly connected imperviousness is to simply use the same conversion ratios (ratio of directly connected to total) used in the 2003/2011CWRMPs as shown in Table 1 and then apply some engineering judgment to the results. For example, if the total imperviousness of Commercial land use was changed from 90% to 80%, and the same ratio was then used to convert total imperviousness to directly connected imperviousness (0.889), the result for Commercial land use would be 71%, or potentially rounded to 70% directly connected imperviousness.

Second, an alternative method is proposed in a report by John Gulliver and others at the University of Minnesota (reference [4]). The proposed method of determining the directly connected impervious area fraction in ungauged urban watersheds is summarized in the following steps:

- Extract total imperviousness from land use and the hydrologic soil groups from the SSURGO data set and calculate the weighted average saturated hydraulic conductivity of the soil.
- Estimate the actual curve number of the watershed as a function of total imperviousness and the saturated hydraulic conductivity.
- Determine the fraction of effective impervious area as a function of the actual curve number.
- Assume that the effective impervious area is roughly 85% of the directly connected impervious area, and scale up the values to account for this difference with a factor of 1.176 (or $0.85^{-1}$).

The approach suggested in the paper by Gulliver could be followed to determine the directly connected impervious area for the purposes of the 2017 XP-SWMM modeling. However, there are some concerns about the applicability of the paper to this modeling. First, much of the method relies on regression equations that do not account for the spread in the data and the error bars, which appear to be relatively significant. Second, the suggested approach is likely more useful for simpler hydrologic modeling methods, such as the rational method. In XP-SWMM, hydrologic factors such as depression storage and infiltration parameters based on soil type are treated as independent inputs. In the method described in the paper, it appears that these other hydrologic factors are implicitly included in the estimated value of effective impervious area. Therefore, we do not recommend using this approach to estimate imperviousness for the 2017 XP-SWMM modeling.

# 6.0 Consequences and Risks

Understanding the consequences and risks of over- or under-estimating the imperviousness can help determine an appropriate value for each land use type in the city of Edina. Figure 18 is a simple diagram to help illustrate this decision making process. Currently, there is a range of imperviousness throughout the city, and it varies by land use type (residential versus commercial versus park space, etc.). Accounting for the trend that the city is becoming more impervious, it is reasonable to expect that in the near future, the imperviousness will be higher than what it is today. However, with policies and regulations being put in place to limit the increase in imperviousness and to offset any additional imperviousness being created (e.g., using stormwater BMPs), the long term outlook is much more uncertain.

If the current imperviousness is used in the modeling for the 2017 CWRMP, then the risk is that it will likely be outdated and too low in the near future. The consequence is that flooding of structures may increase, stormwater infrastructure may be undersized, and the level of service provided by the City will decrease creating frustration within the community.

If the current trend of increasing imperviousness is extended into the future, the risk is that the imperviousness will be overestimated. The consequence is that more locations may be identified as flood risk locations and may require expensive updates to infrastructure. The flooding of structures may decrease because the stormwater infrastructure will generally be oversized. The level of service will increase, but it will come at a significant and potentially unnecessary cost to the community.

Finally, choosing an imperviousness value that is higher than the current average, but one that captures the current trend of increasing imperviousness without extending it too far into the future may be the best selection. Risk of over- or under-estimating the imperviousness still exists, but the consequences may be less because the error in the selected value will likely be less. Therefore, for each land use type, selecting a value that is higher than 80% to 90% of the total area of that land use type is expected to be a reasonably protective, yet still accurate value.

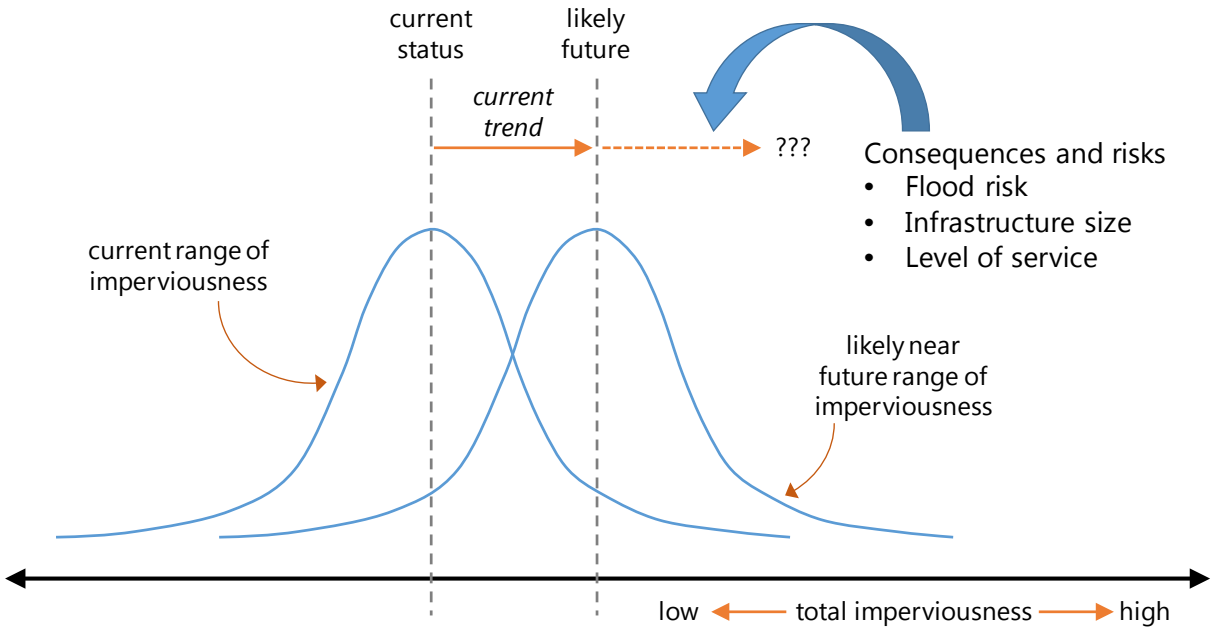



**Figure 18 Total imperviousness estimation; consequences and risks diagram**

# 7.0 Conclusions

An analysis of the imperviousness throughout the city of Edina for multiple land use types was completed using the most recent available imperviousness data set. For some of the land use types, the imperviousness has historically been over- or under-estimated, and for others, the current value has been estimated very well. The values for total imperviousness were updated based on the 2016 imperviousness analysis and consideration of the risks and consequences presented in the previous section. Recommended total imperviousness values for stormwater modeling associated with the 2017 CWRMP are listed in Table 5. Additionally, after discussion with City staff concerning the trends in residential development throughout the city, recommendations for updates to the directly connected imperviousness are also presented in Table 5. For most of the land use types, the recommended total imperviousness for the 2017 CWRMP is at or above the average imperviousness of the 2016 analysis. The two exceptions to this are the "Natural/Park/Open" and "Other" (essentially a railroad corridor) land use types. In both cases, these land use polygons tend to be small and narrow and the analysis was highly affected by the adjacent land use polygons which were often Industrial/Office or Commercial and were raising the average imperviousness. A closer look at the aerial imagery within the small and narrow land use polygons representing Natural/Park/Open and Other justifies using lower numbers for the total imperviousness.

**Table 5 Summary of imperviousness values and recommendation for impervious assumptions for the 2017 CWRMP update**

| Land Use Type | Total Area (acres) | Imperviousness Value Assumptions (%) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2003/2011 CWRMPs | | 2016 Imperviousness Analysis | | Recommended for 2017 CWRMP | |
| | | Total | Directly Connected | Total (Range) | Total (Average) | Total | Directly Connected |
| **Commercial** | 683 | 90% | 80% | 37% - 91% | 78% | 85% | 80% |
| **Developed Park** | 315 | *not previously used* | | 0% - 68% | 19% | 30% | 20% |
| **Golf Course** | 602 | 5% | 2% | 0% - 40% | 5% | 5% | 2% |
| **High Density Residential** | 272 | 70% | 40% | 39% - 73% | 59% | 65% | 50% |
| **Highway** | 404 | 50% | 50% | 38% - 72% | 54% | 65% | 65% |
| **Industrial/Office** | 456 | 90% | 80% | 52% - 83% | 72% | 75% | 75% |
| **Institutional** | 312 | 40% | 20% | 17% - 75% | 42% | 60% | 30% |
| **Institutional - High Imperviousness** | 52 | 70% | 50% | 56% - 85% | 72% | 80% | 70% |
| **Low Density Residential** | 5,416 | 40% | 20% | 21% - 60% | 32% | 40% | 25% |
| **Medium Density Residential** | 227 | 55% | 30% | 3% - 77% | 43% | 50% | 40% |
| **Natural/Park/Open** | 446 | 2% | 0% | 0% - 35% | 11% | 2% | 0% |
| **Open Water** | 396 | 100% | 100% | N/A | 100% | 100% | 100% |
| **Other** | 38 | *not previously used* | | 16% - 45% | 32% | 20% | 20% |
| **Very Low Density Residential** | 266 | 12% | 8% | 13% - 29% | 20% | 25% | 15% |
| **Wetland** | 309 | 100% | 100% | N/A | 100% | 100% | 100% |

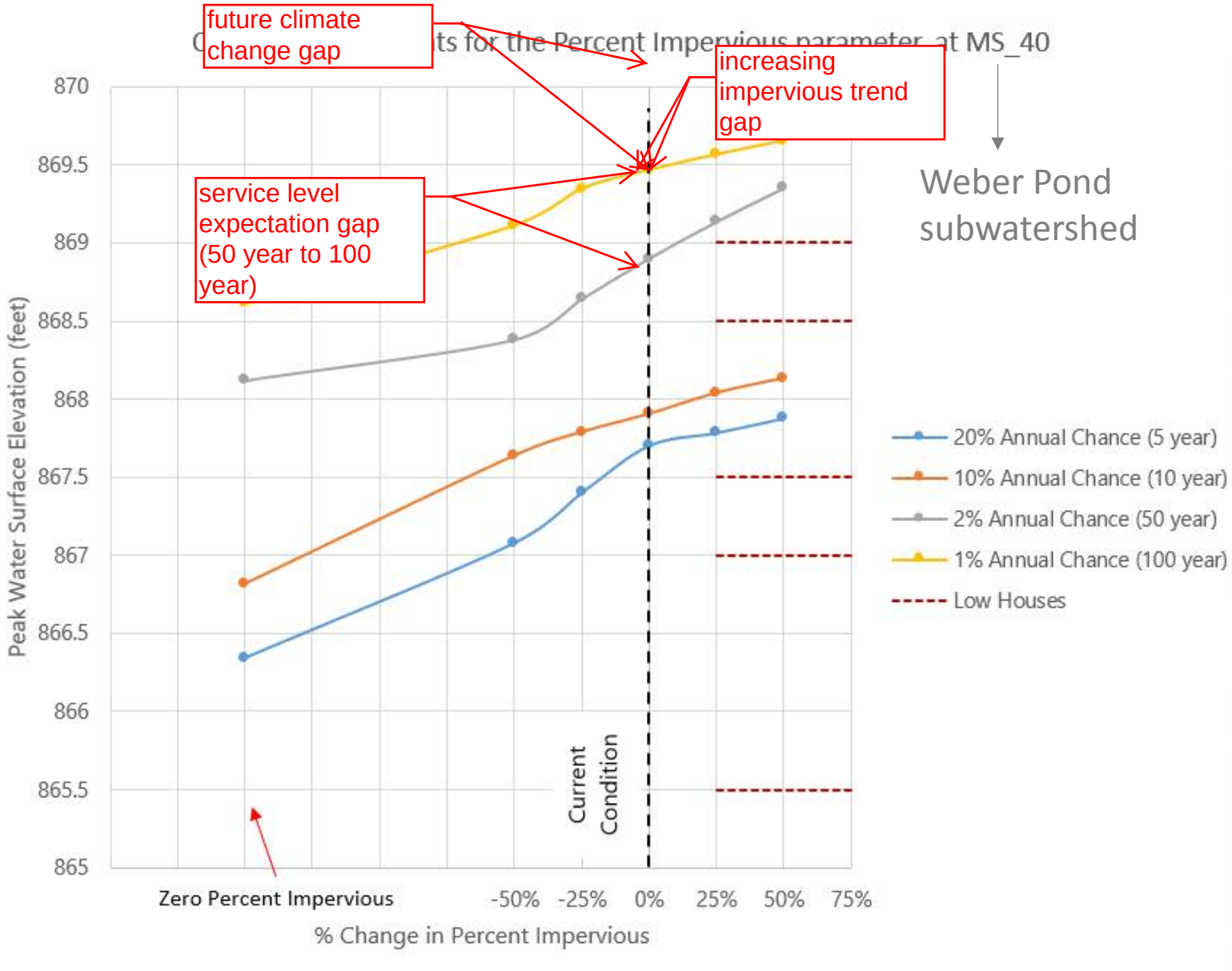
# 8.0 References

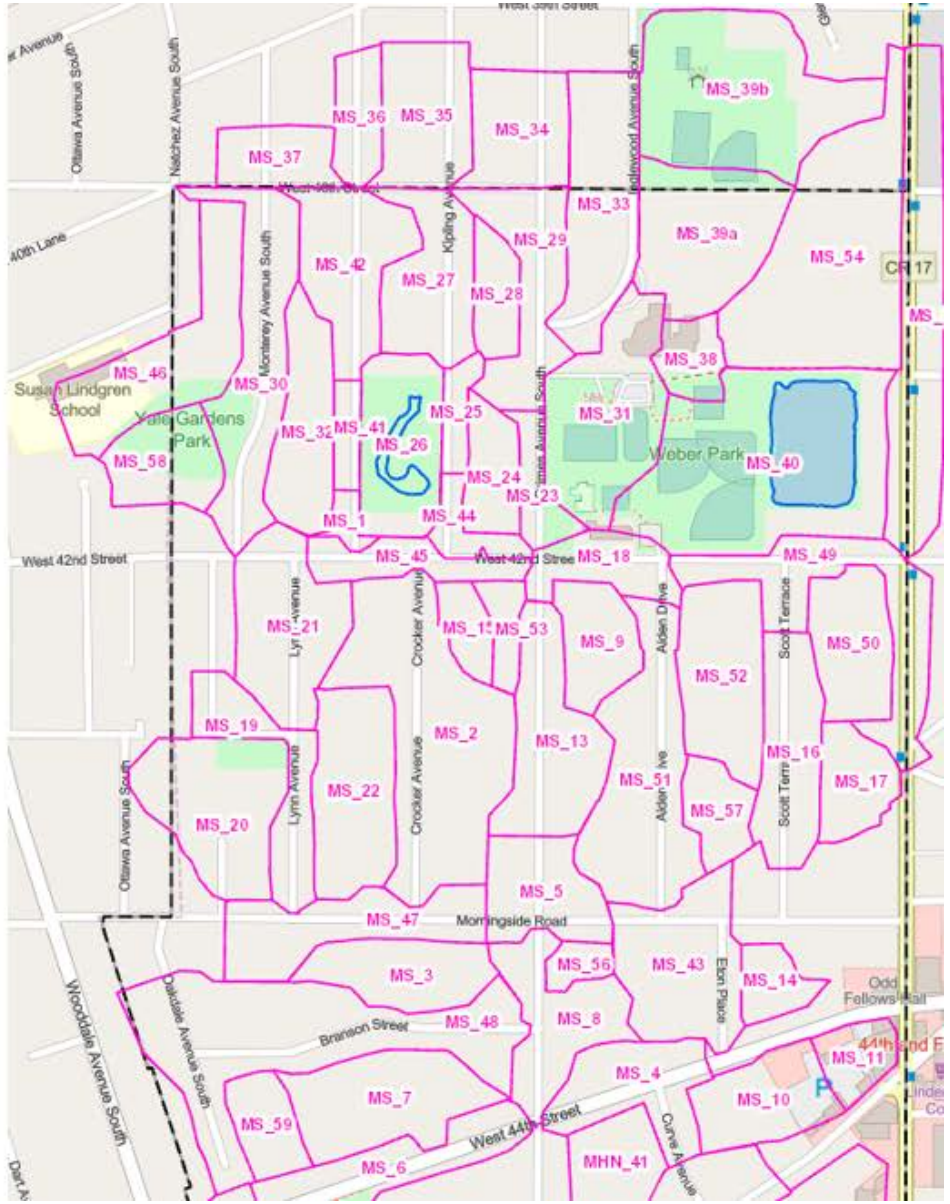
[1] Remote Sensing and Geospatial Analysis Laboratory, University of Minnesota, Marvin Bauer, "Twin Cities Metropolitan Area Land Cover Classification and Impervious Surface Area by Landsat Remote Sensing: 2011 Update," St. Paul, MN, 2011.

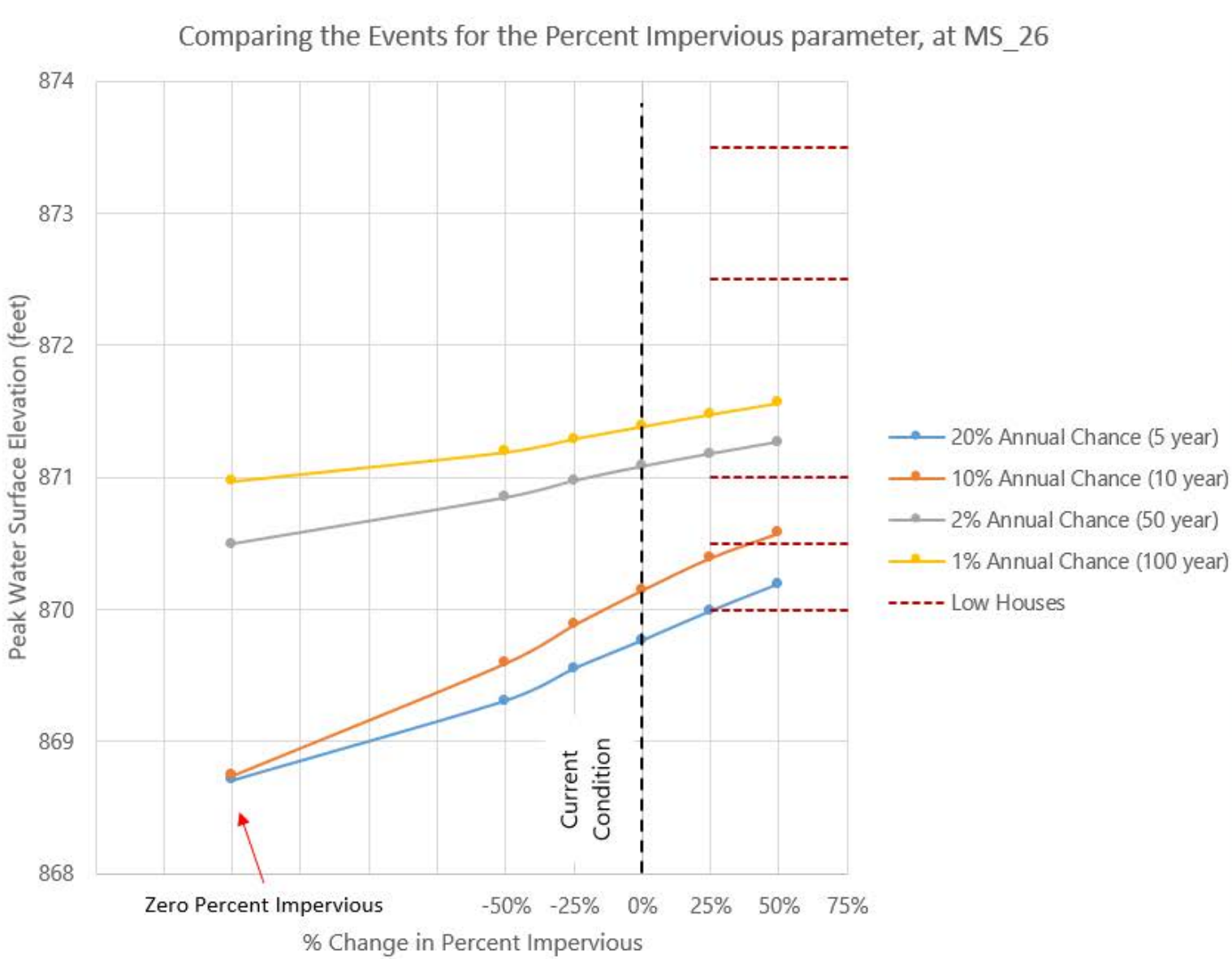
[2] City of Edina, "Neighborhood Layer," Edina, MN, 2016.

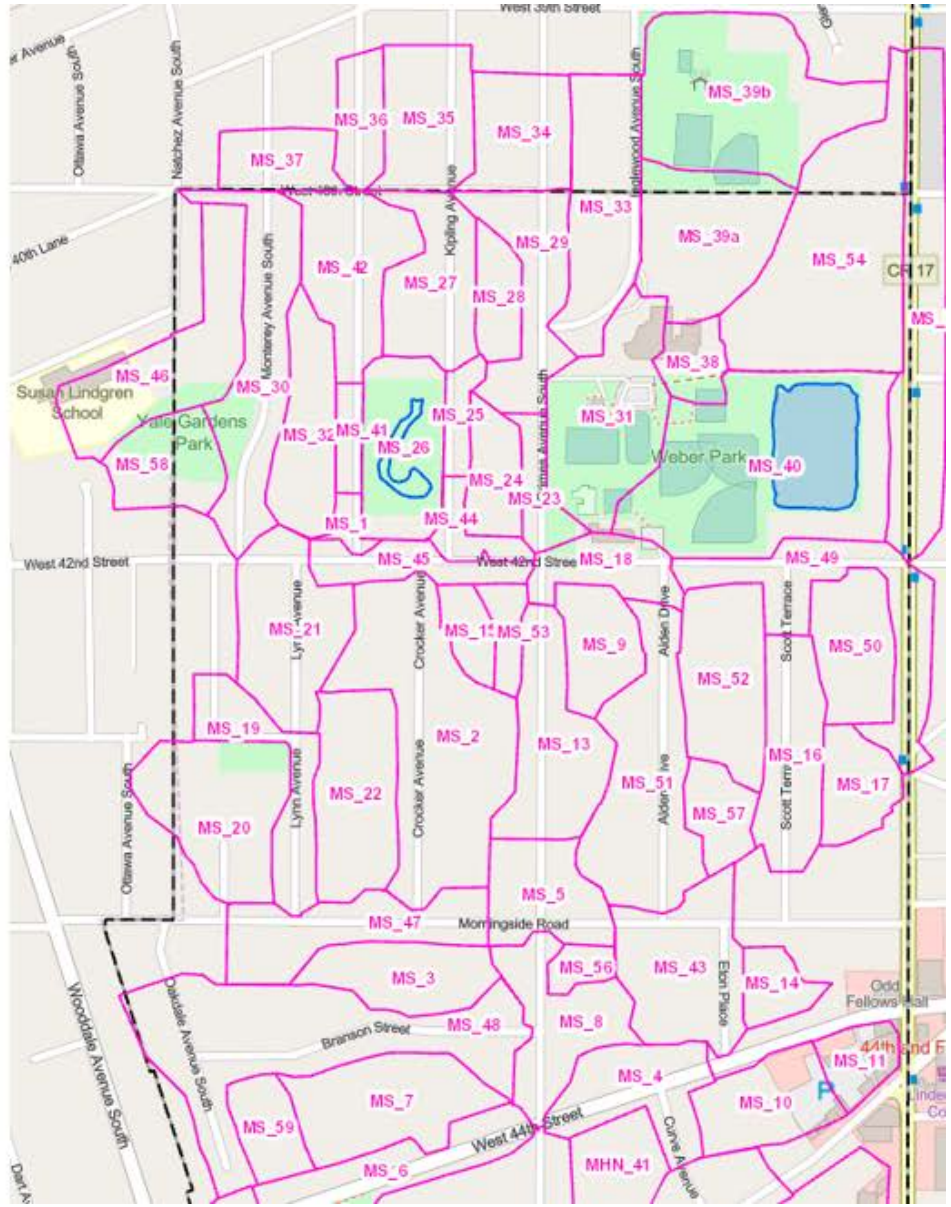
[3] City of Edina, "Land Use Data," 2000.

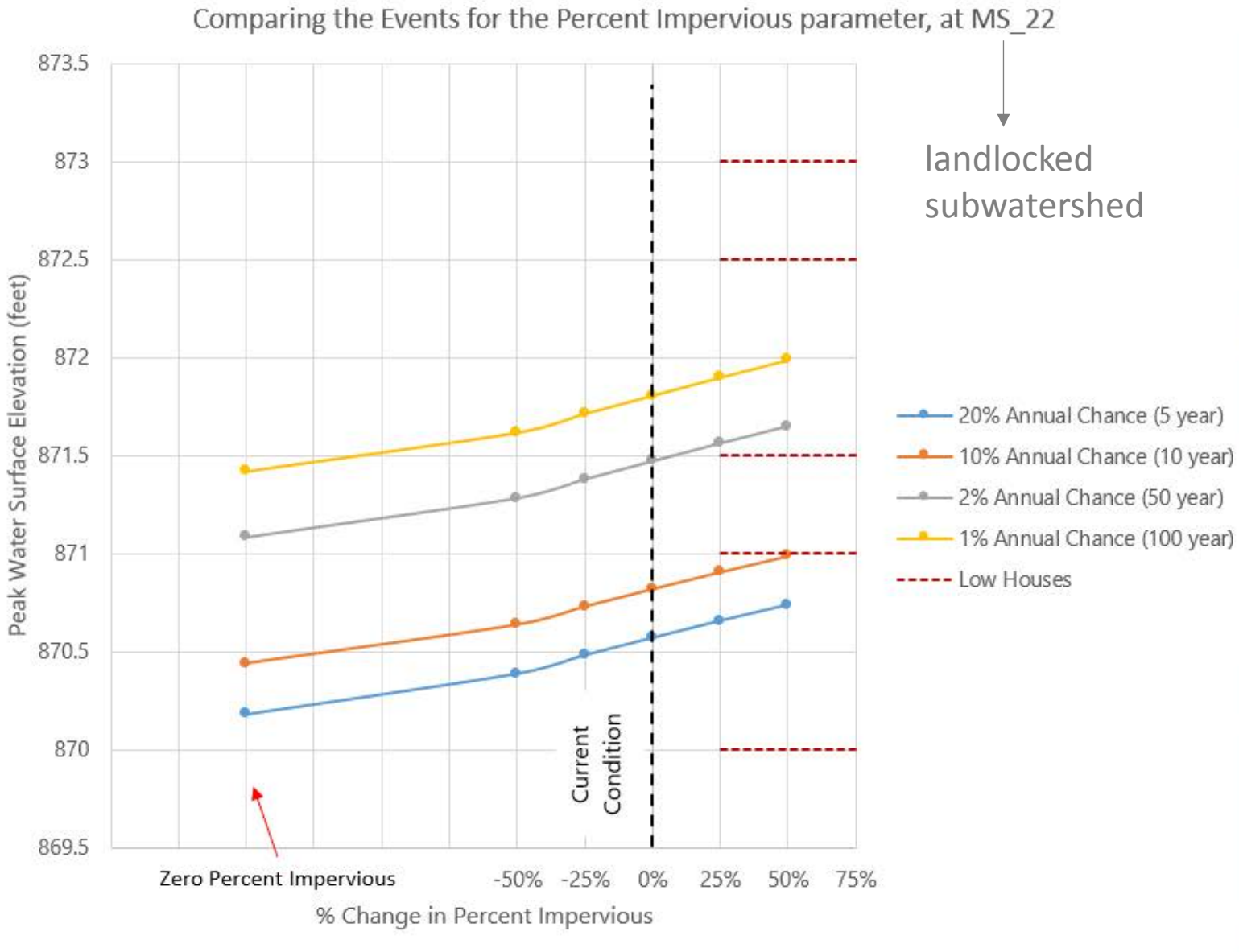
[4] J. S. Gulliver, A. Ebrahimian and B. N. Wilson, "Determination of Effective Impervious Area in Urban Watersheds," Minnesota Department of Transportation, St. Paul, Minnesota, July, 2015.


future climate change gap
increasing impervious trend gap
service level expectation gap (50 year to 100 year)
Weber Pond subwatershed
Peak Water Surface Elevation (feet)
870
869.5
869
868.5
868
867.5
867
866.5
866
865.5
865
Zero Percent Impervious
-50%
-25%
0%
25%
50%
75%
% Change in Percent Impervious
Current Condition
20% Annual Chance (5 year)
10% Annual Chance (10 year)
2% Annual Chance (50 year)
1% Annual Chance (100 year)
Low Houses

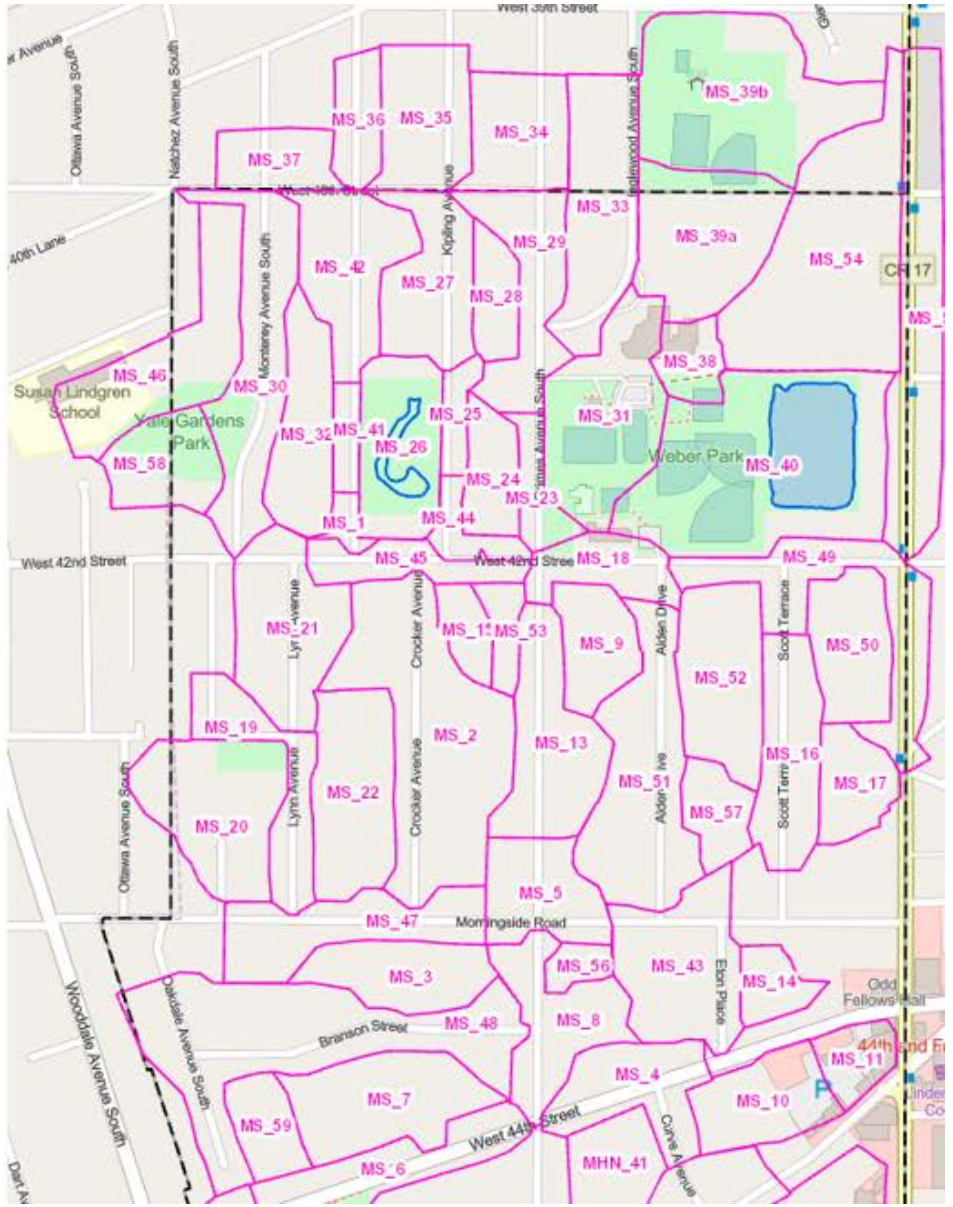

MS_39b
MS_36
MS_35
MS_34
MS_37
MS_33
MS_39a
MS_54
MS_29
MS_42
MS_27
MS_28
MS_38
MS_46
MS_30
MS_25
MS_31
MS_32
MS_41
MS_26
MS_58
MS_24
MS_40
MS_23
MS_1
MS_44
MS_45
MS_18
MS_49
MS_21
MS_53
MS_9
MS_50
MS_52
MS_19
MS_2
MS_13
MS_16
MS_22
MS_51
MS_17
MS_20
MS_57
MS_5
MS_47
MS_56
MS_43
MS_14
MS_3
MS_48
MS_8
MS_4
MS_11
MS_7
MS_10
MS_59
MS_6
MHN_41
Susan Lindgren School
Yale Gardens Park
Weber Park
West 42nd Street
Morningside Road
Branson Street
West 44th Street
Ottawa Avenue South
Natchez Avenue South
Monterey Avenue South
Kipling Avenue
Lynn Avenue
Crocker Avenue
Aldon Drive
Scott Terrace
Woodside Avenue South
Oakdale Avenue South
Eton Place
Curve Avenue
Odd Fellows Hall


Comparing the Events for the Percent Impervious parameter, at MS_26
Peak Water Surface Elevation (feet)
874
873
872
871
870
869
868
Zero Percent Impervious
-50%
-25%
0%
25%
50%
75%
% Change in Percent Impervious
Current Condition
20% Annual Chance (5 year)
10% Annual Chance (10 year)
2% Annual Chance (50 year)
1% Annual Chance (100 year)
Low Houses


MS_39b
MS_36
MS_35
MS_34
MS_37
MS_33
MS_39a
MS_54
MS_29
MS_42
MS_27
MS_28
MS_38
MS_46
MS_30
Susan Lindgren School
Yale Gardens Park
MS_25
MS_31
MS_32
MS_41
MS_26
Weber Park
MS_40
MS_58
MS_24
MS_23
MS_1
MS_44
West 42nd Street
MS_45
MS_18
MS_49
MS_21
MS_15
MS_53
MS_9
MS_50
MS_52
MS_19
MS_2
MS_13
MS_16
MS_17
MS_22
MS_51
MS_57
MS_20
MS_5
MS_47
Morningside Road
MS_3
MS_56
MS_43
MS_14
MS_48
MS_8
Branson Street
MS_4
MS_11
MS_7
MS_10
MS_59
West 44th Street
MS_6
MHN_41
Ottawa Avenue South
Natchez Avenue South
Kipling Avenue
Monterey Avenue South
Lyn Avenue
Crocker Avenue
Aldan Drive
Scott Terrace
Woodale Avenue South
Oakdale Avenue South
Eton Place
Curve Avenue
Odd Fellows Hall




landlocked subwatershed

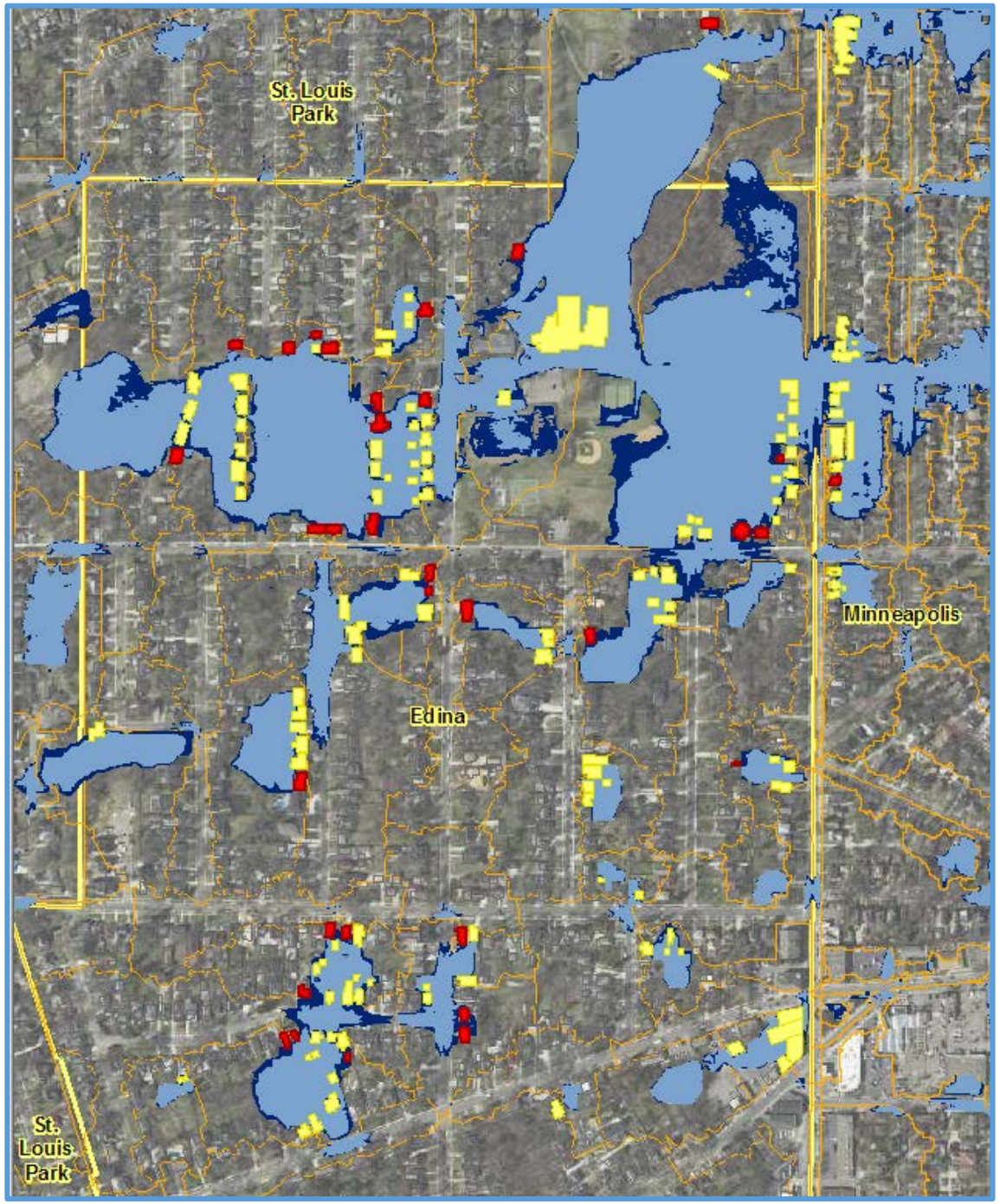


Impact to Structures

- No Impact
- 100yr Impact
- 500yr Impact

100-yr flooding

500-yr flooding



## Design storm parameters for the six modeled design storm events

| Design Storm Event | Annual Chance of Exceedance | 24-hour Depth[1] | Peak Intensity[2] |
|---|---|---|---|
| 5-year | 20% | 3.59 inches | 5.9 in/hr |
| 10-year | 10% | 4.29 inches | 7.1 in/hr |
| 25-year | 4% | 5.41 inches | 8.9 in/hr |
| 50-year | 2% | 6.39 inches | 10.5 in/hr |
| 100-year | 1% | 7.49 inches | 12.3 in/hr |
| 500-year | 0.2% | 10.5 inches | 17.3 in/hr |

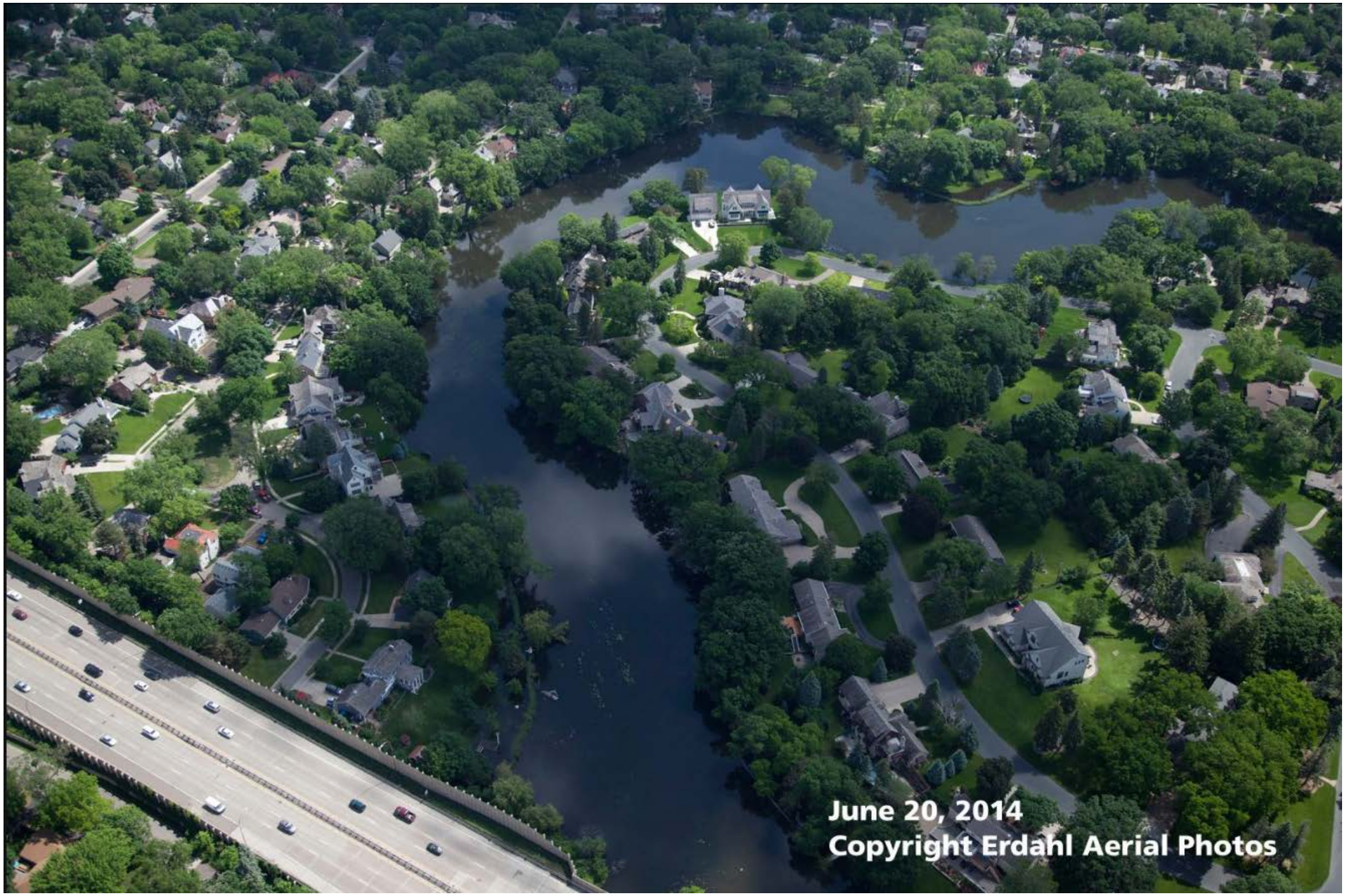
1 24-hour storm depths are based on NOAA Atlas 14 for the Morningside neighborhood (reference (2))

2 Peak intensity is calculated based on the NRCS MSE3 definition of the storm temporal distribution (reference (3))

# For reference, data for the June 19, 2014 rainfall event:

- Total precip (at MSP): 4.13" daily. 4.03" falling in 9 hour period. This ends up being a ~16 year RI (4.03" in 9 hr).
- According to MNDNR, highest single day rainfall total in 5 years.
  - 0.5" of precip the day before.
  - 2.6" of precip June 14th through 16th.
  - All this to say, very wet conditions.


*Source: Minnehaha Creek Watershed District Facebook page*




*Source: Minnehaha Creek Watershed District Facebook page*


*Source: Minnehaha Creek Watershed District Facebook page*

From City staff report that Martha and Ross provided for the last meeting:

*What are the top areas in the City for flood risk?*

During the development of the 2018 CWRMP, staff and consultant reviewed model data inundations intersecting building structures at a citywide level to sort which areas to do detailed level review or screening level review.

*An additional 54 areas were not studied, totaling 381 homes/apts and 454 structures.*

| Detailed Areas (5 areas) | FID(s) | # homes/apt buildings | TOTAL # of structures |
|---|---|---|---|
| Weber Park | 4, 19, 79 | 39 | 57 |
| Concord | 8 | 35 | 51 |
| Halifax | 0, 1, 81 | 28 | 42 |
| Southdale | 11 | 29 | 39 |
| 62&100 | 33, 53, 54, 55 | 26 | 36 |
| *Total in Detailed Areas* | | *157* | *225* |

| Screening Level areas (20 areas) | FID(s) | # homes/apt buildings | TOTAL # of structures |
|---|---|---|---|
| Morningside Road, Branson Street, Grimes and 44th | 21 | 11 | 20 |
| Sally Lane | 65 | 19 | 19 |
| Northeast of Concord, Wooddale and Tower | 7, 27, 28 | 11 | 17 |
| East side of Mud Lake / Bredesen Park | 44 | 15 | 17 |
| Hawkes Lake, upstream and downstream of Vernon | 39, 46, 68 | 16 | 16 |
| North of Morningside Road, between Lynn Ave. and Crocker Ave. | 20 | 10 | 10 |
| Ridgeview Drive, north of 70th, west of 100, south of 62 | 50, 51 | 10 | 10 |
| South of 62, West of Gleason, Duplex/Townhomes | 45 | 9 | 9 |
| 66th Street, west of 100 | 52 | 9 | 9 |
| Blake Road and Belmore Lane | 13 | 5 | 8 |
| Centennial Lakes | 61 | 0 | 8 |
| South of Mirror Lake, north of Vernon, east of Blake Road | 36 | 7 | 7 |
| East of Schaefer Road, along Parkwood | 38 | 6 | 6 |
| Schaefer Road and View Lane | 42 | 6 | 6 |
| Upstream of Mirror Lake, Maloney Ave. & Tyler Ct. | 12 | 5 | 5 |
| Valley View Road and Antrim, south of the High School | 49 | 5 | 5 |
| Cornelia Street, 70th and West Shore Drive | 59 | 4 | 4 |
| 50th & France | 6 | 1 | 3 |
| West of 100, near the creek crossing | 16 | 3 | 3 |
| East of Braemar, south of Dewey Hill Road, east of Gleason | 64 | 2 | 2 |
| *Total in Screening Level Areas* | | *154* | *184* |

resourceful. naturally.
engineering and environmental consultants

BARR

# Technical Memorandum

**To:** Jessica Wilson and Ross Bintner, City of Edina
**From:** Sarah Stratton and Cory Anderson, Barr Engineering Co.
**Subject:** Appendix D - Private Infrastructure Analysis
**Date:** March 30, 2020
**Project:** Edina Flood Risk Reduction Strategy Support (23271728.00)

## Executive Summary

Barr was asked to review model-predicted flood impacts in the focal geography of the Morningside neighborhood to evaluate the sensitivity of those impacts to the magnitude of stormwater storage within the watershed. In particular, the focus was on underground storage methods within private property, the right-of-way, or under streets. This evaluation was conducted as a result of Task Force discussions about the potential benefits of requiring private homeowners to store stormwater on-site similar to requirements for commercial development.

Barr reviewed the benefits achieved by storing the first 1-inch, 2-inches, and 3-inches of precipitation from storm events of varying size, from the 20%-annual-chance storm event (5-year storm; 3.59 inches) to the 1%-annual-chance storm event (100-year storm; 7.49 inches). For the private storage evaluation (underground storage vaults under a portion of each of the 570 residential parcels), storage was assumed for every parcel within the Morningside neighborhood. Barr found that storing the first 1-inch of storms of this magnitude had a negligible impact on flood levels. Storing the first 2-inches and 3-inches showed a more significant benefit with regards to reduction in peak flood levels. Depending on the storm event, and depending on the location within in the neighborhood, the results varied anywhere from flood level decreases of a few inches to decreasing nearly a foot and a half.

However, this apparent benefit comes at an initial cost of approximately $15,000 per inch of stormwater stored, per residential parcel. To store 2-inches of runoff in the entire neighborhood (~570 residential parcels) would cost approximately $17 million. In addition, while the flood levels may be lowered, the number of homes that are removed from potential impacts from flood inundation is small. For example, one home may potentially be removed from flood inundation at Weber Pond depending on the storm event. Finally, the management and maintenance of these underground stormwater storage vaults distributed throughout an entire neighborhood is expected to be complicated and unprecedented. This is all to say, this solution would provide a moderate benefit for a very high cost. Additionally, a preliminary look at the compounding effect of climate change suggests that improvements realized by implementing additional private storage may eventually be negated by climate change (i.e., increased precipitation amounts, see Appendix B on Climate Change Impacts Analysis).

## Private Infrastructure Analysis Details

A common example of private stormwater management infrastructure (infrastructure on a privately owned parcel), is a rainwater garden (Figure 1). Rainwater gardens are typically designed to store the first one inch of runoff generated from a storm, aimed at both reducing the volume of runoff and improving water quality downstream.

**Figure 1 Photo of a rainwater garden.**

Other examples of private infrastructure for stormwater storage can include tree trenches, cisterns, permeable pavement, and underground storage vaults. Figure 2 shows an example of an underground stormwater storage vault.

To simplify our analysis, we assumed that all parcels in the Morningside neighborhood are approximately 60 feet wide (along the road), and also assumed that every parcel would have underground storage (below grade) that is 3 feet deep. Then we determined how wide the underground storage vault would need to be to contain 1 inch of runoff, 2 inches of runoff, or 4 inches of runoff. We found that underground storage vaults on every parcel in the Morningside neighborhood would need to be 5 feet wide to store 1 inch of runoff, 10 feet wide to store 2 inches of runoff, and 20 feet wide to store 4 inches of runoff. Figure 3 provides a graphic that shows the extent of underground storage needed for sample parcels in Morningside.

**Figure 2 Example of an underground storage vault (37th Avenue Greenway, Minneapolis).**

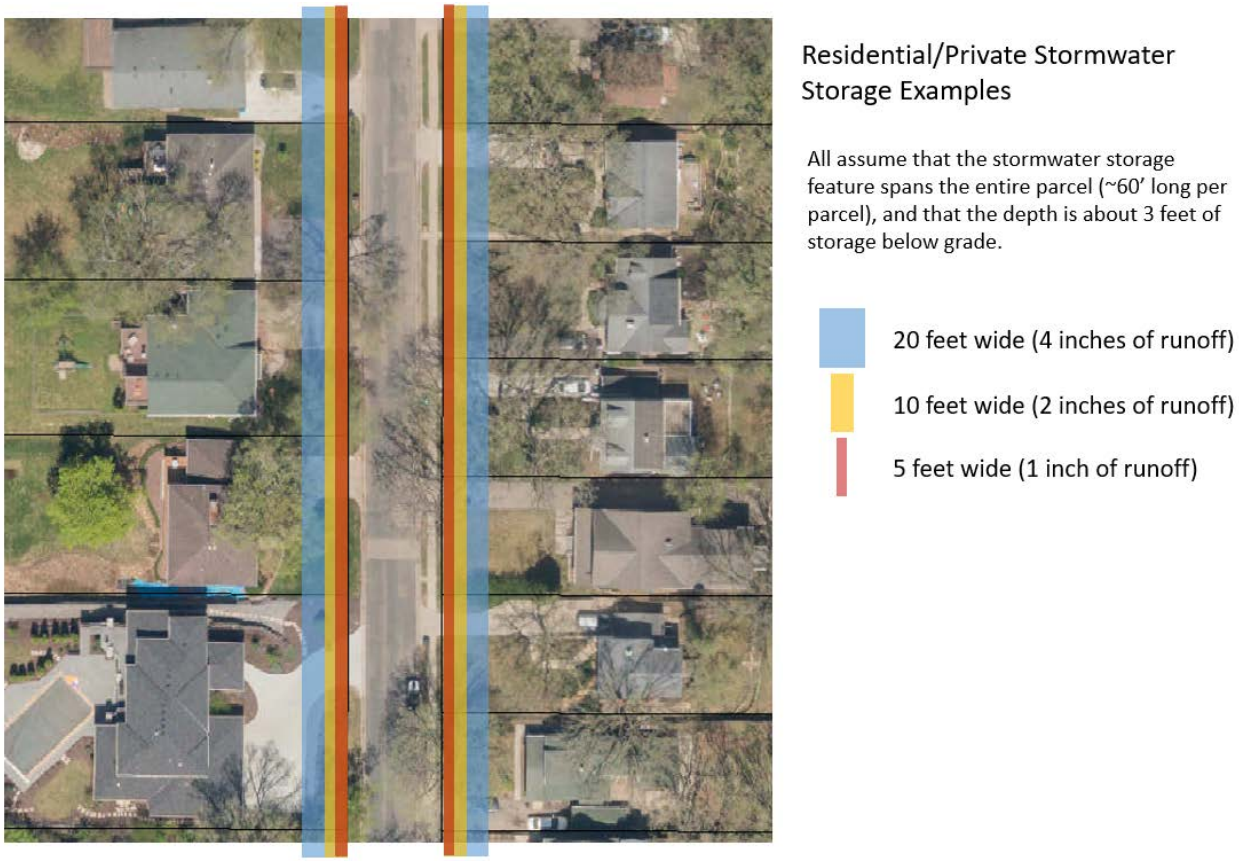



**Figure 3 Private stormwater storage sizing examples for storing varying amounts of runoff.**

Barr also analyzed using stormwater storage under streets and/or in the public right-of-way. Figure 4 provides a graphic that shows the approximate extent of underground storage available for a typical road within the Morningside neighborhood. Assuming two 15-foot wide (and 3 feet deep) underground storage vaults can be installed under all of the roads or right-of-way in the Morningside neighborhood, 3-inches of runoff could be stored in those vaults.

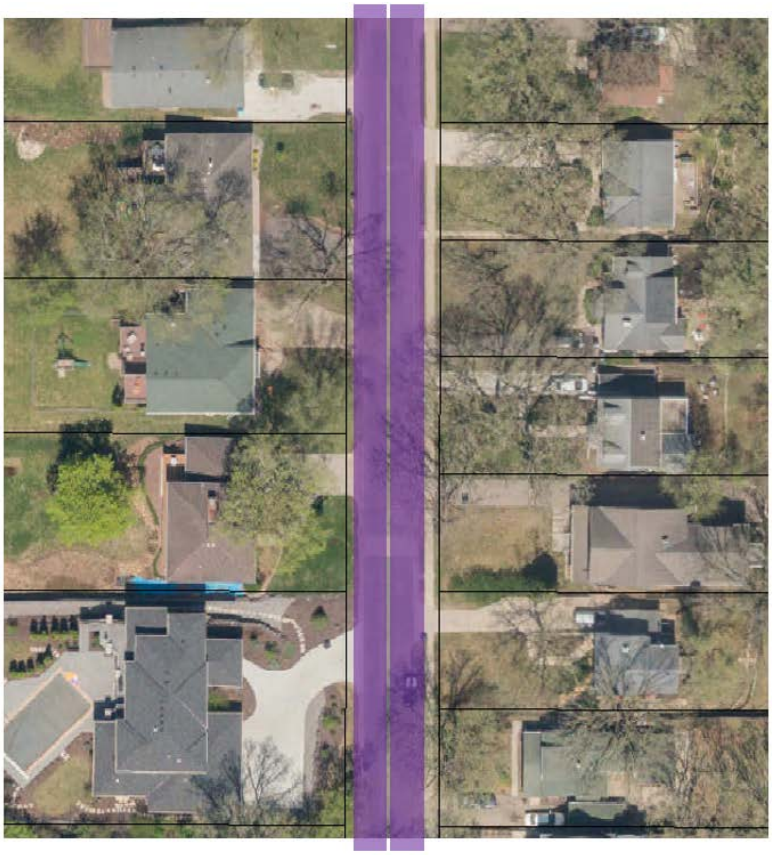



**Figure 4 Stormwater storage sizing (width) available for typical roads or right-of-way in the Morningside neighborhood.**

Figure 5 shows the subwatersheds in the Morningside neighborhood. Graphs are included below that show the results and range of benefits of residential/private stormwater storage for Weber Pond (subwatershed MS_40, Figure 6), for the area along Branson between Oakdale Avenue and Grimes Avenue (subwatershed MS_48, Figure 7), and for the area along Crocker Avenue between West 42nd Street and Morningside Road (subwatershed MS_2, Figure 8).

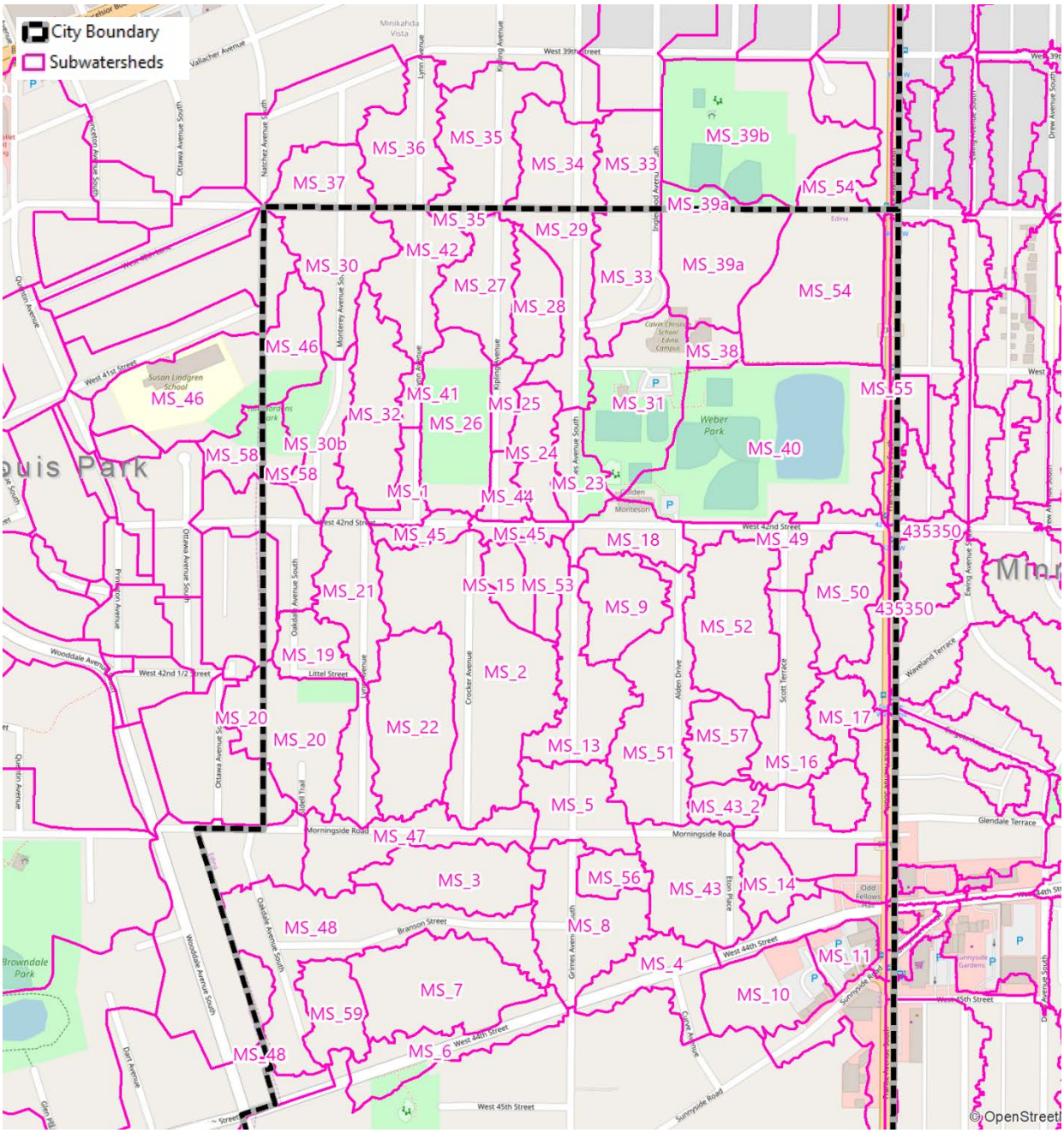



**Figure 5 Map showing subwatershed divides in and around the Morningside neighborhood**

In Figure 6, the horizontal, maroon-dashed lines represent approximate low elevations based on structure footprints for the four lowest homes around Weber Pond. They may or may not represent actual low entry elevations of these homes. However, they give a good representation of the home elevations and how close they are to the flood levels.

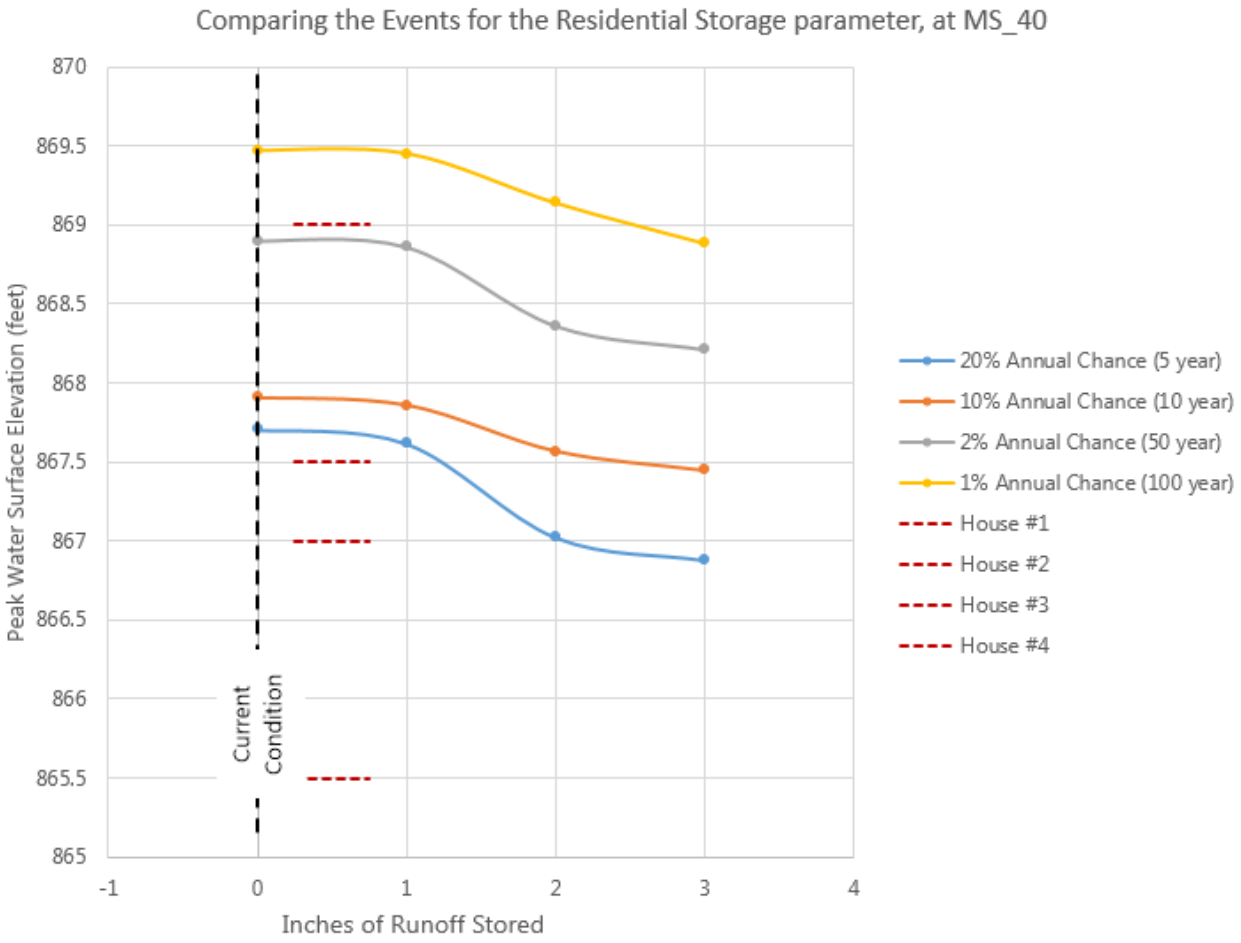



**Figure 6 Peak water surface levels resulting from varying amounts of runoff stored using private infrastructure for varying storm events in the Weber Pond subwatershed (MS_40).**

At first glance, the reductions shown in Figure 6 appear smaller than would be expected. There are multiple other factors affecting the flood volume stored in Weber Pond. First, Weber Pond ultimately receives water from Edina and also from St. Louis Park and Minneapolis. While private infrastructure is overall beneficial, reducing the runoff to Weber Pond from Edina may allow more water from St. Louis Park and Minneapolis to fill the pond back up during an event. Second, at the peak flood elevations shown in Figure 6, stormwater flows out of Weber Pond both *into* Weber Park and *over* France Avenue to the east to Minneapolis. When ponds rise high enough to overflow banks, additional water does not tend to have a significant impact on the water level since water can start following natural overflow paths.

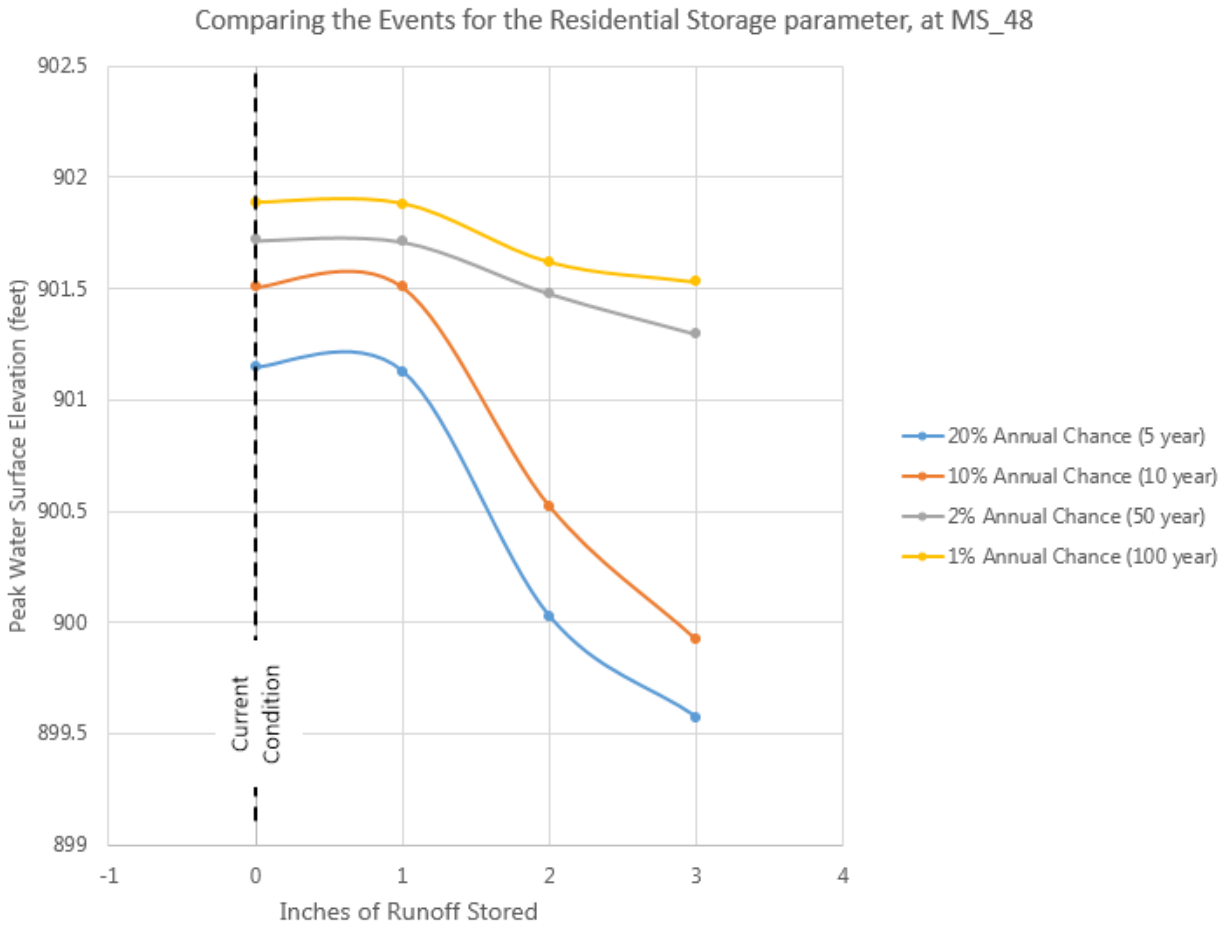



**Figure 7 Peak water surface levels resulting from varying amounts of runoff stored using private infrastructure for varying storm events in subwatershed MS_48.**

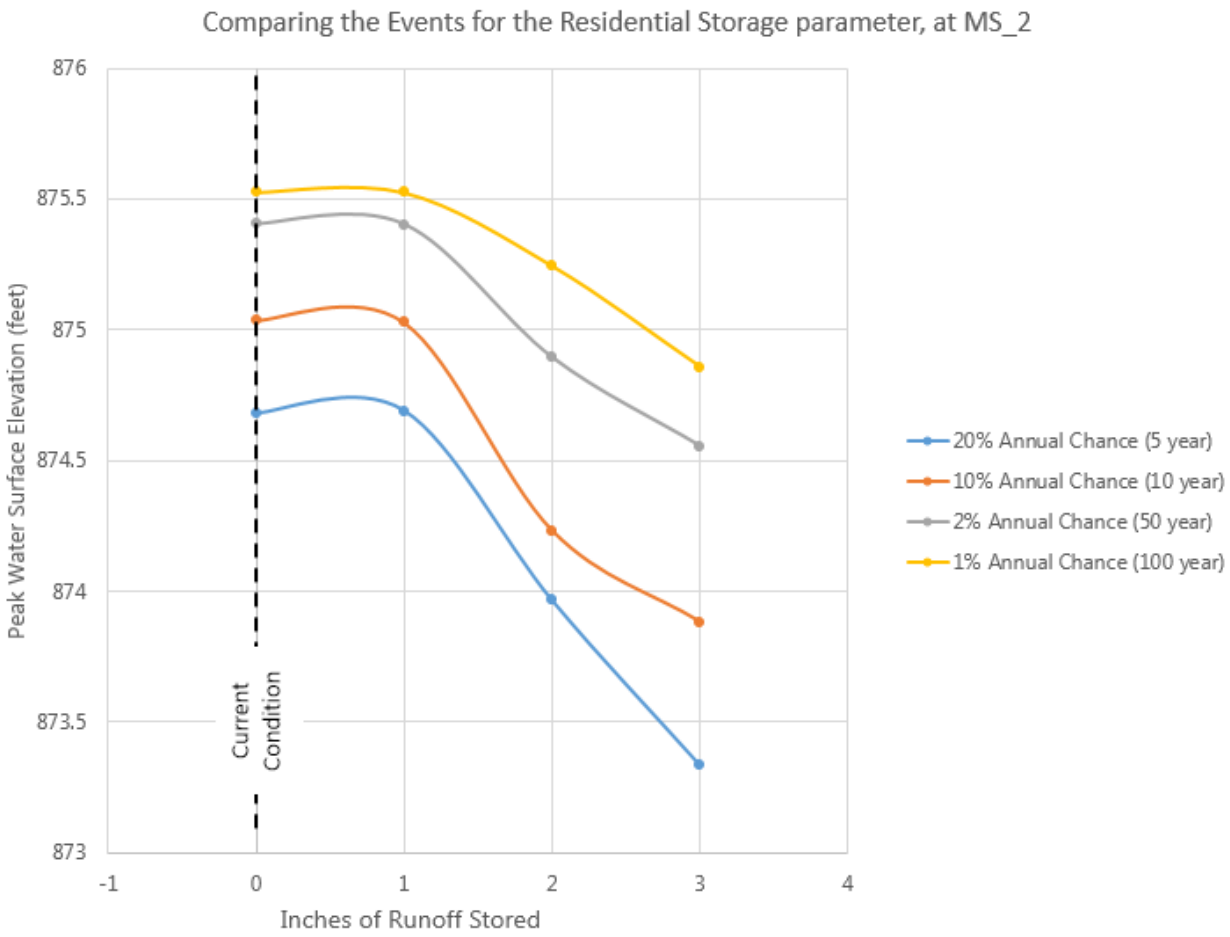



**Figure 8 Peak water surface levels resulting from varying amounts of runoff stored using private infrastructure for varying storm events in subwatershed MS_2.**

Barr commonly estimates that the cost per cubic foot of underground stormwater storage is approximately $10 to $20. For one inch of runoff, for one 0.25-acre parcel, storage volume equals 900 cubic feet. This equates to a little under $15,000 (+/- $5,000) per parcel per inch of runoff stored. Figure 9 shows the approximate cost per parcel of underground storage using varying widths of underground storage units and varying amounts of runoff stored. To put the cost of private underground storage into perspective, Figure 10 shows a portion of the Morningside neighborhood (~180 parcels) and provides a breakdown of an approximate cost to capture two inches of runoff from every parcel.

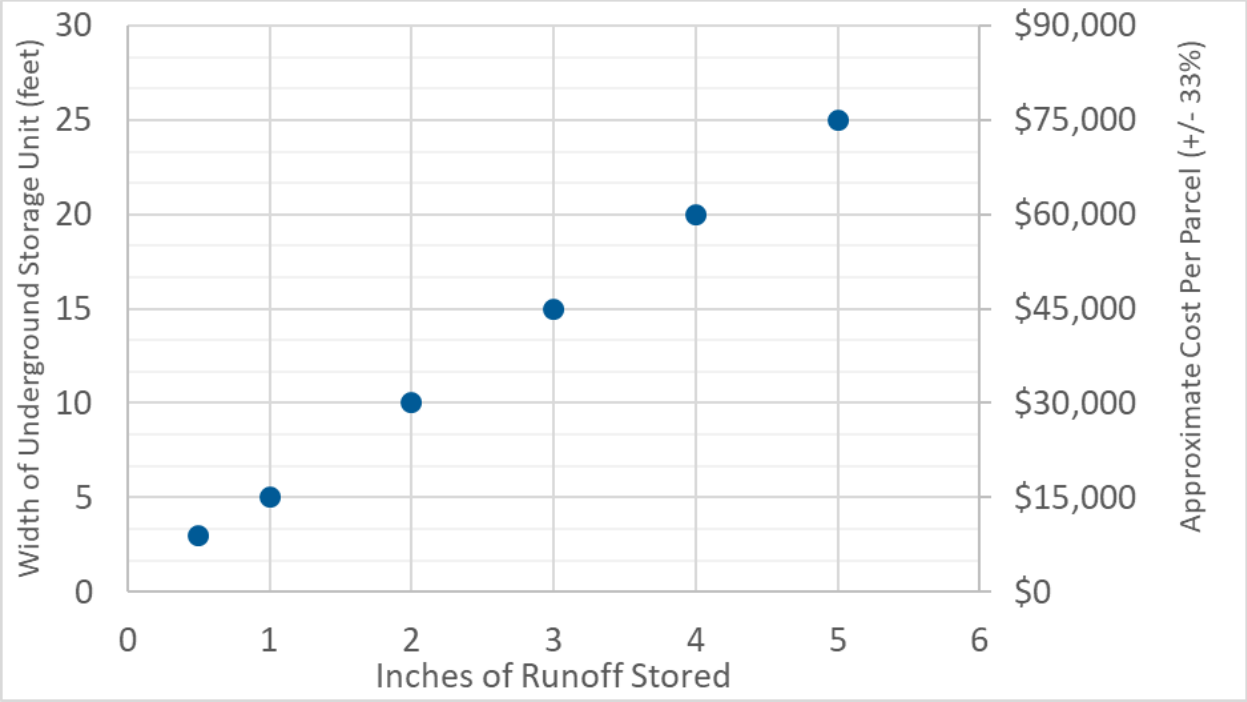
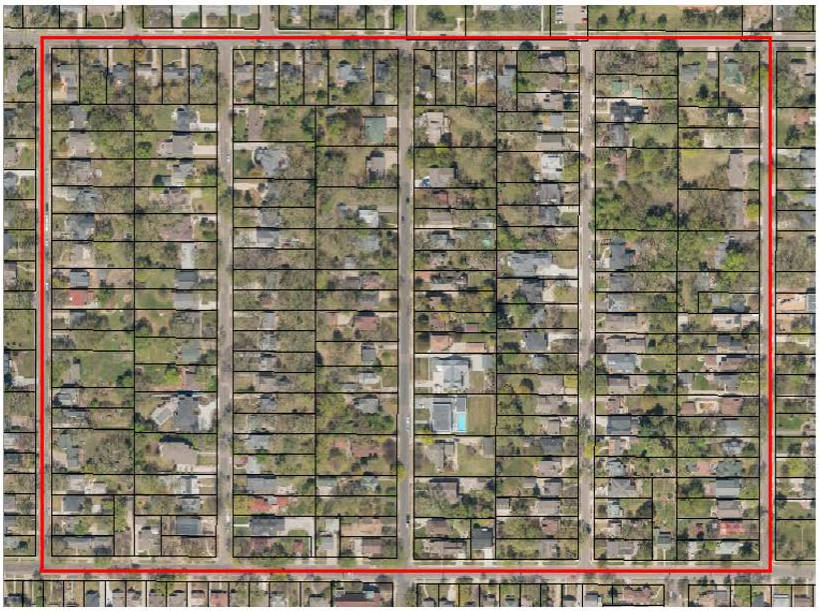



**Figure 9 Approximate cost per parcel of underground storage using varying widths of underground storage units and varying amounts of runoff stored.**



In the window to the left, there are 4 blocks, covering just over 50 acres.

This also means there are about 180 parcels in these 4 blocks.

To capture 2 inches of runoff from every parcel would cost about $5,400,000

2 inches of runoff is what is generated typically (on the whole) in this area from the 10-year storm (4.3 inches of rainfall).

This would remove nearly 400,000 cubic feet of water from the system (just over 8.5 ac-ft).

**Figure 10 Cost breakdown for using private stormwater storage for a portion of the Morningside neighborhood.**

In total, there are approximately 570 residential parcels in the Morningside neighborhood watershed drainage area, as shown in Figure 11.

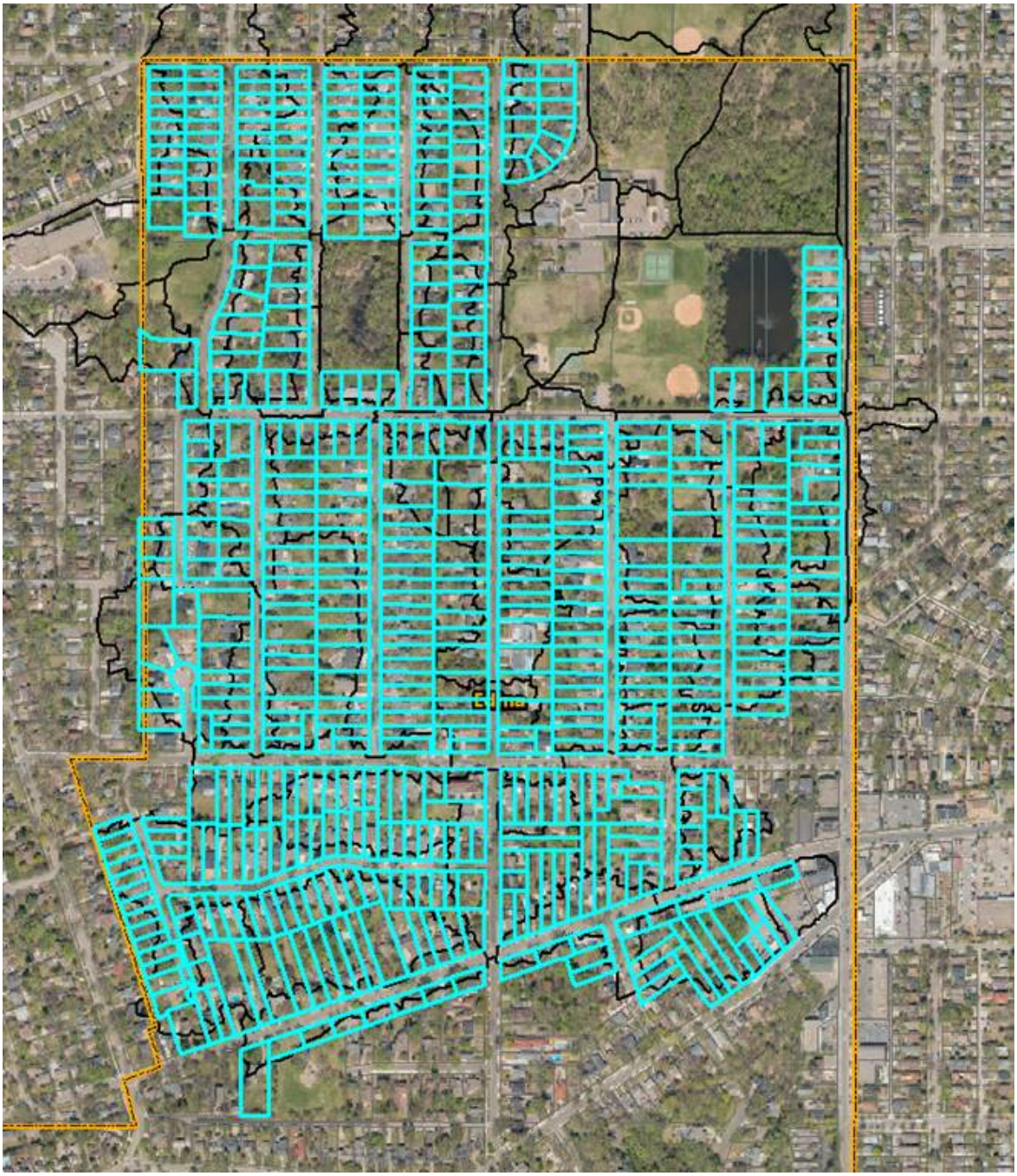


**Figure 11 Parcels in the Morningside neighborhood watershed/drainage area.**

The results of Barr's private storage analysis are summarized in Table 1 below. Recall that storing 1-inch of runoff from every parcel in Morningside had a marginal benefit in general on peak flood levels. Table 1 below shows that to store 2-inches of runoff in the entire neighborhood would cost approximately $17 million. While storing 2-inches of runoff does reduce flood levels, the number of homes that are removed from potential impacts from flood inundation is small. For example, as shown in Figure 6, depending on the storm event, this level of effort may potentially remove only one home from flood inundation at Weber Pond.

**Table 1 Summary of costs and benefits of private stormwater storage for the whole Morningside neighborhood.**

| Inches of Runoff Stored | Cost for All Parcels to Store the Runoff | Flood Level Reduction Benefit (in feet) for Weber Pond Subwatershed (MS_40) | | | |
|---|---|---|---|---|---|
| | | 5-yr Storm (3.59" of precip) | 10-yr Storm (4.29" of precip) | 50-yr Storm (6.39" of precip) | 100-yr Storm (7.49" of precip) |
| 1 inch | $ 8,550,000 | 0.1 | <0.1 | <0.1 | 0 |
| 2 inches | $ 17,100,000 | 0.6 | 0.3 | 0.5 | 0.3 |
| 3 inches | $ 25,650,000 | 0.7 | 0.9 | 0.6 | 0.5 |

resourceful. naturally.
engineering and environmental consultants

BARR

# Technical Memorandum

**To:** Jessica Wilson and Ross Bintner, City of Edina
**From:** Sarah Stratton and Cory Anderson, Barr Engineering Co.
**Subject:** Appendix E - Imperviousness Sensitivity Analysis
**Date:** March 30, 2020
**Project:** Edina Flood Risk Reduction Strategy Support (23271728.00)

## Executive Summary

Barr was asked to review model-predicted flood impacts in the focal geography of the Morningside neighborhood, and to review the sensitivity of those impacts to the magnitude of imperviousness (the hard surfaces that prohibit water infiltration). For reference, the impervious area that is directly connected to the storm sewer system in the Morningside neighborhood is estimated to be about 25% of the total land area, in aggregate (Figure 1). The directly connected imperviousness is the portion of the watershed that is impervious and routes flow directly to an outlet (catch basin, pond, depression, outlet, etc.). Some prominent examples of this type of imperviousness in a low-density residential neighborhood tend to be streets, parking lots, driveways, water bodies (i.e., Weber Pond), portions of roofs with gutters and downspouts directed to impervious surfaces such as a driveway, etc.

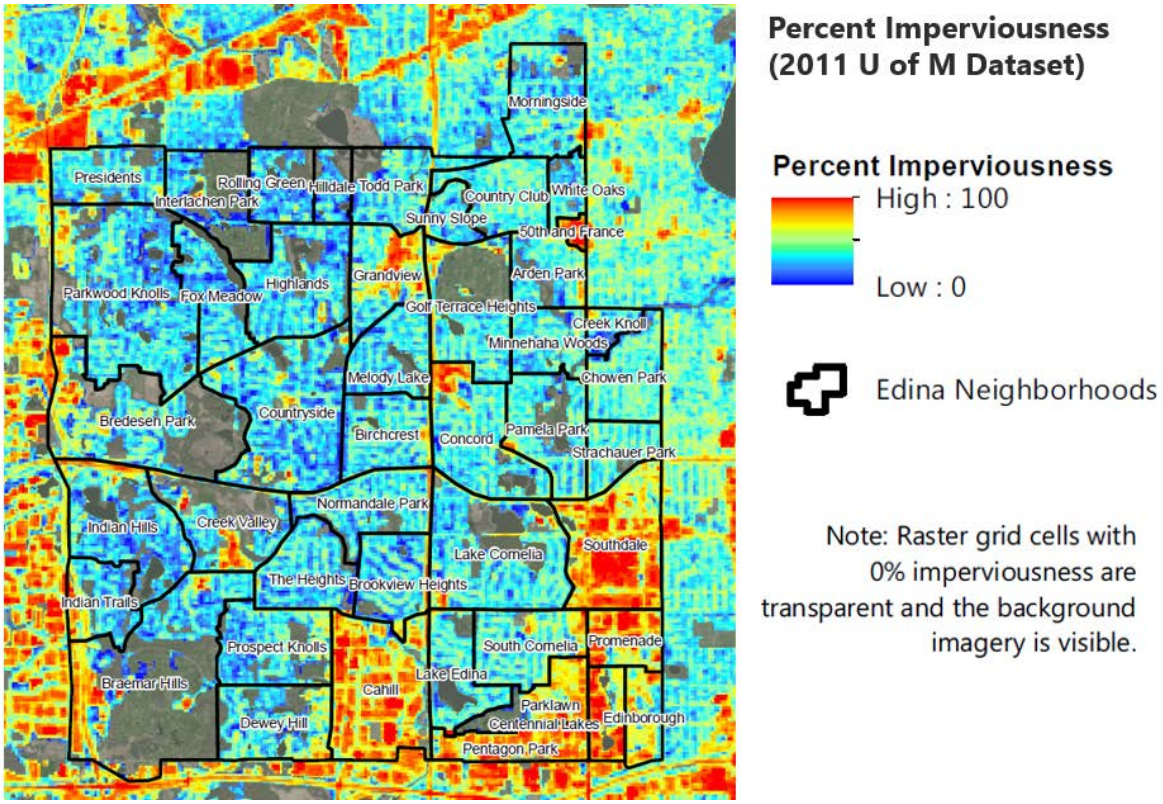



**Figure 1 Imperviousness raster data set from the University of Minnesota. The Morningside neighborhood is in the northeast corner.**

Barr tested the sensitivity by modifying the stormwater model so that the imperviousness of the entire contributing drainage area was increased, decreased, and even lowered all the way to 0%, which reflects a pre-development condition. This sensitivity test was also completed for a range of storm events, from the 20%-annual-chance storm event (5-year storm) to the 1%-annual-chance storm event (100-year storm). As expected, the imperviousness sensitivity test showed that less impervious area generates less stormwater runoff and more impervious area generates more stormwater runoff. However, the magnitude of the runoff changes generated by adjusting imperviousness were not as impactful as may have been expected.

For reference, in the Weber Pond subwatershed, the 1%-annual-chance storm event (100-year storm) flood level would need to be reduced by just over 4 feet in order to remove the 5 lowest homes from potential structural impacts from flood inundation. Based on Barr's imperviousness analysis, reducing or increasing impervious area by half (50%) tends to cause the peak water level to decrease or increase by up to approximately half a foot. This effect is more significant for small storm events, and less so for larger storm events. While affecting the flood level by half a foot may seem like a big gain, this change removed one impacted home at most from the flood inundation area around Weber Pond. Again, to achieve even this low level of impact, the entire contributing area (all of the Morningside neighborhood) would be required to reduce imperviousness by half (i.e., road widths are cut in half, driveway widths are cut in half, roof area cut in half and/or downspouts

**Imperviousness Sensitivity Analysis Details**

The sensitivity analysis focused on design storm events (NOAA Atlas 14, MSE3 temporal distribution) rather than an observed historical event(s). Modeled design storm events included the 5-year (3.59 inches), 10-year (4.29 inches), 50-year (6.39 inches), and 100-year events (7.49 inches), all 24-hour durations (i.e., for a 100-year storm event, 7.49 inches fall over a 24-hour period of time).

Imperviousness parameter values were adjusted relative to "base case" values from the stormwater model. In general, the "base case" imperviousness parameter values were adjusted to +50%, +25%, -25%, -50%, and finally a "low" case to attempt to significantly reduce runoff. The range of values for each of the sensitivity cases is listed in Table 1. Most of the Morningside neighborhood is "low density residential"; for simplicity, only the values for this land use type is presented in Table 1. All other land use types, with varying imperviousness were similarly adjusted upward and downward for this sensitivity analysis.

**Table 1 Imperviousness parameter values for the sensitivity analysis**

| Parameter | Low Case | -50% | -25% | 0% (Base) | +25% | +50% |
|---|---|---|---|---|---|---|
| Directly Connected Percent Impervious[1] | 0% [2] | ~13% | ~19% | ~25% | ~31% | ~38% |

1) Only the value for "low density residential" is shown here, as this covers most of the model area. All land use types were similarly modified for each of the sensitivity cases (-50%, -25%, etc.)

Subwatersheds in the Morningside neighborhood are shown in Figure 2.

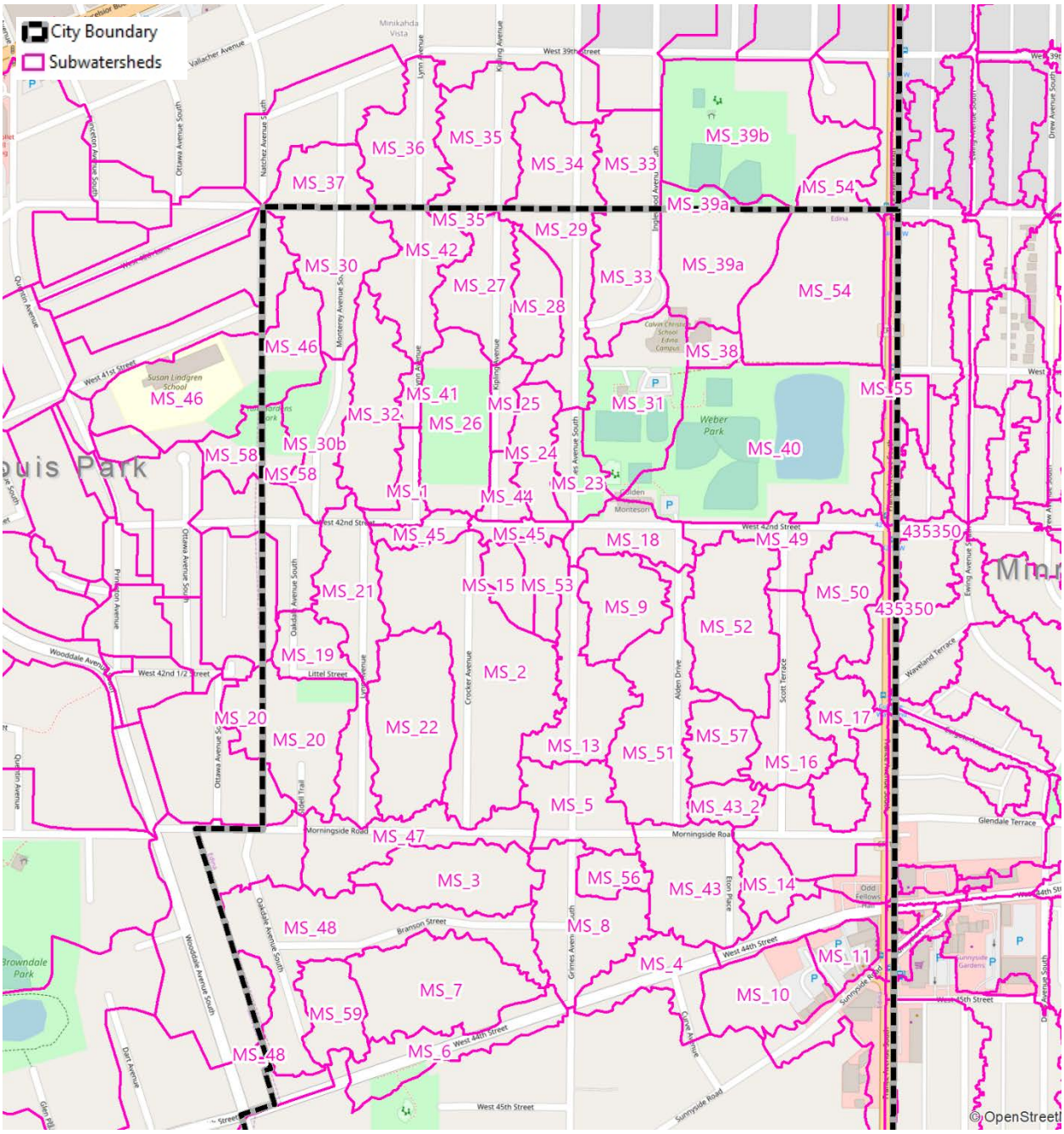



**Figure 2 Map showing subwatershed divides in and around the Morningside neighborhood**

The directly connected impervious percentage tends to have an impact up to ±0.5 feet for the ±50% change in the base value. Example graphs are included that show the results for Weber Pond (MS_40, Figure 3), for the low area between Lynn Avenue and Kipling Avenue, north of West 42nd Street (MS_26, Figure 4), and for a landlocked subwatershed (MS_22) between Lynn Avenue and Crocker Avenue, south of West 42nd Street (Figure 5).

In these figures, the horizontal, maroon-dashed lines represent approximate low elevations based on structure footprints for the five lowest homes around Weber Pond. They may or may not represent actual low entry elevations of these homes. However, they give a good representation of the home elevations and how close they are to the flood levels.

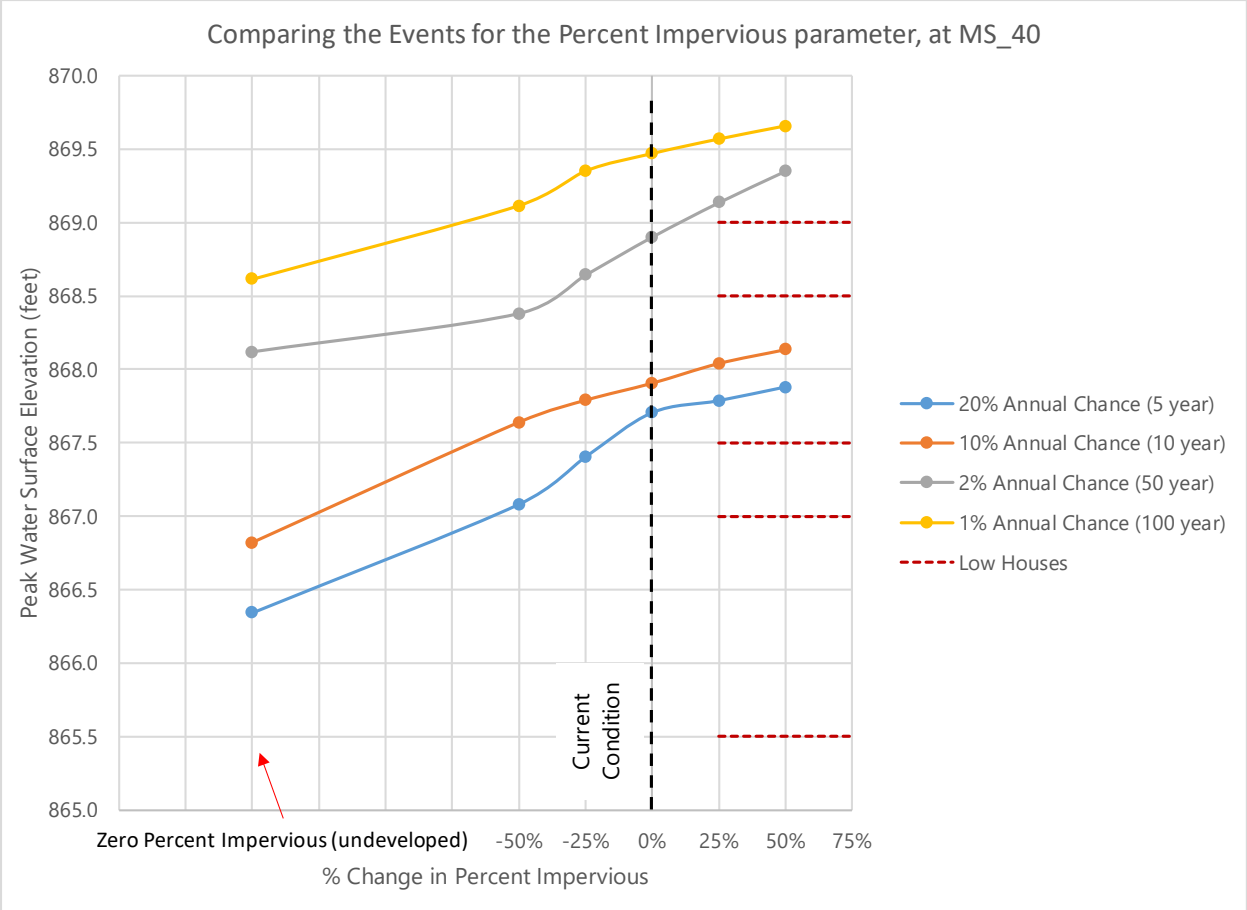



**Figure 3 Sensitivity analysis results showing peak flood levels in Weber Pond (subwatershed MS_40) for a range of imperviousness and a range of storm events.**

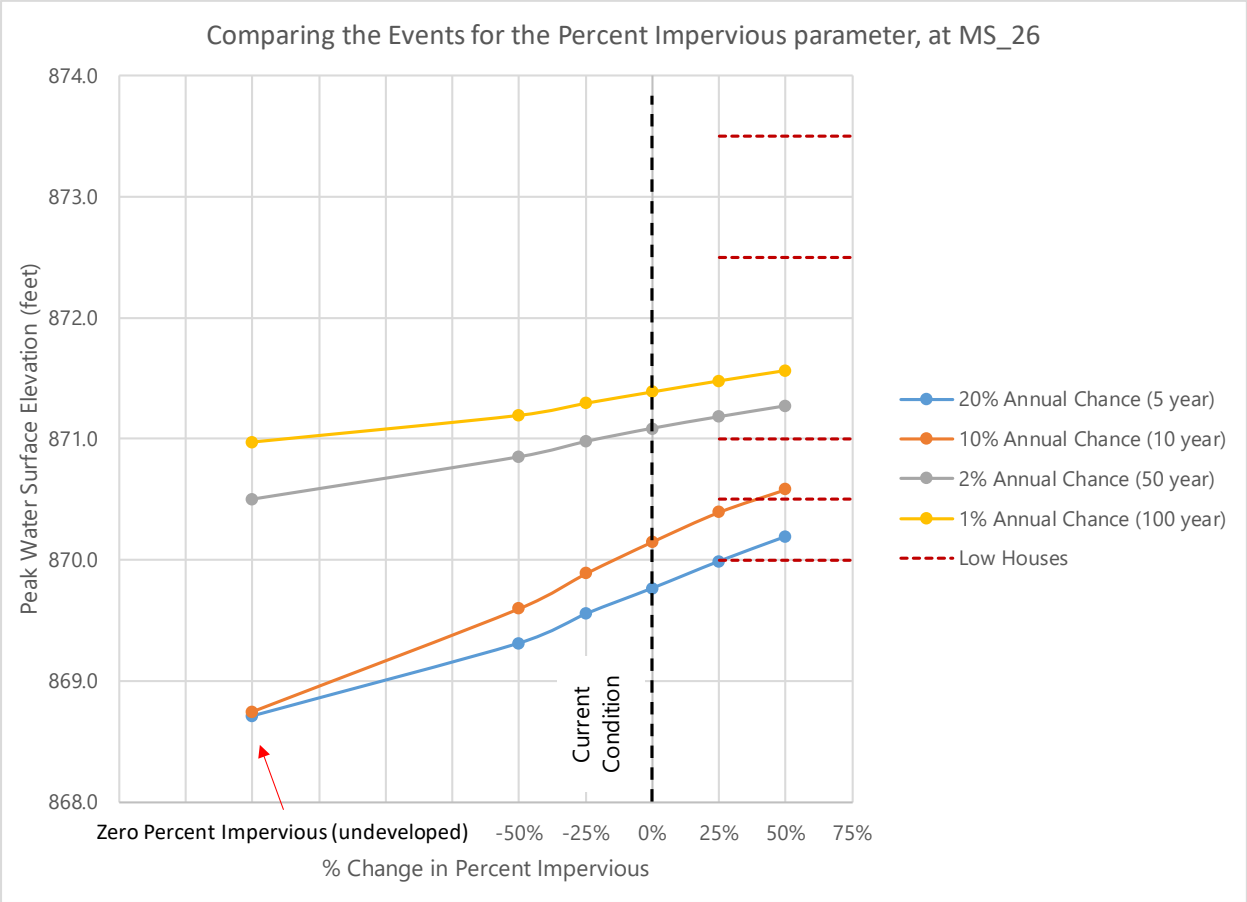



**Figure 4 Sensitivity analysis results showing peak flood levels in MS_26 for a range of imperviousness and a range of storm events.**

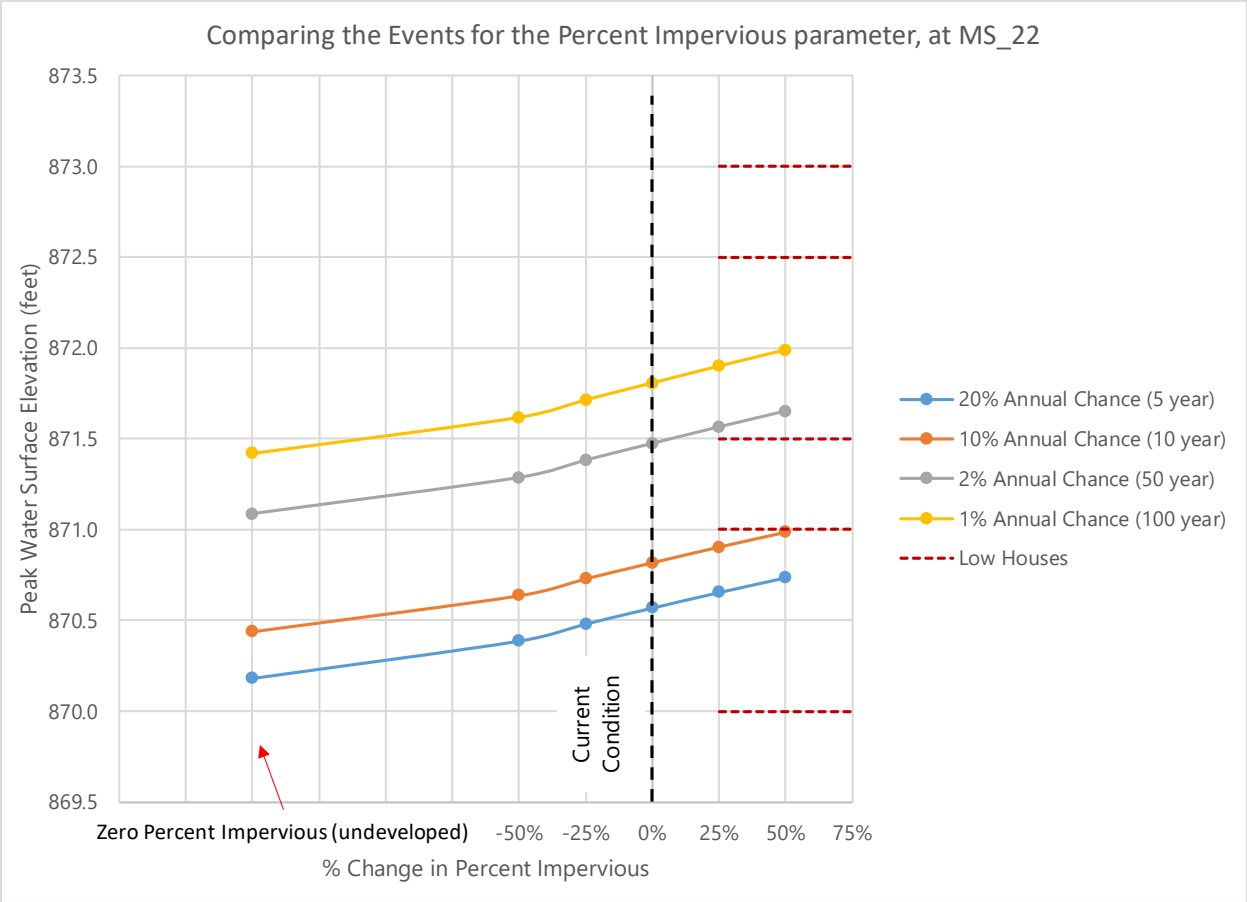



**Figure 5 Sensitivity analysis results showing peak flood levels in MS_22 (a landlocked subwatershed) for a range of imperviousness and a range of storm events.**

As mentioned previously, some prominent examples of directly connected imperviousness in a low-density residential neighborhood tend to be streets, parking lots, driveways, water bodies (i.e., Weber Pond), portions of roofs with gutters and downspouts directed to impervious surfaces such as a driveway, etc. To achieve a 50% decrease in this parameter, these portions of the watershed would need to decrease in area by 50%. In essence, this means driveway and street widths would be cut in half, half of the directly connected roof area would be rerouted to pervious surfaces, half of the parking spaces converted to pervious surfaces and/or routed to BMPs to offset the runoff, etc. Such changes over the entire watershed would be significant and require a coordinated effort from all parcels. This would produce a beneficial change in the peak flood level, but would generally be limited to a benefit of about half a foot or less in this neighborhood. For some homes adjacent to Weber Pond, for example, where the 100-year peak flood level is multiple feet above the suspected low entry elevations, the impacts to peak flood levels shown in Figure 3 due to changes in directly connected imperviousness do not change whether these homes are wet or dry during a large, intense storm event.

The results of the sensitivity analysis change depending on the storm event that is being modeled (e.g., 5-year versus 10-year). Trends and overall magnitudes do not change substantially from what is shown in the few example figures above. Other cases of interest (different storms, different subwatersheds, etc.) can be viewed in a companion Excel spreadsheet generated for the *Morningside XP-SWMM Modeling* technical memorandum (Barr, March 2020).

Finally, it is also important to remember that the results of the sensitivity analysis depend on the input storm itself. As described, this analysis used the NOAA Atlas 14, 24-hour design storm with a MSE3 temporal distribution. This storm is both significant in total precipitation depth and very intense in the middle part of the storm. Storms with high intensity near the beginning or near the end of the event may produce different results, as will storms with more moderate, consistent intensity. However, given that flood management within the City is currently informed by Atlas 14 storms with the MSE3 temporal distribution, this storm was used for the sensitivity analysis.

# Survey of Cities

Single-dwelling unit residential standards
Coverage and impervious maximums
Metro Cities

**Apple Valley**

| Zoning | R-5 | R-2 | R-3 |
|---|---|---|---|
| FAR | None | None | None |
| Max. building coverage | None | None | None |
| Max. impervious surface | None | None | None |

**Blaine**

| Zoning | R-1 | R-1A | R-1AA |
|---|---|---|---|
| Max. building coverage | None | None | None |
| Max. impervious surface | None | None | None |

**Bloomington**

| Zoning | R-1 | RS-1 |
|---|---|---|
| Max. building coverage | None | None |
| Max. impervious surface | 35% | 35% |

**Burnsville**

| Zoning | R-1 |
|---|---|
| Max. building coverage | None |
| Max. impervious surface | None |

**Eagan**

| Zoning | R-1 | R-1S |
|---|---|---|
| Max. building coverage | 20% | 25% |
| Max. impervious surface | None<br>25% for shoreline | None<br>25% for shoreline |

**Eden Prairie**

| Zoning | R1-22 | R1-13.5 | R1-9.5 |
|---|---|---|---|
| Max. building coverage | None | None | None |
| Max. Impervious surface | None<br>30% for shoreline | None<br>30% for shoreline | None<br>30% for shoreline |

**Edina**

| Zoning | R-1 |
|---|---|
| Max. building coverage | 25%<br>30% if lot is less than 9,000 square feet |
| Max. Impervious surface | None |

**Hopkins**

| Zoning | R-1A | R-1B | R-1c |
|---|---|---|---|
| FAR | None | None | None |
| Max. building coverage | 35% | 35% | 35% |
| Max. Impervious surface | None | None | None |

**Lakeville**

| Zoning | RS-1 | RS-2 | RS-3 | RS-4 |
|---|---|---|---|---|
| Max. building coverage | None | None | None | None |
| Max. impervious surface | None | None | None | None |

**Maple Grove**

| Zoning | R-1 | R-2 | R-2B |
|---|---|---|---|
| Max. building coverage | None | None | None |
| Max. impervious surface | None | None | None |

**Minneapolis**

| Zoning | R-1 | R-2 | R-3 |
|---|---|---|---|
| Max. building coverage | 45% | 45% | 45% |
| Max. impervious surface | 60% | 60% | 60% |

**Minnetonka**

| Zoning | R-1 |
|---|---|
| Max. building coverage | None |
| Max. Impervious surface | None<br>30% Impervious within 150 ft of lake<br>75% impervious within 1000 ft of lake |

**New Brighton**

| Zoning | R-1 |
|---|---|
| Max. building coverage | 30% |
| Max. Impervious surface | 50% |

**Plymouth**

| Zoning | RSF-1 | RSF-2 | RSF-3 |
|---|---|---|---|
| Max. building coverage | 30% | 30% | 35% |
| Max. impervious surface | None<br>25% within 1000 ft of water body | None<br>25% within 1000 ft of water body | None<br>25% within 1000 ft of water body |

**St. Louis Park**

| Zoning | R-1 | R-2 |
|---|---|---|
| Max. building coverage | 35% | 35% |
| Max. impervious surface | None | None |

**Wayzata**

| Zoning | R-3A | R-2A | R-2 |
|---|---|---|---|
| Max. building coverage | 30% | 20% | 20% |
| Max. impervious surface | None | None | None |

**Woodbury**

| Zoning | R-4 |
|---|---|
| Max. building coverage | 35% |
| Max. impervious surface | None |

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov


**Date:** November 17, 2021

**Agenda Item #:** VII.A.

**To:** Planning Commission

**Item Type:**
Report and Recommendation

**From:** Cary Teague, Community Development Director

**Item Activity:**
Discussion

**Subject:** Sketch Plan Review - 5780 Lincoln Drive (Londonderry Apartments)

---

**ACTION REQUESTED:**
No action requested.

**INTRODUCTION:**
The Planning Commission is asked to consider a sketch plan request to redevelop 5780 Lincoln Drive. The applicant is proposing to tear down the existing office building on the site and construct a 4-5 story 195-unit apartment. (See attached plans.)

This site is currently zoned PID, Planned Industrial District, and guided OR, Office Residential in the City's Comprehensive Plan. The allowed residential density in this area is up to 75 units per acre. This site is 2.6 acres in size; therefore, the applicant is proposing to max out the density on the site at 75 units per acre. The applicant is proposing to provide 10% of the units within the development for affordable housing to meet the City's affordable housing policy.

**ATTACHMENTS:**

Staff Memo

Site Location, Zoning, & Comp. Plan

Proposed Plans

CITY OF EDINA

**City Hall** • Phone 952-927-8861
Fax 952-826-0389 • www.CityofEdina.com

# MEMO

**Date:** November 17, 2021

**To:** Planning Commission

**From:** Cary Teague, Community Development Director

**Re:** Sketch Plan Review – 5780 Lincoln Drive (Londonderry Apartments)

The Planning Commission is asked to consider a sketch plan request to redevelop 5780 Lincoln Drive. The applicant is proposing to tear down the existing office building on the site and construct a 4-5 story 195-unit apartment. (See attached plans.)

This site is currently zoned PID, Planned Industrial District, and guided OR, Office Residential in the City's Comprehensive Plan. The allowed residential density in this area is up to 75 units per acre. This site is 2.6 acres in size; therefore, the applicant is proposing to max out the density on the site at 75 units per acre. The applicant is proposing to provide 10% of the units within the development for affordable housing to meet the City's affordable housing policy.

The request would require the following:

1. A Rezoning from PID, Planned Industrial District to PUD. Flexibility would be requested through the PUD Ordinance to vary from parking, height, setback and floor area ratio (FAR) requirements. The PUD Zoning is also used to ensure affordable housing on the site.

The table on the following page demonstrates how the proposed new building(s) would comply with the existing PID standards on the lot.

## Compliance Table

| | City Standard (MDD-6) | Proposed |
|---|---|---|
| **Building Setbacks**<br>Front – Lincoln<br>Front – Londonderry<br>Front – Highway 169<br>Side | <br>50 feet<br>50 feet<br>50 feet<br>20 feet | <br>***40****-53 feet<br>***25-30 feet****<br>***22 feet****<br>20 feet |
| Building Height | 4 stories & 48 feet | ***5 stories 50-72 feet**** |
| Density | 20-75 units per acre (5.44 acres) | 75 units per acre |
| Floor Area Ratio (FAR) | .5% | ***1.6%**** |
| Parking | Housing – 1 enclosed space per unit + .75 surface spaces per unit = 341 spaces required | ***265 spaces**** |

***Does not meet base Zoning Standards-Flexibility would be requested through a PUD***

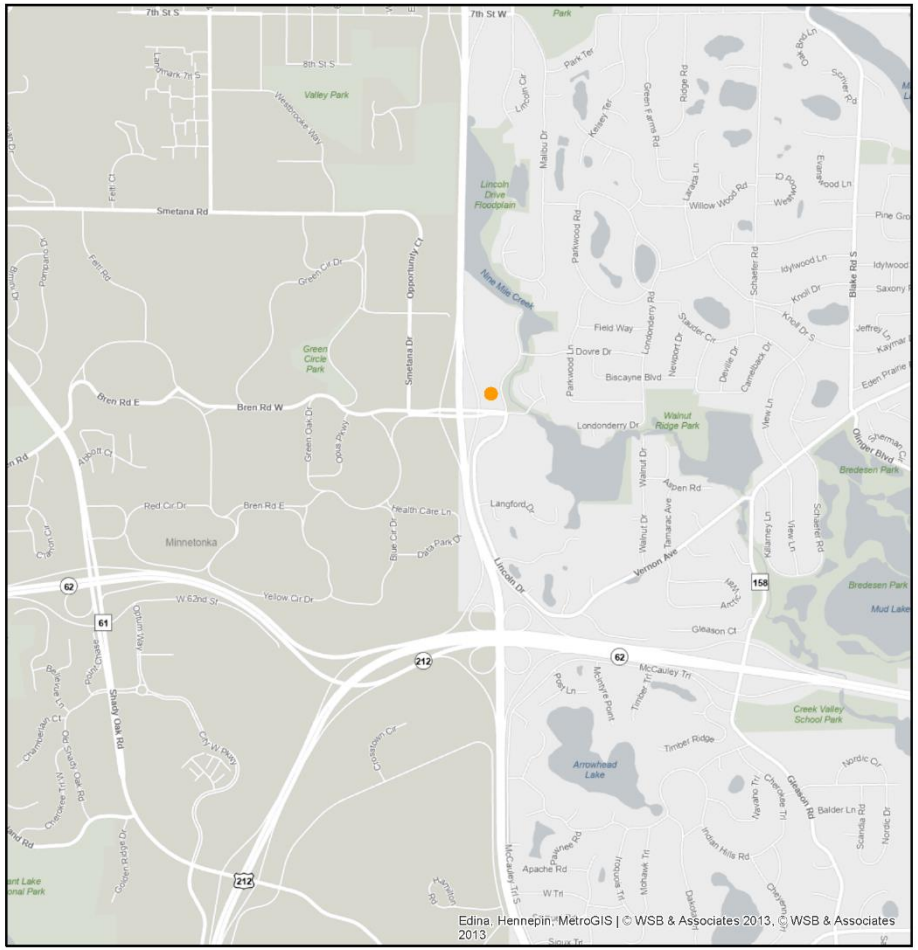
***Issues/considerations:***

- Density. The development density is on the top end of the density range. The applicant is agreeable to meeting the affordable housing policy by providing the units within the development.
- Traffic and parking. A traffic and parking study would be required.
- Sewer Capacity. Currently, there is a sanitary sewer capacity issue in this area. This issue is being addressed by engineering and could be accommodated by upgrading the size of pipes downstream. This issue would have to be resolved prior to any approvals for housing on this site.
- Proposed heights. The proposed height of 5-6 stories exceeds the code required 4-story maximum. The heights seem reasonable as the step back away from the park and the medium density residential neighborhood to the east. The site would be screened by existing trees on City owned land along Lincoln Drive.
- Pedestrian connection to the regional trail. The regional trail is located just to the south of this site. Consideration should be given to pedestrian connections to better connect to the trail.

- Sustainability. The applicant will be asked to submit the sustainability questionnaire as part of a formal application.

- Consider a green roof installation to reduce the impacts of the urban heat island and improve energy efficiency. Consider including EV-ready parking stalls, and at least 5% parking stalls with EV chargers.

# Site Location




1 in = 1,505 ft

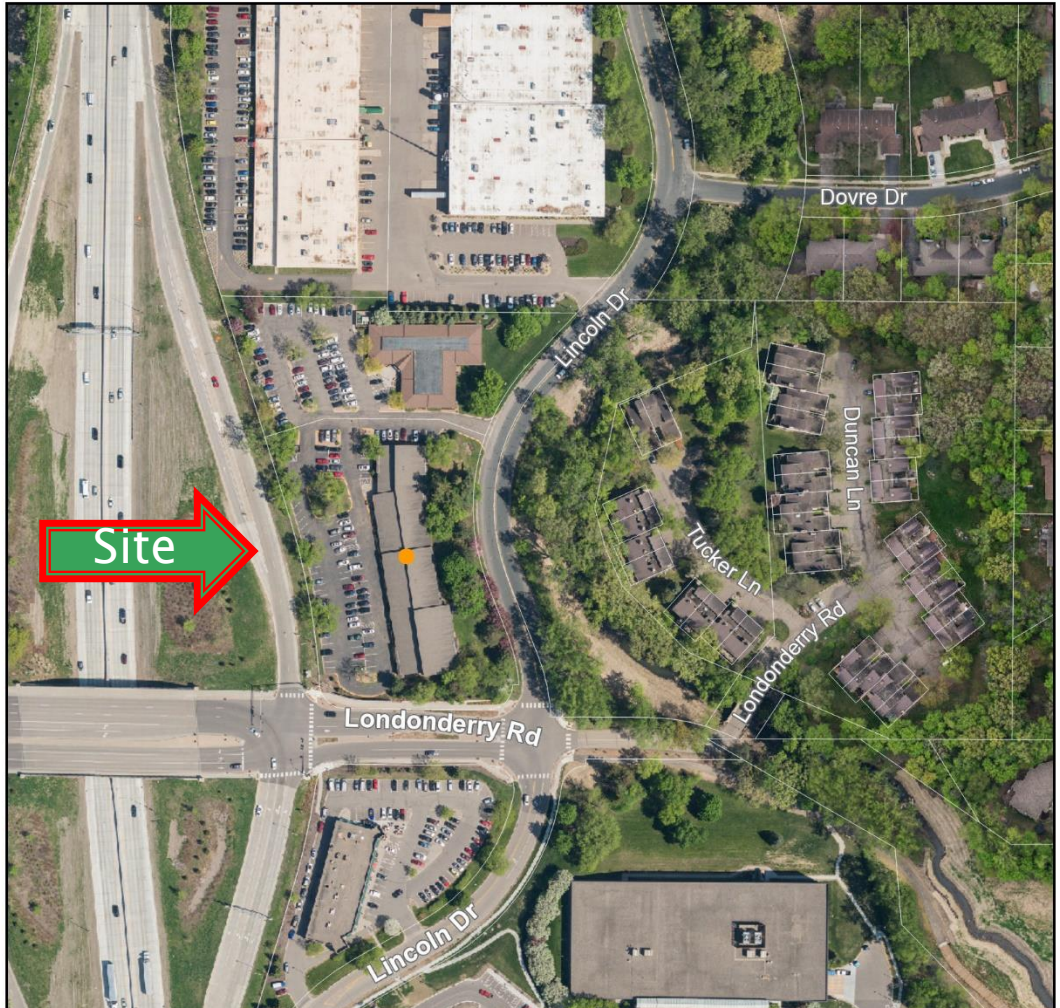
The CITY of EDINA

# Site Location

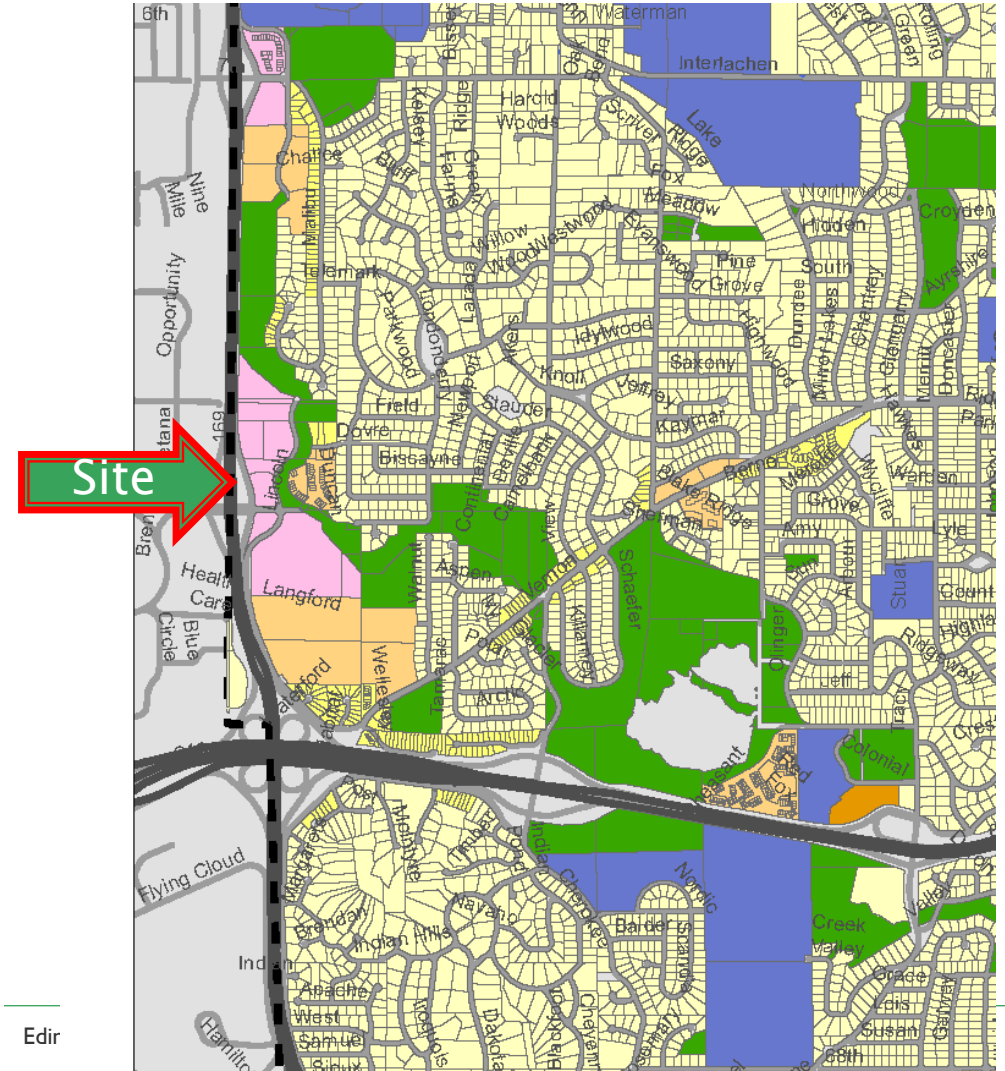

1 in = 376 ft

The CITY of EDINA

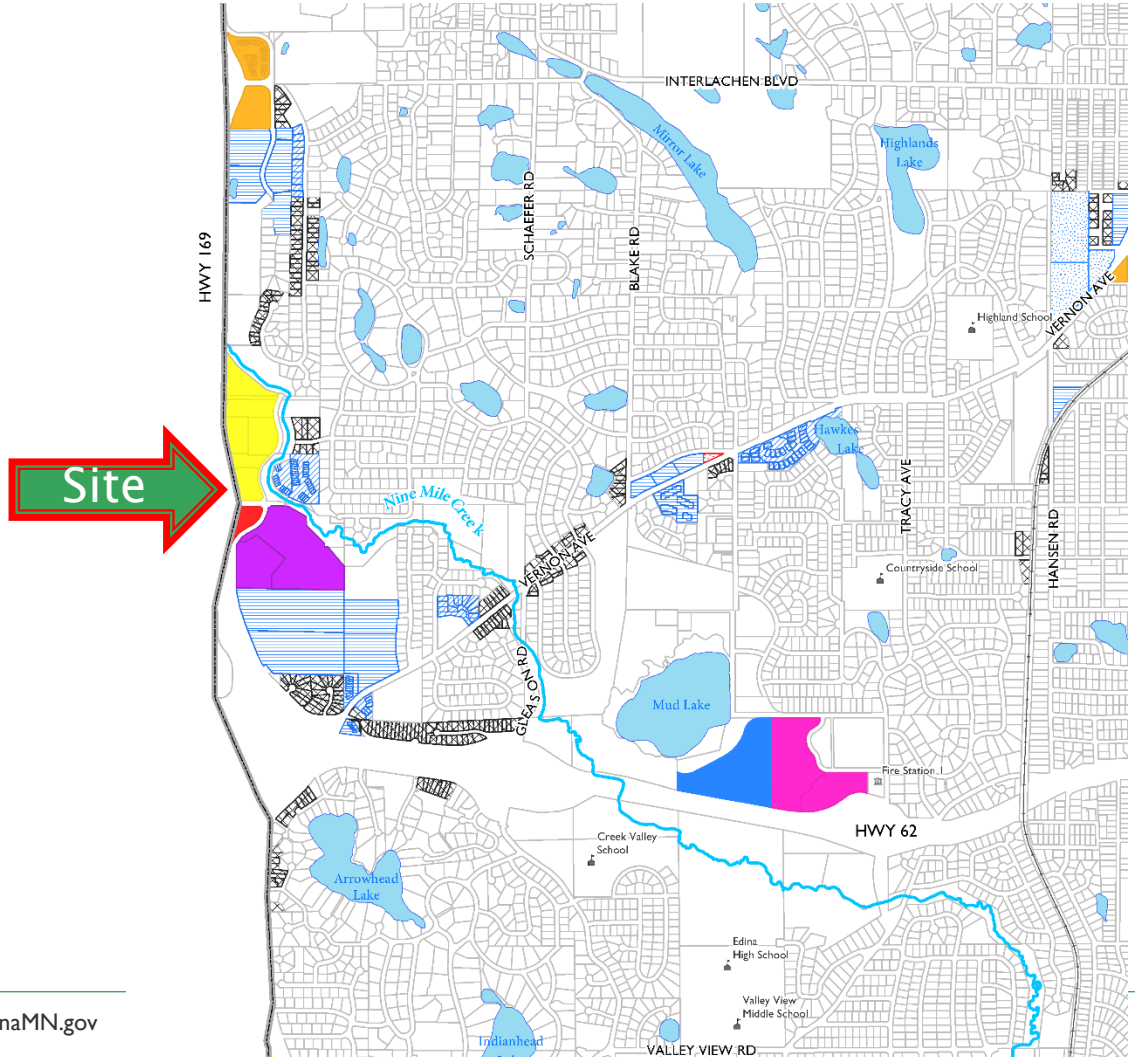
# Site Location




The CITY of EDINA




The CITY of EDINA




# Zoning Map

**Legend**

- R-1 - Single Dwelling Unit
- R-2 - Double Dwelling Unit
- PRD-1 - Planned Residence
- PRD-2 - Planned Residence
- PRD-3 - Planned Residence
- PRD-4 - Planned Residence
- PRD-5 - Planned Residence
- PCD-1 - Planned Commercial
- PCD-2 - Planned Commercial
- PCD-3 - Planned Commercial
- PCD-4 - Planned Commercial
- POD-1 - Planned Office
- POD-2 - Planned Office
- RMD - Regional Medical
- PID - Planned Industrial
- PUD - Planned Unit Development
- APD - Automotive Parking
- PSR-4 - Planned Residence
- MDD-4 - Mixed Development
- MDD-5 - Mixed Development
- MDD-6 - Mixed Development
- Lakes
- Creeks

# Sketch Plan Submittal

## November 2, 2021

# Londonderry Apartments

**Project Narrative:**

The proposed 195-unit building is nestled into a corner created by Londonderry Road and Highway 169. The building is 4-5 stories above ground with one partially exposed parking and lower common area level, and one parking level entirely underground. The building massing is concentrated towards the more active highway intersection, presenting two narrow faces along Lincoln Drive to create a transition from the highway to the progressively less-dense residential neighborhoods to the east. The building's 2-story common space features a lower drive-up entrance, as well as pedestrian access directly to Londonderry on the upper level. The building will read as a 4 story building along the eastward-sloping Londonderry Road.

The north and south wings anchor the angled and saw-toothed middle section, designed to give these units light, air, and unobstructed views, white presenting traditional rectangular 4 story forms as the building turns each corner. The primary aesthetic language is one of warm wood tones with darker brick masonry to merge the building aesthetic with its green surroundings. The building is designed to nestle into the existing landscape and integrate with the natural surroundings as much as possible, including maintaining existing trees and utilizing landscape and planting barriers to soften views of the building from the adjacent neighborhoods.

**Development Summary:**

| | |
|---|---|
| PID #: | 311172123CC0085 |
| Site Area: | 2.59 ACRES (112,990 SF) |
| Current Zoning: | PID (Planned Industrial District) |
| Proposed Zoning: | PUD (Planned Unit Development) |
| Surrounding Context: | North: PID (Industrial) |
| | East: R-2, R-1, PRD-2 |
| | South: PCD-1, MDD-5 |
| | West: HWY 169 / Edina / Minnetonka Boundary |
| Proposed Height: | 4-5 Stories Above Grade - Approximately 72' |
| Building Setback: | See Plans |
| Proposed Units/Acre: | 75.3 |
| Parking Ratio: | 1.32 Garage Stalls Per Unit / + 8 Surface Stalls |

**FAR CALCULATION**

| Area | FAR Calculation |
|---|---|
| 173086 SF | 1.58 |

**GROSS BUILDING AREA BY FLOOR**

| | |
|---|---|
| -1 LL GARAGE | 45729 SF |
| 0 UL GARAGE | 51190 SF |
| 1 LEVEL | 39534 SF |
| 2 LEVEL | 41773 SF |
| 3 LEVEL | 41773 SF |
| 4 LEVEL | 41773 SF |
| TOTAL | 261771 SF |

**UNIT COUNT**

| UNIT | COUNT | PERCENTAGE | AREA |
|---|---|---|---|
| 1 BED | 51 | 26% | 31921 SF |
| 1 BED + DEN | 53 | 27% | 37280 SF |
| 2 BED 1 BATH | 54 | 28% | 45179 SF |
| 2 BED 2 BATH | 29 | 15% | 27568 SF |
| ALCOVE | 8 | 4% | 4558 SF |
| TOTAL | 195 | 100% | 146505 SF |

**PARKING**

| EXTERIOR | |
|---|---|
| 9' x 18' | 8 |
| GARAGE | |
| 9' x 16' Compact | 3 |
| 9' x 18' | 254 |
| TOTAL PARKING | 265 |

**AREA ALLOCATION (OVERALL)**

| OCCUPANCY | AREA | PERCENTAGE |
|---|---|---|
| CIRCULATION | 13265 SF | 5.0% |
| COMMON SPACE | 10681 SF | 4.0% |
| GARAGE | 88477 SF | 33.4% |
| SERVICE | 2636 SF | 1.0% |
| UNITS | 146505 SF | 55.3% |
| VERTICAL CIRCULATION | 3444 SF | 1.3% |
| TOTAL | 265008 SF | |

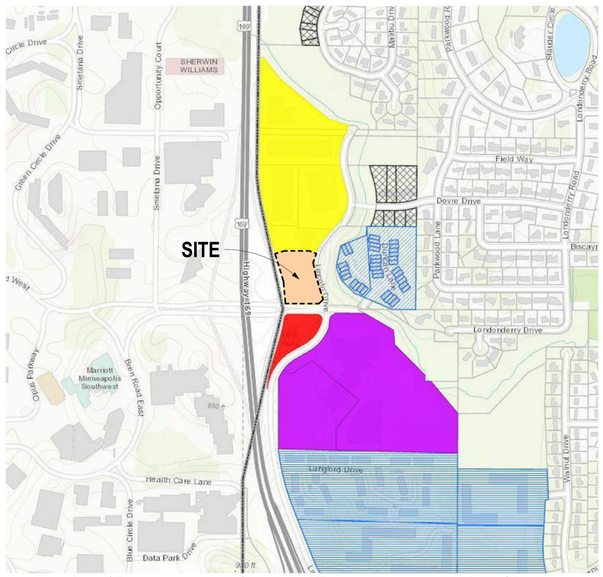
**AREA ALLOCATION (EXCLUDING GARAGE)**

| OCCUPANCY | AREA | PERCENTAGE |
|---|---|---|
| CIRCULATION | 13265 SF | 7.5% |
| COMMON SPACE | 10681 SF | 6.1% |
| SERVICE | 2636 SF | 1.5% |
| UNITS | 146505 SF | 83.0% |
| VERTICAL CIRCULATION | 3444 SF | 2.0% |
| TOTAL | 176530 SF | |

**SKETCH PLAN SHEET INDEX**

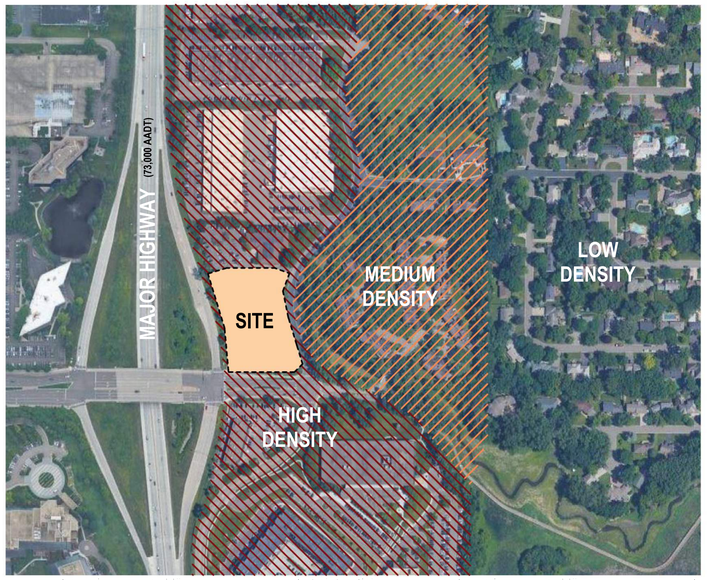



1 **Location Map**
SCALE 1 1/2" = 1'-0"




2 **Zoning Map**
SCALE 1 1/2" = 1'-0"

Zoning Parcel Overlay
- R-1 - Single Dwelling Unit
- R-2 - Double Dwelling Unit
- PRD-1 - Planned Residence
- PRD-2 - Planned Residence
- PRD-3 - Planned Residence
- PRD-4 - Planned Residence
- PRD-5 - Planned Residence
- PCD-1 - Planned Commercial
- PCD-2 - Planned Commercial
- PCD-3 - Planned Commercial
- PCD-4 - Planned Commercial
- POD-1 - Planned Office
- POD-2 - Planned Office
- RMD - Regional Medical
- PID - Planned Industrial
- PUD - Planned Unit Development
- APD - Automotive Parking
- PSR-4 - Planned Residence
- MDD-4 - Mixed Development
- MDD-5 - Mixed Development
- MDD-6 - Mixed Development




3 **Density Map**
SCALE 1 1/2" = 1'-0"

FROM LINCOLN DRIVE

FROM ACROSS THE STREET AT LINCOLN & LONDONDERRY


SITE ADJACENT TO HIGHWAY 169 ON RAMP

EXISTING BUILDING AND SURFACE LOT

EXISTING BUILDING


FROM LONDONDERRY & HWY 169

solhem

Existing Site Photos

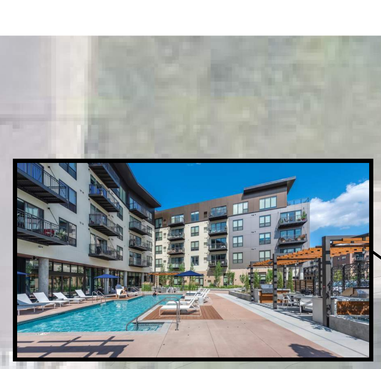
D1 | 21045

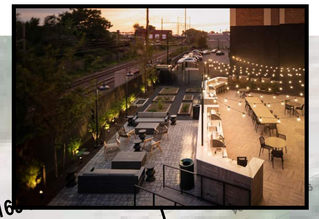
# Londonderry Apartments

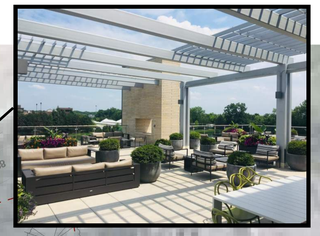
Edina, Minnesota
November 2, 2021



Momentum Design Group







MN HIGHWAY 169

LANDSCAPE SCREENING

DOG RUN

BUILDING ABOVE

20' - 1"

892' - 0"

POOL EQUIP.
619 SF

UL GARAGE ENTRANCE

COMMON SPACE
3025 SF

895' - 0"

22' - 10"

UP

26' - 1"

TRASH
804 SF

LONDONDERRY DRIVE

SIDEWALK EASEMENT

UPPER GARAGE
43521 SF
LOWER GARAGE SIMILAR

BUILDING ABOVE

COMMON SPACE ABOVE W/ ENTRANCE FROM LONDONDERRY

COMMON SPACE
5163 SF

LOWER
ENTRANCE

882' - 0"

LL GARAGE
ENTRANCE

26' - 5"

TWO WAY

53' - 3"

ROOF OVERHANG

ONE WAY


LINCOLN DRIVE

EXISTING MIXED USE PAVED TRAIL

NINEMILE CREEK

NINEMILE CREEK REGIONAL TRAIL

CLOSEST RESIDENTIAL (TOWNHOME)

**SITE CONTEXT PLAN**
3/64" = 1'-0"

solhem

Site Plan

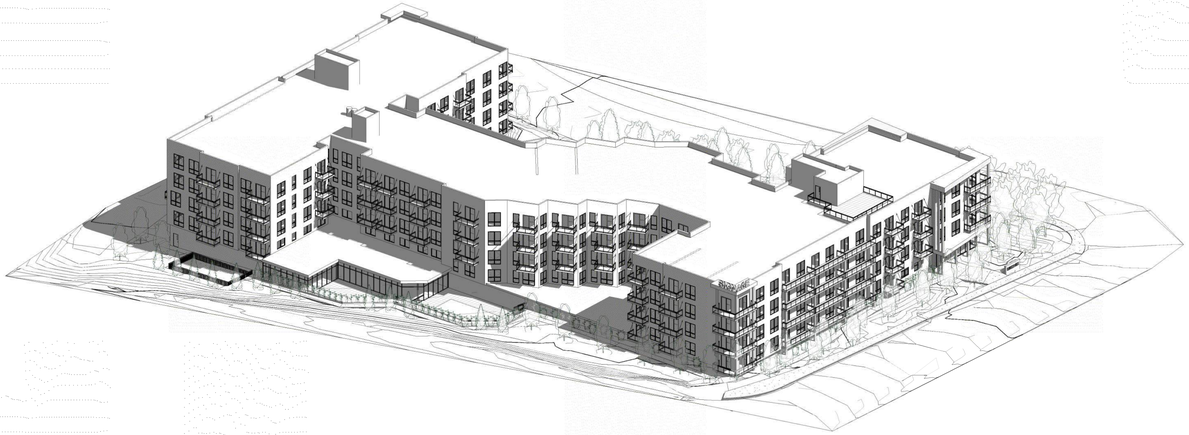
D2 | 21045

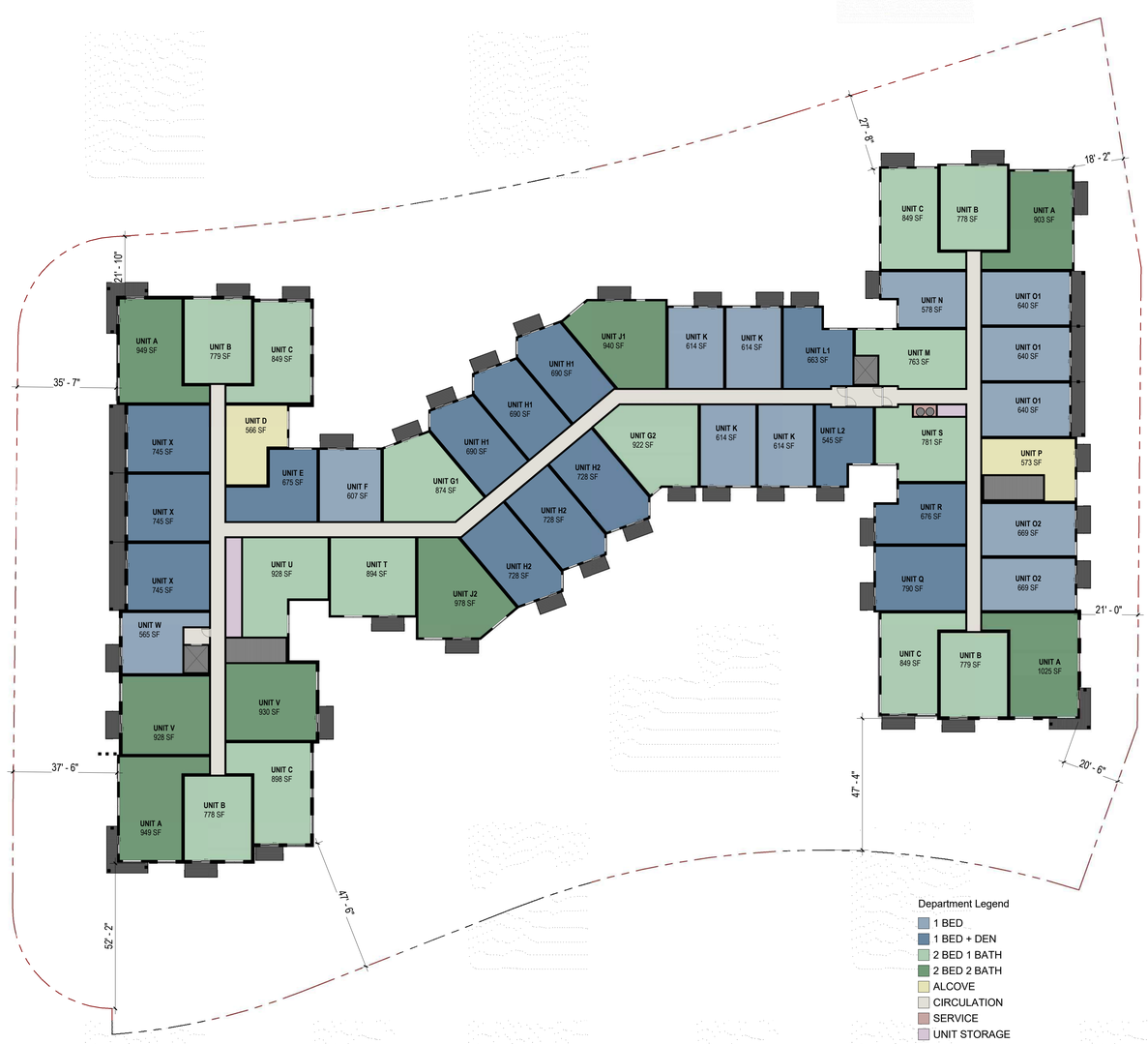
# Londonderry Apartments

Edina, Minnesota
November 2, 2021



Momentum Design Group




**1ST FLOOR**
3/64" = 1'-0"

**TYP FLOORS 2-4**
3/64" = 1'-0"

solhem

Concept Design Plans

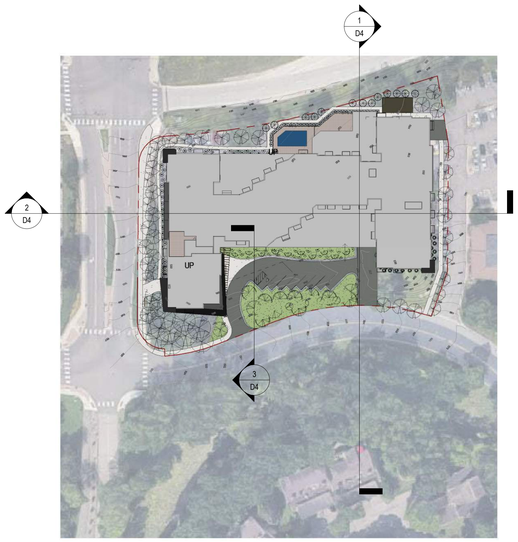
D3 | 21045

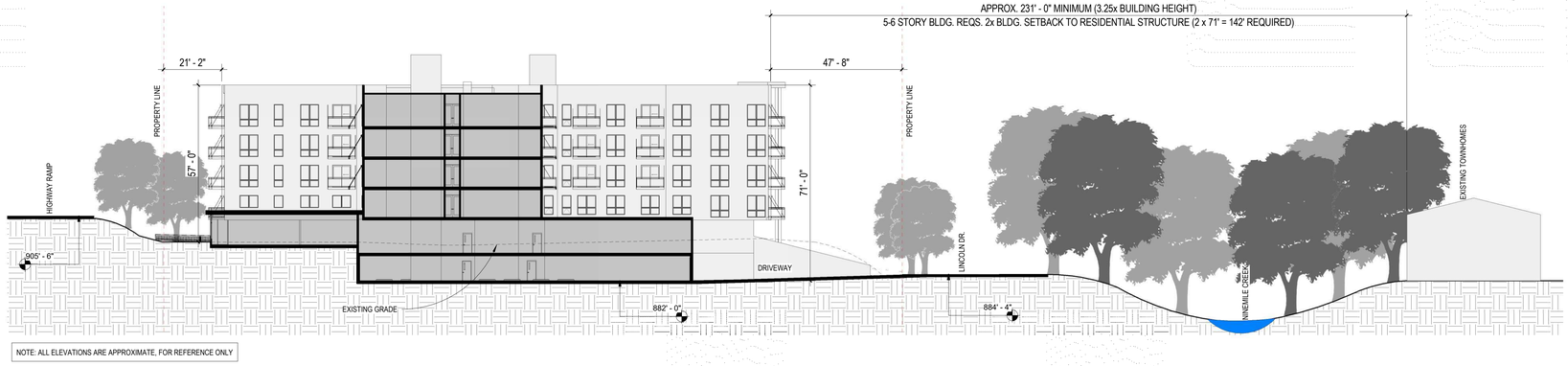
# Londonderry Apartments

Edina, Minnesota
November 2, 2021



Momentum Design Group

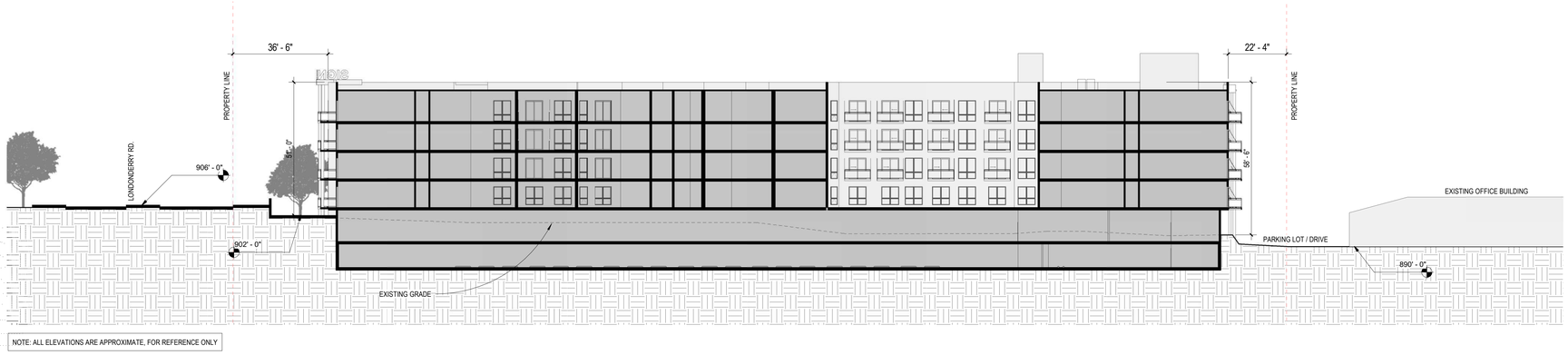



NOTE: ALL ELEVATIONS ARE APPROXIMATE, FOR REFERENCE ONLY

## 1 E-W SITE SECTION

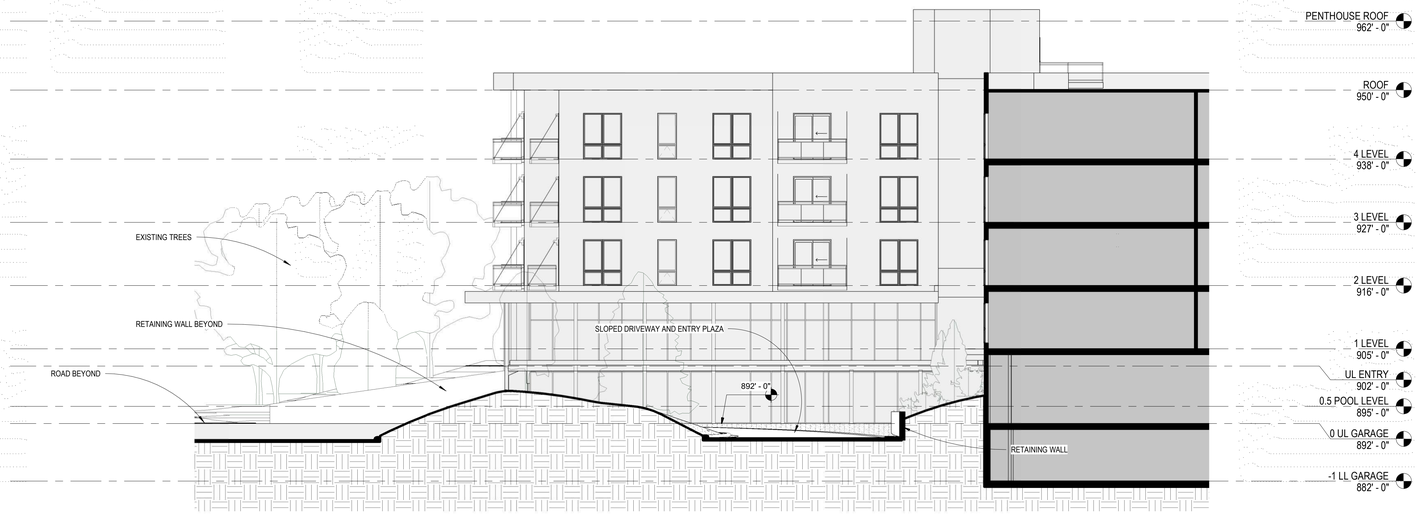
SCALE 3/64" = 1'-0"




NOTE: ALL ELEVATIONS ARE APPROXIMATE, FOR REFERENCE ONLY

## 2 N-S SITE SECTION

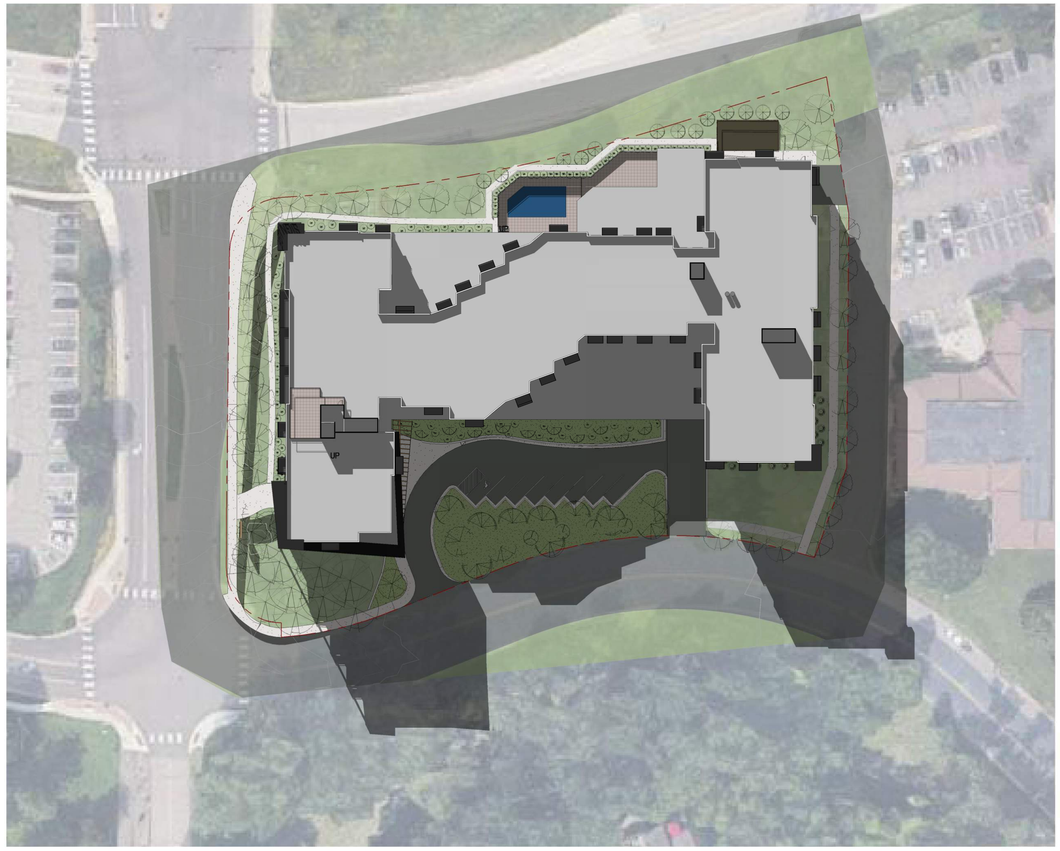
SCALE 3/64" = 1'-0"



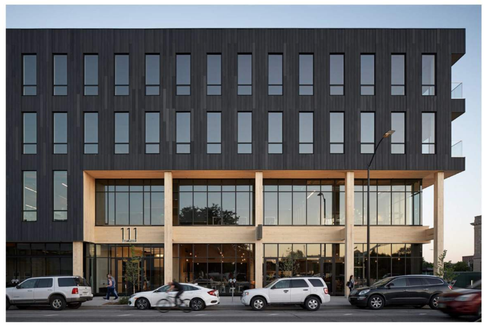

## 3 ENLARGED DRIVEWAY CROSS-SECTION

SCALE 3/32" = 1'-0"

1 **SUN STUDY - SUMMER SOLSTICE 5 PM**
SCALE 1" = 40'-0"



2 **SUN STUDY - FALL / SPRING EQUINOX 5 PM**
SCALE 1" = 40'-0"



Concept Exterior Imagery

Woodgrain Cladding

Fiber Cement Siding

Brick Masonry

Concrete Masonry

Concept Exterior Material Pallette

Concept Exterior Design - Londonderry Facade

Concept Exterior Design - Driveway Entrance

# CITY OF EDINA

4801 West 50th Street
Edina, MN 55424
www.edinamn.gov


**Date:** November 17, 2021

**Agenda Item #:** VII.B.

**To:** Planning Commission

**Item Type:**
Report and Recommendation

**From:** Cary Teague, Community Development Director

**Item Activity:**
Discussion

**Subject:** Sketch Plan Review - 4701 77th Street West

---

**ACTION REQUESTED:**
No action requested.

**INTRODUCTION:**
The Planning Commission is asked to consider a sketch plan request to redevelop 4701 77th Street West. The applicant is proposing to tear down the existing office building on the site and construct a 7 story 189-unit apartment. (See attached plans.)

This site is currently zoned PID, Planned Industrial District, and guided OR, Office Residential in the City's Comprehensive Plan. The allowed residential density in this area is up to 75 units per acre. This site is 2.37 acres in size; therefore, the applicant is proposing to exceed the density on the site at 80 units per acre. The applicant is proposing to provide 17 units within the development for affordable housing. To meet the City's policy 19 units would need to be for affordable housing.

**ATTACHMENTS:**

Staff Memo
Site Location, Zoning, & Comp. Plan
Proposed Plans
Applicant Narrative
AFO Review (Mic Johnson)

CITY OF EDINA

**City Hall** • Phone 952-927-8861
Fax 952-826-0389 • www.CityofEdina.com

# MEMO

**Date:** November 17, 2021

**To:** Planning Commission

**From:** Cary Teague, Community Development Director

**Re:** Sketch Plan Review – 4701 77th Street West

The Planning Commission is asked to consider a sketch plan request to redevelop 4701 77th Street West. The applicant is proposing to tear down the existing office building on the site and construct a 7 story 189-unit apartment. (See attached plans.)

This site is currently zoned PID, Planned Industrial District, and guided OR, Office Residential in the City's Comprehensive Plan. The allowed residential density in this area is up to 75 units per acre. This site is 2.37 acres in size; therefore, the applicant is proposing to exceed the density on the site at 80 units per acre. The applicant is proposing to provide 17 units within the development for affordable housing. To meet the City's policy 19 units would need to be for affordable housing.

The request would require the following:

1. A Comprehensive Plan Amendment to increase density on the site.
2. A Rezoning from PID, Planned Industrial District to PUD. Flexibility would be requested through the PUD Ordinance to vary from parking, setback and floor area ratio (FAR) requirements. The PUD Zoning is also used to ensure affordable housing on the site.

The table on the following page demonstrates how the proposed new building would comply with the existing PID standards on the lot.

## Compliance Table

| | City Standard (MDD-6) | Proposed |
|---|---|---|
| **Building Setbacks**<br>Front – 77th Street<br>Front – Computer<br>Side<br>Side | <br>87 feet<br>87 feet<br>87 feet<br>87 feet | <br>***28' structure & 20' feet patio****<br>***35' structure & 25' patio****<br>***45 feet****<br>***35 feet**** |
| Building Height | 9 stories | 7 stories |
| Density | 20-75 units per acre (2.37.44 acres) | 80 units per acre |
| Floor Area Ratio (FAR) | .5% | ***1.9%**** |
| Parking | Housing – 1 enclosed space per unit + .75 surface spaces per unit = 331 spaces required | ***239 spaces**** |

***Does not meet base Zoning Standards-Flexibility would be requested through a PUD***

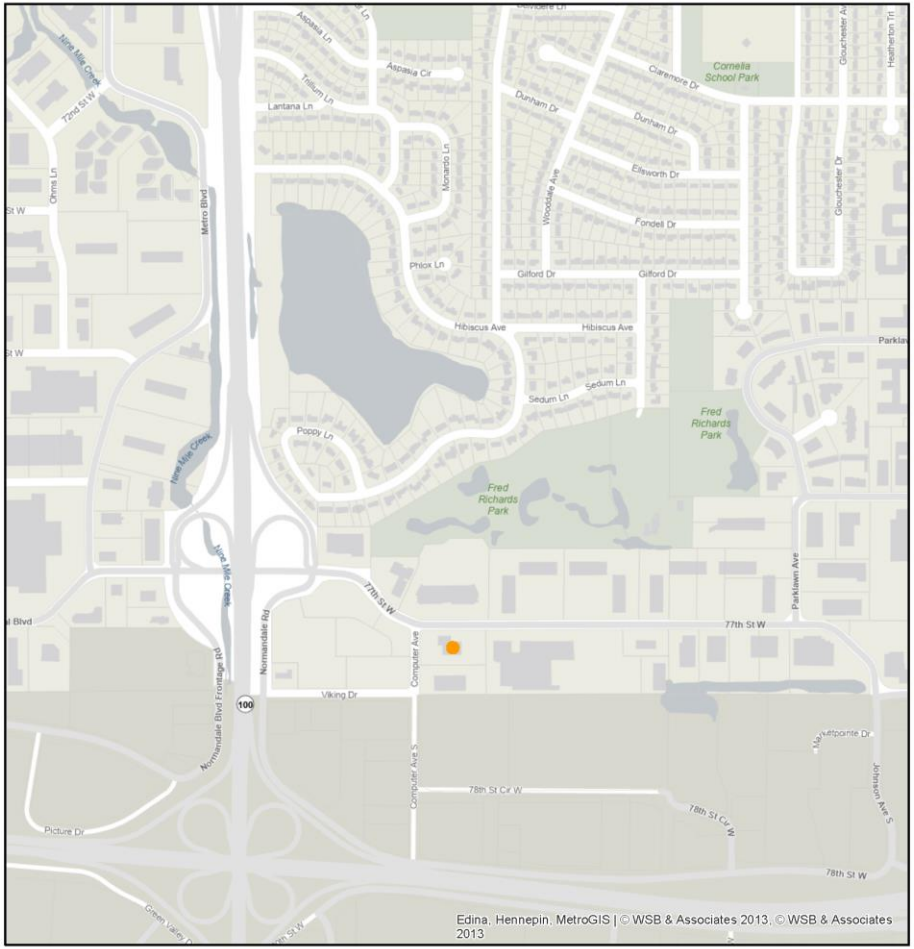
***Issues/considerations:***

- Density. The development density exceeds the Comprehensive Plan allowance for the site. The applicant has expressed a willingness to comply with the 75 unit per acre density.
- Affordable Housing. The applicant is agreeable to meeting the affordable housing policy by providing the units within the development.
- Traffic and parking. A traffic and parking study would be required.
- Proposed heights & Setbacks. The proposed height of 7 stories meets the City Code requirement for height. However, the proposed height of the building compared to the proposed setbacks does not seem in proportion. The setback requirement is based on height.
- Sustainability. The applicant will be asked to submit the sustainability questionnaire as part of a formal application.
- Consider a green roof installation to reduce the impacts of the urban heat island and improve energy efficiency. Consider including EV-ready parking stalls, and at least 5% parking stalls with EV chargers.

- AFO Review. Mic Johnson of Architecture Field Office has provided a review of the project and offered recommendations. These should be considered with any formal application. (See attached AFO review.)

- The property is located within the 100-year flood plain. Mitigation must be addressed with any formal application.

# Site Location



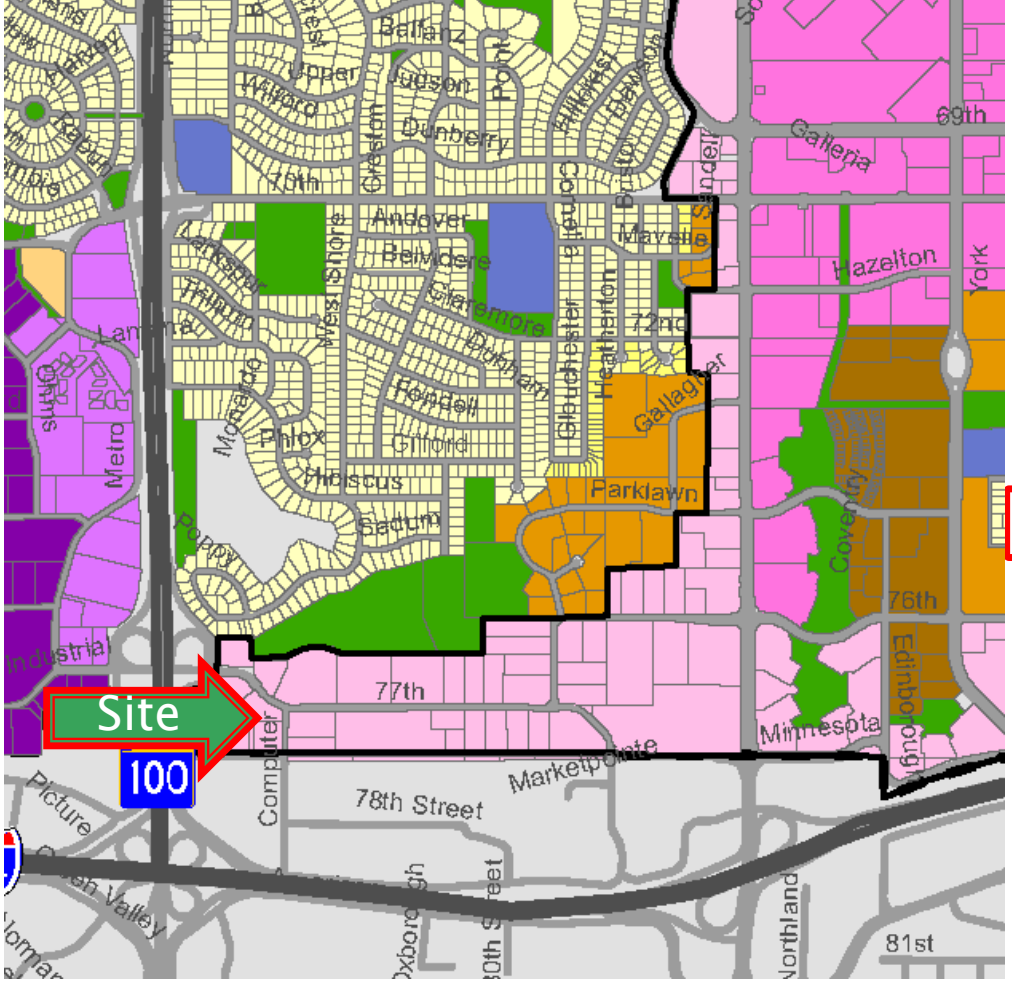

1 in = 752 ft

The CITY of EDINA

# Site Location


1 in = 376 ft

The CITY of EDINA



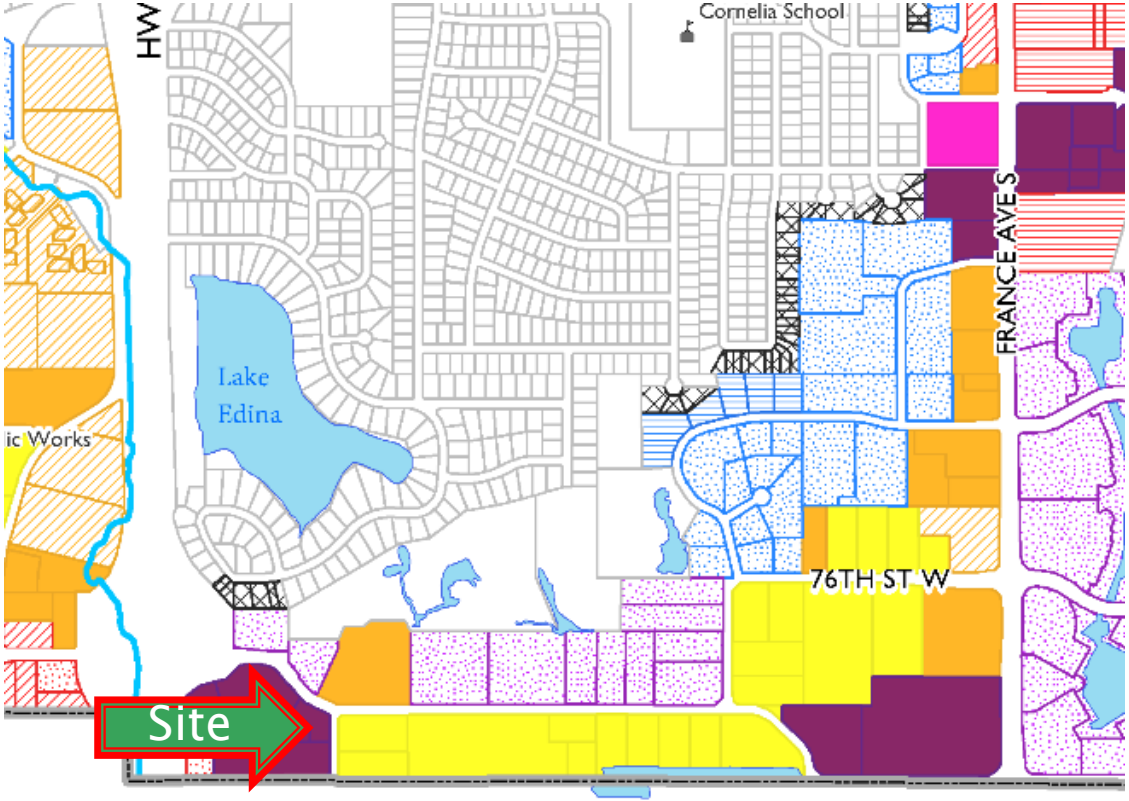

The CITY of EDINA

- Low Density Residential
- Low Density Attached Residential
- Medium Density Residential
- High Density Residential
- Greater Southdale District Residential
- Office Residential
- Office
- Neigborhood Node
- Mixed Use Center
- Community Activity Center
- Industrial
- Open Space and Parks
- Public/Semi Public
- Regional Medical
- City Limits

3,700 Feet

*Source: City of Edina, Hennepin County, MetCouncil,*

# Zoning Map




**Legend**

- R-1 - Single Dwelling Unit
- R-2 - Double Dwelling Unit
- PRD-1 - Planned Residence
- PRD-2 - Planned Residence
- PRD-3 - Planned Residence
- PRD-4 - Planned Residence
- PRD-5 - Planned Residence
- PCD-1 - Planned Commercial
- PCD-2 - Planned Commercial
- PCD-3 - Planned Commercial
- PCD-4 - Planned Commercial
- POD-1 - Planned Office
- POD-2 - Planned Office
- RMD - Regional Medical
- PID - Planned Industrial
- PUD - Planned Unit Development
- APD - Automotive Parking
- PSR-4 - Planned Residence
- MDD-4 - Mixed Development
- MDD-5 - Mixed Development
- MDD-6 - Mixed Development
- Lakes
- Creeks

# 77th Street Apartments

*4701 77th St. W.*

*Edina, MN 55435*


*City of Edina Sketch Plan*


*Aerial View Looking East*

## Contents



### Owner/Developers

### Design Team

DJR ARCHITECTURE
Architect
333 Washington Avenue N, Suite 210
Minneapolis, MN 55401

CivilSite GROUP
Civil Engineer
4931 West 35th St, Suite 200,
St Louis Park, MN 55416

## Vicinity Map

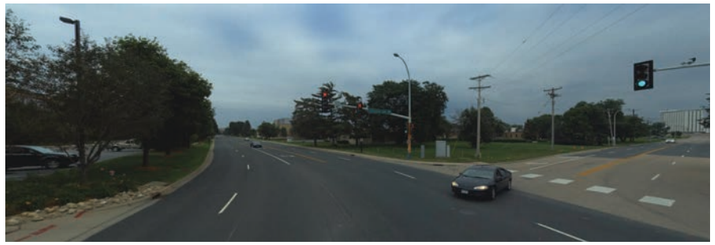

*Vicinity Map*

## Site Description

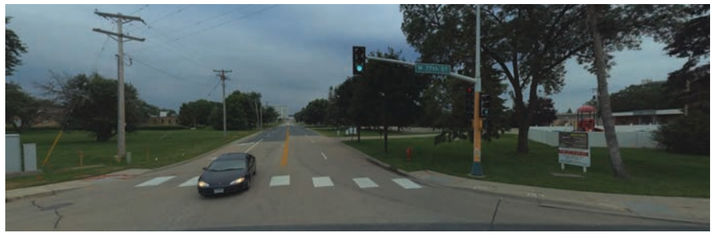
*The project site is a large rectangular lot on 77th St. in Edina, in an area charicterised by medium-density office parks.*
*The site is in walking distance of Fred Richards Park and the Nine Mile Creek Regional trail. It is located directly on major regional bus routes, and has easy access to nearby highways. There are also commercial services of many kinds in close proximity.*
*The site is currently occupied by a small one story commercial building which only utilizes a small fraction of the site's bulidable area, the rest of which is lawn.*

## Key

- *Site*
- *9-mi Creek Regional Trail*
- *77th St*
- *Hwy. 100 / I-494*



*77th St Looking East*



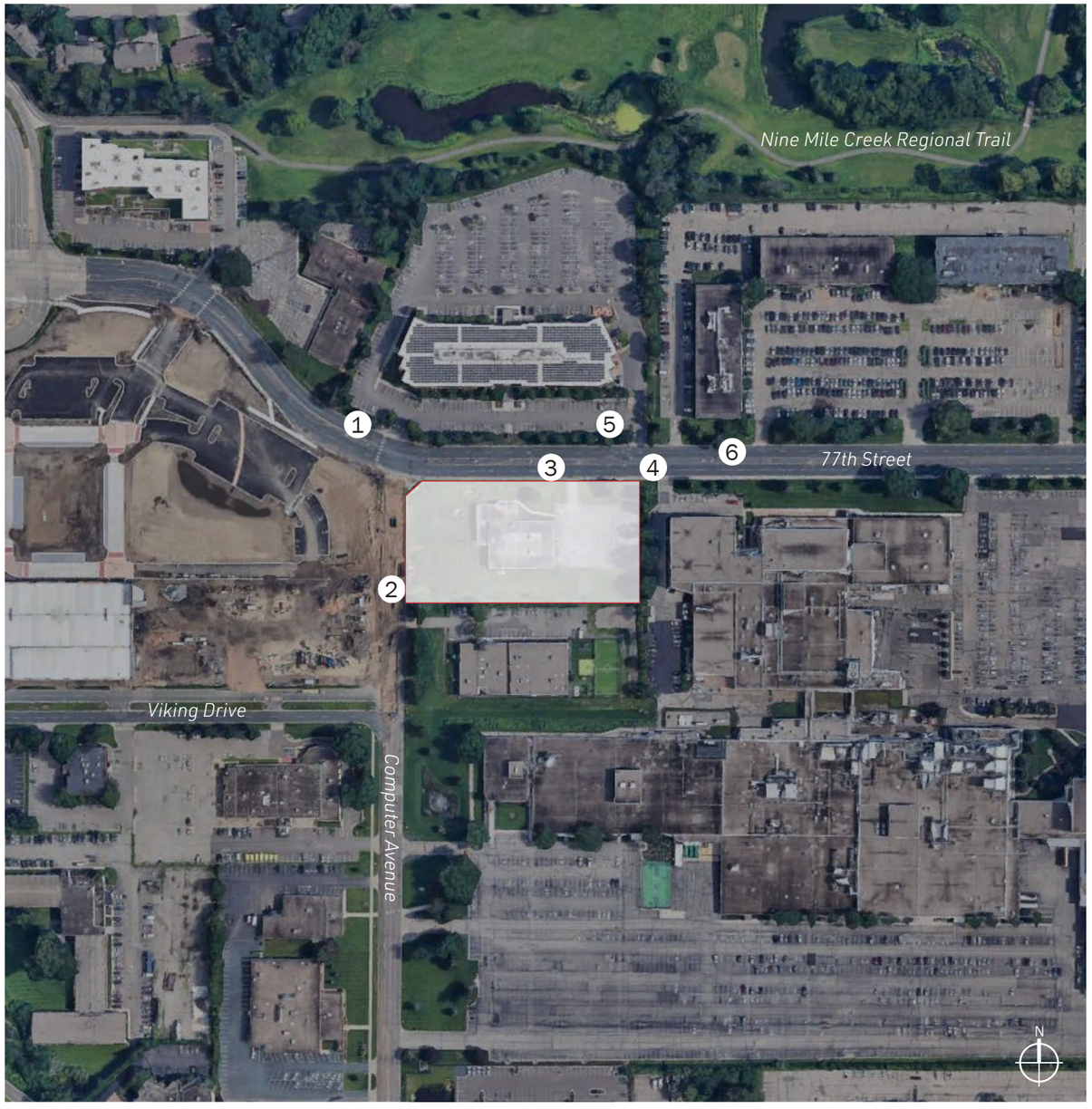
*Computer Avenue Looking South*

*Computer Avenue Looking North*

*77th St Looking West*

## Current Site Conditions

*1. 77th Street Looking East*




*2. Existing Building from Southwest*

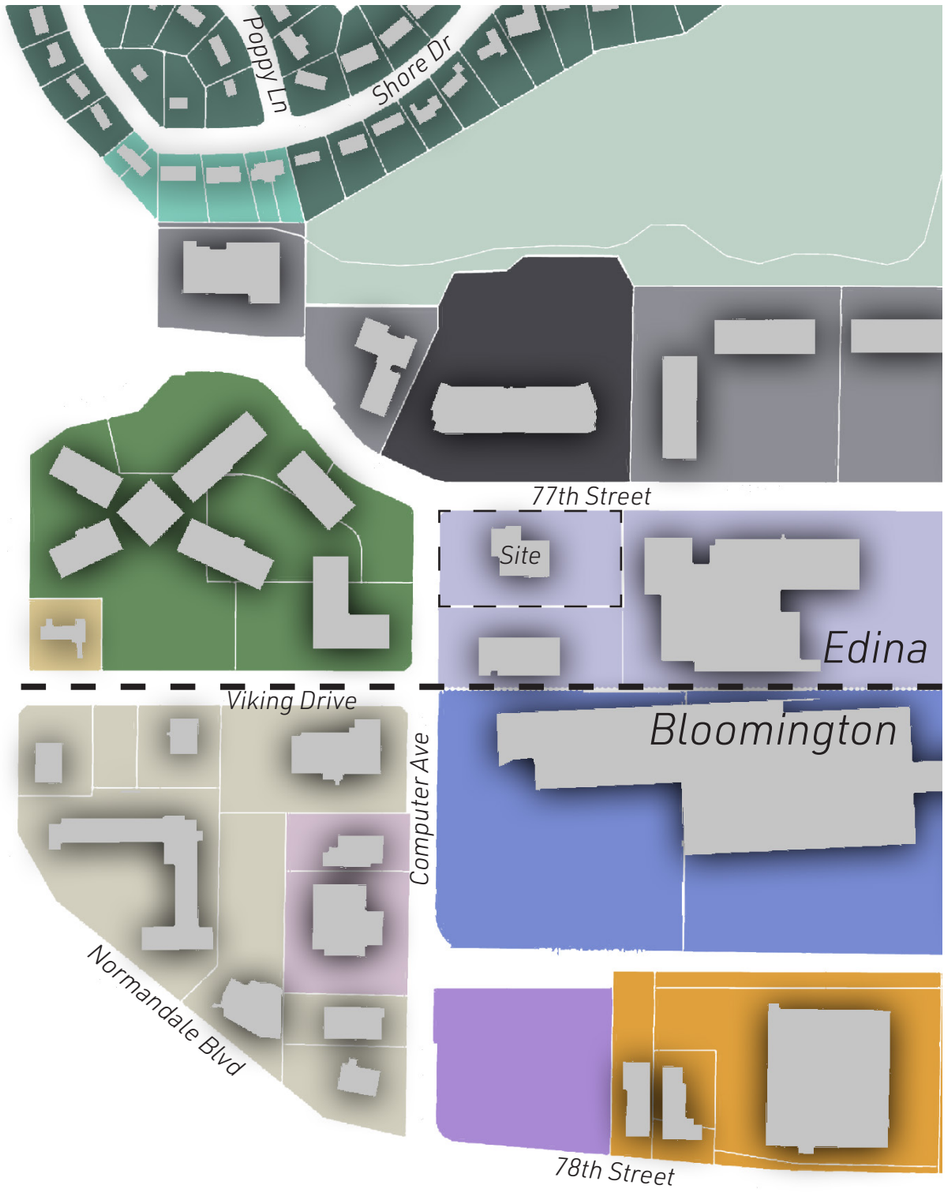
*3. Existing Building from Northeast*

*4. Existing Building from Northeast*

*5. “Edina Corporate Center,” opposite site on 77th Street*

*6. 77th Street Looking West*

## Site Analysis- Zoning




**Key - Zoning**

**Edina**

- R-1
- R-2
- PID
- PCD-4
- POD-1
- PUD
- MDD-6
- Park

**Bloomington**

- CS-1
- I-2
- C-4
- IT
- CS-0.5

*Zoning per City of Edina and City of Bloomington*

## Site Analysis - Land Use


**Key - Usage**

- Single-Family
- Duplex
- Multi-Family
- Commercial
- Industrial

*Land Use*

## Panorama - 4701 77th St. W.

*1. View South from 77th Street*

*Project Site*

*2. View North from 77th Street*

*Across From Project Site*


*Key Plan*

DJR ARCHITECTURE



11.02.2021

4701 77th St. W. Apartments

Edina, Minnesota

20-100.00

## Panorama - 4701 77th St. W.

*3. View East from Computer Ave*



*Key Plan*

N

DJR ARCHITECTURE



11.02.2021

4701 77th St. W. Apartments

Edina, Minnesota

20-100.00

# Topography

## Existing Topography

*4701 77th St. W.*
*The site is located south of W 77th St and East of Computer Ave. There is an approximate 4-foot elevation difference from the high point of the site to the low point of the site.*


*Topography @ 2’ contours from Minnesota DNR*


# The Proposed Project

## 4701 77th St. W.
## 10.27.2021

## Overall Perspective 1

*Rendering viewing Southwest*

## Overall Perspective 2

*Rendering viewing Northeast*

## Overall Perspective 3

*Rendering viewing Southeast*

## Overall Perspective 4

*Rendering viewing Southeast*

## Overall Perspective 5

*Rendering viewing Northwest*

## Summary - Project Data

# 4701 77th St W
# EDINA, MN

CURRENT PRIMARY ZONING: PID
(PLANNED INDUSTRIAL)

TOTAL AREA: 103,340 SF (2.37 ACRES)

ALLOWABLE FAR: 0.5 (51,670)
PROPOSED FAR: 1.86 (191,712)

| PARKING | |
|---|---|
| **Level** | **Count** |
| LEVEL 1 | 117 |
| LEVEL 2 | 122 |
| Grand total: 239 | |

*PID: 3102824330017*
*Address: 4701 77th St W*
*Building Height Overlay: District 12*
*Proposed Rezoning: Planned Unit Development*

*Height: 7 stories / 87'-0"*
*Setbacks:*
*Front - 35' Required - 27'-0" proposed*
*Side Street - 35' Required - 36'-0" proposed*
*Side Interior - 20' Required - 35'-0" proposed*
*Rear - 35' Required - 36'-0" proposed*
*Density: Lot area (103,340 SF) is less than unit area (524,740 SF)*
*Units: 189 units total*
*(17 for-sale townhouses*
*& 172 rental 2BR, 1BR, STUDIO, ALCOVE)*

*Vehicular Parking Required: 347 stalls*
*Vehicular Parking Provided: 239 total*

| RENTABLE AREA | | |
|---|---|---|
| **Unit Type** | **Count** | **Total Area (Both Levels)** |
| LEVEL 1 and 2 (EACH UNIT IS 2 LEVELS) | | |
| TH | 17 | 20,695 SF |

| | | | |
|---|---|---|---|
| **Unit Type** | **Count** | **Total Area** | **Average Area** |
| LEVEL 3 | | | |
| 1BR | 16 | 11,343 SF | 709 |
| 1BR+D | 3 | 2,960 SF | 987 |
| 2BR | 7 | 7,183 SF | 1026 |
| 2BR+D | 2 | 2,916 SF | 1458 |
| STUDIO | 4 | 2,092 SF | 523 |
| LEVEL 3: 32 | | 26,494 SF | |
| LEVEL 4 | | | |
| 1BR | 17 | 12,043 SF | 708 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 7 | 7,190 SF | 1027 |
| 2BR+D | 2 | 2,946 SF | 1473 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| LEVEL 4: 35 | | 28,379 SF | |
| LEVEL 5 | | | |
| 1BR | 17 | 12,043 SF | 708 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 7 | 7,190 SF | 1027 |
| 2BR+D | 2 | 2,946 SF | 1473 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| LEVEL 5: 35 | | 28,379 SF | |
| LEVEL 6 | | | |
| 1BR | 17 | 12,043 SF | 708 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 7 | 7,190 SF | 1027 |
| 2BR+D | 2 | 2,946 SF | 1473 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| LEVEL 6: 35 | | 28,379 SF | |
| LEVEL 7 | | | |
| 1BR | 18 | 12,868 SF | 715 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 8 | 8,127 SF | 1016 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| LEVEL 7: 35 | | 27,196 SF | |
| Grand total: 172 | | 138,828 SF | |

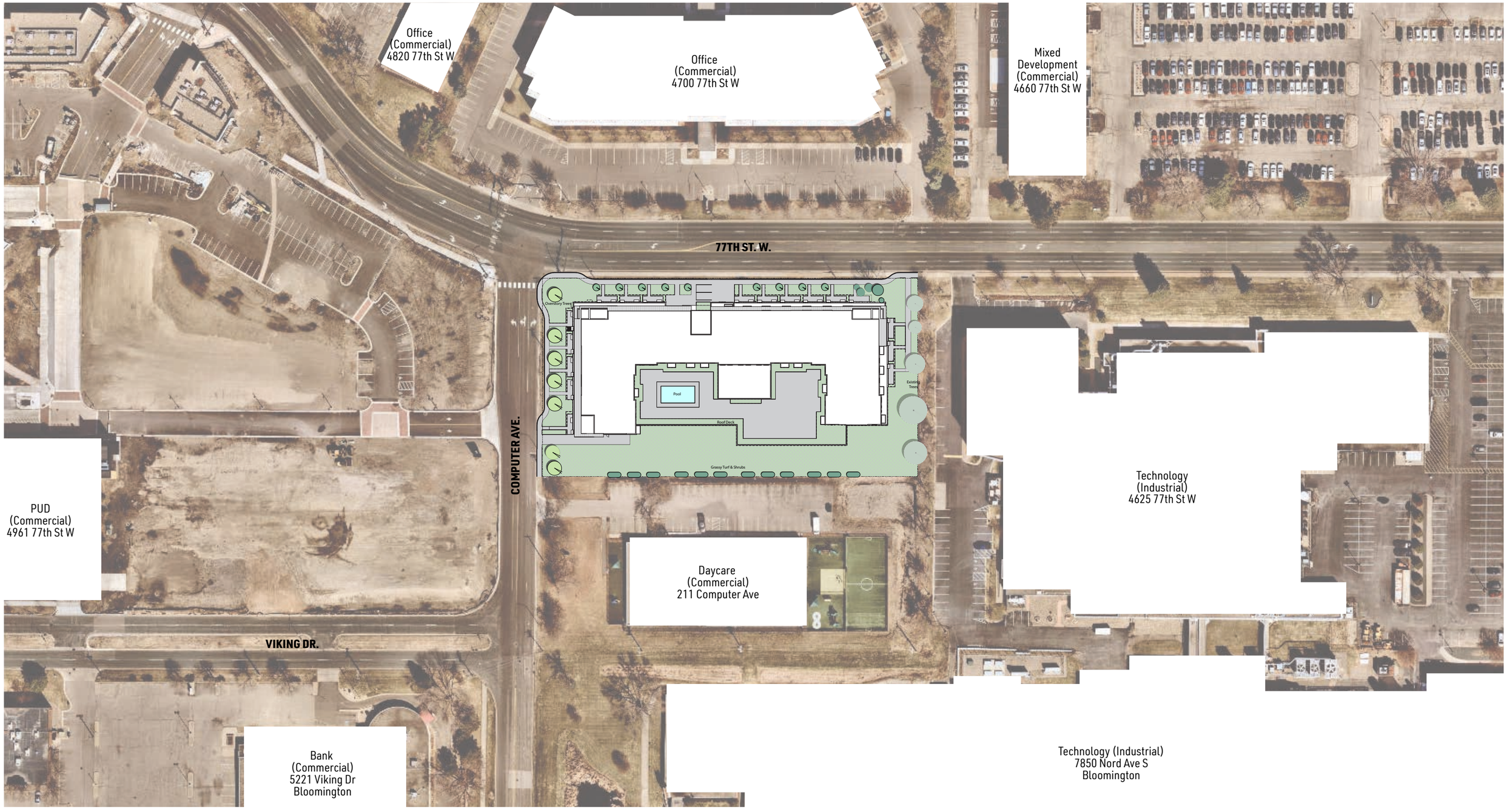
| GROSS AREA | | |
|---|---|---|
| **Unit Type** | **Count** | **Total Area** |
| LEVEL 1 | | |
| ELEVATOR | 2 | 186 SF |
| LOBBY | 1 | 977 SF |
| STAIR | 3 | 602 SF |
| TRASH | 1 | 484 SF |
| TH | 17 | 10,069 SF |
| LEVEL 1: 24 | | 12,318 SF |
| LEVEL 2 | | |
| AMENITY | 1 | 1,211 SF |
| ELEVATOR | 2 | 180 SF |
| LOBBY | 1 | 673 SF |
| STAIR | 3 | 604 SF |
| TRASH | 1 | 27 SF |
| TH (2ND LEVEL) | 17 | 10,627 SF |
| LEVEL 2: 25 | | 13,322 SF |
| LEVEL 3 | | |
| AMENITY | 1 | 3,737 SF |
| CIRCULATION | 1 | 3,476 SF |
| ELEVATOR | 2 | 167 SF |
| MEP | 1 | 607 SF |
| STAIR | 3 | 564 SF |
| STORAGE | 1 | 311 SF |
| TRASH | 1 | 77 SF |
| 1BR | 16 | 11,343 SF |
| 1BR+D | 3 | 2,960 SF |
| 2BR | 7 | 7,183 SF |
| 2BR+D | 2 | 2,916 SF |
| STUDIO | 4 | 2,092 SF |
| LEVEL 3: 42 | | 35,432 SF |
| LEVEL 4 | | |
| CIRCULATION | 1 | 2,853 SF |
| ELEVATOR | 2 | 167 SF |
| MEP | 1 | 607 SF |
| STAIR | 3 | 563 SF |
| STORAGE | 1 | 311 SF |
| TRASH | 1 | 77 SF |
| 1BR | 17 | 12,043 SF |
| 1BR+D | 3 | 2,961 SF |
| 2BR | 7 | 7,190 SF |
| 2BR+D | 2 | 2,946 SF |
| ALCOVE | 1 | 604 SF |
| STUDIO | 5 | 2,635 SF |
| LEVEL 4: 44 | | 32,956 SF |

| GROSS AREA | | |
|---|---|---|
| **Unit Type** | **Count** | **Total Area** |
| LEVEL 5 | | |
| CIRCULATION | 1 | 2,853 SF |
| ELEVATOR | 2 | 167 SF |
| MEP | 1 | 607 SF |
| STAIR | 3 | 563 SF |
| STORAGE | 1 | 311 SF |
| TRASH | 1 | 77 SF |
| 1BR | 17 | 12,043 SF |
| 1BR+D | 3 | 2,961 SF |
| 2BR | 7 | 7,190 SF |
| 2BR+D | 2 | 2,946 SF |
| ALCOVE | 1 | 604 SF |
| STUDIO | 5 | 2,635 SF |
| LEVEL 5: 44 | | 32,956 SF |
| LEVEL 6 | | |
| CIRCULATION | 1 | 2,853 SF |
| ELEVATOR | 2 | 167 SF |
| MEP | 1 | 607 SF |
| STAIR | 3 | 563 SF |
| STORAGE | 1 | 311 SF |
| TRASH | 1 | 77 SF |
| 1BR | 17 | 12,043 SF |
| 1BR+D | 3 | 2,961 SF |
| 2BR | 7 | 7,190 SF |
| 2BR+D | 2 | 2,946 SF |
| ALCOVE | 1 | 604 SF |
| STUDIO | 5 | 2,635 SF |
| LEVEL 6: 44 | | 32,956 SF |
| LEVEL 7 | | |
| CIRCULATION | 1 | 2,853 SF |
| ELEVATOR | 2 | 167 SF |
| MEP | 1 | 607 SF |
| STAIR | 3 | 563 SF |
| STORAGE | 1 | 311 SF |
| TRASH | 1 | 77 SF |
| 1BR | 18 | 12,868 SF |
| 1BR+D | 3 | 2,961 SF |
| 2BR | 8 | 8,127 SF |
| ALCOVE | 1 | 604 SF |
| STUDIO | 5 | 2,635 SF |
| LEVEL 7: 44 | | 31,773 SF |
| Grand total: 267 | | 191,712 SF |



## Site Plan




DJR ARCHITECTURE

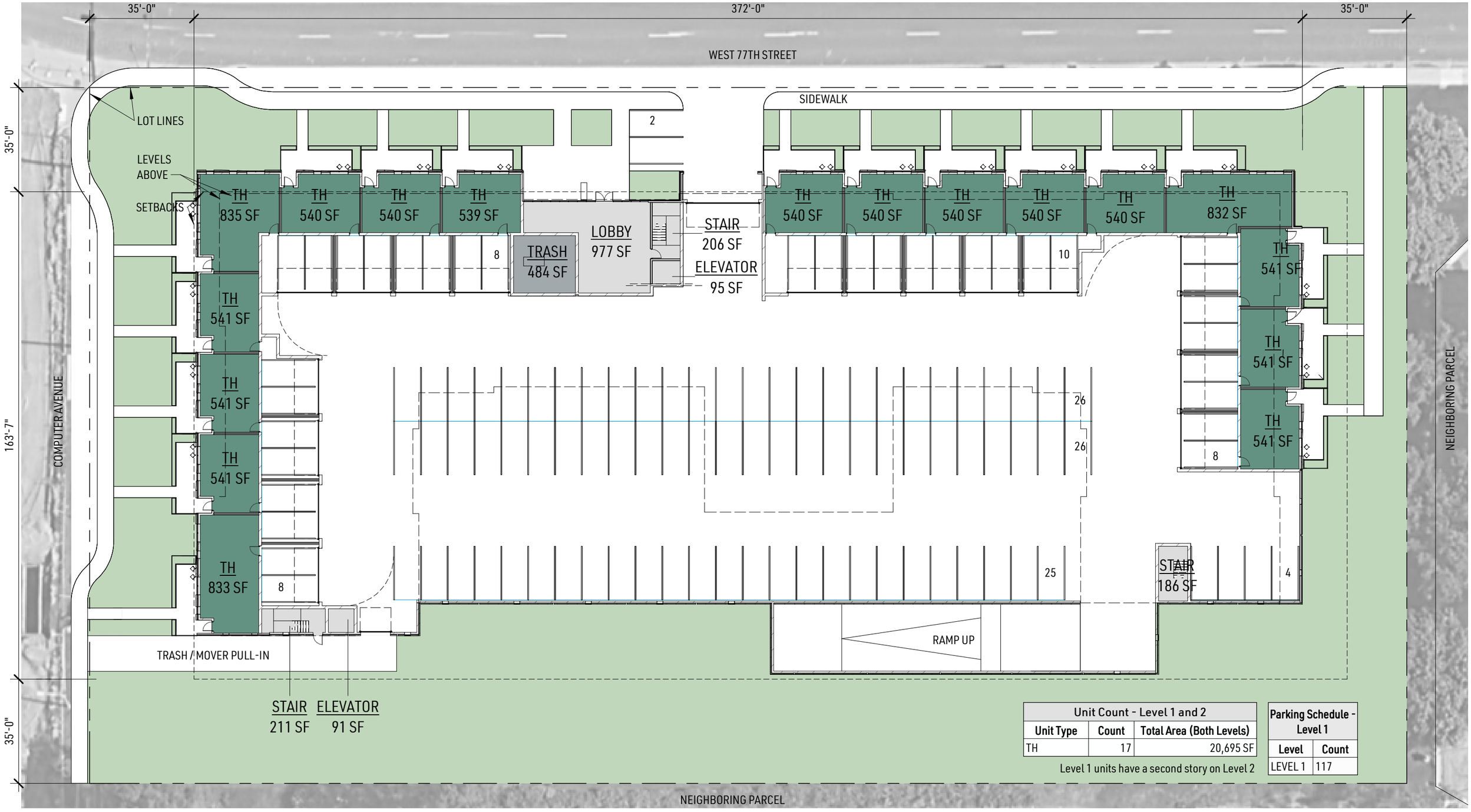


11.02.2021

4701 77th St. W. Apartments

Edina, Minnesota

20-100.00




| Unit Count - Level 1 and 2 | | |
|---|---|---|
| **Unit Type** | **Count** | **Total Area (Both Levels)** |
| TH | 17 | 20,695 SF |

Level 1 units have a second story on Level 2

| Parking Schedule - Level 1 | |
|---|---|
| **Level** | **Count** |
| LEVEL 1 | 117 |

## Floor Plans - Level 1

DJR ARCHITECTURE

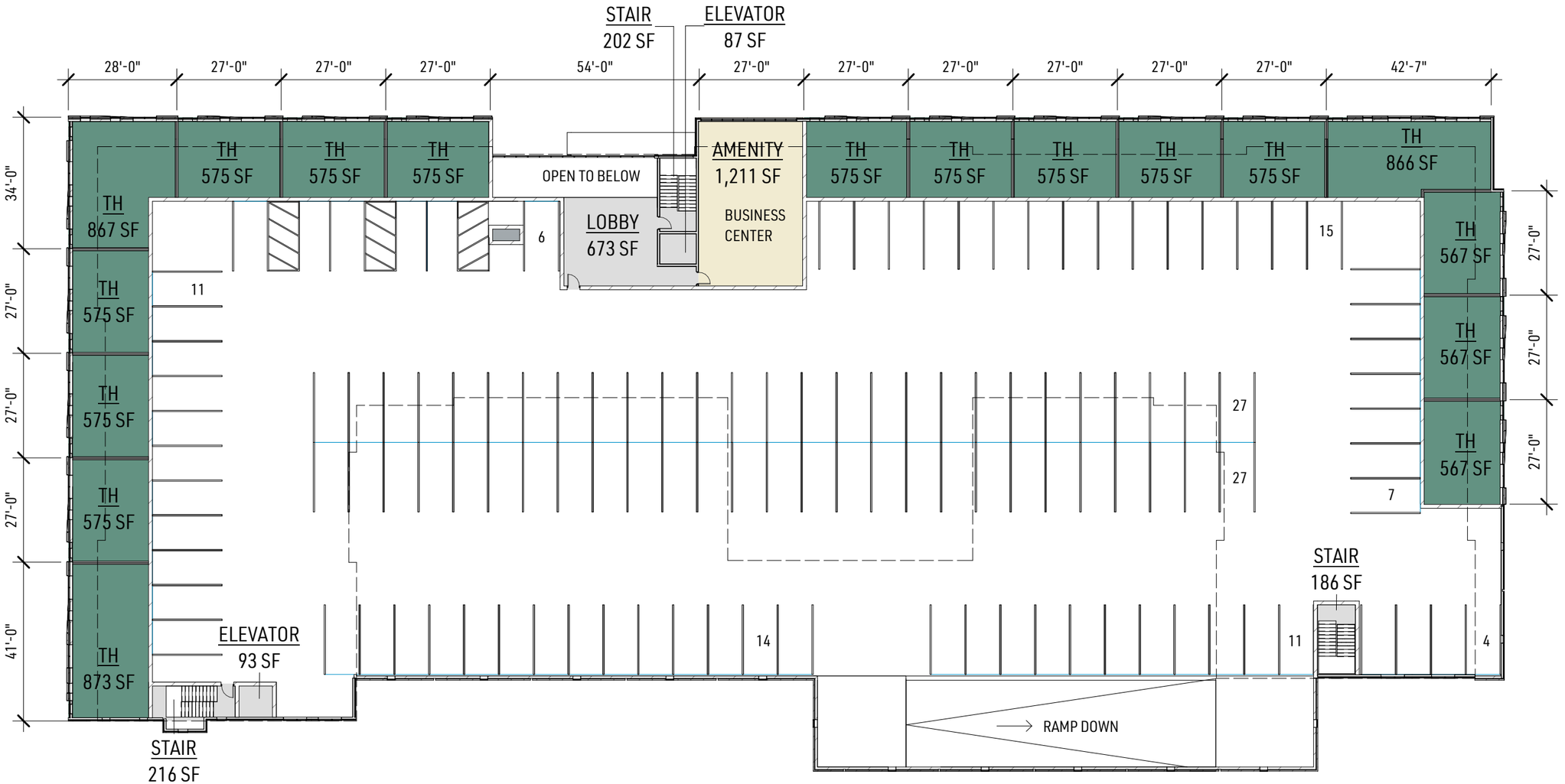
11.02.2021

4701 77th St. W. Apartments

Edina, Minnesota

20-100.00

## Floor Plans - Level 2



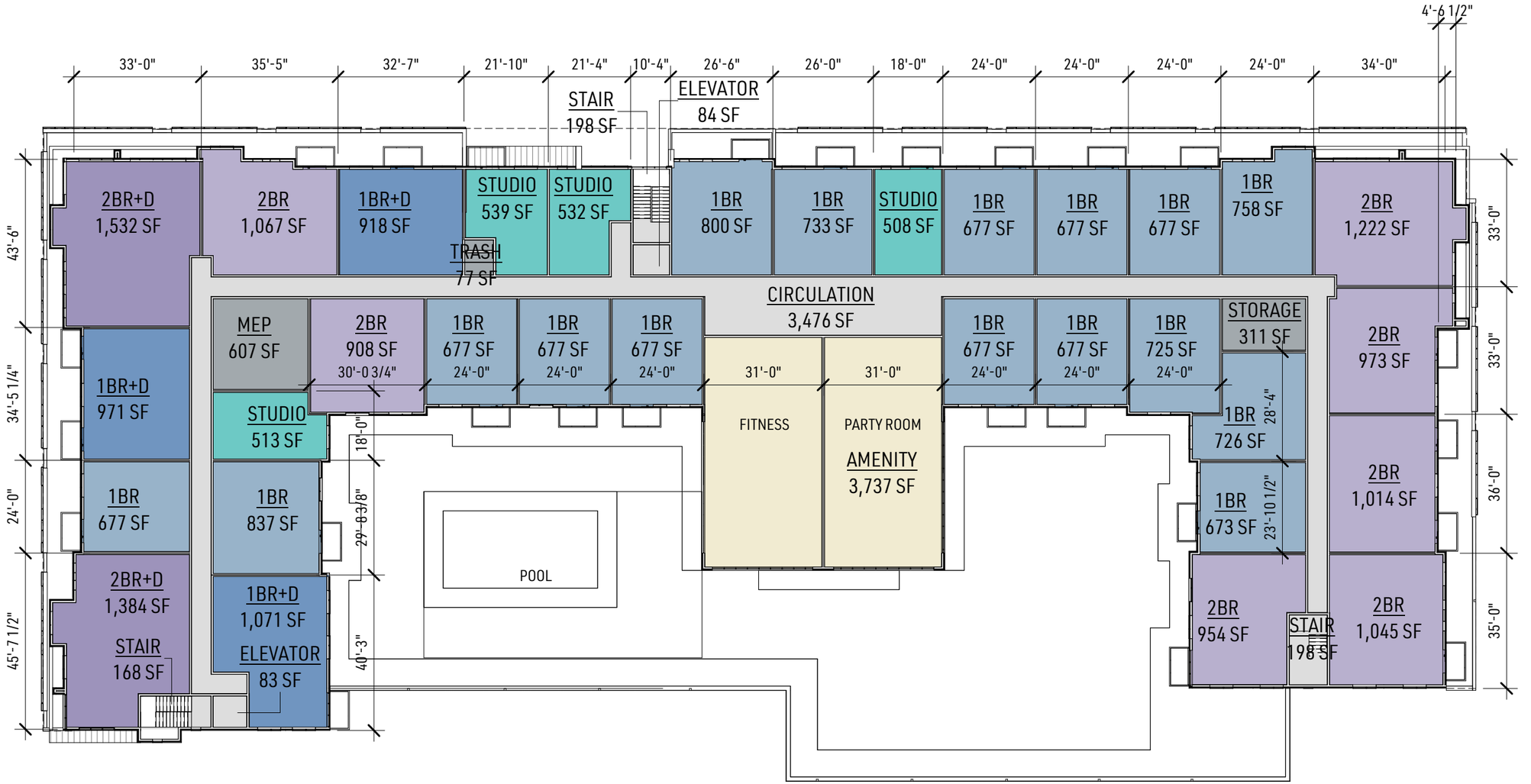

1 **FLOOR PLAN - LEVEL 2**
1" = 30'-0"

| Unit Count - Level 1 and 2 | | |
|---|---|---|
| **Unit Type** | **Count** | **Total Area (Both Levels)** |
| TH | 17 | 20,695 SF |

Level 1 units have a second story on Level 2

| Parking Schedule - Level 2 | |
|---|---|
| Level | Count |
| LEVEL 2 | 122 |

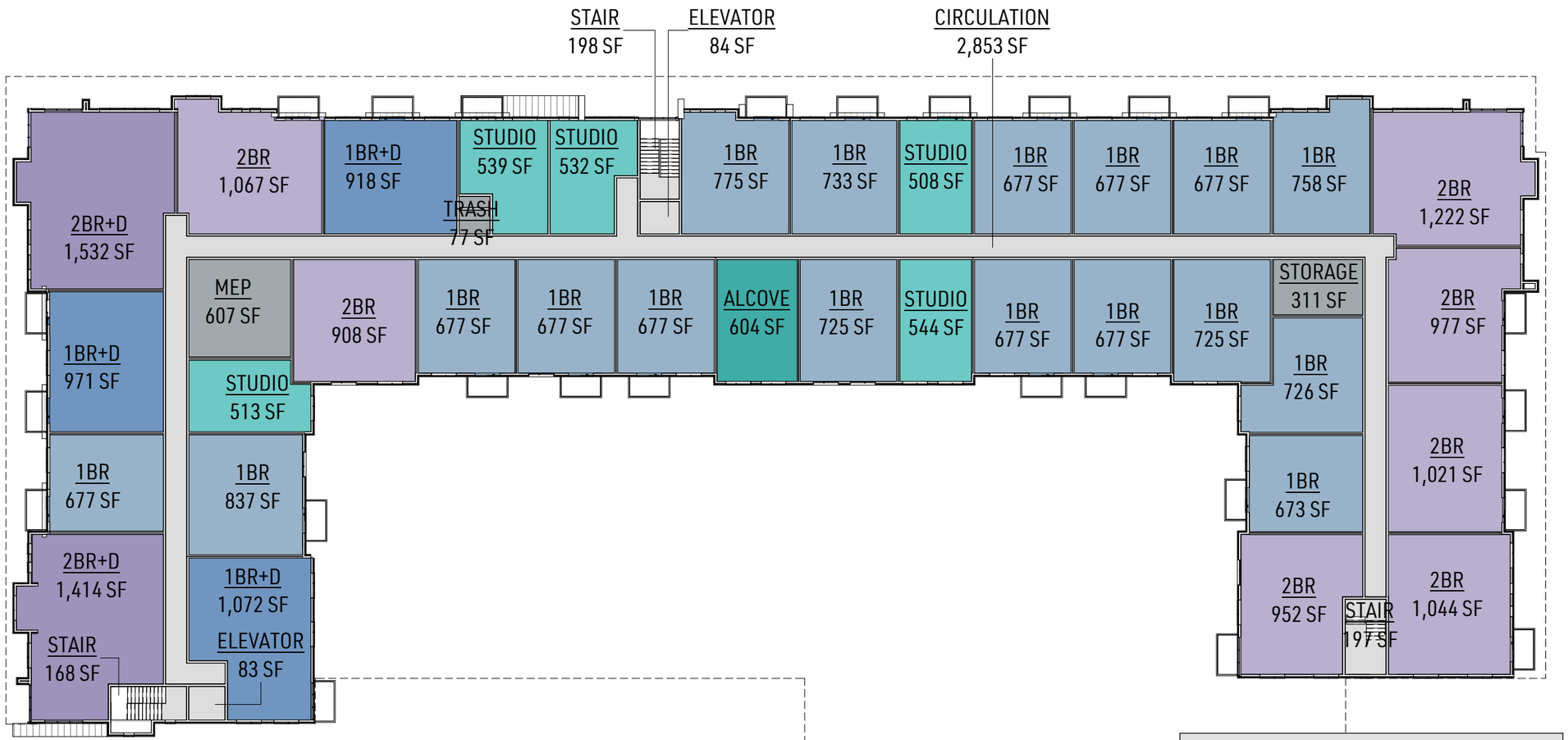
## Floor Plans - Level 3




1 **FLOOR PLAN - LEVEL 3**
1" = 30'-0"

| Unit Count - Level 3 | | | |
|---|---|---|---|
| **Unit Type** | **Count** | **Total Area** | **Average Area** |
| 1BR | 16 | 11,343 SF | 709 |
| 1BR+D | 3 | 2,960 SF | 987 |
| 2BR | 7 | 7,183 SF | 1026 |
| 2BR+D | 2 | 2,916 SF | 1458 |
| STUDIO | 4 | 2,092 SF | 523 |
| Grand total: 32 | | 26,494 SF | |

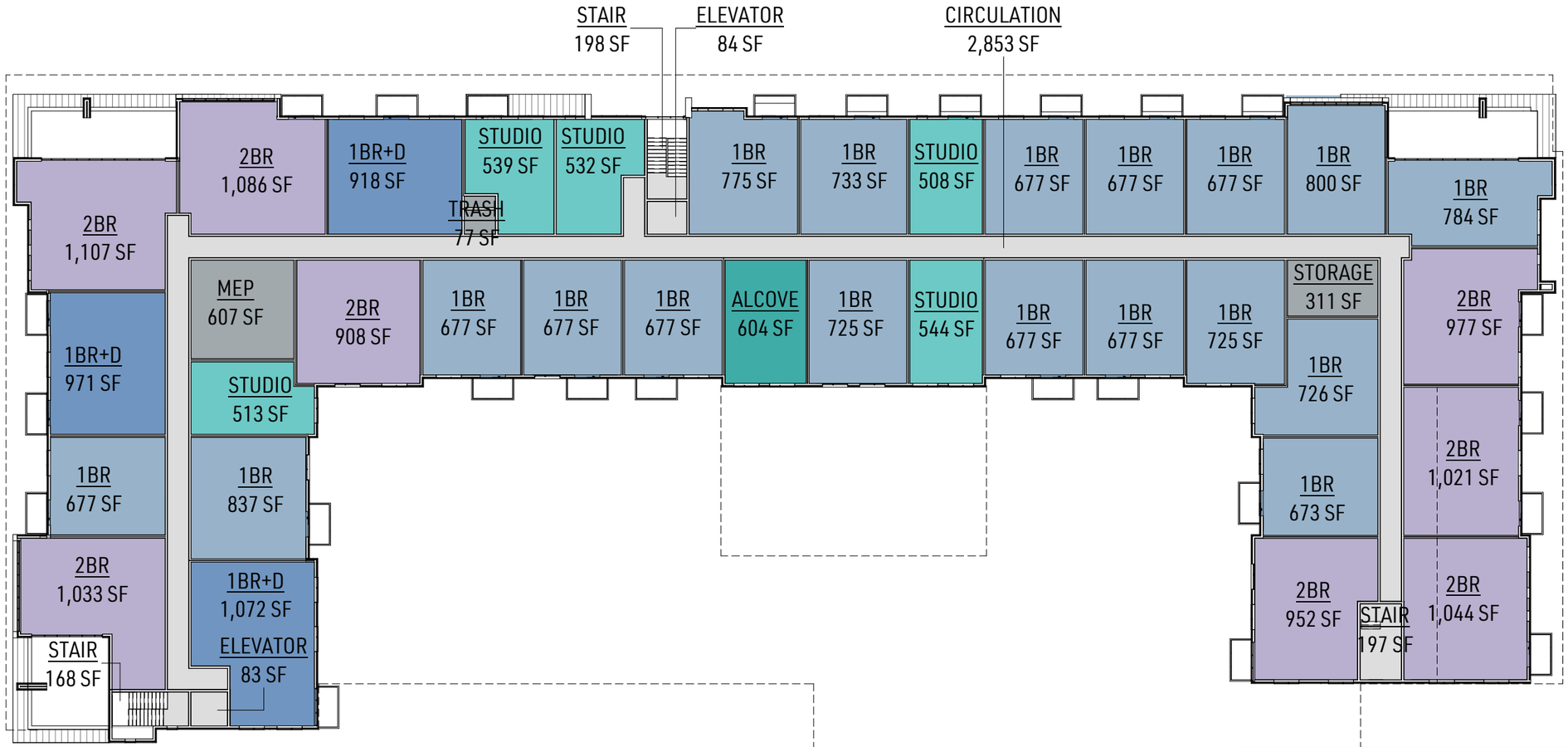
## Floor Plans - Level 4-6




1 **FLOOR PLAN - LEVELS 4-6**
1" = 30'-0"

| Unit Count - Level 4-6 | | | |
|---|---|---|---|
| **Unit Type** | **Count** | **Total Area** | **Average Area** |
| 1BR | 17 | 12,043 SF | 708 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 7 | 7,190 SF | 1027 |
| 2BR+D | 2 | 2,946 SF | 1473 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| Grand total: 35 | | 28,379 SF | |

## Floor Plans - Level 7




1 **FLOOR PLAN - LEVEL 7**
1" = 30'-0"

| Unit Count - Level 7 | | | |
|---|---|---|---|
| **Unit Type** | **Count** | **Total Area** | **Average Area** |
| 1BR | 18 | 12,868 SF | 715 |
| 1BR+D | 3 | 2,961 SF | 987 |
| 2BR | 8 | 8,127 SF | 1016 |
| ALCOVE | 1 | 604 SF | 604 |
| STUDIO | 5 | 2,635 SF | 527 |
| Grand total: 35 | | 27,196 SF | |

*Thank you*

DJR
ARCHITECTURE

333 Washington Ave N
Suite 210 | Union Plaza
Minneapolis MN 55401
612.676.2700 | www.djrarch.com

November 2, 2021

Project Description – 4071 77th Street West

The project proposes a redevelopment of a 2.37-acre site at the southeast corner of 77th Street West and Computer Avenue. The site currently houses a one-story 1960's office and warehouse building which will be removed with redevelopment. The project will provide approximately 17 for-sale affordable townhome style units and approximately 172 market rate rental units. The ground level townhomes wrap the parking for the development including individual parking for the affordable townhomes. The townhomes range in size from 2 bedroom to 3 bedroom and the rental units range from studio to 2 bedroom plus dens. Two car garages are provided for each townhome and 200 parking spaces are provided for the rental units. An additional 2 off-street spaces are proposed for delivery uses and 20 guest parking spaces are shown along Computer Avenue and 77th Street by pulling the curb back to accommodate parallel parking.

Due to a high-water table on the site, the parking is completely above grade, but lined with the two-story townhomes that hide the parking areas for the building. The project is 7 stories in height with step backs at the 3rd floor podium and again on the east and west ends. The rear of the podium will feature a south facing amenity deck with interior amenity spaces and green spaces. Site storm water will be managed in both above-grade and below-grade systems around the site.

Architecture Field Office
2200 Zane Ave N | Minneapolis, MN 55422
www.archfieldoffice.com

To **City of Edina**
Cary Teague, Community Development Director
4801 W. 50th Street
Edina, MN 55424

From Mic Johnson, FAIA

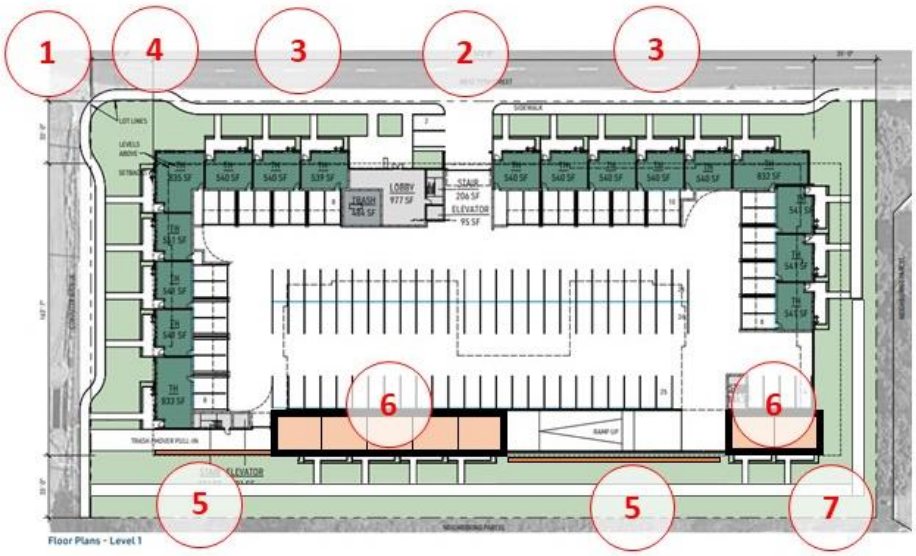
Date November 11, 2021

Cary:

At your request, we reviewed the Sketch Plan submission for the proposed development at 4071 77th Street West based on our experience working with the Greater Southdale Work Group to craft a physical vision for how their guiding principles may translate to the built environment. The resulting vision for development in the district is to create an enhanced human experience along existing major and new connector streets, with overall experience shaped via landscape setbacks, building step backs, a hierarchy of street typologies, transparency at street level, minimizing the impact of the car, and managing storm water as an amenity. The outcome of our collaborations with the Work Group is described in the urban design chapter of the Greater Southdale District Plan and resulted in the Greater Southdale District Design Experience Guidelines.

The project proposed aligns in several areas with the Design Experience Guidelines, demonstrating positive attributes as it relates the creation of an active public realm, and general consideration for the neighborhood. Generally, the elevations and perspectives provided in the sketch plan submission meet the intent of the Experience Guidelines by stepping back from the first 2 stories to create a more pedestrian scale walking environment. The proposal lines above-grade parking with programmed uses (townhomes) and minimizes the visual impact of the car on the pedestrian experience.

However, there are also areas for improved alignment. Landscape options for the Public Realm are not currently represented in the plan drawings or the narrative. If the project moves forward, it will be important to distinguish between desired landscaping at the ground level units and the public sidewalk. In addition, the back of the building is very blank by its design. The programmed parking on the back side is counter to the Experience Guidelines that call for all spaces, in particularly at the ground level are occupied and thereby activated on all four sides of the building as a way to enliven all unbuilt land that surrounds the buildings of the Greater Southdale District. We have included a few suggestions to help the proposal better align with the guidelines, along with an accompanying diagram, on the following page.




**Recommendations**:

1. The turning radius at the corner seems designed to prioritize vehicular turning movement over the safety of pedestrians. Most pedestrian-designed blocks require a 15-foot radius curb, allowing the pedestrian and the driver of the car to have greater eye contact. It would also align more effectively with the crosswalk.
2. At the entry, a more distinct curb cut at the edge of the street would also make it safer for pedestrians by creating distance between the street and cars turning into the parking.
3. Creating islands of trees between the parallel parking stalls at the edge of 77th Street would break up the length of the parallel parking; in these areas, the double row of trees created along with trees along the townhouse units would shade this east-west sidewalk. This should be considered for the west side of the building as well.
4. Allow the sidewalk to continue straight to create more landscaping at the corner of the site for additional trees to reinforce the edge of 77th Street as a major pedestrian corridor. This would also align with comment #3.
5. Provide screening at the service drive and for the parking ramping between floors. Screening the service drive and the ramping are in support of comment #6.
6. Add units on the south side of the parking garage. The screening and these additional units would create a 360 degree public realm around the building, and it would encourage any future building to the south to also recognize the land between the two projects, adding value to the Greater Southdale public realm.
7. Completing the sidewalk that surrounds the building is an important part of activating all four sides of the building.

Thank you for the opportunity to review. Please let me know if you have any questions.
Mic