

## **Discussion and Comments on Monticello Industrial Alternative Urban Areawide Review**

### **REFERENCE AND BACKGROUND**

Monticello Tech LLC is proposing to develop a technology campus, including data center uses, on 550 acres located within the Monticello Orderly Annexation Area. The proposed development area is located south of 85<sup>th</sup> Street and east of TH 25, adjacent to the current city boundary.

In December 2024, Monticello Tech LLC presented a concept to the Planning Commission and City Council at a public workshop. Following that workshop, property owners within the proposed development area submitted a petition for annexation. Based on this action, the City determined an environmental review process would be the appropriate next step.

Per Minnesota Rules part 4410.3610, development of a technology campus would meet the State's mandatory requirements for an environmental review process managed by the City of Monticello as the Responsible Government Unit (RGU).

The City determined that an Alternative Urban Areawide Review (AUAR) should be prepared in compliance with the State's environmental review requirements.

An AUAR is not a project approval document. An AUAR is a planning tool used to evaluate the environmental impacts of proposed development and identifies mitigation strategies the City will use to manage and regulate those impacts.

The Monticello Industrial AUAR process began with an initial scoping process, resulting in the preparation and City acceptance of a Scoping Document. This document outlined two potential development scenarios to be evaluated in the full AUAR.

The draft Monticello Industrial AUAR therefore reviews environmental considerations for the two different development scenarios. The first scenario is consistent with the Monticello Tech proposal and evaluates a technology campus with up to 3 million square feet of technology or data center uses. The second scenario is consistent with the Monticello 2040 Comprehensive Plan for other types of light industrial uses, such as warehousing, production and assembly, and evaluates the development of up to 5 million square feet of these types of light industrial uses.

The draft Monticello Industrial AUAR has been prepared to meet the requirements set for AUAR review. The draft AUAR includes environmental impact analysis in each AUAR category and a detailed mitigation plan specifying required studies, permit, plans, and other strategies necessary to address potential impacts for either development scenario.

During the workshop, the consulting team that prepared the Monticello Industrial AUAR will present an overview of the document and respond to comments and questions. Planning

Commission and City Council members will have the opportunity to discuss the AUAR process and document and offer feedback.

The AUAR is the City's environmental review document. In comments and discussion, the City should consider whether the draft provides the information necessary to inform future planning decisions for either development scenario.

The members are encouraged to review the AUAR in advance of the workshop and come prepared with questions and comments.

**SUPPORTING DATA**

- A. [Environmental Reviews – City of Monticello website](#)
- B. [Monticello Industrial AUAR, DRAFT](#)
- C. Agency Comments To-Date (12/11/25)
- D. Public AUAR Comments To-Date (12/11/25)
- E. Draft Monticello Industrial AUAR Schedule
- F. Environmental Quality Board “Quick Reference: Alternative Urban Areawide Review”

# Monticello Industrial AUAR

## DRAFT ALTERNATIVE URBAN AREAWIDE REVIEW



NOVEMBER 2025

PREPARED FOR:



PREPARED BY:





## Table of Contents

1. Project Title .....	3
2. Proposer .....	3
3. RGU .....	3
4. Reason for Preparation .....	4
5. Project Location .....	4
6. Project Description .....	7
7. Climate Adaption and Resilience .....	11
8. Cover Types .....	17
9. Permits and Approvals Required .....	21
10. Land Use .....	23
11. Geology, Soils, and Topography/Land Forms .....	34
12. Water Resources .....	39
13. Contamination/Hazardous Materials/Wastes .....	70
14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features) .....	74
15. Historic Properties .....	80
16. Visual .....	81
17. Air .....	82
18. Greenhouse Gas (GHG) Emissions/Carbon Footprint .....	83
19. Noise .....	86
20. Transportation .....	89
21. Cumulative Potential Effects .....	98
22. Other Potential Environmental Effects .....	99
Draft Mitigation Plan .....	100

## List of Tables

Table 1: Development Scenarios .....	8
Table 2: Climate Considerations and Adaptions .....	13
Table 3: Existing and Proposed Cover Types .....	18
Table 4: Green Infrastructure .....	18
Table 5: Trees .....	19
Table 6: Anticipated Permits and Approvals .....	21
Table 7: Study Area Future Land Use Designations Purpose and Allowed Uses .....	24
Table 8: Soil Types .....	36
Table 9: Wetland Delineation Summary .....	42
Table 10: Wells within AUAR Study Area .....	45
Table 11. Wastewater Treatment Plant Capacity (Domestic) .....	49
Table 12: Existing Landlocked Basin Summary .....	54
Table 13: Proposed Conditions Runoff Volume Summary .....	57



Table 14: Proposed Stormwater Basin Sizing Summary ..... 57

Table 15: Scenario 1 Water Demand Phasing ..... 64

Table 16: Scenario 2 Water Demand Phasing ..... 65

Table 17: Scenarios 1 and 2 Water Appropriations Summary ..... 66

Table 18. Wetland Buffers ..... 68

Table 19: MPCA “What’s in My Neighborhood?” Sites ..... 70

Table 20. Historic Sites ..... 80

Table 21: Construction Emissions ..... 84

Table 22: Annual Operational Emissions ..... 85

Table 23. Minnesota Industrial Operations Noise Standards ..... 88

Table 24: Trip Generation Forecasts ..... 90

Table 25: Existing and Projected Intersection LOS ..... 93

Table 26: Draft Mitigation Plan ..... 101

## List of Figures

Figure 1: USGS Map ..... 5

Figure 2: AUAR Study Area ..... 6

Figure 3: Development Scenario 1 ..... 9

Figure 4: Development Scenario 2 ..... 10

Figure 5: Average Annual Temperate in Wright County ..... 12

Figure 6: Average Annual Precipitation in Wright County ..... 12

Figure 7: Existing Cover Types ..... 20

Figure 8: Existing Land Use ..... 32

Figure 9: Future Land Use ..... 33

Figure 10: Soil Types ..... 38

Figure 11: Surface Water Resources ..... 40

Figure 12: Wetland Delineation Summary ..... 41

Figure 13: Groundwater Resources ..... 46

Figure 14: Proposed Sewer Service Options ..... 50

Figure 15. Existing Drainage Conditions ..... 60

Figure 16. Proposed Stormwater Basins for Scenario 1 ..... 61

Figure 17. Proposed Stormwater Basins for Scenario 2 ..... 62

Figure 18: Proposed Water Infrastructure ..... 67

Figure 19: What’s in My Neighborhood Listings ..... 72

Figure 20: Traffic Study Intersections ..... 97

## List of Appendices

- Appendix A: Wetland Delineation Reports
- Appendix B: StreamStats Report
- Appendix C: Agency Project Correspondence
- Appendix D: Greenhouse Gas Quantification
- Appendix E: Traffic Impact Analysis

## Draft Alternative Urban Areawide Review

This Alternative Urban Areawide Review (AUAR) follows the format of an Environmental Assessment Worksheet (EAW) (December 2022 version). Where the AUAR guidance provided by the Minnesota Environmental Quality Board (EQB) indicates that an AUAR response should differ notably from what is required for an EAW, the guidance is noted in *italics*.

### 1. PROJECT TITLE

---

Monticello Industrial AUAR

### 2. PROPOSER

---

**Proposer:** Monticello Tech, LLC

**Contact Person:** Nick Frattalone

**Address:** 3205 Spruce Street

**City, State, ZIP:** Little Canada, MN 55117

**Phone:** 651-484-0448

**Email:** nickf@frattaloneco.com

### 3. RGU

---

**RGU:** City of Monticello

**Contact Person:** Angela Schumann

**Title:** Community Development Director

**Address:** 505 Walnut Street

**City, State, ZIP:** Monticello, MN 55362

**Phone:** 763-271-3224

**Email:** angela.schumann@MonticelloMN.gov

#### 4. REASON FOR PREPARATION

---

*AUAR Guidance: Not applicable to an AUAR.*

The Alternative Urban Areawide Review (AUAR) process provides local governments with the opportunity to evaluate how different land uses may impact the community's environment and to plan how to manage and mitigate those impacts. It allows environmental analysis before major development occurs, helping guide local planning and zoning decisions. More information can be found on the Environmental Quality Board's website: <https://www.eqb.state.mn.us/environmental-review/overview/alternative-urban-areawide-review-auar-process>

#### 5. PROJECT LOCATION

---

**County:** Wright

**City/Township:** Monticello

**PLS Location (¼, ¼, Section, Township, Range):** Sections 22, 23, 26, 27, Township 121N, Range 25W

**Watershed (81 major watershed scale):** Mississippi River – St. Cloud and North Fork Crow River Watersheds

**Tax Parcels:** 213100224203, 213100224100, 213100224400, 213100233100, 213100224300, 213100224401, 213100234403, 213100233300, 213100271300, 213100271100, 213100262300, 213100262400, 213100262200, 213100271301, 213100271302, 213100233101.

**At a minimum, attach each of the following to the AUAR:**

- **US Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries** (see **Figure 1**)
- **Map depicting the boundaries of the AUAR and any subdistricts used in the AUAR analysis** (see **Figure 2** through **Figure 4**)
- List of data sources, models, and other resources (from the Item-by-Item Guidance: Climate Adaptation and Resilience or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in Item 7)
- **Cover type map as required for Item 8** (see **Figure 7**)
- **Land use and planning maps as required in conjunction with Item 0** (see **Figure 8** and **Figure 9**)

Figure 1: USGS Map

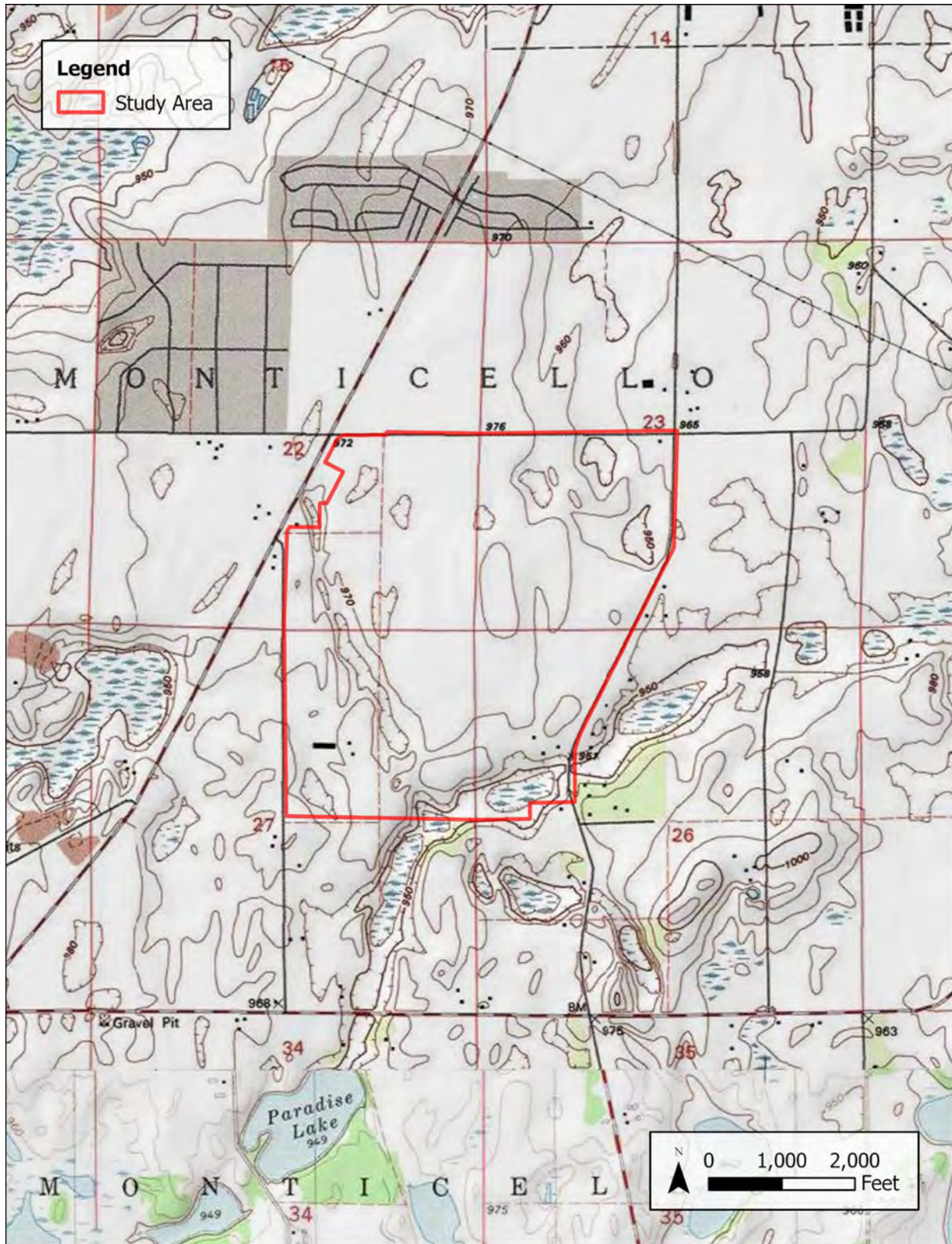
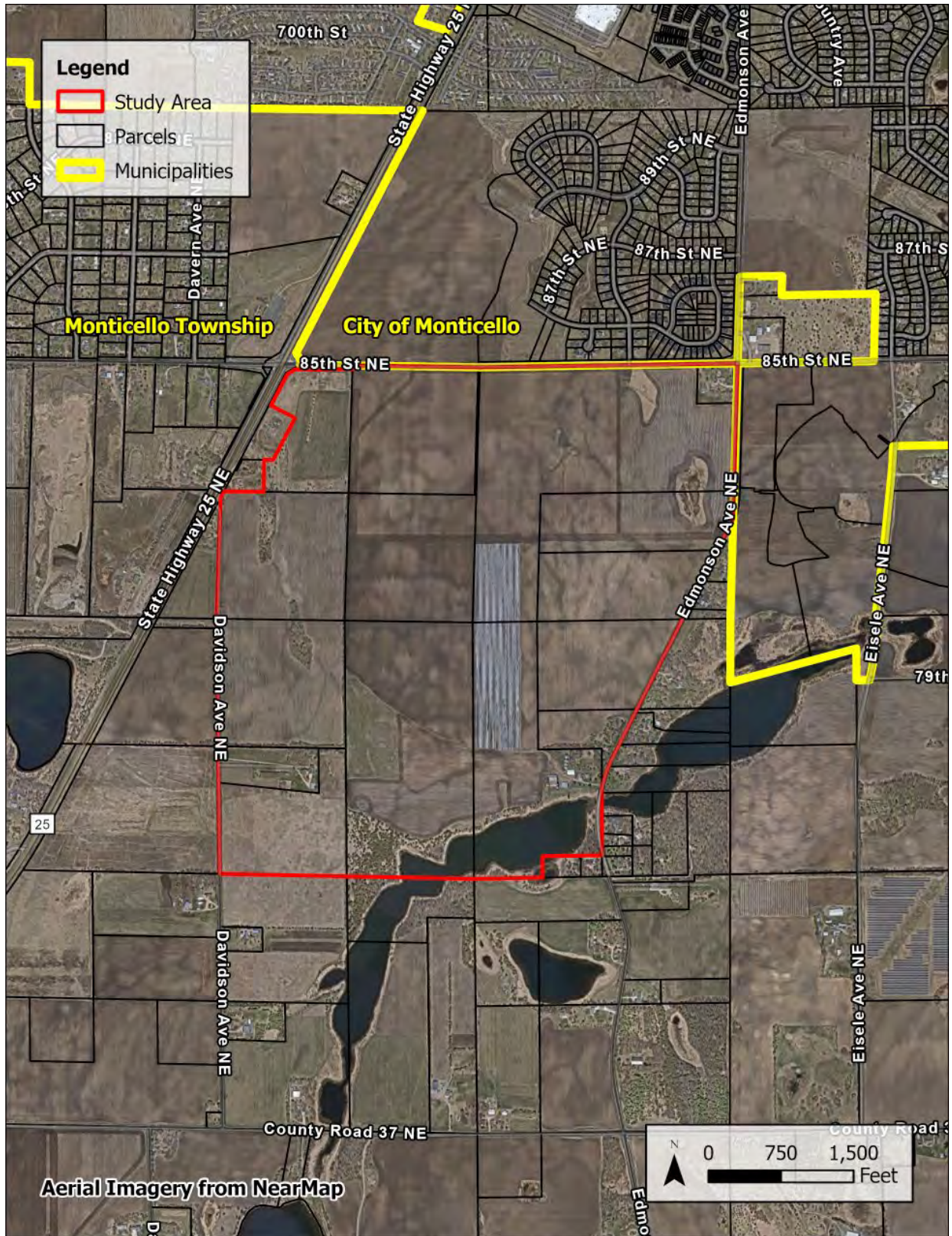


Figure 2: AUAR Study Area



## 6. PROJECT DESCRIPTION

---

*AUAR Guidance: Instead of the information called for on the EAW form, the description section of an AUAR should include the following elements for each major development scenario included:*

- *Anticipated types and intensity (density) of residential and commercial/warehouse/light industrial development throughout the AUAR area.*
- *Infrastructure planned to serve development (roads, sewers, water, stormwater system, etc.). Roadways intended primarily to serve as adjoining land uses within an AUAR area are normally expected to be reviewed as part of an AUAR. More “arterial” types of roadways that would cross an AUAR area are an optional inclusion in the AUAR analysis; if they are included, a more intensive level of review, generally including an analysis of alternative routes, is necessary.*
- *Information about the anticipated staging of various developments, to the extent known, and of the infrastructure, and how the infrastructure staging will influence the development schedule.*

The AUAR study area encompasses an area totaling approximately 550 acres on 16 parcels in Monticello Township, Wright County, Minnesota (shown on Figure 2). Monticello Tech, LLC is proposing to develop the study area from existing farmland to a technology campus or light industrial uses. The intent of the AUAR is to recognize the worst-case potential impacts and identify mitigation measures that may be taken to compensate for those impacts.

Two scenarios are evaluated in the AUAR as outlined in Table 1. Scenario 1 includes multiple buildings for a total of up to 3,000,000 square feet of a proposed technology park/campus development (see Figure 3). Scenario 1 could include a data center, research and design facilities, technology, laboratories or research park uses. These types of uses are expected to also include the need to build additional electrical substations, transmission lines, and backup generators. For the purposes of impact evaluation, this scenario assumes a data center campus, with 5-10 principal buildings, approximately 200,000 – 400,000 square feet per building with a few ancillary support buildings. Scenario 1 is expected to follow a similar life cycle of other typical light industrial development. With most technology park campuses, including data centers, the exterior shell of the buildings are anticipated to be used over many decades, while the internal components are upgraded periodically as technology advances.

Scenario 2 includes multiple buildings for a total of up to 5,000,000 square feet of light industrial land use based on the City of Monticello’s adopted land use plan (see Figure 4). Scenario 2 could include process and production manufacturing which uses moderate amounts of partially processed materials, warehousing and distribution, machine shops, computer technology including office and research and development facilities (but not including data centers as a singular principal use), professional and corporate offices and industrial engineering facilities. For the purposes of impact evaluation, this scenario assumes a light industrial park type development that could include 5-20 buildings that range from approximately 20,000-1 million square feet. Generally, light industrial



development within Scenario 2 is expected to occur in the range of 50,000 – 500,000 square foot buildings.

The proposed development within the AUAR study area is anticipated to begin construction in 2027. Under Scenario 1, a developer would build out the AUAR study area in multiple phases, ending in approximately 2034. Under Scenario 2, multiple developers would build out the AUAR study area in multiple phases, ending in approximately 2045.

Development of the study area for both scenarios would include new municipal infrastructure, including water service, sewer, stormwater, streets, and utilities. All new services would be extensions to existing infrastructure or upgrades to existing systems to support the new development. Both scenarios are anticipated to require approximately two miles of trunk water and trunk sanitary sewer extensions to serve the site along Fallon Avenue NE and 85<sup>th</sup> Street NE extending as directed by the City to the property boundary. Additionally, a trunk water extension may be routed along Edmonson Ave NE. Additional infrastructure needs would be built in general conformance with the City of Monticello 2040 Comprehensive Plan.

Scenario 1 would require significantly lower operational traffic and potentially higher water/wastewater demands compared to Scenario 2. However, both scenarios present variable impacts to water/wastewater demand based on the types of uses develop in either scenario. Scenario 2 would require additional public roadway network improvements as compared to Scenario 1. Scenario 2 is anticipated to include a new entrance to Highway 25. Both scenarios are expected to incorporate similar screening/buffering elements to minimize any potential land use conflicts.

**Table 1: Development Scenarios**

Component	Scenario 1	Scenario 2 (Comp Plan)
Technology Park (square feet)	3,000,000	-
Light Industrial (square feet)	-	5,000,000
<b>Total (square feet)</b>	<b>3,000,000</b>	<b>5,000,000</b>
<b>Total Project Area</b>	<b>550 acres</b>	<b>550 acres</b>

Figure 3: Development Scenario 1

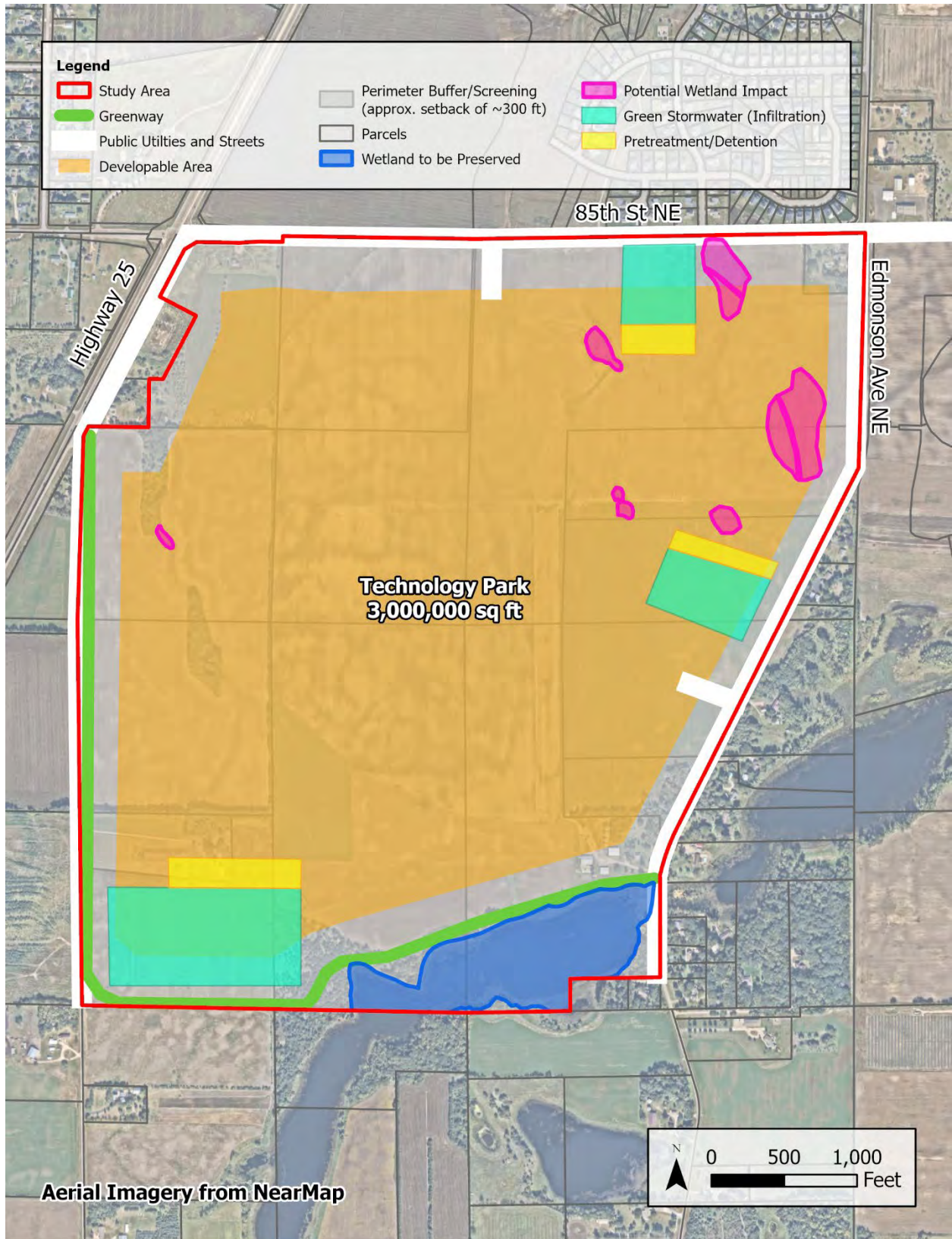
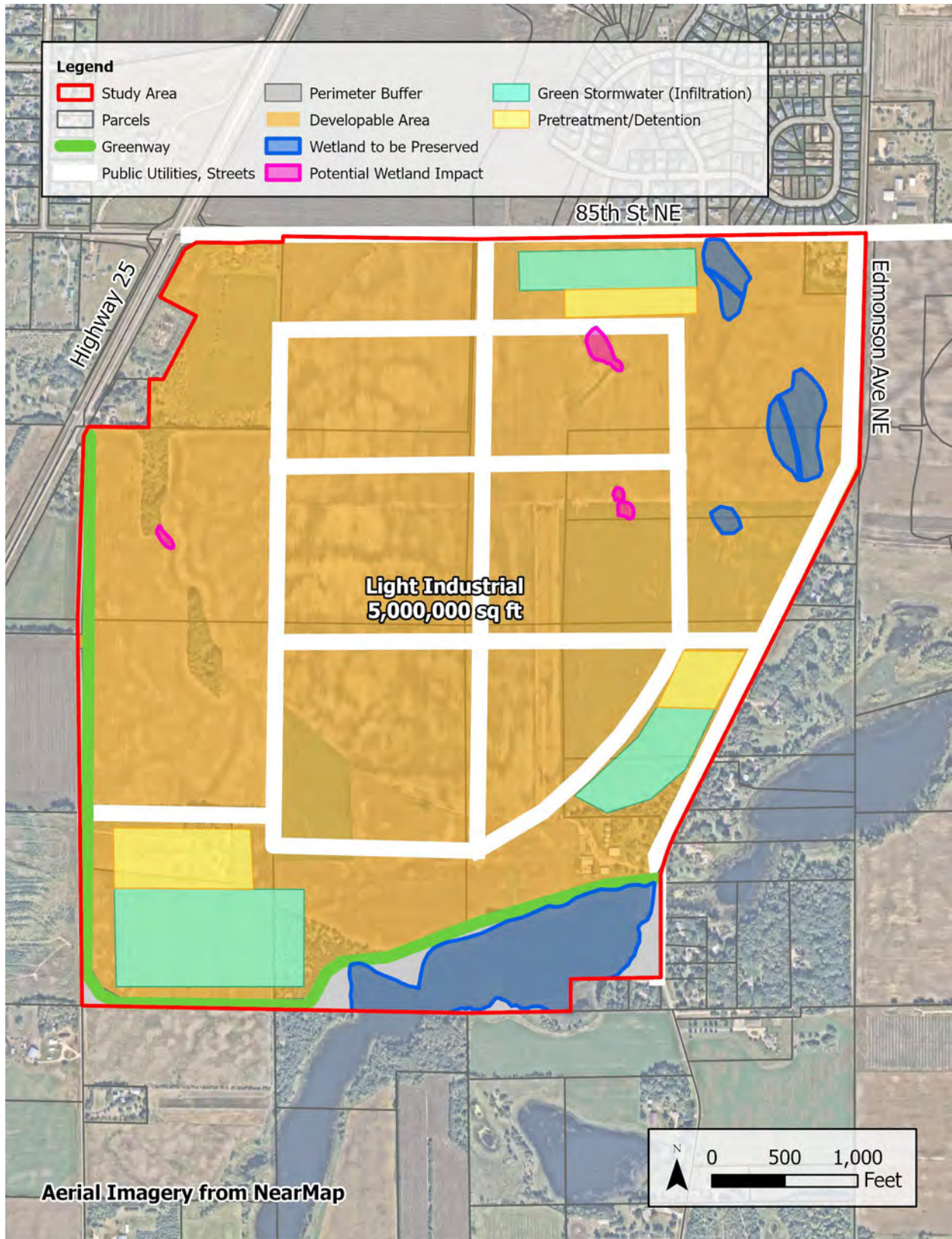


Figure 4: Development Scenario 2



## 7. CLIMATE ADAPTION AND RESILIENCE

---

- a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

Trends in temperature, precipitation, flood risk, and cooling degree days are described below for the general project location. Some of the climate projections summarized below use shared socioeconomic pathways (SSPs), which are greenhouse gas concentration scenarios used by the Intergovernmental Panel on Climate Change. The SSPs reflect assumptions about how industrialization, fossil fuel dependence, land use, and population density evolve in the future. The assumptions are based on population growth, urbanization, economic growth, technological advances, greenhouse gas and aerosol emissions, energy supply and demand, land-use changes, and more.<sup>1</sup> SSP 245 is an intermediate scenario in which emissions decline after peaking around 2040, and SSP 370 is a high-emission scenario in which emissions continue to rise through the 21st Century.

### Temperature

According to the National Centers for Environmental Information, the annual daily average temperature in Wright County from 2005 to 2024 was 44.7°F.<sup>2</sup> According to the Minnesota Climate Mapping and Analysis Tool, the annual daily average temperature in the study area is projected to increase to 48.0°F from 2040 to 2059 under an intermediate emissions pathway (SSP 245).<sup>3</sup> In 2080-2099, annual daily average temperature is projected to further increase to 51.0°F and 53.2°F under an intermediate (SSP 245) and high emissions pathway (SSP 370), respectively.

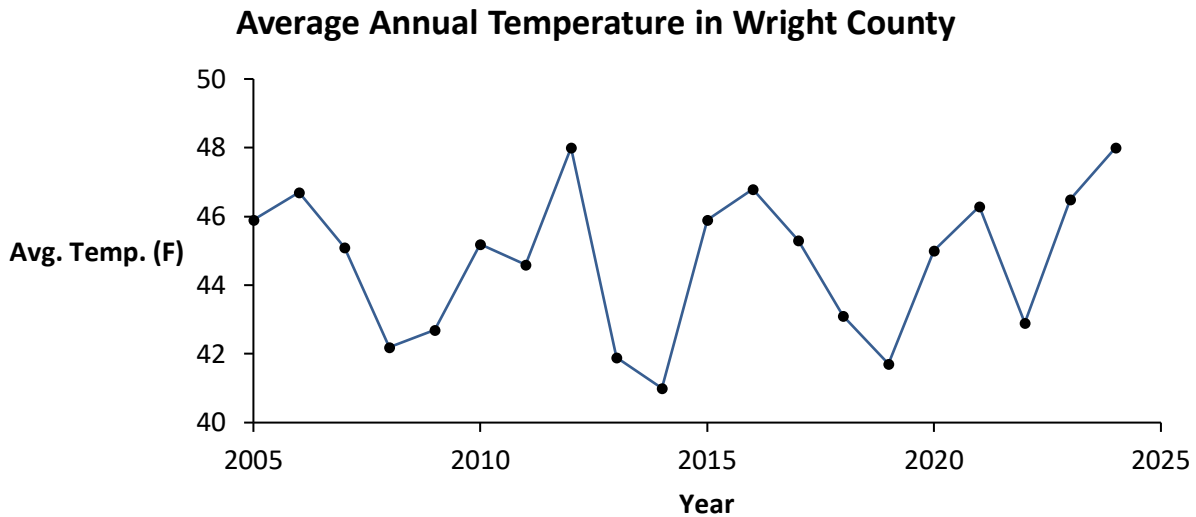
---

<sup>1</sup> More information on SSPs is available at: [https://climate.umn.edu/sites/climate.umn.edu/files/2023-06/ClimateProjectionPrimer\\_Compiled\\_CoverPage.pdf](https://climate.umn.edu/sites/climate.umn.edu/files/2023-06/ClimateProjectionPrimer_Compiled_CoverPage.pdf)

<sup>2</sup> National Centers for Environmental Information, National Oceanic and Atmospheric Administration. *County Time Series*. Available at: <https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series>.

<sup>3</sup> Minnesota CliMAT. University of Minnesota. Available at [https://app.climate.umn.edu/?output\\_type=modelVal&scenario=ssp370\\_2080-2099&model=ensemble&variable=tmax-degF&time\\_frame=yearly&aoi=none#intro\\_pane](https://app.climate.umn.edu/?output_type=modelVal&scenario=ssp370_2080-2099&model=ensemble&variable=tmax-degF&time_frame=yearly&aoi=none#intro_pane)

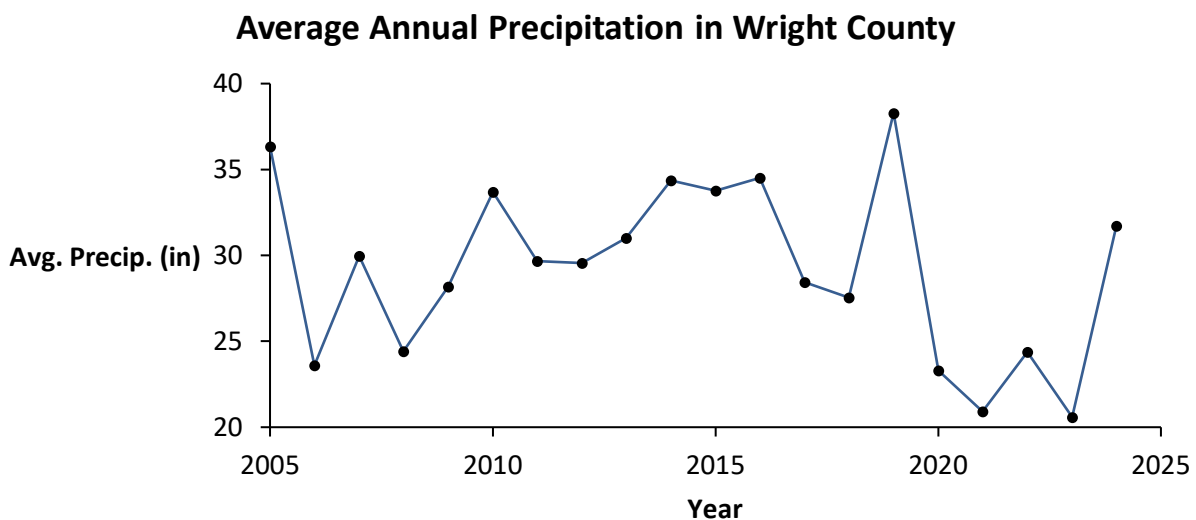
Figure 5: Average Annual Temperature in Wright County



**Precipitation**

According to the National Centers for Environmental Information, the annual average precipitation in Wright County from 2005 to 2024 was 29.2 inches.<sup>4</sup> According to the EPA Climate Resilience Evaluation and Awareness Tool (CREAT) Climate Change Scenarios Projection Map, there is a projected 2.6% to 13.8% increase in 100-year storm intensity by 2035 and a projected 5.2% to 26.9% increase in 100-year storm intensity by 2060 for the AUAR study area.<sup>5</sup>

Figure 6: Average Annual Precipitation in Wright County



<sup>4</sup> National Centers for Environmental Information, National Oceanic and Atmospheric Administration. *County Time Series*. Available at: <https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series>.

<sup>5</sup> CREAT Climate Change Scenarios Projection Map. US EPA. Available at <https://www.arcgis.com/home/item.html?id=3805293158d54846a29f750d63c6890e>

**Localized Flood Risk**

The National Oceanic and Atmospheric Administration’s (NOAA) Climate Mapping for Resilience and Adaptation (CMRA) tool<sup>6</sup> includes climate projections for numerous variables related to various climate hazards. In this tool, the lower emissions scenario is a possible future in which humans drastically reduce their use of fossil fuels, reducing global emissions of heat-trapping gases to zero by 2040. This scenario is known as RCP 4.5. The higher emissions scenario is a possible future in which humans continue increasing emissions of heat-trapping gases from fossil fuels through 2100. This scenario is known as RCP 8.5. For a census tract containing the AUAR study area, this tool projects the average annual total precipitation in 2015-2044 to increase to 30.7 inches with lower emissions and 31.1 inches with higher emissions. In 2035-2064, the average annual total precipitation is projected to further increase to 31.1 inches with lower emissions and 31.2 inches with higher emissions.

**Cooling Degree Days**

As defined by the National Weather Service, cooling degree days, which are often used as a proxy to estimate cooling needs for buildings, can be examined as a baseline and projected exposure indicator under the RCP 4.5 and RCP 8.5 scenarios. Cooling degree days are indexed units, not actual days, which roughly describe the demand to heat or cool a building. Cooling degree days accumulate on days warmer than 65°F when cooling is required. For example, if a weather station recorded an average daily temperature of 78°F, cooling degree days for that station would be 13.

According to Heat Vulnerability in Minnesota,<sup>7</sup> which provides county level data, the number of cooling degree days in 2019 for the county containing the AUAR study area (Wright County) was 381. The number of cooling days in 2050 for Wright County is projected to be 448 and 598 for RCP 4.5 and 8.5, respectively.

- b. For each resource category in the table below, describe the project’s proposed activities and how the project’s design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.**

**Table 2: Climate Considerations and Adaptions**

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptions (Scenario 1 and Scenario 2)
<b>Project Design</b>	Aspects of building architecture/ materials choices and site	In the coming decades, the location of the study area is anticipated to experience:	<ul style="list-style-type: none"> <li>• Majority of technology park end users have sustainability goals around water, energy, carbon, recycling that would be implemented on this site (applies to Scenario 1).</li> </ul>

<sup>6</sup> NOAA Climate Mapping for Resilience and Adaption tool. Available at <https://resilience.climate.gov/#assessment-tool>.

<sup>7</sup> Heat Vulnerability in Minnesota. Minnesota Department of Health and the University of Minnesota. Available at [https://maps.umn.edu/climatehealthtool/heat\\_app/](https://maps.umn.edu/climatehealthtool/heat_app/).

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptions (Scenario 1 and Scenario 2)
	design may impact conditions in the surrounding area, including changing climate zones, temperature trends, and potential for extended heat waves.	<ul style="list-style-type: none"> <li>• Increased annual temperature.</li> <li>• Increased annual precipitation and more frequent heavy rainfall events.</li> <li>• Increased freeze thaw cycles.</li> </ul>	<ul style="list-style-type: none"> <li>• Energy efficient building shells, appliances, equipment and lighting would be incorporated into the building design to minimize overall energy needs with rising cooling demand.</li> <li>• Proposed native trees and landscaping would reduce runoff and mitigate heat island effect and increased energy/water costs for cooling.</li> <li>• Parking areas would be evaluated to reduce impervious areas within the AUAR study area to mitigate potential increases in precipitation.</li> <li>• A chloride management plan would be implemented per any state and local guidelines or requirements. Chloride conscious design would be considered to minimize salt usage by the development. This could include considering potential locations of snow melt, ice formation, and tree shading.</li> <li>• Addition of pathways and the construction of the roundabout at Fallon Avenue/School Boulevard and 85th/Hwy 25 will reduce vehicle emissions from stalling vehicles and encourage pedestrian activity.</li> </ul>
<b>Land Use</b>	Loss of tree cover, removal of wetlands, increasing severity of storms, increased frequency of freeze/thaw transitions	<ul style="list-style-type: none"> <li>• Development of the study area will convert the land use from agriculture to industrial uses, increasing impervious surfaces within the study area as well as demand for</li> </ul>	<ul style="list-style-type: none"> <li>• Design of the site, greenway, and stormwater management facilities will be used to reduce the risk of flooding in the AUAR study area. Infiltration areas will be used to improve water quality and reduce stormwater runoff in the project vicinity.</li> <li>• Design of the site will incorporate buffer requirements and preservation of wetlands or woodlands as required</li> </ul>

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptions (Scenario 1 and Scenario 2)
		utility and energy services. <ul style="list-style-type: none"> <li>• Portions of the proposed development may experience flooding during extreme rain events.</li> </ul>	by the City ordinance and/or to the extent practical.
<b>Water Resources</b>	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence water resources.	<ul style="list-style-type: none"> <li>• Water resources in the general project area may become warmer, and increase in volume due to increased temperatures and runoff. There may be more evaporation and water available when it rains leading to an increase in the flood potential.</li> <li>• It is projected that there will be more severe storm events with high, intense rain amounts which will require drainage systems to be adequately maintained to accommodate for the increase</li> </ul>	<ul style="list-style-type: none"> <li>• Developer could consider using native plants and perennials for landscaping and stormwater features to absorb water and reduce the water demand for irrigation.</li> <li>• Developer could use native plants and perennials for landscaping adjacent to water resource buffers</li> <li>• If using groundwater, water reuse systems such as cycling water, will be implemented for cooling purposes to reduce water usage (applies to Scenario 1).</li> <li>• Stormwater Best Management Practices (BMP) shall meet criteria for Minnesota Pollution Control Agency (MPCA) water quality requirements.</li> <li>• Stormwater BMP's shall be designed to meet the City of Monticello's criteria for rate control as well as runoff volume reduction.</li> <li>• Stormwater BMP's will be designed to maintain stormwater runoff rates at or below the level of existing conditions.</li> <li>• The precipitation depth for the 100-year, 24-hour storm is anticipated to increase by 20% by the end of the century based on the paper Equipping Municipalities with Climate Change Data to Inform Stormwater</li> </ul>

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptions (Scenario 1 and Scenario 2)
		in water volume.	<p>Management.<sup>8</sup> The runoff volume and rates would increase proportionally to the precipitation depth assuming the same land use and storm duration. Stormwater BMPs should be conservatively designed to account for this increase in runoff volume. Stormwater conveyance system should be designed to account for the increase in peak flow.</p> <ul style="list-style-type: none"> <li>• Water efficient irrigation design will be considered for any landscape irrigation systems.</li> <li>• Green infrastructure systems will be included in site development. This could be infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, or vegetated swales with impermeable check dams.</li> <li>• Additional adaptations discussed in Item 12.</li> </ul>
<b>Contamination / Hazardous Materials/ Wastes</b>	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence the potential environmental effects of generation /use/ storage of hazardous waste and materials.	The proposed development is not anticipated to generate hazardous waste or materials. Any potential technology campus and light industrial uses may require storage of hazardous materials and wastes.	Design of the site would ensure placement of any potential storage of hazardous materials and wastes would not be in floodplain areas or result in contamination.

<sup>8</sup> Equipping Municipalities with Climate Change Data to Inform Stormwater Management. Available at: <https://conservancy.umn.edu/server/api/core/bitstreams/e29c1999-088a-4958-b68f-c201153f4884/content>.

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptions (Scenario 1 and Scenario 2)
<b>Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)</b>	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence the local species and suitable habitat.	Suitable habitat for species may become unsuitable due to land use changes, increased temperature, and increased runoff.	<ul style="list-style-type: none"> <li>Climate-appropriate native plantings and stormwater BMPs will provide suitable habitat for small mammals, insects, and bird species.</li> <li>Integration of a future greenway corridor will provide for additional habitat and species connectivity.</li> </ul>

## 8. COVER TYPES

*AUAR Guidance: The following information should be provided:*

- *A cover type map, at least at the scale of a USGS topographic map, depicting:
 
  - *Wetlands (identified by Circular 39 type)*
  - *Watercourses (rivers, streams, creeks, ditches)*
  - *Lakes (identify public waters status and shoreland management classification)*
  - *Woodlands (break down by classes where possible)*
  - *Grassland (identify native and old field)*
  - *Cropland*
  - *Current development**
- *An overlay map showing anticipated development in relation to the cover types. This map should also depict any “protection areas,” existing or proposed, that will preserve sensitive cover types. Separate maps for each major development scenario should be generally provided.*

The AUAR study area is approximately 550 acres of cropland, forest, wetland, open water, impervious surface, and grassland. See Table 3 for the complete acreage of each cover type within the AUAR study area. There are few existing buildings and structures within the study area that include some single-family homes and some farmstead buildings and structures. These cover types were determined by reviewing recent aerial photography and wetland boundaries were determined during two field delineations completed June 2024 and April 2025.

The proposed cover types for the two scenarios are included in Table 3. Protected elements, including wetland impacts and buffer/protection areas, are shown on the proposed scenarios maps for Scenarios 1 and 2, which are shown on Figure 3 and Figure 4.

Site development of either scenario would be required to follow city landscaping ordinances. Landscaping could include the use of green infrastructure to enhance existing wetland function, preserve existing natural features, and mitigate stormwater runoff. Green infrastructure systems include infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, vegetated swales with impermeable check dams. The project proposer will use native plants in landscape design and will maintain existing significant floodplain and wetland complexes as feasible. The proposed Wooded/Forest, Brush/Grassland, and Lawn/Landscaping cover types account for the proposed greenway transecting the site. The acreage of green infrastructure systems proposed for the two scenarios is included in Table 3 and Table 4.

**Table 3: Existing and Proposed Cover Types**

Cover Type	Existing (acres)	Scenario 1 (acres)	Scenario 2 (acres)
Wetlands and Shallow Lakes (less than 2 meters deep)	30.75	22.26	29.49
Rivers/Streams	0 In ft	0 In ft	0 In ft
Wooded/Forest	28	25.25	25.25
Brush/Grassland	36.25	1	1
Cropland	444	0	0
Livestock Rangeland/Pastureland	0	0	0
Lawn/Landscaping	0	289.49	262.26
Green Infrastructure (total from Table 4)	0	33	39
Impervious Surface	11	171	232
Other (Stormwater Pretreatment and Detention Ponds)	0	8	17
<b>Total</b>	<b>550 acres</b>	<b>550 acres</b>	<b>550 acres</b>

**Table 4: Green Infrastructure**

Green Infrastructure	Before (acres)	Scenario 1 (acres)	Scenario 2 (acres)
Constructed Infiltration Systems (infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, vegetated swales with impermeable check dams) <sup>9</sup>	0	33	39
<b>Total</b>	<b>0</b>	<b>33</b>	<b>39</b>

<sup>9</sup> Based on preliminary stormwater requirement calculations based on estimated impervious surface area.



**Table 5: Trees**

Trees	Scenario 1 (acres)	Scenario 2 (acres)
Area of Mature Trees Removed During Development <sup>10</sup>	15	25
New Trees Planted (acres) <sup>11</sup>	15	25

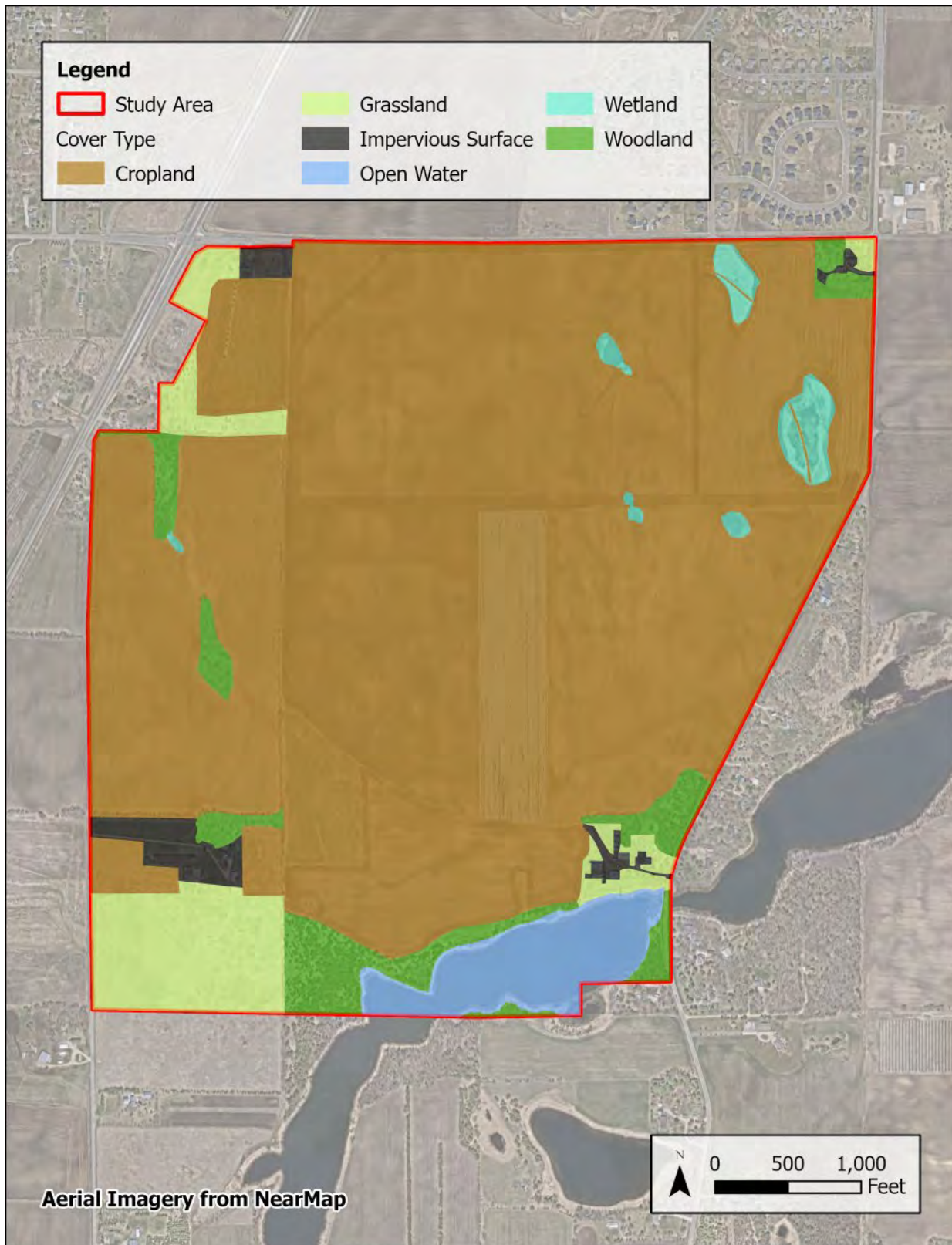
Any hardwood tree 6 inches or more in diameter at breast height (DBH), softwood tree 8 inches or more in DBH, or conifer over 12 feet in height must be replaced at a rate of 1:1 aggregate caliper inch (ACI) to removed DBH inches per Ordinance 847 which amends Chapter 153.061 of the Monticello Code of Ordinances.

---

<sup>10</sup> Tree clearing will be limited as much as feasible to support the proposed development scenarios. Tree clearing will be restricted to the winter months when migratory birds are not likely to be present (November 1 – March 31). If winter tree clearing is not feasible, technical assistance from the U.S. Fish and Wildlife Service will be obtained before any trees or shrubs are removed.

<sup>11</sup> Exact number to be determined as design plans advance. Higher quality trees will be preserved to the extent practicable as site design advances.

Figure 7: Existing Cover Types



**9. PERMITS AND APPROVALS REQUIRED**

*AUAR Guidance: A listing of major approvals (including any comprehensive plan amendments and zoning amendments) and public financial assistance and infrastructure likely to be required by the anticipated types of development projects should be given for each major development scenario. This list will help orient reviewers to the framework that will protect environmental resources. The list can also serve as a starting point for the development of the implementation aspects of the mitigation plan to be developed as part of the AUAR.*

**Table 6: Anticipated Permits and Approvals**

Unit of Government	Type of Application	Status
<b>Federal</b>		
US Army Corps of Engineers (USACE)	Section 404 Permit	To be applied for, if applicable
<b>State</b>		
Minnesota Pollution Control Agency	Section 401 Water Quality Certification	To be applied for, if applicable
	National Pollutant Discharge Elimination System Stormwater Permit for Construction Activities	To be applied for, if applicable
	Sanitary Sewer Extension Permit	To be applied for, if applicable
	Construction Contingency Plan and Response Action Plan approval	To be applied for, if applicable
	Notice of Intent of Demolition	To be applied for, if applicable
	Industrial Wastewater Permit	To be applied for, if applicable
	Significant Industrial User Permit	To be applied for, if applicable
	Construction Stormwater Permit	To be applied for, if applicable
	Fuel Storage Tank	To be applied for, if applicable
	Air Permit	To be applied for, if applicable
	Discharge Permit	To be applied for, if applicable
Minnesota Department of Natural Resources (MnDNR)	Environmental Assessment Worksheet	To be applied for, if applicable
	Temporary Groundwater Appropriation Permit for Construction Dewatering	To be applied for, if applicable
	Water Appropriation Permit Ammendment	To be applied for, if applicable
Minnesota Department of Health	Public Waters Work Permit	To be applied for, if applicable
	Water Main Installation Permit	To be applied for, if applicable
	Notification of Intent to Perform a Demolition	To be applied for, if applicable
	Notification of Asbestos Related Work	To be applied for, if applicable
Minnesota Department of Transportation	Water Tower and Well(s) Approval	To be applied for, if applicable
	Right-of-Way Permit	To be applied for, if applicable
	Plumbing Review	To be applied for, if applicable



Unit of Government	Type of Application	Status
Minnesota Department of Labor Industry	Electrical Permit	To be applied for, if applicable
<b>County</b>		
Wright County	WCA Review and Approval, pending annexation	To be applied for, if applicable
	Right-of-Way Permit	To be applied for, if applicable
	Subsurface Sewage Treatment System Abandonment Permit	To be applied for, if applicable
<b>City</b>		
City of Monticello	Preliminary/Final Plat	To be applied for, if applicable
	Sign Permit	To be applied for, if applicable
	Building Permit	To be applied for, if applicable
	Site Plan Approval	To be applied for, if applicable
	Conditional Use Permit	To be applied for, if applicable
	Right-of-Way Permit	To be applied for, if applicable
	WCA Review and Approval	To be applied for, if applicable
	Zoning Map Amendment	To be applied for, if applicable
	Demolition Permit	To be applied for, if applicable
	AUAR Adoption	In process
	Erosion Control, Grading, and Stormwater Permit	To be applied for, if applicable
	Planned Unit Development	To be applied for, if applicable
	Annexation	Subject to Orderly Annexation Agreement with Monticello Township

*Note for the potential for additional permits/approvals for Scenario 1:*

Additional environmental reviews may be necessary, which are the responsibility of either the city or the project proposer, should potential improvements and supporting infrastructure for either development scenario exceed mandatory environmental thresholds. The local utility company will design and obtain development permit and approvals needed for any potential grid infrastructure projects that are required for Scenario 1 through the MN Public Utilities Commission (PUC). If either scenario results in a proposed project that anticipates the need for more than 1,000,000 gallons of fuel storage for backup generators and may exceed the threshold for air emissions, a separate EAW will be required for these components of the project per Minnesota Rules 4410.4300. A separate EAW with MPCA as the RGU could also be required if a project triggers the need for a sewer extension with over 2 million GPD of water. For Scenario 1, a separate EAW with MPCA as the RGU would also be required for the proposed RIB system.

## 10. LAND USE

---

### a. Describe:

#### i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, and prime or unique farmlands.

The AUAR study area is in a semi-rural area just south of the City of Monticello, in Monticello Township, Wright County, Minnesota. The study area consists of 16 existing parcels. The study area is generally bounded by 85th Street NE to the north, Edmonson Avenue NE on a portion of the property to the east, and parcel boundaries to the west, southeast, and south. Land uses adjacent to the study area include single family and agricultural to the north, sparse single-family residences with mostly agricultural uses to the east and west, and natural areas including woodland, grassland, and wetlands. A single-family neighborhood is planned for development within 3-5 years to the east of Edmonson Avenue.

There are no existing parks within the study area or immediate vicinity. Bertram Chain of Lakes Regional Park is located approximately three miles northwest of the study area boundary. A greenway corridor is planned per the City's adopted Natural Resource Inventory & Assessment. The alignment of the greenway should coincide with other existing or added natural features on the site.

According to the Web Soil Survey for the study area 3.3 percent is mapped as prime farmland, 2.8 percent would be prime farmland if drained, and 77 percent of the study area is considered farmland of statewide importance.<sup>12</sup>

#### ii. Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.

##### *Wright County Northeast Quadrant Land Use Plan*

Wright County adopted the *Northeast Quadrant Land Use Plan* in 2007<sup>13</sup>. The Northeast Quadrant Land Use Plan was developed to provide a framework for shaping future growth of the Northeast Quadrant of Wright County, which include the Buffalo, Monticello, and Rockford Townships. Anticipated phasing for future development in the AUAR study area is predicted to occur between 2020 and 2040. The study area is identified as Transition Area (TA) in the 2007 Monticello Township Land Use Plan.<sup>14</sup> The purpose of the Transition Area is to properly manage the land at the urban/rural fringe. Management of these areas consists of identifying and designating areas to economically and efficiently accommodate growth pressures. The proper management

---

<sup>12</sup> USDA. 2024. Web soil Survey. Available at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

<sup>13</sup> Northeast Quadrant Land Use Plan. Available at: <https://www.co.wright.mn.us/DocumentCenter/View/236/Northeast-Quadrant-Land-Use-Plan---Adopted-07-31-07-PDF>.

<sup>14</sup> Monticello Township. 2007. *Monticello Land Use Plan*. Available at: <https://www.co.wright.mn.us/DocumentCenter/View/235/Monticello-Township-Land-Use-Plan-Map-PDF>



of these areas will avoid premature annexation, prohibit large lot residential development that would make provision of municipal services unnecessarily expensive, and limit the possibility of incompatible future land uses.<sup>15</sup> The Plan notes that orderly annexation agreements provide more detailed plans for annexation areas.

*City of Monticello 2040 Comprehensive Plan*

The City of Monticello adopted the *Monticello 2040 Comprehensive Plan* in 2020.<sup>16</sup> The plan is centered around three important themes: Sustainability, Community Health, and Sense of Place. The Plan focuses on land use, growth, and orderly annexation; mobility and connectivity; economic development; parks, pathways, and open space; and community character, art, design, facilities, and infrastructure. The Plan covers the geographic area of the City’s current municipal boundary as well as the Monticello Orderly Annexation Area. The study area is completely within the Monticello Orderly Annexation Area and is planned to be annexed into the city. The study area has the land use designation of Light Industrial Park (see Figure 9). See Table 7 for a description of this land use designation and allowed uses.

According to the plan, areas currently within the City limits adjacent to the study area have been designated for future commercial or residential uses, with an identified industrial land use to the northwest directly across 85<sup>th</sup> Street. The southern boundary of the study area is also the southern boundary of the City’s Orderly Annexation Area.

The 2040 Plan includes appendix studies for municipal utilities, including water and sanitary sewer systems.

The city has plans for a park south of the study area, which is intended as city-owned and available for public use with a trail along the wetland edge.

**Table 7: Study Area Future Land Use Designations Purpose and Allowed Uses**

Land Use Designation	Purpose	Allowed Uses
Light Industrial Park (LIP)	To promote a strong industrial business sector represented by increased jobs and tax revenue generated for the City of Monticello.	Process and production manufacturing which uses moderate amounts of partially processed materials, warehousing and distribution, research and development, medical laboratories, machine shops, computer technology, professional and corporate offices and industrial engineering facilities. “Computer technology” includes active technology uses dominated by office and research-oriented businesses. The Light Industrial Designation accommodates Data Center (or similar “Technology Campus”)

<sup>15</sup> Northeast Quadrant Land Use Plan. Available at: <https://www.co.wright.mn.us/DocumentCenter/View/236/Northeast-Quadrant-Land-Use-Plan---Adopted-07-31-07-PDF>

<sup>16</sup> City of Monticello. 2020. *Monticello 2040 Vision and Plan*. Available at: [Complete-Monticello-2040-Comprehensive-Plan-PDF](#)



Land Use Designation	Purpose	Allowed Uses
		<p>development for passive computer storage and processing only when specific elements are demonstrated. Consideration of these uses in the LIP areas shall be subject to the following review requirements, among others as determined on a case-by-case basis:</p> <ul style="list-style-type: none"> <li>a. The City’s 2040 Plan recognizes data centers as a singularly unique land use due to size and scope.</li> <li>b. Data center use locations will not create conflict with other land uses, especially residential land uses, through off-site impacts including unusual amounts of noise, lights, odors, or other similar aspects. Data center users will demonstrate site conditions that meet this condition and are consistent with other light industrial development.</li> <li>c. Where data center development creates shortages in land supply, utility services, electric generation service to the broader area, or any other impacts on the City of Monticello or its neighboring communities, and which are not specifically mitigated by the data center developer and its associated partners, the City is under no obligation to accommodate the use within any land use district or location, or through any land use process.</li> <li>d. Data center uses shall demonstrate convincingly that its burden on municipal services, infrastructure, or fiscal condition</li> </ul>



Land Use Designation	Purpose	Allowed Uses
		<p>is completely mitigated by the data center project and its developers, and such mitigation is sustainable by its subsequent owners, users, and other related entities.</p> <p>e. The data center will not inhibit future growth; it will accommodate and facilitate the extension of efficient and orderly municipal infrastructure to the edge of the development property consistent with the City’s plans for growth.</p> <p>Full and clear assurances from both the data center use and the electric utility provider that data center development will not create threats of power loss to the community, nor limit the city’s other growth and development interests in the future.</p>
<p>Source: City of Monticello. 2020. Monticello 2040 Chapter 3: Land Use, Growth and Orderly Annexation. <a href="https://www.ci.monticello.mn.us/DocumentCenter/View/313/Chapter-3---Land-Use-Growth-and-Orderly-Annexation-PDF">https://www.ci.monticello.mn.us/DocumentCenter/View/313/Chapter-3---Land-Use-Growth-and-Orderly-Annexation-PDF</a>.</p>		

*Monticello Orderly Annexation Agreement*

The City and Monticello Township have established an Orderly Annexation Agreement providing for the annexation of specific land area within Monticello Township. The current agreement extends through January 1, 2040. The agreement outlines the triggering events for annexation. The study area is within the orderly annexation area covered by the agreement.

*Natural Resource Inventory & Assessment*

The City of Monticello has adopted a Natural Resource Inventory & Assessment which identifies and inventories existing natural resources within the Monticello Orderly Annexation Area and assesses the resource’s quality. The document is used to plan for parks, trails and integration of natural resources into development planning.

The Natural Resource Inventory and Assessment identifies a conceptual future greenway corridor<sup>17</sup> that bisects the study area east-west. From this plan, the purpose of the greenway corridor is to connect the major parks of the City and future annexation area. The locations for these corridors were identified based on the presence of natural land cover features, existing parks and open spaces, locations of Areas of Community Importance, and locations of conservation areas. Greenway corridors could provide connections between and among natural open spaces and parks via trails and walkways

<sup>17</sup> Source: City of Monticello. 2008. Natural Resource Inventory and Assessment. <https://www.monticellomn.gov/DocumentCenter/View/270/Natural-Resource-Inventory-Assessment-Conceptual-Greenway-Corridors-PDF>

and can be natural areas such as wildlife corridors with no developed trail system or other disturbance within the corridor.

#### *Wright County Trail & Bikeway Plan*

In addition to consistency with the City's Natural Resource Inventory & Assessment, the greenway corridor evaluation should consider long-range regional trail planning as identified in the Wright County Trail & Bikeway Plan. The plan is designed to connect the County with non-motorized trails and bikeways which will provide opportunities for residents to increase their physical activity and improve their health. The Plan envisions the County creating a network of offroad trails and on-road bikeways that connect and complement city and township trails and bikeways.

### **iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.**

*AUAR Guidance: Water-related land use management districts should be delineated on appropriate maps, and the land use restrictions applicable in those districts should be described. If any variances or deviations from these restrictions within the AUAR area are envisioned, this should be discussed.*

#### *Zoning*

The study area is currently within Monticello Township and is being used for agricultural purposes. Once annexed into the City of Monticello municipal limits, a zoning change would be required for future development and would be required to be consistent with the City of Monticello's Comprehensive Plan. The Monticello Zoning Ordinance includes a Wetland Overlay District, which would apply to wetlands within the study area.

The city is also in the process of creating a Data Center Planned Unit Development (PUD) Zoning Ordinance that would create a review and plan submittal process specific to the data center use and its impacts. The Ordinance once adopted would apply to data centers of any scale or location within the city.

#### *FEMA National Flood Hazard*

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (panel number 27171C0170D, effective 6/20/2024 and panel number 27171C0165D, effective 6/20/2024), the AUAR study area is in an area of minimal flooding area, or Zone X.<sup>18,19</sup>

#### *Comprehensive Water Resource Management Plan<sup>20</sup>*

The Water Resources Management Plan (WRMP) serves as a comprehensive planning document to guide the City in conserving, protecting, and managing its surface water resources. The City will use the WRMP as a guide to reach goals related to water quality,

<sup>18</sup> FEMA. 2024. *FEMA Flood Map 27171C0165D*. Available at: [FIRMette Web \[27171C0165D\] \(fema.gov\)](https://www.fema.gov/flood-maps/27171C0165D).

<sup>19</sup> FEMA. 2024. *FEMA Flood Map 27171C0170D*. Available at: [FIRMette Web \[27171C0170D\] \(fema.gov\)](https://www.fema.gov/flood-maps/27171C0170D).

<sup>20</sup> City of Monticello. 2019. *Comprehensive Water Resource Management Plan*. Available at: [Comprehensive-Water-Resource-Management-Plan-PDF \(monticello.mn.us\)](https://www.monticello.mn.us/Comprehensive-Water-Resource-Management-Plan-PDF)

volume reduction, and flood management. The WRMP also includes associated goals and policies that address wetland management. As part of the goals and policies relating to wetland management, the WRMP references wetland buffers between developments adjacent to a wetland area. The goals and policies outlined in the WRMP relating to wetland buffers are in accordance with the City of Monticello's Code of Ordinances for Wetland Districts and associated buffer and setback requirements.

#### *City of Monticello Shoreland Ordinance*

As noted above, the study area is within the Monticello Orderly Annexation Area and is planned to be annexed into the city. Once annexed, a reclassification of DNR Basin 86-394 would be required. The DNR anticipates this basin would be classified as Natural Environment. The city would zone the 1,000-foot area surrounding the Ordinary High Water Level (OHWL) of this basin as a Shoreland Overlay District. According to the city zoning ordinance, industrial use is not allowed within a shoreland district. Within a shoreland district, building structures and sewers must be located at least 150 feet from the OHWL, no structures shall exceed 25 feet in height, and detached accessory structures shall not exceed 15 feet in height. Structures must be placed in accordance with floodplain regulations applicable to the site. If these controls do not exist, the elevation of the lowest floor's placement or floodproofing must be three feet above the OHWL or the highest known water level, whichever is higher. Non-water oriented uses on lots with water frontage are required to double the ordinary structure setbacks unless substantially screened from view by vegetation (leaf-on conditions) or topography. There are also restrictions that apply to the shore and bluff impact zones; however, given the required setback of 150 feet from the OHWL, impacts to these zones are not anticipated. The Community Development Department will also evaluate possible soil erosion impacts and development visibility from public waters before issuing a permit for construction of sewage treatment systems, roads, driveways, structures, or other improvements on steep slopes within the shoreland district. Full ordinance language is found in Zoning Code 153.046 Overlay Zoning Districts.

- iv. If any critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.**

No critical facilities are proposed as part of the project.

**b. Discuss the project’s compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.**

*AUAR Guidance: The extent of conversion of existing farmlands anticipated in the AUAR should be described. If any farmland will be preserved by special protection programs, this should be discussed.*

*If development of the AUAR will interfere or change the use of any existing designated parks, recreation areas, or trails, this should be described in the AUAR. The RGU may also want to discuss under this item any proposed parks, recreation areas, or trails to be developed in conjunction with development of the AUAR area.*

*The AUAR must include a statement of certification from the RGU that its comprehensive plan complies with the requirements set out at Minnesota Rules, part 4410.3610, subpart 1. The AUAR document should discuss the proposed AUAR area development in the context of the comprehensive plan. If this has not been done as part of the responses to Items 6, 9, 11, 18, and others, it must be addressed here; a brief synopsis should be presented here if the material has been presented in detail under other items. Necessary amendments to comprehensive plan elements to allow for any of the development scenarios should be noted. If there are any management plans of any other local, state, or federal agencies applicable to the AUAR area, the document must discuss the compatibility of the plan with the various development scenarios studied, with emphasis on any incompatible elements.*

*Existing Land Use*

Scenario 1 and Scenario 2

The existing agricultural and residential land use within the study area is expected to transition to other uses as the area develops. Any new development, redevelopment, annexation, change in land use, or change in zoning is required to be consistent with the City of Monticello 2040 Comprehensive Plan.

*Zoning*

Scenario 1 and Scenario 2

Wright County has not included the AUAR study area in its zoning map. Monticello Township does not have a zoning map. When the AUAR study area is annexed by the city of Monticello, the City’s zoning map will need to be updated to include the study area with an applicable zoning district that is consistent with the future land use for the area.

Both scenarios are anticipated to comply with the Water Resources Management Plan and the Shoreland Overlay Ordinance that applies to the Unnamed MnDNR Public Water Wetland on the southern portion of the study area.

Once the Data Center PUD Zoning Ordinance is adopted, it may include different development requirements applicable to Scenario 1. Any requirements pertaining to overlay districts that overlap with the study area will also apply.

*2040 Comprehensive Plan*

The City of Monticello has certified that the 2040 Comprehensive Plan complies with the requirements set out in Minnesota Rules, part 4410.3610, subpart 1.

Scenario 1

The development anticipated under Scenario 1 is consistent with the future Light Industrial Park land use designation for the AUAR study area pending compliance with the review requirements as detailed within the designation language of the 2040 Plan. The City of Monticello 2040 Comprehensive Plan accommodates technology campus development as described for Scenario 1 under the Light Industrial Park designation pending rezoning in compliance with the list of review requirements as described in Table 7 for a data center or similar technology campus use.

Scenario 2

Development as contemplated under Scenario 2, which consists of a variety of light industrial use, is consistent with the land uses allowed under the Monticello 2040 Comprehensive Plan Light Industrial Park designation.

*Wright County Northeast Quadrant Land Use Plan*

Scenario 2

The study area was anticipated to be developed between 2020 and 2040 in the Wright County Northeast Quadrant Land Use Plan. Scenario 2's full build out is likely to require a longer timeline beyond 2040 based on typical light industrial land development occurring in the greater Twin Cities area and would therefore be subject to future land use planning for that undeveloped portion.

*Natural Resource Inventory & Assessment*

Scenarios 1 and 2

Both scenarios would need to incorporate the conceptual future greenway corridor as site planning advances.

**c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.**

Both scenarios would incorporate buffering and screening to mitigate any potential land use conflicts with nearby existing residential uses. No industrial development would occur within shoreland, in accordance with city zoning ordinances.

Scenario 1

Scenario 1 would require a zoning change to allow for a technology campus use in the study area and would need to comply with the Data Center PUD Zoning Ordinance once approved. Application of the Shoreland Overlay District will also require review. The study area is outside the city of Monticello and would require the city to annex land from the Township. Future development would need to consider aligning the Natural Resource Inventory & Assessment

greenway corridor with the natural amenities in the area and accommodate future development as shown on Figure 3.

Scenario 2

Scenario 2 would require a zoning change to allow for light industrial use in the study area. The study area is outside the city of Monticello and would require the city to annex land from the Township. Future development would need to consider aligning the Natural Resource Inventory & Assessment plan greenway corridor with the natural amenities in the area and accommodate future development as shown on Figure 4.

Figure 8: Existing Land Use

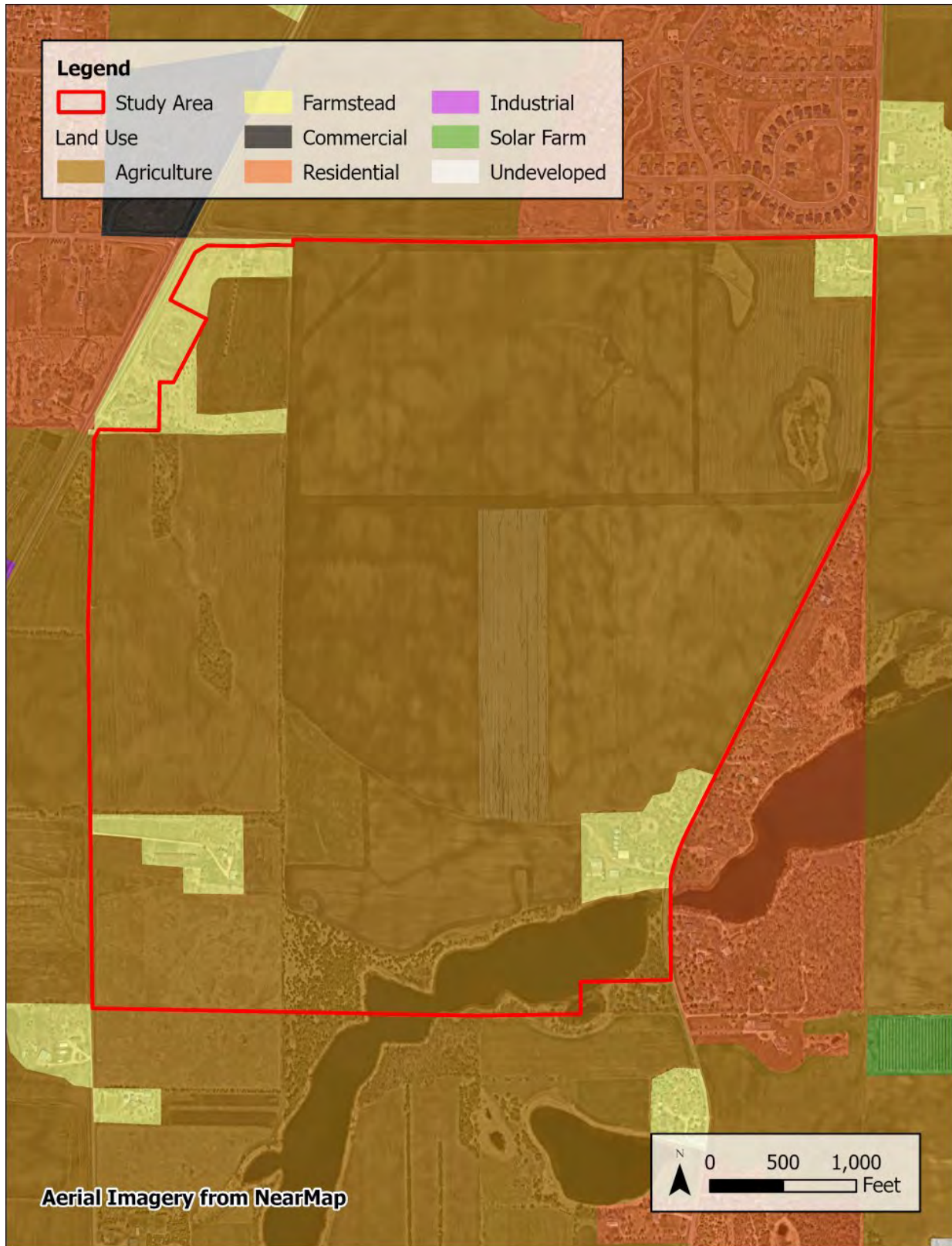
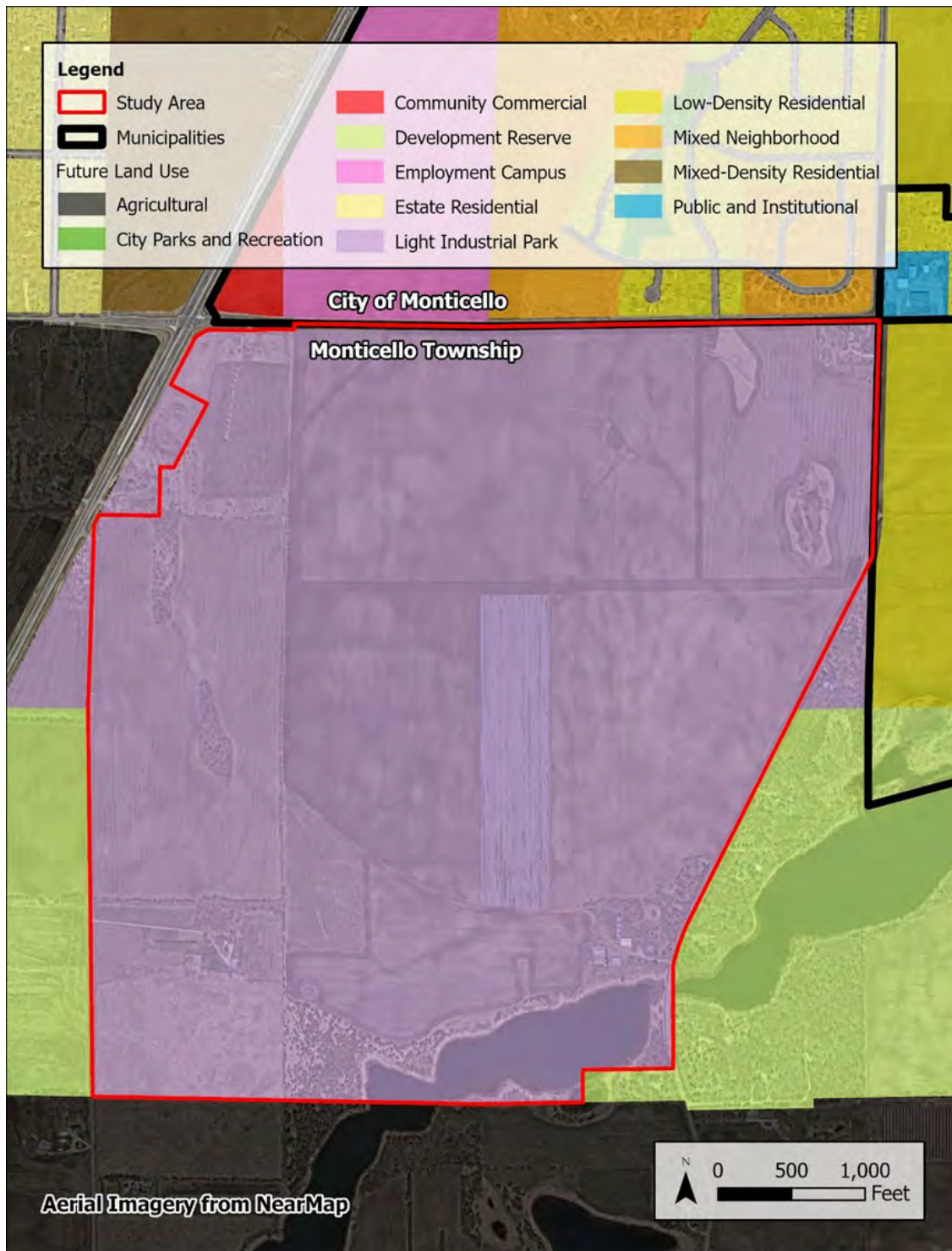


Figure 9: Future Land Use<sup>21</sup>



<sup>21</sup> Future land uses for the city of Monticello and adjacent areas determined in the Monticello 2040 Comprehensive Plan. Available at: <https://monticellomn.gov/274/Monticello-2040>.

Agricultural land use for Monticello Township was determined in the Monticello Township Land Use Plan. Available at: <https://www.co.wright.mn.us/DocumentCenter/View/235/Monticello-Township-Land-Use-Plan-Map-PDF>.

## 11. GEOLOGY, SOILS, AND TOPOGRAPHY/LAND FORMS

---

- a. Geology – Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.**

*AUAR Guidance: A map should be included to show any groundwater hazards identified.*

According to the Geologic Atlas of Wright County, the majority of the AUAR study area is underlain by Mesoproterozoic bedrock and Paleozoic bedrocks. The Mesoproterozoic rocks consist largely of sandstone, with minor amounts of siltstone and shale. These rocks are poorly known in Wright County; therefore, they cannot be confidently assigned to individual formations. However, they are likely to correlate with parts of the Hinckley Sandstone, Fond du Lac, and Solor Church Formations. The Paleozoic rocks are dominantly medium-to coarse-grained quartz sandstone and are part of the Mt. Simon Sandstone formation.<sup>22</sup>

There are no known sinkholes located within the AUAR study area. Additionally, there are no karst conditions located within or near the study area. There is a shallow, unconfined aquifer within the AUAR study area.

A Geotechnical Evaluation of the study area was completed in May 2025. According to borings conducted during the study the site contains topsoil across varying in thickness from 1-2 feet. Beneath the topsoil a mix of upper clay and silt soils was encountered generally extending 1-5 feet deep. Beneath this layer the site generally consists of sandy soils mixed with varying amounts of clay, silt, and gravel to a depth of 30-50 feet with groundwater typically encountered 10-30 feet beneath the surface. The Rapid Infiltration Basin (RIB) systems, discussed in the water resources section below, will be placed according to the results of a hydrogeological analysis. This analysis will ensure RIB placement results in an adequate distance between projected groundwater mounding, at the end of a 20-year infiltration period, and the soil surface. The soils are generally considered suitable for support of the proposed buildings with some soil improvements recommended, such as removal of topsoil and replacement with engineered fill materials. With 10 feet or more of soil above the groundwater, construction activities will not impact the groundwater in the study area as the soil acts as a natural filter.

- b. Soils and Topography – Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability, or other soil limitations, such as steep slopes or highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after**

---

<sup>22</sup> University of Minnesota. 2013. *Bedrock Geology*. Available at: <https://conservancy.umn.edu/server/api/core/bitstreams/c8f26a04-9210-476a-9e2c-b098c1209760/content>.

**project construction to address soil limitations including stabilization, soil corrections, or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.**

*AUAR Guidance: The number of acres to be graded and number of cubic yards of soil to be moved need not be given; instead, a general discussion of the likely earthmoving needs for development of the area should be given, with an emphasis on unusual or problem areas. In discussing mitigation measures, both the standard requirements of the local ordinances and any special measures that would be added for AUAR purposes should be included. A standard soils map for the area should be included.*

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the study area is comprised of 12 different soil types. Soils are classified by the NRCS into four hydrologic soil groups, A, B, C, and D, with A having the lowest runoff potential and D having the greatest runoff potential. The erosion hazard indicates the hazard of soil loss from off-road areas after disturbance activities that expose the soil surface. All soil information for the study area is described in Table 8. Within the project site, 13.0 percent of the soil surface is mapped with a “moderate” rating, indicating that some erosion is likely in these areas and that erosion control measures may be needed. The remaining 86.1 percent of the study area is mapped with a “slight” rating, meaning that erosion is unlikely under ordinary climatic conditions, and 0.9 percent is considered null or not rated.

Topography within the study area varies from 948 feet in elevation in the northeastern corner of the site to 980 feet in elevation in the southern portion of the study area as shown in Figure 1.

#### Scenario 1 and Scenario 2

It is anticipated that for both development scenarios the raw earthwork can be generally balanced on the site to maintain the existing drainage patterns when feasible. This earthwork will be compliant with the city shoreland ordinance. Where appropriate, slope stabilization will be provided by means of vegetation establishment, erosion control blankets, or other standard methods of erosion and sediment control.

A National Pollutant Discharge Elimination System (NPDES) and Stormwater Pollution Prevention Program Construction Stormwater Permit (SWPPP) will be obtained prior to any earthwork or grading activities within the AUAR study area.

Operational activities are not expected to have an impact on soils within the study area.

A 1991 report by the MnDNR identified substantial aggregate resources underneath the study area.<sup>23</sup> The report did not designate the study area as an “Aggregate Resource Area”; however, it is adjacent to a proposed Aggregate Resource Area. The city will consider mining of aggregate resources prior to moving forward with either development scenario. While mining could be

---

<sup>23</sup> MnDNR. *Wright County Aggregate Map*. Available at: [https://www.dnr.state.mn.us/lands\\_minerals/aggregate\\_maps/completed/wright.html](https://www.dnr.state.mn.us/lands_minerals/aggregate_maps/completed/wright.html).

incorporated under Scenario 2, Scenario 1 would not allow for these aggregate resources to be mined.

**Table 8: Soil Types**

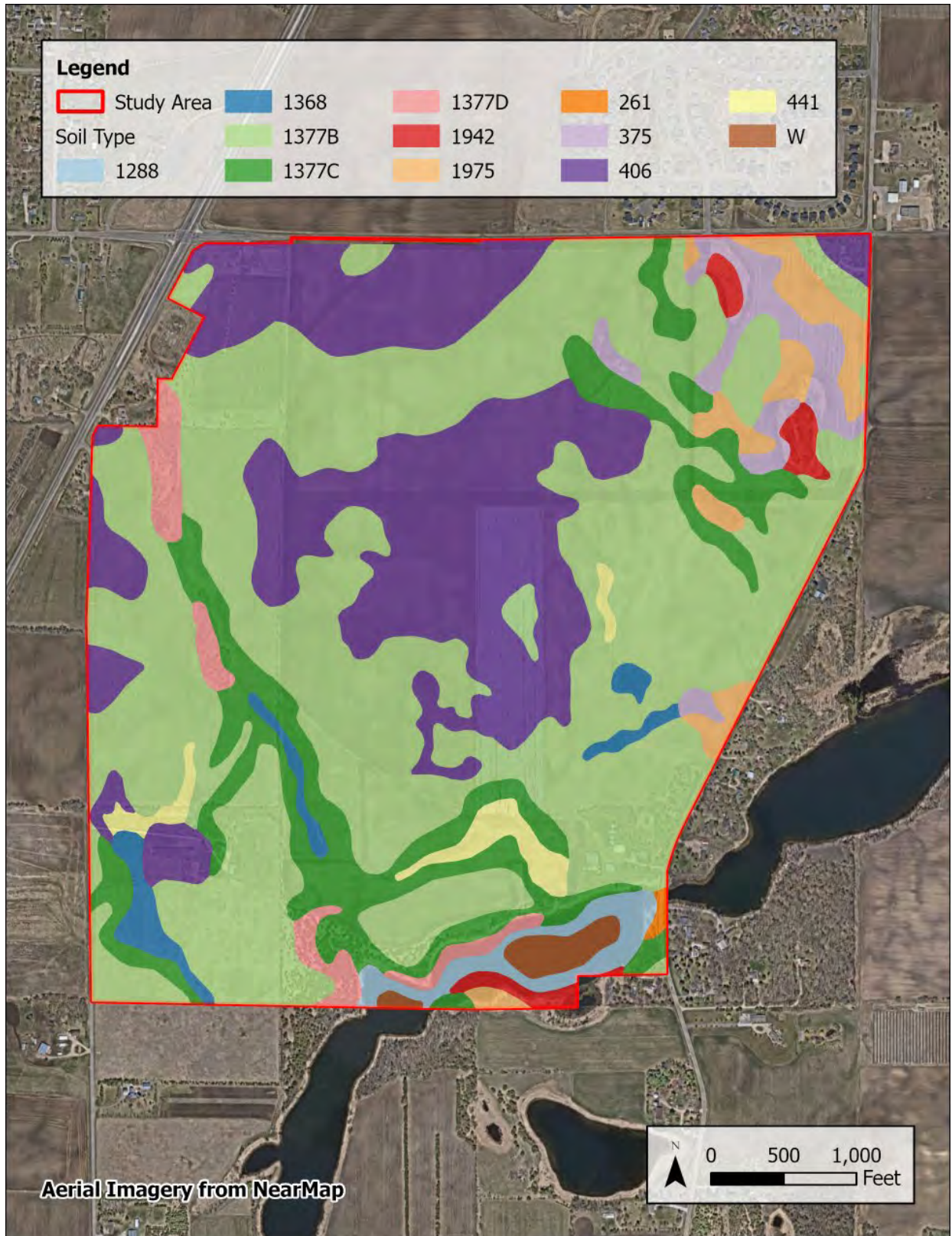
Map unit symbol	Map unit name	Acres in AOI	Percent of AOI	Farmland Rating	Hydric Rating	Hydrologic Soil Group	Erosion Hazard Rating
261	Isan-Isan, frequently ponded, complex, 0 to 2 percent slopes	0.7	0.1%	Not prime farmland	2, 3	A/D	Slight
375	Forada sandy loam, 0 to 2 percent slopes	15.6	2.8%	Prime farmland if drained	2, 3	B/D	Slight
406	Dorset sandy loam, 0 to 2 percent slopes	127.0	23.1%	Farmland of statewide importance	2	B	Slight
441	Almora loam, 0 to 2 percent slopes	8.8	1.6%	All areas are prime farmland	0	B	Slight
1288	Seelyeville and Markey soils, ponded, 0 to 1 percent slopes	9.1	1.7%	Not prime farmland	1, 2, 3	A/D	Slight
1368	Southaven loam, 0 to 2 percent slopes	9.5	1.7%	All areas are prime farmland	0	B	Slight
1377B	Dorset-Two Inlets complex, 6 to 12 percent slopes	279.8	50.9%	Farmland of statewide importance	0	A	Slight
1377C	Dorset-Two Inlets complex, 6 to 12 percent slopes	59.1	10.7%	Not prime farmland	0	A	Moderate
1377D	Dorset-Two Inlets complex, 12 to 20 percent slopes	12.6	2.3%	Not prime farmland	0	A	Moderate



Map unit symbol	Map unit name	Acres in AOI	Percent of AOI	Farmland Rating	Hydric Rating	Hydrologic Soil Group	Erosion Hazard Rating
1942	Forada and Leafriver soils, frequently ponded, 0 to 1 percent slopes	6.4	1.2%	Not prime farmland	1, 2, 3	B/D	Slight
1975	Oylen sandy loam, 0 to 2 percent slopes	16.5	3.0%	Farmland of statewide importance	2	C	Slight
W	Water	4.9	0.9%	Not prime farmland	N/A	N/A	Not Rated

Source: United States Department of Agriculture. 2024. *Web Soil Survey*.  
<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

Figure 10: Soil Types



## 12. WATER RESOURCES

---

*AUAR Guidance: The information called for on the EAW form should be supplied for any of the infrastructure associated with the AUAR development scenarios, and for any development expected to physically impact any water resources. Where it is uncertain whether water resources will be impacted depending on the exact design of future development, the AUAR should cover the possible impacts through a “worst case scenario” or else prevent impacts through the provisions of the mitigation plan.*

**a. Describe surface water and groundwater features on or near the site below.**

- i. Surface Water – lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within one mile of the project. Include DNR Public Waters Inventory number(s), if any.**

There are seven identified wetlands within the study area as shown in Figure 12. Two field wetland delineations were completed in 2024 and 2025 to confirm the extents of wetlands and waterways within the project study area (see Appendix A).<sup>24</sup>

The closest MPCA 303d Impaired Water to the study area is Pelican Lake, located approximately 1.3 miles to the southeast.<sup>25</sup> There is one unnamed MnDNR Public Water Wetland in the southeastern corner of the study area (ID# 86039400). There are five unnamed MnDNR Public Water Wetlands within one-mile of the study area (ID# 86048400, 86008300, 86007700, 86007500, 86008400). There are three MnDNR Public Water basins within one-mile of the study area (Paradise Lake - ID# 86008200, Slough Lake - ID# 86007800, Gilchrist Lake - ID# 86006400).<sup>26</sup> Additionally, there are no trout streams or lakes, County Ditches migratory waterfowl feeding/resting lakes, or outstanding resource value waters within or adjacent to the study area.

Runoff from the study area generally drains to landlocked basins on the west, east and north side of the property, and approximately 15% of the site drains towards the wetland located in the southern portion of the study area.

---

<sup>24</sup> The westernmost wetland is referred to as “Wetland 7” in this document. However, since this wetland was delineated in 2025, separately from the other six wetlands, it is referred to as “Wetland 1” in the 2025 Notice of Decision included in Appendix A.

<sup>25</sup> Minnesota Pollution Control Agency. 2024. *Impaired Waters*. Available at: <https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=fcc5a12d2fd4b16bc95bb535d09ae82>

<sup>26</sup> Minnesota Department of Natural Resources. 2025. *Public Waters (PW) Basin and Watercourse Delineation*. Available at: <https://gisdata.mn.gov/dataset/water-mn-public-waters>

Figure 11: Surface Water Resources

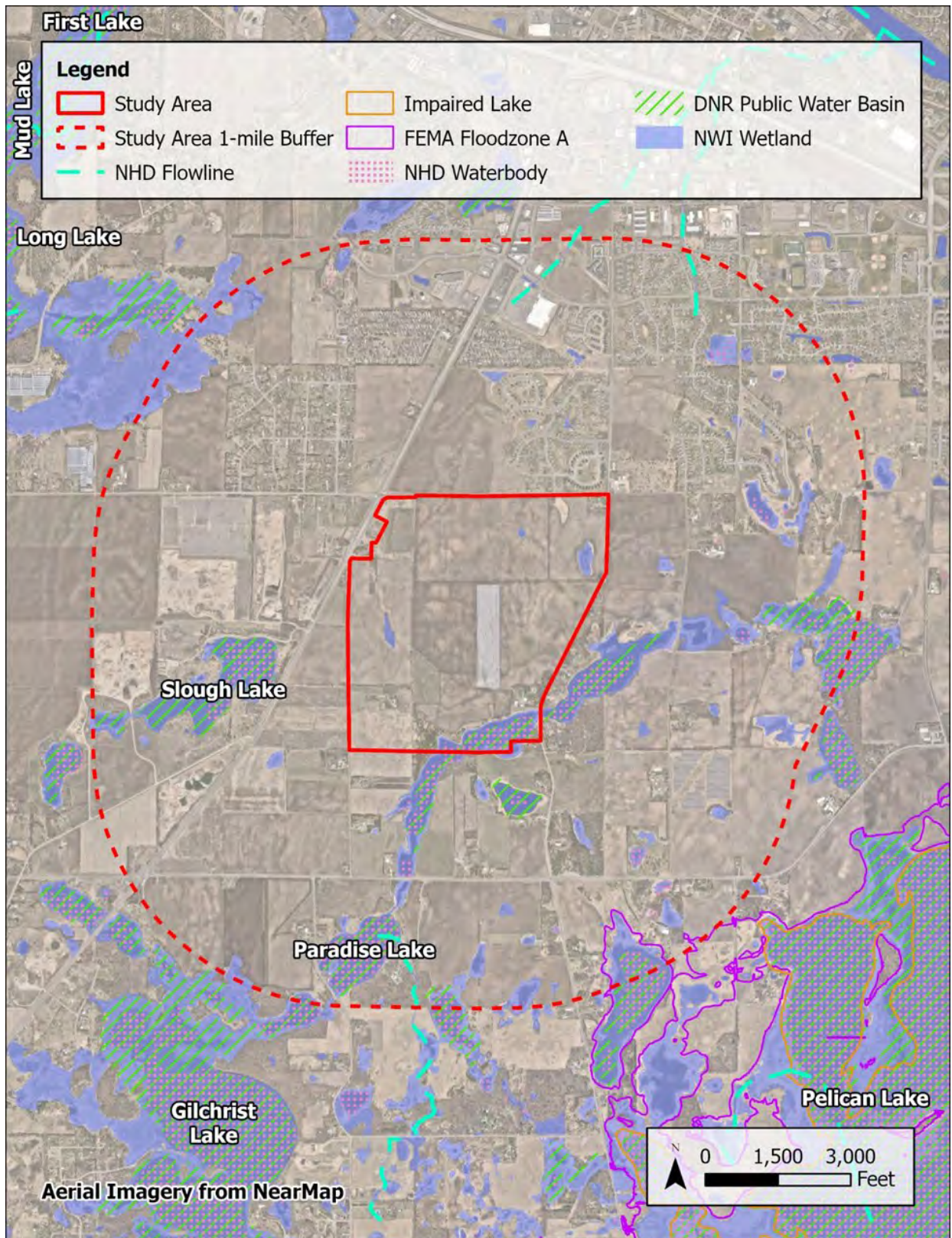
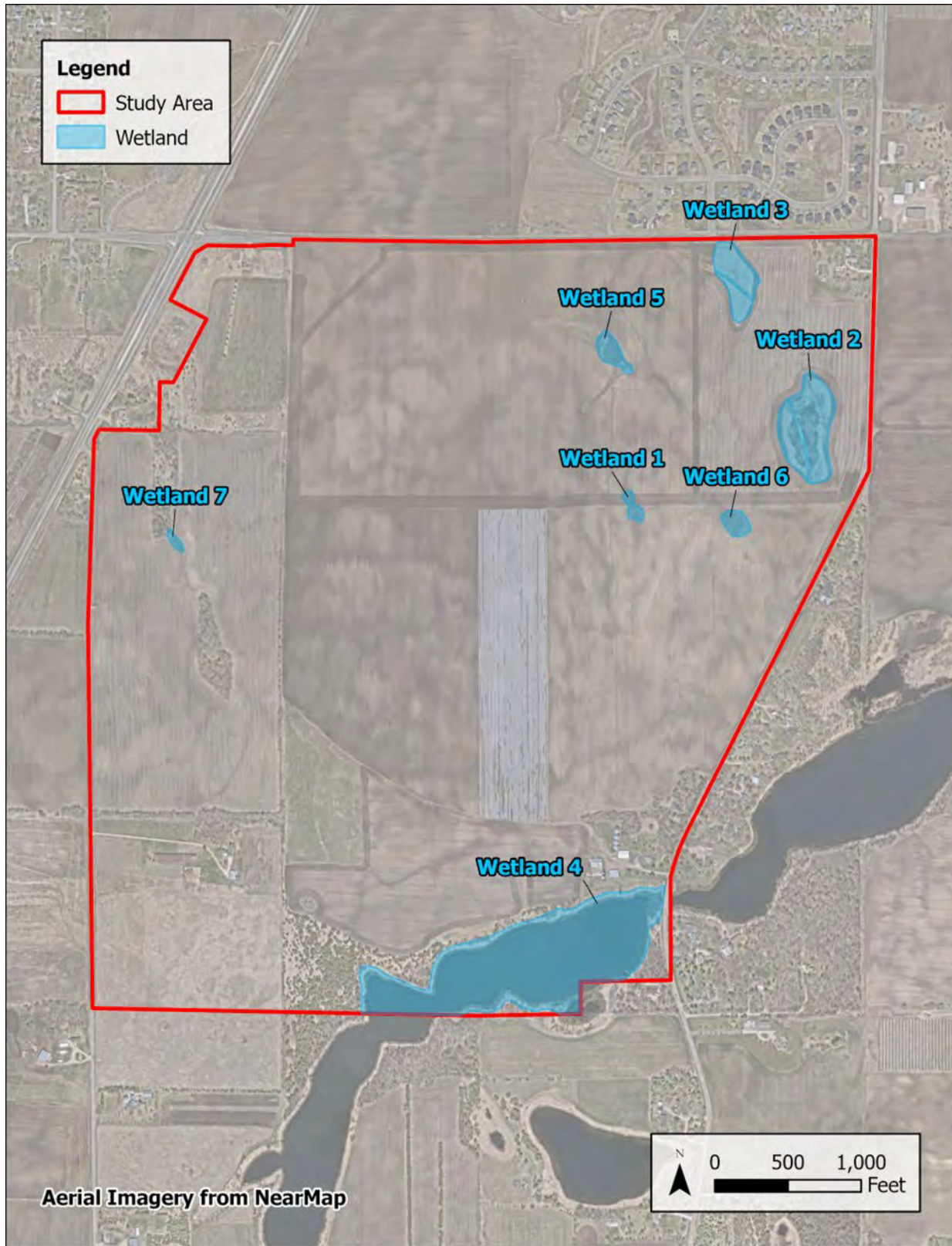


Figure 12: Wetland Delineation Summary



**Table 9: Wetland Delineation Summary**

Resource ID	Wetland Plant Community	Size (acres)	Anticipated Wetland Quality <sup>27</sup>	Notes
Wetland 1	Seasonally Flooded Basin	0.33	Low	Wetland located in depression in the northcentral section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis.
Wetland 2	Fresh Wet Meadow	4.44	Medium	Wetland located in depression in the northeastern section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography, offsite aerial analysis, and hydrophytic vegetation dominance.
Wetland 3	Seasonally Flooded Basin	2.19	Low	Wetland located in depression in the northeastern section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography, offsite aerial analysis, and hydrophytic vegetation dominance.
Wetland 4	Shallow, Open Water; Floodplain Forest; Fresh Wet Meadow	22.26	Medium	Wetland complex located in a depression between agricultural fields along the southern border of the study area. The complex consists of a shallow, open water plant community surrounded by a fresh wet meadow plant community and a forested floodplain plant community. The wetland collects runoff from the surrounding landscape and a series of onsite/offsite mapped National Wetland Inventory, National Hydrology Database, and Public Water Inventory features. The wetland boundary was based on the change in topography and hydrophytic vegetation dominance.
Wetland 5	Seasonally Flooded Basin	0.75	Low	Wetland located in depression in the northeastern section of the study area. The wetland collects runoff from the surrounding landscape. The wetland

<sup>27</sup> Wetland quality is discussed further in Table 11.

Resource ID	Wetland Plant Community	Size (acres)	Anticipated Wetland Quality <sup>27</sup>	Notes
				boundary was based on the change in topography, presence of hydric soils, and hydrophytic vegetation dominance.
Wetland 6	Seasonally Flooded Basin	0.60	Low	Wetland located in depression in the northeastern section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis.
Wetland 7	Seasonally Flooded Basin	0.18	Low	The wetland is located in a farmed depression in the center of the study area. The wetland collects runoff from the surrounding landscape and drains south. The wetland boundary was based on the change in topography, historic aeriels, and LiDAR review.

- ii. **Groundwater – aquifers, springs, and seeps. Include 1) depth to groundwater; 2) if project is within a MDH well protection area; and 3) identification of any onsite and/or nearby wells, including unique numbers and well logs, if available. If there are no wells known on site or nearby, explain the methodology used to determine this.**

According to the Geologic Atlas of Wright County groundwater is present at approximately 20 feet below grade, excluding the wetland portion.<sup>28</sup>

Based on Minnesota Department of Health (MDH) and Minnesota Department of Natural Resources (MnDNR) well records, five wells may be located within the study area. Descriptions of each well are identified in Table 10 and wells with verified mapped locations are shown in Figure 13. If unable to re-use, wells located within the study area would be properly sealed by a licensed well contractor prior to redevelopment within the study area as per MDH well sealing requirements.

If unidentified wells are found, the MDH must be contacted to determine the course of action, which may include sealing, relocating, or preserving by a licensed well contractor according to Minnesota Rules Chapter 4725.

The northwestern corner of AUAR study area is located within a wellhead protection area (Monticello) and a Drinking Water Supply Management Area (DWSMA) (Monticello).<sup>29</sup> The DWSMA is listed as low vulnerability. According to the Monticello

<sup>28</sup> Minnesota Department of Natural Resources. 2018. *Geological Atlas of Wright County, Minnesota Part B, Hydrogeology*. Available at: [https://files.dnr.state.mn.us/waters/groundwater\\_section/mapping/cga/c30\\_wright/wright\\_report.pdf](https://files.dnr.state.mn.us/waters/groundwater_section/mapping/cga/c30_wright/wright_report.pdf)

<sup>29</sup> Minnesota Department of Health. *Source Water Protection Web Map Viewer*. Available at: <https://mdh.maps.arcgis.com/apps/View/index.html?appid=8b0db73d3c95452fb45231900e977be4>

Wellhead Protection Plan, the DWSMA is an area studied for potential contaminant sources and how to reduce pathways for those contaminants that could reach the source water aquifer.<sup>30</sup> Under Scenario 1, the DWSMA would need to be re-evaluated to account for the anticipated increase in water appropriations from the aquifer. Surface water that is captured and infiltrated will be designed in accordance with the MPCA stormwater manual and DWSMA standards, to reduce the risk of impacting the groundwater from surface water runoff. The surface water runoff from future development will be captured and treated in lined stormwater ponds prior to leaving the site to meet requirements from the City of Monticello, MPCA, MDH, and the NPDES Construction Stormwater Permit.

### Scenario 1

Scenario 1 would include the use of non-contact cooling water. This water is used to absorb and remove heat from equipment or processes without directly contacting the materials being cooled. It typically circulates through heat exchangers or condensers to dissipate heat from various mechanical or industrial systems before being discharged or reused. This water could be circulated through the system two or more times to reduce water usage. The non-contact cooling wastewater generated under Scenario 1 is proposed to be discharged into the groundwater via a Rapid Infiltration Basin (RIB) system. See the wastewater section below for a detailed description of RIB function.

The City completed a draft study in 2025 to evaluate the current aquifer capacity in the area. The study evaluated two scenarios, both assuming four new wells with assumptions for pumping at different levels. The study found that there appears to be limited draw down impact to adjacent wells within city limits and wells directly across the Mississippi River. The four sites for the potential location for the well identified through this study include the following:

- Site No. 1: 4<sup>th</sup> St. and Palm St.
- Site No. 2: Southeast parcel on the corner of Dundas Rd. and Dundas Cir.
- Site No. 3: 4<sup>th</sup> St. and Wright St.
- Site No. 4: Adjacent to the Monticello Fire Station

Following construction of the new well, the City would implement monitoring wells and the water data from these monitoring wells would be sent to the MnDNR to evaluate if there is additional mitigation needed for adjacent private wells. If there is an impact to adjacent wells, the DNR and City would lower the pumping levels allowed.

The wellhead protection boundary area as part of the DWSMA will need to be increased with any new wells.

---

<sup>30</sup> City of Monticello. *Wellhead Protection Program*. Available at: <https://www.monticellomn.gov/232/Wellhead-Protection-Program>.

Scenario 2

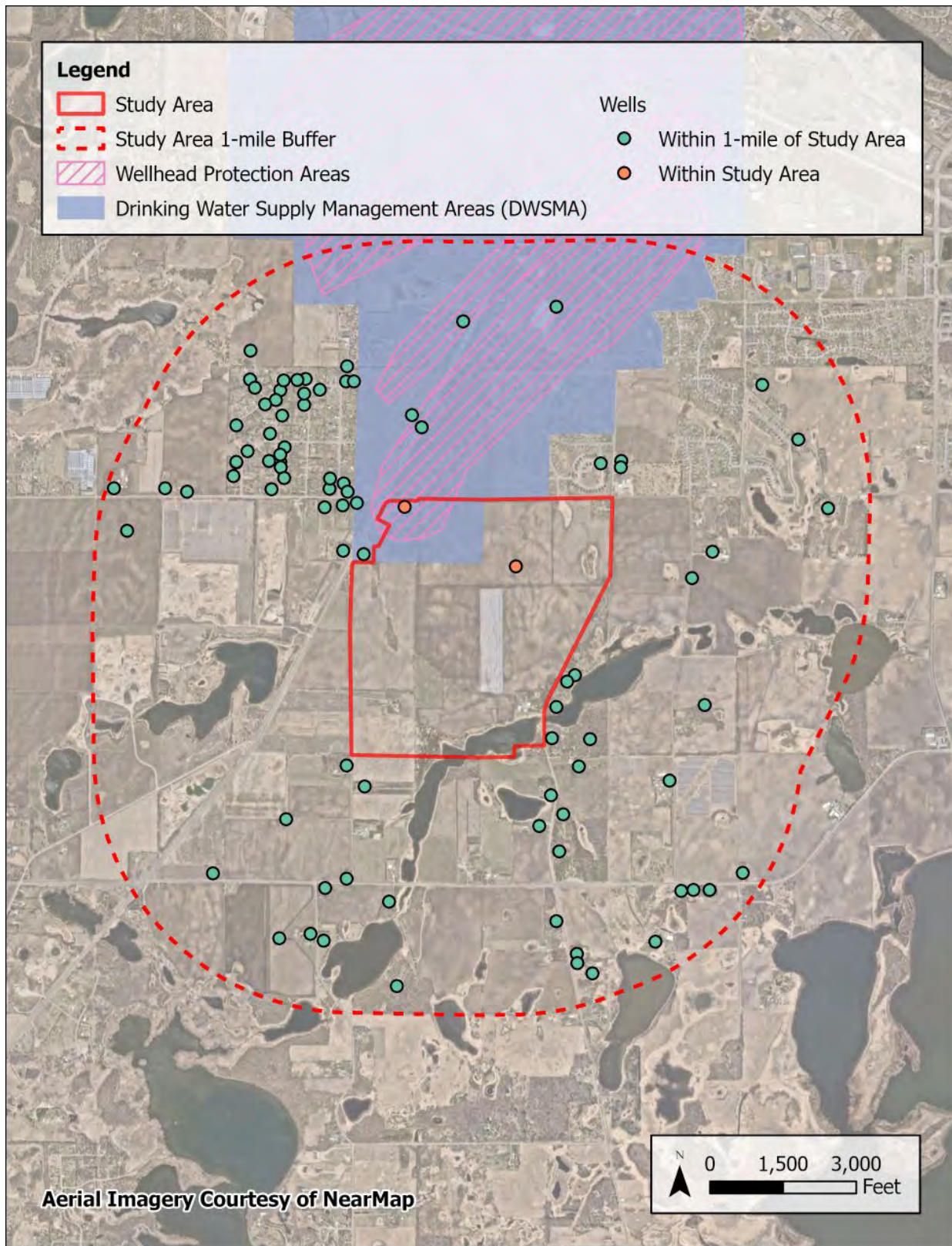
Scenario 2 would not require a RIB system for cooling wastewater discharge, and all wastewater would be discharged to the Municipal collection system.

**Table 10: Wells within AUAR Study Area**

Well ID Number	Index Status	Well Use	Well Depth (feet)	MN DNR Permit
182151	Active	Irrigation	122	2012-0909
472289	Active	Domestic	62	-
785271	Unverified	Irrigation	120	-
840393	Unverified	Irrigation	96	2019-1384
183902	Unverified	Domestic	79	-

Source: Minnesota Department of Health. *Minnesota Well Index*. Available at: <https://mnwellindex.web.health.state.mn.us/>; Minnesota Department of Natural Resources. *Well Records*.

Figure 13: Groundwater Resources



**b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects below.**

**i. Wastewater – For each of the following, describe the sources, quantities, and composition of all sanitary, municipal/domestic, and industrial wastewaters projected or treated at the site.**

*AUAR Guidance: Observe the following points of guidance in an AUAR:*

- *Only domestic wastewater should be considered in an AUAR—industrial wastewater would be coming from industrial uses that are excluded from review through an AUAR process*
- *Wastewater flows should be estimated by land use subareas of the AUAR area; the basis of flow estimates should be explained*
- *The major sewer system features should be shown on a map and the expected flows should be identified*
- *If not explained under Item 6, the expected staging of the sewer system construction should be described*
- *The relationship of the sewer system extension to the RGU’s comprehensive sewer plan and (for metro area AUARs) to Metropolitan Council regional systems plans, including MUSA expansions, should be discussed. For non-metro area AUARs, the AUAR must discuss the capacity of the RGU’s wastewater treatment system compared to the flows from the AUAR area; any necessary improvements should be described.*
- *If on-site systems will serve part of the AUAR, the guidance in the February 2000 edition of the EAW Guidelines on page 16 regarding item 18b under Residential development should be followed.*

**1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.**

The City of Monticello has its own wastewater treatment plant (WWTP) that is permitted for 2.36 million gallons per day (MGD) and has an average daily flow of 1.15 MGD. The WWTP ultimately discharges into the Mississippi River. For both Scenarios 1 and 2, the City of Monticello's Sanitary Sewer Comprehensive plan indicates a proposed trunk sewer being extended to and through the site to serve this area of the city. A draft analysis of the sanitary sewer collection system for this development was completed in November 2024 by the city to determine the scope of the improvements to serve this area with sanitary sewer. Based on the results of the study, a 36-inch trunk sanitary sewer line will need to be constructed down

Fallon Avenue from Chelsea Road. A more detailed analysis of the scope and extent of the trunk sewer extension will be needed for a specific project. If the specific project that requires a sewer extension with over 2 MGD of water, a separate EAW would be required with MPCA as the Responsible Governmental Unit (RGU).

#### Scenario 1

Under Scenario 1, a technology campus use would only send domestic strength waste to the WWTP. Typically, facilities of this size have discharges of 25,000 gallons per day (GPD) or 50,000 GPD depending on the number of people on site per day. The city has the available capacity to treat the domestic wastewater at their current treatment plant but will require the trunk sewer extension to be constructed to provide sewer service to the study area, see Table 11.

For the purposes of evaluating the worst case scenario, Scenario 1 assumes a water-cooled system could be implemented. If a specific project advances that intends to use an air-cooled system or a combination of air and water-cooled, the peak demand evaluated in this AUAR already covers the upper limit for water use anticipated in terms of impacts and mitigation.

Non-contact cooling water use from a technology campus is anticipated to have a peak discharge of 1 to 1.5 MGD for the peak day, and may discharge as much as 100 million gallons per year. This discharge does not contain any Biochemical Oxygen Demand (BOD) or Total Suspended Solids (TSS) like domestic wastewater and is only discharged from approximately April through October on an intermittent basis. The discharge does not occur on an everyday basis and the amount of water discharged is dependent on the temperature of the facility and the ambient air temperature. This discharge is proposed to be infiltrated back into the soil through a Rapid Infiltration Basin (RIB) system within the site. The proposed Rapid Infiltration Basin (RIB) system will be separate from any stormwater management systems or basins and is well-suited to the study area due to the generally sandy and permeable soils. The RIB system is designed with Drinking Water Supply Management Area (DWSMA) considerations in mind and will comply with Minnesota Department of Health (MDH) and Minnesota Pollution Control Agency (MPCA) standards of care for DWSMA regions.

Non-contact cooling water, which circulates through equipment multiple times in technology parks, will ultimately be discharged to the RIB. This water contains no human or industrial waste and meets MDH drinking water standards, consisting only of water from groundwater wells. The discharge will be infiltrated back into the soil through the RIB system, allowing for gradual aquifer recharge over time.

As part of the RIB system permit application, a hydrogeological study will be conducted to determine groundwater flow direction, assess soil suitability, and identify any limitations for siting the RIB. This study will also address the rate of



infiltration and required RIB sizing. A full water quality analysis of the effluent will be provided, and any pre-treatment requirements will be determined by the MPCA prior to discharge. The permitting process will include an Environmental Assessment Workshop (EAW) and a 30-day public and agency comment period, with an anticipated timeline of 12 to 18 months from permit submittal to approval.

The RIB system will consist of multiple cells, each accepting cooling water wastewater flow for two days and then resting for six days, with rotation to ensure proper infiltration and resting. The system acts as a large filter, trapping most impurities at the surface. Maintenance will involve periodic removal of the top few inches of mineral deposit-laden soil, which will be disposed of in a landfill. Monthly Discharge Monitoring Reports will be required according to the NPDES permit. The end user will be responsible for hiring a licensed professional to prepare these reports and send them to the MPCA.

If a future development requires 310,000 GPD or less of non-contact cooling water and domestic wastewater then that discharge could go to the city’s municipal sanitary sewer collection system as the additional discharge to the WWTP is within hydraulic capacity. However, with the additional non-contact cooling water that is anticipated with Scenario 1, it is expected to have a slight decrease in the organic loading that would require biological adjustments to operation of the WWTP.

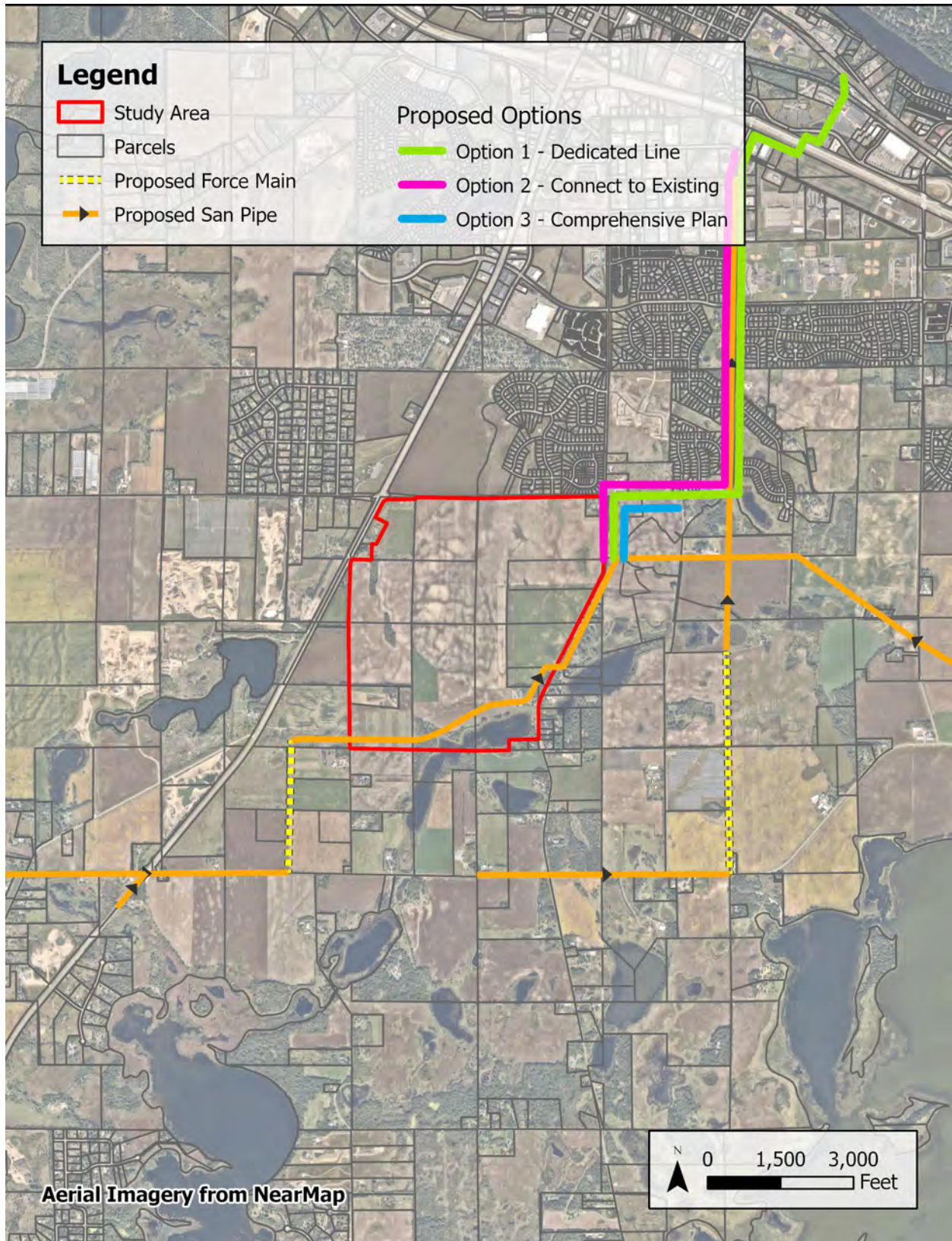
Scenario 2

Office/warehouse industrial developments typically have a low water and wastewater demand on the distribution and collection system. Based on the anticipated uses and using the MCES SAC determination calculator, assuming 30% office and 70% warehouse for each building, Scenario 2 is estimated to produce approximately 310,000 GPD of wastewater. The wastewater would consist of typical domestic strength wastewater. The city appears to have the available capacity in their existing system for the proposed flows for Scenario 2 with the extension of the sanitary sewer trunk main, see Table 11.

**Table 11. Wastewater Treatment Plant Capacity (Domestic)**

	Scenario 1	Scenario 2
WWTP Permit Capacity (MGD)	2.36	
WWTP Average Flow (MGD)	1.15	
WWTP Average Available Capacity (MGD)	1.21	
Additional Proposed Flow to WWTP (MGD)	0.025-0.05	0.31

Figure 14: Proposed Sewer Service Options



- 2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.**

No subsurface sewage treatment systems (SSTS) are anticipated within the AUAR study area for the proposed development scenarios. The residences within the study area will remain until such time development starts. The SSTS systems will be pumped, collapsed, filled, and abandoned per the MPCA chapter 7080 code. A permit for the abandonment of the existing SSTS will be applied for from the county.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods, discharge points, and proposed effluent limitations to mitigation impacts. Discuss any effects to surface or groundwater from wastewater discharges.**

There is no planned surface discharge of the non-contact cooling wastewater for either scenario. The cooling water from the facility will be discharged to a RIB system and infiltrated into the ground water. The effluent that will be discharged to the ground water will need to meet the water quality standards set by the MPCA for the discharge as described above.

- ii. **Stormwater – Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post-construction, including how the project will affect runoff volume, discharge rate, and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.**

*AUAR Guidance: For an AUAR the following additional guidance should be followed in addition to that in EAW Guidelines:*

- *It is expected that an AUAR will have a detailed analysis of stormwater issues*

- *A map of the proposed stormwater management system and of the water bodies that will receive stormwater should be provided*
- *The description of the stormwater systems would identify on-site and “regional” detention ponding and also indicate whether the various ponds will be new water bodies or converted existing ponds or wetlands. Where on-site ponds will be used but have not yet been designed, the discussion should indicate the design standards that will be followed.*
- *If present in or adjoining the AUAR area, the following types of water bodies must be given special analyses:*
  - *Lakes: Within the Twin Cities metro area, a nutrient budget analysis must be prepared for any “priority lake” identified by the Metropolitan Council. Outside of the metro area, lakes needing a nutrient budget analysis must be determined by consultation with the MPCA and DNR staffs.*
  - *Trout streams: If stormwater discharges will enter or affect a trout stream, an evaluation of the impacts on the chemical composition and temperature regime of the stream and the consequent impacts on the trout population (and other species of concern) must be included.*

*Environmental Effects*

Stormwater runoff can cause several environmental problems. When untreated, stormwater drains from manmade locations such as agricultural fields, impervious surfaces, and construction sites. It can carry sediments and/or pollutants that harm aquatic ecosystems and wildlife.

*Analysis Objectives*

This analysis aims to evaluate the potential impacts of the proposed development in the AUAR on receiving waters and provide guidance on necessary stormwater mitigation measures to protect downstream bodies. The focus is on recommending stormwater mitigation strategies to reduce runoff volumes and rates leaving the AUAR area to the MnDNR Public Water Wetland (ID#86039400) and to address the potential loss of landlocked storage within the study area. The standards and strategies guiding these mitigation measures are derived from the following sources:

- Minnesota Pollution Control Agency (MPCA), National Pollution Discharge Elimination System (NPDES) General Construction Permit;
- City of Monticello Engineering Design Standards for Stormwater Management
- City of Monticello Comprehensive Water Resources Management Plan
- Minnesota Stormwater Manual

Specific requirements that guided the analysis for the AUAR are described below:

1. Rate Control – The City of Monticello requires onsite detention to maintain existing flow rates for the 2-year (2.84 inches), 10-year (4.22 inches), and 100-year (6.87 inches) 24-hour rainfalls. In addition, the city requires that detention basins be designed with capacity for the critical 100-year event (2-hour, 6-hour, 12-hour, or 24-hour rainfall, or the 10-day, 9.94-inch snowmelt runoff event). If the basin is landlocked, the back-to-back 24-hour event and the 10-day 9.94-inch snowmelt runoff event is also used.
2. Volume Control – The City of Monticello's performance goal is to capture and retain on site 1.1 inches of runoff from the sum of the new and fully reconstructed impervious surfaces in post-construction conditions. The City's Comprehensive Water Resources Management Plan states that the city prefers the use of regional stormwater retention systems.
3. Water Quality – The City of Monticello requires pretreatment prior to discharge to infiltration facilities. And if the volume control standard has been met, then the water quality sizing criteria shall be considered satisfied.

Meeting these AUAR standards should sufficiently protect the downstream system after development in either scenario.

*Existing Conditions*

Most of the study area is agricultural land with good soils. There is minimal impervious surface area within the study area, and no existing permanent stormwater management features. There are three landlocked areas located in the study area and four main drainage areas, See Figure 15 for names and drainage areas.

Approximately 326 acres, (308 acres within study area, 18 acres offsite) flows south and west to landlocked basin LL-1 with an ultimate outfall to the southwest of approximately 964.2 feet above sea level. Approximately 94 acres of the site drains northeast to landlocked basin LL-2 with an ultimate outfall of 954.9 feet above sea level.

Approximately 79 acres of the site drains east to landlocked basin LL-3 with an ultimate outfall of 961.4 feet above sea level. Approximately 69 acres of the site flows south unrestricted to the unnamed MnDNR Public Water Wetland in the southeast corner of the site (ID# 86039400). This feature appears to be hydraulically connected to Paradise Lake and Gilchrist Lake to the south.

HydroCAD was used to model the landlocked basins and assess their storage capacity and potential discharge. The available storage was calculated using the 100-year, 10-day runoff (7.2 inches) per the City of Monticello Design Manual, dated December 2024. The HWL was calculated using the 10-day, 9.94-inch snowmelt runoff event per the City of Monticello Design Manual. See table below for existing landlocked basin available storage and HWL.

**Table 12: Existing Landlocked Basin Summary**

Basin Name	Available Storage (acre-feet)	Existing HWL	Overflow Elevation	Discharge in Critical 100-yr Event?
LL-1	95.6	965.1	964.2	Yes
LL-2	54.5	954.5	954.9	No
LL-3	36.1	961.5	961.4	Yes

There is approximately 18 acres of offsite drainage area from the southwest that contributes to the existing landlocked basin LL-1. According to StreamStats,<sup>31</sup> approximately 4.35 square miles of offsite drainage originates at County Road 12 and continues northwest toward the study area (see Appendix B for the Streamstats report). However, public LIDAR data indicates that this drainage does not actually reach the study area boundary. Within the StreamStats-defined drainage area, there are several landlocked basins (ID#86042300, ID#86008000, ID#86007900, and ID#86007800) that retain runoff volume and prevent flow from moving further downstream. Additionally, the mapped flow path in StreamStats crosses Minnesota Highway 25, but the road’s lowest elevation near the study area is 971 feet, while Basin #86007800’s DNR-defined ordinary high water level (OHWL) is 950.9 feet. This elevation difference, along with the presence of landlocked basins, means that the estimated 4.35 square miles of offsite drainage shown in StreamStats does not actually flow through or enter the study area. A detailed survey of this area will be conducted to confirm the conveyance of offsite flow in this area.

*During Construction*

During construction, erosion and sediment control best management practices (BMPs) will be implemented to prevent impacts to aquatic ecosystems per the City of Monticello and MPCA MS4 and NPDES Standards. There are no special or impaired waters within 1-mile of the study area. The following design/construction standards are to be adhered to during construction:

- Plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices to minimize erosion and prevent damage to adjacent property. All areas not to be disturbed shall be marked (e.g., with flags, stakes, signs, silt fence etc.) on the project site before any work begins.
- The erosion and sediment control measures shall be maintained and repaired throughout construction and until such time as the property has been either sodded or a seeded vegetative cover has taken hold.

<sup>31</sup> Available at: <https://streamstats.usgs.gov/ss/>.

- Temporary rock entrances are required on every construction site and are required after backfilling of foundation.
- Exposed soil, including stockpiles shall be stabilized immediately where activity has permanently or temporarily ceased on any portion of this site and will not resume for a period of time exceeding 14 days.
- After connecting drainage ditches or swales that drain water from the site, the last 200 linear feet must be stabilized within 24 hours after connecting to surface water.
- If dewatering is to take place, adequate treatment must be provided so that nuisance conditions will not result from the discharge.
- Pipe outlets must have temporary or permanent energy dissipation before connecting to surface water.
- All areas disturbed during construction must be restored, and a minimum of six inches of topsoil must be installed prior to permanent restoration.
- Sediment control practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices must remain in place until final stabilization has been achieved.
- Temporary sedimentation basins will be designed with outlet skimmers, energy dissipation, sediment storage, stabilized banks, and permanent vegetation to maximize pollutant removal and control.
- Ensure that clearing and grading activities are restricted within 20 feet of the existing wetland boundary that is to be protected, in order to maintain a buffer strip of natural vegetation.
- Compliance with the NPDES General Construction Stormwater Permit requirements.

*Post Construction*

Overall impervious surface area is proposed to increase to 170 acres in Scenario 1 and 233 acres in Scenario 2, increasing the runoff coefficient from existing conditions. To mitigate this, on-site stormwater basins are proposed and will be sized to accommodate runoff from these impervious areas and the outlet control structures will be designed to discharge at a rate less than that in the existing condition for the 2-year, 10-year, and 100-year, 24-hour storm events and the 10-day, 9.94-inch runoff event for landlocked basins. These basins will be separate from the proposed RIB systems to mitigate non-contact cooling water discharge.

The proposed conditions analysis assumes the impervious areas in scenarios 1 and 2 are distributed evenly across the site. Additionally, as the drainage area boundaries are schematic, it is assumed that in either scenario existing drainage patterns are able to be maintained with the proposed locations of the stormwater management areas. There are three stormwater management areas proposed in this analysis that align with where

the existing landlocked basins are located. See Figure 16 and Figure 17 for proposed stormwater management drainage areas and basins.

The PR-DA-1 drainage area encompasses approximately 325 acres, in the western portion of the study area with all runoff directed to Basin P1 in the southwest. Basin P1 is sized to detain the full runoff volume generated by a 100-year, 24-hour storm event and retain 1.1" times the new impervious area. For storm events exceeding 24-hours, controlled discharge from Basin P1 may occur to Minnesota Public Water Wetland ID #86039400. Furthermore, discharge rates from Basin P1 will be restricted to match existing condition rates from LL-1 to prevent adverse impacts downstream.

The PR-DA-2 drainage area encompasses approximately 107 acres in the northeast portion of the study area, with all runoff directed to Basin P2. Basin P1 is sized to detain the full runoff volume generated by a 100-year, 24-hour storm event and retain 1.1" times the new impervious area. The existing landlocked basin does not discharge in the 10-day, 9.94-inch runoff event. Therefore, PR-DA-2 will be restricted to this threshold. Basin 2 may discharge to the preserved landlocked area as long as this landlocked area maintains no discharge to the north.

The PR-DA-3 drainage area encompasses approximately 94 acres, in the eastern portion of the study area with all runoff directed to Basin P3 in the southwest. Basin P1 is sized to detain the full runoff volume generated by a 100-year, 24-hour storm event and retain 1.1" times the new impervious area. For storm events exceeding 24-hours, controlled discharge from Basin P3 may occur to Minnesota Public Water Wetland ID#86039400. Furthermore, discharge rates from Basin P3 will be restricted to match existing condition rates from LL-3 to prevent adverse impacts downstream.

The PR-DA-4 drainage area encompasses approximately 42 acres in the southeast portion of the study area and will flow directly to Minnesota Public Water Wetland ID#86039400. Discharge rates from PR-DA-4 will be restricted to match existing condition rates entering Minnesota Public Water Wetland ID#86039400.

According to the Comprehensive Water Resources Management Plan, the city prefers to provide rate control with a regional stormwater retention system.<sup>32</sup> If a regional system is not viable, onsite basins will be required to store the full runoff volume in the event of a 100-year, 24-hour storm.<sup>33</sup> For the purposes of this analysis, the proposed basins are sized to manage the runoff from a fully developed drainage area, including any offsite drainage area (approximately 18 acres from the southwest). Infiltration basins with pretreatment NURP ponds are assumed to be viable based on the high-quality soils. Infiltration basins will follow MPCA guidelines and the requirements of the NPDES Permit. Drawdown times and ponding depths are the driving metric for basin size and footprint. NURP ponds with permanent pools should be evaluated for algae growth.

---

<sup>32</sup> Available at: <https://www.monticellomn.gov/203/Resources>.

<sup>33</sup> See Section 3.1 Policy 4 of the City of Monticello Comprehensive Water Resource Management Plan. Available at: <https://www.monticellomn.gov/203/Resources>.

Natural buffers around the ponds should be prioritized to reduce nutrient loading and trash entering the pond from the direct drainage areas, aeration devices can also be used to increase pond circulation and limit algae growth.

Infiltration basin sizing assumes a maximum ponding depth of 4 feet with an infiltration rate of 1.0 inches per hour, with a mix of sand and gravel soils present. Future Geotech reports will help further define infiltration rates used in the basins. Pretreatment basins are sized to provide a permanent pool of the 2.5” event based on NURP standards with an average ponding depth of six feet. The detention area needed is based on the difference in runoff volume from existing conditions to proposed conditions for the Back-to-Back 100-year storm for a given basin on the site. See Table 13 and Table 14 below for a summary of the proposed runoff volumes and stormwater basin sizing.

**Table 13: Proposed Conditions Runoff Volume Summary**

Scenario	Basin	1.1” * Impervious Volume Control Requireme nt (ac-ft)	2.5” Runoff Volume (ac-ft)		100-yr Runoff Volume (ac-ft)	Δ Volume for Back-to- Back 100- Year Storm (ac-ft)
Scenario 1	P-1	8.9	7.3		78.6	17.1
	P-2	2.9	2.4		25.9	16.4
	P-3	1.2	2.1		22.7	15.2
Scenario 2	P-1	12.2	12.3		95.0	42.6
	P-2	4.0	3.8		31.2	21.6
	P-3	1.6	3.3		26.8	21.4

**Table 14: Proposed Stormwater Basin Sizing Summary**

Scenario	Basin	Pretreatment Area (ac)	Infiltration Area (ac)	Detention Area (ac)	Total Stormwater Area (ac)
Scenario 1	P-1	1.2	19.7	2.9	23.7
	P-2	0.4	6.5	2.4	9.3
	P-3	0.4	5.7	2.5	8.6
Scenario 2	P-1	2.1	23.8	7.1	32.9
	P-2	0.6	7.8	3.6	12.0
	P-3	0.6	6.7	3.6	12.0

Potential locations for these basins are based on buildable area, minimizing wetland impacts and maintaining existing drainage patterns, see Figure 15, Figure 16, and Figure 17. These figures are schematic in nature, a detailed stormwater management plan would be provided in later design stages with the potential for more stormwater BMPs. Additionally, freeboard will be 2-feet above the High-Water Level determined by modeling the 100-year critical event. The emergency overflows shall be 1.5-feet below the lowest ground elevation adjacent to a structure.

Outlets to landlocked areas may be constructed if decreases in storage or increased design elevations cause negative upstream or downstream impacts to infrastructure or property. If no outlet is proposed for the existing or proposed landlocked basins, freeboard will be determined by the greater of the following: 1) three feet above the HWL determined by modeling back-to-back 100-year, 24-hour events. 2) Three feet above the highest known water level. 3) Five feet above the HWL determined by modeling a single 100-year, 24-hour event. In existing conditions, the greatest freeboard comes from three feet above the HWL of the Back-to-back 100-year, 24-hour event. Future stormwater management plan(s) for the study area will define the freeboard requirements on a site-by-site, basin-by-basin basis.

Future stormwater BMPs would manage stormwater runoff and limit the volume of discharge to existing landlocked areas. A climate trends analysis including the potential for increased rainfall will help define any additional volume or rate control needs during site design. The city code does not currently specify a requirement to evaluate increased precipitation depths due to climate change. The precipitation depth for the 100-year, 24-hour storm is anticipated to increase by 20% by the end of the century based on the paper, *Equipping Municipalities with Climate Change Data to Inform Stormwater Management*.<sup>34</sup> The runoff volume and rates would increase proportionally to the precipitation depth assuming the same land use and storm duration. During site design, stormwater BMPs may consider a conservative design to account for this increase in runoff volume. Stormwater conveyance systems may also consider a conservative design to account for the increase in peak flow.

Under the proposed development, stormwater from the impervious areas of the site will be conveyed to stormwater management BMPs using storm sewer and overland flow. The conveyance system will be designed to the City of Monticello Engineering Design Standards. The onsite BMPs will be designed to the published MPCA guidelines as well as City of Monticello requirements. Pretreatment of stormwater is required prior to discharge to an infiltration basin or filtration basin. It is anticipated that all onsite BMPs would be constructed prior to any construction of impervious surface.

The soils across the AUAR study area primarily consist of hydraulic group A/B and are potentially suitable for infiltration. Additional studies and percolation testing should be

---

<sup>34</sup> *Equipping Municipalities with Climate Change Data to Inform Stormwater Management*. Available at: <https://conservancy.umn.edu/server/api/core/bitstreams/e29c1999-088a-4958-b68f-c201153f4884/content>.

considered to better understand site specific infiltration feasibility. As an alternative to infiltration, biofiltration or wet stormwater ponds could be pursued as the stormwater management approach for the site. The required treatment volume is determined by the City of Monticello, MS4 General Permit and NPDES Stormwater Permit as a function of new and reconstructed impervious area and will be required to meet the permanent stormwater management requirements of the MS4 and NPDES permit. For both scenarios, it will be required to retain 1.1 inches of runoff from new and reconstructed impervious surfaces. If volume retention is deemed infeasible, biofiltration or wet sedimentation may be used to treat stormwater runoff and must comply with the City's MIDS Flexible Treatment Options. Finally, existing off-site flows directed to the project will need to be managed onsite using a regional system or maintain existing drainage patterns via bypass flow. Conveyance strategies for offsite flow must be sized assuming fully developed conditions.

Additional detailed stormwater analysis will be provided at later stages of the design phase. This will include a stormwater management plan with existing and proposed detailed drainage figures, narrative describing onsite stormwater management and offsite conveyance, as well as applicable hydrologic and hydraulic modeling. Detailed basin information (normal water level, water quality volume, high water level) will also be provided in the stormwater management plan. The following stormwater management and erosion control requirements will be adhered to:

- City of Monticello Engineering Design Standards for Stormwater Management.
- National Pollution Discharge Elimination System permit requirements will be determined for each new development within the AUAR study area.

Additionally, to mitigate additional winter salt use associated with the planned increase impervious surfaces, the project proposer will implement a chloride management plan with every project that requires an NPDES permit.

Figure 15. Existing Drainage Conditions

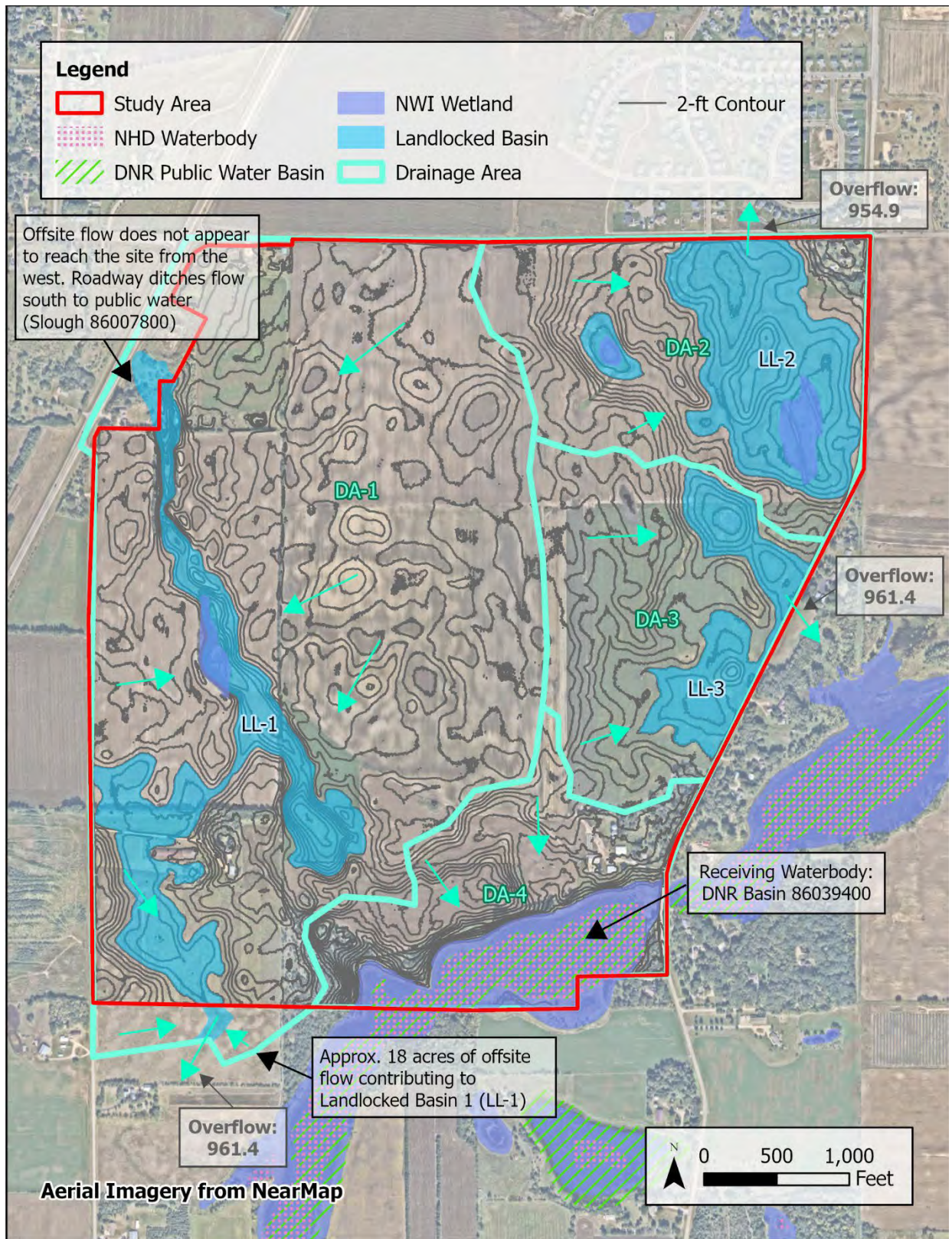


Figure 16. Proposed Stormwater Basins for Scenario 1

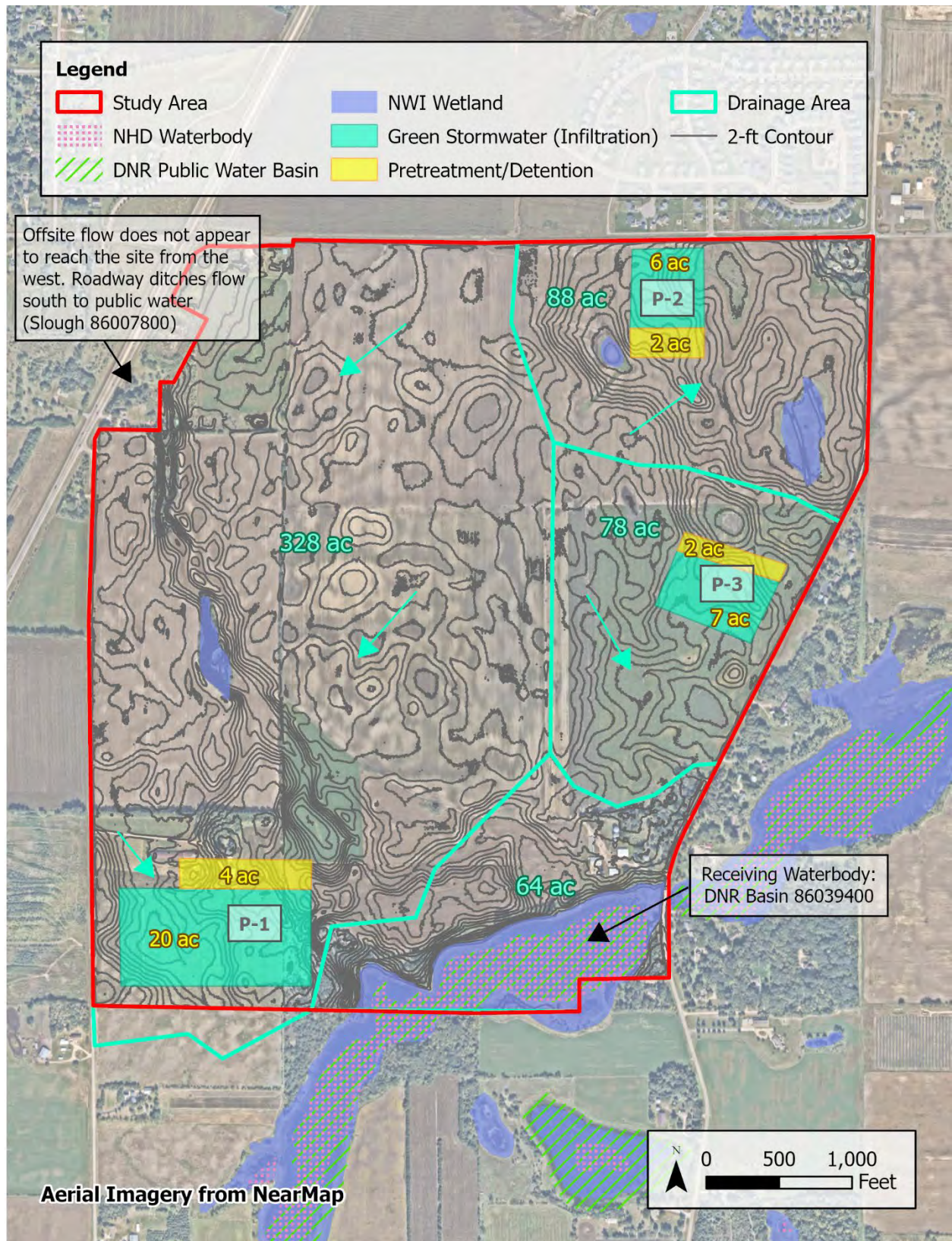
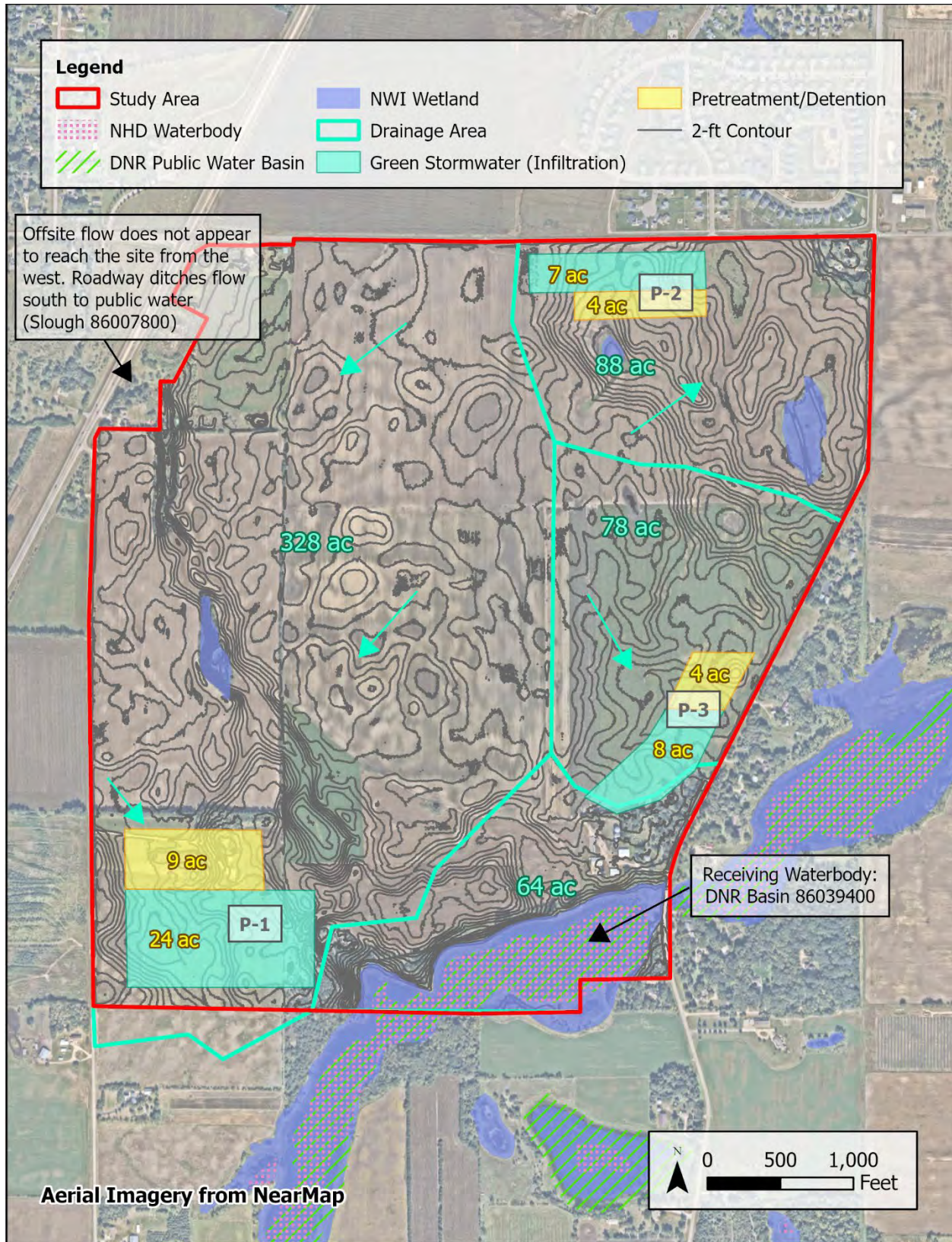


Figure 17. Proposed Stormwater Basins for Scenario 2



- iii. **Water Appropriation – Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use, and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.**

*AUAR Guidance: If the area requires new water supply wells, specific information about that appropriation and its potential impacts on groundwater levels should be given; if groundwater levels would be affected, any impacts resulting on other resources should be addressed.*

The water supply for the study area is anticipated to be obtained from the City of Monticello water supply system. Currently, the city has a MnDNR water appropriations permit to extract up to 800 million gallons per year from the Quaternary Buried Artesian aquifer from four wells. From 2019 to 2023 the city pumped a total of 511 to 651 million gallons per year of water from the aquifer. The City of Monticello has an average daily water demand of approximately 2.2 million gallons per day and a maximum day demand of 4.4 million gallons per day. The city is currently in the early stages of designing a water treatment plant that will remove the iron and manganese from the water supply (shown on Figure 18). The city has completed a preliminary study of their water supply system and has determined that watermain extensions and potentially a water storage tank will need to be constructed to service the study area. Depending on the specific water demand, additional pumping capacity may need to be added to the water system. Minimum watermain improvements for both scenarios include a 24-inch water main extension along Fallon Avenue from Chelsea Road to 85<sup>th</sup> Street NE and a 16-inch watermain extension along Edmondson Road from School Boulevard to the site to complete a looped system (see Figure 18).

Currently, the study area has two irrigation wells that have a combined water appropriation permits from the MnDNR totaling 76.3 million gallons per year (MGY). In 2023 there were 88.4 million gallons withdrawn through the two irrigation wells and a low of 43.1 million gallons withdrawn in 2019. In both scenarios these two wells will be



abandoned and removed from service. This will lessen the demand on the aquifer by the 76 MGY that is currently being withdrawn per year.

The city has completed a preliminary aquifer analysis. Under either scenario, the DNR may choose to perform further analysis before providing the required permits or approvals for any new city wells to evaluate potential impacts on adjacent wells or Pelican Lake.

Scenario 1

For the purposes of evaluating the worst case scenario, Scenario 1 assumes a water-cooled system could be implemented. If a specific project advances that intends to use an air-cooled system or a combination of air and water-cooled, the peak demand evaluated in this AUAR already covers the upper limit for water use anticipated in terms of impacts and mitigation.

For Scenario 1, a technology campus is anticipated to have a maximum peak day water demand of up to 3-3.5 million gallons per day (MGD) for non-contact cooling water use during the months of April through October at full build out. This would be an average daily demand of 750,000-875,000 GPD. This water demand is also intermittent and dependent on the ambient temperature and will fluctuate greatly during these months. It is anticipated that this system will only run 5-15% of the entire year. The estimated yearly water demand could be as high as 250 – 300 million gallons per year, including the domestic demand, which could range between 25,000 to 50,000 GPD depending on the total number of employees at the facility. Onsite storage at the facility may be implemented to shave the peak day demand to levels in the average daily demand category.

Under Scenario 1, the city would need to increase their water appropriation from the MnDNR to accommodate the full buildout of the project. The water demands will be phased as the project is intended to be built over the next 10+ years to get to the full build out (summarized in Table 15). The phasing will depend on the availability of water for the facility and the specific end user’s development plans.

**Table 15: Scenario 1 Water Demand Phasing**

Year	Demand
2025	0 million gallons per year
Ramp up	End user dependent
Full build out (approximately 2035)	Up to 250-300 million gallons per year

Currently, the City of Monticello has approximately 149 MGY of available water appropriations available. The existing irrigation wells within the study have an appropriation of approximately 76 MGY. The future development is anticipated to



provide up to 75 MGY of recharge water back to the aquifer through the on-site RIB system. The new net demand from the facility would be 99 MGY on the aquifer once the demand from the current irrigation wells are removed and the 75 MGY is infiltrated to the aquifer (see Table 17 for a breakdown). The infiltration process through the RIB will not immediately recharge the aquifer but will occur over the next 10-20 years.

If using groundwater for cooling, water reuse systems, such as cycling water, will be implemented to reduce water usage. This would entail having the cooling water cycle two or more times for reuse.

For Scenario 1, the firm pumping capacity for the city will need to be increased and a 2.5-million-gallon water storage tank would likely need to be constructed near the site in addition to the watermain extensions as shown on Figure 18. Under this scenario, the water treatment plant capacity would need to be increased to accommodate up to 3-3.5 million gallons per day for peak demand.

Scenario 2

Scenario 2 is assumed to be an office/warehouse type of industrial development. These buildings typically contain approximately 30% office space, while 70% of the building would be used as warehouse space. For industrial type buildings of this nature, water demands are typically based on the estimated sewer demands for the project. The estimated water demands are based on a flow rate of 274 gallons per day for every 2,400 square feet of office space and 7,000 square feet of warehouse space. For 5 million square feet of building, an estimated water demand would be 310,000 GPD. The watermain extensions as previously outlined would need to be completed, but the additional storage and increased pumping capacity would need further evaluation. Additional water appropriations would be needed from the MnDNR.

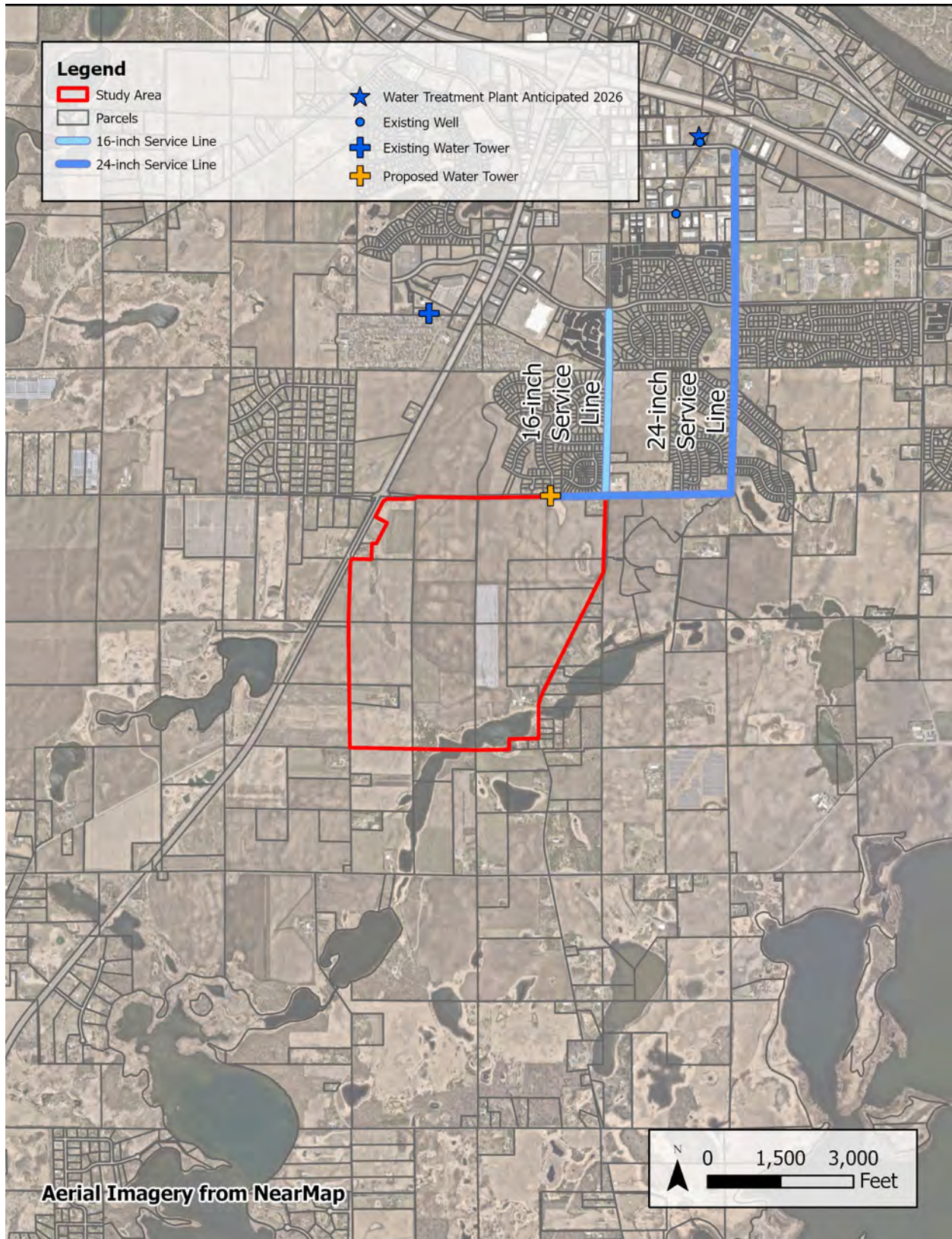
**Table 16: Scenario 2 Water Demand Phasing**

Year	Demand
2025	0 million gallons per year
Ramp up	End user dependent
Full build out (approximately 2035)	Up to 113,150,000 gallons per year

**Table 17: Scenarios 1 and 2 Water Appropriations Summary**

	Scenario 1	Scenario 2
City’s Water Appropriation	149 MGY	
Current Property Owner Appropriation	76 MGY	
Demand from Proposed Development	250-300 MGY (minus 75 recharged back, minus 76 returned from the current property owner appropriation) = 99-149 MGY net demand on the city’s water system	113.15 MGY

Figure 18: Proposed Water Infrastructure



iv. Surface Waters

- 1) **Wetlands – Describe any anticipated physical effects or alterations to wetland features, such as draining, filling, permanent inundation, dredging, and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.**

The development proposed in Scenarios 1 and 2 would avoid wetland impacts to the extent practicable. The wetland impacts proposed in Table 3 are based on anticipated worst case development impact and are dependent on final design for the chosen scenario. The project proposer will be required to comply with all federal, state, and local wetland requirements including avoiding and minimizing impacts to the extent practicable and mitigating any wetland impacts that are unavoidable. If natural flowpaths between wetlands cannot be maintained, piped connections may be installed to maintain hydraulic connectivity.

The City of Monticello requires the following wetland buffers based on anticipated wetland quality:

**Table 18. Wetland Buffers<sup>35</sup>**

Wetland Quality	Exceptional	High	Medium	Low
<b>Wetland buffer width (minimum)</b>	50 feet	40 feet	10 feet	10 feet
<b>Wetland buffer width (maximum)</b>	100 feet	60 feet	50 feet	50 feet
<b>Wetland buffer average width</b>	75 feet	50 feet	30 feet	25 feet
<b>Structure setback (from buffer)</b>	15 feet	15 feet	15 feet	15 feet
<b>Total (average)</b>	90 feet	65 feet	45 feet	40 feet

These wetland buffers will consist of natural vegetative ground cover and will be incorporated into site design. Wetland investigators anticipate Wetlands 1, 3, 5, 6, and 7 to be low quality and Wetlands 2 and 4 to be medium quality based on the City of Monticello definition, see Figure 12.<sup>36</sup> To ensure the correct buffer size is

<sup>35</sup> City of Monticello. *Code of Ordinances, Chapter 153.046 N.5. "Wetland buffer strips and setbacks"*. Available at: <https://www.monticellomn.gov/315/City-Ordinances>.

<sup>36</sup> City of Monticello. *Code of Ordinances, Chapter 153.012 "Wetlands"*. Available at: <https://www.monticellomn.gov/315/City-Ordinances>.

used, the developer will classify the wetlands using the Minnesota Routine Assessment Method (MnRAM) prior to construction.<sup>37</sup>

The MnDNR maps Wetland 4 as a Public Water Wetland. If impacts to this feature are anticipated, a Public Waters Work permit will be obtained prior to construction activities. Regulatory coordination with the Minnesota DNR Hydrologist will be conducted to implement appropriate avoidance and mitigation measures, if required. If the city annexes the study area, a reclassification of this basin will occur. The MnDNR anticipates its classification to be “Natural Environment”. Upon receiving this classification, the basin would be subject to the Shoreland Overlay Ordinance established by the city.

- 2) Other surface waters – Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal, and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.**

*AUAR Guidance: Water surface use need only be addressed if the AUAR area would include or adjoin recreational water bodies.*

No alterations to other surface waters are anticipated as part of the development scenario. The AUAR study area does not contain and is not adjacent to any recreational water bodies. No industrial development would occur within shoreland, in accordance with city zoning ordinances.

Pelican Lake is less than two miles downstream of the AUAR study area. The MPCA lists this waterbody as an impaired lake. Due to Pelican Lake’s hydrologic separation from the AUAR study area, developers are not required to implement further construction-related practices mitigating discharge to this waterbody. However, the developer will design the site with runoff rates and volumes that provide no measurable effects to pollution levels in Pelican Lake. The developer will manage total suspended solids (TSS) and total phosphorus (TP) loading through volume reduction practices or through the City of Monticello’s Flexible Treatment Option. The city is not anticipating negative effects to Pelican Lake due to the development of the AUAR study area.

---

<sup>37</sup> Available at: <https://bwsr.state.mn.us/wetland-functional-assessment>.

13. CONTAMINATION/HAZARDOUS MATERIALS/WASTES

- a. **Pre-project Site Conditions – Describe existing contamination or potential environmental hazards on or in close proximity to the project site, such as soil or groundwater contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize, or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.**

The Minnesota Pollution Control Agency’s (MPCA) What’s In My Neighborhood (WIMN) database was reviewed to determine if any known contaminated properties or potential environmental hazards are within the study area. During this review, Kimley-Horn identified one WIMN listing within the study area and ten within ¼-mile:

**Table 19: MPCA “What’s in My Neighborhood?” Sites**

Site ID	Site Name	Location	Activity Status	Activities	Program
151878	School Blvd & 85 <sup>th</sup> St Improvements	In Study Area	Inactive	Construction Stormwater	Stormwater
257130	Fritz Companies LLC	Within ¼-mile of Study Area	Active	Construction Stormwater, Wastewater, Industrial NPDES/SDS Permit	Multiple Programs
53396	Jacob DesMarais Farm	Within ¼-mile of Study Area	Active	Feedlots	Feedlots
263645	Haven Ridge West	Within ¼-mile of Study Area	Active	Construction Stormwater	Stormwater
16608	Monticello Township Hall	Within ¼-mile of Study Area	Inactive	Hazardous Waste	Hazardous Waste
96277	Featherstone	Within ¼-mile of Study Area	Active	Construction Stormwater	Stormwater
260340	Monticello Town Hall	Within ¼-mile of Study Area	Active	Construction Stormwater	Stormwater
246632	Edmonson Ridge	Within ¼-mile of Study Area	Inactive	Construction Stormwater	Stormwater
229214	Featherstone 4 <sup>th</sup> Add.	Within ¼-mile of Study Area	Active	Construction Stormwater	Stormwater



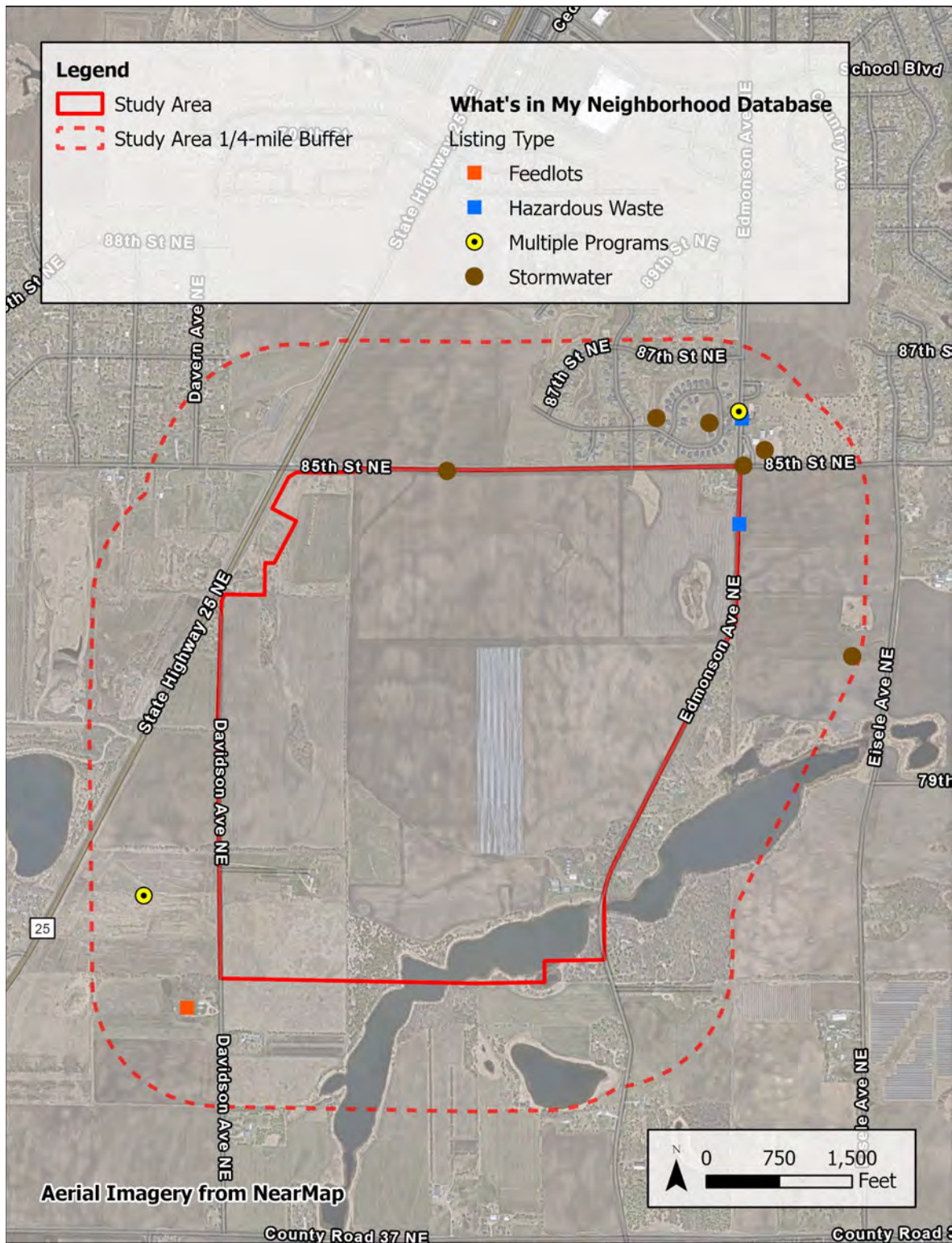
Site ID	Site Name	Location	Activity Status	Activities	Program
150255	Genereux Fine Wood Products	Within ¼-mile of Study Area	Active	Air Quality, Hazardous Waste, Very Small Quantity Generator, Industrial Stormwater	Multiple Programs
35957	The H Window Co	Within ¼-mile of Study Area	Inactive	Hazardous Waste	Hazardous Waste

The School Blvd & 85<sup>th</sup> St Improvements listing is an inactive stormwater permit that was terminated August 29, 2019. This listing is not anticipated to constitute an environmental hazard to the study area.

A review of MN Department of Agriculture’s Chemical Incidents and Agricultural Spills database was completed for the study area and no reports are documented within the study area or within 1/4 mile of the study area.

A Phase I/II Environmental Site Assessment (ESA) should be completed prior to construction under either Scenario and coordinate with the MPCA on safe handling and disposal of any contamination and hazardous materials found on the site prior to and during construction. An asbestos and regulated materials (ARM) assessment would need to be completed prior to the demolition of any structures and a demolition notification will be made to the MPCA/Minnesota Department of Health (MDH) if asbestos containing material (ACM) is identified during the ARM assessment. If ACM and/or other regulated solid waste is identified during the ARM assessment requiring removal, generated solid waste will be disposed of at an MPCA permitted landfill.

Figure 19: What's in My Neighborhood Listings



b. Project Related Generation/Storage of Solid Wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss

**potential environmental effects from solid waste handling, storage, and disposal. Identify measures to avoid, minimize, or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.**

*AUAR Guidance: Generally, only the estimated total quantity of municipal solid waste generated and information about any recycling or source separation programs of the RGU need to be included.*

According to the Wright County Solid Waste Ordinance, the county will ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes, section 473.811.

#### *Construction Generated Solid Waste*

Construction under either development scenario would generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would either be recycled or disposed of in the proper facilities in accordance with state regulations and guidelines.

#### *Operation Generated Solid Waste*

Recycling for industrial buildings in the AUAR study area will be conducted in accordance with the 2016 Recycling Law (Minnesota Statutes Chapter 115A, Section 115A.151 and Section 115A.552). Furthermore, Wright County Ordinance 156.026 requires all solid waste haulers to offer recycling services within the county.

The proposed development would generate new demands on solid waste management and sanitation services provided in the project area. During operation, it is estimated that the non-residential (commercial/industrial) waste stream be approximately 1,630 tons per year for Scenario 1 and 16,297 tons per year for Scenario 2<sup>38</sup>.

- c. Project Related Use/Storage of Hazardous Materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location, and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spills or releases of hazardous materials. Identify measures to avoid, minimize, or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.**

*AUAR Guidance: Not required for an AUAR. Potential locations of storage tanks associated with commercial uses in the AUAR should be identified (e.g., gasoline tanks at service stations).*

Above ground fuel belly tanks for the back-up generators may be needed for the Scenario 1 for emergency use. Details pertaining to the number, size, and location are unknown at this time and will be determined as site planning advances. Each will be installed and maintained in compliance with applicable state regulations for above ground storage tanks, including:

---

<sup>38</sup> Based on the Minnesota Environmental Quality Board's Climate Calculator Tool

- New tanks and piping would be designed to applicable industry standards and guidance.
- Tank upgrades and repairs would follow applicable industry standards.
- Tank owners would clearly label all tanks and piping.
- Underground storage tanks of any size will not be used as above ground storage tanks.

It is possible that there may be some above ground storage or back-up generators with Scenario 2, but the quantity would be significantly less than Scenario 1. The developer would prepare an Emergency Action Plan for the use of back-up generators under either scenario, which should include routine maintenance and testing, proper and safe setup during an outage, and fuel management. The plan must emphasize safety protocols, such as operating generators outdoors, away from openings, and never "back-feeding" power through a wall outlet.

If either scenario results in a proposed project that anticipates the need for more than 1,000,000 gallons of fuel storage for backup generators and may exceed the threshold for air emissions, a separate EAW will be required for these components of the project per Minnesota Rules 4410.4300.

- d. Project Related Generation/Storage of Hazardous Wastes – Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize, or mitigate adverse effects from the generation/storage of hazardous wastes including source reduction and recycling.**

*AUAR Guidance: Not required for an AUAR.*

Not applicable.

## 14. FISH, WILDLIFE, PLANT COMMUNITIES, AND SENSITIVE ECOLOGICAL RESOURCES (RARE FEATURES)

---

- a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.**

*AUAR Guidance: The description of fish and wildlife resources should be related to the habitat types depicted on the cover types map. Any differences in impacts between development scenarios should be highlighted in the discussion.*

Approximately 2% of the land within the study area has been previously disturbed for the construction of residences as well as agricultural facilities and provides little to no habitat. Approximately 81% of the land within the study area has been previously disturbed through farming and provides limited, low-quality habitat. Approximately 13% of the land within the study area is woodland, grassland, or wetland, and provides habitat for wildlife. These habitat types are shown in Figure 7. Wildlife that can be found within the study area includes birds, small mammals, and insects. There is one record of a state-listed species, Blanding’s turtle (*Emydoidea blandingii*), within a mile of the study area. No native plant or animal communities under the jurisdiction of the United States Fish and Wildlife Service (USFWS) are located within

the study area.<sup>39</sup> There are no areas of biodiversity significance within one mile of the study area. Additionally, there are no regionally significant ecological areas within one mile of the study area. There are no trout streams within a mile of the study area.

- b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number and/or correspondence number (ERDB) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe results.**

*AUAR Guidance: For an AUAR, prior consultation with the DNR Division of Ecological Resources for information about reports of rare plant and animal species in the vicinity is required. Include the reference numbers called for on the EAW form in the AUAR and include the DNR's response letter. If such consultation indicates the need, an on-site habitat survey for rare species in the appropriate portions of the AUAR area is required. Areas of on-site surveys should be depicted on a map, as should any "protection zones" established as a result.*

#### *State-Listed Species*

Kimley-Horn conducted a review of the DNR Natural Heritage Information System (NHIS) in June 2024 per license agreement LA-2024-006 for the AUAR study area and area within a one-mile buffer for state-listed threatened, endangered, and special concern species (see **Appendix C**). The review identified the Blanding's turtle southwest of the study area. The preferred habitat for this species is upland areas within approximately one mile of wetlands, waterbodies, and watercourses. Another NHIS review was requested in July 2025 and was received in August 2025 from the DNR for any potential changes since 2024. No changes were identified.

#### *Federally-Listed Species*

The U.S. Fish and Wildlife (USFWS) Service Information for Planning and Conservation (IPaC) tool was used to identify federally-listed species within or near the AUAR Study Area. This review identified two proposed threatened species, the monarch butterfly (*Danaus plexippus*) and the western regal fritillary (*Argunnis idalia occidentalis*), as well as one experimental population (non-essential), the whooping crane (*Grus americana*). The IPaC species list is included in **Appendix C**.

#### **Monarch Butterfly**

The monarch butterfly is designated as a proposed threatened species for official listing by the USFWS. The preferred habitat for this species is prairie where milkweed and flowers are present. If this species is listed as threatened prior to development, effects on the species may need to be reevaluated.

---

<sup>39</sup> USFWS. ND. Critical Habitat for Threatened & Endangered Species. Available at: <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>.

### Whooping Crane

The whooping crane is designated as an experimental population, non-essential species by the USFWS. Non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land (require consultation under 7(a)(2) of the ESA) and as a proposed species on private land (no section 7(a)(2) requirements, but Federal agencies must not jeopardize their existence (section 7(a)(4))). The preferred habitat for the species includes shallow marshes and adjacent, open grasslands.<sup>40</sup>

### Western Regal Fritillary

The western regal fritillary is a butterfly species that is known to occur in Minnesota and was identified as potentially occurring within the study area. The species is not federally listed but is proposed threatened. Suitable habitat consists of native grasslands containing violets, nectar sources, and tall vegetation. If this species is listed as threatened prior to development, effects on the species may need to be reevaluated.

### *Migratory Birds – Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by USFWS. USFWS has the responsibility under the MBTA to prevent the mortality of migratory birds and provide recommendations to mitigate or reduce potential impacts to migratory birds, such as initiating clearing of forested habitats outside of the nesting season (generally March 1 to August 31) or requiring nest surveys to be conducted prior to clearing or other construction related activities to avoid injury to eggs or nestlings.

In addition to the species identified above, the IPaC results indicated that several migratory bird species, including the bald eagle (*Haliaeetus leucocephalus*), have the potential to be present in the study area. Bald eagles are protected under the Bald and Golden Eagle Protection Act.

- c. Discuss how the identified fish, wildlife, plant communities, rare features, and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.**

### *State Listed Species*

Wetland drainage and degradation, vehicle collisions, and development of upland habitat near wetlands can all negatively impact populations of the Blanding's turtle. Both scenarios propose impacts to wetlands, increases in vehicular traffic to the AUAR study area, and development of upland surrounding wetlands; therefore, impacts to the Blanding's turtle are possible given the proximity of a NHIS listing to the AUAR study area.

### *Federally-listed Species*

#### **Monarch Butterfly**

Agricultural users have disturbed most of the study area to cultivate crops. Natural prairie vegetation does exist within the study area; however, the proposed scenarios are not expected

<sup>40</sup> USFWS. Whooping Crane. Available at: <https://ecos.fws.gov/ecp/species/758>

to appreciably diminish the quality or extent of available suitable habitat in the vicinity of the study area.

**Whooping Crane**

No critical habitat has been designated for this species. While potential suitable habitat may be present, the study area is located on land outside of a federal National Wildlife Refuge or National Park.

**Western Regal Fritillary**

Agricultural users have disturbed most of the study area to cultivate crops. Natural prairie vegetation does exist within the study area; however, the proposed scenarios are not expected to appreciably diminish the quality or extent of available suitable habitat in the vicinity of the study area.

*Invasive Species*

Invasive species are a major cause of biodiversity loss and are considered biological pollutants by the DNR. Invasive species can be moved on construction equipment, landscaping equipment, and other debris.

*Stormwater*

Stormwater run-off can cause several environmental problems. When stormwater drains off a construction site, it can carry sediment and pollutants that harm lakes, rivers, streams, and wetlands, which in turn may harm wildlife.

*Tree Removal*

The AUAR study area contains approximately 26 acres of wooded land. Forests and forested areas provide an important natural resource in Minnesota. Forest clearing and tree removal creates a variety of environmental impacts including habitat destruction, biodiversity impairment, soil erosion, and loss of carbon sinks. Any tree clearing will be conducted in accordance with Ordinance 847 which amends Chapter 153.061 of the Monticello Code of Ordinances.

**d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.**

*State-listed Species*

**Blanding’s Turtle**

The MnDNR determined future development within the study area would not likely affect any rare features per letter received on July 17, 2024. This determination is valid for one year; thus, Kimley-Horn submitted a new Natural Heritage Review request to the MnDNR on July 16, 2025. A letter was received on August 14, 2025. The MnDNR determined that Blanding’s turtle may be impacted by the proposed project and required the following mitigation efforts for the Blanding’s turtle, which include:

- Avoid wetland and aquatic impacts during hibernation season, between September 15 and April 15, if the area is suitable for hibernation.

- Limit erosion and sediment control to wildlife friendly erosion control.
- Check bare ground within construction areas for turtles before the use of heavy equipment or any ground disturbance.
- The Blanding’s turtle flyer must be given to all contractors working in the area.
- Report any sightings using the DNR Plant and Animal Observation Form.
- If turtles are in imminent danger, move them by hand out of harm’s way; otherwise, they are to be left undisturbed. Directions on how to move turtles safely can be found at Helping Turtles Across the Road.

*Federally-listed Species*

**Monarch Butterfly**

The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area.

**Whooping Crane**

Experimental population, non-essential status does not provide species protection under the ESA listing process outside of federal lands; therefore, negative impacts to this species are unlikely.

**Western Regal Fritillary**

The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area.

*Invasive Species*

State requirements necessitate the control and spread of state listed noxious weeds and/or invasive weeds if encountered prior to construction. Disturbed areas would be reestablished using appropriate native and stabilization seed mixes. Methods to avoid spreading noxious weeds and/or invasive species will be incorporated into project specifications (and/or SWPPP when developed). According to the DNR, some methods that can prevent the spread of invasive species during construction include:

- Inspecting construction equipment and removing any visible plant, seeds, mud, dirt clods, and animals when arriving and leaving a site.
- Using certified weed-free products such as weed-free seed or hay whenever possible.
- Using mulch, soil, gravel, etc., that is free of invasive species whenever possible.
- Inspecting soil and plant material during planting for signs of invasive species and removing or destroying the invasive species or the plant and associated soil if the invasive species cannot be separated out.

*Tree Removal*

Any hardwood tree 6 inches or more in diameter at breast height (DBH), softwood tree 8 inches or more in DBH, or conifer over 12 feet in height must be replaced at a rate of 1:1 aggregate

caliper inch (ACI) to removed DBH inches per Ordinance 847 which amends Chapter 153.061 of the Monticello Code of Ordinances. In accordance with this ordinance, the developer will also conduct a tree survey prior to construction. Although some tree removal will be necessary, the scope of removal will be limited as much as feasible to support the proposed development. Trees will be planted in accordance with requirements in the city of Monticello's Tree Manual.

*Stormwater*

The proposed development scenarios include stormwater management and treatment of all stormwater runoff within the AUAR study area.

*Greenway Corridor*

A conceptual greenway corridor is planned within the study area that could provide connections between and among natural open spaces and be a natural area for wildlife.

15. HISTORIC PROPERTIES

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include 1) historic designations; 2) known artifact areas; and 3) architectural features. Attach letter received from the Minnesota State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

*AUAR Guidance: For an AUAR, contact with the State Historic Preservation Office and State Archeologist is required to determine whether there are areas of potential impacts to these resources. If any exist, an appropriate site survey of high probability areas is needed to address the issue in more detail. The mitigation plan must include mitigation for any impacts identified.*

The Minnesota Statewide Historic Inventory Portal (MnSHIP) was reviewed to identify historic resources. According to MnSHIP, there are three historic sites in the vicinity of the AUAR study area. None of the historic sites are listed on the National Register of Historic Places (NRHP).

**Table 20. Historic Sites**

Address	Property Name	National Register Listing Status	Distance from Study Area
8817 TH 25 Monticello Township, MN 55362	Nickerson Farm	Inventoried – Not Listed	Approximately 1,700 feet north
7607 TH 25 Monticello Township, MN 55261	Goetzke Property	Inventoried – Not Listed	Approximately 2,000 feet west
N/A	Trunk Highway 25	Not eligible	Adjacent to northwest boundary

According to the Minnesota Office of the State Archeologist (OSA) Public Viewer map, there are known archeological records within and/or in the vicinity of the study area. Prior to construction under either scenario, developers will need to consult with both the OSA and Minnesota Indian Affairs Council.

An archeological consultant (In Situ) conducted a Phase I Archaeological Survey of the study area in 2025. This included a background literature review within and surrounding the study area along with a field survey conducted in March 2025. The field survey consisted of 408 acres of the study area that covered everything except for a few areas on the northwest and southwest portions of the study area. Field conditions prevented the investigators from evaluating the entire AUAR study area. The remaining area (totaling 122 acres) will be subject to archaeological survey at a later date, unless development is not planned in these areas.

The survey identified three new archaeological sites which were all pre-contact, isolated, lithic finds that are recommended as not eligible for the National Register of Historic Places due to no known cultural affiliation and with no associated diagnostic artifacts or features. Further, the investigators recommended a finding of No Historic Properties Affected within the survey limits and pending agency concurrence, recommended no further archeological work for the area that was surveyed.

If a federal nexus is identified during preparation of project permits (i.e. if a USACE Section 404 permit is required due to impacts to regulated wetlands), the project proposer must also consider potential impacts on historic properties under Section 106, which requires consultation with the State Historic Preservation Officer (SHPO) and other relevant parties to identify any potential mitigation needed. If human remains are recovered at any time during archaeological investigation or development, all activities must stop and consultation initiated with the Office of the State Archaeologist and Minnesota Indian Affairs Council.

Coordination with the State Historic Preservation Office and State Archeologist is ongoing. Both agencies received a copy of the AUAR Scoping Document and this Draft AUAR for review and any identified mitigation from their review will be included, if warranted.

## 16. VISUAL

---

**Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.**

*AUAR Guidance: Any impacts on scenic views and vistas present in the AUAR should be addressed. This would include both direct physical impacts and impacts on visual quality or integrity. EAW Guidelines contains a list of possible scenic resources.*

*If any non-routine visual impacts would occur from the anticipated development, this should be discussed here along with appropriate mitigation.*

### Scenarios 1 and 2

The AUAR study area includes existing agricultural land and small residential sites that are not near any unique designated scenic views or vistas. Any development of agricultural land will have an impact on the visual look of a property. Future development would conform with the city ordinances for building height, building form, landscape screening, outdoor storage areas, and lighting to avoid impacts to neighboring properties and species. No significant visual impacts are anticipated. Future development will need to follow the City of Monticello's landscaping and screening standards applicable to the Scenario development and land uses to provide a visual buffer to neighboring properties. Scenario 1 is expected to have larger buffers and setback requirements between nearby uses around the perimeter of the buildings as compared to Scenario 2. Additionally, tree mitigation and replacement plans would be coordinated with the City as required by the ordinance and incorporated in the development plans.

As building and site designs advance, lighting practices will be selected to address known ecological concerns and prevent avoidable impacts to insects, wildlife, rare plants, and adjacent natural areas.

Guidance from the USFWS to minimize blue light, uplight, and backlight will be adhered to the extent practicable.

## 17. AIR

- a. Stationary Source Emissions – Describe the type, sources, quantities, and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health, or applicable regulatory criteria. Include a discussion of any methods used to assess the project’s effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.**

*AUAR Guidance: This item is not applicable to an AUAR. Any stationary air emissions source large enough to merit environmental review requires individual review.*

Not applicable to an AUAR. If any potential emission generation (e.g., from generators) from future development is above the threshold for an air quality permit/environmental review, then that specific project would be subject to additional environmental review beyond what is evaluated in this AUAR.

- b. Vehicle Emissions – Describe the effect of the project’s traffic generation on air emissions. Discuss the project’s vehicle-related emissions effect on air quality. Identify measures (e.g., traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.**

*AUAR Guidance: Although the MPCA no longer issues Indirect Source Permits, traffic-related air quality may still be an issue if the analysis in Item 18 indicates that development would cause or worsen traffic congestion. The general guidance from the EAW form should still be followed. Questions about the details of air quality analysis should be directed to MPCA staff.*

The Minnesota Department of Transportation (MnDOT) has developed a screening method designed to identify intersections that will not cause a carbon monoxide (CO) impact above state standards. MnDOT has demonstrated that even the 10 highest traffic volume intersections in the Twin Cities do not experience CO impacts<sup>41</sup>. Therefore, intersections with traffic volumes lower than these 10 highest intersections will not cause a CO impact above state standards. MnDOT’s screening method demonstrates that intersections with total daily approaching traffic volumes below 82,300 vehicles per day will not have the potential for causing CO air pollution problems. None of the intersections in the study area exceed the criteria that would lead to a violation of the air quality standards.

- c. Dust and Odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be**

<sup>41</sup> Source: MnDOT CO Hot Spot Screening Method. [https://www.dot.state.mn.us/project-development/subject-guidance/air-quality/process.html#:~:text=The%20Twin%20Cities%20area%20has,carbon%20monoxide%20\(CO\)%20violations](https://www.dot.state.mn.us/project-development/subject-guidance/air-quality/process.html#:~:text=The%20Twin%20Cities%20area%20has,carbon%20monoxide%20(CO)%20violations)

**discussed under Item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

*AUAR Guidance: Dust and odors need not be addressed in an AUAR, unless there is some unusual reason to do so. The RGU might want to discuss as part of the mitigation plan, however, any dust control ordinances in effect.*

#### Scenarios 1 and 2

The proposed development may generate temporary fugitive dust emissions during construction. The City of Monticello regulates dust according to Minnesota pollution control standards. Dust emissions can be controlled by sweeping, watering, sprinkling, as appropriate or as prevailing weather and soil conditions dictate. Dust emissions are not anticipated during operations as all ground surfaces will either be impervious or vegetated.

### 18. GREENHOUSE GAS (GHG) EMISSIONS/CARBON FOOTPRINT

---

- a. **GHG Quantification – For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.**

#### *About Greenhouse Gases (GHGs)*

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are

believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming.<sup>42</sup>

*Project-related GHG Emissions*

This section estimates emissions of the following GHGs for each scenario:

- Carbon dioxide (CO<sub>2</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Methane (CH<sub>4</sub>)

The projected GHG emissions are provided on an average annual basis using the CO<sub>2</sub> equivalent (CO<sub>2</sub>e) and include the proposer’s best estimate of average annual emissions over the proposed life/design service life of future development. The estimates also include emissions from the construction and operating phases of the scenario. Emissions were estimated using the Minnesota Environmental Quality Board’s Climate Calculator Tool<sup>43</sup> and are summarized in Table 21, Table 22, and Appendix D by project phase (i.e., construction and operations) and source type (e.g., material inputs, building energy consumption).

Construction emissions for the two proposed scenarios are based on length of construction and are from material inputs, transport of those material inputs, employee commuting, construction equipment, land use change, and construction waste.

**Table 21: Construction Emissions**

Emissions Source	Scenario 1 Project-Related CO <sub>2</sub> e Emissions (total)	Scenario 2 Project-Related CO <sub>2</sub> e Emissions (total)
Material inputs	117,457.85	197,881.21
Transportation of material inputs	2,383.50	4,049.70
Employee commuting	126,621.97	211,458.70
Construction equipment	19,939.55	19,939.55
Land use change	38.15	43.02
Construction waste	398.93	664.89
<b>Total</b>	<b>266,839.95</b>	<b>434,037.07</b>

<sup>42</sup> Summarized from U.S. EPA, Overview of Greenhouse Gases: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

<sup>43</sup> Available at: <https://www.eqb.state.mn.us/environmental-review/climate-assessments>.

**Table 22: Annual Operational Emissions<sup>44</sup>**

Emissions Source	Scenario 1 Proposed CO <sub>2e</sub> Emissions (tons/year) <sup>45</sup>	Scenario 2 Proposed CO <sub>2e</sub> Emissions (tons/year)
Building energy consumption	127,404.78	190,317.19
Industrial Processes	N/A	2,793,425.57
HFC leakage	247.18	372.73
On-road vehicles	5,626.18	21,190.94
Treatment of waste off-site	913.99	8,269.44
<b>Total</b>	<b>134,192.13</b>	<b>3,013,575.87</b>

**b. GHG Assessment**

**i. Describe any mitigation considered to reduce the project’s GHG emissions.**

Scenario 1 and Scenario 2

The following are potential design strategies and sustainability measures that are under consideration for the proposed development to reduce emissions for both scenarios:

- Create new open space with native vegetation and habitat
- Expand urban tree planting
- Require energy efficient appliances

Implementation of the above strategies will be evaluated on a case-by-case basis based on code requirements, feasibility, availability of materials, schedule, and tenant considerations. For Scenario 1, most technology park end users have sustainability goals pertaining to water, energy, carbon, and recycling that would be implemented on this site.

**ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project’s GHG emissions. Explain why the selected mitigation was preferred.**

- By creating new vegetated areas from previously cropped land, the project would sequester carbon dioxide that would not have been captured without the land conversion. Trees and other vegetation also incorporate carbon into their biomass when growing.
- Tree planting can provide shade, which reduces building cooling demands. When this demand is reduced, it also reduces energy consumption and corresponding GHG emissions.

<sup>44</sup> While the existing conditions within the AUAR study area do emit GHGs, Kimley-Horn assumed the emissions to be negligible when compared to the emissions of the development scenarios; therefore, Kimley-Horn did not include the annual operational emissions of the existing conditions in Table 15.

<sup>45</sup> Note: Scenario 1’s estimated annual emissions are based on the EQB’s recommended Climate Calculator Tool and is based on a typical light industrial user.

- Selecting energy-efficient appliances reduces energy consumption and corresponding GHG emissions.

The potential mitigation listed in Item 18.b.i. was selected to comply with best management practices for new construction and reduce GHG emissions where practicable during operations.

**iii. Quantify the proposed project’s predicted net lifetime GHG emissions (total tons per number of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.**

The Next Generation Energy Act requires the state to reduce greenhouse gas emissions in the state by 80 percent between 2005 and 2050, while supporting clean energy, energy efficiency, and supplementing other renewable energy standards in Minnesota. The MPCA’s biennial GHG emissions reduction report from 2021 identifies strategies for reducing emissions in the three economic sectors with the highest emissions – transportation, electricity generation, and agriculture, forestry, and land use.

The expected lifespan of the project is 50 years, this equates to a total estimated 7,915,791.36 CO<sub>2</sub><sub>e</sub> metric tons over the lifetime of the development under Scenario 1 and 190,289,315.97 CO<sub>2</sub><sub>e</sub> metric tons over the lifetime of the development under Scenario 2 (including both construction and operations phases). The proposer will evaluate implementing the sustainability measures listed in Item 18.b.i to reduce operational emissions to the extent practicable. The proposed development will be built in compliance with state regulations and city building codes.

## 19. NOISE

---

**Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area; 2) nearby sensitive receptors; 3) conformance to state noise standards; and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.**

*AUAR Guidance: Construction noise need not be addressed in an AUAR, unless there is some unusual reason to do so. The RGU might want to discuss as part of the mitigation plan, however, any construction noise ordinances in effect.*

*If the area will include or adjoin major noise sources, a noise analysis is needed to determine if any noise levels in excess of standards would occur, and if so, to identify appropriate mitigation measures. With respect to traffic-generated noise, the noise analysis should be based on the traffic analysis of Item 18.*

### *Existing Noise*

The AUAR study area is currently cropland, woodland, wetland, grassland, and some residences. The existing noise sources at the site consist mainly of the surrounding roadways.

### *Construction Noise*

As stated in the AUAR guidelines, construction noise need not be addressed unless there is some unusual reason to do so. No unusual circumstances have been identified for either scenario that would necessitate a detailed construction noise analysis. Construction activities are prohibited between the hours of 10:00 p.m. and 7:00 a.m.<sup>46</sup> Construction of the proposed project would comply with these requirements.

### *Traffic Generated Noise*

A sound increase of 3 dBA is barely noticeable by the human ear, a 5 dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (i.e., the amount of traffic doubles), there is a 3 dBA increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases by a factor of 10, the resulting sound level will increase by about 10 dBA and be heard as twice as loud.

Traffic volumes in the project area are either on roadways that do not have receivers that are sensitive to noise, or the traffic levels attributable to the project are well below the amount that would generate a sound increase that could be noticeable.

The change in traffic noise levels is not anticipated to be readily perceptible.

### *Operational Noise*

#### Scenario 1

For Scenario 1, the main source of noise, depending on the type of technology park use, could include computers and ventilation/cooling systems within the building, and the testing of generators up to once per month and operating in the case of emergency. Depending on a variety of factors (i.e., equipment manufacturer, operational capacity, etc.), chiller equipment at a typical data center could range from around 65 dB(A) up to around 80 dB(A) at a distance of approximately 30 feet. Given the quantity of chillers needed for a typical data center building, these noise levels would be higher. Manufactures can apply treatments to the equipment to make them quieter, or noise attenuating barriers can be designed and implemented to help reduce noise.

Depending on the manufacturer specifications for the various pieces of operational equipment, it is possible for low frequency noise to be emitted. Similar to chillers, manufacturers offer mitigation packages that could be applied directly to the equipment. Additionally, absorptive screening barriers can be implemented to assist with reducing operational noise levels, including low frequency noise.

#### Scenario 2

Light industrial uses like those proposed under Scenario 2 can include outdoor storage areas. Operation of large vehicles in these storage areas could generate unwanted noise.

#### Scenarios 1 and 2

Operational noise from both scenarios could include emergency generators that are only expected to operate during maintenance and testing as well as during emergency conditions for power

---

<sup>46</sup> City of Monticello. *Code of Ordinances Chapter 130.09*. Available at: <https://www.monticellomn.gov/315/City-Ordinances>.

outages. When used, generators could range between 75 dB(A) to 85 dB(A). Depending on the specific use for each Scenario, it is expected that Scenario 1 may require more backup generators than Scenario 2. Sensitive receptors within a mile of the study area include residential homes, farmsteads, commercial developments, and churches. In some cases, more robust noise enclosures are needed as well as physical barriers to assist with containing operational noise from emergency generator use.

The site plans developed for specific projects should show the proposed locations and types of mitigation, with the estimated noise reductions for all areas projected to exceed noise standards.

The State of Minnesota regulates industrial operations standards in Chapter 7030 of the Minnesota Administrative Rules (<https://www.revisor.mn.gov/rules/7030>). The chapter establishes the thresholds in Table 23. Both scenarios will abide by these thresholds. For Scenario 1, these thresholds will apply whether the cooling system uses just water or a hybrid of air and water.

**Table 23. Minnesota Industrial Operations Noise Standards**

Noise Area Classification (NAC)	Maximum Permissible Hourly Sound Pressure Levels (dBA)	
	Daytime/Nighttime	
	<i>L</i> <sub>10</sub>	<i>L</i> <sub>50</sub>
Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services	65/55	60/50
Retail, business and government services, recreational activities, transit passenger terminals	70/70	65/65
Manufacturing, fairgrounds and amusement parks, agricultural and forestry activities	80/80	75/75

dBA: An A-weighted decibel is a unit for measuring sound levels that is adjusted to represent how the human ear hears sound  
*L*<sub>10</sub>: sound level, in dBA, which is exceeded ten percent of the time for a one-hour survey  
*L*<sub>50</sub>: sound level, in dBA, which is exceeded fifty percent of the time for a one-hour survey

Minnesota law permits the Minnesota Pollution Control Agency (MPCA) to enforce the State's noise rules; however, the enforcement of noise rules are generally conducted at the local level. Under either of the scenarios, noise attenuation measures will be incorporated into the project design to ensure MPCA noise rules and City noise ordinances are followed.<sup>47</sup> As site development progresses, developers would be responsible for assessing whether operational noise exceeds established noise standards which may require studies of ambient and proposed noise conditions and then mitigation for compliance.

<sup>47</sup> MPCA Noise Pollution Rules Available at: <https://www.revisor.mn.gov/rules/7030/>.

## 20. TRANSPORTATION

---

- a. Describe traffic-related aspects of project construction and operation. Include 1) existing and proposed additional parking spaces; 2) estimated total average daily traffic generated; 3) estimated maximum peak hour traffic generated and time of occurrence; 4) source of trip generation rates used in the estimates; and 5) availability of transit and/or other alternative transportation modes.

### *Parking*

Minimum off-street parking and loading requirements listed in Section 153.067 and 153.068 of the City of Monticello Code of Ordinances will be adhered to.

### *Existing Conditions*

The following provides a description of the public roadways within the AUAR area:

**85<sup>th</sup> Street NE (or CR 106 West of MN 25)** is an east-west roadway that serves as the northern boundary of the AUAR area. It is a two-lane undivided roadway with dedicated right- and left-turn lanes at the intersection with MN 25. 85<sup>th</sup> Street NE is classified as a major collector, according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along 85<sup>th</sup> Street is approximately 1,797 vehicles per day (vpd) west of MN 25, as of 2024. No AADT data is available east of MN 25. The posted speed limit is 45 mph west of MN 55 and unposted east of MN 55, with a statutory speed limit of 55 mph.

**Minnesota State Highway 25 (MN 25)** is a generally north-south state highway that runs west of the AUAR area. It is a two-lane undivided roadway about 1000' south of 85<sup>th</sup> Street, where it transitions to a four-lane divided roadway to the north. There are dedicated left and right turn lanes along MN 25 at the intersections with 85<sup>th</sup> street NE and CSAH 37. MN 25 is classified as Principal Arterial - other, according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along MN 25 is approximately 15,009 vehicles per day (vpd) north of 85<sup>th</sup> Street, as of 2024. The posted speed limit is 60 mph.

**Edmonson Avenue NE (CR 117)** is a north-south roadway that serves as the eastern boundary of the AUAR area. It is a two-lane undivided roadway that connects to the AUAR site via 85<sup>th</sup> Street NE. There are no existing turn lanes along this road. Edmonson Avenue NE is classified as a minor collector according to the *Monticello 2040 Vision + Plan*. Edmonson Avenue NE has an AADT of 1,808 vpd north of CSAH 37 and 1,930 vpd north of 85<sup>th</sup> Street NE. The posted speed limit is 55 mph.

**CSAH 37** is an east-west County State Aid Highway (CSAH) located south of the AUAR area. It is a two-lane undivided roadway and is classified as a major collector south of the AUAR area according to page 99 of the 2045 Monticello Comprehensive Plan. According to the MnDOT Traffic Mapping Application, the road has an AADT of approximately 4,873 vpd west of MN 25 as of 2024. The posted speed limit is 55 mph.

**Davidson Avenue NE** is a north-south roadway that serves as the western boundary of the AUAR area. It is a two-lane undivided local roadway with no turn lanes. There is no AADT data available for



Davidson Avenue NE and there is no posted speed limit. The speed limit was assumed to be 45 mph for analysis purposes.

**School Boulevard** is a three-lane undivided east-west roadway with one travel lane in each direction and a shared left turn lane. School Boulevard is classified as a minor arterial, according to the Monticello 2040 Plan. MnDOT reports an AADT of 5,994 west of Edmonson Avenue and 6,464 west of Fenning Avenue, as of 2024. The posted speed limit is 40 mph, with a school speed limit of 30 mph enforced when children are present.

**Fallon Avenue** is a two-lane undivided north-south roadway. Fallon Avenue is classified as a local road according to the Monticello 2040 Plan. MnDOT reports an AADT of 3,847 north of School Boulevard, as of 2024. The posted speed limit is 30 mph.

*Traffic Generation*

The trip generation of the two previously shown development scenarios were estimated based on data from the ITE Trip Generation Manual, 11th Edition. Scenario 1 utilized the Land Use Code (LUC) for Data Center (LUC 160) as the best available representation of the number of trips generated, while Scenario 2 utilized the code Industrial Park (LUC 130). Note that a significant portion of site trips in Scenario 2 are anticipated to be heavy vehicle trips. The trip generation is shown below in Table 24. The full traffic study conducted for the AUAR can be found in **Appendix E**.

**Table 24: Trip Generation Forecasts**

Scenario	AM Peak Hour			PM Peak Hour			Daily
	Total	In	Out	Total	In	Out	
<b>Scenario 1</b>	330	182	148	270	81	189	2,970
<b>Scenario 2</b>	1,700	1,377	323	1,700	373	1,327	16,850

*Availability of Transit*

There are no transit services available near the site. It is not anticipated that there will be significant change in transit usage.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project’s impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation’s Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance.**

*AUAR Guidance: For AUAR reviews, a detailed traffic analysis will be needed, conforming to the MnDOT guidance as listed on the EAW form. The results of the traffic analysis must be used in the response to Items 16 and 17.*

A Traffic Impact Analysis (TIA) was completed in August 2025 based on the projected trip generation of the proposed scenarios. The results of this study can be found in Appendix E. Based on the detailed findings of the Monticello Industrial TIA, the area's transportation network is expected to support development within the AUAR study area with mitigation. The TIA identified improvements that could be constructed to mitigate possible future traffic impacts associated with development within the AUAR study area. Metrics for traffic analysis include intersection delay as measured by Level of Service (LOS) and queue lengths.

The traffic analysis report includes intersection capacity analyses for intersections at the site access points as well as intersection operations within the vicinity of the project (see locations identified in Figure 20). Access to the study area is anticipated to be provided via three locations:

- North Access (along 85<sup>th</sup> Street NE)
- East Access (along Edmonson Avenue NE)
- West Access (Scenario 2 only; along Davidson Avenue NE / via future connection to MN 25)

The location of the proposed access points will adhere to the access management standards outlined in the City of Monticello's *2040 Transportation Plan*.

Based on the results of the Traffic Impact Analysis, all study intersections are anticipated to operate at an overall LOS D or better under Existing and No-Build (2030 and 2045) scenarios. Some movements at signalized intersections are anticipated to operate at LOS E, but all intersections are anticipated to operate acceptably overall.

Under Scenario 1 conditions, delays see a minor increase, but all analyzed intersections are expected to remain at generally acceptable LOS through the analyzed design year (2045). A southbound right turn lane is recommended at Edmonson Avenue NE & East Access and a northbound right turn lane at Edmonson Avenue & 85<sup>th</sup> Street.

Under Scenario 2 conditions, delays see a larger increase than Scenario 1 conditions, and some study area intersections are anticipated to experience operational issues if left unmitigated. A traffic signal or roundabout is anticipated to be required at MN 25 & Future Roadway (proposed collector). Analysis also indicates that a roundabout or traffic signal will be required at School Boulevard & Fallon Avenue by the opening year (the city is planning to construct a roundabout here in the long term). All other study intersections are anticipated to operate acceptably with some turn lane improvements.

Table 25 shows the LOS for the study area intersections in each analysis scenario. Mitigated conditions results (where applicable) are shown after a slash. With mitigation, all intersections are expected to operate at generally acceptable levels of service in all scenarios.

### *Bike and Pedestrian Infrastructure*

For both scenarios, pedestrian access will be provided via the greenway corridor proposed to be located along the southern portion of the study area. Connections to external pathway and/or sidewalk systems will be required for both scenarios, to be constructed along all directly adjacent

roadways. For Scenario 2, sidewalks are required along all internal public streets. These improvements would be provided by the developer(s).

Table 25: Existing and Projected Intersection LOS

Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS	
	2025	2030	2045	2030	2045	2030	2045
<b>AM Peak Hour</b>							
MN 25 & 85 <sup>th</sup> Street	A	A	A	A	B	B	B
Edmonson Avenue & 85 <sup>th</sup> Street	A	A	A	A	A	B	C
MN 25 & CSAH 37	B	A	A	A	A	A	B
CSAH 37 & Davidson Avenue	A	A	A	A	A	A	A
CSAH 37 & Edmonson Avenue	B	B	B	B	B	B	B
MN 25 & Davidson Avenue / Proposed Collector	A	A	C	B	B	C	D / A
School Boulevard & Fallon Avenue	A	A	A	B	A	D / A	B
85 <sup>th</sup> Street & North Access	-	-	-	A	A	C	C
Edmonson Avenue & East Access	-	-	-	A	A	B	B
<b>PM Peak Hour</b>							
MN 25 & 85 <sup>th</sup> Street	A	A	B	B	B	B	B
Edmonson Avenue & 85 <sup>th</sup> Street	A	A	A	A	B	C	D
MN 25 & CSAH 37	B	A	C	A	C	B	C
CSAH 37 & Davidson Avenue	A	A	A	A	A	A	B
CSAH 37 & Edmonson Avenue	B	B	C	B	C	C	F / E
MN 25 & Davidson Avenue / Proposed Collector	A	-	D	-	E	F	F / B
School Boulevard & Fallon Avenue	A	A	A	B	A	C / A	B



Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS	
	2025	2030	2045	2030	2045	2030	2045
85 <sup>th</sup> Street & North Access	-	-	-	A	A	C	C
Edmonson Avenue & East Access	-	-	-	A	A	B	C

*Construction Conditions Analysis for Scenario 1*

In addition to the traffic study, a construction conditions analysis will also be completed with a focus on Scenario 1 (Technology Park) as the construction period is anticipated to see significantly higher trip generation than what will occur at full build out during typical operations of this type of development. No construction analysis will be conducted for Scenario 2, as the construction is anticipated to be less trip-intensive than the typical operations of this development type and the peak trip generation would be the same for both scenarios during construction. However, length of construction is anticipated to vary between the two scenarios due to Scenario 2 being higher density and would likely be developed by multiple developments. The analysis was conducted to determine if additional mitigation would be required during the initial construction phase of the development for Scenario 1. The analysis indicated that all study intersections operate at LOS A or B with the addition of the estimated Scenario 1 construction traffic (see **Appendix E** for more information).

*Future Road Network*

As shown on Figure 3: Development Scenario 1 and Figure 4: Development Scenario 2, it is anticipated that both development scenarios will include a future road network within the study area. Scenario 1 is expected to have a new public road connection off 85<sup>th</sup> Street NE into the site with only private roads internal to the site (not shown as these are end user dependent). Scenario 2 is anticipated to have a grid system of internal public roads to facilitate traffic between various tenants.

**c. Identify measures that will be taken to minimize or mitigate project related transportation effects.**

The following provides a summary of mitigation improvements that were identified as part of the traffic analysis for the Monticello Industrial development. It should be noted that mitigation measures noted in the mitigation plan are only the mitigation measures that are the direct result of the development in addition to the background mitigation. The planned single-lane roundabouts at MN 25 & County Road 37 and School Boulevard & Fallon Avenue are assumed to be in place in the analysis years 2030 and 2045, respectively.

**Existing (2025) Conditions**

- No Mitigation Necessary

**Opening Year (2030) No-Build Conditions**

- No Mitigation Necessary

**Opening Year (2030) Build Scenario 1 Conditions**

- Install a dedicated eastbound right-turn lane at 85<sup>th</sup> Street & North Access
- Install a northbound left turn lane at Edmonson Avenue & 85<sup>th</sup> Street
- Install side street stop control at site access points (one approach lane is acceptable for each)
- Install pedestrian pathways along all arterial and collector roadways impacted by the project. As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure.

**Construction Conditions (2030) Scenario 1**

- Install an eastbound right turn lane at 85<sup>th</sup> Street & North Access
- Install northbound left and southbound right turn lanes at Edmonson Avenue & East Access
- Install a northbound right turn lane at Edmonson Avenue & 85<sup>th</sup> Street
- Install side street stop control at site access points (one approach lane is acceptable for each)
- Reconstruction of roads heavily impacted by construction (i.e., 85<sup>th</sup> Street) will be required.

**Opening Year (2030) Build Scenario 2 Conditions**

- Install dedicated right and left-turn lanes at 85<sup>th</sup> Street & North Access
- Install dedicated right and left-turn lanes at Edmonson Avenue & East Access
- Install northbound left- and right-turn lanes at Edmonson Avenue & 85<sup>th</sup> Street
- Install Side Street Stop control at all site access points (single-lane approaches are acceptable)
- Install pedestrian pathways along all arterial and collector roadways impacted by the project. As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure
- Install a single-lane roundabout at School Boulevard & Fallon Avenue

**Design Year (2045) No-Build Conditions**

- Install a southbound left turn lane at MN 25 & Future Roadway (proposed collector) and install a side street stop control at the intersection.

**Design Year (2045) Build Scenario 1 Conditions**

- All modifications from Opening Year (2030) Scenario 1 Condition
- Install a southbound left turn lane at MN 25 & Future Roadway (proposed collector) and install a side street stop control at the intersection.

**Design Year (2045) Build Scenario 2 Conditions**

- All modifications from Opening Year (2030) Scenario 2 Conditions
- Install a traffic signal or roundabout at MN 25 & Future Roadway (proposed minor collector). Install a northbound right-turn lane at this intersection.
  - Alternatively, the intersection could be installed as a right-in/right-out or a three-quarter access intersection to minimize side street delays.
- Install a southbound right turn lane at Edmonson Avenue & 85<sup>th</sup> Street NE
- Install northbound and southbound left turn lanes at CSAH 37 & Edmonson Avenue and monitor the intersection for further mitigation needs.

## Monticello Industrial AUAR



- Install a northbound bypass lane for right turns at MN 25 & CSAH 37.

Figure 20: Traffic Study Intersections



## 21. CUMULATIVE POTENTIAL EFFECTS

---

*AUAR Guidance: Because the AUAR process by its nature is intended to deal with cumulative potential effects from all future developments within the AUAR area, it is presumed that the responses to all items on the EAW form automatically encompass the impacts from all anticipated developments within the AUAR area.*

*However, the total impact on the environment with respect to any of the items on the EAW form may also be influenced by past, present, and reasonably foreseeable future projects outside of the AUAR area. The cumulative potential effect descriptions may be provided as part of the responses to other appropriate EAW items, or in response to this item.*

**a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.**

Cumulative effects are defined as the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.”<sup>48</sup> The geographic areas considered for cumulative effects are those areas adjacent to the AUAR study area, and the timeframe considered includes projects that would be constructed in the reasonably foreseeable future (by 2030).

**b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.**

The second of five phases of the Haven Ridge West housing development is currently under construction approximately 0.5 miles east of the study area. This includes approximately 300 single family homes. The remaining two phases are yet to be completed and timing is dependent on the developers plans and the market.

**c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.**

Future public and private development projects may result in impacts to transportation, water resources, and utilities. These impacts will be addressed via the regulatory permitting and approval processes and will be individually mitigated to ensure minimal cumulative impacts occur. For regional impacts associated with these facilities, it is expected that review by state agencies will be coordinated to study and address expected impacts. These types of projects would also be required to complete an environmental review and if developed, coordinate with

---

<sup>48</sup> Minnesota Rules, part 4410.0200, subpart 11a

state and local agencies for the applicable permits and approvals, which would have the authority to determine if there were adequate resources available at the time of application.

## 22. OTHER POTENTIAL ENVIRONMENTAL EFFECTS

---

*AUAR Guidance: If the project may cause any additional environmental effects not addressed by Items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.*

### *Power Needs (Scenario 1)*

The proposed development scenarios will have a higher power need and consumption than what is currently required for the existing land uses within the AUAR study area. Future power needs for any proposed development would need to be coordinated with the current power provider for the AUAR study area.

Under Scenario 1, the project proposer would request the utility company complete a System Impact Study on the existing grid network to understand the existing capacity and future infrastructure needs to provide sufficient capacity for the proposed development scenarios while maintaining the grid system for the surrounding area. After that step, a Facilities Study would be completed and look at what improvements would be needed (i.e. substation/transmission lines). This Facilities Study would also include the cost associated with needed improvements (which would be paid for by the project proposer) and how those improvements would support larger grid improvements beyond this study area. For Scenario 1, the cost of these improvements would not affect current rate payers. The utility company's model would be coordinated with the Midcontinent Independent System Operator's model to ensure the project properly integrates into the broader energy system.

After the studies are completed, additional permits, environmental reviews, and approvals would be identified specific to power lines, transmission lines, and substations for onsite and offsite improvements under Scenario 1. Typically, the utility company will design and permit the grid infrastructure projects through the MN Public Utilities Commission (PUC) and apply for associated development permits/approvals needed then construct the improvements.

### *Site Security (Scenario 1)*

Depending on the chosen scenario and end user, security measures could include fencing, buffering from public roads, private roads, and security personnel. These measures would address anti-terrorism and other safety concerns.

### *Electromagnetic Field Radiation (Scenario 1 and 2)*

Electromagnetic field (EMF) radiation refers to the waves of the electromagnetic field produced by electrically charged objects. These waves propagate through space carrying electromagnetic radiant energy. EMF radiation can come from both natural sources such as the Earth's magnetic field and manmade sources, such as electronics/electronic appliances, cell phones, and power lines.

### *Types of EMF Radiation*

**Non-ionizing Radiation:** This includes extremely low-frequency (60Hz) EMFs (like those from power lines) and low frequency (up to 1015Hz) optical radiation (like visible light, infrared, and ultraviolet). Non-ionizing radiation is generally considered less harmful, as it does not have enough energy to remove tightly bound electrons from atoms.

**Ionizing Radiation:** This includes ultraviolet rays (part of it), X-rays, and gamma rays, which have higher frequencies (greater than 1015Hz) and the energy to ionize atoms and molecules, potentially causing damage to cells and DNA.

#### *Potential Impacts of EMF Radiation*

The health and environmental impacts of EMF radiation have been a subject of extensive study. According to the World Health Organization (WHO), low-frequency EMF exposures from power lines and electrical appliances are far below the levels that can produce significant heating or long-term tissue damage. A committee of the National Research Council, the operating arm of the National Academy of Sciences, reported in 1996 that it had found no persuasive evidence that household appliances or power transmission lines presented a threat.<sup>49</sup>

#### *Project Related EMF Radiation*

##### Scenario 1 and Scenario 2

Both scenarios propose new electronics and utilities that would emit EMF levels. Scenario 1 would emit EMF levels typical of industrial and utility applications and Scenario 2 would emit EMF levels typical of office and warehouse applications. Under Scenario 1, potential for new high voltage transmission lines servicing a data center could be constructed. The EMFs generated by these transmission lines are within the non-ionizing range and would comply with federal regulatory standards to ensure public safety including the National Electrical Safety Code, which sets forth guidelines for the installation and operation of power lines to control EMF exposure.

The project's design would include EMF mitigation strategies to ensure that the EMF radiation levels remain well within the safety thresholds. These strategies include maintaining safe distances from residential areas, using EMF shielding techniques where necessary, and adhering to the recommended exposure limits set by health and safety regulatory bodies. Additionally, the EMF emissions from high voltage transmission lines are closely monitored and regulated to prevent any adverse environmental or health impacts.

## DRAFT MITIGATION PLAN

---

This Draft Mitigation Plan is submitted as part of the AUAR to provide reviewers and regulators with an understanding of the actions that are advisable, recommended, or necessary to protect the environment and minimize potential impacts by the proposed development scenarios. This Mitigation Plan will be revised and updated based on comments received during the AUAR comment period.

---

<sup>49</sup> World Health Organization (2014). Electromagnetic fields and public health. Retrieved from WHO website. Available at: <https://www.who.int/news-room/fact-sheets/detail/electromagnetic-fields-and-public-health-mobile-phones>

This Draft Mitigation Plan is intended to satisfy the AUAR rules that require the preparation of a mitigation plan that specifies measures or procedures that will be used to avoid, minimize, or mitigate the potential impacts of development within the AUAR study area. Although mitigation strategies are discussed throughout the AUAR document, this plan will be formally adopted by the RGU as their action plan to prevent potentially significant environmental impacts.

The primary mechanism for mitigation of environmental impacts is the effective use of ordinances, rules, and regulations. The plan does not modify the regulatory agencies’ responsibilities for implementing their respective regulatory programs nor create additional regulatory requirements. The plan specifies the legal and institutional arrangements that will assure that the adopted mitigation measures are implemented.

In addition to the anticipated permits and approvals listed in Table 6, the mitigation measures developed in the AUAR process are outlined in Table 26. The mitigation items identified are regulatory requirements and/or mitigation measures that reduce the level of potential impact of development within the study area. The plan is formatted consistent with the sections of the AUAR for ease of reference.

**Table 26: Draft Mitigation Plan**

Resource Area	Mitigation
<b>Climate Adaption and Resilience</b>	<b>Scenario 1:</b> Most technology park end users have sustainability goals pertaining to water, energy, carbon, and recycling that would be implemented on this site.
	<b>Scenarios 1 and 2:</b> Water efficient irrigation design will be considered for any landscape irrigation systems.
	<b>Scenarios 1 and 2:</b> Energy efficient building shells, appliances, equipment and lighting will be incorporated into the building design.
	<b>Scenarios 1 and 2:</b> Retention of existing and planting of native trees and landscaping will reduce runoff and mitigate heat island effect.
	<b>Scenarios 1 and 2:</b> Parking areas will be evaluated to potentially reduce impervious areas within the AUAR study area.
	<b>Scenarios 1 and 2:</b> Green infrastructure such as infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, vegetated swales with impermeable check dams will be implemented for both scenarios.
	<b>Scenarios 1 and 2:</b> A chloride management plan will be implemented per any state and local guidelines or requirements. Chloride conscious design will be considered to minimize salt usage by the development. This could include considering potential locations of snow melt, ice formation, and tree shading.
	<b>Scenarios 1 and 2:</b> Addition of pathways and the construction of the roundabout at Fallon Avenue/School Boulevard and 85th/Hwy 25 will reduce vehicle emissions from stalling vehicles and encourage pedestrian activity.

Resource Area	Mitigation
<p><b>Land Use</b></p>	<p><b>Scenarios 1 and 2:</b> The city will annex the AUAR study area prior to development and incorporate it into an applicable zoning district and overlay districts, subject to land use permit review.</p>
	<p><b>Scenario 1:</b> Future development would be required to comply with the list of review requirements as described in Table 7 for a data center or similar technology campus use and comply with the future Data Center PUD Zoning requirements.</p>
	<p><b>Scenarios 1 and 2:</b> Incorporate the conceptual future greenway corridor as site planning advances.</p>
	<p><b>Scenarios 1 and 2:</b> The project proposer will use native plants in landscape design and will maintain existing significant floodplain, woodland, and wetland complexes as feasible.</p>
<p><b>Geology, Soils, and Topography</b></p>	<p><b>Scenarios 1 and 2:</b> A National Pollutant Discharge Elimination System (NPDES) and Stormwater Pollution Prevention Program Construction Stormwater Permit (SWPPP) would need to be obtained prior to any earthwork or grading activities within the AUAR study area.</p>
	<p><b>Scenarios 1 and 2:</b> Where required, slope stabilization will be provided by means of vegetation establishment, erosion control blankets, or other standard methods of erosion and sediment control. The proposed development within the AUAR study area will require compliance with the City of Monticello’s erosion and sediment control standards as well as stormwater management requirements.</p>
<p><b>Water Resources - Stormwater</b></p>	<p><b>Scenarios 1 and 2:</b> Infrastructure will be built within the AUAR study area to convey stormwater to stormwater management areas to help achieve the appropriate water quality treatment. Design of the site and stormwater management facilities will be used to reduce the risk of flooding in the AUAR study area. Infiltration areas will be used to improve water quality and reduce stormwater runoff in the project vicinity.</p>
	<p><b>Scenarios 1 and 2:</b> Maintenance and monitoring of the stormwater management areas will be performed to ensure long term effectiveness of the facilities.</p>
	<p><b>Scenarios 1 and 2:</b> Best management practices pertaining to stormwater management will be adhered to during construction.</p>
	<p><b>Scenarios 1 and 2:</b> Stormwater Best Management Practices (BMP) shall meet criteria for Minnesota Pollution Control Agency (MPCA) water quality requirements.</p>
	<p><b>Scenarios 1 and 2:</b> Stormwater BMPs shall be designed to meet the City of Monticello’s criteria for rate control as well as runoff volume reduction and will be designed to maintain stormwater runoff rates at or below the level of existing conditions.</p>
	<p><b>Scenarios 1 and 2:</b> The use of native plants will be considered for landscaping and stormwater features to absorb water, reduce water demand for irrigation, and protect water resources from pollution.</p>
	<p><b>Scenarios 1 and 2:</b> The impact of more severe precipitation events on offsite flows will be evaluated with conveyance and/or storage of offsite flow.</p>

Resource Area	Mitigation
	<p><b>Scenarios 1 and 2:</b> A stormwater management plan will be prepared during development plan review for each proposed development with existing and proposed drainage figures, narrative describing onsite stormwater management and offsite conveyance, as well as applicable hydrologic and hydraulic modeling. Detailed basin information (normal water level, water quality volume, high water level) will also be provided in the stormwater management plan.</p> <p><b>Scenarios 1 and 2:</b> Future stormwater BMPs would manage stormwater runoff and limit the volume of discharge to existing landlocked areas. Adequate freeboard would be maintained for stormwater BMPs and landlocked areas.</p>
<p><b>Water Resources - Surface Water</b></p>	<p><b>Scenarios 1 and 2:</b> Avoidance measures will be taken to avoid impacts to the wetlands within the AUAR study area to the extent practicable. As design plans advance and if impacts to wetlands are found necessary, the project proposer will obtain appropriate permits and purchase wetland banking credits. Buffers will also be installed around wetlands to protect water quality from adjacent development.</p> <p><b>Scenarios 1 and 2:</b> Future development would need to comply with the city’s Shoreland Ordinance, which applies to the 1,000-foot area surrounding the OHWL of the DNR Public Water Wetland in the southeast corner of the study area.</p>
<p><b>Water Resources – Water Appropriation</b></p>	<p><b>Scenarios 1 and 2:</b> Technology Park and Light Industrial land use water demands can be highly variable depending upon the business operation or manufacturing process used at each property. At the time of the five year AUAR update evaluation, water demands from individual properties should be evaluated and estimated future demands revised, if necessary.</p> <p><b>Scenarios 1 and 2:</b> The presence or absence of unverified wells will be confirmed and any existing wells will be sealed according to MDH requirements.</p> <p><b>Scenario 1:</b> The City will need to install a new well to serve the entirety of the study area and satisfy City-wide water demands and shall be constructed in accordance with local ordinances and Minnesota Statutes Chapter 103I and Minnesota Rules Chapter 4725. This will also include additional elevated storage, raw watermain piping and well modifications to meet capacity. The City would also implement monitoring wells after the City drills the new well. The water data from these monitoring wells would be sent to the MnDNR to evaluate if there is additional mitigation needed for adjacent private wells.</p> <p><b>Scenarios 1 and 2:</b> Both scenarios would require the City to request an amendment to water appropriations from the MnDNR.</p> <p><b>Scenario 1:</b> The City would need to increase the capacity of the future water treatment plant that the city is constructing in 2026.</p> <p><b>Scenarios 1 and 2:</b> Construct the extension of the water supply and distribution system according to the site according to Figure 18 and in accordance with Minnesota Department of Health standards.</p>
	<p><b>Scenarios 1 and 2:</b> Construct infrastructure improvements needed to expand the capacity of the wastewater system to the site as shown on Figure 14.</p>

Resource Area	Mitigation
<p><b>Water Resources - Wastewater</b></p>	<p><b>Scenarios 1 and 2:</b> An EAW, with MPCA as the RGU, could be required if a project triggers the need for a sewer extension with over 2 million GPD of water.</p>
	<p><b>Scenario 1:</b> The industrial cooling water discharge will be treated through a Rapid Infiltration Basin (RIB) system, which will need to be permitted through the MPCA and designed to meet MDH standards. As part of the MPCA review, the permit application will undergo an EAW process and 30 day public comment process prior to any issuance of a permit. Additionally, a full water quality analysis of the effluent will be provided as part of the RIB permit process and a hydrogeological study would be conducted, including soil testing, to determine any limitations for a RIB within the study area. These studies would address the rate of infiltration to the proposed RIBs, the rate of recharge to the aquifer, as well as the required size of RIBs. Through the permitting process, any pre-treatment requirements would be determined by the MPCA prior to discharge to the RIBs. Monitoring will occur monthly to dispose of any sediment build up.</p>
<p><b>Water Resources - Groundwater</b></p>	<p><b>Scenario 1:</b> The proposed RIB will follow the DWSMA guidelines set by the MDH.</p>
	<p><b>Scenario 1:</b> If a future development requires 310,000 GPD or less of non-contact cooling water and domestic wastewater then that discharge could go to the city’s municipal sanitary sewer collection system. This would not require any improvements to the WWTP. Biological operational adjustments would be needed to accommodate the slight decrease in organic loading from the non-contact cooling water.</p>
	<p><b>Scenario 1:</b> The RIB system is a natural filtration of water into the ground and will allow the water to be naturally cleaned by the soil to less any adverse impact on the ground water. This will also allow for the aquifer to become recharged from the cooling water system infiltration. The infiltration process through the RIB system will not immediately recharge the aquifer but will occur over the next 10-20 years.</p>
	<p><b>Scenario 1:</b> If using groundwater for cooling, water reuse systems, such as cycling water, will be implemented to reduce water usage.</p>
	<p><b>Scenarios 1 and 2:</b> The City would complete a well capacity and aquifer pumping plan in coordination with the DNR.</p>
	<p><b>Scenario 1:</b> The wellhead protection boundary area as part of the DWSMA will need to be increased with any new wells.</p>
<p><b>Contamination/ Hazardous Waste</b></p>	<p><b>Scenarios 1 and 2:</b> Ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes 2020, section 473.811, subdivision 5c.</p>
	<p><b>Scenarios 1 and 2:</b> Coordinate with the MPCA regarding the required plans, material handling, and disposal.</p>

Resource Area	Mitigation
	<p><b>Scenarios 1 and 2:</b> Development would both generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would be either recycled or disposed in the proper facilities.</p> <p><b>Scenarios 1 and 2:</b> An Emergency Action Plan should be created for the backup generators. See Item 13 for more information.</p> <p><b>Scenarios 1 and 2:</b> A Phase I/II Environmental Site Assessment (ESA) should be completed prior to construction and coordinate with the MPCA on safe handling and disposal of any contamination and hazardous materials found on the site prior to and during construction.</p> <p><b>Scenarios 1 and 2:</b> If either scenario results in a proposed project that anticipates the need for more than 1,000,000 gallons of fuel storage for backup generators and may exceed the threshold for air emissions, an EAW will be required for these components of the project per Minnesota Rules 4410.4300.</p> <p><b>Scenarios 1 and 2:</b> The placement of any potential storage of hazardous materials and wastes would not be in floodplain areas.</p>
<p><b>Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources</b></p>	<p><b>Scenarios 1 and 2:</b> Invasive species will be controlled during site construction. Additionally, appropriate measures will be taken to control the spread of invasive species will be controlled during construction and landscaping:</p> <ul style="list-style-type: none"> <li>• Inspecting construction equipment and removing any visible plant, seeds, mud, dirt clods, and animals when arriving and leaving a site.</li> <li>• Using certified weed-free products such as weed-free seed or hay whenever possible.</li> <li>• Using mulch, soil, gravel, etc., that is free of invasive species whenever possible.</li> <li>• Inspecting soil and plant material during planting for signs of invasive species and removing or destroying the invasive species or the plant and associated soil if the invasive species cannot be separated out.</li> <li>• Native and drought-tolerant species will be utilized in landscaped areas.</li> </ul> <p><b>Scenarios 1 and 2:</b> Wildlife friendly erosion control methods will be utilized within the study area to minimize impacts to wildlife using the site during construction.</p> <p><b>Scenarios 1 and 2:</b> The use of native plant species, including flowering plants, in seed mixes may be used to promote pollinator friendly habitat within the study area.</p> <p><b>Scenarios 1 and 2:</b> Climate-appropriate native plantings and stormwater BMPs will provide suitable habitat for small mammals, insects, and bird species.</p> <p><b>Scenarios 1 and 2:</b> The developer will conduct a tree survey prior to construction and tree replacement will comply with the City’s tree protection ordinance.</p> <p><b>Scenarios 1 and 2:</b> A future greenway corridor will be incorporated as site planning advances.</p>

Resource Area	Mitigation
	<p><b>Scenarios 1 and 2:</b> The DNR required specific mitigation measures to avoid impacts to the state-listed threatened Blanding’s turtle. These efforts include avoiding wetland and aquatic impacts between September 14-April 15, limiting erosion, checking bare ground, trenches, holes, and depressions during construction activities, provide contracts the Blanding’s turtle fact sheet, sighting reporting, and following guidelines for interactions of in-danger turtles.</p>
<p><b>Historic Properties</b></p>	<p><b>Scenarios 1 and 2:</b> If a federal nexus is identified during preparation of project permits additional coordination with SHPO and other relevant parties may be required.</p>
	<p><b>Scenarios 1 and 2:</b> The remaining area not previously surveyed will be subject to archaeological survey prior to construction, unless development is not planned in these areas.</p>
	<p><b>Scenarios 1 and 2:</b> If human remains are recovered at any time during archaeological investigation or development, all activities must stop and consultation initiated with the Office of the State Archaeologist and Minnesota Indian Affairs Council.</p>
<p><b>Visual</b></p>	<p><b>Scenarios 1 and 2:</b> Lighting practices will be selected to address known ecological concerns and prevent avoidable impacts to insects, wildlife, rare plants, and adjacent natural areas. Guidance from the USFWS that recommends a lighting system that minimizes uplight and backlight would be adhered to the extent practicable.</p>
	<p><b>Scenarios 1 and 2:</b> Through the development review process, the City will review future site and building plans to ensure is it conforming with city ordinances for building height, form, material, landscape screening and lighting. Note: site buffering requirements related to Scenario 1 will be defined in the Data Center PUD Zoning Ordinance once this has been finalized.</p>
<p><b>Air</b></p>	<p><b>Scenarios 1 and 2:</b> Fugitive dust emissions from construction will be controlled by sweeping, watering, sprinkling, as appropriate or as prevailing weather and soil conditions dictate.</p>
	<p><b>Scenarios 1 and 2:</b> An air permit may be required from the MPCA for backup generators.</p>
<p><b>GHG Emissions/Carbon Footprint</b></p>	<p><b>Scenarios 1 and 2:</b> The following are potential design strategies and sustainability measures that are under consideration for the proposed development to reduce emissions for both scenarios:</p> <ul style="list-style-type: none"> <li>• Create new open space with native vegetation and habitat</li> <li>• Expand urban tree planting</li> <li>• Require energy efficient appliances</li> </ul>
<p><b>Noise</b></p>	<p><b>Scenarios 1 and 2:</b> Construction activities may result in temporarily elevated noise levels. To the extent possible, construction activities will be conducted to minimize noise levels and nighttime construction activities. Construction will not occur between 10:00 PM and 7:00 AM.</p>
	<p><b>Scenarios 1 and 2:</b> Further noise evaluation may be conducted as required to demonstrate compliance with local and state regulations. Noise attenuation</p>

Resource Area	Mitigation
	<p>measures will be incorporated into the project design to ensure MPCA noise rules and city noise ordinances are followed.</p> <p>The site plans developed for specific projects should show the proposed locations and types of mitigation, with the estimated noise reductions for all areas projected to exceed noise standards.</p>
<p><b>Transportation</b></p>	<p><b>Opening Year (2030) Scenario 1 Conditions</b></p> <ul style="list-style-type: none"> <li>• Install a dedicated eastbound right-turn lane at 85th Street &amp; North Access</li> <li>• Install a northbound left turn lane at Edmonson Avenue &amp; 85th Street</li> <li>• Install side street stop control at site access points (one approach lane is acceptable for each)</li> <li>• Install pedestrian pathways along all arterial and collector roadways impacted by the project (85<sup>th</sup> Street, Fallon Avenue, and Edmonson Avenue). As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure</li> </ul>
	<p><b>Construction Conditions (2030) Scenario 1</b></p> <ul style="list-style-type: none"> <li>• Install an eastbound right turn lane at 85th Street &amp; North Access</li> <li>• Install northbound left and southbound right turn lanes at Edmonson Avenue &amp; East Access</li> <li>• Install a northbound right turn lane at Edmonson Avenue &amp; 85th Street</li> <li>• Install side street stop control at site access points (one approach lane is acceptable for each)</li> </ul>
	<p><b>Opening Year (2030) Scenario 2 Conditions</b></p> <ul style="list-style-type: none"> <li>• Install dedicated right and left-turn lanes at 85th Street &amp; North Access</li> <li>• Install dedicated right and left-turn lanes at Edmonson Avenue &amp; East Access</li> <li>• Install northbound left- and right-turn lanes at Edmonson Avenue &amp; 85th Street</li> <li>• Install Side Street Stop control at all site access points (single-lane approaches are acceptable)</li> <li>• Install pedestrian pathways along all arterial and collector roadways impacted by the project (85<sup>th</sup> Street, Fallon Avenue, and Edmonson Avenue). As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure</li> <li>• Install a single-lane roundabout at School Boulevard &amp; Fallon Avenue</li> </ul>
	<p><b>Design Year (2045) No-Build Conditions</b></p> <ul style="list-style-type: none"> <li>• Install a southbound left turn lane at MN 25 &amp; Future Roadway (proposed collector) and install a side street stop control at the intersection.</li> </ul>
<p><b>Design Year (2045) Scenario 1 Conditions</b></p> <ul style="list-style-type: none"> <li>• All modifications from Opening Year (2030) Scenario 1 Condition</li> </ul>	

Resource Area	Mitigation
	<ul style="list-style-type: none"> <li>• Install a southbound left turn lane at MN 25 &amp; Future Roadway (proposed collector) and install a side street stop control at the intersection.</li> <li>•</li> </ul> <p><b>Design Year (2045) Scenario 2 Conditions</b></p> <ul style="list-style-type: none"> <li>• All modifications from Opening Year (2030) Scenario 2 Conditions</li> <li>• Install a traffic signal or roundabout at MN 25 &amp; Future Roadway (proposed minor collector). Install a northbound right-turn lane at this intersection.                             <ul style="list-style-type: none"> <li>○ Alternatively, the intersection could be installed as a right-in/right-out or a three-quarter access intersection to minimize side street delays.</li> </ul> </li> <li>• Install a southbound right turn lane at Edmonson Avenue &amp; 85<sup>th</sup> Street NE</li> <li>• Install northbound and southbound left turn lanes at CSAH 37 &amp; Edmonson Avenue and monitor the intersection for further mitigation needs.</li> <li>• Install a northbound bypass lane for right turns at MN 25 &amp; CSAH 37.</li> </ul> <p><b>Scenarios 1 and 2:</b> Connections to external pathway and/or sidewalk systems will be required for both scenarios, to be constructed along all directly adjacent roadways. For Scenario 2, sidewalks are required along all internal public streets. These improvements would be provided by the developer(s). Any reconstruction of public roadways necessary for site construction purposes will also be provided by the developer(s).</p>

**Appendix A:**  
*Wetland  
Notice of  
Decisions  
(NODs)*

## Minnesota Wetland Conservation Act Notice of Decision

<b>Local Government Unit:</b> Wright SWCD	<b>County:</b> Wright
<b>Applicant Name:</b> Frattalone Development Company	<b>Applicant</b>
<b>Representative:</b> Keller Leet-Otley	
<b>Project Name:</b> Frattalone Development Wetland Delineation	<b>LGU</b>
<b>Project No. (if any):</b>	
<b>Date Complete Application Received by LGU:</b> 9-10-24	
<b>Date of LGU Decision:</b> 10-30-24	
<b>Date this Notice was Sent:</b> 10-30-24	

**WCA Decision Type - check all that apply**

<input checked="" type="checkbox"/> Wetland Boundary/Type	<input type="checkbox"/> Sequencing	<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Bank Plan (not credit purchase)
<input type="checkbox"/> No-Loss (8420.0415)	<input type="checkbox"/> Exemption (8420.0420)		
Part: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H		Subpart: <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9	

**Replacement Plan Impacts (replacement plan decisions only)**

Total WCA Wetland Impact Area:
Wetland Replacement Type: <input type="checkbox"/> Project Specific Credits: <input type="checkbox"/> Bank Credits:
Bank Account Number(s):

**Technical Evaluation Panel Findings and Recommendations (attach if any)**

<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Approve w/Conditions <input type="checkbox"/> Deny <input type="checkbox"/> No TEP Recommendation
--

**LGU Decision**

<input type="checkbox"/> Approved with Conditions (specify below) <sup>1</sup> List Conditions:	<input checked="" type="checkbox"/> Approved <sup>1</sup>	<input type="checkbox"/> Denied
<b>Decision-Maker for this Application:</b> <input checked="" type="checkbox"/> Staff <input type="checkbox"/> Governing Board/Council <input type="checkbox"/> Other:		
<b>Decision is valid for:</b> <input checked="" type="checkbox"/> 5 years (default) <input type="checkbox"/> Other (specify):		

<sup>1</sup> *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

**LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision<sup>1</sup>.**

<input type="checkbox"/> Attachment(s) (specify):
<input checked="" type="checkbox"/> Summary: The LGU and TEP conducted a site visit on 9-19-24 to review the wetland boundaries as described within the application and flagged on-site. The LGU and TEP recommended that the applicant review additional aerial photos to verify the boundary of “Wetland 3” and “Wetland 2” due to the lack of crop stress observed during a year of abnormally high precipitation. The LGU and TEP also requested additional review of a possible wetland area located just northwest of “SP-19” to confirm the stockpiling of brush in this area didn’t occur in a wetland. The applicant provided an addendum including new boundaries for “Wetland

3” and “Wetland 2” as well as supporting information confirming the area of brush stockpiling didn’t occur in a historic wetland area. The LGU and TEP concur with the revised wetland boundary as shown on the attached “Delineated Resources Map”.

<sup>1</sup> Findings must consider any TEP recommendations.

**Attached Project Documents**

Site Location Map     Project Plan(s)/Descriptions/Reports (specify): **Delineated Resources Map**

**Appeals of LGU Decisions**

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for \$500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator  
Minnesota Board of Water & Soils Resources  
520 Lafayette Road North  
St. Paul, MN 55155  
[travis.germundson@state.mn.us](mailto:travis.germundson@state.mn.us)

Does the LGU have a local appeal process applicable to this decision?

Yes<sup>1</sup>       No

<sup>1</sup>If yes, all appeals must first be considered via the local appeals process.

**Local Appeals Submittal Requirements** (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

**Notice Distribution (include name)**

*Required on all notices:*

<input checked="" type="checkbox"/> SWCD & LGU TEP Member: Andrew Grean – <a href="mailto:andrew.grean@usda.gov">andrew.grean@usda.gov</a>	<input checked="" type="checkbox"/> BWSR TEP Member: Cade Steffenson – <a href="mailto:cade.steffenson@state.mn.us">cade.steffenson@state.mn.us</a>
<input checked="" type="checkbox"/> Wright County Delegated TEP Member: Jeremy Carlson - <a href="mailto:jeremy.carlson@co.wright.mn.us">jeremy.carlson@co.wright.mn.us</a>	
<input checked="" type="checkbox"/> DNR Representative: James Bedell – <a href="mailto:james.bedell@state.mn.us">james.bedell@state.mn.us</a>	
<input type="checkbox"/> Watershed District or Watershed Mgmt. Org.:	
<input checked="" type="checkbox"/> Applicant: Frattalone Development Company, <a href="mailto:nickf@frattaloneco.com">nickf@frattaloneco.com</a>	<input checked="" type="checkbox"/> Agent/Consultant:
<a href="mailto:keller.leet-otley@kimley-horn.com">keller.leet-otley@kimley-horn.com</a>	

*Optional or As Applicable:*

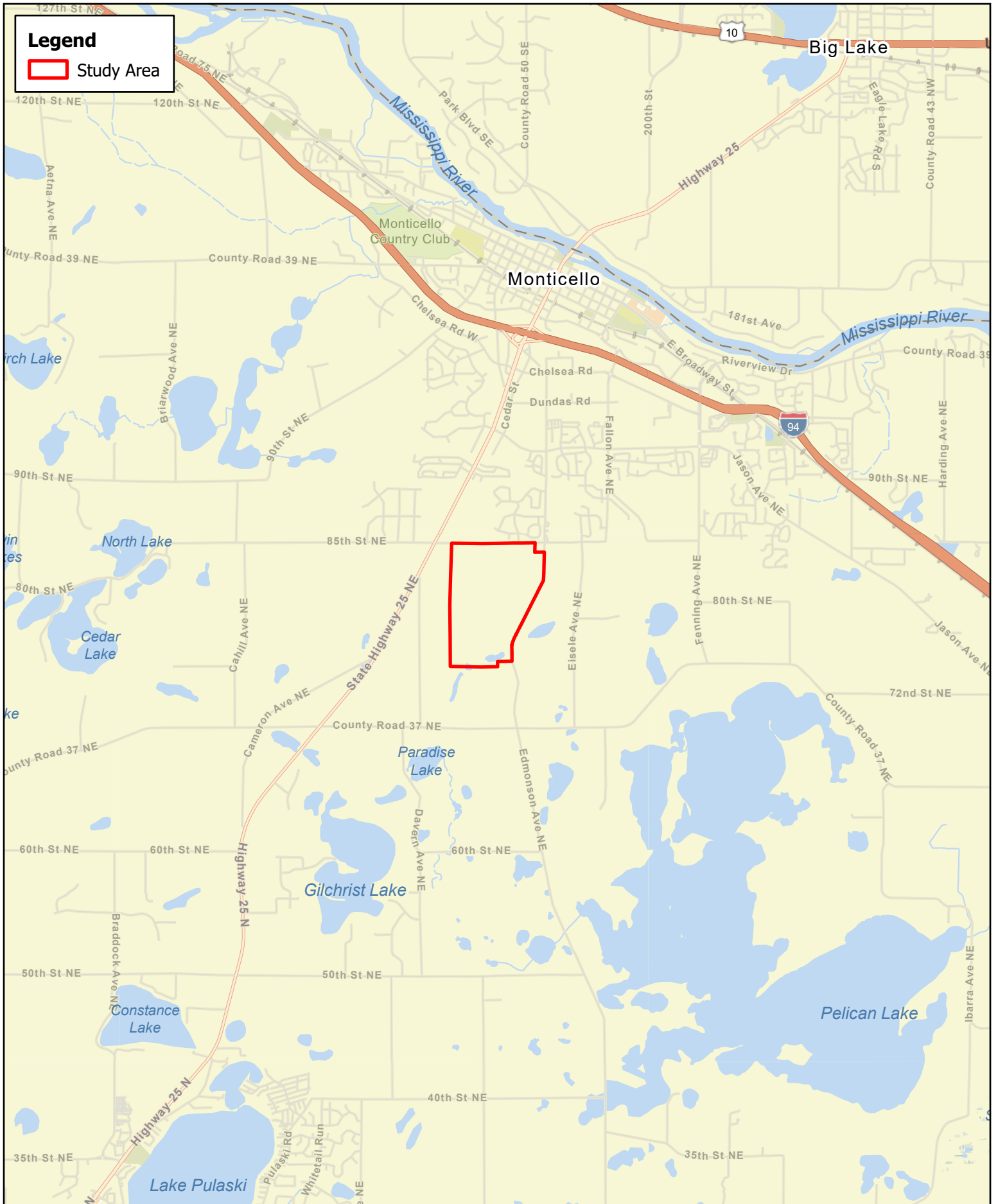
<input checked="" type="checkbox"/> Corps of Engineers: <a href="mailto:usace_requests_mn_usace.army.mil">usace_requests_mn_usace.army.mil</a>
<input type="checkbox"/> BWSR Wetland Mitigation Coordinator (required for bank plan applications only):
<input checked="" type="checkbox"/> Members of the Public (notice only): Frank Svoboda - <a href="mailto:fjsvoboda@gmail.co">fjsvoboda@gmail.co</a> , <input checked="" type="checkbox"/> Other: Scott Glup, USFWS – <a href="mailto:scott_glup@fws.gov">scott_glup@fws.gov</a> Jeremy Donabauer, <a href="mailto:jeremydonabauer@hotmail.com">jeremydonabauer@hotmail.com</a>

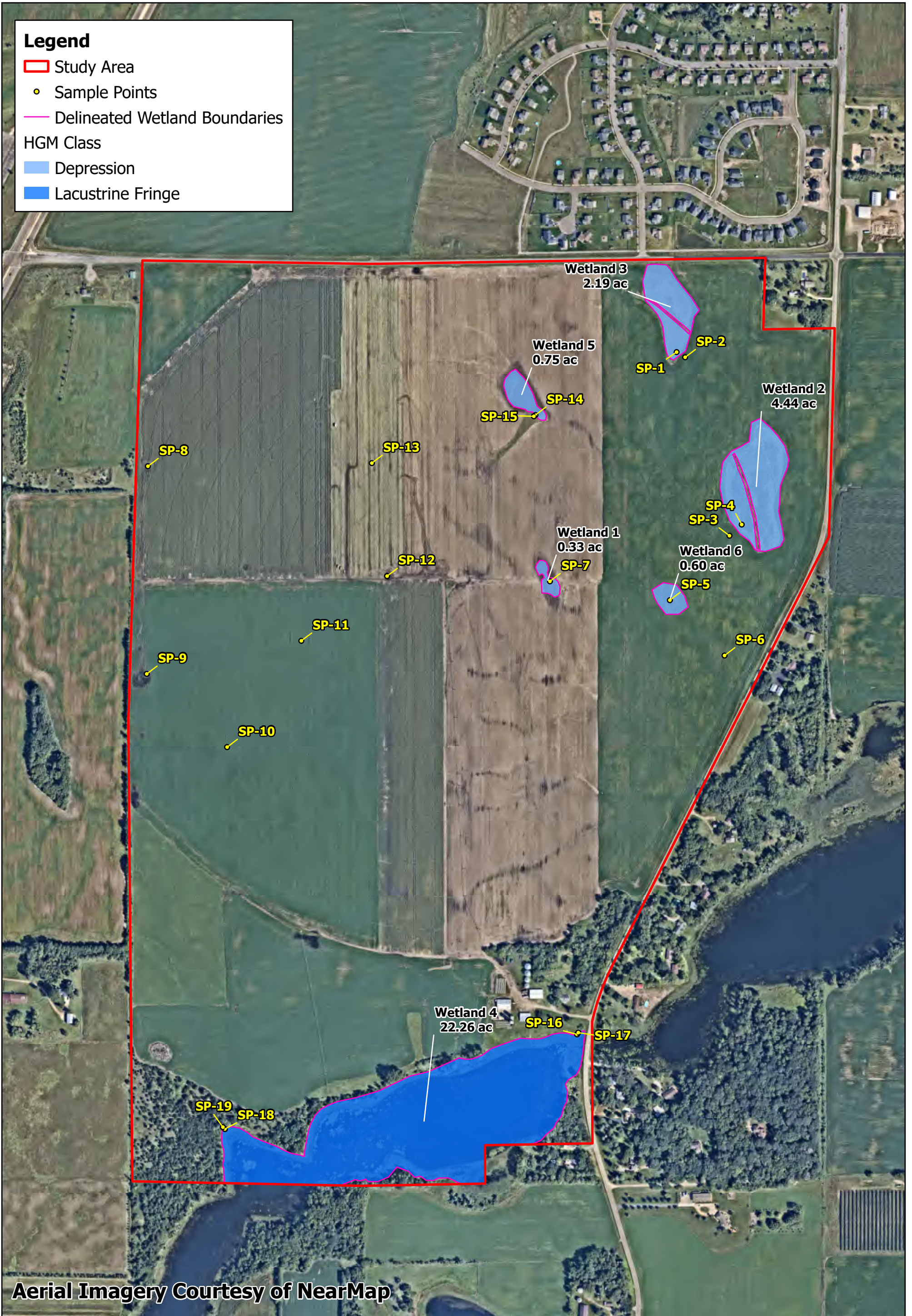
**Signature:**



**Date:** 10-30-24

**This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.**





## Minnesota Wetland Conservation Act Notice of Decision

<b>Local Government Unit:</b> Wright SWCD	<b>County:</b> Wright
<b>Applicant Name:</b> Pamela Gregorski Payne, Kilmey-Horn	<b>Applicant Representative:</b> Ashley
<b>Project Name:</b> Project Groundhog Wetland Boundary/Type	<b>LGU</b>
<b>Project No. (if any):</b>	
<b>Date Complete Application Received by LGU:</b> 6-20-25	
<b>Date of LGU Decision:</b> 8-18-25	
<b>Date this Notice was sent:</b> 8-18-25	

**WCA Decision Type - check all that apply**

<input checked="" type="checkbox"/> Wetland Boundary/Type	<input type="checkbox"/> Sequencing	<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Bank Plan (not credit purchase)
<input type="checkbox"/> Exemption		<input type="checkbox"/> No-Loss (8420.0415)	
MN Rules 8420.0420		Part: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H	
Subpart: <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 7 <input type="checkbox"/> 9			
MN Statutes 103G.2241			
Subdivision: : <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 6 <input type="checkbox"/> 9			

**Replacement Plan Impacts (replacement plan decisions only)**

<b>Total WCA Wetland Impact Area:</b>
<b>Wetland Replacement Type:</b> <input type="checkbox"/> Project Specific Credits - Number of Credits: <input type="checkbox"/> Bank Credits – Number of Credits:
<b>Bank Account Number(s):</b>

**Technical Evaluation Panel Findings and Recommendations (attach if any)**

<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Approve w/Conditions <input type="checkbox"/> Deny <input type="checkbox"/> No TEP Recommendation
--

**LGU Decision**

<input type="checkbox"/> Approved with Conditions (specify below) <sup>1</sup> List Conditions:	<input checked="" type="checkbox"/> Approved <sup>1</sup>	<input type="checkbox"/> Denied
<b>Decision-Maker for this Application:</b> <input checked="" type="checkbox"/> Staff <input type="checkbox"/> Governing Board/Council <input type="checkbox"/> Other:		
<b>Decision is valid for:</b> <input checked="" type="checkbox"/> 5 years (default) <input type="checkbox"/> Other (specify):		

<sup>1</sup> *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

**LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision<sup>1</sup>.**

<input type="checkbox"/> Attachment(s) (specify):
<input checked="" type="checkbox"/> Summary: The LGU conducted a site review with the applicant’s representatives on 7-15-25. During the site review “Wetland 2” (0.99 acre Fresh Wet Meadow) was observed to lack hydrophytic vegetation and hydrology indicators. Based on the observations made during the LGU site review, the applicant’s representatives provided a revised application with additional documentation supporting the fact that

“Wetland 2” does not meet the required criteria for being a wetland. Members of the TEP conducted another site visit on 7-31-25 and concur with this conclusion. The final wetland boundary figure is included as an attachment to this decision.

<sup>1</sup> Findings must consider any TEP recommendations.

**Attached Project Documents**

Site Location Map     Project Plan(s)/Descriptions/Reports (specify): **Final Wetland Boundary Figure**

**Appeals of LGU Decisions**

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for \$500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator  
 Minnesota Board of Water & Soils Resources  
 520 Lafayette Road North  
 St. Paul, MN 55155  
[travis.germundson@state.mn.us](mailto:travis.germundson@state.mn.us)

Does the LGU have a local appeal process applicable to this decision?

Yes<sup>1</sup>       No

<sup>1</sup>If yes, all appeals must first be considered via the local appeals process.

**Local Appeals Submittal Requirements** (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

**Notice Distribution (include name)**

*Required on all notices:*

<input checked="" type="checkbox"/> SWCD and LGU TEP Member: Andrew Grean, <a href="mailto:andrew.grean@usda.gov">andrew.grean@usda.gov</a>	<input checked="" type="checkbox"/> BWSR TEP
Member: Cade Steffenson, <a href="mailto:cade.steffenson@state.mn.us">cade.steffenson@state.mn.us</a>	
<input checked="" type="checkbox"/> TEP Member (if different than LGU contact): Jeremy Carlson, <a href="mailto:Jeremy.carlson@co.wright.mn.us">Jeremy.carlson@co.wright.mn.us</a>	
<input type="checkbox"/> DNR Representative: James Bedell, <a href="mailto:james.bedell@state.mn.us">james.bedell@state.mn.us</a>	
<input type="checkbox"/> Watershed District or Watershed Mgmt. Org.:	
<input checked="" type="checkbox"/> Applicant: Pamela Gregorski, <a href="mailto:pamela.gregorski@cscglobal.com">pamela.gregorski@cscglobal.com</a>	<input checked="" type="checkbox"/>
Agent/Consultant: Ashley Payne, <a href="mailto:Ashley.payne@kimley-horn.com">Ashley.payne@kimley-horn.com</a>	

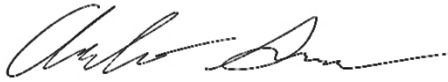
*Optional or As Applicable:*

<input checked="" type="checkbox"/> Corps of Engineers: <a href="mailto:usace_requests_mn@usace.army.mil">usace_requests_mn@usace.army.mil</a>
<input type="checkbox"/> BWSR Wetland Mitigation Coordinator (required for bank plan applications only):
<input checked="" type="checkbox"/> Members of the Public (notice only): Jeremy Donabauer, <a href="mailto:jeremydonabauer@hotmail.com">jeremydonabauer@hotmail.com</a> Frank Svoboda, <a href="mailto:fjsvoboda@gmail.com">fjsvoboda@gmail.com</a>

Todd\_Boonstra@fws.gov

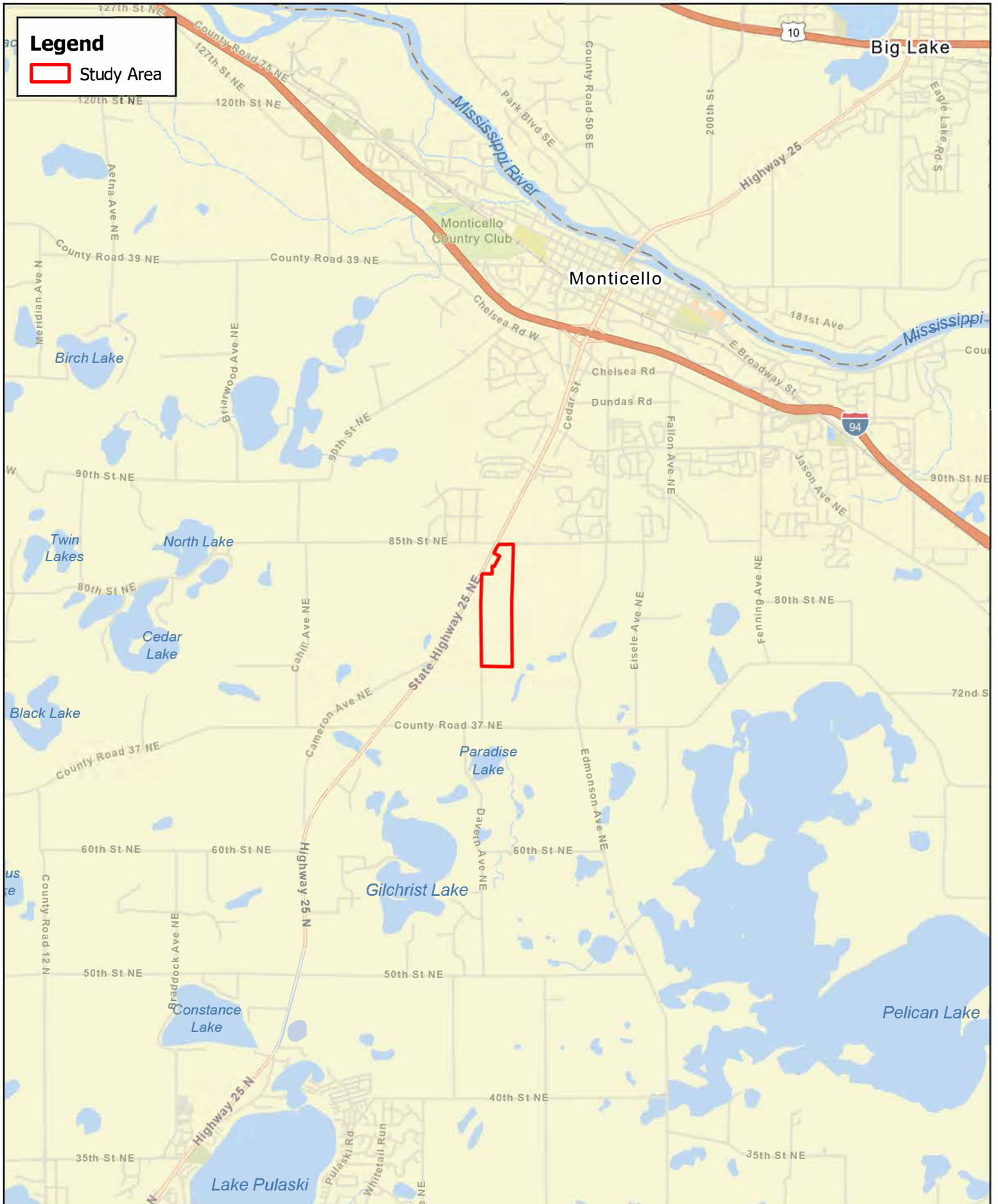
Other:

**Signature:**



**Date:** 8-18-25

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.

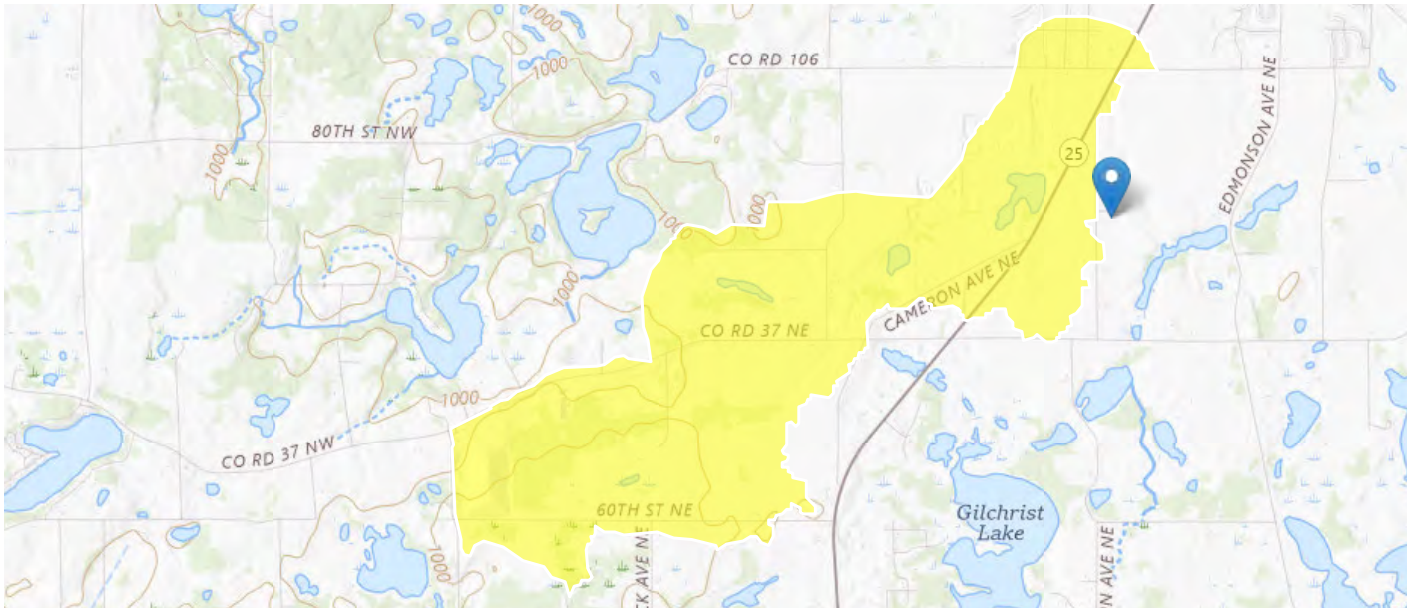




# **Appendix B:** *StreamStats Report*

# StreamStats Report

**Region ID:** MN  
**Workspace ID:** MN20251016182031220000  
**Clicked Point (Latitude, Longitude):** 45.26190, -93.81562  
**Time:** 2025-10-16 13:20:51 -0500



Offsite drainage area does not actually appear to flow onto the site based on public Lidar. No visible culverts exist at the site boundary that would convey flows. The roadway elevation at the site boundary is higher than adjacent overflows. Flow would be captured in multiple different landlocked basins west of MN 25.

[+ Collapse All](#)

## Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	8.09	feet per mi
DRNAREA	Area that drains to a point on a stream	4.35	square miles
LAKEAREA	Percentage of Lakes and Ponds	0.77	percent
LAT_OUT	Latitude of Basin Outlet	45.261915	degrees
PFLATLOW	Flat lands lower than median elevation from Wolock 2003 unpublished data	22	percent
PMPE	Precipitation minus potential evaporation from Wolock 2003 unpublished data	81.9	millimeters

## General Disclaimers

This watershed has been edited, computed flows and basin characteristics may not apply. For more information, submit a support request from the 'Help' button in the upper-right of the screen, attach a pdf of this report and request assistance from your local StreamStats regional representative.

## ➤ Peak-Flow Statistics

### Peak-Flow Statistics Parameters [Minnesota Peakflow D 2023 5079]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CSL10_85	Stream Slope 10 and 85 Method	8.09	feet per mi	1.493468411	75.17007505
DRNAREA	Drainage Area	4.35	square miles	0.147080646	1870.067115
LAKEAREA	Percent Lakes and Ponds	0.77	percent	0	13.46002046
LAT_OUT	Latitude of Basin Outlet	45.261915	decimal degrees	43.51441115	46.0944041

### Peak-Flow Statistics Flow Report [Minnesota Peakflow D 2023 5079]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR<sup>2</sup>: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	SE	ASEp
66.7-percent AEP flood	33.5	ft <sup>3</sup> /s	14.5	77.3	51.7	53.8
50-percent AEP flood	47.8	ft <sup>3</sup> /s	22.6	101	45.7	47.6
20-percent AEP flood	95	ft <sup>3</sup> /s	48.9	185	40.3	42.2
10-percent AEP flood	134	ft <sup>3</sup> /s	67.3	267	41.2	43.2
4-percent AEP flood	192	ft <sup>3</sup> /s	93.1	396	43.8	46.1
2-percent AEP flood	240	ft <sup>3</sup> /s	111	517	46.4	48.9
1-percent AEP flood	292	ft <sup>3</sup> /s	129	661	49.8	52.5
0.2-percent AEP flood	428	ft <sup>3</sup> /s	168	1090	58.1	61.4

#### Peak-Flow Statistics Citations

**Christopher A. Sanocki and Sara B. Levin**2023, **Techniques for Estimating the Magnitude and Frequency of Peak Flows on Small Streams in Minnesota, excluding the Rainy River Basin, Based on Data through Water Year 2019, U.S. Geological Survey Scientific Investigations Report 2023-5079, 15 p.** (<https://doi.org/10.3133/sir20235079>)

## ➤ Flow-Duration Statistics

### Flow-Duration Statistics Parameters [Flow duration Region D 2015 5170]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.35	square miles	7.65	2640
PFLATLOW	Flat_Lands_Below_Median_Elevation	22	percent	4.88	56.9
PMPE	Precip_Minus_Potential_Evap	81.9	millimeters	-132	203

### Flow-Duration Statistics Disclaimers [Flow duration Region D 2015 5170]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

### Flow-Duration Statistics Flow Report [Flow duration Region D 2015 5170]

Statistic	Value	Unit
0.01 Percent Duration	218	ft <sup>3</sup> /s
0.1 Percent Duration	100	ft <sup>3</sup> /s

Statistic	Value	Unit
2 Percent Duration	17.9	ft <sup>3</sup> /s
5 Percent Duration	8.17	ft <sup>3</sup> /s
10 Percent Duration	3.95	ft <sup>3</sup> /s
25 Percent Duration	1.14	ft <sup>3</sup> /s
50 Percent Duration	0.219	ft <sup>3</sup> /s
75 Percent Duration	0.0271	ft <sup>3</sup> /s
90 Percent Duration	0.0126	ft <sup>3</sup> /s
95 Percent Duration	0.0138	ft <sup>3</sup> /s
99 Percent Duration	0.00604	ft <sup>3</sup> /s
99.9 Percent Duration	0.000304	ft <sup>3</sup> /s
99.99 Percent Duration	0.000335	ft <sup>3</sup> /s

*Flow-Duration Statistics Citations*

**Ziegeweid, J.R., Lorenz, D.L., Sanocki, C.A., and Czuba, C.R., 2015, Methods for estimating flow-duration curve and low-flow frequency statistics for ungaged locations on small streams in Minnesota: U.S. Geological Survey Scientific Investigations Report 2015-5170, 23 p. (<http://dx.doi.org/10.3133/sir20155170>)**

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.29.3

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

# **Appendix C: *Agency Correspondence***



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Minnesota-Wisconsin Ecological Services Field Office  
3815 American Blvd East  
Bloomington, MN 55425-1659  
Phone: (952) 858-0793

In Reply Refer To:

07/16/2025 18:38:06 UTC

Project Code: 2025-0122601

Project Name: Monticello Industrial AUAR

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

### **Threatened and Endangered Species**

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

### **Consultation Technical Assistance**

Please refer to our [Section 7 website](#) for guidance and technical assistance, including [step-by-step instructions](#) for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, USDA Rural Development projects, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

We recommend running the project (if it qualifies) through our **Minnesota-Wisconsin Federal Endangered Species Determination Key (Minnesota-Wisconsin ("D-key"))**. A [demonstration video](#) showing how-to access and use the determination key is available. Please note that the Minnesota-Wisconsin D-key is the third option of 3 available d-keys. D-keys are tools to help Federal agencies and other project proponents determine if their proposed action has the potential to adversely affect federally listed species and designated critical habitat. The Minnesota-Wisconsin D-key includes a structured set of questions that assists a project proponent in determining whether a proposed project qualifies for a certain predetermined consultation outcome for all federally listed species found in Minnesota and Wisconsin (except for the northern long-eared bat- see below), which includes determinations of "no effect" or "may affect, not likely to adversely affect." In each case, the Service has compiled and analyzed the best available information on the species' biology and the impacts of certain activities to support these determinations.

If your completed d-key output letter shows a "No Effect" (NE) determination for all listed species, print your IPaC output letter for your files to document your compliance with the Endangered Species Act.

For Federal projects with a "Not Likely to Adversely Affect" (NLAA) determination, our concurrence becomes valid if you do not hear otherwise from us after a 30-day review period, as indicated in your letter.

If your d-key output letter indicates additional coordination with the Minnesota-Wisconsin Ecological Services Field Office is necessary (i.e., you get a "May Affect" determination), you will be provided additional guidance on contacting the Service to continue ESA coordination outside of the key; ESA compliance cannot be concluded using the key for "May Affect" determinations unless otherwise indicated in your output letter.

**Note: Once you obtain your official species list, you are not required to continue in IPaC with d-keys, although in most cases these tools should expedite your review.** If you choose to make an effects determination on your own, you may do so. If the project is a Federal Action, you may want to review our section 7 step-by-step instructions before making your determinations.

### **Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species**

1. If IPaC returns a result of "There are no listed species found within the vicinity of the project," then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. [Electronic submission is preferred.](#)

### **Northern Long-Eared Bats**

Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags  $\geq 3$  inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected. For bat activity dates, please review Appendix L in the [Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines.](#)

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A monoculture stand of shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:

- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or
- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

*If none of the above activities are proposed,* project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC

species list report for your records.

*If any of the above activities are proposed*, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the northern long-eared bat and tricolored bat range-wide D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys help to determine if prohibited take might occur and, if not, will generate an automated verification letter. Additional information about available tools can be found on the Service's [northern long-eared bat website](#).

### **Whooping Crane**

Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "[Establishment of a Nonessential Experimental Population of Whooping Cranes in the Eastern United States](#)."

### **Other Trust Resources and Activities**

*Bald and Golden Eagles* - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a [permit](#). A [nest take permit](#) is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.

*Migratory Birds* - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of [recommendations that minimize potential impacts to migratory birds](#). Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

*Communication Towers* - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

*Transmission Lines* - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

*Wind Energy* - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

### **State Department of Natural Resources Coordination**

While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. **Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.**

#### *Minnesota*

[Minnesota Department of Natural Resources - Endangered Resources Review Homepage](#)

Email: [Review.NHIS@state.mn.us](mailto:Review.NHIS@state.mn.us)

#### *Wisconsin*

[Wisconsin Department of Natural Resources - Endangered Resources Review Homepage](#)

Email: [DNRRERReview@wi.gov](mailto:DNRRERReview@wi.gov)

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

### **Minnesota-Wisconsin Ecological Services Field Office**

3815 American Blvd East

Bloomington, MN 55425-1659

(952) 858-0793

## PROJECT SUMMARY

Project Code: 2025-0122601  
Project Name: Monticello Industrial AUAR  
Project Type: Mixed-Use Construction  
Project Description: The AUAR study area encompasses an area totaling approximately 546 acres on 15 parcels in Monticello Township, Wright County, Minnesota. Monticello Tech, LLC is proposing to develop the study area from existing farmland to a technology park or light industrial uses.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@45.26542395,-93.80850254796702,14z>



Counties: Wright County, Minnesota

## ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## BIRDS

NAME	STATUS
Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Experimental Population, Non-Essential

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Proposed Threatened
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/12017">https://ecos.fws.gov/ecp/species/12017</a>	Proposed Threatened

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act <sup>2</sup> and the Migratory Bird Treaty Act (MBTA) <sup>1</sup>. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

### Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and

activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

### Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Dec 1 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

### Breeding Season (■)

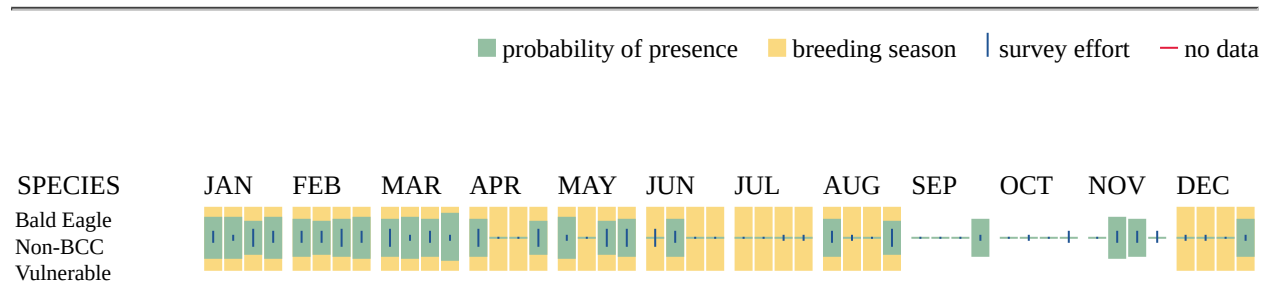
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

### Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

### No Data (-)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) <sup>1</sup> prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Dec 1 to Aug 31
<p>Canada Warbler <i>Cardellina canadensis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9643">https://ecos.fws.gov/ecp/species/9643</a></p>	Breeds May 20 to Aug 10
<p>Chimney Swift <i>Chaetura pelagica</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a></p>	Breeds Mar 15 to Aug 25
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/8745">https://ecos.fws.gov/ecp/species/8745</a></p>	Breeds May 1 to Jul 20
<p>Lesser Yellowlegs <i>Tringa flavipes</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p>Pectoral Sandpiper <i>Calidris melanotos</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9561">https://ecos.fws.gov/ecp/species/9561</a></p>	Breeds elsewhere
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9398">https://ecos.fws.gov/ecp/species/9398</a></p>	Breeds May 10 to Sep 10
<p>Rusty Blackbird <i>Euphagus carolinus</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p><a href="https://ecos.fws.gov/ecp/species/9478">https://ecos.fws.gov/ecp/species/9478</a></p>	Breeds elsewhere
<p>Western Grebe <i>aechmophorus occidentalis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a></p>	Breeds Jun 1 to Aug 31
<p>Wood Thrush <i>Hylocichla mustelina</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9431">https://ecos.fws.gov/ecp/species/9431</a></p>	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

### Breeding Season (■)

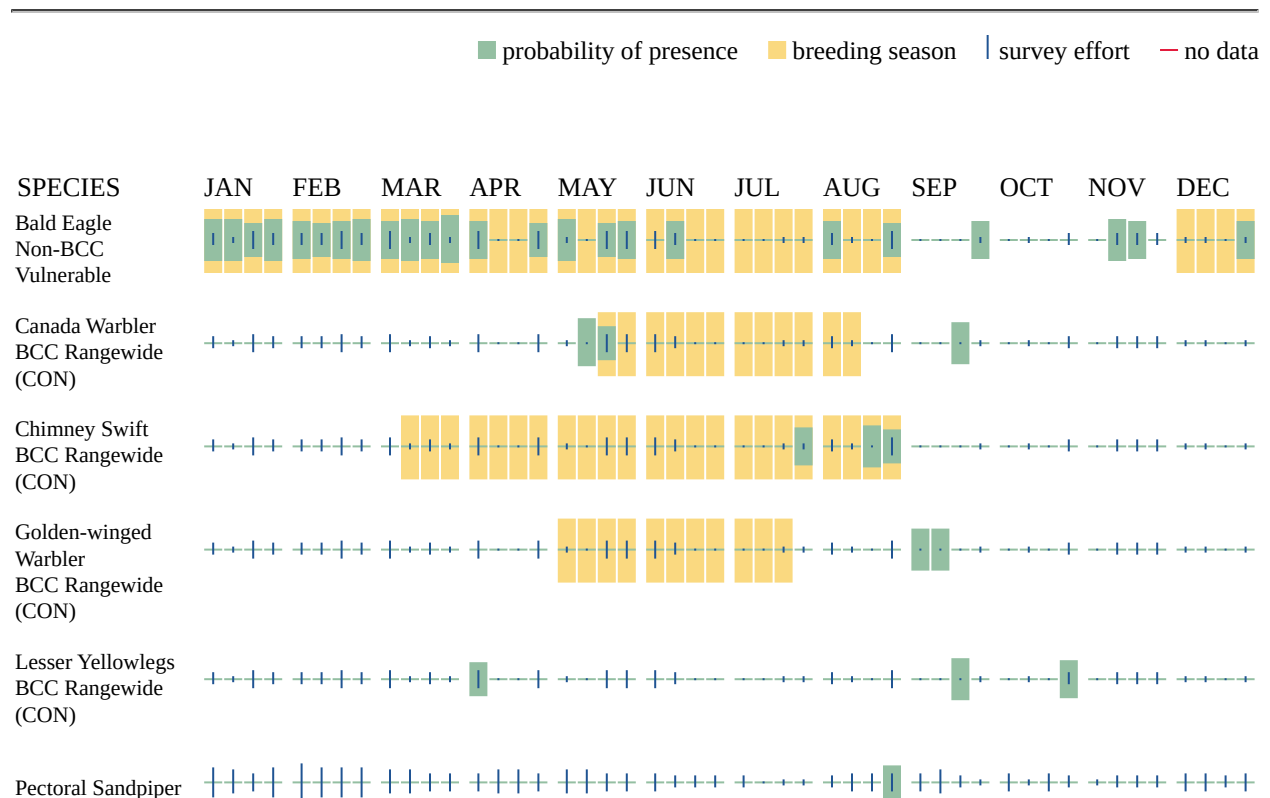
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

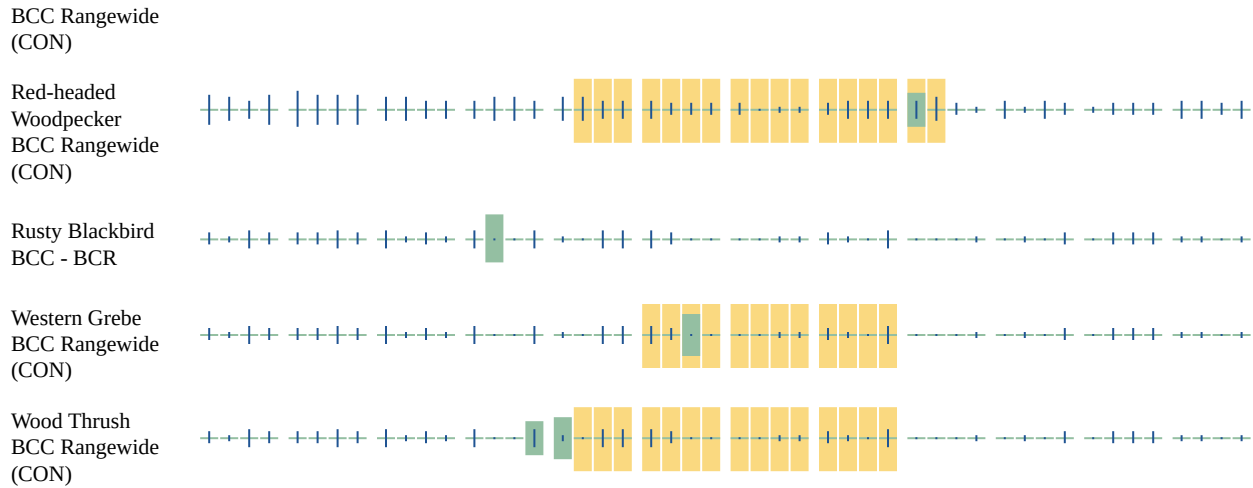
### Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

### No Data (-)

A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## **IPAC USER CONTACT INFORMATION**

Agency: Private Entity  
Name: Jacob Ackerman  
Address: 767 N Eustis St  
Address Line 2: Suite 100  
City: St. Paul  
State: MN  
Zip: 55114  
Email: [jake.ackerman@kimley-horn.com](mailto:jake.ackerman@kimley-horn.com)  
Phone: 6514568135



## Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

**Project Name:** Monticello Industrial

**Project Proposer:** Frattalone

**Project Type:** Development, Commercial/Institutional/Industrial

**Project Type Activities:** Tree Removal;Wetland impacts (e.g., dewatering, tiling, drainage, discharge, excavation, fill, runoff, sedimentation, changes in hydrology)

**TRS:** T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

**County(s):** Wright

**DNR Admin Region(s):** Central

**Reason Requested:** State EAW

**Project Description:** The project would involve the construction of an industrial development.

**Existing Land Uses:** Agricultural

**Landcover / Habitat Impacted:** Cultivated crops, grassland, potential wetland impacts

**Waterbodies Affected:** There may be potential impacts to wetlands on site.

**Groundwater Resources Affected:** N/A

**Previous Natural Heritage Review:** No

**Previous Habitat Assessments / Surveys:** No

### SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
<b>Project Details</b>	Comments	Tree Removal - Recommendations
<b>Ecologically Significant Area</b>	No Comments	No Further Review Required
<b>State-Listed Endangered or Threatened Species</b>	No Comments	No Further Review Required
<b>State-Listed Species of Special Concern</b>	No Comments	No Further Review Required
<b>Federally Listed Species</b>	No Records	Visit IPaC For Federal Review



Minnesota Department of Natural Resources  
Division of Ecological & Water Resources  
500 Lafayette Road, Box 25  
St. Paul, MN 55155-4025

July 17, 2024

Project ID: MCE #2024-00577

Twin Cities - Environmental (Kimley-Horn)  
Kimley-Horn and Associates, Inc.  
767 Eustis Street, Suite 100  
St. Paul, MN 55114

RE: Automated Natural Heritage Review of the proposed Monticello Industrial  
See Cover Page for location and project details.

Dear Twin Cities - Environmental (Kimley-Horn),

As requested, the above project has been reviewed for potential effects to rare features. Given the project details provided on the cover page, I do not believe the proposed project will negatively affect any known occurrences of rare features. To ensure compliance with federal law, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online [Information for Planning and Consultation \(IPaC\) tool](#).

*Project Type and/or Project Type Activity Comments*

- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed below, all of Minnesota's bats, including the federally endangered northern long-eared bat ([Myotis septentrionalis](#)), can be found throughout Minnesota. During the active season (approximately April-November) bats roost underneath bark, in cavities, or in crevices of both live and dead trees. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, the DNR recommends that tree removal be avoided from June 1 through August 15.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and the project description provided on the cover page. If project details change or construction has not occurred within one year, please resubmit the project for review before initiating project activities.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential impacts to these rare features. For information on the environmental review process or other natural resource concerns, you may contact your [DNR Regional Environmental Assessment Ecologist](#).

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

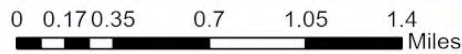
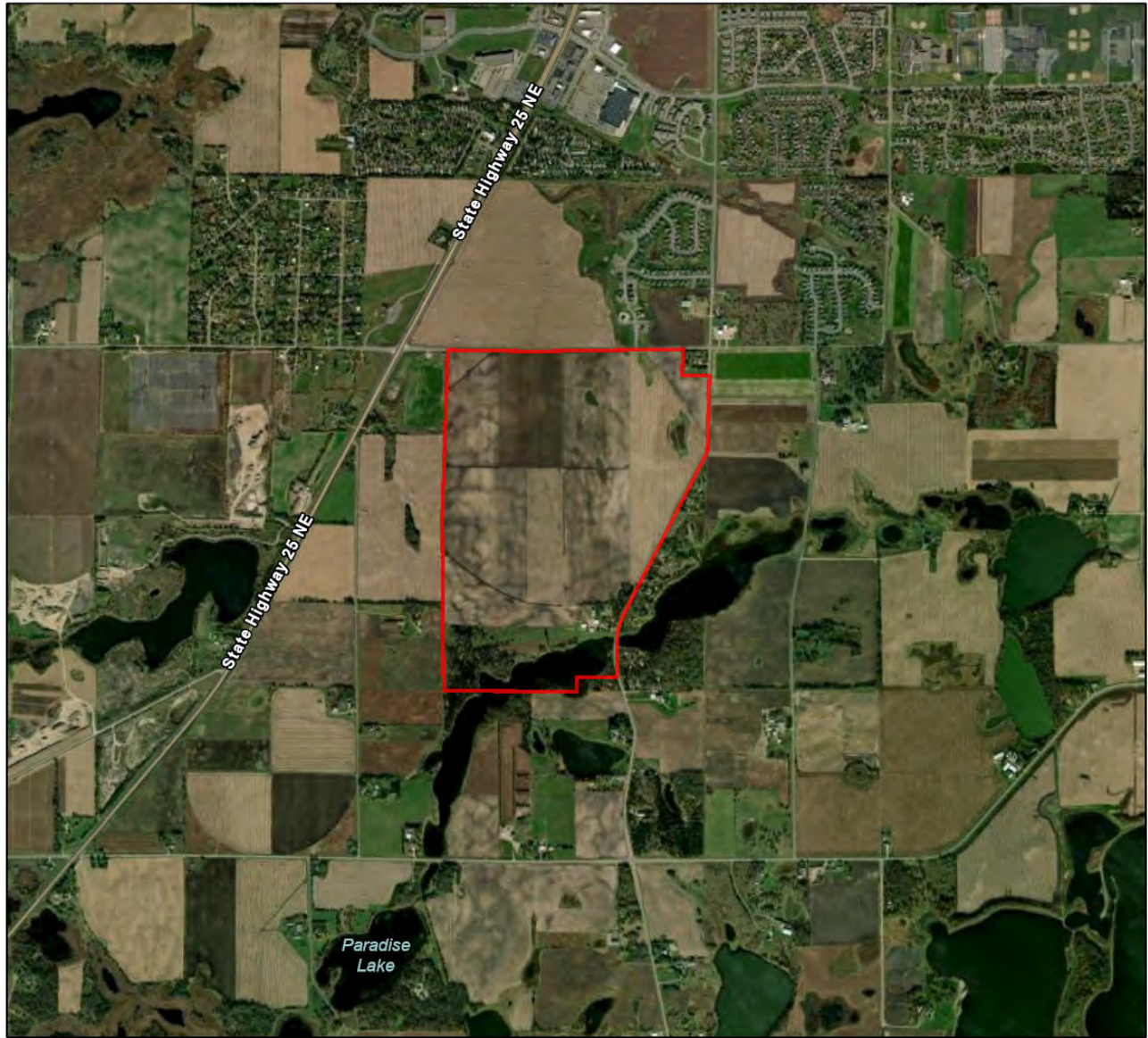
Sincerely,

*Jim Drake* Jim Drake  
Natural Heritage Review Specialist  
[James.F.Drake@state.mn.us](mailto:James.F.Drake@state.mn.us)

Links: USFWS Information for Planning and Consultation (IPaC) tool  
[Information for Planning and Consultation \(IPaC\) tool](#)  
DNR Regional Environmental Assessment Ecologist Contact Info  
[https://www.dnr.state.mn.us/eco/ereview/erp\\_regioncontacts.html](https://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html)

# Monticello Industrial

Aerial Imagery With Locator Map



 Project\_Boundary

Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 404.11

County(s): Wright

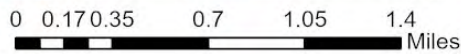
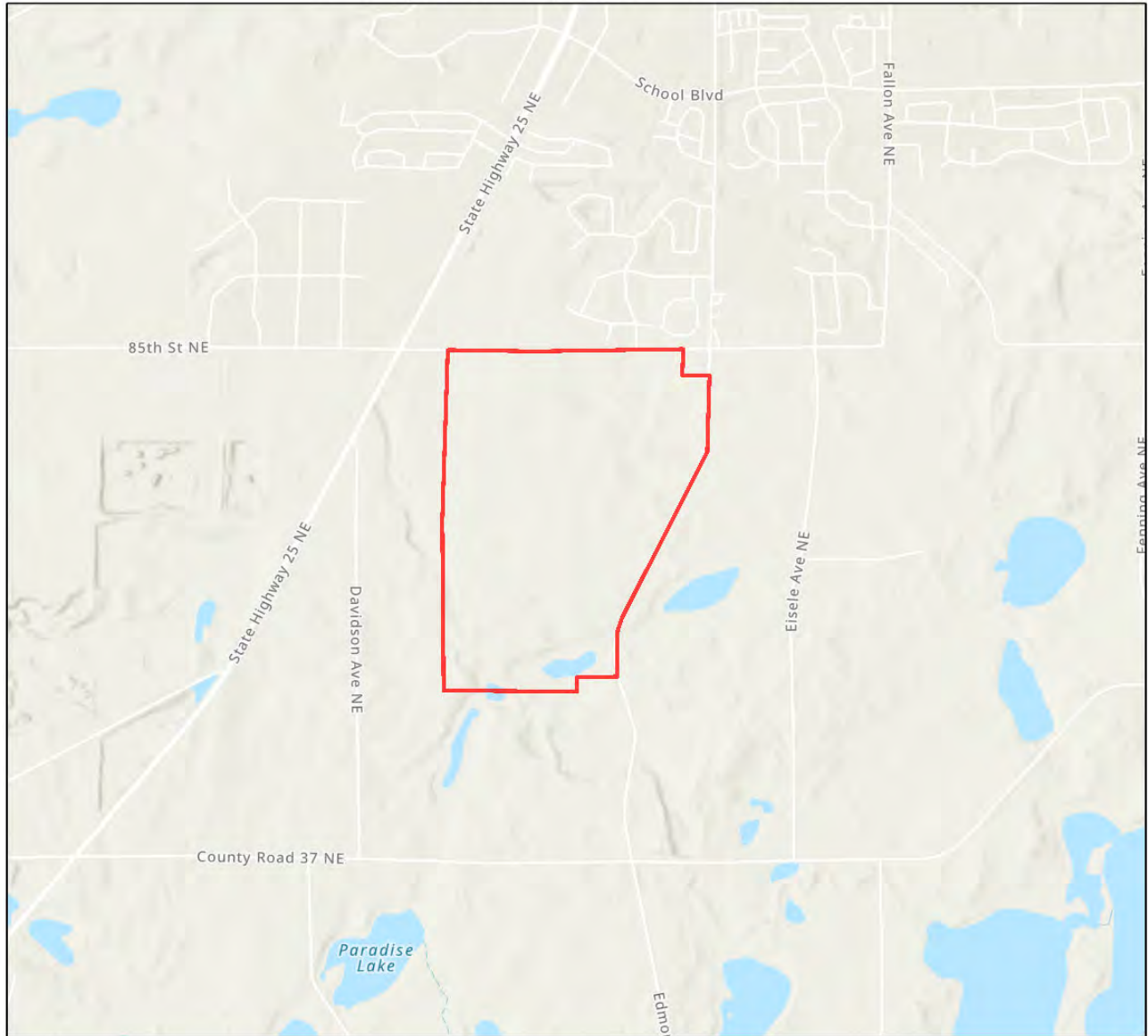
TRS: T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS  
Earthstar Geographics  
Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph,



# Monticello Industrial

USA Topo Basemap With Locator Map



 Project\_Boundary

Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 404.11

County(s): Wright

TRS: T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS  
Esri, NASA, NGA, USGS, FEMA  
Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph,





## Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

**Project Name:** Monticello Industrial AUAR

**Project Proposer:** Monticello Tech, LLC

**Project Type:** Development, Commercial/Institutional/Industrial

**Project Type Activities:** Wetland impacts (e.g., dewatering, tiling, drainage, discharge, excavation, fill, runoff, sedimentation, changes in hydrology); Tree Removal; Grading

**TRS:** T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

**County(s):** Wright

**DNR Admin Region(s):** Central

**Reason Requested:** State EAW

**Project Description:** The city of Monticello is preparing an AUAR for the Monticello Industrial Development. The city is proposing two development scenarios. One is for 3,000,000 ...

**Existing Land Uses:**

**Landcover / Habitat Impacted:**

**Waterbodies Affected:**

**Groundwater Resources Affected:**

**Previous Natural Heritage Review:** Yes, ERDB#: 2024-00577

**Previous Habitat Assessments / Surveys:** No

### SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	Comments	Tree Removal - Recommendations
Ecologically Significant Area	No Comments	No Further Review Required
State-Listed Endangered or Threatened Species	Needs Further Review	State-protected Species - Needs Further Review
State-Listed Species of Special Concern	No Comments	No Further Review Required
Federally Listed Species	No Records	Visit IPaC For Federal Review



July 16, 2025

**Project Name:** Monticello Industrial AUAR  
**Project Proposer:** Monticello Tech, LLC  
**Project Type:** Development, Commercial/Institutional/Industrial  
**Project ID:** MCE #2025-00610

**AUTOMATED RESULTS: FURTHER REVIEW IS NEEDED**

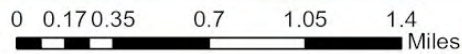
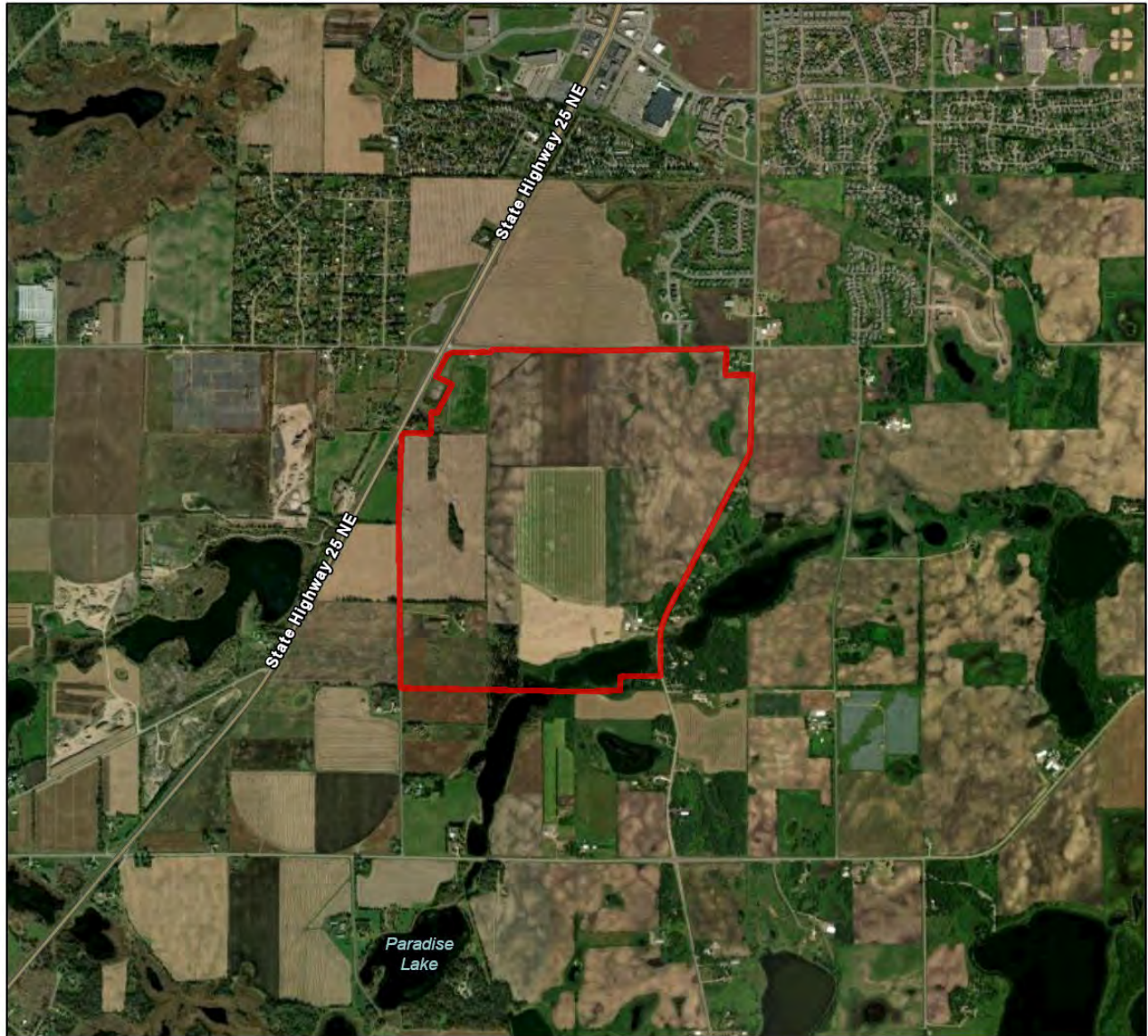
As requested, the above project has undergone an automated review for potential impacts to rare features. Based on this review, one or more rare features may be impacted by the proposed project and further review by the Natural Heritage Review Team is needed. You will receive a separate notification email when the review process is complete and the Natural Heritage Review letter has been posted.

Please refer to the table on the cover page of this report for a summary of potential impacts to rare features. For additional information or planning purposes, use the Explore Page in Minnesota Conservation Explorer to view the potentially impacted rare features or to create a Conservation Planning Report for the proposed project.

If you have additional information to help resolve the potential impacts listed in the summary results, please attach related project documentation in the Edit Details tab of the Project page. Relevant information includes, but is not limited to, additional project details, completed habitat assessments, or survey results. This additional information will be considered during the project review.

# Monticello Industrial AUAR

Aerial Imagery With Locator Map



 Project Boundary

Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 545.75

County(s): Wright

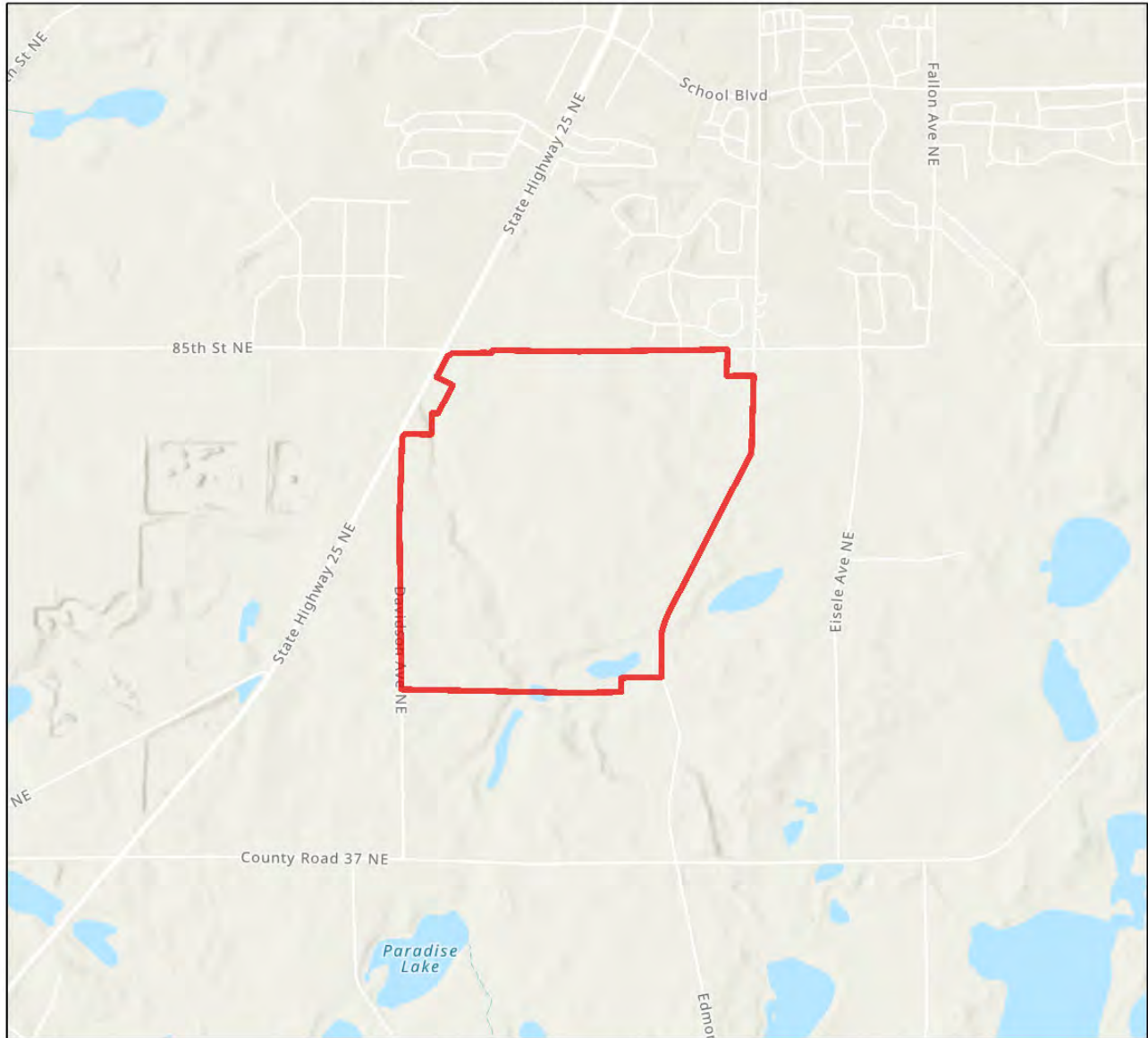
TRS: T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS  
Earthstar Geographics  
Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph,



# Monticello Industrial AUAR

USA Topo Basemap With Locator Map



  
 Project Boundary

Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 545.75

County(s): Wright

TRS: T121 R25 S22, T121 R25 S23, T121 R25 S26, T121 R25 S27

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS  
Esri, NASA, NGA, USGS, FEMA  
Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph,





Minnesota Department of Natural Resources  
Division of Ecological & Water Resources  
500 Lafayette Road, Box 25  
St. Paul, MN 55155-4025

August 14, 2025

Twin Cities - Environmental (Kimley-Horn)  
Kimley-Horn and Associates, Inc.

RE: Natural Heritage Review of the proposed **Monticello Industrial AUAR**,  
T121N R25W Sections 22-23 and 26-27; Wright County

Dear Twin Cities - Environmental (Kimley-Horn),

For all correspondence regarding the Natural Heritage Review of this project please include the project ID **MCE-2025-00610** in the email subject line.

As requested, the [Minnesota Natural Heritage Information System](#) has been reviewed to determine if the proposed project has the potential to impact any rare species or other significant natural features. Based on the project details provided with the request, the following rare features may be impacted by the proposed project:

*State-listed Species*

- [Blanding's turtles](#) (*Emydoidea blandingii*), a state-listed threatened species, have been documented in the vicinity of the proposed project. Blanding's turtles use upland areas up to and over a mile distant from wetlands, waterbodies, and watercourses. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Factors believed to contribute to the decline of this species include collisions with vehicles, wetland drainage and degradation, and the development of upland habitat. Any added mortality can be detrimental to populations of Blanding's turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels.

This project has the potential to impact this rare turtle through direct fatalities and habitat disturbance/destruction due to activities associated with the proposed project. Minnesota's Endangered Species Statute (Minnesota Statutes, section 84.0895) and associated Rules (Minnesota Rules, part 6212.1800 to 6212.2300 and 6134) prohibit the take of threatened or endangered species without a permit. **As such, please contact [Review.NHIS@state.mn.us](mailto:Review.NHIS@state.mn.us) to confirm that the following measures will be implemented:**

- Avoid wetland and aquatic impacts during hibernation season, between September 15 and April 15, if the area is suitable for hibernation.
- Limit erosion and sediment control to [wildlife friendly erosion control](#).
- Check bare ground within construction areas for turtles before the use of heavy equipment or any ground disturbance.
- The [Blanding's turtle flyer](#) must be given to all contractors working in the area.

- Report any sightings using the [DNR Plant and Animal Observation Form](#).
- If turtles are in imminent danger, move them by hand out of harm's way; otherwise, they are to be left undisturbed. Directions on how to move turtles safely can be found at [Helping Turtles Across the Road](#).

**If the above measures are not feasible, please contact [Review.NHIS@state.mn.us](mailto:Review.NHIS@state.mn.us) as a project-specific avoidance plan will likely be needed to demonstrate avoidance.**

Additional Blanding's turtle avoidance measures may include, but are not limited to, the following recommendations:

- Recommendations from List 1 of the [Blanding's turtle fact sheet](#). If greater protection for turtles is desired, implement recommendations from List 2.
    - For examples of wildlife friendly roads, see "Curb Design and Small Animals" ([Ch. 1 Species Protection](#), P. 24) in the [Best Practices for Meeting DNR General Public Waters Work Permit manual](#).
  - Avoid hydro-mulch products that contain any materials with synthetic (plastic) fiber additives, as the fibers can re-suspend and flow into waterbodies.
  - Nesting occurs in open (grassy or brushy) sandy uplands. Blanding's turtles have been known to nest in residential areas, farm fields, and areas of exposed soil/sand/sediment (including soil stockpiles and gravel pads). To minimize impacts:
    - Avoid impacts to potential nesting habitat from June 1 through September 15, **or**
    - Exclude Blanding's turtles from potential nesting habitat from May 15 through July 15. To exclude turtles from potential nesting habitat: Install a barrier, buried 10 inches, around suitable nesting habitat.
    - See the [Blanding's turtle fact sheet](#) for more information regarding nesting.
  - Buffer wetlands and waterbodies.
  - Disturbed ground should be restored to pre-construction contours and re-vegetated with [native species suitable to the local habitat](#).
- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed nearby, all of Minnesota's bats, including the federally endangered northern long-eared bat ([Myotis septentrionalis](#)), can be found throughout Minnesota. During the active season (approximately April-November) bats roost underneath bark, in cavities, or in crevices of both live and dead trees. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, **the DNR recommends that tree removal be avoided from June 1 through August 15.**
  - Please visit the [DNR Rare Species Guide](#) for more information on the habitat use of state-listed species and recommended measures to avoid or minimize impacts.
  - Please report incidental sightings of state-listed species via the [DNR Plant and Animal Observation Form](#).

### *Federally Protected Species*

- To ensure compliance with federal law, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online [Information for Planning and Consultation \(IPaC\) tool](#).

### *Environmental Review and Permitting*

- Please include a copy of this letter and the MCE-generated Final Project Report in any state or local license or permit application. Please note that measures to avoid or minimize disturbance to the above rare features may be included as restrictions or conditions in any required permits or licenses.
- Given the potential presence of state protected species, we encourage submission of Natural Heritage Review requests to ensure avoidance of take for these species and to determine survey needs as individual projects are planned for the Alternative Urban Areawide Review (AUAR).

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available and is the most complete source of data on Minnesota's native plant communities, rare species, and other rare features. However, the NHIS is not an exhaustive inventory and does not contain the locations of all rare features in the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and project description provided with the request. **If project details change or the project has not occurred within one year, please resubmit the project for review within one year of initiating project activities.** Resubmit by selecting *Clone Project as Draft* on the project page in MCE.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential impacts to these rare features. Visit [Natural Heritage Review](#) for additional information regarding this process, survey guidance, and other related information. For information on the environmental review process or other natural resource concerns, please contact your [DNR Regional Environmental Assessment Ecologist](#).

Thank you for consulting us on this matter and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

*Molly Barrett*

Natural Heritage Review Specialist

[molly.barrett@state.mn.us](mailto:molly.barrett@state.mn.us)

Cc: [Melissa Collins](#), Regional Environmental Assessment Ecologist, Central (Region 3)

Cc: [Catherine Plank](#), Assistant Regional Environmental Assessment Ecologist, Central (Region 3)

**Appendix D:**  
*Greenhouse Gas  
Analysis*

# Minnesota Climate Calculator: Project Summary Report

Date Prepared: 10/20/2025

The results shown below were generated using the Minnesota Climate Calculator. The emissions quantified account for the full greenhouse gas impact of a potential project throughout the construction and operational phases of the project. This includes emissions from project activities that occur on-site as well as emissions that occur upstream and downstream of the project. The results are based on user inputs and assumptions; actual project emissions may vary.

## Background Information

Project Name	Monticello Industrial AUAR - Scenario 1	
Project Category (primary)	Subp. 14, Industrial, commercial, institutional facilities	
Project Category (secondary)		
Location (County)	Wright	
Construction Start Date	4/1/2027	
Operational Year	2034	
Operational Lifetime (Years)	50	

Electricity Provider	Grid Average	
Portion of Building Electricity Consumption to be Generated On-Site via Renewables or Supplied through the Purchase of Renewable Energy Credits (RECs)		0%
Portion of Building Natural Gas Consumption to be Supplied from Renewable Sources		0%

Building Construction Project?	Yes
--------------------------------	-----

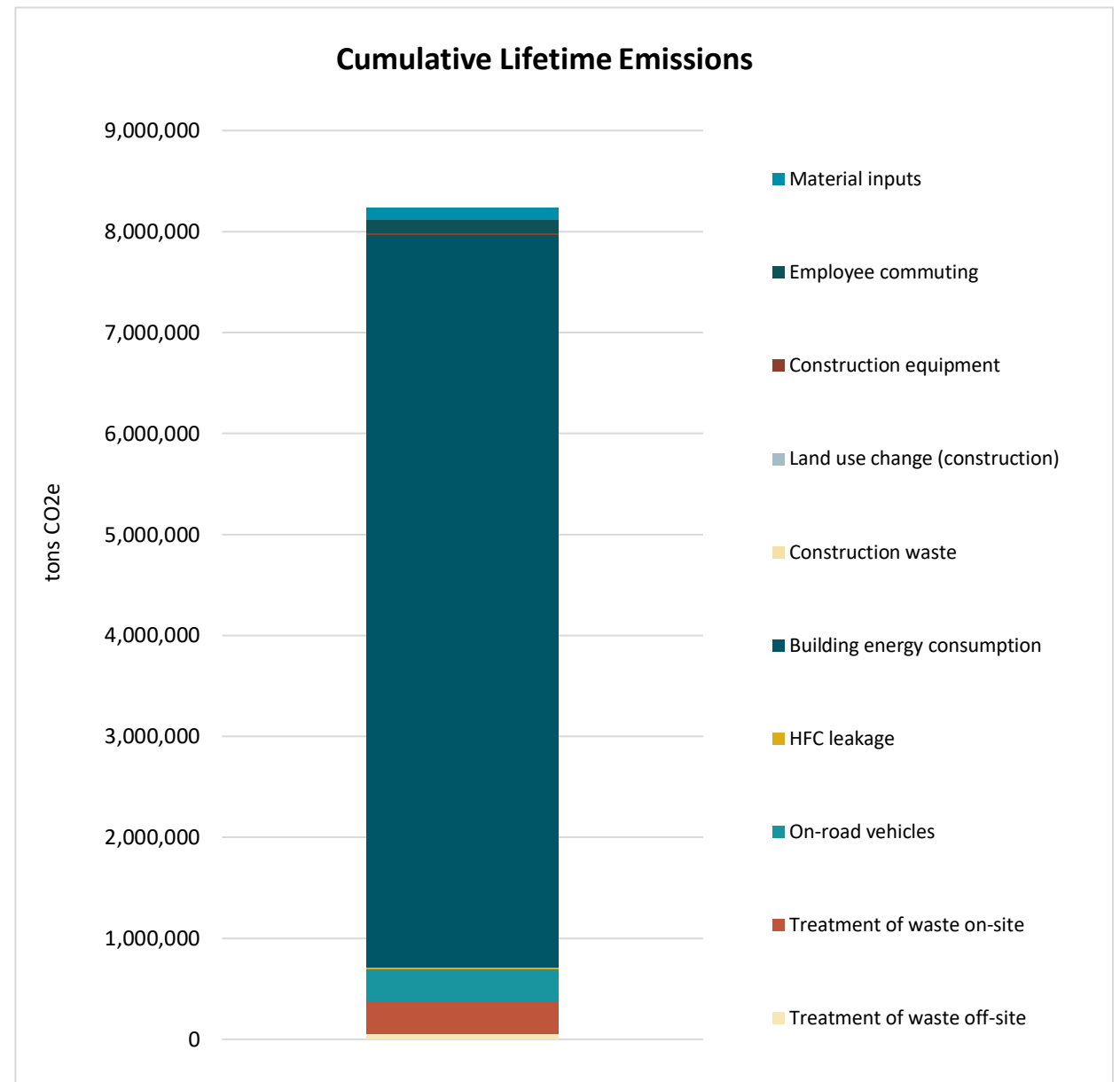
Construction Stage	Duration (Days)
Demolition	546
Site Preparation	328
Grading	846
Building Construction	8,463
Architectural Coatings	601
Paving and Landscaping	601

## Summary Results

Project Lifetime	57
Unit	tons

Phase	CO <sub>2</sub> e Emissions	
	Cumulative	Annualized
<b>Construction</b>		
Material inputs	117,457.85	2,060.66
Transportation of material inputs	2,383.50	41.82
Employee commuting	126,621.97	2,221.44
Construction equipment	19,939.55	349.82
Land use change (construction)	44.57	0.78
Construction waste	398.93	7.00
<b>Operation</b>		
Building energy consumption	7,262,072.29	127,404.78
Coal production	NA	NA
Natural gas and oil products	NA	NA
Industrial processes	NA	NA
HFC leakage	14,089.12	247.18
Land use change (operations)	NA	NA
On-road vehicles	320,692.54	5,626.18
Treatment of waste on-site	NA	NA
Treatment of wastewater on-site	NA	NA
Treatment of waste off-site	52,097.45	913.99
Enteric fermentation	NA	NA
Manure management	NA	NA
<b>Total</b>	<b>7,915,797.78</b>	<b>138,873.65</b>

Note: NA indicates that emissions were not quantified and/or are not applicable.



## User Inputs

Note: NA indicates that emissions were not quantified and/or activity is not applicable.

### Material Inputs

Material Type	Quantity	Unit	Geographical Sourcing
Aluminum	375.00	Tons	Unknown
Asphalt	12,068.00	Tons	Domestic
Brick	150.00	Tons	Unknown
Concrete	600,000.00	Tons	Domestic
Glass	750.00	Tons	Unknown
Insulation (residential)	0.00	Tons	Unknown
Insulation (commercial)	30.00	Tons	Unknown
Steel	9,000.00	Tons	Unknown
Wood Products	150.00	Tons	Unknown

### Employee Commuting

Construction Stage	Daily Average Number of Employees Commuting
Demolition	500
Site Preparation	100
Grading	500
Building Construction	1400
Architectural Coatings	400
Paving and Landscaping	100

Transportation Mode	Percent of Employees
Single Occupancy Vehicle	82%
Carpool	11%
Motorcycle	0%
Bus	2%
Transit Rail	2%
Bike/Walk	3%

Average One-Way Commute Length (miles)	13.2
--	------

### Construction Equipment

Equipment Type	Fuel Type	Number of Hours per Day by Construction Stage					
		Demolition	Site Preparation	Grading	Building Construction	Architectural Coatings	Paving and Landscaping
Air Compressors	Diesel	0	0	0	0	6	0
Cement and Mortar Mixers	Diesel	0	0	0	0	0	0
Concrete/Industrial Saws	Diesel	8	0	0	0	0	0
Cranes	Diesel	0	0	0	7	0	0
Excavators	Diesel	24	0	16	0	0	0
Forklifts	Diesel	0	0	0	24	0	0
Generator Sets	Diesel	0	0	0	8	0	0
Graders	Diesel	0	0	8	0	0	0
Pavers	Diesel	0	0	0	0	0	16
Paving Equipment	Diesel	0	0	0	0	0	16
Rollers	Diesel	0	0	0	0	0	16
Rubber Tired Dozers	Diesel	16	24	8	0	0	0
Scrapers	Diesel	0	0	16	0	0	0
Tractors/Loaders/Backhoes	Diesel	0	32	16	21	0	0
Welders	Diesel	0	0	0	8	0	0

### Land Use Change

Land Use Type	Acres		
	Pre-Construction	Post-Construction	Post-Operation
Wetlands, forested	0.00	0.00	NA
Wetlands, not forested	30.75	22.26	NA
Forest	28.00	25.25	NA
Rivers and streams	0.00	0.00	NA
Brush and grassland	36.25	1.00	NA
Cropland	444.00	0.00	NA
Livestock rangeland/pastureland	0.00	0.00	NA
Lawn/landscaping	0.00	289.49	NA
Green Infrastructure: Constructed wetlands, paved	0.00	0.00	NA
Green Infrastructure: Constructed wetlands, vegetated	0.00	32.00	NA
Green Infrastructure: Constructed green roofs	0.00	0.00	NA
Green Infrastructure: Constructed permeable pavements	0.00	0.00	NA
Impervious surface	11.00	170.00	NA
Stormwater pond (wet sedimentation basin)	0.00	10.00	NA

Trees	Number
Number of mature trees removed	15
Number of new trees planted	15

**Construction Waste**

Material Type	Quantity (tons)
Aluminum	0.00
Asphalt	0.00
Brick	6.00
Concrete	18000.00
Glass	22.50
Insulation	3.00
Steel	0.00
Wood Products	7.50
Mixed Waste	0.00

**Building Energy Consumption**

Building Type	Energy Intensity (Btu/sq ft/year)			
	Electricity	Natural Gas	Propane	Kerosene or Fuel Oil
Residential	18,096.91	24,460.01	3,619.38	233.51
Commercial	30,766.13	35,534.88	0.00	1,661.56
Industrial	229,952.20	656,392.90	0.00	8,191.66
Institutional	46,860.06	48,219.03	0.00	3,659.93
Other	0.00	0.00	0.00	0.00

**Emissions from Coal Production**

Coal Type	Incremental Production (tons/year)
Mixed Coal	NA
Anthracite Coal	NA
Bituminous Coal	NA
Subbituminous Coal	NA
Lignite Coal	NA
Coal Coke	NA

**Emissions from Natural Gas and Oil Products**

Fuel Type	Incremental Throughput	Unit
Natural Gas	NA	Cubic Feet/year
Renewable Natural Gas	NA	Cubic Feet/year
Propane	NA	Gallons/year
Gasoline	NA	Gallons/year
Distillate Fuel Oil No. 1	NA	Gallons/year
Distillate Fuel Oil No. 2	NA	Gallons/year
Distillate Fuel Oil No. 4	NA	Gallons/year
Residual Fuel Oil No. 5	NA	Gallons/year
Residual Fuel Oil No. 6	NA	Gallons/year
Liquified Petroleum Gas (LPG)	NA	Gallons/year
Kerosene	NA	Gallons/year
Kerosene Jet Fuel	NA	Gallons/year
Biodiesel 100	NA	Gallons/year
Biodiesel 20	NA	Gallons/year
Renewable Diesel	NA	Gallons/year

**Natural Gas Assumptions**

Percent Reduction in Leakage and Venting Emissions	NA
Leakage and Venting Emissions (kgCO <sub>2</sub> e/MMBtu)	NA

**Industrial Processes**

Product Type	Quantity (tons/year)	Emission Factor (kgCO <sub>2</sub> e/ton)
Cement	NA	NA
Lime	NA	NA
Limestone Use	NA	NA
Magnesium	NA	NA
Iron and Steel	NA	NA
Ammonia	NA	NA
Aluminum	NA	NA
Nitric Acid	NA	NA

**HFC Leakage**

Building Type	Percent of Building Area Utilized
Residential	100%
Commercial	100%
Industrial	100%
Institutional	100%

**On-Road Vehicles**

Speed Bin (miles/hr)	Additional VMT (miles/year)
Fleet Average	23400000
0-30	0
31-55	0
56-75	0

**Treatment of Waste On-Site**

Waste Treatment Practice	Quantity of Waste Treated (tons/year)
	NA
	NA
	NA

**Treatment of Wastewater On-Site**

<b>Population Served by Treatment Plant</b>	NA
---	----

Product Type	Production (MT/year)
	NA

**Treatment of Waste Off-Site**

Activity	Quantity	Waste Generation Rate	Unit
Number of single family households	0	7.00	lb/household/day
Number of employees (commercial)	0	10.53	lb/employee/day
Number of employees (industrial)	1000	8.93	lb/employee/day
Number of employees (institutional)	0	3.55	lb/employee/day
Visitors per year (public venues)	0	1.72	lb/visitor

Waste Treatment Practice	Percent of Waste
Recycled	0%
Composted	0%
Landfilled	100%
Combusted	-

**Enteric Fermentation and Manure Management**

Livestock Type	Population	Percentage of Manure Management System											
		Anaerobic digester	Anaerobic lagoon - liquid	Cattle deep litter	Composting	Daily spread	Deep pit	Dry lot	Liquid/slurry	Pasture, range, paddock	Poultry with litter	Poultry without litter	Solid storage
Bulls	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef cows	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef heifers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Steer stockers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heifer stockers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feedlot beef	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef calves	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy heifers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy cows	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy calves	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine, <55 lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine 55-330 lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine 330+ lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, layers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, pullets	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, chickens	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, broilers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turkeys	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<b>Percent of manure applied or sold for application to agricultural soils (pasture or cropland) as fertilizer</b>	0%
--	----

## Notes

General Notes	
Material inputs	
Transportation of material inputs	
Employee commuting	
Construction equipment	
Land use change (construction)	
Construction waste	
Building energy consumption	
Coal production	
Natural gas and oil products	
Industrial processes	
HFC leakage	
Land use change (operations)	
On-road vehicles	
Treatment of waste on-site	
Treatment of wastewater on-site	
Treatment of waste off-site	
Enteric fermentation	
Manure management	
Mitigation Measures	
Adaptation Strategies	

# Minnesota Climate Calculator: Project Summary Report

Date Prepared: 10/20/2025

The results shown below were generated using the Minnesota Climate Calculator. The emissions quantified account for the full greenhouse gas impact of a potential project throughout the construction and operational phases of the project. This includes emissions from project activities that occur on-site as well as emissions that occur upstream and downstream of the project. The results are based on user inputs and assumptions; actual project emissions may vary.

## Background Information

Project Name	Monticello Industrial AUAR - Scenario 2
Project Category (primary)	Subp. 14, Industrial, commercial, institutional facilities
Project Category (secondary)	
Location (County)	Wright
Construction Start Date	4/1/2027
Operational Year	2040
Operational Lifetime (Years)	50

Electricity Provider	Grid Average
Portion of Building Electricity Consumption to be Generated On-Site via Renewables or Supplied through the Purchase of Renewable Energy Credits (RECs)	0%
Portion of Building Natural Gas Consumption to be Supplied from Renewable Sources	0%

Building Construction Project?	Yes
--------------------------------	-----

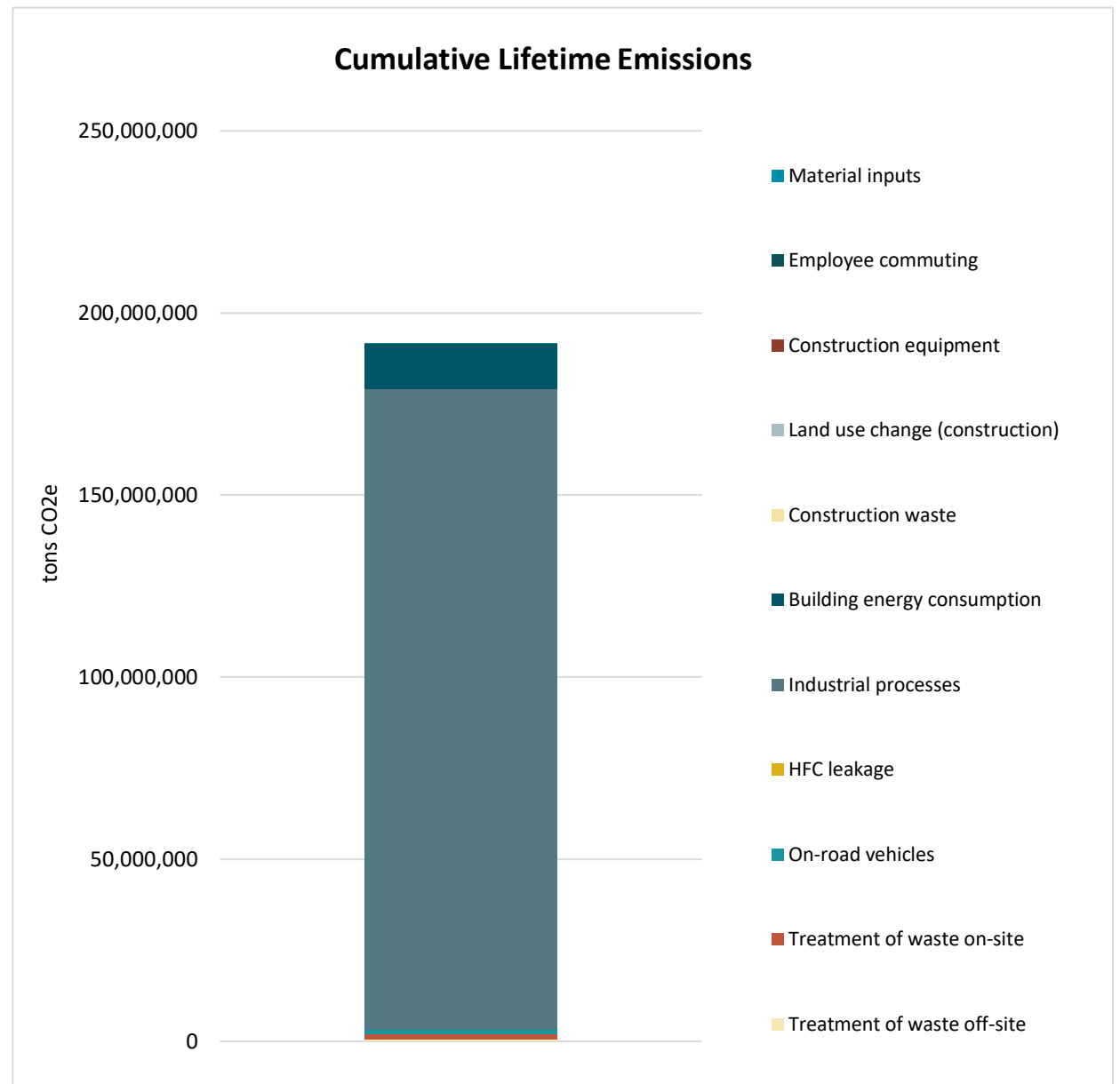
Construction Stage	Duration (Days)
Demolition	546
Site Preparation	328
Grading	846
Building Construction	8,463
Architectural Coatings	601
Paving and Landscaping	601

## Summary Results

Project Lifetime	63
Unit	tons

Phase	CO <sub>2</sub> e Emissions	
	Cumulative	Annualized
<b>Construction</b>		
Material inputs	197,881.21	3,140.97
Transportation of material inputs	4,049.70	64.28
Employee commuting	211,458.70	3,356.49
Construction equipment	19,939.55	316.50
Land use change (construction)	43.83	0.70
Construction waste	664.89	10.55
<b>Operation</b>		
Building energy consumption	11,989,982.68	190,317.19
Coal production	NA	NA
Natural gas and oil products	NA	NA
Industrial processes	175,985,810.72	2,793,425.57
HFC leakage	23,481.87	372.73
Land use change (operations)	NA	NA
On-road vehicles	1,335,029.14	21,190.94
Treatment of waste on-site	NA	NA
Treatment of wastewater on-site	NA	NA
Treatment of waste off-site	520,974.50	8,269.44
Enteric fermentation	NA	NA
Manure management	NA	NA
<b>Total</b>	<b>190,289,316.78</b>	<b>3,020,465.35</b>

Note: NA indicates that emissions were not quantified and/or are not applicable.



## User Inputs

Note: NA indicates that emissions were not quantified and/or activity is not applicable.

### Material Inputs

Material Type	Quantity	Unit	Geographical Sourcing
Aluminum	625.00	Tons	Unknown
Asphalt	47,485.68	Tons	Domestic
Brick	250.00	Tons	Unknown
Concrete	1,000,000.00	Tons	Domestic
Glass	1,250.00	Tons	Unknown
Insulation (residential)	0.00	Tons	Unknown
Insulation (commercial)	50.00	Tons	Unknown
Steel	15,000.00	Tons	Unknown
Wood Products	250.00	Tons	Unknown

### Employee Commuting

Construction Stage	Daily Average Number of Employees Commuting
Demolition	835
Site Preparation	167
Grading	835
Building Construction	2338
Architectural Coatings	668
Paving and Landscaping	167

Transportation Mode	Percent of Employees
Single Occupancy Vehicle	82%
Carpool	11%
Motorcycle	0%
Bus	2%
Transit Rail	2%
Bike/Walk	3%

Average One-Way Commute Length (miles)	13.2
--	------

### Construction Equipment

Equipment Type	Fuel Type	Number of Hours per Day by Construction Stage					
		Demolition	Site Preparation	Grading	Building Construction	Architectural Coatings	Paving and Landscaping
Air Compressors	Diesel	0	0	0	0	6	0
Cement and Mortar Mixers	Diesel	0	0	0	0	0	0
Concrete/Industrial Saws	Diesel	8	0	0	0	0	0
Cranes	Diesel	0	0	0	7	0	0
Excavators	Diesel	24	0	16	0	0	0
Forklifts	Diesel	0	0	0	24	0	0
Generator Sets	Diesel	0	0	0	8	0	0
Graders	Diesel	0	0	8	0	0	0
Pavers	Diesel	0	0	0	0	0	16
Paving Equipment	Diesel	0	0	0	0	0	16
Rollers	Diesel	0	0	0	0	0	16
Rubber Tired Dozers	Diesel	16	24	8	0	0	0
Scrapers	Diesel	0	0	16	0	0	0
Tractors/Loaders/Backhoes	Diesel	0	32	16	21	0	0
Welders	Diesel	0	0	0	8	0	0

### Land Use Change

Land Use Type	Acres		
	Pre-Construction	Post-Construction	Post-Operation
Wetlands, forested	0.00	0.00	NA
Wetlands, not forested	30.75	29.49	NA
Forest	28.00	25.25	NA
Rivers and streams	0.00	0.00	NA
Brush and grassland	36.25	1.00	NA
Cropland	444.00	0.00	NA
Livestock rangeland/pastureland	0.00	0.00	NA
Lawn/landscaping	0.00	205.26	NA
Green Infrastructure: Constructed wetlands, paved	0.00	0.00	NA
Green Infrastructure: Constructed wetlands, vegetated	0.00	38.00	NA
Green Infrastructure: Constructed green roofs	0.00	0.00	NA
Green Infrastructure: Constructed permeable pavements	0.00	0.00	NA
Impervious surface	11.00	233.00	NA
Stormwater pond (wet sedimentation basin)	0.00	18.00	NA

Trees	Number
Number of mature trees removed	25
Number of new trees planted	20

#### Construction Waste

Material Type	Quantity (tons)
Aluminum	0.00
Asphalt	0.00
Brick	10.00
Concrete	30000.00
Glass	37.50
Insulation	5.00
Steel	0.00
Wood Products	12.50
Mixed Waste	0.00

#### Building Energy Consumption

Building Type	Energy Intensity (Btu/sq ft/year)			
	Electricity	Natural Gas	Propane	Kerosene or Fuel Oil
Residential	18,096.91	24,460.01	3,619.38	233.51
Commercial	30,766.13	35,534.88	0.00	1,661.56
Industrial	229,952.20	656,392.90	0.00	8,191.66
Institutional	46,860.06	48,219.03	0.00	3,659.93
Other	0.00	0.00	0.00	0.00

#### Emissions from Coal Production

Coal Type	Incremental Production (tons/year)
Mixed Coal	NA
Anthracite Coal	NA
Bituminous Coal	NA
Subbituminous Coal	NA
Lignite Coal	NA
Coal Coke	NA

#### Emissions from Natural Gas and Oil Products

Fuel Type	Incremental Throughput	Unit
Natural Gas	NA	Cubic Feet/year
Renewable Natural Gas	NA	Cubic Feet/year
Propane	NA	Gallons/year
Gasoline	NA	Gallons/year
Distillate Fuel Oil No. 1	NA	Gallons/year
Distillate Fuel Oil No. 2	NA	Gallons/year
Distillate Fuel Oil No. 4	NA	Gallons/year
Residual Fuel Oil No. 5	NA	Gallons/year
Residual Fuel Oil No. 6	NA	Gallons/year
Liquified Petroleum Gas (LPG)	NA	Gallons/year
Kerosene	NA	Gallons/year
Kerosene Jet Fuel	NA	Gallons/year
Biodiesel 100	NA	Gallons/year
Biodiesel 20	NA	Gallons/year
Renewable Diesel	NA	Gallons/year

#### Natural Gas Assumptions

Percent Reduction in Leakage and Venting Emissions	NA
Leakage and Venting Emissions (kgCO <sub>2</sub> e/MMBtu)	NA

#### Industrial Processes

Product Type	Quantity (tons/year)	Emission Factor (kgCO <sub>2</sub> e/ton)
Cement	0.00	863.12
Lime	0.00	1,162.63
Limestone Use	0.00	8.59
Magnesium	0.00	16,178.31
Iron and Steel	1000000.00	1,326.60
Ammonia	0.00	937.36
Aluminum	200000.00	9,332.16
Nitric Acid	0.00	1,804.37

**HFC Leakage**

Building Type	Percent of Building Area Utilized
Residential	100%
Commercial	100%
Industrial	100%
Institutional	100%

**On-Road Vehicles**

Speed Bin (miles/hr)	Additional VMT (miles/year)
Fleet Average	104000000
0-30	0
31-55	0
56-75	0

**Treatment of Waste On-Site**

Waste Treatment Practice	Quantity of Waste Treated (tons/year)
	NA
	NA
	NA

**Treatment of Wastewater On-Site**

<b>Population Served by Treatment Plant</b>	NA
---	----

Product Type	Production (MT/year)
	NA

**Treatment of Waste Off-Site**

Activity	Quantity	Waste Generation Rate	Unit
Number of single family households	0	7.00	lb/household/day
Number of employees (commercial)	0	10.53	lb/employee/day
Number of employees (industrial)	10000	8.93	lb/employee/day
Number of employees (institutional)	0	3.55	lb/employee/day
Visitors per year (public venues)	0	1.72	lb/visitor

Waste Treatment Practice	Percent of Waste
Recycled	0%
Composted	0%
Landfilled	100%
Combusted	-

**Enteric Fermentation and Manure Management**

Livestock Type	Population	Percentage of Manure Management System											
		Anaerobic digester	Anaerobic lagoon - liquid	Cattle deep litter	Composting	Daily spread	Deep pit	Dry lot	Liquid/slurry	Pasture, range, paddock	Poultry with litter	Poultry without litter	Solid storage
Bulls	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef cows	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef heifers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Steer stockers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heifer stockers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feedlot beef	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beef calves	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy heifers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy cows	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dairy calves	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine, <55 lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine 55-330 lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Swine 330+ lbs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, layers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, pullets	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, chickens	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poultry, broilers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turkeys	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<b>Percent of manure applied or sold for application to agricultural soils (pasture or cropland) as fertilizer</b>	0%
--	----

## Notes

General Notes	
Material inputs	
Transportation of material inputs	
Employee commuting	
Construction equipment	
Land use change (construction)	
Construction waste	
Building energy consumption	
Coal production	
Natural gas and oil products	
Industrial processes	
HFC leakage	
Land use change (operations)	
On-road vehicles	
Treatment of waste on-site	
Treatment of wastewater on-site	
Treatment of waste off-site	
Enteric fermentation	
Manure management	
Mitigation Measures	
Adaptation Strategies	

## Mitigation Measures (Step 5)

Use the filters in the table below to identify potential mitigation measures to reduce GHG emissions from the proposed project. Use the column on the far left to select measures you plan to implement. Select Generate PDF button once you've made your desired selections.

Generate PDF

Select All Unhidden Measures

Reset all Selected Measures

Select	Emissions Source	Phase	ID	Measure Title	Measure Description
Yes	Land use change	Construction	M-1E-01	Create New Open Space with Native Vegetation and Habitat	Convert previously developed areas to vegetated open spaces. By creating new vegetated areas from previously settled land, the project would sequester carbon dioxide that would not have been captured without the land conversion. Trees and other vegetation also incorporate carbon into their biomass during their growth phase (stored carbon). Prior to establishing new vegetation, conduct information gathering to assess the site history, soil type, hydrology, topography, and wildlife populations to determine appropriate native vegetation that will be well adapted to the local environment. Establish project goals, including GHG emission reduction and restoration native pollinator and/or native habitat. Other important goals may include expanding contiguous habitat and wildlife corridors for threatened or endangered species or increasing biodiversity. Create a detailed planting and management plan that describes actions for site preparation, planting, habitat enhancement, water management, and invasive species control. Maximize long-term establishment success by conducting regular monitoring. This may involve tracking plant growth, soil conditions, and wildlife movement. Utilize the monitoring data to perform regular maintenance. Adjust the management plan as needed to keep the site healthy and ensure attainment of project goal(s).
Yes	Land use change	Construction	M-1E-02	Expand Urban Tree Planting	Require tree planting in urban areas. Planting trees sequesters carbon dioxide while the trees are actively growing, thereby reducing GHGs. The amount of carbon dioxide sequestered depends on the type of tree and the duration of the active growing period. Urban trees may also provide shade, which can reduce the urban heat island effect and building cooling demands. Buildings that use less electricity for air conditioning reduce energy consumption and associated indirect GHG emission. The selection of tree type is critical to minimize the use of additional water. Trees that have high water demands that are met through GHG-intensive water (such as water transported over long distances) can impact the amount of GHG reductions achieved by this measure.
No	Land use change	Construction	M-1E-03	Clear Vegetation from Area to be Flooded	Reduce the amount of organic material flooded during construction. Flooded areas can result in organic decomposition, which can contribute to methane emissions.
No	Land use change	Construction	M-1E-04	Land Agreements for Tree Removal	Engage landowners to develop a strategy for composting, chipping, processing, or reusing trees removed from their properties. The strategy should prioritize cost-effective options that minimize GHG emissions from stored tree carbon. If appropriate, consider retaining stumps or logs on the project site to improve soil health and support wildlife habitat.
No	Land use change	Construction	M-1E-05	Wetland Restoration	Restore wetlands to improve their function and ability to sequester GHG emissions. For example, rewet drained wetlands, remove non-native plants, exclude livestock, and plant native wetland species. Because wetlands can also represent a GHG source, ensure the restored wetland and selected restoration strategies will effectively reduce GHG emissions.
No	Land use change	Construction	M-1E-06	Afforestation	Plant trees on previously deforested land.
No	Land use change	Construction	M-1E-07	Establish a Carbon Sequestration Project	Establish a carbon sequestration project. Carbon emissions are sequestered by embedding the carbon in a structure that will hold the emissions and keep them out of the atmosphere. Sequestration can happen through biological, chemical, or physical processes.
Yes	Building energy consumption	Operation	M-2A-01	Require Energy Efficient Appliances	Install ENERGY STAR-certified appliances that exceed the energy efficiency of conventional appliances. By committing to more efficient appliances, the building's energy use is reduced, thereby reducing GHG emissions.
No	Building energy consumption	Operation	M-2A-02	Install Alternative Type of Water Heater in Place of Gas Storage Tank Heater	Install water heaters that are less emissions intensive than a natural gas conventional storage tank water heater. Alternatives may include electric conventional storage tanks, solar water heaters with natural gas backup, or solar water heaters with electric backup. Each alternative reduces GHG emissions in a slightly different way. An electric storage tank heater displaces natural gas consumption with electricity use, replacing more emissions-intensive natural gas with less emissions-intensive electricity. A solar water heater with electric backup reduces GHG emissions by displacing natural gas with zero-emission solar energy when water is heated by the system's solar collectors and grid electricity when the back-up function is utilized. A solar water heater with natural gas backup reduces emissions by displacing natural gas with solar energy when water is heated by the solar collectors.
No	Building energy consumption	Operation	M-2A-03	Limit Wood Burning Devices and Natural Gas/Propane Fireplaces	Prohibit installation of any wood burning devices (i.e., woodstoves and fireplaces) or natural gas or propane fireplaces. This avoids the combustion of biomass, natural gas, and propane, thereby reducing associated biogenic and non-biogenic GHG emissions. The most efficient alternatives to wood burning devices or gas fireplaces are electric fireplace inserts and electric heat pumps.
No	Building energy consumption	Operation	M-2A-04	Install Electric Ranges in Place of Gas Ranges	Install electric ranges (i.e., cooktop plus oven) in place of gas ranges. An electric range displaces natural gas consumption with electricity use, replacing a more emissions-intensive fossil fuel-based source of energy with electricity from the grid that is increasingly transitioning to renewable sources.

No	Building energy consumption	Operation	M-2A-05	Install Electric Heat Pumps	Install electric heat pumps as alternatives to conventional furnaces or air conditioners. Electric heat pumps use electricity to transfer heat between cool and warm spaces to either provide cooling or heating. When cooling is needed during the summer months, the pumps move warmer inside air to outside. The pumps operate in reverse during the winter, moving warmer outdoor air into the building to provide heat. Because heat pumps move warm air instead of generating heat, they are more efficient than conventional heating and cooling systems. When electric heat pumps replace fossil-fuel heating or cooling sources, they achieve a dual efficiency and decarbonization benefit. The most common types of heat pumps collect heat from the air (are air-to-air), water (water-to-air), or ground (geothermal-to-air). The performance and emissions reductions achieved by electric heat pumps depend heavily on the system type, cooling and heating loads, climate zone, season, and other project-specific variables.
No	Building energy consumption	Operation	M-2A-06	Require Energy Efficient Boilers	Install boilers with higher energy efficiencies than what is required by regulation. Improving boiler efficiency decreases fuel consumption for the same amount of energy output, thereby reducing associated GHG emissions
No	Building energy consumption	Operation	M-2A-07	Install Whole-House Fans	Install whole-house fans in new construction. Whole-house fans draw cooler outdoor air through open windows, exhaust the warmer air into the attic, and then expel the air outside through attic vents. Whole-house cooling using a whole house fan can substitute for an air conditioner most of the year in most climates, resulting in a reduction in emissions associated with building energy use. Whole-house fans may be inappropriate in locations near sources that generate air pollutants during the evening hours, such as major roads and freeways.
No	Building energy consumption	Operation	M-2A-08	Install Cool Roofs and/or Cool Walls	Install cool roofs and/or walls in place of dark roofs and/or conventional walls. Cool roofs have been designed to reflect more sunlight and absorb less heat than a standard roof, keeping buildings cooler in the summertime and thus reducing air-conditioning loads. Complementary to cool roofs, cool walls achieve a similar result through using more reflective paints or materials. This reduces the electricity needed to provide cooling but can potentially increase the energy needed to provide winter heating, thereby reducing associated GHG emissions depending on the project parameters (e.g., climate, level of implementation, carbon intensity of local electricity provider). However, the winter heating penalty may be small with lower levels of winter sunlight due to shorter daylight hours and more overcast skies.
No	Building energy consumption	Operation	M-2A-09	Install Green Roofs in Place of Dark Roofs	Install green roofs in place of dark roofs. Green roofs consist of a layer of vegetation on top of buildings, which provides natural insulation and climate control benefits. This reduces the electricity and natural gas needed to provide cooling and heating, thereby reducing associated GHG emissions.
No	Building energy consumption	Operation	M-2A-10	Install Cool Pavements	Install cool pavement in place of dark pavement. Cool pavement helps to lower ambient outdoor air temperatures when compared to dark-colored, heat-absorbent pavement such as asphalt. This reduces the electricity needed to provide cooling, thereby reducing associated GHG emissions, depending on the project parameters (e.g., climate, carbon intensity of local utility).
No	Building energy consumption	Operation	M-2A-11	Improve Insulation Standards	Use building insulation that exceeds minimum code standards. Improving insulation reduces energy demand for both heating and cooling and thus reduces GHG emissions from reduced energy consumption. Adequate insulation improves buildings' thermal regulation as it helps avoid extreme heat gains and losses.
No	Building energy consumption	Operation	M-2A-12	Limit Window-To-Wall Ratio	Limit the window-to-wall ratio (WWR) of new buildings. Buildings with fully glazed façades are dependent on heating, ventilation, and air conditioning and tend to be highly exposed to solar. The optimal WWR for energy efficiency depends on the climate and orientation of the building.
No	Building energy consumption	Operation	M-2A-13	Maximize Solar Shading	Maximize building shade during the summer months. Shading is a passive and inexpensive way to reduce summer heat loads, and thus the need for air conditioning. Examples include vegetation with seasonal variation and envelope elements that reflect natural light.
No	Building energy consumption	Operation	M-2A-14	Optimize Natural Ventilation	Maximize natural building ventilation in new construction. Façade design allows natural ventilation at night to cool the building and reduce peak daytime temperatures in summer. This in turn reduces the need for air conditioning, which reduces building electricity consumption and associated emissions.
No	Building energy consumption	Operation	M-2A-15	Obtain Third-party HVAC Commissioning and Verification of Energy Savings	Require third-party review of heating ventilation and air conditioning (HVAC) systems to ensure proper installation and construction of energy reduction features. HVAC commissioning and third-party verification of energy savings may be obtained for thermal efficiency components including HVAC systems, insulation, windows, and water heating.
No	Building energy consumption	Operation	M-2A-16	Require Higher Efficacy Public Street and Area Lighting	Install higher efficacy public street and area lighting in place of typical or existing lamps. Installing more efficacious lamps, such as light-emitting diodes, will use less electricity while producing the same amount of light, thereby reducing the associated indirect GHG emissions.
No	Building energy consumption	Operation	M-2A-17	Replace Incandescent Traffic Lights with LED Traffic Lights	Replace incandescent traffic lights with more energy-efficient light-emitting diode (LED) traffic lights. Installing LEDs reduces electricity demand and thus results in a reduction in indirect GHG emissions.
No	Building energy consumption	Operation	M-2A-18	Procure Electricity from Lower Carbon Intensity Power Supply	Procure electricity with a lower carbon intensity than the primary product offered by the local provider (often an investor-owned utility). This would displace the electricity demand that would ordinarily be supplied by the local electricity provider's energy mix. Electricity provided by local electricity providers has varying carbon intensities based on the portfolio of energy sources. Procurement of electricity of a lower carbon intensity would displace the emissions that would have been produced had the electricity been supplied by the default energy mix and thus results in a reduction in GHG emissions. Green power supply options include utility green power products, community choice aggregation, shared renewables (e.g., community solar), and power purchase agreements.
No	Building energy consumption	Operation	M-2A-19	Require All-Electric Development	Install all-electric appliances and end uses. Using electric instead of natural gas-powered appliances and end uses replaces a more emissions-intensive fossil fuel source of energy with a less emissions-intensive source of energy, electricity from the grid that is increasingly transitioning to renewable sources.

No	Building energy consumption	Operation	M-2A-20	Require Zero Net Energy Buildings	Design and construct zero net energy (ZNE) buildings. A ZNE building foremost reduces GHG emissions by reducing energy use through more efficient design. Further, the building avoids GHG emissions either by using no emissions-generating energy sources or offsetting the building energy emissions by exporting emission-free energy (typically from onsite renewables).
No	Building energy consumption	Operation	M-2A-21	Require Renewable-Surplus Buildings	Install onsite renewable energy in an amount that offsets more emissions than the amount generated from the development's electricity use and onsite fuel consumption. Installing zero-emission renewable energy displaces emissions from grid electricity that would otherwise be used, thereby reducing GHG emissions. Implementation of this measure would result in buildings that reduce more GHG emissions than they generate through surplus generation of energy from renewables, sometimes known as carbon-negative buildings. The amount of renewable energy required for a building to have net negative GHG emissions is largely determined by the number of emissions from onsite fuel consumption and the carbon intensity of the local electricity provider.
No	Building energy consumption	Operation	M-2A-22	Establish Onsite Renewable Energy Systems	Generate electricity from an onsite renewable or zero-emission power system. This displaces the electricity demand that would ordinarily be supplied by the local electricity provider. Electricity generation provided by local electricity providers have varying carbon intensities based on the portfolio of energy sources. Some renewable energy systems, such as fuel cells, may not be completely GHG emissions-free, but may still have lower emissions than the electricity provided by the local electricity provider (unless the electricity provider has a relatively high renewable portfolio), thereby reducing GHG emissions. Zero-emissions power systems, such as solar panels, result in the greatest magnitude of emissions reductions. Onsite renewable systems can also provide back-up power as an alternative to diesel generators in the event of grid power outages or demand response events.
No	Building energy consumption	Operation	M-2A-23	Use Renewable Natural Gas or Green Hydrogen Fuel	Use renewable natural gas (RNG) in buildings instead of traditional natural gas. RNG has much lower carbon emissions and can be used in standard gas appliances like furnaces and water heaters. Alternatively, consider green hydrogen as a primary fuel source. Use of hydrogen would likely require some buildings retrofits or updates to appliances.
No	Building energy consumption	Operation	M-2A-24	Encourage Residential Participation in Existing Demand Response Program(s)	Market and promote the local utility's manual (i.e., behavioral) demand response program(s) to encourage participation from residents in the project area. During demand response events, program users shift or conserve electricity, thereby reducing the associated indirect GHG emissions. Methods of engaging customers in demand response efforts include offering time-based rates, such as time-of-use pricing, critical peak pricing, variable peak pricing, real-time pricing, and critical peak rebates. Users are encouraged to respond to time-based rates or other forms of financial incentives with smart phone app, email, phone call, and/or text notifications.
No	Building energy consumption	Operation	M-2A-25	Use Microgrids and Energy Storage	Design, install, and manage a microgrid. Microgrids offer the opportunity to deploy more zero-emission electricity sources, thereby reducing GHG emissions. The microgrid manager (e.g., local energy management system) can balance generation from non-controllable renewable power sources, such as solar, with distributed, controllable generation, such as natural gas-fueled combustion turbines. They can also use energy storage and batteries in electric vehicles to balance energy distribution and usage within the microgrid.
No	Building energy consumption	Operation	M-2A-26	Provide Battery Storage	Strategically deploy battery storage. While energy storage has no direct emissions effect, when deployed strategically, energy storage can make the grid more flexible, unlocking renewable energy and reducing GHG emissions. When deployed non-strategically, owners of energy storage assets are more likely to charge their facilities during off-peak periods when power prices are lower, in order to supply power during more expensive peak hours. Off-peak generation times such as nighttime hours are more likely to be dominated by conventional power sources, which, except for nuclear and hydropower, are likely to be more emissions intensive.
No	Building energy consumption	Operation	M-2A-27	Utilize a Combined Heat and Power System	Use combined heat and power (CHP) systems in place of separate heat and power (SHP) systems. For the same level of power output, CHP systems use less input energy than traditional SHP generation, resulting in lower GHG emissions. In traditional SHP systems, heat created as a by-product is wasted as it is released into the surrounding environment. CHP systems harvest thermal energy and use it to heat onsite uses or for processes in proximity, which reduces the amount of natural gas or other fuel that would otherwise be combusted for heating or for use in those processes. CHP systems also result in a reduced demand for electricity from the grid, which displaces the GHG emissions from the production of electricity from the grid.
No	Building energy consumption	Operation	M-2A-28	Utilize Biomass Energy	Install new biomass or biofuel electricity generation (or cogeneration). Although the direct combustion emissions for biofuels are generally on-par with other forms of fossil fuel energy, biofuels have a lower life-cycle carbon intensity due to the uptake of carbon from plants used to produce that fuel. A reasonable reference point for this carbon intensity would be the average carbon intensity of the electricity in the utility that would receive power from this new biomass plant.
No	Land use change	Operation	M-2F-01	Implement Management Practices to Improve the Health and Function of Natural and Working Lands	Implement management strategies aimed at improving the overall health and functionality of natural and working lands as a mechanism for increasing carbon sequestration and reducing GHG emissions. Management practices may include those that change ecosystem carbon exchange rates (e.g., cultivated land soil conservation, use of biochar) and those that involve land cover changes. If land conversion is deemed appropriate, refer to Measure M-1E-1 for recommended implementation and management strategies.
No	Land use change	Operation	M-2F-02	Wildfire Resilience and Management	Implement fuel treatments in forested areas to minimize the likelihood of severe or catastrophic wildfire behavior, thereby minimizing pyrogenic carbon emissions during a wildfire event. Fuel treatments have the short-term effect of releasing more carbon emissions as understory, ladder fuels, and forest fuel loads are burned. However, in the long term, treated stands produce fewer emissions compared to untreated stands because treated stands produce low to moderate fire severity that does not disturb the carbon stock in the overstory canopy. Untreated stands are far more likely to experience severe behavior that ignites the canopy and releases the stored carbon in the overstory.
No	Land use change	Operation	M-2F-03	Use Rotational Grazing	Regularly move cattle between different grazing areas to promote healthy pasture regrowth before resuming grazing.

No	Land use change	Operation	M-2F-04	Reduce Livestock Stocking Density	Decrease the amount of cattle stocked per pasture to reduce grazing pressure, which in turn reduces plant defoliation and soil disturbance, which can mitigate soil carbon loss. Reducing the stocking density also reduces methane emissions by decreasing the animal population.
No	Land use change	Operation	M-2F-05	Plant Cover Crops	Plant cover crops during fallow periods to enhance soil carbon storage.

## Adaptation Strategies (Step 6)

Use the checkboxes below to identify adaptation strategies relevant to selected climate trends and project characteristics. The list of adaptation strategies will filter to show strategies that align with both the climate trends and project characteristics selected. Ensure Macros are enabled for filters to work (see the User Guide tab for instructions on enabling macros). Use the column on the far left to select strategies you plan to implement as part of your proposed project. Select Generate PDF button once you've made your desired selections.

### Step 1: Select Climate Trends

- Heavier, more damaging rain
- Average annual precipitation increasing
- Average annual temperature increasing
- Increasing risk of extreme heat and heatwaves
- Early thawing (cold weather warming)
- Increasing risk of drought

Reset Climate Trends

Reset Project Characteristics

Select All Unhidden Strategies

Reset all Selected Strategies

### Step 2: Select Project Characteristics

- Hazardous waste
- Agriculture
- Livestock
- Critical infrastructure
- Waste management
- New or upgraded buildings
- Subsurface infrastructure
- Water management
- Construction
- Increased impervious surface
- New, expanded, or rebuilt transportation route

Generate PDF

Selection	ID	Adaptation Strategies	Additional Information
Yes	S-1A-01	Clear floodplains and other areas subject to flooding of hazardous contaminants in advance of a flood event from extreme precipitation.	Develop a coordination plan to clear hazardous contaminants ahead of and/or after a flood event.
No	S-1A-02	Conduct ongoing and pre-event stormwater infrastructure maintenance.	Clean out the storm drains and culverts; Ensure that all maintenance equipment are readily available and working for extreme events (e.g., generators).
Yes	S-1A-05	Enhance/develop adaptive stormwater management practices and technologies.	Implement natural buffers and green infrastructure (e.g., bioswales, tree trench; blue roof; vegetated roof; bioretention; green and blue roofs; preserve or build natural features/ecosystems; Use certified/qualified green infrastructure contractors and engineers; Maintain and/or expand the urban tree canopy); Ensure adequate culvert sizing and/or replace undersized culverts; Remove impervious surfaces and/or install permeable surfaces; Ensure sufficient water storage capacity for extreme flooding; Install underground storage systems to detain runoff in underground receptacles (e.g., culverts, engineered stormwater detention vaults, or perforated pipes); Build a retention pond to manage stormwater; Implement enhanced roof access to inspect and maintain roof and drainage system; Install oversized roof drains; use smart ponds.
No	S-1A-06	Incorporate flood-proofing measures into new or upgraded facilities/assets.	Dry or wet-proof facilities (e.g., apply a waterproof veneer); Waterproof key equipment; Install back-up power; Conduct pre-flood event sandbagging; Install hard flood protection structures (e.g., floodwall, levees, dikes); Install removable barriers; Have movable assets; Seal buildings; Place critical equipment in waterproof containers or foundation systems; Consider elevation when selecting the site (e.g., Elevate the facilities and/or assets to be above the flood level).
No	S-1A-07	Flood-proof facilities/assets using natural buffers and green infrastructure.	Maintain and/or expand the urban tree canopy; Use green roofs; Preserve or build natural features/ecosystems; Use certified/qualified green infrastructure contractors and engineers.
Yes	S-1A-10	Ensure there is adequate redundancy and/or backup energy resources available to maintain necessary operations during extreme precipitation events.	Implement renewable energy and smart grid technology to optimize energy distribution and reduce outages; Develop off-grid sources for redundant power supply; Install easy hookups for temporary power; Install backup generators; Diversify energy sources such as by installing renewable energy; Install battery storage; Incorporate multiple power supplies; Implement a microgrid with integrated energy storage systems; Join a community energy project to pool resources; Utilize a combined heat and power (CHP) system; Ensure these systems are designed to be resilient during a projected extreme flood event.
No	S-1A-11	Harden the energy infrastructure systems to withstand extreme precipitation events.	Bury distribution lines; Elevate critical infrastructure above flood levels; Waterproof or seal equipment; Improve drainage systems around critical infrastructure.
No	S-1A-14	Ensure waste management facilities are prepared for extreme precipitation events.	Waterproof waste storage (e.g., sealed containers; protective barriers); Improve drainage systems around the facility; Elevate the weigh station area to allow continued receipt of waste deliveries; Ensure access roads to the facility do not flood; When siting the facility, consider location (e.g., avoid floodplains; elevate the facility).
No	S-1A-15	Ensure water infrastructure can withstand projected increases in average and extreme precipitation.	Install stormwater outfall pumps/lift stations to drain water from the system if outfalls were to become submerged; Implement strong pumps for backflow prevention; Ensure adequate capacity for wastewater and stormwater collection or treatment; Increase water treatment capabilities; Incorporate backup generators and fuels sources, as applicable, in a location safe from flooding, for the water infrastructure system to provide a sustained minimal level of water services in the event of a power outage.
No	S-1A-16	Prepare for worst case scenarios regarding extreme precipitation.	Stockpile response materials and store them near areas that will likely need rapid repairs after an extreme rainfall event (e.g., pre-position emergency power generation capacity, portable pumps, and debris removal equipment); Implement early warning systems for extreme weather events.
No	S-1A-17	When siting and orienting a facility or asset, consider flood risk from increased precipitation and extreme precipitation events.	Avoid development in erosion zones and floodplains; Select a site at higher elevation.
Yes	S-1A-18	Maintain or improve ecosystem health to act as a natural barrier to increasing precipitation and extreme precipitation events.	Avoid or minimize development on key ecosystem areas (e.g., wetlands, trees) to maintain natural barriers; Revegetate with native and/or deep rooted plants to improve stormwater drainage and flooding; Develop a plan for future ecosystem health; If there is tree planting, plant tree species that are adapted to current and/or future climate conditions (see: <a href="https://extension.umn.edu/creating-climate-ready-woodlands/recommended-trees">https://extension.umn.edu/creating-climate-ready-woodlands/recommended-trees</a> ).
No	S-1A-19	Incorporate stormwater green infrastructure into site plans to mimic the water storage of natural systems.	Plan installation of bioswales, tree trenches, bioretention cells, raingardens, etc. sized to better address more frequent intense precipitation events.
No	S-1A-20	Develop post-storm plans for the construction site.	Develop a coordination plan to clear roads and drainage systems from debris after extreme precipitation events.
No	S-1B-01	Ensure hazardous materials are stored in temperature-controlled environments to accommodate for high temperatures and heatwaves.	Insulate storage areas; Install temperature monitoring systems with alarms to alert staff; Conduct regular inspections and maintenance of storage facilities.
No	S-1B-02	Consider alternative pavement surfaces and materials that are more heat-resistant to reduce heat impacts and surface temperatures.	Use light-colored asphalt pavement to reduce heat absorption and reflect radiation; Use materials for railway tracks and stations that are resistant to higher heat to prevent buckling and kinks; Install permeable surfaces especially for low-traffic areas such as roadside parking (along curbs) and parking lots.
No	S-1B-03	Incorporate flexible pavement design to accommodate thermal expansion and prevent buckling from high temperatures and heatwaves.	Design roads with additional thermal expansion joints; Incorporate polymer-modified asphalt in the pavement mix; Apply reflective coatings.
No	S-1B-05	Retain mature trees as part of design and during construction.	Inventory trees; mark boundaries around trees to avoid compaction and damage to trunks and roots.
No	S-1B-06	Use cooling technologies to reduce surface temperatures during periods of high temperatures and/or heatwaves.	Use reflective coating; Use high-reflectivity hardscape; Decrease impervious surfaces and/or install permeable surfaces; Incorporate green infrastructure (e.g., green roofs); Maintain and/or expand urban tree canopy.
No	S-1B-07	Consider and adjust to changes in the distribution and prevalence of heat-tolerant pests by incorporating changes into pest management for buildings and infrastructure.	Resist intrusion of termites as hardiness zones move north.
No	S-1B-08	Use building construction materials that maintain indoor temperatures and/or are resilient to increasing temperatures during high heat conditions and heatwaves.	Update building insulation for higher heat thresholds; Use reflective roofing materials; Install energy efficient windows (e.g., double-glazed windows); Install green roofs and/or green walls; Use light-colored building materials (e.g., cool roofing and sliding materials); Optimize natural ventilation.
No	S-1B-12	Consider how higher temperatures and heatwaves may increase decomposition rates and the need to improve waste management practices.	Install a temperature monitoring system to detect and manage heat build-up; Install waste infrastructure that can withstand higher temperatures such as landfill liners, odor control strategies for organics composting.
No	S-1B-13	Ensure subsurface infrastructure (e.g., pipes, SSTA installation) can withstand high temperatures and heatwaves.	Install sensors to monitor ground temperatures; Use thermal insulation; Implement cooling systems (e.g., ventilation shafts, cooling pipes); Install temperature sensors for monitoring.
Yes	S-1B-14	Ensure there is adequate redundancy and/or backup energy resources available to maintain necessary operations during increased cooling demand and/or an extreme heat event.	Implement renewable energy and smart grid technology to optimize energy distribution and reduce outages; Develop off-grid sources for redundant power supply; Install easy hookups for temporary power; Install backup generators; Diversify energy sources such as by installing renewable energy; Install battery storage; Incorporate multiple power supplies; Implement a microgrid with integrated energy storage systems; Join a community energy project to pool resources; Utilize a combined heat and power (CHP) system.
No	S-1B-15	Harden the energy infrastructure systems to withstand projected increasing temperatures and heatwaves.	Increase tension in transmission lines to reduce sag; Add external coolers to transformers; Use more heat-resistant materials (e.g., high-temperature conductors); Bury lines/cables.
No	S-1B-16	Upgrade the electrical systems to handle increased cooling demand especially from extreme heat events.	Consider renewable energy and smart grid technology to optimize energy distribution and reduce outages.
No	S-1B-17	Provide cooling systems for critical infrastructure or equipment sensitive to overheating during periods of high temperatures and/or heatwaves.	Install back up air conditioning units; Use battery-powered equipment which is less prone to overheating than gas-powered machinery.
No	S-1B-18	Implement cooling strategies for construction equipment vulnerable to high temperatures.	Provide cooling systems for equipment sensitive to overheating; Use battery-powered equipment which is less prone to overheating than gas-powered machinery.
No	S-1B-19	Increase the frequency of maintenance checks to ensure construction equipment is functioning optimally in high temperatures and during heatwaves.	Regularly check fluid levels, tire pressure, and hydraulic systems.
No	S-1B-20	Use cooling technologies to reduce heat impact on waste management systems during periods of high temperatures and/or heatwaves.	Implement cooling systems for waste facility; Install heat-resistant and sealed containers to store waste; Install green infrastructure on the facility (e.g., green roof; increased vegetation).
Yes	S-1B-21	Maintain or improve ecosystem health to mitigate heat from increasing temperatures and heatwaves.	Avoid or minimize development on key ecosystem areas (e.g., wetlands, trees) to maintain natural cooling systems; Develop a plan for future ecosystem health; If there is tree planting, plant tree species that are adapted to current and/or future climate conditions (see: <a href="https://extension.umn.edu/creating-climate-ready-woodlands/recommended-trees">https://extension.umn.edu/creating-climate-ready-woodlands/recommended-trees</a> ).

No	S-1B-22	Provide heat protective measures for construction staff who may be exposed to heat during work duties.	Consider different attire/uniforms, more breaks, more shade, more hydration stations, or telecommuting options.
No	S-1C-01	Consider impact of increased freeze/thaw cycles for design and construction of building and road foundations.	Use frost-resistant materials (e.g., frost-resistant concrete and asphalt) to minimize damage like cracking; Insulate foundations; Construct deeper foundations; Conduct regular maintenance and monitoring to inspect and repair damage.
No	S-1C-02	Consider changing thawing conditions when selecting or upgrading pipes.	Install PVC water pipes (rather than metal cast iron pipes) which are less expensive and easier to install than iron, to minimize breaks and ensure structural integrity.
No	S-1C-03	Regularly monitor the conditions of the construction site, roadway, etc. and conduct maintenance to reduce any degradation from increased temperatures and/or freeze/thaw cycles.	Implement regular monitoring and maintenance of potholes; Track thawing with sensors.
No	S-1D-01	For landscaping, use drought-tolerant plants or xeriscaping.	Plant more drought-tolerant options (e.g., succulents); Apply mulch around plants; Incorporate hardscaping (e.g., rocks).
Yes	S-1D-04	Install water storage to retain rainfall on the land for use to meet agricultural and irrigation needs.	Convert low spots that are currently in crop production but prone to flooding / washout into water storage areas.
No	S-1D-05	Incorporate water-efficient practices/technology into the waste management facility to account for drought conditions.	Use greywater for cleaning; Install rainwater harvesting systems; Use alternative water sources (e.g., reclaimed water).
No	S-1D-06	Ensure water infrastructure can withstand drought conditions.	Build infrastructure needed for aquifer storage and recovery; Diversify sources of water supply.
No	S-1D-07	Use technologies and strategies that recycle water for water management systems to account for drought conditions.	Establish systems to recycle water and use reclaimed water; Plumb buildings for greywater separation and reuse; Install wastewater treatment technology (e.g., a Living Machine) to recycle wastewater; Install greywater purification and reuse systems; Develop a closed-loop system.
No	S-1D-08	Install water-saving technologies indoors to account for drought conditions.	Use water-efficient household appliances (e.g., low-flow toilets, showerheads, and front-loading washers); Install water meters.
No	S-1D-09	Install water-saving technologies outdoors to account for drought conditions.	Install rainwater harvesting tanks; Plant native, deep-rooted, and/or drought-tolerant plants.

# **Appendix E:** *Traffic Study*

# Traffic Impact Analysis

## Monticello Industrial

MONTICELLO, MINNESOTA

NOVEMBER 2025

Prepared By:

**Kimley»Horn**

# TABLE OF CONTENTS

List of Tables .....	2
1. Introduction.....	3
2. Existing Conditions.....	4
3. Background Conditions Analysis .....	6
4. Future Conditions Analysis - Scenario 1 .....	12
5. Future Conditions Analysis - Scenario 2.....	17
6. Turn Lane Warrant Analysis .....	24
7. Conclusion and Recommendations .....	25
8. Appendix .....	29

## LIST OF TABLES

Table 3-1 : Level of Service Grading Descriptions.....	7
Table 3-2: Level of Service Grading Criteria.....	7
Table 3-3: Existing Year (2025) Level of Service.....	8
Table 3-4: Opening Year (2030) No-Build Level of Service .....	9
Table 3-5: Design Year (2045) No-Build Level of Service.....	11
Table 4-1: Trip Generation – Scenario 1 .....	12
Table 4-2: Opening Year (2030) Build Scenario 1 Level of Service .....	14
Table 4-3: Design Year (2045) Build Scenario 1 Level of Service .....	16
Table 5-1: Site-Generated Traffic Projections – Scenario 2.....	17
Table 5-2: Opening Year (2030) Build Scenario 2 Level of Service .....	19
Table 5-3: Opening Year (2030) Build Scenario 2 Mitigated Level of Service.....	20
Table 5-4: Design Year (2045) Build Scenario 2 Level of Service .....	21
Table 5-5: Mitigated Design Year (2045) Build Scenario 2 Level of Service .....	23
Table 6-1: Turn Lane Warrant Analysis Summary.....	24

# 1. INTRODUCTION

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained to prepare a Traffic Impact Analysis for a proposed industrial development in Monticello, MN, as the site undergoes the Alternative Urban Areawide Review (AUAR) process. The existing site is currently not zoned and will need to be annexed by the city of Monticello. An aerial view of the study location and surrounding roadway network is presented in **Exhibit 1**. All exhibits for this report are included in the appendix.

Two development scenarios are included in the AUAR. Scenario 1 consists of a 3 million square-foot Technology Park while Scenario 2 consists of a 5 million square-foot Industrial Park. As part of this study, the existing roadway network was analyzed to determine the current operations at the study intersections. In order to assess the potential impact of the development scenarios on the area roadway network, site-generated trips were established and added to the background traffic volumes. Future traffic conditions were evaluated for the approximate Opening Year of the proposed development (2030) and a long term “Design Year” (2045).

This report presents and documents data collection, summarizes the evaluation of existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential impact of site-generated traffic on the adjacent roadway network for Scenario 1 and Scenario 2.

## 1.1 Report Purpose and Objectives

The purpose of this study is to address traffic and transportation impacts of the proposed development on surrounding streets and intersections. This traffic impact study was prepared based on criteria set forth by the AUAR guidelines. The following specific information, per AUAR recommended content, should be provided:

- A description and map of the existing and proposed roadway system, including state, regional, and local roads to be affected by the development of the AUAR area. This information should include existing and proposed roadway capacities and existing and projected background (i.e. without the AUAR development) traffic volumes;
- Trip generation data – trip generation rates and trip totals – for each major development scenario broken down by land use zones and/or other relevant subdivisions of the area. The projected distributions onto the roadway system must be included;
- Analysis of impacts of the traffic generated by the AUAR area on the roadway system, including: comparison of peak period total flows to capacities and analysis of Level of Service and delay times at critical points (if any);
- A discussion of structural and non-structural improvements and traffic management measures that are proposed to mitigate problems.

Note: in the above analyses the geographical scope must extend outward as far as the traffic to be generated would have a significant effect on the roadway system and traffic measurements and projections should include peak days and peak hours, or other appropriate measures related to identifying congestion problems, as well as ADTs (average daily traffic).

## 2. EXISTING CONDITIONS

Kimley-Horn conducted a review of the AUAR area including existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on the existing conditions. An aerial view of the existing conditions and lane movements are shown in **Exhibit 2**.

### 2.1 Area Land Uses & Connectivity

The land uses of the site and the surrounding area are primarily agricultural, with some residential land north of 85<sup>th</sup> Street. The AUAR area is located in Wright County, just south of the City of Monticello's current boundary. Minnesota State Highway 25 (MN 25) connects the area to a full interchange with Interstate 94 (I-94) approximately 1.7 miles north of the site. I-94 provides regional east-west connectivity to major population centers such as the Twin Cities to the east and Saint Cloud to the west.

### 2.2 Existing Roadway Characteristics

The following provides a description of the public roadways within the AUAR area:

**85<sup>th</sup> Street NE (or CR 106 west of MN 25)** is an east-west roadway that serves as the northern boundary of the AUAR area. It is a two-lane undivided roadway with dedicated right- and left-turn lanes at the intersection with MN 25. 85<sup>th</sup> Street NE is classified as a major collector, according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along 85<sup>th</sup> Street is approximately 1,797 vehicles per day (vpd) west of MN 25, as of 2024. No AADT data is available east of MN 25. The posted speed limit is 45 mph west of MN 25. There is no posted speed limit east of MN 25, and therefore the statutory speed limit is 55 mph.

**Minnesota State Highway 25 (MN 25)** is a generally north-south state highway that runs west of the AUAR area. It is a two-lane undivided roadway about 1000' south of 85<sup>th</sup> Street, where it transitions to a four-lane divided roadway to the north. There are dedicated left and right turn lanes at the intersections with 85<sup>th</sup> street NE and CSAH 37. MN 25 is classified as Principal Arterial - other, according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along MN 25 is approximately 15,009 vehicles per day (vpd) north of 85<sup>th</sup> Street, as of 2024. The posted speed limit is 60 mph.

**Edmonson Avenue NE (CR 117)** is a north-south roadway that serves as the eastern boundary of the AUAR area. It is a two-lane undivided roadway that connects to the AUAR site via 85<sup>th</sup> Street NE. There are no existing turn lanes along this road. Edmonson Avenue NE is classified as a minor collector according to the *Monticello 2040 Vision + Plan*. Edmonson Avenue NE has an AADT of 1,808 vpd north of CSAH 37 and 1,930 vpd north of 85<sup>th</sup> Street NE. The posted speed limit is 55 mph.

**CSAH 37** is an east-west County State Aid Highway (CSAH) located south of the AUAR area. It is a two-lane undivided roadway. CSAH 37 is classified as a major collector south of the AUAR area according to page 99 of the 2040 Monticello Comprehensive Plan. According to the MnDOT Traffic Mapping Application, the road has an AADT of approximately 4,873 vpd west of Edmonson Avenue as of 2024. The posted speed limit is 55 mph.

**Davidson Avenue NE** is a north-south roadway that serves as the western boundary of the AUAR area. It is a two-lane undivided local roadway with no turn lanes. There is no AADT data available for Davidson

Avenue NE and there is no posted speed limit. The speed limit was assumed to be 45 mph for analysis purposes.

**School Boulevard** is a three-lane undivided east-west roadway with one travel lane in each direction and a shared left turn lane. School Boulevard is classified as a minor arterial, according to the *Monticello 2040 Plan*. MnDOT reports an AADT of 5,994 west of Edmonson Avenue and 6,464 west of Fenning Avenue, as of 2024. The posted speed limit is 40 mph, with a school speed limit of 30 mph enforced when children are present.

**Fallon Avenue** is a two-lane undivided north-south roadway. Fallon Avenue is classified as a local road according to the *Monticello 2040 Plan*. MnDOT reports an AADT of 3,847 north of School Boulevard, as of 2024. The posted speed limit is 30 mph.

The existing geometry and intersection control for the intersections in the study area that will be included in this analysis are shown in **Exhibit 2**.

## 2.4 Traffic Count Data

Turning movement count data was collected during the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM). Data was collected at each study intersection, as listed below.

- MN 25 & 85<sup>th</sup> Street NE (Signal)
- Edmonson Avenue NE & 85<sup>th</sup> Street NE (Side-Street Stop)
- MN 25 & County Road 37 (Signal/Planned Roundabout)
- County Road 37 & Davidson Avenue (Side-Street Stop)
- County Road 37 & Edmonson Avenue (Side-Street Stop)
- School Boulevard & Fallon Avenue (All-Way Stop/Planned Roundabout)

Turning movement counts at the intersections of MN 25 & 85<sup>th</sup> Street NE and Edmonson Avenue & 85<sup>th</sup> Street NE were conducted on Thursday, July 11, 2024. Turning movement counts at MN 25 & County Road 37, County Road 37 & Davidson Avenue, and County Road 37 & Edmonson Drive were conducted on Wednesday, July 16, 2025. Traffic Volumes for MN 25 & Davidson Avenue were determined using the traffic counts from surrounding intersections. Count data from 2024 was grown with one year of background growth to conform with the newer traffic data. TMC data for School Boulevard & Fallon Avenue was collected when schools were in session on Tuesday, April 8, 2025.

The traffic count data indicates that peak traffic volumes occur within the study area from 7:00 to 8:00 AM and 4:00 to 5:00 PM on a typical weekday. Existing peak hour traffic volumes are summarized on **Exhibit 3**. A summary of the traffic count data is provided in the appendix.

## 2.3 Pedestrian and Bicycle Infrastructure

There is currently a shared use path located north of 85<sup>th</sup> Street NE but no pedestrian or bicycle facilities within the AUAR Area. The intersection of MN 25 & 85<sup>th</sup> Street NE has pedestrian crosswalks at the north and west legs of the intersection.

## 3. BACKGROUND CONDITIONS ANALYSIS

Analysis of the future background conditions was carried out to determine the baseline operating conditions for the Opening Year (2030) and Design Year (2045) of the proposed AUAR developments. A review of future traffic growth and planned geometric changes for the study roadways was conducted for the analysis.

### 3.1 Future Roadway Improvements

A corridor study for Highway 25 between Buffalo and Monticello was completed in 2022. The study identified multiple short-term and long-term improvements to the roadway within the study area. Some of the short term improvements identified by this corridor study are planned for construction in 2026. The most notable of these improvements is the installation of a single-lane roundabout at MN 25 & CSAH 37.

The corridor study also identified the potential removal of access to Davidson Avenue as a potential improvement. Additionally, a new full-access intersection along MN 25 south of the existing Davidson Avenue intersection was identified as a long-term improvement. The *Monticello 2040 Vision + Plan* identifies a future minor collector roadway passing through the southern portion of the site and connecting from MN 25 to Edmonson Avenue.

For the sake of analysis, a roundabout at MN 25 & CSAH 37 was assumed to be in place by the Opening Year (2030). Removal of access from Davidson Avenue and the addition of a new full-access intersection along MN 25 were assumed under the Opening Year (2030) conditions. For this analysis, through traffic was not included at this potential roadway connection.

The City of Monticello is preliminarily planning to construct a roundabout at the intersection of School Boulevard & Fallon Avenue. Because there is no clear timeline for this improvement, it was assumed that this would be a long term project and would be completed by 2045.

### 3.2 Future Background Growth

The *Wright County Long Range Transportation Plan* gives future traffic projections in a broad range of values for each roadway and therefore it is difficult to determine the level of growth from projected AADT growth. Furthermore, review of historical AADT data revealed no clear trends in traffic patterns for the adjacent roadways. Instead, the background growth rate was calculated to align with the City of Monticello's anticipated population growth. With a 2019 population of about 13,747 people, the city is anticipated to grow to a population of 19,738 by 2045, based on the preferred growth scenario outlined in the *Monticello 2040 Vision + Plan*. This represents about a 1.7% annual growth rate.

A nearby residential development, Haven Ridge, is located east of Fallon Avenue near the study area. This development includes 59 single-family residences and is currently under construction. Traffic to/from this development were applied to the School Boulevard & Fallon Avenue intersection to account for development traffic.

The Future (2030) No-Build traffic projections are presented in **Exhibit 4**. The Future (2045) No-Build traffic projections are presented in **Exhibit 5**.

### 3.3 Existing (2025) Capacity Analysis

Synchro/SimTraffic 12<sup>th</sup> edition capacity software was used to evaluate existing operational conditions at the signalized and stop-controlled intersections. Operations of the future roundabout at MN 25 & CSAH 37 were evaluated using roundabout analysis software Rodel.

The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions).

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 3-1**.

**Table 3-1 : Level of Service Grading Descriptions**

Level of Service	Description <sup>1</sup>
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

<sup>1</sup>Highway Capacity Manual, 6<sup>th</sup> Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 3-2**. HCM considers roundabouts to be unsignalized intersections when determining LOS.

**Table 3-2: Level of Service Grading Criteria**

Level of Service <sup>1</sup>	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F <sup>2</sup>	> 50	> 80

<sup>1</sup>Highway Capacity Manual, 6<sup>th</sup> Edition

<sup>2</sup>All movements with a Volume to Capacity (v/c) ratio greater than 1 receive a rating of LOS F.

For the purposes of this study, the worst individual movement delay was reported as the overall intersection delay at side street stop control intersections. The results of capacity analysis for existing conditions are

summarized in **Table 3-3**. The results are based on SimTraffic within Synchro, 12<sup>th</sup> Edition. Copies of the SimTraffic reports are provided in the appendix.

Based on the analysis, all study intersections operate at LOS B or better during the AM and PM peak hours. Under Existing Year (2025) Conditions, some side street movements at MN 25 & 85<sup>th</sup> Street NE are anticipated to operate at LOS E during the PM peak hour. The long cycle lengths employed during the PM peak hour ensure very low levels of delay for through movements along MN 25, resulting in overall low delays at the intersection. LOS E for side street turning movements is not an issue in itself and the intersection operates with very low delays overall; therefore, no mitigation is recommended. The 95<sup>th</sup> percentile queues were reviewed at the study intersections. All 95<sup>th</sup> percentile queues are anticipated to be accommodated within their respective storage bays.

**Table 3-3: Existing Year (2025) Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall <sup>1</sup>	Left	Through	Right	Overall <sup>1</sup>
MN 25 & 85th Street	Signal	EB	C (33)	C (25)	A (3)	A (8)	E (60)	D (53)	A (2)	A (9)
		WB	C (30)	C (31)	A (3)		E (55)	D (44)	A (3)	
		NB	A (4)	A (3)	A (0)		A (4)	A (3)	A (1)	
		SB	A (6)	A (8)	A (1)		A (7)	A (8)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (3)	A (7)	A (1)	A (8)	A (4)	A (5)	A (2)	A (9)
		WB	A (4)	A (8)	A (1)		A (4)	A (9)	A (3)	
		NB	A (0)	A (1)	A (0)		A (1)	A (1)	A (0)	
		SB	A (0)	A (0)	A (0)		A (1)	A (1)	A (0)	
MN 25 & CSAH 37	Signal	EB	B (10)	B (13)	A (4)	B (10)	B (18)	B (19)	A (5)	B (12)
		WB	B (13)	B (13)	A (7)		B (17)	B (19)	A (5)	
		NB	B (16)	A (9)	A (2)		C (21)	B (12)	A (3)	
		SB	C (21)	B (10)	A (4)		C (26)	B (13)	A (5)	
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (6)	A (5)	-	A (6)	A (3)	A (3)	-	A (4)
		WB	-	A (2)	A (1)		-	A (2)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (3)	A (0)	A (2)		A (4)	A (0)	A (3)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (1)	A (2)	A (2)	B (11)	A (2)	A (3)	A (2)	B (13)
		WB	A (1)	A (1)	A (1)		A (1)	A (1)	A (0)	
		NB	A (5)	B (11)	A (3)		A (9)	B (13)	A (4)	
		SB	A (3)	A (5)	A (3)		A (5)	A (5)	A (3)	
MN 25 & Davidson Avenue	Side Street Stop	EB	-	-	-	A (3)	-	-	-	A (4)
		WB	A (4)	A (0)	A (3)		B (15)	-	A (4)	
		NB	-	A (1)	A (0)		-	A (1)	A (0)	
		SB	A (1)	A (1)	-		A (3)	A (1)	-	

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall <sup>1</sup>	Left	Through	Right	Overall <sup>1</sup>
School Boulevard & Fallon Avenue	All-Way Stop	EB	A (7)	B (12)	A (7)	A (9)	A (6)	B (11)	A (6)	A (9)
		WB	A (7)	B (11)	A (6)		A (7)	B (12)	A (7)	
		NB	A (8)	A (9)	A (6)		A (7)	A (8)	A (4)	
		SB	A (7)	A (8)	A (5)		A (8)	A (9)	A (5)	

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

### 3.4 Opening Year (2030) No-Build Capacity Analysis

The Opening Year (2030) No-Build Condition analysis was completed to develop an understanding of the baseline operating conditions for the study area in the opening year without the addition of the development traffic. Capacity results for the Opening Year (2030) No-Build conditions are provided in **Table 3-4**. Roundabout analysis software Rodel was used to evaluate the traffic operations at the planned MN 25 & CSAH 37 roundabout. SimTraffic and Rodel analysis reports are provided in the appendix.

Under Opening Year (2030) No-Build conditions, all intersections are anticipated to continue operating at LOS C or better and all individual movements/approaches at LOS E or better. Delays are generally anticipated to see very minor changes compared to the Existing (2025) conditions and all intersections are expected to operate acceptably. The 95<sup>th</sup> percentile queue lengths were reviewed, and all queues are anticipated to remain within their respective storage bays.

**Table 3-4: Opening Year (2030) No-Build Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall <sup>1</sup>	Left	Through	Right	Overall <sup>1</sup>
MN 25 & 85th Street	Signal	EB	C (33)	C (33)	A (3)	A (8)	E (64)	E (59)	A (3)	A (10)
		WB	C (27)	C (28)	A (3)		D (51)	D (51)	A (3)	
		NB	A (8)	A (3)	A (0)		A (5)	A (3)	A (1)	
		SB	A (7)	A (9)	A (1)		A (7)	A (8)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (3)	A (7)	A (2)	A (8)	A (5)	A (6)	A (2)	A (9)
		WB	A (3)	A (8)	A (1)		A (5)	A (9)	A (2)	
		NB	A (0)	A (1)	A (0)		A (1)	A (1)	A (0)	
		SB	A (0)	A (0)	A (0)		A (1)	A (1)	A (0)	
MN 25 & CSAH 37	Roundabout	EB	A (5)			A (5)	A (5)			A (7)
		WB	A (4)				A (6)			
		NB	A (5)				A (9)			
		SB	A (5)				A (7)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (4)	A (5)	-	A (5)	A (4)	A (3)	-	A (5)
		WB	-	A (2)	A (2)		-	A (2)	A (1)	
		NB	-	-	-		-	-	-	
		SB	A (4)	A (0)	A (1)		A (5)	A (0)	A (1)	

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall <sup>1</sup>	Left	Through	Right	Overall <sup>1</sup>
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (2)	A (2)	A (2)	B (12)	A (3)	A (3)	A (2)	B (14)
		WB	A (1)	A (1)	A (0)		A (2)	A (1)	A (0)	
		NB	A (6)	B (12)	A (3)		A (10)	B (14)	A (5)	
		SB	A (6)	A (6)	A (2)		A (9)	A (5)	A (4)	
School Boulevard & Fallon Avenue	All-Way Stop	EB	A (7)	B (14)	A (8)	A (9)	A (7)	B (12)	A (7)	A (10)
		WB	A (8)	B (11)	A (6)		A (8)	B (12)	A (7)	
		NB	A (9)	A (10)	A (7)		A (8)	A (8)	A (5)	
		SB	A (8)	A (10)	A (6)		A (8)	A (10)	A (6)	

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

### 3.5 Design Year (2045) No-Build Capacity Analysis

The Design Year (2045) No-Build Condition analysis was completed to develop an understanding of the baseline operating conditions for the study area in the long-term without the addition of the development traffic. Existing geometry and intersection control was assumed for this analysis, with optimized signal timings. Capacity results for the Design Year (2045) No-Build conditions are provided in **Table 3-5**. SimTraffic analysis reports are included in the appendix.

Under Design Year (2045) No-Build conditions, all intersections are anticipated to operate at LOS D or better and all movements at LOS E or better. Compared to the Opening Year (2030) No-Build conditions, delays are anticipated to increase by a few seconds per vehicle at some study area intersections.

All other 95<sup>th</sup> percentile queues are anticipated to remain within their respective storage bays. The northbound approach at the MN 25 & CSAH 37 roundabout is anticipated to see longer queues during the PM peak (23 vehicle lengths, or about 575'), but these queues are not expected to cause any significant issues downstream.

**Table 3-5: Design Year (2045) No-Build Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	C (32)	C (28)	A (3)	A (10)	E (68)	D (48)	A (3)	B (11)
		WB	C (30)	C (29)	A (3)		E (58)	D (47)	A (3)	
		NB	A (9)	A (4)	A (1)		A (10)	A (4)	A (1)	
		SB	A (7)	B (12)	A (2)		A (8)	B (11)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (3)	A (7)	A (2)	A (8)	A (5)	A (6)	A (3)	A (10)
		WB	A (3)	A (8)	A (2)		A (6)	A (10)	A (3)	
		NB	A (1)	A (1)	A (0)		A (1)	A (2)	A (0)	
		SB	A (1)	A (0)	A (0)		A (1)	A (1)	A (1)	
MN 25 & CSAH 37	Round-about	EB	A (5)			A (6)	A (6)			C (16)
		WB	A (5)				A (7)			
		NB	A (6)				C (25)			
		SB	A (6)				B (11)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (2)	A (1)	-	A (2)	A (2)	A (1)	-	A (2)
		WB	-	A (2)	A (2)		-	A (2)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (5)	-	A (2)		A (6)	-	A (3)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (2)	A (2)	A (2)	B (12)	A (3)	A (4)	A (2)	C (18)
		WB	A (1)	A (1)	A (0)		A (3)	A (2)	A (0)	
		NB	A (8)	B (12)	A (4)		B (14)	C (18)	A (9)	
		SB	A (8)	A (6)	A (4)		B (11)	A (6)	A (5)	
MN 25 & Future Roadway	Side Street Stop	EB	-	-	-	C (22)	-	-	-	D (32)
		WB	C (22)	-	A (4)		D (32)	-	A (6)	
		NB	-	A (2)	A (1)		-	A (2)	A (0)	
		SB	A (7)	A (6)	-		A (9)	A (6)	-	
School Boulevard & Fallon Avenue	Round-about	EB	A (9)			A (7)	A (10)			A (8)
		WB	A (8)				A (10)			
		NB	A (7)				A (7)			
		SB	A (7)				A (9)			

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

## 4. FUTURE CONDITIONS ANALYSIS - SCENARIO 1

This section of the report outlines the proposed development scenario, summarizes site-specific traffic characteristics, and develops future traffic projections for Scenario 1. The project location is shown in **Exhibit 1**.

### 4.1 Development Characteristics and Site Access

The Scenario 1 development consists of 3,000,000 square feet of technology park. The studied opening year of the full development is 2030. Two site access points were assumed: one along 85<sup>th</sup> Street NE (“North Access”), and the other along Edmonson Avenue (“East Access”). The exact location of access points will be determined when a site specific development plan is developed. No turn lanes were assumed at the access points for the capacity analysis.

### 4.2 Trip Generation

Proposed development traffic was determined based on data from the Institute of Transportation Engineers’ (ITE) *Trip Generation*, 11<sup>th</sup> Edition. The manual provides peak hour trips rates/equations, inbound-outbound percentages that can be attributed to the proposed site. Based on a review of industrial land uses provided in the manual, LUC 160 (Data Center) was determined to be the most appropriate fit for the proposed Scenario 1.

**Table 4-1** provides a summary of trip generation for development Scenario 1. Based on the trip generation calculation, the proposed Scenario 1 development is anticipated to generate 2,970 daily trips, including 330 total trips during the AM Peak Hour (182 entering and 148 exiting), and 270 total trips during the PM Peak Hour (81 entering, 189 exiting). Trip generation of trucks is anticipated to be negligible, and all trips are considered to be passenger vehicle trips.

**Table 4-1: Trip Generation – Scenario 1**

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Technology Park – ITE LUC 160	3,000 kSF	2,970	182	148	330	81	189	270

### 4.3 Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network was developed based on a review of the roadway network, area development pattern, and access to the proposed development. The anticipated directional distribution of passenger vehicle site traffic is summarized below.

- 35% to/from the north on MN 25
- 30% to/from the east on School Boulevard
- 20% to/from the east on CSAH 37
- 15% to/from the south on MN 25

Note that the majority of the site traffic is anticipated to come from the east along I-94, but such trips could use many different routes to access the site, resulting in a relatively even spread of site traffic throughout the roadway network. The Scenario 1 site trip distribution is shown in **Exhibit 6**.

The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections, is a function of the estimated trip generation (Table 4-1) and the directional distribution (Exhibit 6). The site trip assignment is shown in **Exhibit 8**.

Opening Year (2030) Build Scenario 1 traffic projections, shown on **Exhibit 13**, were developed by adding site-generated traffic for the Technology Center (Exhibit 7) to the Opening Year (2030) No-Build volumes (Exhibit 4). Design Year (2045) Build Scenario 1 traffic projections, shown on **Exhibit 15**, were developed by adding site-generated traffic for the Technology Center (Exhibit 7) to the Design Year (2045) No-Build volumes (Exhibit 5).

#### 4.4 Future Pedestrian and Bicycle Infrastructure

The area surrounding the site is largely rural with few pedestrian and bicycle facilities. As the surrounding area develops further, pedestrian connectivity should be a priority.

#### 4.5 Opening Year (2030) Build Scenario 1 Capacity Analysis

The results of the analysis for the Opening Year (2030) Build Scenario 1 are shown in **Table 4-2**. Consistent with the existing conditions analysis, the results are based on Synchro/SimTraffic reports. Copies of the capacity analysis reports are provided in the appendix.

All study intersections and site accesses are anticipated to operate at LOS A or B during the AM and PM peak hours. Additionally, all movements are anticipated to continue operating at LOS E or better. Overall, the study intersections are anticipated to see very little change in delay as a result of the Scenario 1 Build conditions in the Opening Year (2030). The 95<sup>th</sup> percentile queueing results were reviewed, and all queues are anticipated to remain within their respective storage bays.

**Table 4-2: Opening Year (2030) Build Scenario 1 Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	C (31)	C (22)	A (3)	A (9)	E (69)	D (44)	A (3)	B (10)
		WB	C (31)	C (25)	A (3)		E (57)	D (52)	A (3)	
		NB	A (1)	A (4)	A (1)		A (6)	A (4)	A (1)	
		SB	A (8)	A (10)	A (1)		A (6)	A (9)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (4)	A (9)	A (2)	A (9)	A (5)	A (8)	A (3)	A (10)
		WB	A (4)	A (9)	A (3)		A (5)	A (10)	A (3)	
		NB	A (1)	A (1)	A (0)		A (1)	A (1)	A (0)	
		SB	A (0)	A (1)	A (0)		A (1)	A (1)	A (0)	
MN 25 & CSAH 37	Round-about	EB	A (5)			A (5)	A (5)			A (8)
		WB	A (5)				A (6)			
		NB	A (5)				A (10)			
		SB	A (5)				A (7)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (5)	A (5)	-	A (5)	A (5)	A (3)	-	A (5)
		WB	-	A (2)	A (1)		-	A (2)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (4)	A (0)	A (2)		A (5)	A (0)	A (1)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (2)	A (3)	A (2)	B (12)	A (3)	A (3)	A (2)	B (15)
		WB	A (1)	A (1)	A (0)		A (2)	A (1)	A (0)	
		NB	A (5)	B (12)	A (3)		B (10)	B (15)	A (5)	
		SB	A (6)	A (7)	A (3)		A (10)	A (6)	A (5)	
85th Street & North Access	Side Street Stop	EB	-	A (2)	A (1)	A (5)	-	A (1)	A (1)	A (6)
		WB	A (3)	A (3)	-		A (3)	A (3)	-	
		NB	A (5)	-	A (3)		A (6)	-	A (3)	
		SB	-	-	-		-	-	-	
Edmonson Avenue & East Access	Side Street Stop	EB	A (5)	-	A (3)	A (5)	A (6)	-	A (3)	A (6)
		WB	-	-	-		-	-	-	
		NB	A (1)	A (1)	-		A (1)	A (1)	-	
		SB	-	A (1)	A (0)		-	A (1)	A (0)	
School Boulevard & Fallon Avenue	All-Way Stop	EB	A (7)	B (15)	A (9)	B (11)	A (8)	B (13)	A (8)	B (10)
		WB	A (9)	B (12)	A (7)		A (8)	B (13)	A (8)	
		NB	B (11)	B (11)	A (8)		A (8)	A (9)	A (6)	
		SB	A (8)	A (10)	A (6)		A (8)	B (10)	A (6)	

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

## 4.6 Design Year (2045) Build Scenario 1 Capacity Analysis

Capacity analysis results for the Design Year (2045) Scenario 1 conditions are provided in **Table 4-3**. Consistent with the existing conditions analysis, the results are based on Synchro/SimTraffic reports. Copies of the capacity analysis reports are provided in the appendix.

Results of the Design Year (2045) Scenario 1 conditions show that all intersections are anticipated to operate at LOS C or better except for the proposed collector roadway connection to MN 25 which operates at LOS E during the PM peak hour. Overall, the study area intersections are anticipated to see very little change in delay as a result of the proposed Scenario 1 development. The 95<sup>th</sup> percentile queueing results were reviewed, and all queues are anticipated to remain within their respective storage bays. SimTraffic reports are included in the appendix.

**Table 4-3: Design Year (2045) Build Scenario 1 Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	C (33)	C (27)	A (3)	B (10)	E (67)	D (47)	A (3)	B (12)
		WB	C (31)	C (27)	A (3)		E (66)	E (60)	A (3)	
		NB	A (4)	A (5)	A (1)		B (11)	A (5)	A (0)	
		SB	A (8)	B (12)	A (2)		A (9)	B (12)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (5)	A (9)	A (3)	A (9)	A (7)	A (9)	A (3)	B (10)
		WB	A (5)	A (9)	A (3)		A (6)	B (10)	A (5)	
		NB	A (1)	A (1)	A (0)		A (1)	A (2)	A (0)	
		SB	A (1)	A (1)	A (0)		A (1)	A (2)	A (1)	
MN 25 & CSAH 37	Round-about	EB	A (6)			A (6)	A (6)			C (18)
		WB	A (5)				A (7)			
		NB	A (5)				D (29)			
		SB	A (7)				B (12)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (2)	A (1)	-	A (2)	A (2)	A (1)	-	A (2)
		WB	-	A (2)	A (2)		-	A (3)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (6)	-	A (3)		A (6)	-	A (2)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (3)	A (3)	A (1)	B (13)	A (4)	A (4)	A (2)	C (19)
		WB	A (1)	A (1)	A (0)		A (3)	A (2)	A (0)	
		NB	A (9)	B (13)	A (4)		C (16)	C (19)	B (11)	
		SB	A (9)	A (8)	A (4)		C (17)	A (8)	A (7)	
MN 25 & Future Roadway	Side Street Stop	EB	-	-	-	B (10)	-	-	-	E (37)
		WB	B (10)	-	A (3)		E (37)	-	A (8)	
		NB	-	A (2)	A (1)		-	A (2)	A (0)	
		SB	A (7)	A (6)	-		B (11)	A (6)	-	
85th Street & North Access	Side Street Stop	EB	-	A (2)	A (1)	A (5)	-	A (2)	A (1)	A (6)
		WB	A (4)	A (3)	-		A (3)	A (3)	-	
		NB	A (5)	-	A (3)		A (6)	-	A (3)	
		SB	-	-	-		-	-	-	
Edmonson Avenue & East Access	Side Street Stop	EB	A (6)	-	A (3)	A (6)	A (6)	-	A (4)	A (6)
		WB	-	-	-		-	-	-	
		NB	A (1)	A (1)	-		A (1)	A (1)	-	
		SB	-	A (1)	A (0)		-	A (1)	A (0)	
School Boulevard & Fallon Avenue	Round-about	EB	A (9)			A (7)	A (10)			A (8)
		WB	A (9)				B (10)			
		NB	A (8)				A (7)			
		SB	A (7)				A (9)			

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

## 5. FUTURE CONDITIONS ANALYSIS - SCENARIO 2

This section of the report outlines the proposed development scenario, summarizes site-specific traffic characteristics, and develops future traffic projections for Scenario 2. The project location is shown in **Exhibit 1**.

### 5.1 Scenario 2 Development Characteristics and Site Access

Scenario 2 is anticipated to include up to 5,000,000 sq ft of industrial park space. For this analysis, the studied Opening Year of the full development is 2030. Three site access points were assumed: one along 85<sup>th</sup> Street NE (“North Access”), one along Edmonson Avenue (“East Access”), and one along Davidson Avenue (“West Access”). With the Davidson Avenue connection to MN 25 being removed, it is assumed that the West Access will be a collector roadway that connects to MN 25, as included in the City’s comp. The exact location of the access points will be determined when a site specific development plan is developed.

### 5.2 Scenario 2 Trip Generation

Proposed development traffic was based on the Institute of Transportation Engineers’ (ITE) *Trip Generation*, 11<sup>th</sup> Edition. The manual provides peak hour trips rates/equations, inbound-outbound percentages, and truck percentages which were used to estimate the number of daily, peak hour, and truck trips that can be attributed to the proposed site. Based on a review of industrial land uses provided in the manual, Land Use Code (LUC) 130 (Industrial Park) was determined to be the most appropriate fit for the proposed Scenario 2 development.

**Table 5-1** provides a summary of trip generation for development Scenario 2. Based on the trip generation calculation, the proposed development is anticipated to generate 16,850 total daily trips, 2,850 of which are truck trips. During the AM Peak Hour, Scenario 2 is anticipated to generate 1,500 passenger vehicle trips (1,287 entering and 213 exiting), and 200 truck trips (90 entering and 110 exiting). During the PM peak hour, Scenario 2 is anticipated to generate 1,500 passenger vehicle trips (297 entering and 1,203 exiting) and 200 truck trips (77 entering and 123 exiting).

**Table 5-1: Site-Generated Traffic Projections – Scenario 2**

Land Use Description	Trip Type	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Industrial Park - ITE LUC 130	Passenger Vehicle	5,000 kSF	14,000	1,287	213	1,500	297	1,203	1,500
	Truck		2,850	90	110	200	77	123	200
	Total		16,850	1,377	323	1,700	373	1,327	1,700

### 5.3 Scenario 2 Directional Distribution

Due to the addition of a west access point along Davidson Avenue, trip distribution differs from Scenario 1. Additionally, passenger vehicle traffic and truck traffic are expected to exhibit different global distributions.

Thus, traffic distribution for passenger vehicles and trucks were determined individually, as shown in **Exhibit 8** and **Exhibit 10**, respectively.

Passenger vehicle site trips were determined by applying trip generation (**Table 5-1**) to passenger vehicle distribution (**Exhibit 8**). Passenger vehicle site trips are shown in **Exhibit 9**. Truck site trips were determined by applying trip generation (**Table 5-1**) to truck distribution (**Exhibit 10**). Truck site trips are shown in **Exhibit 11**. The total Scenario 2 site trips are presented in **Exhibit 12**.

Opening Year (2030) Build Scenario 2 traffic projections, shown on **Exhibit 14**, were developed by adding total site-generated traffic for the Industrial Park (**Exhibit 12**) to the Opening Year (2030) No-Build volumes (**Exhibit 4**). Design Year (2045) Build Scenario 2 traffic projections, shown on **Exhibit 16**, were developed by adding total site-generated traffic for the Industrial Park (**Exhibit 12**) to the Design Year (2045) No-Build volumes (**Exhibit 5**).

#### 5.4 Scenario 2 Future Pedestrian and Bicycle Infrastructure

The area surrounding the site is largely rural with few pedestrian and bicycle facilities. As the surrounding area develops further, pedestrian connectivity should be a priority.

#### 5.5 Opening Year (2030) Build Scenario 2 Capacity Analysis

The results of the analysis for the Opening Year (2030) Build Scenario 2 are shown in **Table 5-2**. Consistent with the existing conditions analysis, the results are based on Synchro 12/SimTraffic. Copies of the capacity analysis reports are provided in the appendix. Adjustments were made to the signal timings to account for the added site traffic to the development site. Heavy vehicle volumes were included in the analysis for all Scenario 2 conditions.

Based on the analysis in the Opening Year (2030) Build Scenario 2, all intersections, apart from MN 25 & Davidson Avenue, are expected to operate at LOS D or better in the AM and PM peak hours. The westbound left and right turn movements at MN 25 and Davidson Avenue are expected to operate at LOS F during the PM peak hour. This is due to high traffic in the northbound and southbound directions on MN 25. Because this is an interim operating condition, mitigation is not recommended at Davidson Avenue since the connection to MN 25 is planned to be removed in the near future.

The intersection of School Boulevard & Fallon Avenue is anticipated to operate at LOS D during the AM peak hour with multiple movements operating at LOS E or F. Severe queueing is anticipated to occur during the AM peak hour, with westbound through/right turn queues exceeding 700'. Overall, the intersection is operating near capacity, and mitigation is recommended to reduce delays and queueing. A single lane roundabout is recommended at the intersection to improve traffic operations and safety conditions at the intersection.

All other individual intersection movements are anticipated to operate at LOS E or better. The 95<sup>th</sup> percentile queueing results were reviewed, and all queues are anticipated to remain within their respective storage bays. Traffic analysis reports are included in **Appendix I**.

**Table 5-2: Opening Year (2030) Build Scenario 2 Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	C (33)	C (29)	A (2)	B (14)	E (68)	D (54)	A (3)	B (13)
		WB	C (34)	C (31)	A (5)		E (64)	D (52)	A (7)	
		NB	A (6)	A (8)	A (2)		A (7)	A (6)	A (1)	
		SB	B (17)	B (16)	A (3)		B (13)	B (11)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (8)	B (12)	A (6)	B (13)	B (13)	C (17)	A (9)	C (17)
		WB	A (9)	B (13)	A (7)		B (12)	B (14)	A (7)	
		NB	A (1)	A (2)	A (0)		A (3)	A (4)	A (1)	
		SB	A (1)	A (3)	A (1)		A (2)	A (2)	A (0)	
MN 25 & CSAH 37	Round-about	EB	A (5)			A (6)	A (6)			A (9)
		WB	A (5)				A (7)			
		NB	A (7)				B (11)			
		SB	A (6)				A (9)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (2)	A (1)	-	A (3)	A (2)	A (2)	-	A (4)
		WB	-	A (4)	A (2)		-	A (3)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (8)	A (1)	A (4)		A (9)	A (0)	A (7)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (4)	A (3)	A (2)	B (14)	A (4)	A (4)	A (3)	D (25)
		WB	A (2)	A (2)	A (1)		A (3)	A (2)	A (1)	
		NB	A (9)	B (14)	A (4)		B (15)	C (21)	B (11)	
		SB	A (9)	A (8)	A (5)		D (25)	B (10)	C (17)	
MN 25 & Future Roadway (West Access)	Side Street Stop	EB	-	-	-	C (20)	-	-	-	F (87)
		WB	C (20)	A (0)	A (8)		F (87)	-	F (69)	
		NB	-	A (2)	A (0)		-	A (4)	A (1)	
		SB	A (5)	A (1)	-		A (7)	A (1)	-	
85th Street & North Access	Side Street Stop	EB	-	A (6)	A (4)	C (18)	-	A (4)	A (2)	C (18)
		WB	A (9)	A (7)	-		A (4)	A (4)	-	
		NB	C (18)	-	B (11)		C (18)	-	B (15)	
		SB	-	-	-		-	-	-	
Edmonson Avenue & East Access	Side Street Stop	EB	B (10)	-	A (4)	B (10)	B (15)	-	B (12)	B (15)
		WB	-	-	-		-	-	-	
		NB	A (5)	A (5)	-		A (2)	A (3)	-	
		SB	-	A (5)	A (1)		-	A (2)	A (0)	
School Boulevard & Fallon Avenue	All-Way Stop	EB	A (9)	E (44)	E (35)	D (35)	A (7)	D (29)	D (26)	C (18)
		WB	F (56)	D (29)	C (21)		A (9)	C (17)	B (11)	
		NB	C (19)	C (19)	B (14)		C (20)	C (19)	C (16)	
		SB	B (11)	B (13)	A (10)		B (12)	B (14)	A (9)	

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

## 5.6 Mitigated Opening Year (2030) Build Scenario 2 Capacity Analysis

An Opening Year (2030) Scenario 2 Mitigated conditions capacity analysis was conducted to measure the effectiveness of the proposed mitigation at the intersection of School Boulevard & Fallon Avenue. This analysis focused on a single-lane roundabout mitigation to provide consistency along the School Boulevard corridor which has multiple roundabouts.

Results of the capacity analysis are given below in **Table 5-3**. The analysis indicates that installation of a roundabout, all approaches at the intersection operate at LOS B or better during the AM and PM peak hours. All 95<sup>th</sup> percentile queues are less than 200'. No further mitigation is required.

**Table 5-3: Opening Year (2030) Build Scenario 2 Mitigated Level of Service**

Intersection	Control	Approach	Operations by Movement								
			AM Peak Hour				PM Peak Hour				
			Left	Through	Right	Overall	Left	Through	Right	Overall	
School Boulevard & Fallon Avenue	Round-about	EB	A (9)				A (10)				A (8)
		WB	B (14)				A (9)				
		NB	A (7)				A (10)				
		SB	A (8)				A (8)				

## 5.7 Design Year (2045) Build Scenario 2 Capacity Analysis

Design Year (2045) Scenario 2 conditions analysis was conducted to determine the long-term effects of the proposed Scenario 2 development and determine any resultant mitigation needs at the study intersections. For the analysis, modifications were made to the signal timings to account for the traffic associated with the proposed Scenario 2 development. A northbound left turn lane was assumed at School Boulevard & Fallon Avenue (though a traffic signal was not assumed), in line with the Design Year (2045) Build Scenario 1 conditions analysis. Results of the capacity analysis for the Design Year (2045) Build Scenario 2 conditions are provided in **Table 5-4**.

The results of the capacity analysis show the system has increased delay throughout the roadway network with several movements approaching or at capacity. The intersection of MN 25 & Proposed Collector is expected to operate at LOS F with the westbound left and right turn movement expected to see more than 100 seconds of delay per vehicle in the PM peak hour. Based on this, separate left and right turn lanes are expected to be required at a minimum.

The northbound approach at MN 25 & CSAH 37 is anticipated to operate at LOS E during the PM peak hour with 95<sup>th</sup> percentile queues in excess of 1,000'. A right-turn bypass should be considered for the roundabout's northbound approach to reduce delays and queueing.

The southbound left and right turn movements at CSAH 37 & Edmonson Avenue are anticipated to operate at LOS F during the PM peak hour with delays exceeding 100 seconds per vehicle. The northbound approach is also nearing its capacity, with all three movements operating at LOS E. Therefore, it is recommended that northbound and southbound left turn lanes be installed at this intersection to reduce delays.

All 95<sup>th</sup> percentile queues are anticipated to remain within their provided storage bays. Traffic analysis reports are included in **Appendix J**.

**Table 5-4: Design Year (2045) Build Scenario 2 Level of Service**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	C (31)	C (24)	A (3)	B (16)	E (73)	E (55)	A (3)	B (15)
		WB	C (29)	C (34)	A (5)		E (64)	D (46)	A (9)	
		NB	B (13)	A (10)	A (3)		B (13)	A (8)	A (1)	
		SB	C (26)	B (17)	A (2)		B (17)	B (13)	A (2)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (9)	B (12)	A (6)	B (14)	C (20)	C (20)	B (12)	C (20)
		WB	B (10)	B (14)	B (11)		B (12)	B (15)	A (8)	
		NB	A (2)	A (2)	A (0)		A (3)	A (3)	A (1)	
		SB	A (1)	A (3)	A (1)		A (3)	A (2)	A (1)	
MN 25 & CSAH 37	Round-about	EB	A (6)			A (7)	A (7)			C (24)
		WB	A (6)				A (10)			
		NB	A (9)				E (36)			
		SB	A (8)				C (21)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (4)	A (1)	-	A (3)	A (3)	A (2)	-	A (4)
		WB	-	A (4)	A (3)		-	A (4)	A (2)	
		NB	-	-	-		-	-	-	
		SB	A (7)	-	A (5)		B (12)	-	A (9)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (5)	A (3)	A (3)	C (18)	A (5)	A (5)	A (3)	F (90)
		WB	A (2)	A (2)	A (1)		A (4)	A (3)	A (1)	
		NB	C (16)	C (18)	A (6)		E (45)	E (43)	E (35)	
		SB	B (13)	B (10)	A (7)		F (90)	E (35)	F (84)	
MN 25 & Future Roadway (West Access)	Side Street Stop	EB	-	-	-	D (34)	-	-	-	F (100+)
		WB	D (34)	-	B (14)		F (100+)	-	F (100+)	
		NB	-	A (3)	A (1)		-	A (4)	A (1)	
		SB	B (13)	A (8)	-		C (19)	A (8)	-	
85th Street & North Access	Side Street Stop	EB	-	A (7)	A (4)	C (20)	-	A (4)	A (2)	C (25)
		WB	B (10)	A (8)	-		A (4)	A (4)	-	
		NB	C (20)	-	B (11)		C (25)	-	C (20)	
		SB	-	-	-		-	-	-	
Edmonson Avenue & East Access	Side Street Stop	EB	B (14)	-	A (6)	B (14)	B (14)	-	B (11)	B (14)
		WB	-	-	-		-	-	-	
		NB	A (5)	A (5)	-		-	A (2)	-	
		SB	-	A (5)	A (1)		-	A (2)	A (0)	
School Boulevard & Fallon Avenue	Round-about	EB	B (11)			B (13)	B (13)			B (11)
		WB	C (19)				B (12)			
		NB	A (8)				B (12)			
		SB	A (9)				A (10)			

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

## 5.8 Mitigated Design Year (2045) Build Scenario 2

In order to determine the impact of the proposed mitigations on the Design Year (2045) Build Scenario 2, a Mitigated Design Year (2045) Build Scenario 2 capacity analysis was conducted. The following mitigations were included in the analysis:

- 250-foot dedicated left turn lanes were added to the northbound and southbound approaches at Edmonson Avenue & CSAH 37.
- A northbound bypass (for right turns) lane was added to the MN 25 & CSAH 37 roundabout
- A traffic signal was added to the intersection of MN 25 & Future Roadway. Northbound right and southbound left turn lanes were assumed, along with separate westbound left and right turn lanes.

Results of the Mitigated Design Year (2045) Build Scenario 2 capacity analysis are shown in **Table 5-5**. The results of the analysis show improvements in delay at all mitigated intersections, particularly in the PM hour, but the intersection of Edmonson Avenue & CSAH 37 is still anticipated to experience some minor operational deficiencies with side street delays up to 44 seconds per vehicle during the PM peak hour. While some long delays are anticipated, none of the movements are anticipated to operate at LOS F. Therefore, no further mitigation is proposed. However, as the parcels develop, the intersection should be monitored for a possible change in traffic control which could include all-way stop control, roundabout, or a traffic signal.

The intersection of MN 25 & Future Roadway is anticipated to operate acceptably with a signal in place, with all individual movements operating at LOS C or better during the AM and PM peak hour.

At MN 25 & CSAH 37, the installation of a northbound bypass lane is anticipated to significantly reduce the anticipated delays at the northbound approach of the intersection during the PM peak hour, improving from LOS E to LOS A during this period. The intersection is anticipated to see acceptable operations overall, operating at LOS A and LOS B during the peak hours with all approaches operating at LOS C or better.

**Table 5-5: Mitigated Design Year (2045) Build Scenario 2 Level of Service**

Intersection	Control	Approach	Operations by Movement								
			AM Peak Hour				PM Peak Hour				
			Left	Through	Right	Overall	Left	Through	Right	Overall	
MN 25 & CSAH 37	Round-about	EB	A (6)				A (7)				B (13)
		WB	A (5)				A (10)				
		NB	A (5)				A (9)				
		SB	A (7)				C (21)				
Edmonson Avenue & CSAH 37	Side Street Stop	EB	A (5)	A (3)	A (2)	C (19)	A (5)	A (5)	A (3)	E (44)	
		WB	A (2)	A (2)	A (1)		A (4)	A (2)	A (1)		
		NB	C (16)	C (19)	A (7)		C (24)	E (38)	C (23)		
		SB	C (15)	A (9)	A (6)		E (44)	A (9)	A (9)		
MN 25 & Future Roadway (West Access)	Signal	EB	-	-	-	B (12)	-	-	-	B (17)	
		WB	C (25)	-	A (9)		C (30)	-	C (25)		
		NB	-	B (12)	A (4)		-	B (16)	A (6)		
		SB	B (16)	B (11)	-		C (29)	B (15)	-		

<sup>1</sup>Worst movement delay reported in place of overall delay at side street stop intersections. Excludes minor movements (<5 vph).

## 6. TURN LANE WARRANT ANALYSIS

Warrant analysis was conducted at the two site access points for Opening Year (2030) and Design Year (2045) of Scenario 1 and Scenario 2 to determine the need for major-road left- and right-turn lanes at the site access points and stop-controlled study intersections. The warrant analysis was carried out using the methodologies outlined in National Cooperative Highway Research Program (NCHRP) Report 457 regarding the need for major-road turn lanes at unsignalized intersections. Results of the analysis are summarized below in **Table 6-1**.

**Table 6-1: Turn Lane Warrant Analysis Summary**

Intersection	Movement	Turn Lane Warrant Result by Scenario					
		No-Build		Scenario 1		Scenario 2	
		2030	2045	2030	2045	2030	2045
85th Street NE & North Access	WBL	-	-	<i>Not Met</i>	<i>Not Met</i>	Met	Met
	EBR	-	-	Met	Met	Met	Met
Edmonson Avenue NE & East Access	NBL	-	-	<i>Not Met</i>	<i>Not Met</i>	Met	Met
	SBR	-	-	<i>Not Met</i>	<i>Not Met</i>	Met	Met
MN 25 & Future Roadway	NBR	-	<i>Not Met</i>	-	<i>Not Met</i>	-	Met
	SBL	-	Met	-	Met	-	Met
Edmonson Avenue & 85th Street NE	NBR	<i>Not Met</i>	<i>Not Met</i>	Met	Met	Met	Met
	NBL	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	Met	Met
	SBR	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	Met
	SBL	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>	<i>Not Met</i>

Results of the warrant analysis indicate that multiple turn lanes will be required under Scenario 2 conditions while three turn lanes will be required under Scenario 1 conditions. A southbound left turn lane along MN 25 at the proposed future collector roadway will be required under the No-Build conditions. Turn lanes shown to be warranted are included in the recommended mitigation listed in the section below.

## 7. CONCLUSION AND RECOMMENDATIONS

A traffic analysis was performed to quantify the impacts of the proposed development on the adjacent roadway network and study intersections. The proposed site is encompassed by 85<sup>th</sup> Street, Davidson Avenue and Edmonson Avenue. No-Build, Build Scenario 1, and Build Scenario 2 were analyzed in the Opening Year (2030) and Design Year (2045). An Existing Year (2025) analysis was also conducted.

### 7.1 Project Characteristics

Two development buildout scenarios were considered; Scenario 1 consists of a 3 million square-foot Technology Park while Scenario 2 consists of a 5 million square-foot Industrial Park. Scenario 1 is anticipated to generate 330 and 270 trips during the AM and PM peak hours, respectively. Scenario 2 is anticipated to generate 1,700 trips in both the AM and PM peak hours.

The study area intersections include the following (side street stop controlled unless otherwise noted):

- MN 25 & 85<sup>th</sup> Street NE (Signal Controlled)
- Edmonson Avenue NE & 85<sup>th</sup> Street NE
- MN 25 & County Road 37 (Signal Controlled; planned roundabout)
- County Road 37 & Davidson Avenue
- County Road 37 & Edmonson Avenue
- MN 25 & Davidson Avenue (Intersection to be removed in the future)
- School Boulevard & Fallon Avenue (All-way stop; planned roundabout)

The listed intersections were analyzed in the following scenarios:

- Existing Year (2025)
- Opening Year (2030) No-Build
- Opening Year (2030) Build Scenario 1
- Opening Year (2030) Build Scenario 2
- Design Year (2045) No-Build
- Design Year (2045) Build Scenario 1
- Design Year (2045) Build Scenario 2

Additionally, mitigation scenarios were analyzed for each of the scenarios that were shown to require significant mitigation measures.

### 7.2 Existing Year (2025) Capacity Analysis Summary

A capacity analysis was conducted for Existing Year (2025) traffic conditions at the study intersections to determine baseline existing conditions. Based on the analysis, all intersections currently operate at acceptable LOS and there are no queuing issues at the study intersections.

### 7.3 Opening Year (2030) No-Build Capacity Analysis Summary

A capacity analysis was conducted for the Opening Year (2030) No-Build traffic conditions at the study intersections to determine baseline conditions for the 2030 analysis year. A roundabout was assumed to be in place at MN 25 & County Road 37 and the Davidson Avenue connection to MN 25 was assumed to

be removed by 2030. Based on the analysis, all intersections are anticipated to operate at acceptable LOS and there are no queuing issues at the study intersections.

#### 7.4 Opening Year (2030) Build Scenario 1 Capacity Analysis Summary

Scenario 1 consists of a 3 million square foot technology park and was assumed to be fully operational by 2030. With the addition of Scenario 1 site traffic, the roadway system slightly worsen in terms of delay and queues. All intersections are anticipated to operate at LOS B or better and all individual movements are expected to operate at LOS E or better. The roadway system is expected to operate at acceptable LOS and there are no queuing issues at the study intersections.

Turn lane warrants were analyzed at the study intersections and site access points, and it was determined that the eastbound right turn movement at Edmonson Avenue & East Access and northbound right turn movement at Edmonson Avenue & 85<sup>th</sup> Street are anticipated to meet the warrant for turn lanes.

#### 7.5 Opening Year (2030) Build Scenario 2 Capacity Analysis Summary

Scenario 2 consists of a 5 million square foot industrial park and was assumed to be fully operational by 2030. With the addition of Scenario 2 traffic, the existing system worsens in terms of LOS and queuing. The westbound left movement at MN 25 & Davidson Avenue is expected to operate at LOS F due to heavy traffic with limited openings on MN 25. The movement has low usage with only three (3) vehicles utilizing the movement in both the AM and PM peak hours. Due to this, mitigation was deemed to be unnecessary for the movement.

The intersection of School Boulevard & Fallon Avenue is anticipated to operate poorly during the AM peak hour, and a traffic control change may be necessary. A single-lane roundabout is recommended at the intersection.

All other intersections are expected to operate at LOS D or better and all other individual movements are expected to operate at LOS E or better. No queuing issues are present in the roadway system.

Turn lane warrants were analyzed at the study intersections and site access points, and it was determined that left- and right-turn lanes would be required for the north access point, the east access point, and for the northbound approach of Edmonson Avenue & 85<sup>th</sup> Street.

#### 7.6 Design Year (2045) No-Build Capacity Analysis Summary

A capacity analysis was conducted for the Design Year (2045) No-Build traffic conditions at the study intersections to determine baseline conditions for the 2045 analysis year. Background geometric changes are anticipated to include a single-lane roundabout at MN 25 & CSAH 37, a single-lane roundabout at School Boulevard & Fallon Avenue, removal of the Davidson Avenue connection to MN 25, and potential construction of a new collector roadway connection to MN 25 south of the existing Davidson Avenue intersection.

Based on the analysis, all other intersections are anticipated to operate at acceptable LOS and there are no queuing issues at the study intersections. The intersection of MN 25 & Future Roadway (proposed minor collector) is anticipated to meet the warrant for a southbound left turn lane.

#### 7.7 Design Year (2045) Build Scenario 1 Capacity Analysis Summary

In the long-term analysis of Scenario 1, the roadway system slightly worsen in terms of delay and queues.

All intersections are anticipated to operate at LOS C or better and all individual movements are expected to operate at LOS E or better. The roadway system is expected to operate at acceptable LOS and there are no queuing issues at the study intersections.

Turn lane warrants were analyzed at the study intersections and site access points, and it was determined that only the in addition to the turn lanes required under Opening Year (2030) Scenario 1 conditions, a southbound left turn lane is at MN 25 & Future Roadway (proposed collector) is anticipated to meet warrants.

The proposed Design Year (2045) Scenario 1 intersection control and geometry is shown in **Exhibit 17**.

## 7.8 Design Year (2045) Build Scenario 2 Capacity Analysis Summary

The long-term analysis of Scenario 2 reveals that multiple delay issues are expected. At MN 25 & CSAH 37, long delays are expected during the PM peak at the northbound approach of the roundabout. A northbound bypass lane is recommended to reduce these delays. At MN 25 & Future Roadway (proposed minor collector) the westbound left and right movements are expected to operate at LOS F. The intersection is not expected to operate acceptably as a side street stop control under Scenario 2 conditions, and a traffic signal or roundabout are expected to be required if the intersection is full-access. At the intersection of Edmonson Avenue & CSAH 37, long side street delays are anticipated due to the addition of site generated traffic. Installation of northbound and southbound left turn lanes are anticipated to be required to reduce these delays to a reasonable level.

Turn lane warrants were analyzed at the study intersections and site access points, and it was determined that in addition to the turn lanes required under the Design Year (2030) Scenario 2 conditions, left- and right-turn lanes would be required at MN 25 & Future Roadway (proposed collector) and a southbound right turn lane would be required at Edmonson Avenue & 85<sup>th</sup> Street.

The proposed Design Year (2045) Scenario 2 intersection control and geometry is shown in **Exhibit 18**.

## 7.9 Mitigation Plan

The following provides a summary of mitigation improvements that were identified as part of the traffic analysis for the proposed development. The Design Year (2045) geometry proposed for the Scenario 1 and Scenario 2 build conditions are also shown in **Exhibit 17** and **Exhibit 18**, respectively.

### Existing (2025) Conditions

- No Mitigation Necessary

### Opening Year (2030) No-Build Conditions

- No Mitigation Necessary

### Opening Year (2030) Build Scenario 1 Conditions

- Install a dedicated eastbound right-turn lane at Edmonson Avenue & North Access
- Install a northbound right turn lane at Edmonson Avenue & 85<sup>th</sup> Street
- Install Side Street Stop control at site access points (one approach lane is acceptable for each).
- As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure

### **Opening Year (2030) Build Scenario 2 Conditions**

- Install dedicated right and left-turn lanes at 85<sup>th</sup> Street & East Access
- Install dedicated right and left-turn lanes at Edmonson Avenue & North Access
- Install northbound left- and right-turn lanes at Edmonson Avenue & 85<sup>th</sup> Street
- Install Side Street Stop control at all site access points (single-lane approaches are acceptable)
- As parcels begin to develop on the AUAR area, install sidewalk and trail connections to connect to existing pedestrian and bicycle infrastructure
- Install a single-lane roundabout at School Boulevard & Fallon Avenue

### **Design Year (2045) No-Build Conditions**

- Install a southbound left turn lane at MN 25 & Future Roadway (proposed collector) and install a side street stop control at the intersection.

### **Design Year (2045) Build Scenario 1 Conditions**

- All modifications from Opening Year (2030) Scenario 1 Condition
- Install a southbound left turn lane at MN 25 & Future Roadway (proposed collector) and install a side street stop control at the intersection.

### **Design Year (2045) Build Scenario 2 Conditions**

- All modifications from Opening Year (2030) Scenario 2 Conditions
- Install a traffic signal or roundabout at MN 25 & Future Roadway (proposed minor collector). Install a northbound right-turn lane at this intersection.
  - Alternatively, the intersection could be installed as a right-in/right-out or a three-quarter access intersection to minimize side street delays.
- Install a southbound right turn lane at Edmonson Avenue & 85<sup>th</sup> Street NE
- Install northbound and southbound left turn lanes at CSAH 37 & Edmonson Avenue and monitor the intersection for further mitigation needs.
- Install a northbound bypass (right-turn) lane at the MN 25 & CSAH 37 roundabout.

## 8. APPENDIX

Appendix A: Exhibits

Appendix B: Turning Movement Counts

Appendix C: Development Scenario Concepts

Appendix D: Existing Year (2025) Capacity Analysis Reports

Appendix E: Opening Year (2030) No-Build Capacity Analysis Reports

Appendix F: Design Year (2045) No-Build Capacity Analysis Reports

Appendix G: Opening Year (2030) Build Scenario 1 Capacity Analysis Reports

Appendix H: Design Year (2045) Build Scenario 1 Capacity Analysis Reports

Appendix I: Opening Year (2030) Build Scenario 2 Capacity Analysis Reports

Appendix J: Design Year (2045) Build Scenario 2 Capacity Analysis Reports

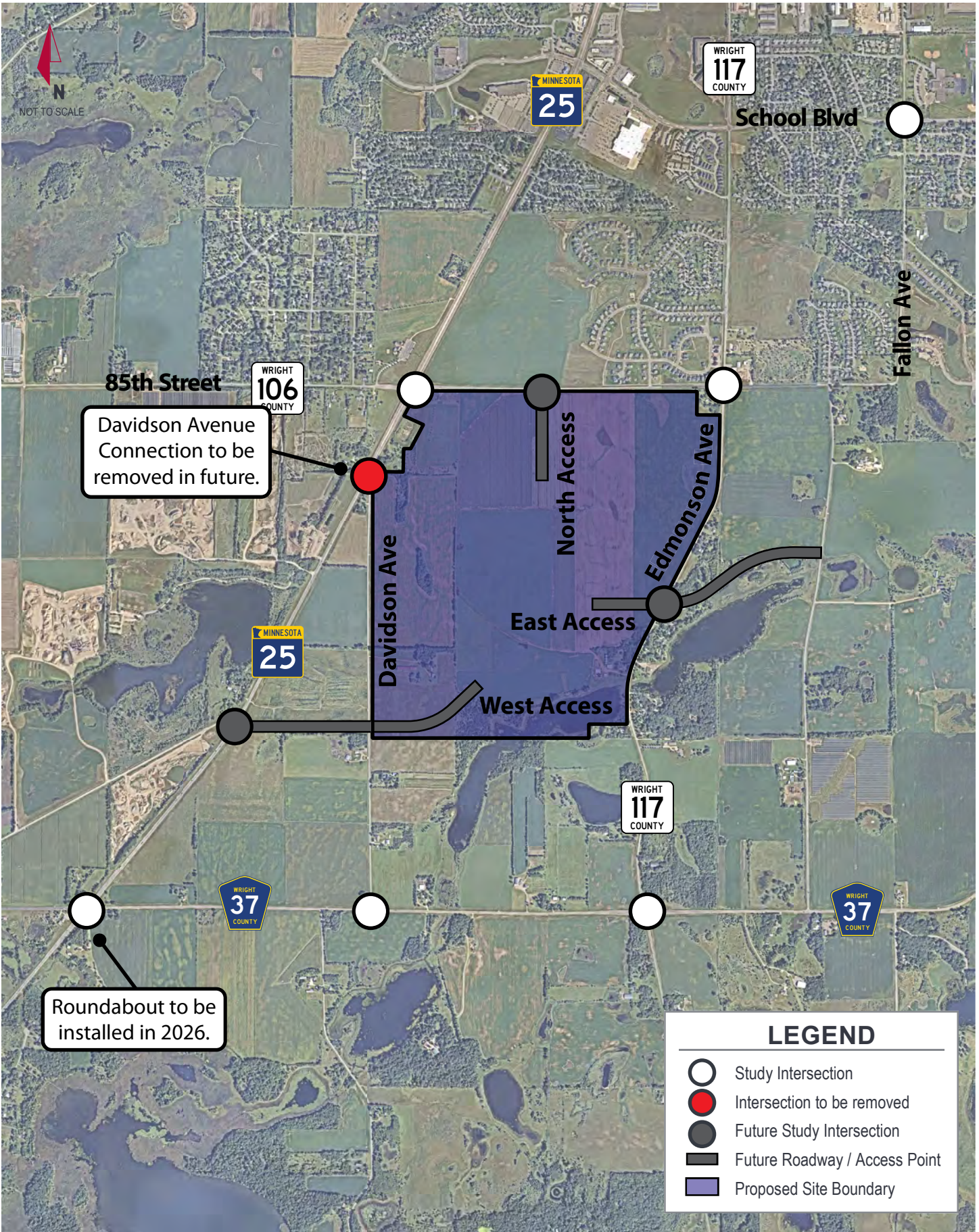
Appendix K: Mitigated Design Year (2045) Build Scenario 2 Capacity Analysis Reports

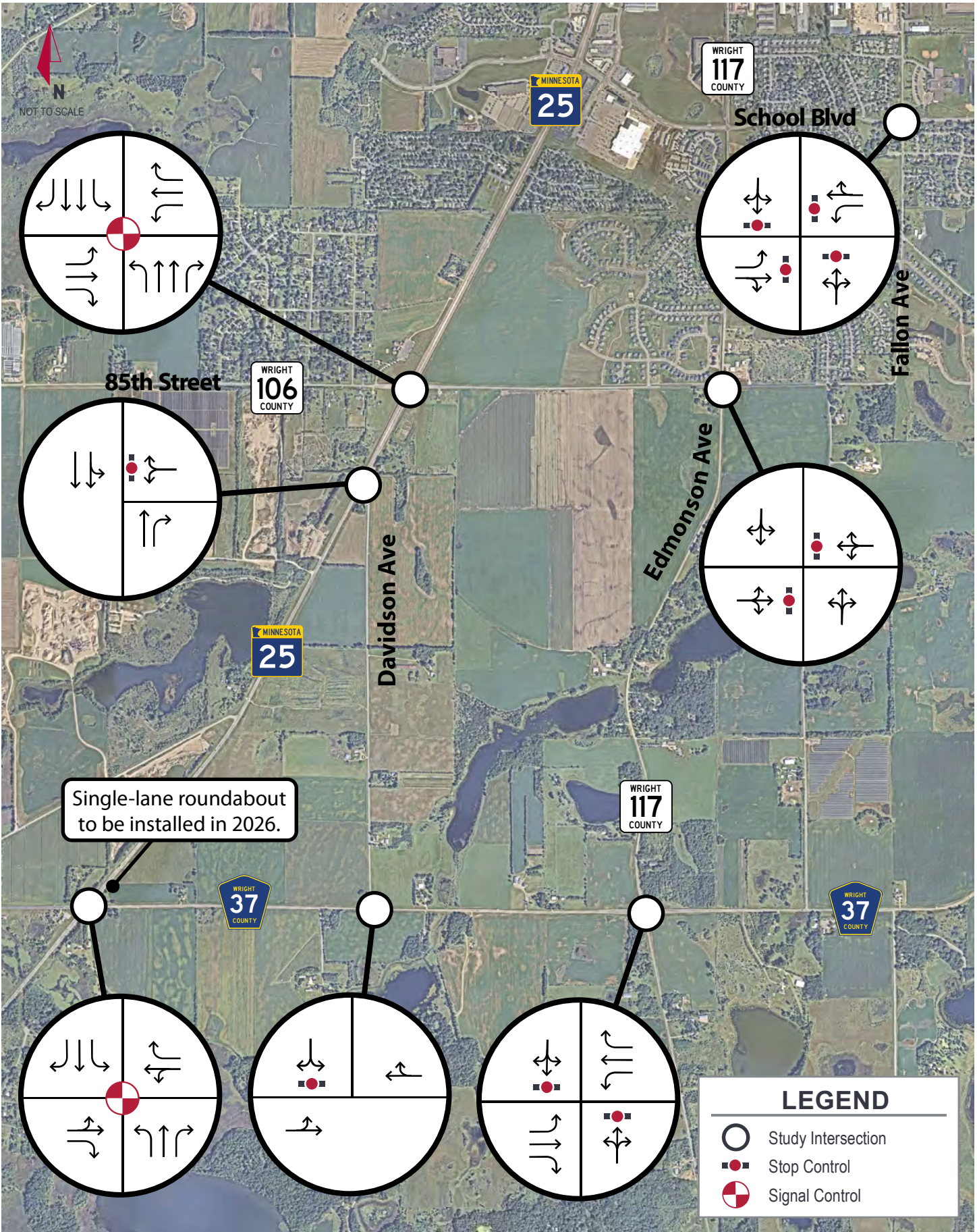
Appendix L: Turn Lane Warrant Analysis

# Appendix A:




## Exhibits

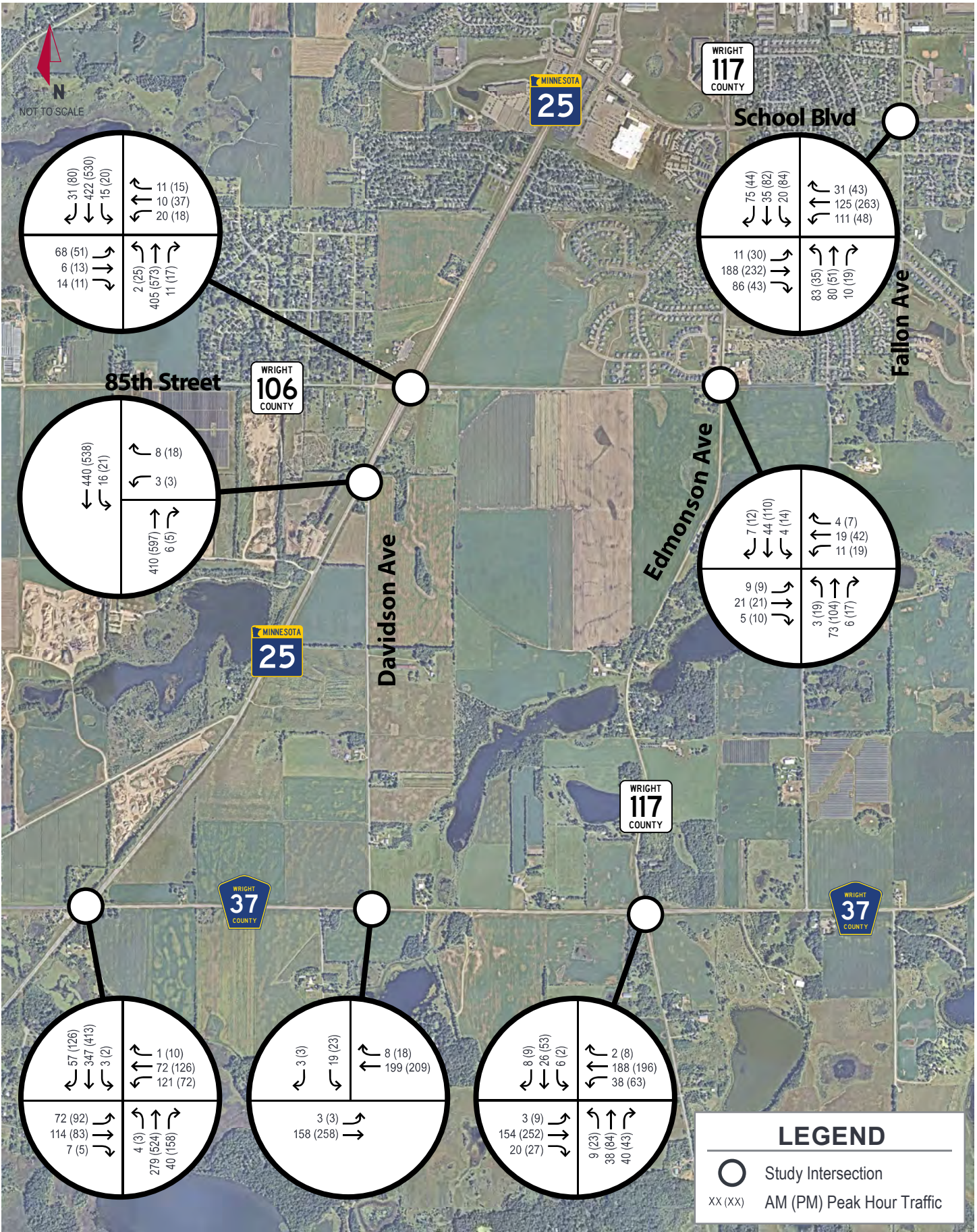
- Exhibit 1. Project Location Map
- Exhibit 2. Existing Geometry and Intersection Control
- Exhibit 3. Existing Year (2025) Traffic Volumes
- Exhibit 4. Opening Year (2030) No-Build Traffic Volumes
- Exhibit 5. Design Year (2045) No-Build Traffic Volumes
- Exhibit 6. Traffic Distribution (Scenario 1)
- Exhibit 7. Total Peak Hour Site Trips (Scenario 1)
- Exhibit 8. Passenger Vehicle Distribution (Scenario 2)
- Exhibit 9. Passenger Vehicle Site Trips (Scenario 2)
- Exhibit 10. Truck Traffic Distribution (Scenario 2)
- Exhibit 11. Truck Site Trips (Scenario 2)
- Exhibit 12. Total Peak Hour Site Trips (Scenario 2)
- Exhibit 13. 2030 Build Traffic Volumes (Scenario 1)
- Exhibit 14. 2030 Build Traffic Volumes (Scenario 2)
- Exhibit 15. 2045 Build Traffic Volumes (Scenario 1)
- Exhibit 16. 2045 Build Traffic Volumes (Scenario 2)
- Exhibit 17. Proposed 2045 Geometry (Scenario 1)
- Exhibit 18. Proposed 2045 Geometry (Scenario 2)

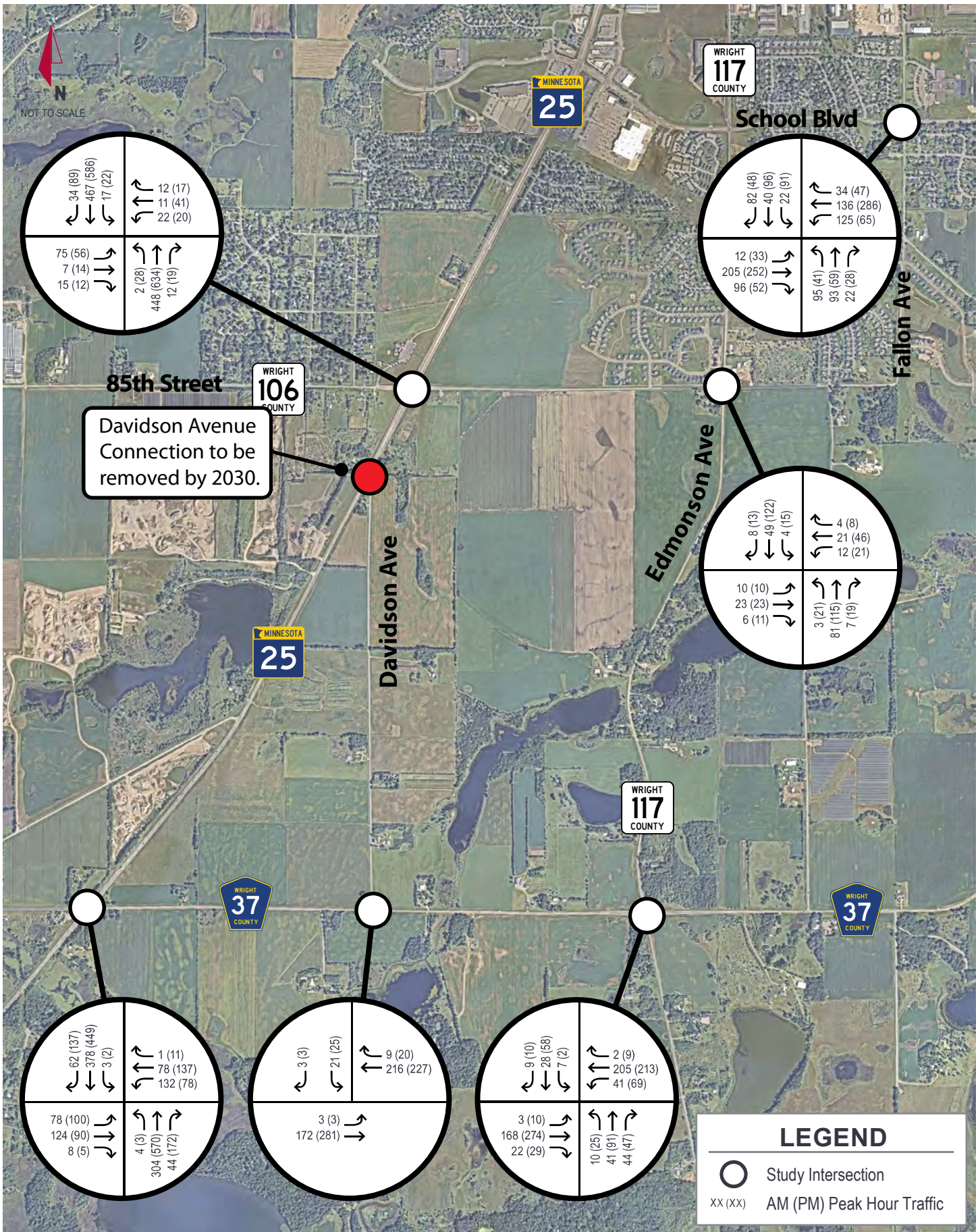


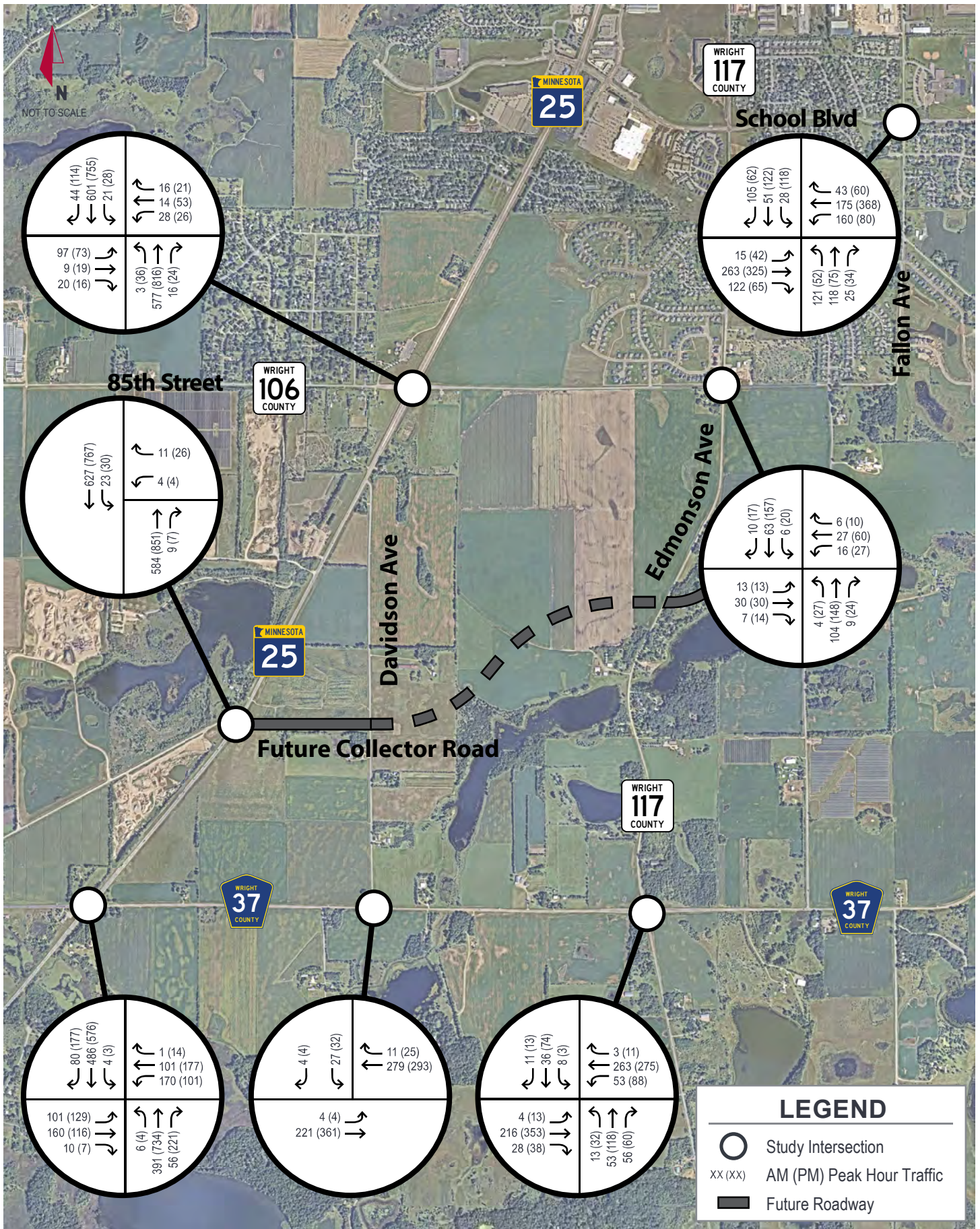


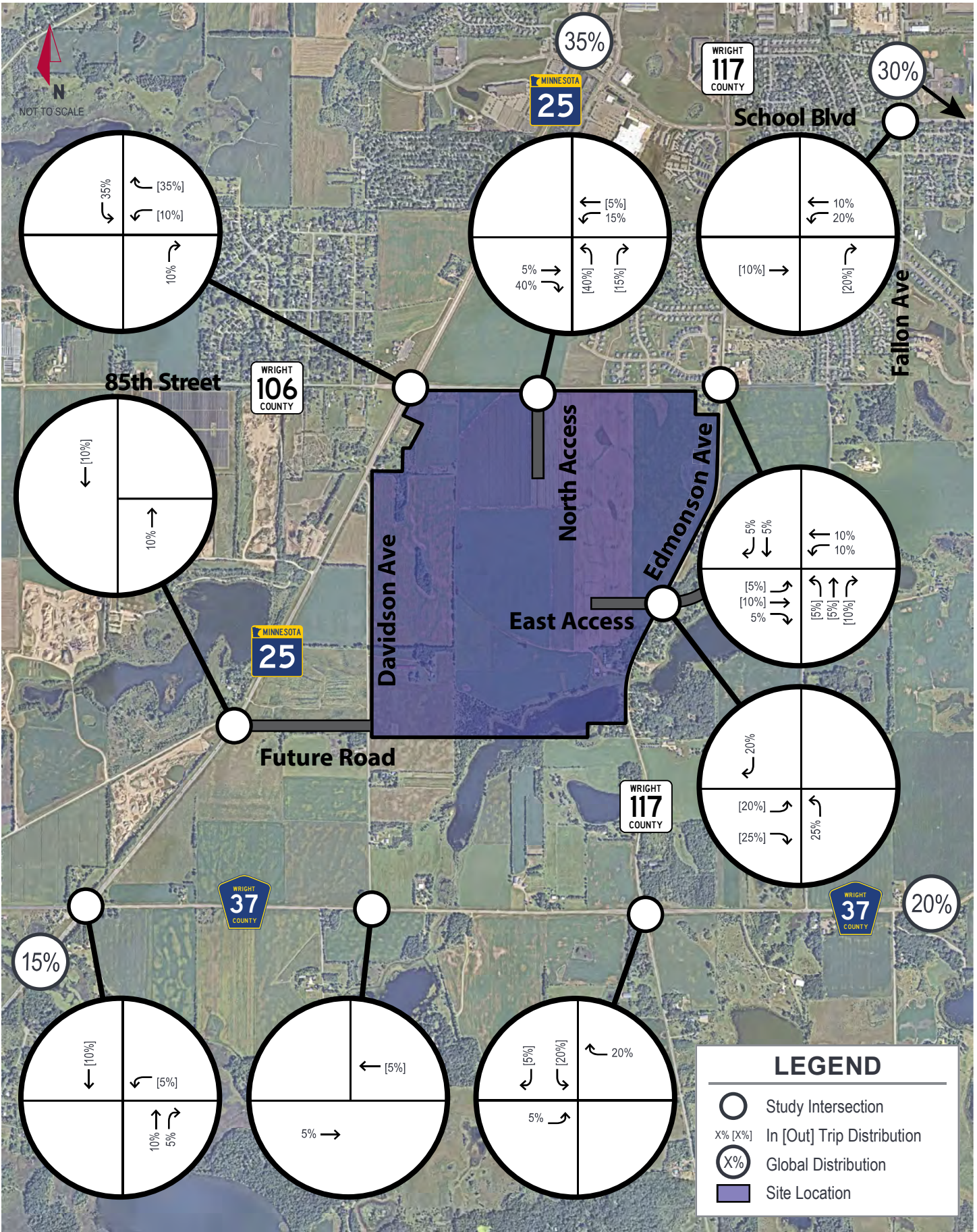
**LEGEND**

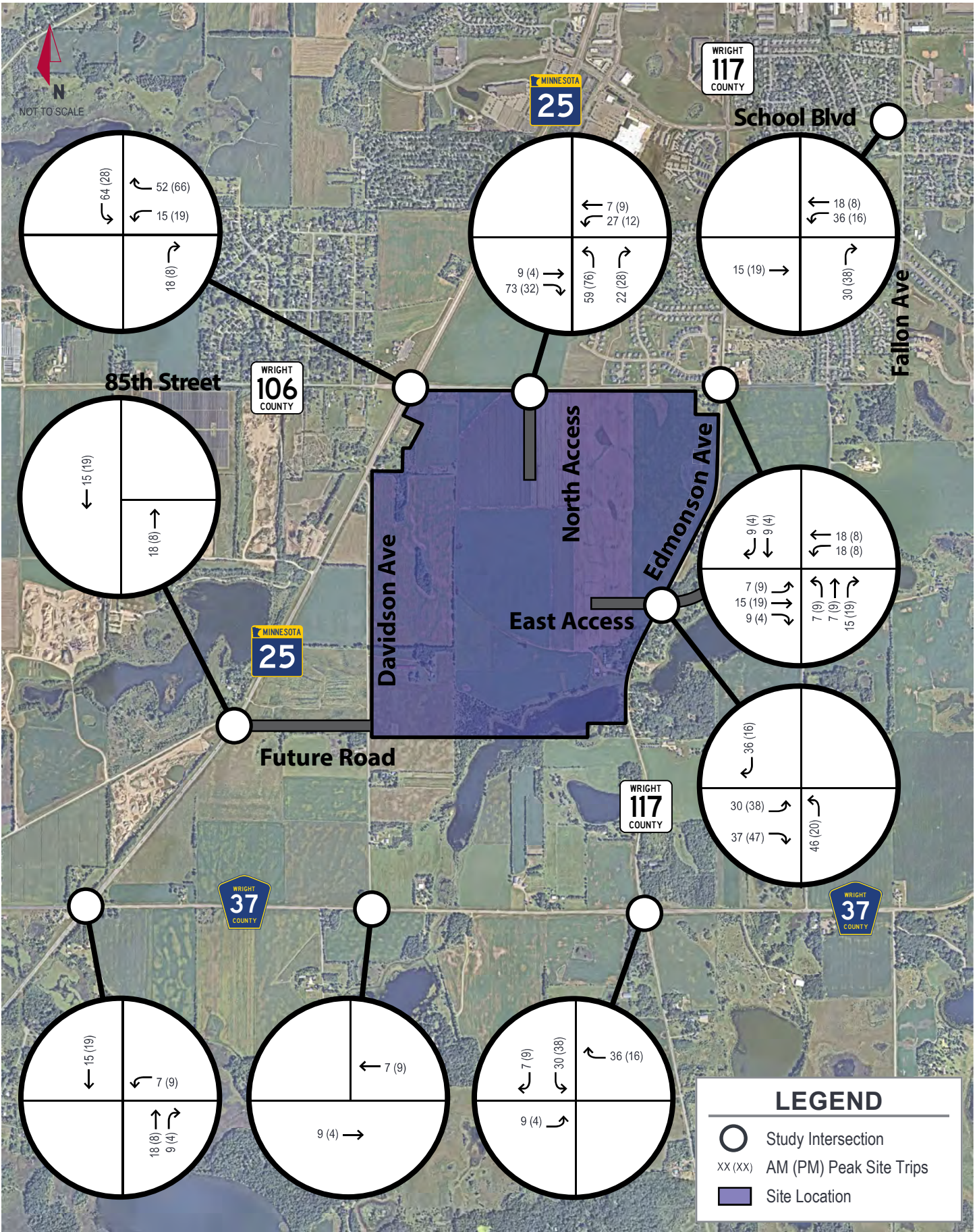
-  Study Intersection
-  Stop Control
-  Signal Control

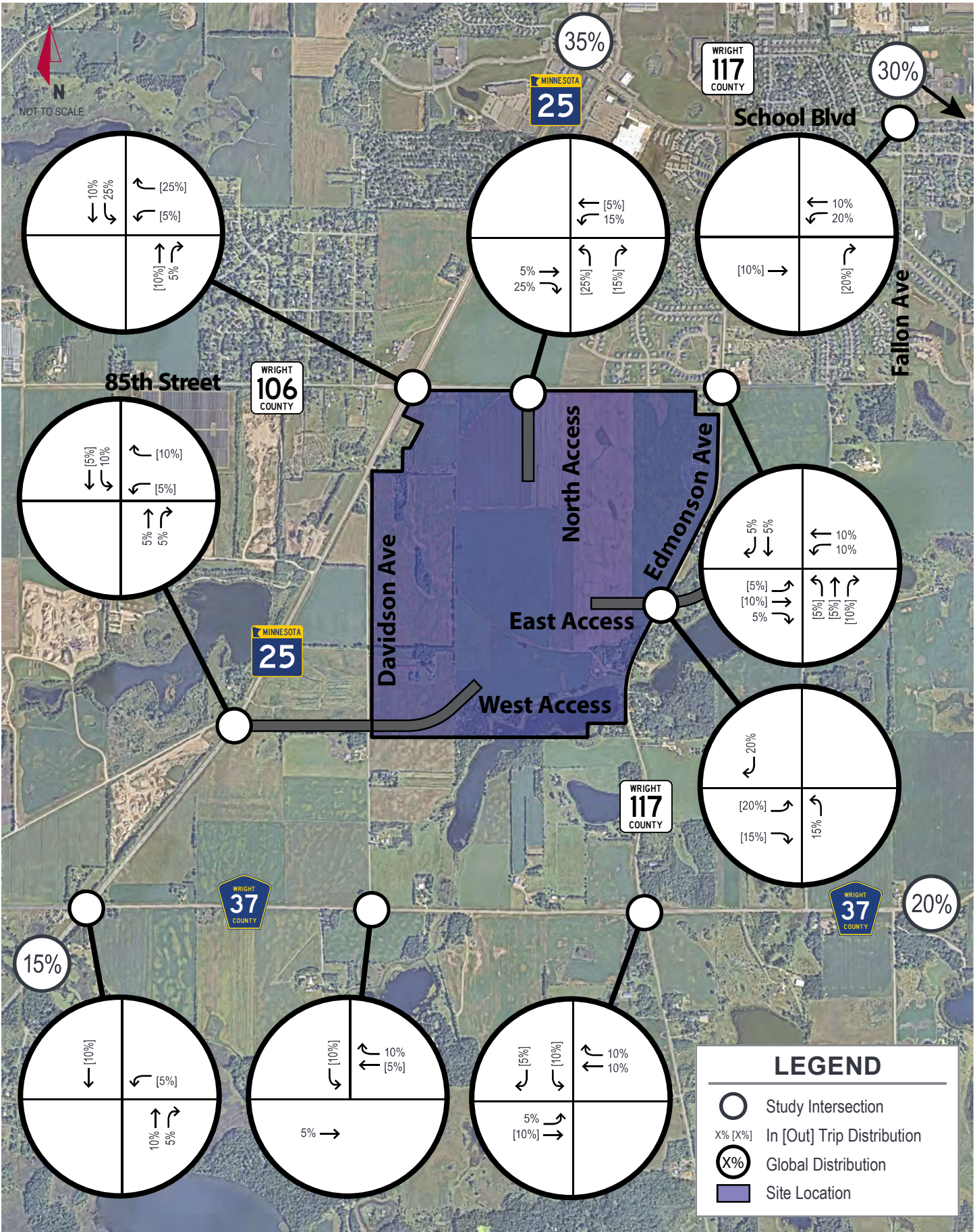


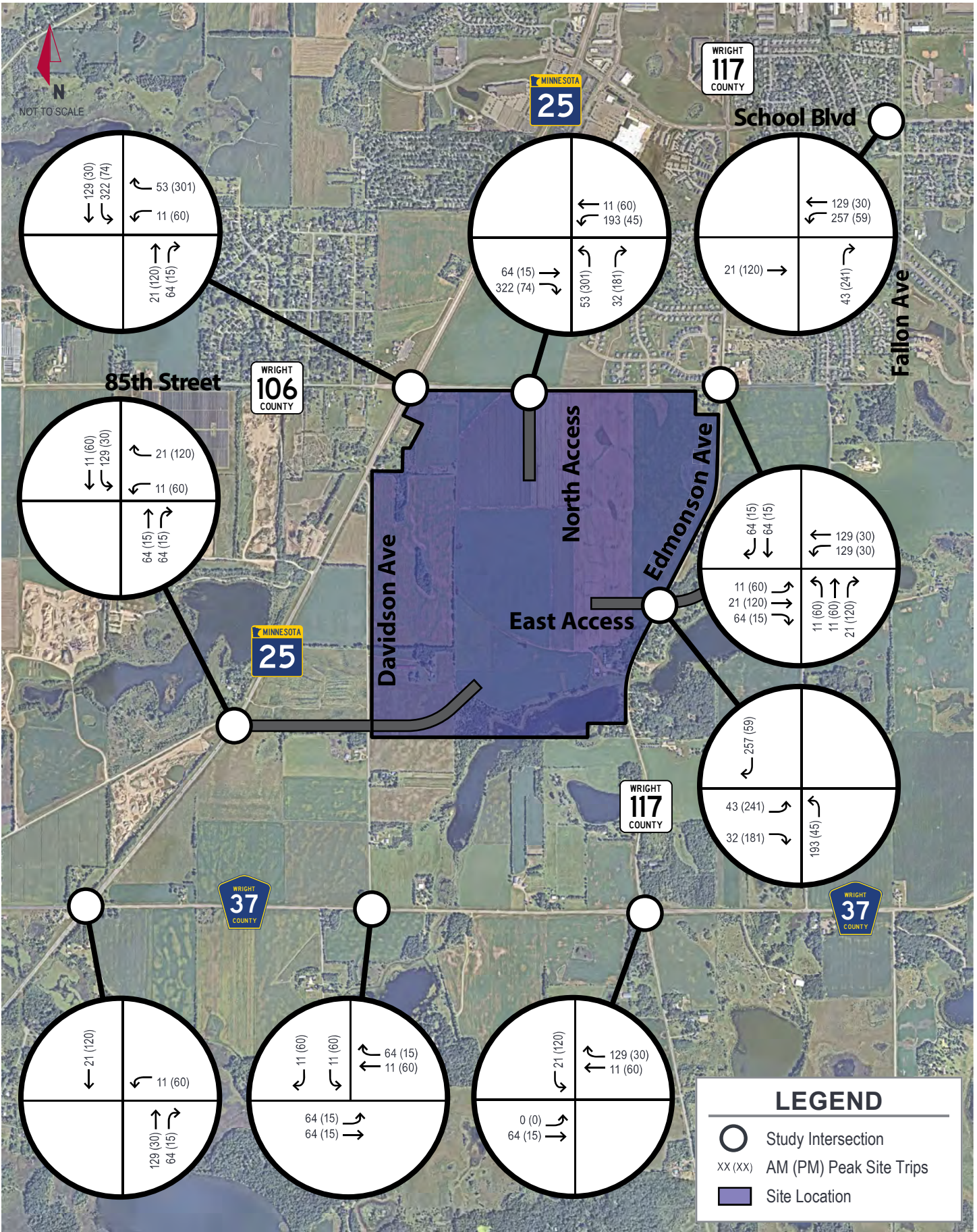




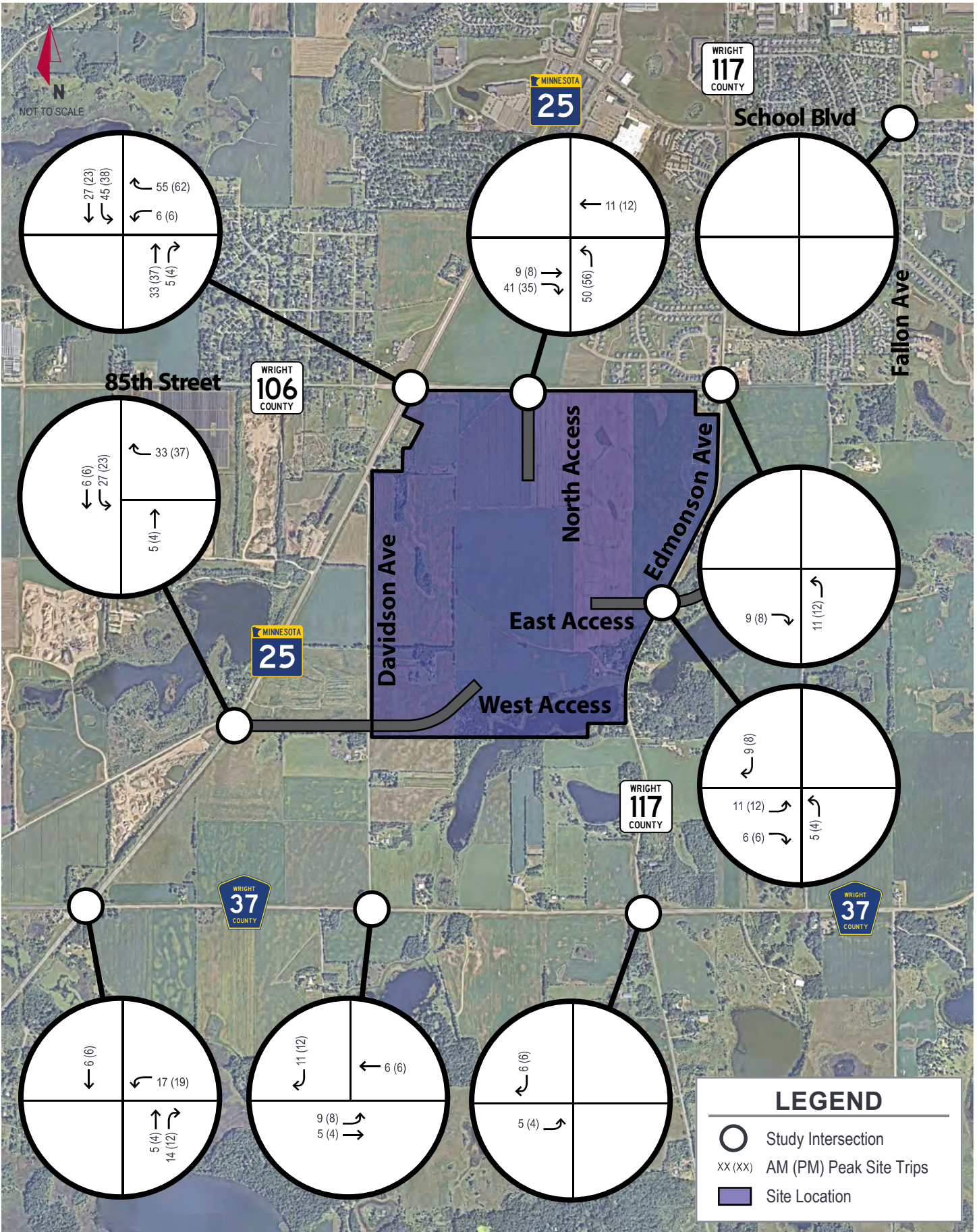


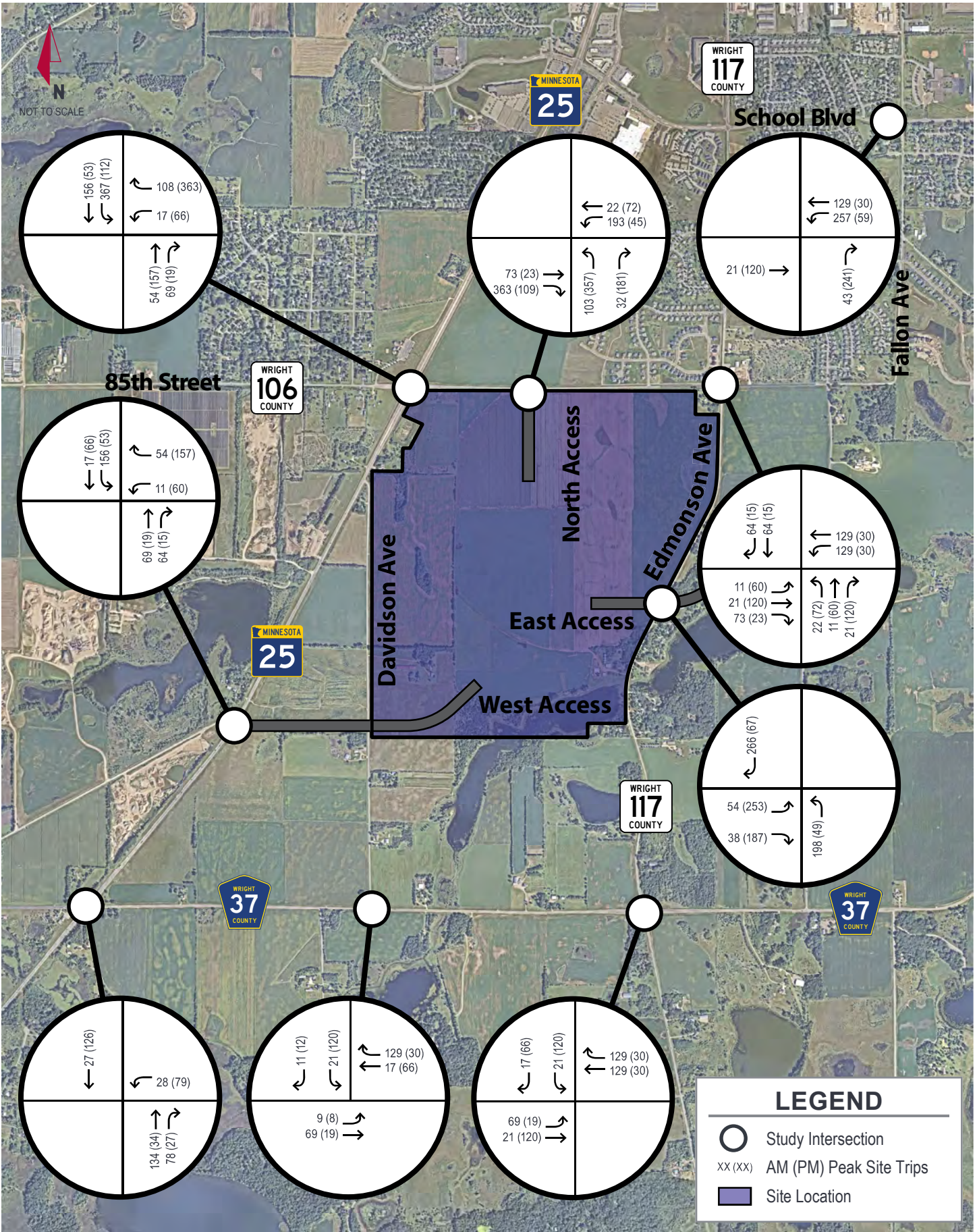




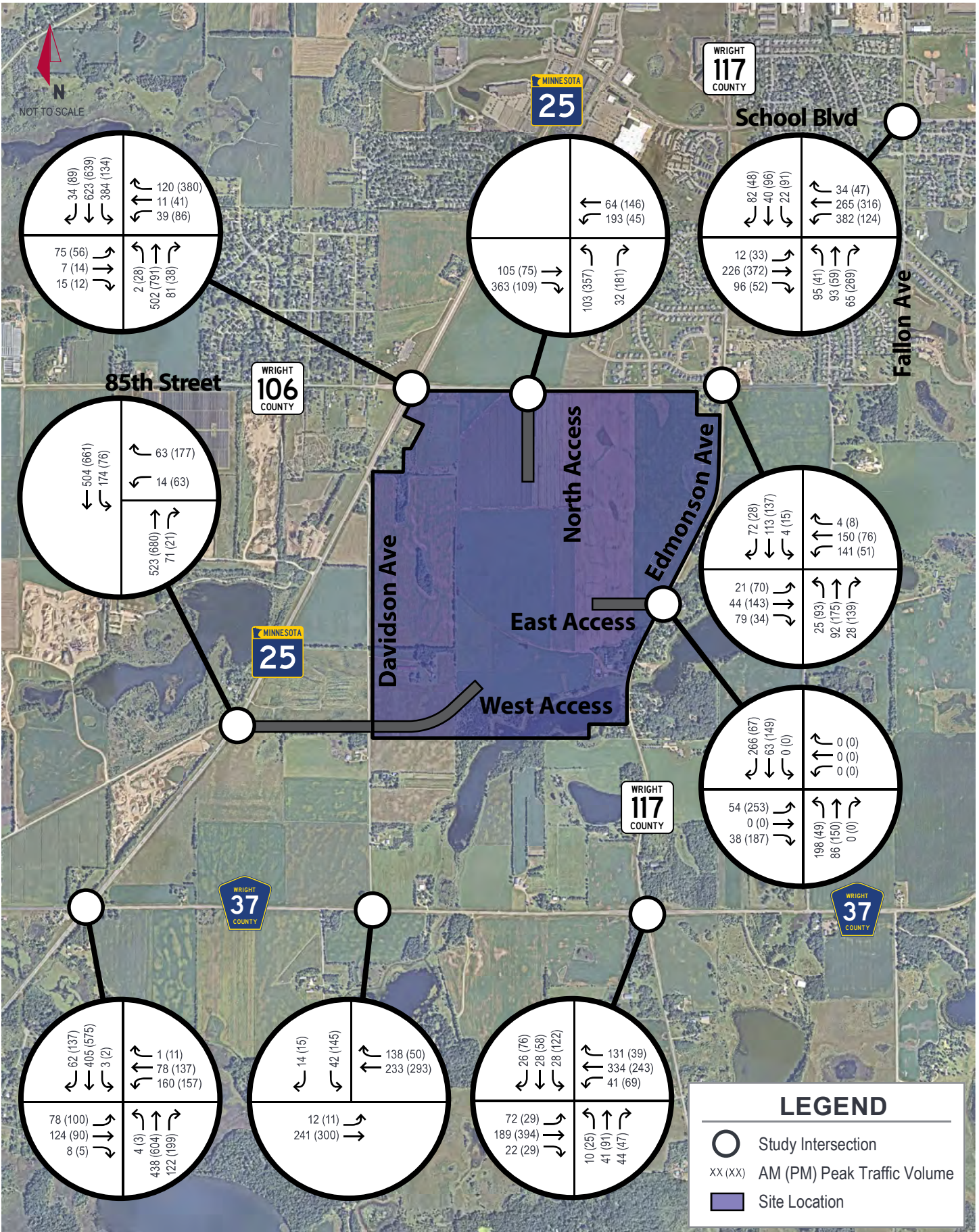


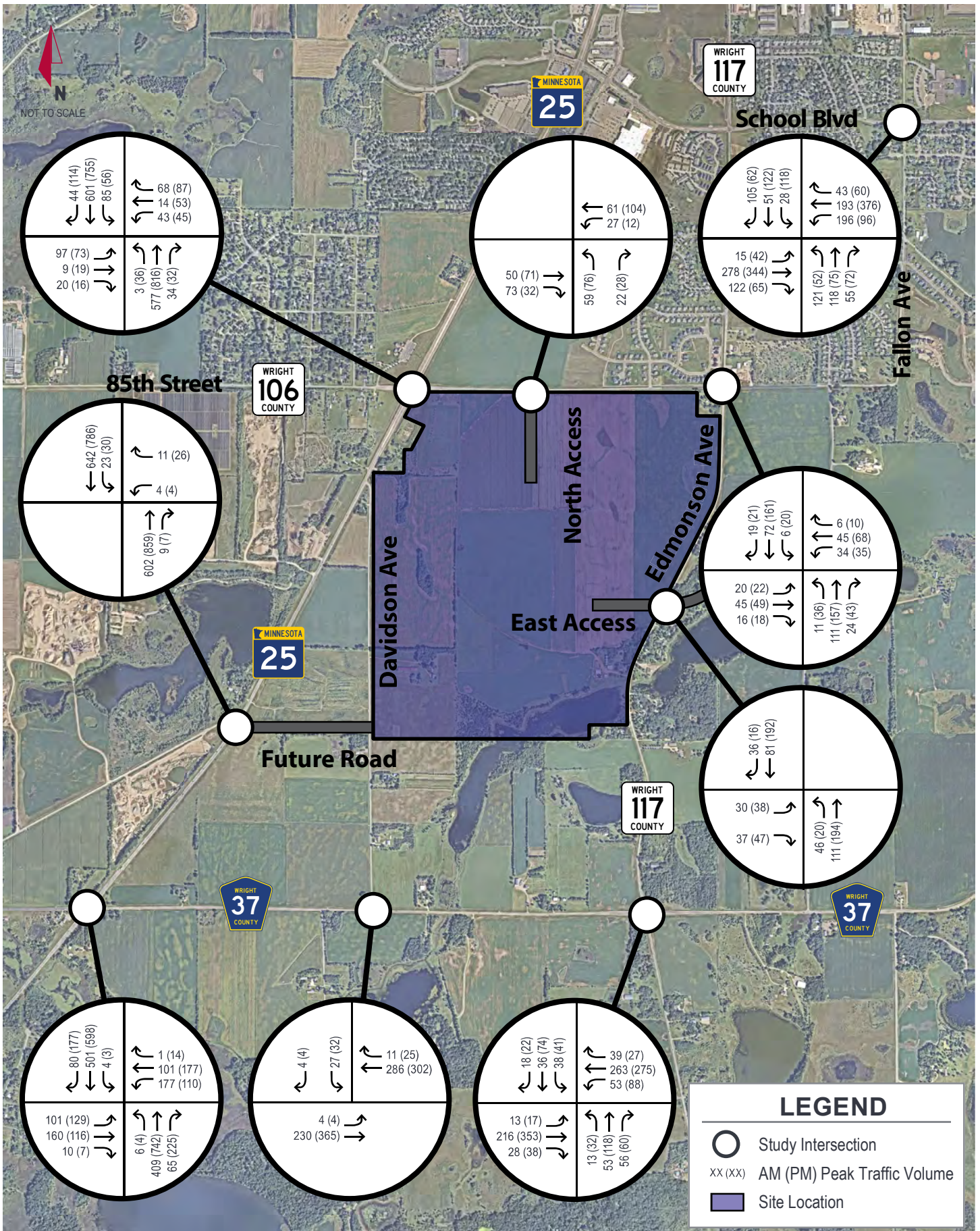


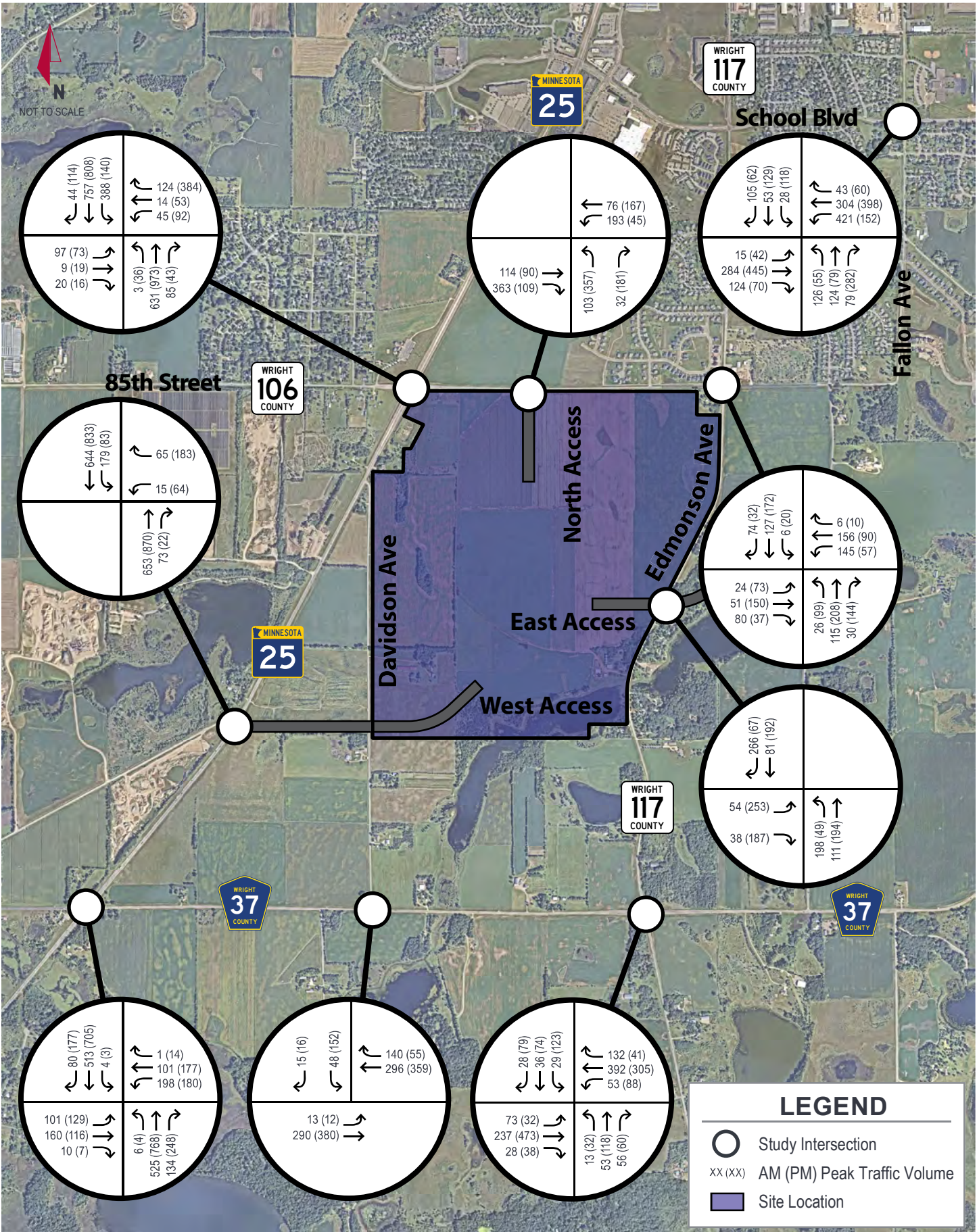


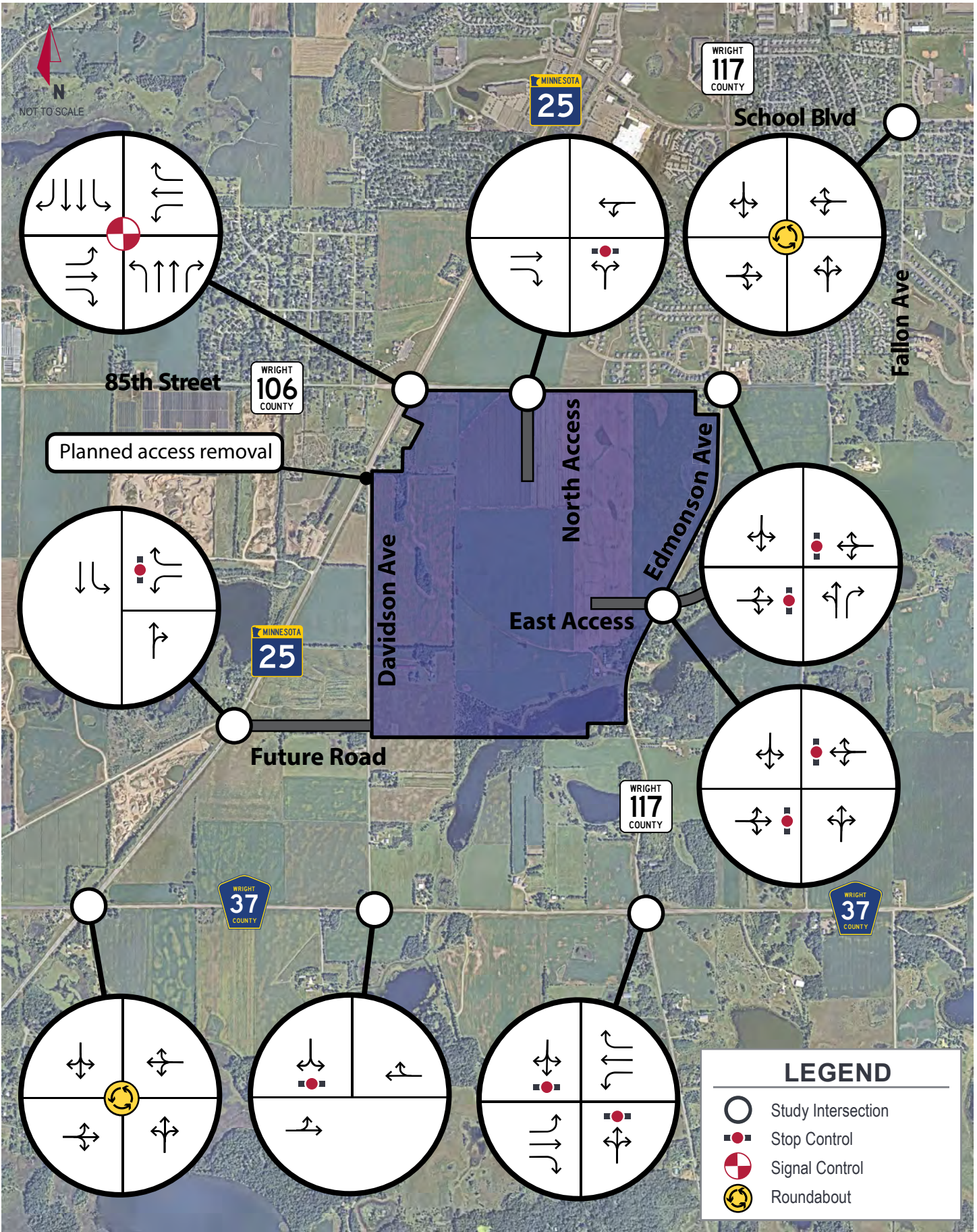


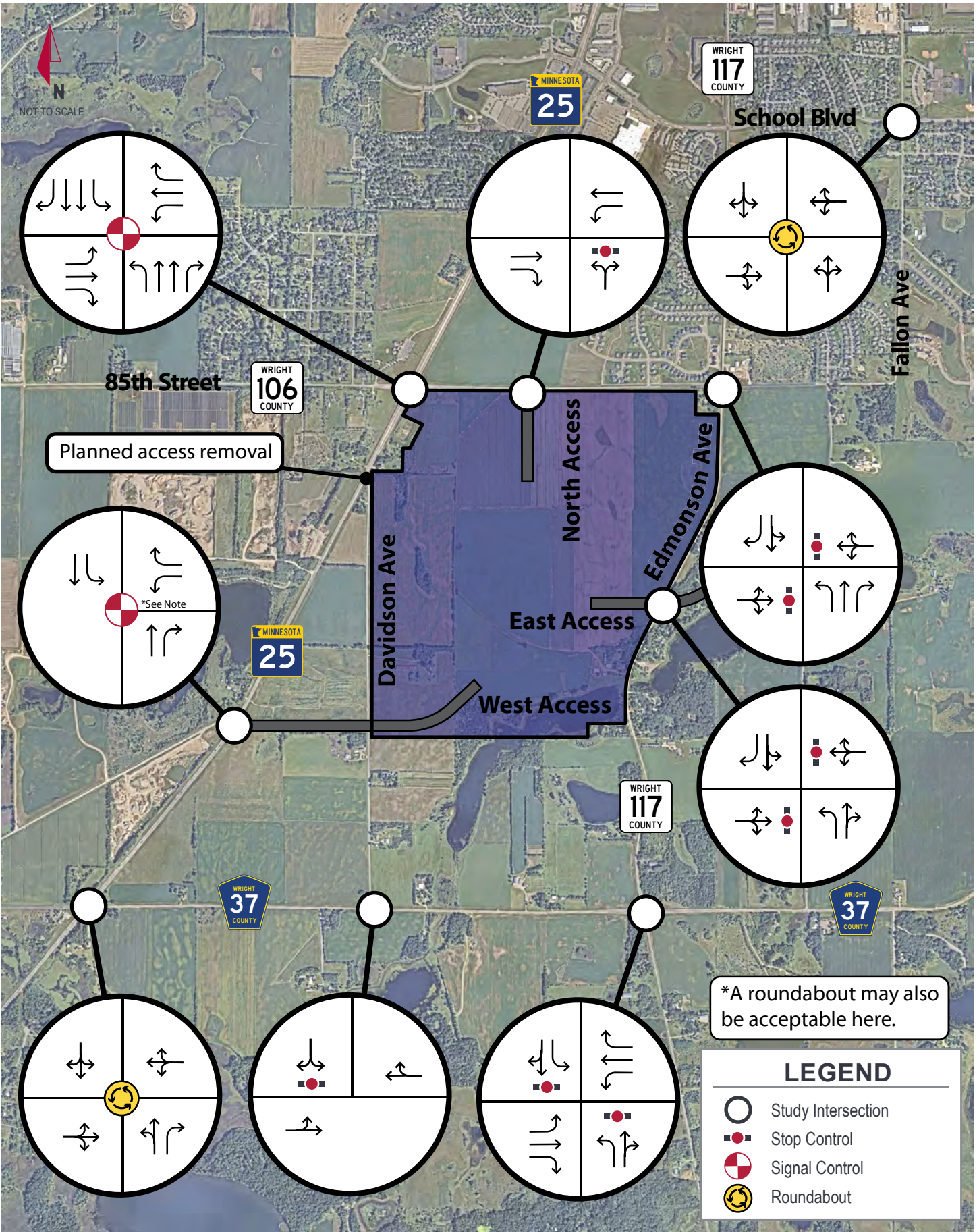












# Appendix B:

## Turning Movement Counts



Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 1

### Turning Movement Data

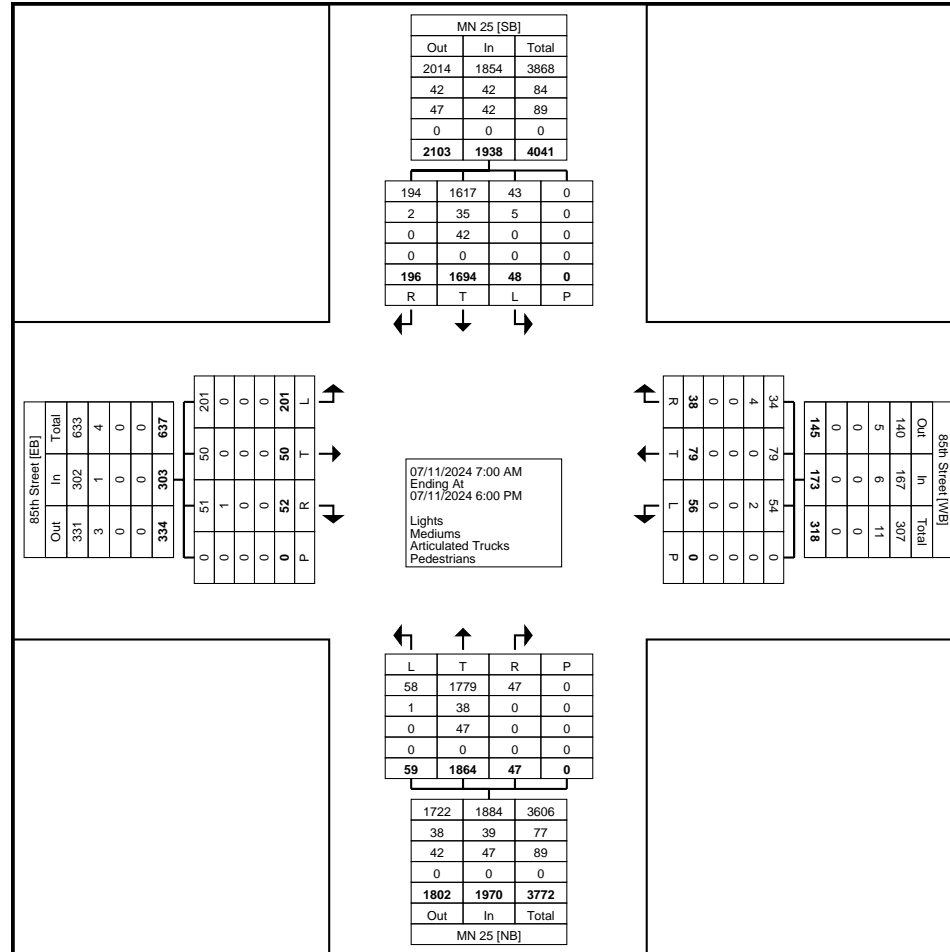
Start Time	85th Street Eastbound					85th Street Westbound					MN 25 Northbound					MN 25 Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	18	3	0	0	21	5	5	6	0	16	0	104	1	0	105	6	89	4	0	99	241
7:15 AM	16	2	7	0	25	3	2	2	0	7	0	95	2	0	97	2	119	10	0	131	260
7:30 AM	13	0	3	0	16	7	0	2	0	9	0	96	5	0	101	1	102	8	0	111	237
7:45 AM	19	0	3	0	22	4	2	0	0	6	1	103	2	0	106	5	104	8	0	117	251
Hourly Total	66	5	13	0	84	19	9	10	0	38	1	398	10	0	409	14	414	30	0	458	989
8:00 AM	10	0	5	0	15	3	0	1	0	4	2	105	1	0	108	0	91	11	0	102	229
8:15 AM	15	7	4	0	26	3	0	2	0	5	6	106	1	0	113	0	80	6	0	86	230
8:30 AM	14	0	6	0	20	1	1	2	0	4	0	100	0	0	100	2	80	8	0	90	214
8:45 AM	8	5	1	0	14	4	5	0	0	9	3	77	2	0	82	1	64	7	0	72	177
Hourly Total	47	12	16	0	75	11	6	5	0	22	11	388	4	0	403	3	315	32	0	350	850
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	11	4	4	0	19	3	6	6	0	15	4	138	3	0	145	5	140	19	0	164	343
4:15 PM	10	1	0	0	11	6	12	4	0	22	6	127	3	0	136	3	128	18	0	149	318
4:30 PM	18	5	1	0	24	6	10	3	0	19	7	140	4	0	151	4	134	20	0	158	352
4:45 PM	11	2	5	0	18	2	8	1	0	11	7	158	6	0	171	7	119	21	0	147	347
Hourly Total	50	12	10	0	72	17	36	14	0	67	24	563	16	0	603	19	521	78	0	618	1360
5:00 PM	15	7	3	0	25	4	10	5	0	19	5	118	5	0	128	5	113	19	0	137	309
5:15 PM	2	3	4	0	9	2	9	1	0	12	5	148	5	0	158	4	121	13	0	138	317
5:30 PM	10	5	5	0	20	2	6	3	0	11	4	150	3	0	157	1	111	14	0	126	314
5:45 PM	11	6	1	0	18	1	3	0	0	4	9	99	4	0	112	2	99	10	0	111	245
Hourly Total	38	21	13	0	72	9	28	9	0	46	23	515	17	0	555	12	444	56	0	512	1185
Grand Total	201	50	52	0	303	56	79	38	0	173	59	1864	47	0	1970	48	1694	196	0	1938	4384
Approach %	66.3	16.5	17.2	-	-	32.4	45.7	22.0	-	-	3.0	94.6	2.4	-	-	2.5	87.4	10.1	-	-	-
Total %	4.6	1.1	1.2	-	6.9	1.3	1.8	0.9	-	3.9	1.3	42.5	1.1	-	44.9	1.1	38.6	4.5	-	44.2	-
Lights	201	50	51	-	302	54	79	34	-	167	58	1779	47	-	1884	43	1617	194	-	1854	4207
% Lights	100.0	100.0	98.1	-	99.7	96.4	100.0	89.5	-	96.5	98.3	95.4	100.0	-	95.6	89.6	95.5	99.0	-	95.7	96.0
Mediums	0	0	1	-	1	2	0	4	-	6	1	38	0	-	39	5	35	2	-	42	88
% Mediums	0.0	0.0	1.9	-	0.3	3.6	0.0	10.5	-	3.5	1.7	2.0	0.0	-	2.0	10.4	2.1	1.0	-	2.2	2.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	47	0	-	47	0	42	0	-	42	89
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	2.5	0.0	-	2.4	0.0	2.5	0.0	-	2.2	2.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 2



Turning Movement Data Plot

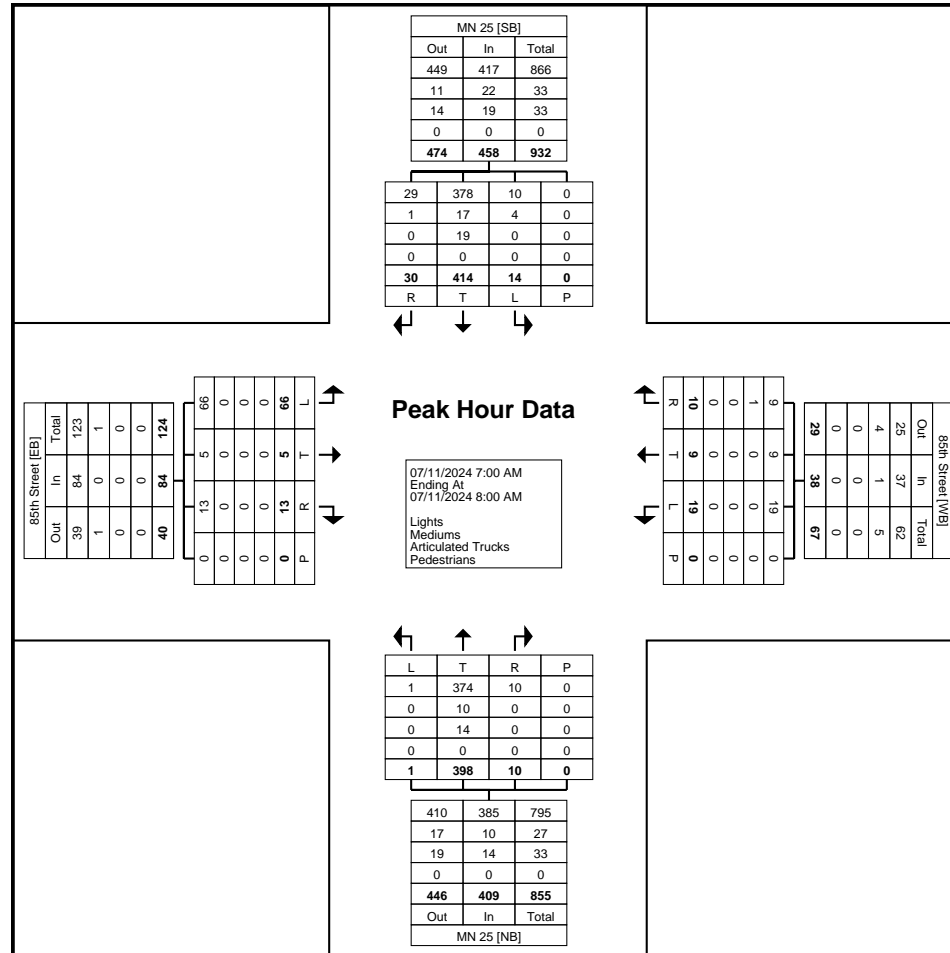




Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)







Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Edmonson Ave & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 1

### Turning Movement Data

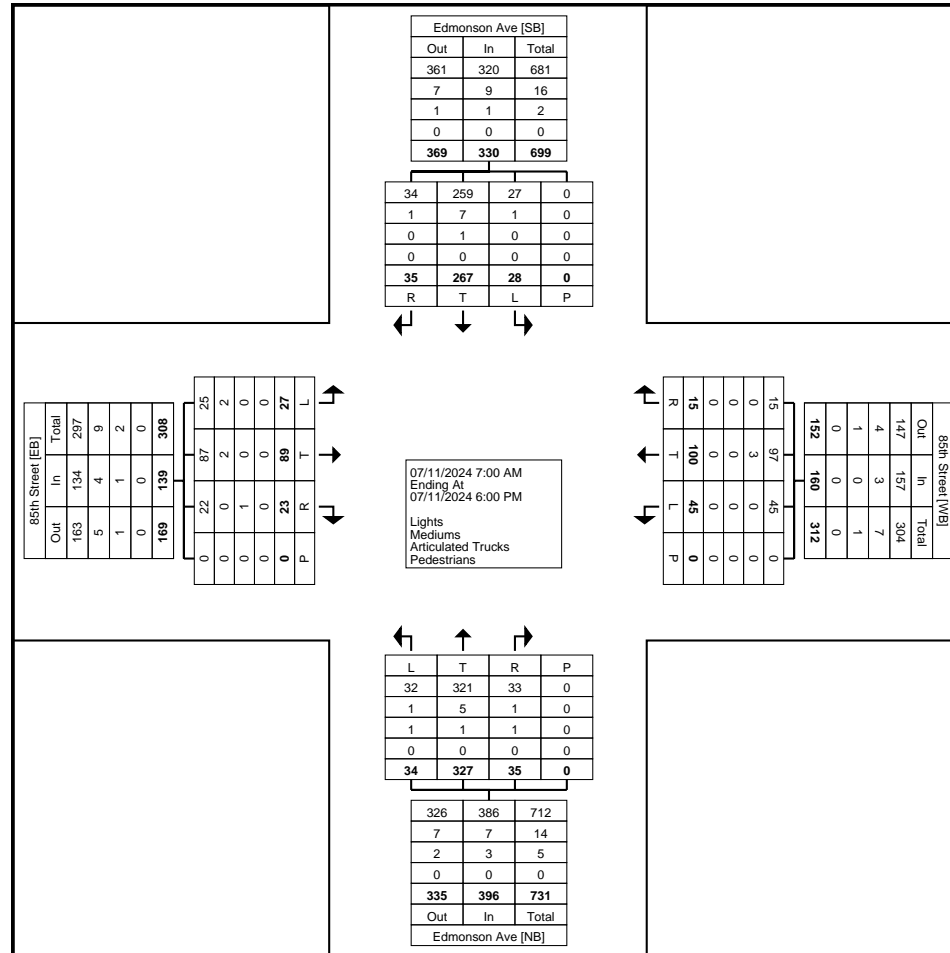
Start Time	85th Street Eastbound					85th Street Westbound					Edmonson Ave Northbound					Edmonson Ave Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	2	7	3	0	12	1	5	0	0	6	0	8	1	0	9	1	12	3	0	16	43
7:15 AM	0	4	1	0	5	2	5	1	0	8	1	12	2	0	15	2	8	1	0	11	39
7:30 AM	3	4	0	0	7	3	4	1	0	8	1	20	1	0	22	0	13	1	0	14	51
7:45 AM	3	5	0	0	8	4	4	1	0	9	0	31	1	0	32	0	10	1	0	11	60
Hourly Total	8	20	4	0	32	10	18	3	0	31	2	71	5	0	78	3	43	6	0	52	193
8:00 AM	0	2	1	0	3	5	0	1	0	6	0	16	3	0	19	2	6	0	0	8	36
8:15 AM	1	9	0	0	10	0	2	0	0	2	0	15	0	0	15	0	13	2	0	15	42
8:30 AM	0	2	0	0	2	0	4	0	0	4	1	11	1	0	13	1	13	2	0	16	35
8:45 AM	2	5	1	0	8	1	7	0	0	8	1	13	1	0	15	2	11	1	0	14	45
Hourly Total	3	18	2	0	23	6	13	1	0	20	2	55	5	0	62	5	43	5	0	53	158
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	4	2	0	8	3	13	1	0	17	7	20	3	0	30	2	25	2	0	29	84
4:15 PM	2	6	3	0	11	6	9	1	0	16	5	27	4	0	36	5	26	2	0	33	96
4:30 PM	1	4	3	0	8	4	12	2	0	18	3	28	5	0	36	4	32	2	0	38	100
4:45 PM	3	6	1	0	10	5	7	2	0	14	3	27	4	0	34	2	25	5	0	32	90
Hourly Total	8	20	9	0	37	18	41	6	0	65	18	102	16	0	136	13	108	11	0	132	370
5:00 PM	2	12	3	0	17	4	9	4	0	17	2	37	4	0	43	2	22	5	0	29	106
5:15 PM	3	4	4	0	11	4	12	0	0	16	4	26	2	0	32	2	18	4	0	24	83
5:30 PM	1	8	0	0	9	2	3	0	0	5	5	21	2	0	28	1	20	1	0	22	64
5:45 PM	2	7	1	0	10	1	4	1	0	6	1	15	1	0	17	2	13	3	0	18	51
Hourly Total	8	31	8	0	47	11	28	5	0	44	12	99	9	0	120	7	73	13	0	93	304
Grand Total	27	89	23	0	139	45	100	15	0	160	34	327	35	0	396	28	267	35	0	330	1025
Approach %	19.4	64.0	16.5	-	-	28.1	62.5	9.4	-	-	8.6	82.6	8.8	-	-	8.5	80.9	10.6	-	-	-
Total %	2.6	8.7	2.2	-	13.6	4.4	9.8	1.5	-	15.6	3.3	31.9	3.4	-	38.6	2.7	26.0	3.4	-	32.2	-
Lights	25	87	22	-	134	45	97	15	-	157	32	321	33	-	386	27	259	34	-	320	997
% Lights	92.6	97.8	95.7	-	96.4	100.0	97.0	100.0	-	98.1	94.1	98.2	94.3	-	97.5	96.4	97.0	97.1	-	97.0	97.3
Mediums	2	2	0	-	4	0	3	0	-	3	1	5	1	-	7	1	7	1	-	9	23
% Mediums	7.4	2.2	0.0	-	2.9	0.0	3.0	0.0	-	1.9	2.9	1.5	2.9	-	1.8	3.6	2.6	2.9	-	2.7	2.2
Articulated Trucks	0	0	1	-	1	0	0	0	-	0	1	1	1	-	3	0	1	0	-	1	5
% Articulated Trucks	0.0	0.0	4.3	-	0.7	0.0	0.0	0.0	-	0.0	2.9	0.3	2.9	-	0.8	0.0	0.4	0.0	-	0.3	0.5
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Edmonson Ave & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 2



Turning Movement Data Plot

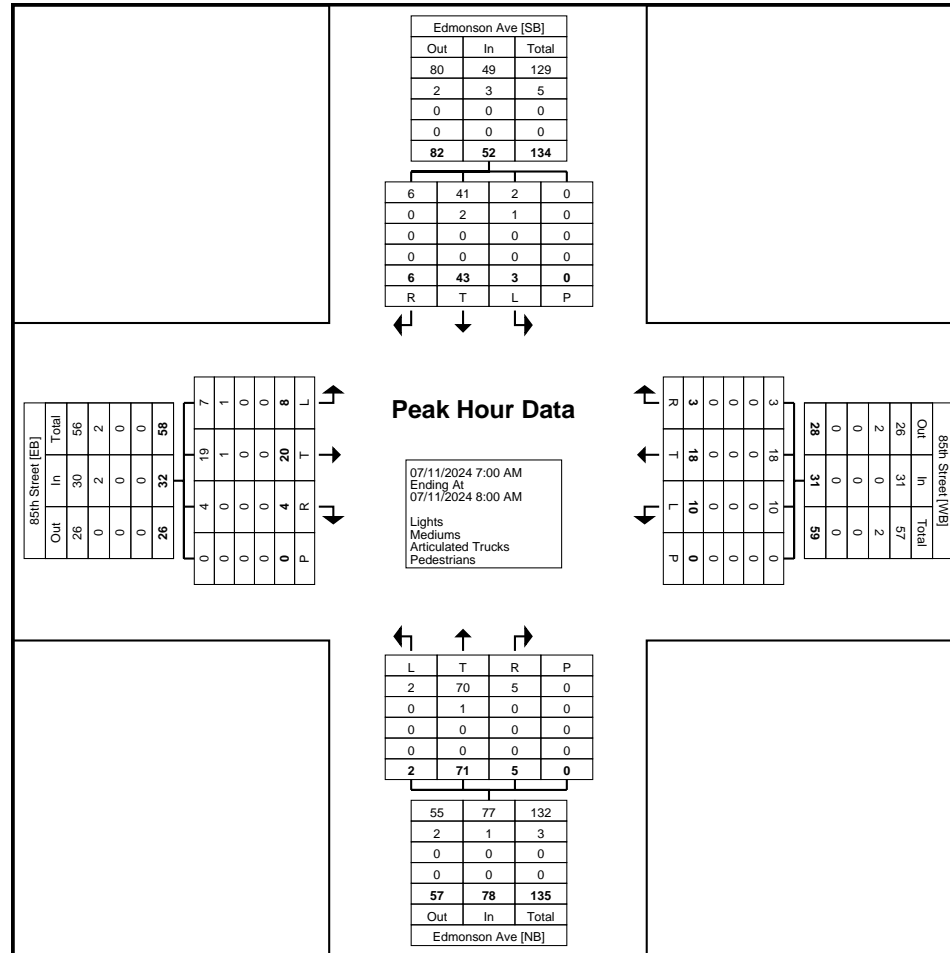




Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Edmonson Ave & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)

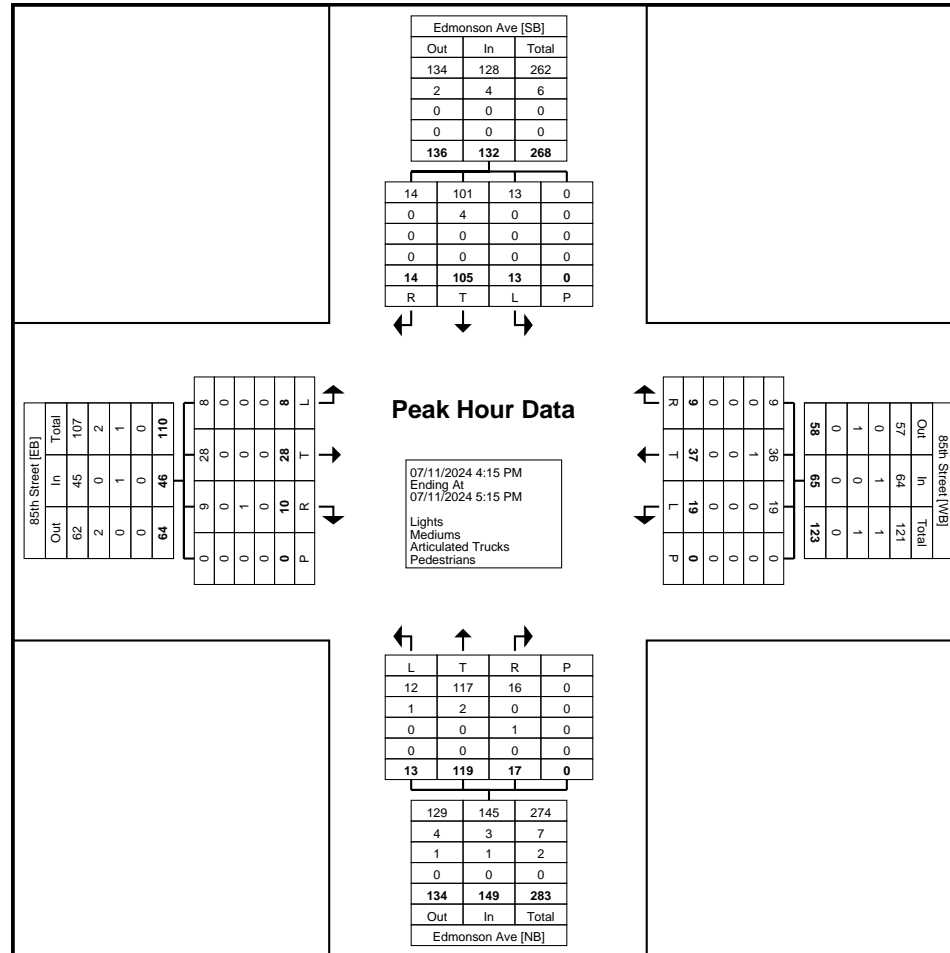




Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Edmonson Ave & 85th Street  
Site Code:  
Start Date: 07/11/2024  
Page No: 6



Turning Movement Peak Hour Data Plot (4:15 PM)



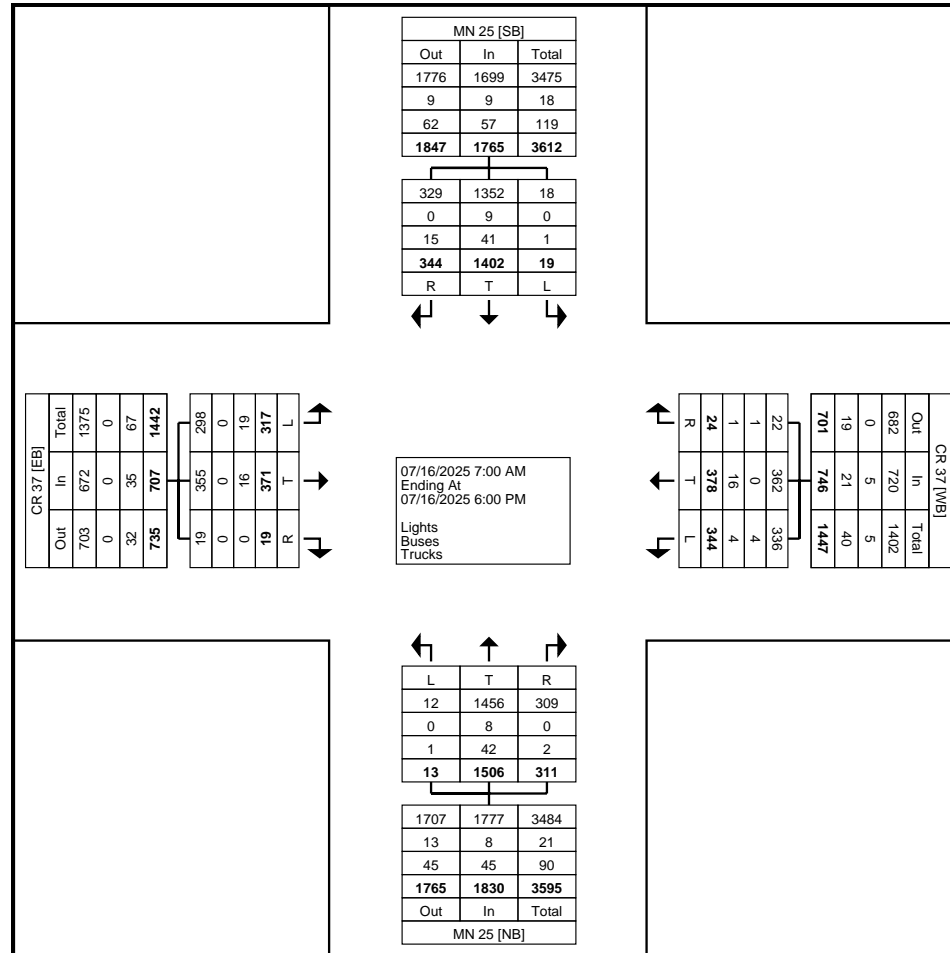
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & CR 37  
Site Code:  
Start Date: 07/16/2025  
Page No: 1

### Turning Movement Data

Start Time	CR 37 Eastbound				CR 37 Westbound				MN 25 Northbound				MN 25 Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
7:00 AM	16	27	2	45	13	17	0	30	1	70	12	83	0	78	11	89	247
7:15 AM	21	29	1	51	32	16	0	48	2	67	15	84	1	82	17	100	283
7:30 AM	13	29	2	44	31	19	1	51	0	80	7	87	1	94	15	110	292
7:45 AM	22	29	2	53	45	20	0	65	1	62	6	69	1	93	14	108	295
Hourly Total	72	114	7	193	121	72	1	194	4	279	40	323	3	347	57	407	1117
8:00 AM	15	21	2	38	20	13	5	38	1	80	9	90	1	73	16	90	256
8:15 AM	15	22	0	37	18	17	1	36	0	79	8	87	1	73	18	92	252
8:30 AM	13	30	1	44	29	12	1	42	0	70	11	81	3	68	21	92	259
8:45 AM	19	22	0	41	16	21	1	38	0	63	14	77	1	76	8	85	241
Hourly Total	62	95	3	160	83	63	8	154	1	292	42	335	6	290	63	359	1008
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	20	19	1	40	20	22	2	44	1	138	23	162	0	93	31	124	370
4:15 PM	21	25	1	47	18	37	3	58	0	111	35	146	0	96	27	123	374
4:30 PM	22	11	2	35	16	38	1	55	1	148	62	211	1	102	33	136	437
4:45 PM	29	28	1	58	18	29	4	51	1	127	38	166	1	122	35	158	433
Hourly Total	92	83	5	180	72	126	10	208	3	524	158	685	2	413	126	541	1614
5:00 PM	22	23	1	46	14	29	1	44	1	118	20	139	2	118	24	144	373
5:15 PM	20	18	2	40	15	29	3	47	0	115	26	141	1	78	24	103	331
5:30 PM	27	16	1	44	18	30	0	48	1	94	12	107	3	91	28	122	321
5:45 PM	22	22	0	44	21	29	1	51	3	84	13	100	2	65	22	89	284
Hourly Total	91	79	4	174	68	117	5	190	5	411	71	487	8	352	98	458	1309
Grand Total	317	371	19	707	344	378	24	746	13	1506	311	1830	19	1402	344	1765	5048
Approach %	44.8	52.5	2.7	-	46.1	50.7	3.2	-	0.7	82.3	17.0	-	1.1	79.4	19.5	-	-
Total %	6.3	7.3	0.4	14.0	6.8	7.5	0.5	14.8	0.3	29.8	6.2	36.3	0.4	27.8	6.8	35.0	-
Lights	298	355	19	672	336	362	22	720	12	1456	309	1777	18	1352	329	1699	4868
% Lights	94.0	95.7	100.0	95.0	97.7	95.8	91.7	96.5	92.3	96.7	99.4	97.1	94.7	96.4	95.6	96.3	96.4
Buses	0	0	0	0	4	0	1	5	0	8	0	8	0	9	0	9	22
% Buses	0.0	0.0	0.0	0.0	1.2	0.0	4.2	0.7	0.0	0.5	0.0	0.4	0.0	0.6	0.0	0.5	0.4
Trucks	19	16	0	35	4	16	1	21	1	42	2	45	1	41	15	57	158
% Trucks	6.0	4.3	0.0	5.0	1.2	4.2	4.2	2.8	7.7	2.8	0.6	2.5	5.3	2.9	4.4	3.2	3.1



Turning Movement Data Plot



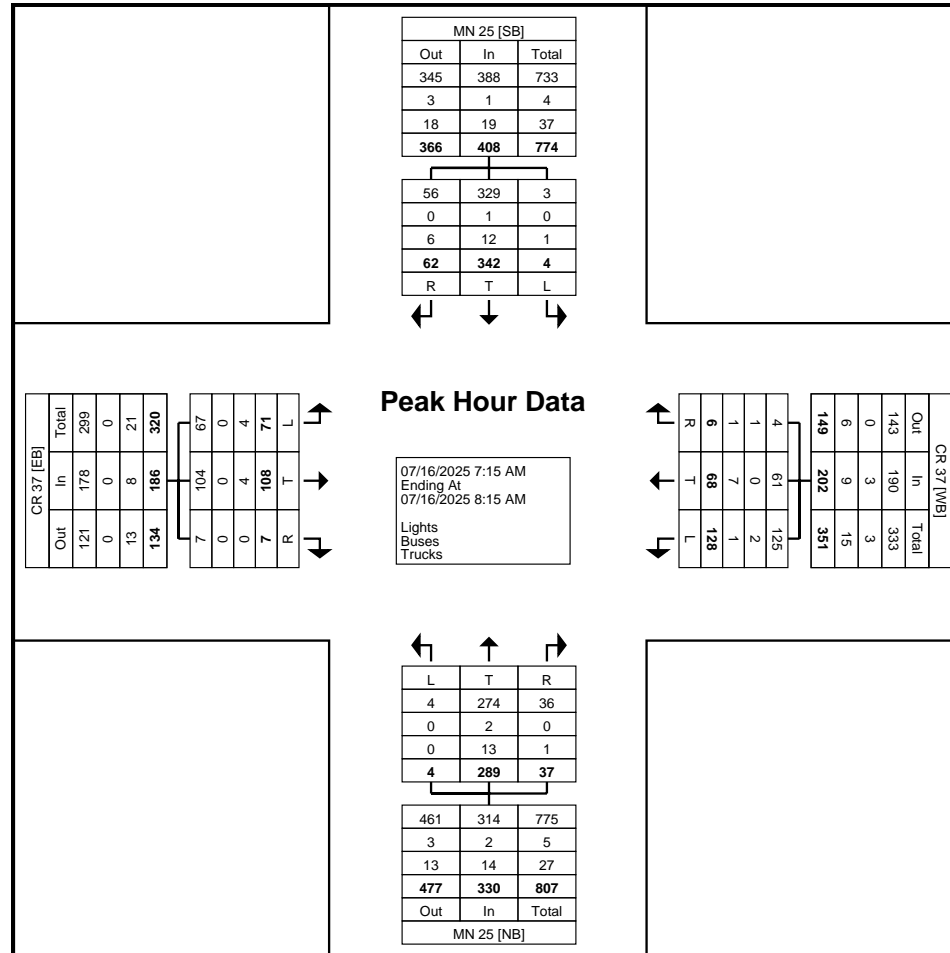
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & CR 37  
Site Code:  
Start Date: 07/16/2025  
Page No: 3

### Turning Movement Peak Hour Data (7:15 AM)

Start Time	CR 37 Eastbound				CR 37 Westbound				MN 25 Northbound				MN 25 Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
7:15 AM	21	29	1	51	32	16	0	48	2	67	15	84	1	82	17	100	283
7:30 AM	13	29	2	44	31	19	1	51	0	80	7	87	1	94	15	110	292
7:45 AM	22	29	2	53	45	20	0	65	1	62	6	69	1	93	14	108	295
8:00 AM	15	21	2	38	20	13	5	38	1	80	9	90	1	73	16	90	256
Total	71	108	7	186	128	68	6	202	4	289	37	330	4	342	62	408	1126
Approach %	38.2	58.1	3.8	-	63.4	33.7	3.0	-	1.2	87.6	11.2	-	1.0	83.8	15.2	-	-
Total %	6.3	9.6	0.6	16.5	11.4	6.0	0.5	17.9	0.4	25.7	3.3	29.3	0.4	30.4	5.5	36.2	-
PHF	0.807	0.931	0.875	0.877	0.711	0.850	0.300	0.777	0.500	0.903	0.617	0.917	1.000	0.910	0.912	0.927	0.954
Lights	67	104	7	178	125	61	4	190	4	274	36	314	3	329	56	388	1070
% Lights	94.4	96.3	100.0	95.7	97.7	89.7	66.7	94.1	100.0	94.8	97.3	95.2	75.0	96.2	90.3	95.1	95.0
Buses	0	0	0	0	2	0	1	3	0	2	0	2	0	1	0	1	6
% Buses	0.0	0.0	0.0	0.0	1.6	0.0	16.7	1.5	0.0	0.7	0.0	0.6	0.0	0.3	0.0	0.2	0.5
Trucks	4	4	0	8	1	7	1	9	0	13	1	14	1	12	6	19	50
% Trucks	5.6	3.7	0.0	4.3	0.8	10.3	16.7	4.5	0.0	4.5	2.7	4.2	25.0	3.5	9.7	4.7	4.4



Turning Movement Peak Hour Data Plot (7:15 AM)



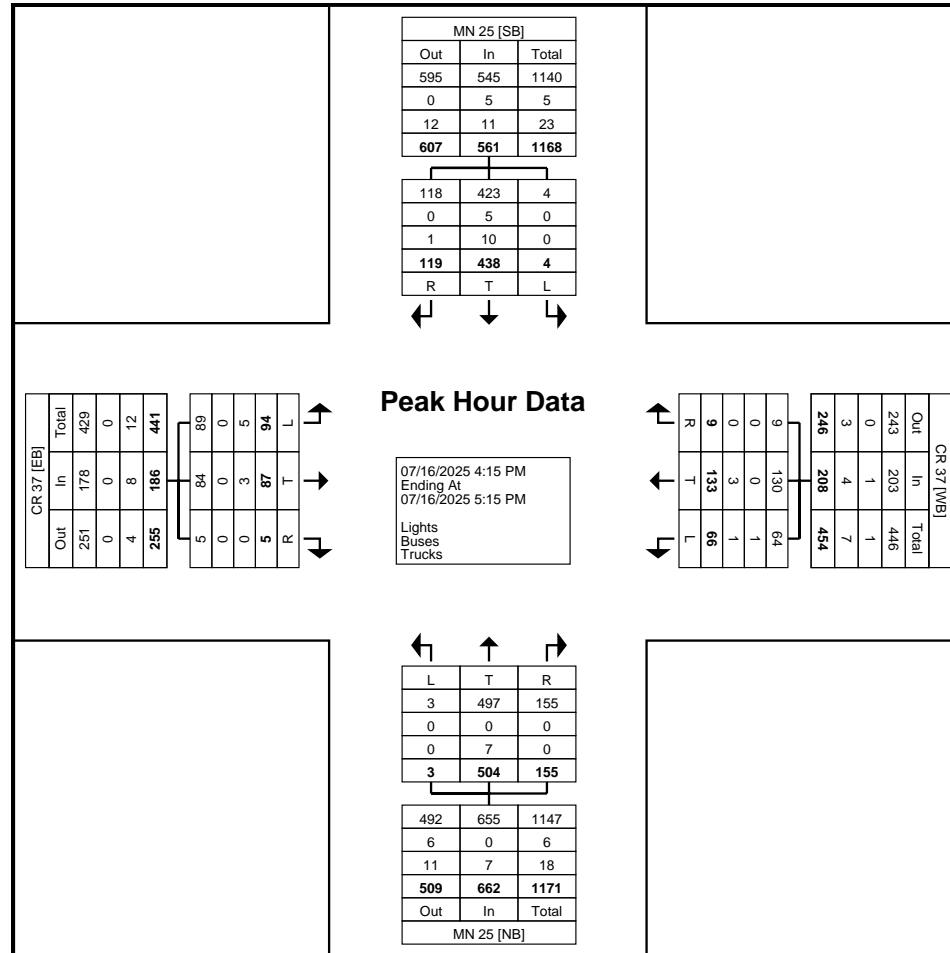
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: MN 25 & CR 37  
Site Code:  
Start Date: 07/16/2025  
Page No: 5

### Turning Movement Peak Hour Data (4:15 PM)

Start Time	CR 37 Eastbound				CR 37 Westbound				MN 25 Northbound				MN 25 Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
4:15 PM	21	25	1	47	18	37	3	58	0	111	35	146	0	96	27	123	374
4:30 PM	22	11	2	35	16	38	1	55	1	148	62	211	1	102	33	136	437
4:45 PM	29	28	1	58	18	29	4	51	1	127	38	166	1	122	35	158	433
5:00 PM	22	23	1	46	14	29	1	44	1	118	20	139	2	118	24	144	373
Total	94	87	5	186	66	133	9	208	3	504	155	662	4	438	119	561	1617
Approach %	50.5	46.8	2.7	-	31.7	63.9	4.3	-	0.5	76.1	23.4	-	0.7	78.1	21.2	-	-
Total %	5.8	5.4	0.3	11.5	4.1	8.2	0.6	12.9	0.2	31.2	9.6	40.9	0.2	27.1	7.4	34.7	-
PHF	0.810	0.777	0.625	0.802	0.917	0.875	0.563	0.897	0.750	0.851	0.625	0.784	0.500	0.898	0.850	0.888	0.925
Lights	89	84	5	178	64	130	9	203	3	497	155	655	4	423	118	545	1581
% Lights	94.7	96.6	100.0	95.7	97.0	97.7	100.0	97.6	100.0	98.6	100.0	98.9	100.0	96.6	99.2	97.1	97.8
Buses	0	0	0	0	1	0	0	1	0	0	0	0	0	5	0	5	6
% Buses	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.9	0.4
Trucks	5	3	0	8	1	3	0	4	0	7	0	7	0	10	1	11	30
% Trucks	5.3	3.4	0.0	4.3	1.5	2.3	0.0	1.9	0.0	1.4	0.0	1.1	0.0	2.3	0.8	2.0	1.9



Turning Movement Peak Hour Data Plot (4:15 PM)



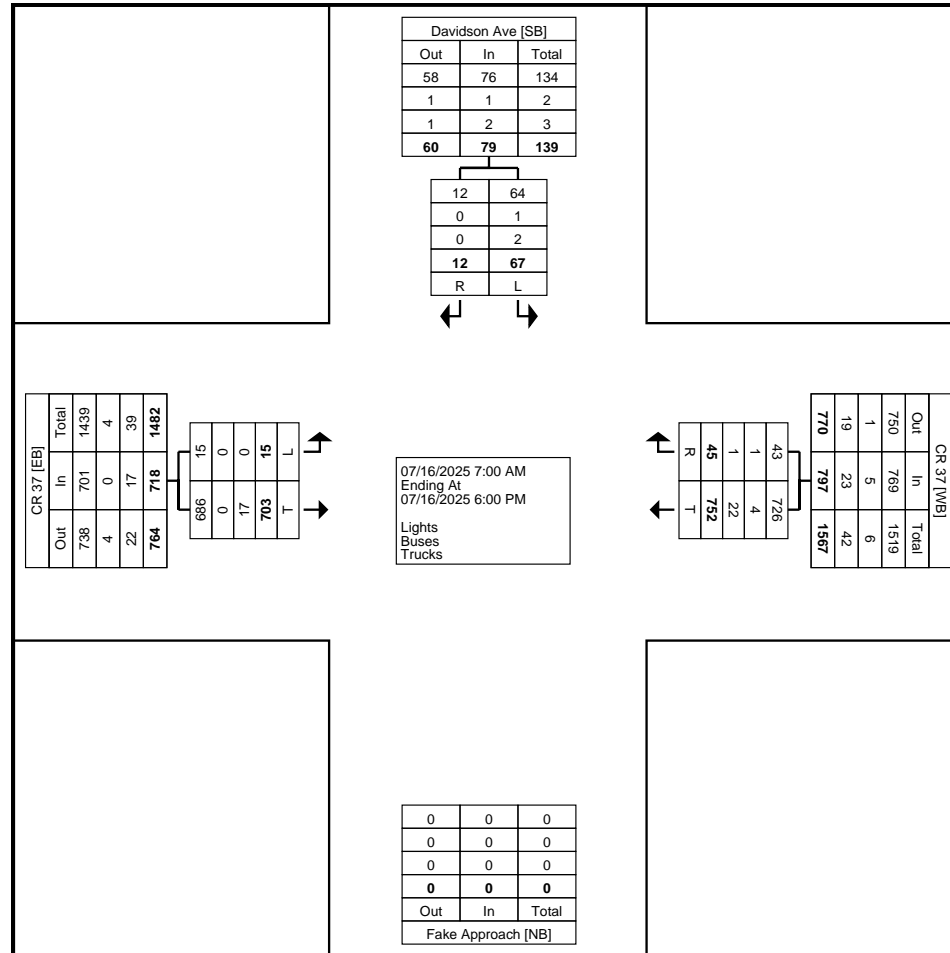
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Davidson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 1

### Turning Movement Data

Start Time	CR 37 Eastbound			CR 37 Westbound			Davidson Ave Southbound			Int. Total
	Left	Thru	App. Total	Thru	Right	App. Total	Left	Right	App. Total	
7:00 AM	0	39	39	34	1	35	2	0	2	76
7:15 AM	1	45	46	44	0	44	7	2	9	99
7:30 AM	0	38	38	55	4	59	5	1	6	103
7:45 AM	2	36	38	66	3	69	5	0	5	112
Hourly Total	3	158	161	199	8	207	19	3	22	390
8:00 AM	1	32	33	39	2	41	4	0	4	78
8:15 AM	0	27	27	35	3	38	2	2	4	69
8:30 AM	1	42	43	45	1	46	2	0	2	91
8:45 AM	2	37	39	33	0	33	1	0	1	73
Hourly Total	4	138	142	152	6	158	9	2	11	311
*** BREAK ***	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	55	55	43	5	48	2	2	4	107
4:15 PM	1	58	59	65	5	70	3	0	3	132
4:30 PM	0	73	73	50	4	54	6	1	7	134
4:45 PM	2	72	74	51	4	55	12	0	12	141
Hourly Total	3	258	261	209	18	227	23	3	26	514
5:00 PM	0	43	43	42	6	48	4	1	5	96
5:15 PM	0	44	44	52	2	54	6	1	7	105
5:30 PM	4	28	32	51	1	52	2	2	4	88
5:45 PM	1	34	35	47	4	51	4	0	4	90
Hourly Total	5	149	154	192	13	205	16	4	20	379
Grand Total	15	703	718	752	45	797	67	12	79	1594
Approach %	2.1	97.9	-	94.4	5.6	-	84.8	15.2	-	-
Total %	0.9	44.1	45.0	47.2	2.8	50.0	4.2	0.8	5.0	-
Lights	15	686	701	726	43	769	64	12	76	1546
% Lights	100.0	97.6	97.6	96.5	95.6	96.5	95.5	100.0	96.2	97.0
Buses	0	0	0	4	1	5	1	0	1	6
% Buses	0.0	0.0	0.0	0.5	2.2	0.6	1.5	0.0	1.3	0.4
Trucks	0	17	17	22	1	23	2	0	2	42
% Trucks	0.0	2.4	2.4	2.9	2.2	2.9	3.0	0.0	2.5	2.6



Turning Movement Data Plot



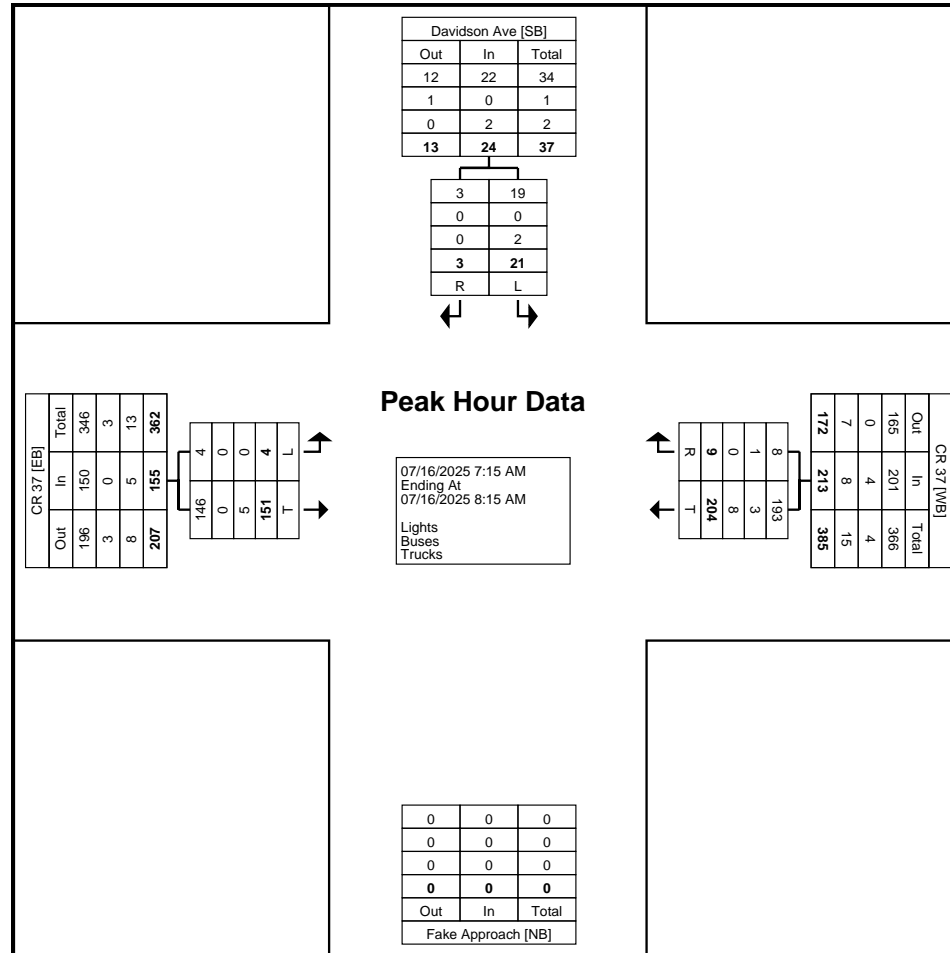
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Davidson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 3

### Turning Movement Peak Hour Data (7:15 AM)

Start Time	CR 37 Eastbound			CR 37 Westbound			Davidson Ave Southbound			Int. Total
	Left	Thru	App. Total	Thru	Right	App. Total	Left	Right	App. Total	
7:15 AM	1	45	46	44	0	44	7	2	9	99
7:30 AM	0	38	38	55	4	59	5	1	6	103
7:45 AM	2	36	38	66	3	69	5	0	5	112
8:00 AM	1	32	33	39	2	41	4	0	4	78
Total	4	151	155	204	9	213	21	3	24	392
Approach %	2.6	97.4	-	95.8	4.2	-	87.5	12.5	-	-
Total %	1.0	38.5	39.5	52.0	2.3	54.3	5.4	0.8	6.1	-
PHF	0.500	0.839	0.842	0.773	0.563	0.772	0.750	0.375	0.667	0.875
Lights	4	146	150	193	8	201	19	3	22	373
% Lights	100.0	96.7	96.8	94.6	88.9	94.4	90.5	100.0	91.7	95.2
Buses	0	0	0	3	1	4	0	0	0	4
% Buses	0.0	0.0	0.0	1.5	11.1	1.9	0.0	0.0	0.0	1.0
Trucks	0	5	5	8	0	8	2	0	2	15
% Trucks	0.0	3.3	3.2	3.9	0.0	3.8	9.5	0.0	8.3	3.8



Turning Movement Peak Hour Data Plot (7:15 AM)



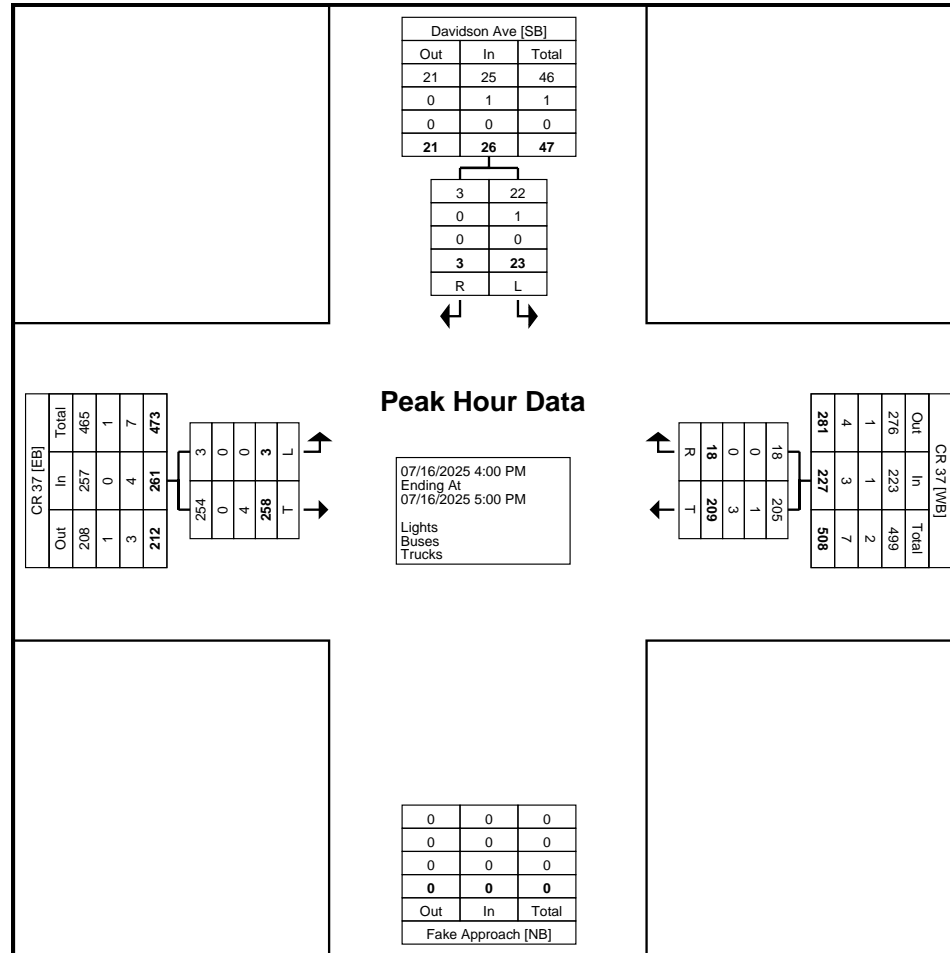
Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Davidson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 5

### Turning Movement Peak Hour Data (4:00 PM)

Start Time	CR 37 Eastbound			CR 37 Westbound			Davidson Ave Southbound			Int. Total
	Left	Thru	App. Total	Thru	Right	App. Total	Left	Right	App. Total	
4:00 PM	0	55	55	43	5	48	2	2	4	107
4:15 PM	1	58	59	65	5	70	3	0	3	132
4:30 PM	0	73	73	50	4	54	6	1	7	134
4:45 PM	2	72	74	51	4	55	12	0	12	141
Total	3	258	261	209	18	227	23	3	26	514
Approach %	1.1	98.9	-	92.1	7.9	-	88.5	11.5	-	-
Total %	0.6	50.2	50.8	40.7	3.5	44.2	4.5	0.6	5.1	-
PHF	0.375	0.884	0.882	0.804	0.900	0.811	0.479	0.375	0.542	0.911
Lights	3	254	257	205	18	223	22	3	25	505
% Lights	100.0	98.4	98.5	98.1	100.0	98.2	95.7	100.0	96.2	98.2
Buses	0	0	0	1	0	1	1	0	1	2
% Buses	0.0	0.0	0.0	0.5	0.0	0.4	4.3	0.0	3.8	0.4
Trucks	0	4	4	3	0	3	0	0	0	7
% Trucks	0.0	1.6	1.5	1.4	0.0	1.3	0.0	0.0	0.0	1.4



Turning Movement Peak Hour Data Plot (4:00 PM)



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 1

### Turning Movement Data

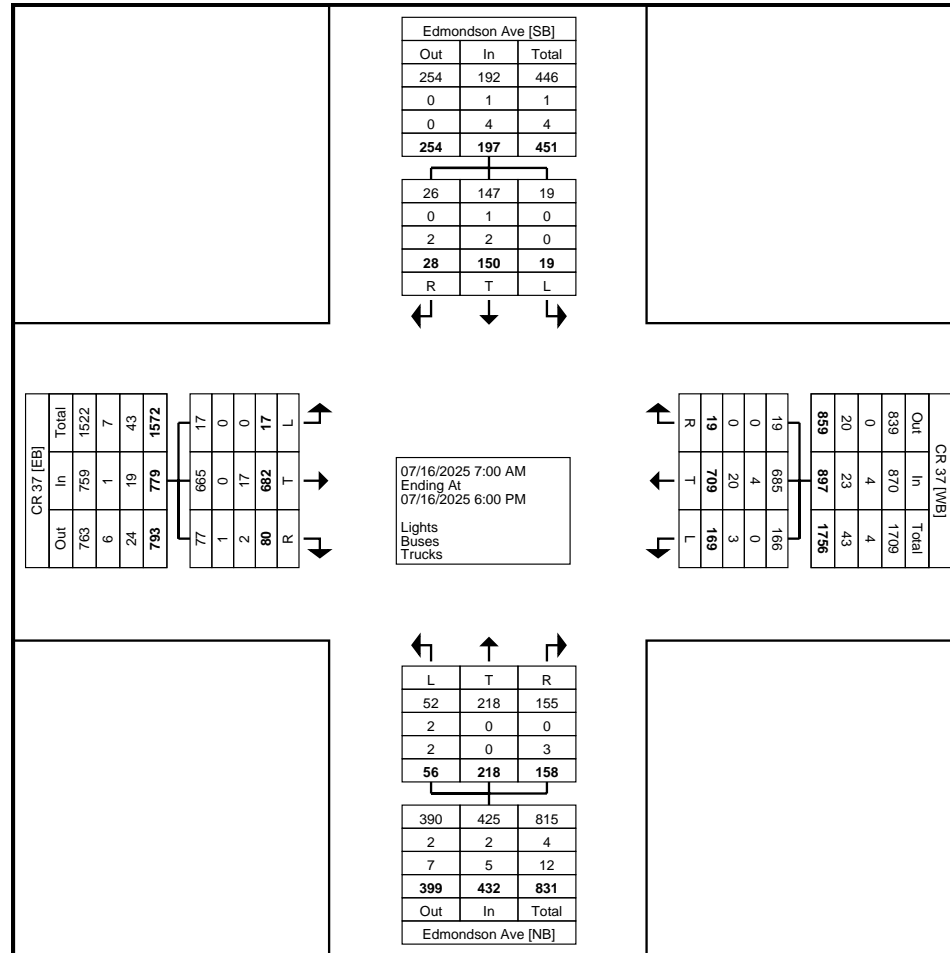
Start Time	CR 37 Eastbound				CR 37 Westbound				Edmondson Ave Northbound				Edmondson Ave Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
7:00 AM	1	36	2	39	12	30	0	42	0	11	5	16	2	11	0	13	110
7:15 AM	2	46	7	55	9	43	0	52	0	7	10	17	2	6	1	9	133
7:30 AM	0	38	4	42	9	49	1	59	6	9	11	26	1	4	4	9	136
7:45 AM	0	34	7	41	8	66	1	75	3	11	14	28	1	5	3	9	153
Hourly Total	3	154	20	177	38	188	2	228	9	38	40	87	6	26	8	40	532
8:00 AM	0	29	5	34	8	34	2	44	4	6	11	21	1	6	3	10	109
8:15 AM	0	27	4	31	4	35	0	39	1	7	5	13	1	5	1	7	90
8:30 AM	1	38	4	43	10	41	0	51	1	10	6	17	4	7	2	13	124
8:45 AM	1	36	3	40	4	29	1	34	5	8	6	19	1	8	1	10	103
Hourly Total	2	130	16	148	26	139	3	168	11	31	28	70	7	26	7	40	426
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	5	55	6	66	14	45	2	61	6	20	7	33	1	14	2	17	177
4:15 PM	1	52	4	57	13	58	2	73	6	23	9	38	0	15	2	17	185
4:30 PM	1	72	3	76	20	50	2	72	5	17	18	40	0	14	4	18	206
4:45 PM	2	73	14	89	16	43	2	61	6	24	9	39	1	10	1	12	201
Hourly Total	9	252	27	288	63	196	8	267	23	84	43	150	2	53	9	64	769
5:00 PM	1	41	5	47	15	42	2	59	6	18	17	41	0	11	3	14	161
5:15 PM	1	44	6	51	14	49	3	66	3	20	9	32	0	15	0	15	164
5:30 PM	0	26	4	30	7	53	0	60	1	16	13	30	3	8	0	11	131
5:45 PM	1	35	2	38	6	42	1	49	3	11	8	22	1	11	1	13	122
Hourly Total	3	146	17	166	42	186	6	234	13	65	47	125	4	45	4	53	578
Grand Total	17	682	80	779	169	709	19	897	56	218	158	432	19	150	28	197	2305
Approach %	2.2	87.5	10.3	-	18.8	79.0	2.1	-	13.0	50.5	36.6	-	9.6	76.1	14.2	-	-
Total %	0.7	29.6	3.5	33.8	7.3	30.8	0.8	38.9	2.4	9.5	6.9	18.7	0.8	6.5	1.2	8.5	-
Lights	17	665	77	759	166	685	19	870	52	218	155	425	19	147	26	192	2246
% Lights	100.0	97.5	96.3	97.4	98.2	96.6	100.0	97.0	92.9	100.0	98.1	98.4	100.0	98.0	92.9	97.5	97.4
Buses	0	0	1	1	0	4	0	4	2	0	0	2	0	1	0	1	8
% Buses	0.0	0.0	1.3	0.1	0.0	0.6	0.0	0.4	3.6	0.0	0.0	0.5	0.0	0.7	0.0	0.5	0.3
Trucks	0	17	2	19	3	20	0	23	2	0	3	5	0	2	2	4	51
% Trucks	0.0	2.5	2.5	2.4	1.8	2.8	0.0	2.6	3.6	0.0	1.9	1.2	0.0	1.3	7.1	2.0	2.2



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 2



Turning Movement Data Plot



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 3

### Turning Movement Peak Hour Data (7:00 AM)

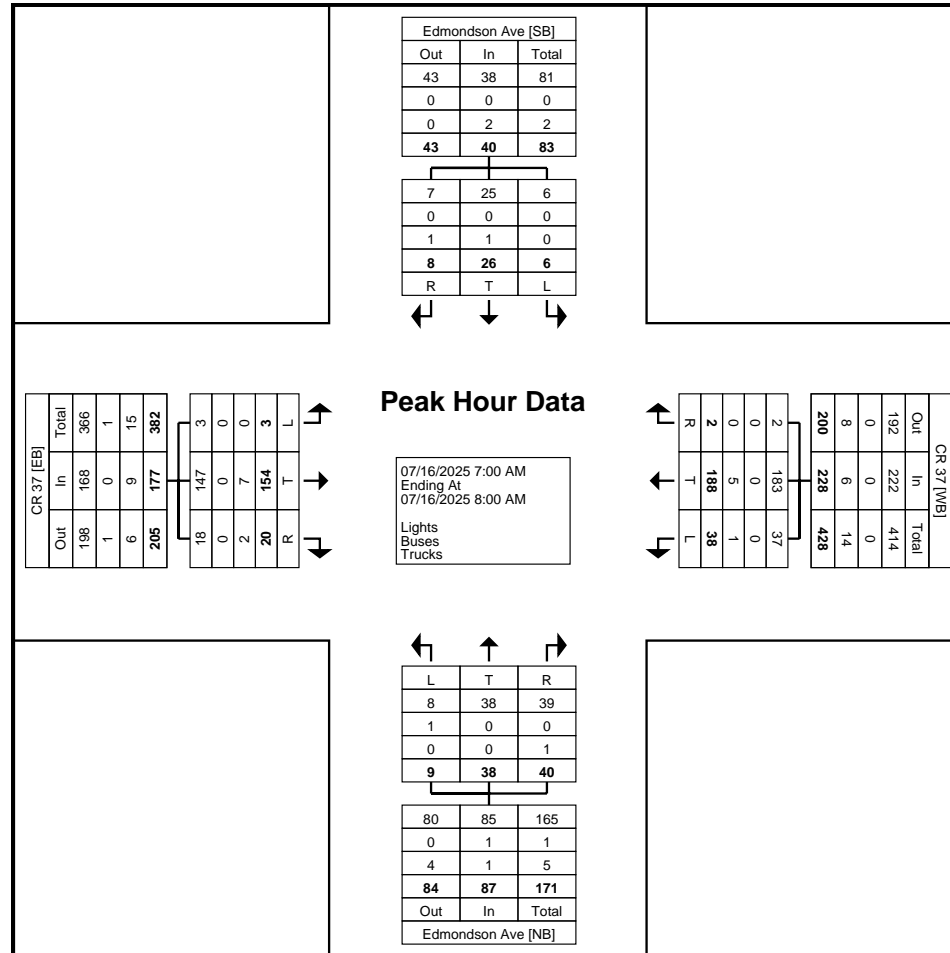
Start Time	CR 37 Eastbound				CR 37 Westbound				Edmondson Ave Northbound				Edmondson Ave Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
7:00 AM	1	36	2	39	12	30	0	42	0	11	5	16	2	11	0	13	110
7:15 AM	2	46	7	55	9	43	0	52	0	7	10	17	2	6	1	9	133
7:30 AM	0	38	4	42	9	49	1	59	6	9	11	26	1	4	4	9	136
7:45 AM	0	34	7	41	8	66	1	75	3	11	14	28	1	5	3	9	153
Total	3	154	20	177	38	188	2	228	9	38	40	87	6	26	8	40	532
Approach %	1.7	87.0	11.3	-	16.7	82.5	0.9	-	10.3	43.7	46.0	-	15.0	65.0	20.0	-	-
Total %	0.6	28.9	3.8	33.3	7.1	35.3	0.4	42.9	1.7	7.1	7.5	16.4	1.1	4.9	1.5	7.5	-
PHF	0.375	0.837	0.714	0.805	0.792	0.712	0.500	0.760	0.375	0.864	0.714	0.777	0.750	0.591	0.500	0.769	0.869
Lights	3	147	18	168	37	183	2	222	8	38	39	85	6	25	7	38	513
% Lights	100.0	95.5	90.0	94.9	97.4	97.3	100.0	97.4	88.9	100.0	97.5	97.7	100.0	96.2	87.5	95.0	96.4
Buses	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.2
Trucks	0	7	2	9	1	5	0	6	0	0	1	1	0	1	1	2	18
% Trucks	0.0	4.5	10.0	5.1	2.6	2.7	0.0	2.6	0.0	0.0	2.5	1.1	0.0	3.8	12.5	5.0	3.4



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 5

### Turning Movement Peak Hour Data (4:00 PM)

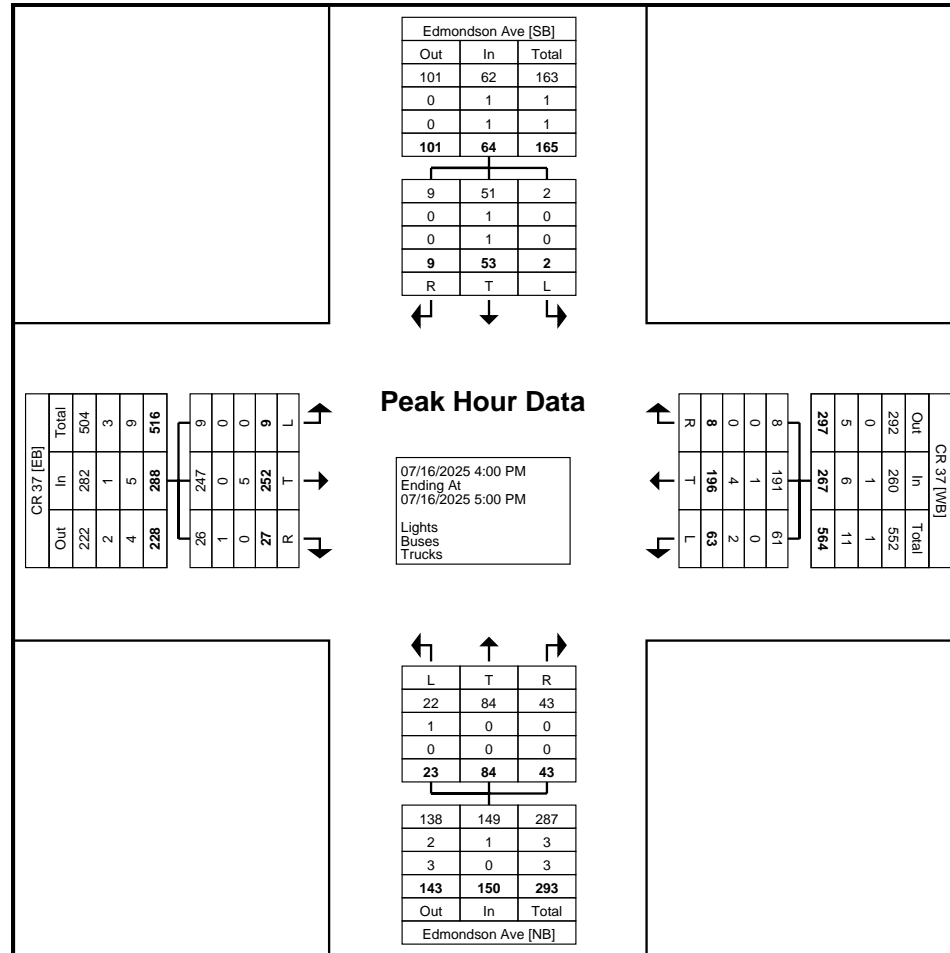
Start Time	CR 37 Eastbound				CR 37 Westbound				Edmondson Ave Northbound				Edmondson Ave Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
4:00 PM	5	55	6	66	14	45	2	61	6	20	7	33	1	14	2	17	177
4:15 PM	1	52	4	57	13	58	2	73	6	23	9	38	0	15	2	17	185
4:30 PM	1	72	3	76	20	50	2	72	5	17	18	40	0	14	4	18	206
4:45 PM	2	73	14	89	16	43	2	61	6	24	9	39	1	10	1	12	201
Total	9	252	27	288	63	196	8	267	23	84	43	150	2	53	9	64	769
Approach %	3.1	87.5	9.4	-	23.6	73.4	3.0	-	15.3	56.0	28.7	-	3.1	82.8	14.1	-	-
Total %	1.2	32.8	3.5	37.5	8.2	25.5	1.0	34.7	3.0	10.9	5.6	19.5	0.3	6.9	1.2	8.3	-
PHF	0.450	0.863	0.482	0.809	0.788	0.845	1.000	0.914	0.958	0.875	0.597	0.938	0.500	0.883	0.563	0.889	0.933
Lights	9	247	26	282	61	191	8	260	22	84	43	149	2	51	9	62	753
% Lights	100.0	98.0	96.3	97.9	96.8	97.4	100.0	97.4	95.7	100.0	100.0	99.3	100.0	96.2	100.0	96.9	97.9
Buses	0	0	1	1	0	1	0	1	1	0	0	1	0	1	0	1	4
% Buses	0.0	0.0	3.7	0.3	0.0	0.5	0.0	0.4	4.3	0.0	0.0	0.7	0.0	1.9	0.0	1.6	0.5
Trucks	0	5	0	5	2	4	0	6	0	0	0	0	0	1	0	1	12
% Trucks	0.0	2.0	0.0	1.7	3.2	2.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.6	1.6



Kimley-Horn  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: CR 37 & Edmondson Ave  
Site Code:  
Start Date: 07/16/2025  
Page No: 6



Turning Movement Peak Hour Data Plot (4:00 PM)

# wsb

701 Xenia Ave S, Suite 300  
Minneapolis, MN 55416

Fallon Ave & School Blvd  
6am to 7pm  
vehicles, heavy trucks, peds, bikes  
Monticello, MN

File Name : Fallon Ave & School Blvd  
Site Code : 3  
Start Date : 4/8/2025  
Page No : 1

### Groups Printed- vehicles & peds - heavy trucks & bikes

Start Time	Fallon Ave From North					From East					Fallon Ave From South					From West					Int. Total
	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	
06:00 AM	4	2	1	0	7	4	3	0	0	7	5	3	0	0	8	1	21	5	0	27	49
06:15 AM	0	4	0	0	4	1	4	1	0	6	11	9	3	0	23	2	29	4	0	35	68
06:30 AM	0	2	5	0	7	3	7	8	0	18	11	13	2	0	26	2	30	2	0	34	85
06:45 AM	3	2	5	0	10	9	14	4	0	27	17	9	2	0	28	1	31	8	0	40	105
Total	7	10	11	0	28	17	28	13	0	58	44	34	7	0	85	6	111	19	0	136	307
07:00 AM	2	6	7	0	15	15	23	3	0	41	13	14	2	0	29	4	33	12	0	49	134
07:15 AM	3	8	18	0	29	26	24	4	0	54	20	20	4	0	44	4	44	12	0	60	187
07:30 AM	9	8	25	32	74	29	27	11	0	67	20	30	2	0	52	1	41	37	19	98	291
07:45 AM	6	13	25	4	48	41	51	13	0	105	30	16	2	0	48	2	70	25	3	100	301
Total	20	35	75	36	166	111	125	31	0	267	83	80	10	0	173	11	188	86	22	307	913
08:00 AM	6	15	18	2	41	29	34	10	0	73	24	9	2	0	35	1	66	7	2	76	225
08:15 AM	6	3	8	1	18	8	26	1	0	35	5	9	2	0	16	4	37	5	0	46	115
08:30 AM	5	9	3	0	17	2	23	5	0	30	7	7	3	0	17	1	22	3	0	26	90
08:45 AM	7	6	5	0	18	12	23	1	0	36	6	4	1	0	11	2	26	3	0	31	96
Total	24	33	34	3	94	51	106	17	0	174	42	29	8	0	79	8	151	18	2	179	526
09:00 AM	7	3	8	1	19	3	20	4	0	27	5	7	2	0	14	3	19	4	0	26	86
09:15 AM	7	10	3	0	20	8	22	4	0	34	2	5	1	0	8	0	24	6	0	30	92
09:30 AM	7	6	2	0	15	2	13	5	0	20	3	9	2	1	15	4	20	8	0	32	82
09:45 AM	4	5	5	0	14	8	17	3	0	28	5	9	1	1	16	1	19	7	1	28	86
Total	25	24	18	1	68	21	72	16	0	109	15	30	6	2	53	8	82	25	1	116	346
10:00 AM	14	10	6	0	30	3	20	3	0	26	7	9	1	0	17	3	25	5	1	34	107
10:15 AM	8	9	4	0	21	4	28	0	0	32	8	8	0	3	19	3	24	6	5	38	110
10:30 AM	14	7	6	0	27	9	36	4	0	49	7	10	4	0	21	1	26	12	0	39	136
10:45 AM	11	6	3	0	20	4	31	1	0	36	1	6	4	0	11	1	27	7	0	35	102
Total	47	32	19	0	98	20	115	8	0	143	23	33	9	3	68	8	102	30	6	146	455
11:00 AM	8	5	4	1	18	4	33	3	0	40	3	3	1	0	7	4	22	7	0	33	98
11:15 AM	14	11	8	0	33	5	32	5	0	42	3	7	3	0	13	4	32	14	0	50	138
11:30 AM	12	9	6	0	27	7	37	3	0	47	6	4	1	0	11	4	29	8	0	41	126
11:45 AM	16	10	4	1	31	15	51	9	0	75	2	11	2	0	15	3	34	12	0	49	170
Total	50	35	22	2	109	31	153	20	0	204	14	25	7	0	46	15	117	41	0	173	532
12:00 PM	15	9	5	0	29	6	48	2	0	56	8	9	3	0	20	2	35	11	0	48	153
12:15 PM	11	10	6	0	27	5	42	1	0	48	2	5	5	0	12	1	35	11	0	47	134
12:30 PM	15	8	4	0	27	11	24	1	0	36	10	4	7	0	21	4	36	15	0	55	139
12:45 PM	11	10	5	0	26	9	55	8	0	72	7	9	3	1	20	5	37	10	0	52	170
Total	52	37	20	0	109	31	169	12	0	212	27	27	18	1	73	12	143	47	0	202	596
01:00 PM	13	8	10	0	31	6	39	7	0	52	3	5	1	0	9	2	26	12	0	40	132
01:15 PM	15	7	5	2	29	11	35	7	0	53	5	9	0	0	14	2	42	15	0	59	155
01:30 PM	12	13	9	1	35	7	26	9	0	42	4	5	3	1	13	3	35	10	0	48	138
01:45 PM	14	9	19	2	44	11	39	10	0	60	5	19	5	3	32	4	44	17	0	65	201
Total	54	37	43	5	139	35	139	33	0	207	17	38	9	4	68	11	147	54	0	212	626
02:00 PM	18	4	14	0	36	20	42	9	0	71	5	12	4	1	22	3	39	18	0	60	189
02:15 PM	23	19	15	38	95	32	41	5	0	78	7	11	5	0	23	7	34	18	19	78	274
02:30 PM	14	22	11	2	49	4	44	3	0	51	3	9	3	1	16	0	42	10	2	54	170
02:45 PM	16	15	17	1	49	7	57	15	0	79	8	10	3	0	21	8	39	13	1	61	210
Total	71	60	57	41	229	63	184	32	0	279	23	42	15	2	82	18	154	59	22	253	843
03:00 PM	17	19	15	11	62	24	73	29	0	126	9	12	3	1	25	3	60	14	3	80	293
03:15 PM	17	15	10	3	45	11	66	6	0	83	6	8	7	0	21	3	41	13	0	57	206
03:30 PM	22	20	7	3	52	11	42	11	0	64	5	10	4	0	19	7	30	9	2	48	183
03:45 PM	23	15	4	2	44	9	54	10	0	73	3	12	7	2	24	6	41	7	1	55	196
Total	79	69	36	19	203	55	235	56	0	346	23	42	21	3	89	19	172	43	6	240	878
04:00 PM	21	10	11	3	45	10	63	7	0	80	12	8	6	0	26	8	61	15	1	85	236
04:15 PM	16	19	13	0	48	13	68	14	0	95	9	17	3	1	30	8	47	10	2	67	240
04:30 PM	30	29	11	0	70	9	66	6	0	81	4	9	5	2	20	11	54	5	2	72	243
04:45 PM	17	24	9	3	53	16	66	16	0	98	10	17	5	5	37	3	70	13	1	87	275
Total	84	82	44	6	216	48	263	43	0	354	35	51	19	8	113	30	232	43	6	311	994

**wsb**

701 Xenia Ave S, Suite 300  
Minneapolis, MN 55416

Fallon Ave & School Blvd  
6am to 7pm  
vehicles, heavy trucks, peds, bikes  
Monticello, MN

File Name : Fallon Ave & School Blvd  
Site Code : 3  
Start Date : 4/8/2025  
Page No : 2

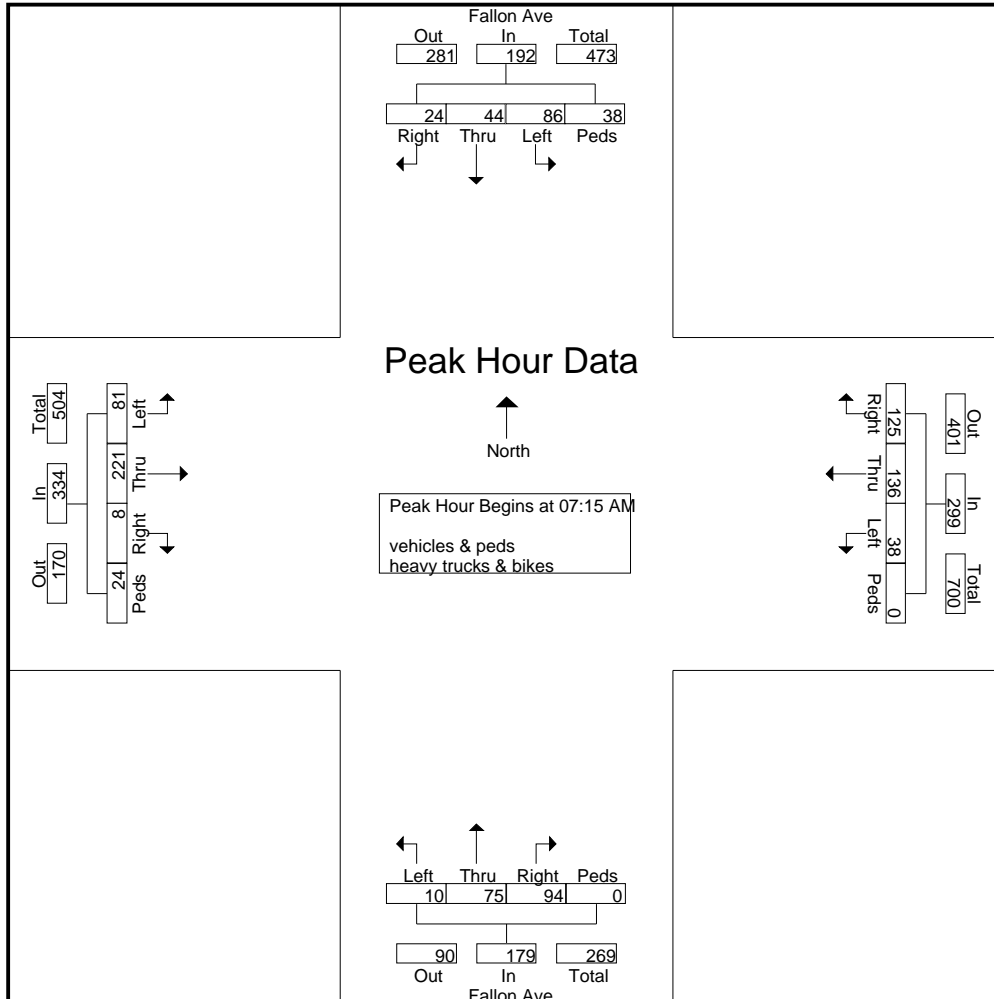
Groups Printed- vehicles & peds - heavy trucks & bikes

Start Time	Fallon Ave From North					From East					Fallon Ave From South					From West					Int. Total
	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	
05:00 PM	23	14	13	1	51	13	54	12	0	79	10	8	6	2	26	6	62	13	1	82	238
05:15 PM	25	20	6	1	52	8	82	16	0	106	7	18	9	1	35	8	59	10	0	77	270
05:30 PM	11	12	6	0	29	8	59	12	0	79	9	11	6	0	26	7	48	9	1	65	199
05:45 PM	9	14	20	2	45	18	78	12	0	108	12	12	6	2	32	7	57	10	2	76	261
Total	68	60	45	4	177	47	273	52	0	372	38	49	27	5	119	28	226	42	4	300	968
06:00 PM	16	13	8	4	41	10	67	12	0	89	6	14	6	0	26	5	46	9	4	64	220
06:15 PM	14	11	9	3	37	11	80	11	0	102	3	11	2	4	20	2	58	12	1	73	232
06:30 PM	15	8	12	2	37	3	47	5	0	55	8	7	5	1	21	12	42	9	0	63	176
06:45 PM	11	9	5	0	25	11	51	6	0	68	6	10	5	1	22	5	49	4	3	61	176
Total	56	41	34	9	140	35	245	34	0	314	23	42	18	6	89	24	195	34	8	261	804
Grand Total	637	555	458	126	1776	565	2107	367	0	3039	407	522	174	34	1137	198	2020	541	77	2836	8788
Apprch %	35.9	31.2	25.8	7.1		18.6	69.3	12.1	0		35.8	45.9	15.3	3		7	71.2	19.1	2.7		
Total %	7.2	6.3	5.2	1.4	20.2	6.4	24	4.2	0	34.6	4.6	5.9	2	0.4	12.9	2.3	23	6.2	0.9	32.3	
vehicles & peds	637	554	457	98	1746	564	2106	367	0	3037	407	522	174	19	1122	198	2020	541	60	2819	8724
% vehicles & peds	100	99.8	99.8	77.8	98.3	99.8	100	100	0	99.9	100	100	100	55.9	98.7	100	100	100	77.9	99.4	99.3
heavy trucks & bikes	0	1	1	28	30	1	1	0	0	2	0	0	0	15	15	0	0	0	17	17	64
% heavy trucks & bikes	0	0.2	0.2	22.2	1.7	0.2	0	0	0	0.1	0	0	0	44.1	1.3	0	0	0	22.1	0.6	0.7

Fallon Ave & School Blvd  
6am to 7pm  
vehicles, heavy trucks, peds, bikes  
Monticello, MN

File Name : Fallon Ave & School Blvd  
Site Code : 3  
Start Date : 4/8/2025  
Page No : 3

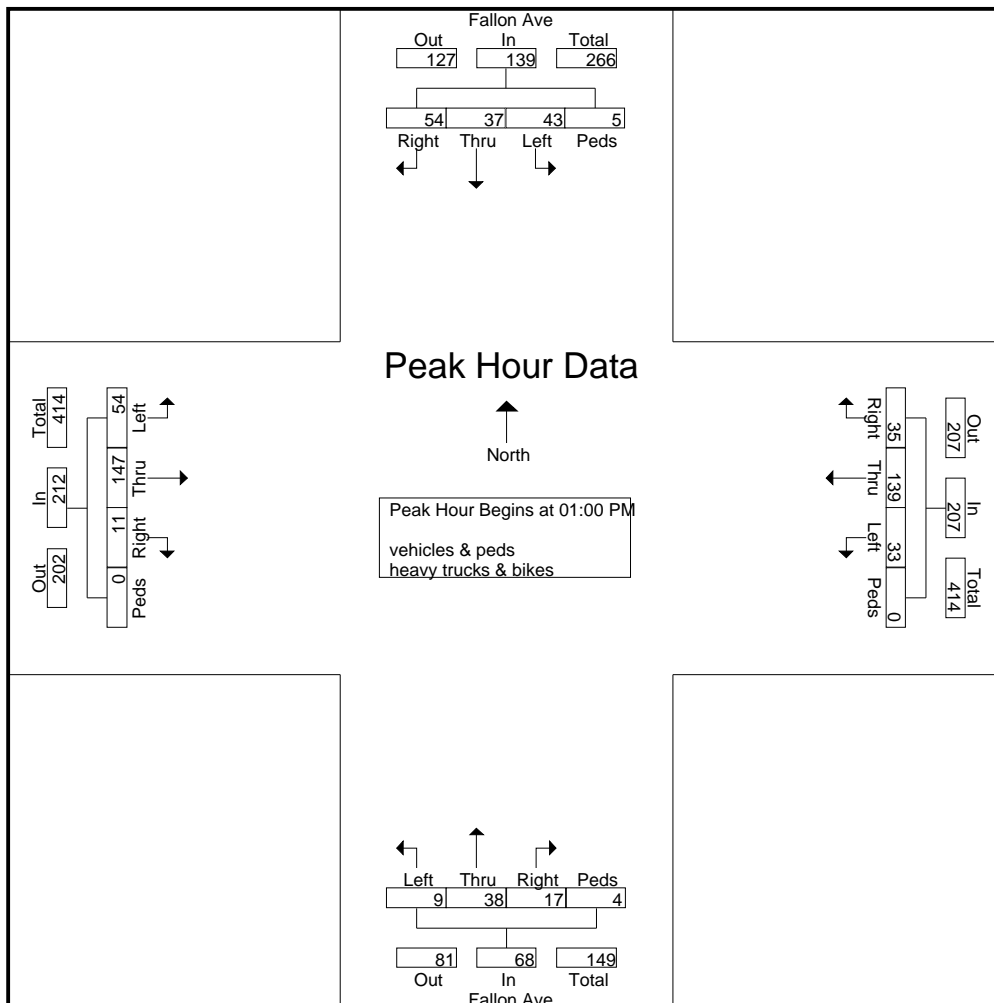
Start Time	Fallon Ave From North					From East					Fallon Ave From South					From West					Int. Total
	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	8	18	0	29	26	24	4	0	54	20	20	4	0	44	4	44	12	0	60	187
07:30 AM	9	8	25	32	74	29	27	11	0	67	20	30	2	0	52	1	41	37	19	98	291
07:45 AM	6	13	25	4	48	41	51	13	0	105	30	16	2	0	48	2	70	25	3	100	301
08:00 AM	6	15	18	2	41	29	34	10	0	73	24	9	2	0	35	1	66	7	2	76	225
Total Volume	24	44	86	38	192	125	136	38	0	299	94	75	10	0	179	8	221	81	24	334	1004
% App. Total	12.5	22.9	44.8	19.8		41.8	45.5	12.7	0		52.5	41.9	5.6	0		2.4	66.2	24.3	7.2		
PHF	.667	.733	.860	.297	.649	.762	.667	.731	.000	.712	.783	.625	.625	.000	.861	.500	.789	.547	.316	.835	.834



Fallon Ave & School Blvd  
6am to 7pm  
vehicles, heavy trucks, peds, bikes  
Monticello, MN

File Name : Fallon Ave & School Blvd  
Site Code : 3  
Start Date : 4/8/2025  
Page No : 4

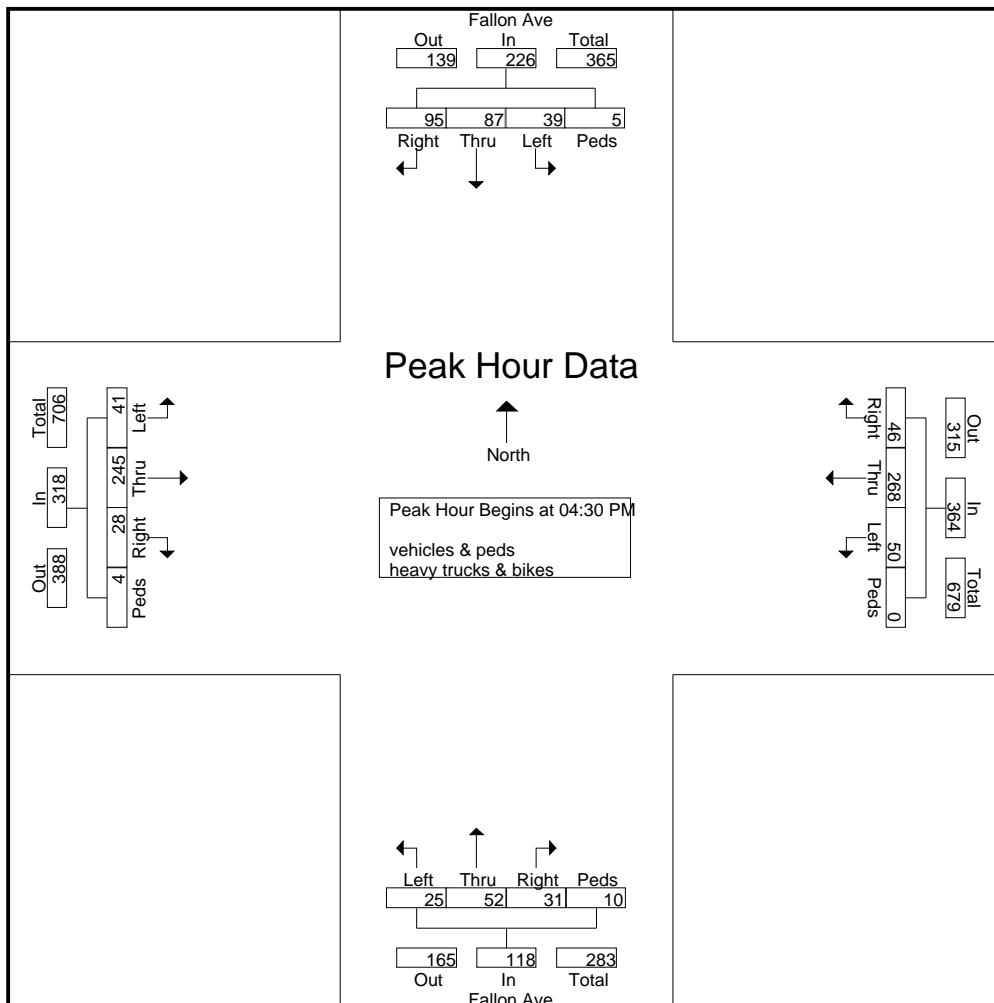
Start Time	Fallon Ave From North					From East					Fallon Ave From South					From West					Int. Total
	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	13	8	10	0	31	6	39	7	0	52	3	5	1	0	9	2	26	12	0	40	132
01:15 PM	15	7	5	2	29	11	35	7	0	53	5	9	0	0	14	2	42	15	0	59	155
01:30 PM	12	13	9	1	35	7	26	9	0	42	4	5	3	1	13	3	35	10	0	48	138
01:45 PM	14	9	19	2	44	11	39	10	0	60	5	19	5	3	32	4	44	17	0	65	201
Total Volume	54	37	43	5	139	35	139	33	0	207	17	38	9	4	68	11	147	54	0	212	626
% App. Total	38.8	26.6	30.9	3.6		16.9	67.1	15.9	0		25	55.9	13.2	5.9		5.2	69.3	25.5	0		
PHF	.900	.712	.566	.625	.790	.795	.891	.825	.000	.863	.850	.500	.450	.333	.531	.688	.835	.794	.000	.815	.779



Fallon Ave & School Blvd  
6am to 7pm  
vehicles, heavy trucks, peds, bikes  
Monticello, MN

File Name : Fallon Ave & School Blvd  
Site Code : 3  
Start Date : 4/8/2025  
Page No : 5

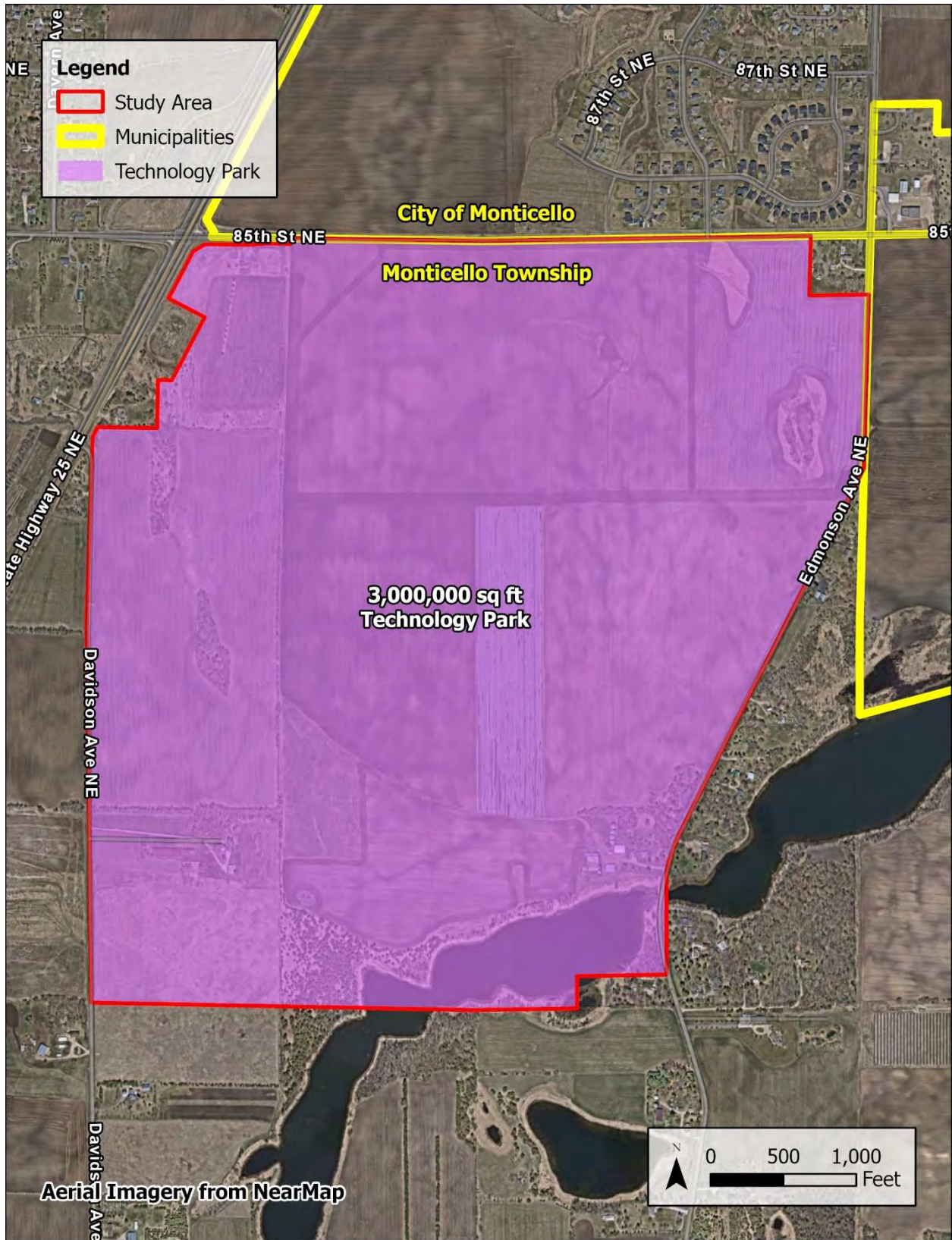
Start Time	Fallon Ave From North					From East					Fallon Ave From South					From West					Int. Total
	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	Right	Thru	Left	bikes	App. Total	
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	30	29	11	0	70	9	66	6	0	81	4	9	5	2	20	11	54	5	2	72	243
04:45 PM	17	24	9	3	53	16	66	16	0	98	10	17	5	5	37	3	70	13	1	87	275
05:00 PM	23	14	13	1	51	13	54	12	0	79	10	8	6	2	26	6	62	13	1	82	238
05:15 PM	25	20	6	1	52	8	82	16	0	106	7	18	9	1	35	8	59	10	0	77	270
Total Volume	95	87	39	5	226	46	268	50	0	364	31	52	25	10	118	28	245	41	4	318	1026
% App. Total	42	38.5	17.3	2.2		12.6	73.6	13.7	0		26.3	44.1	21.2	8.5		8.8	77	12.9	1.3		
PHF	.792	.750	.750	.417	.807	.719	.817	.781	.000	.858	.775	.722	.694	.500	.797	.636	.875	.788	.500	.914	.933



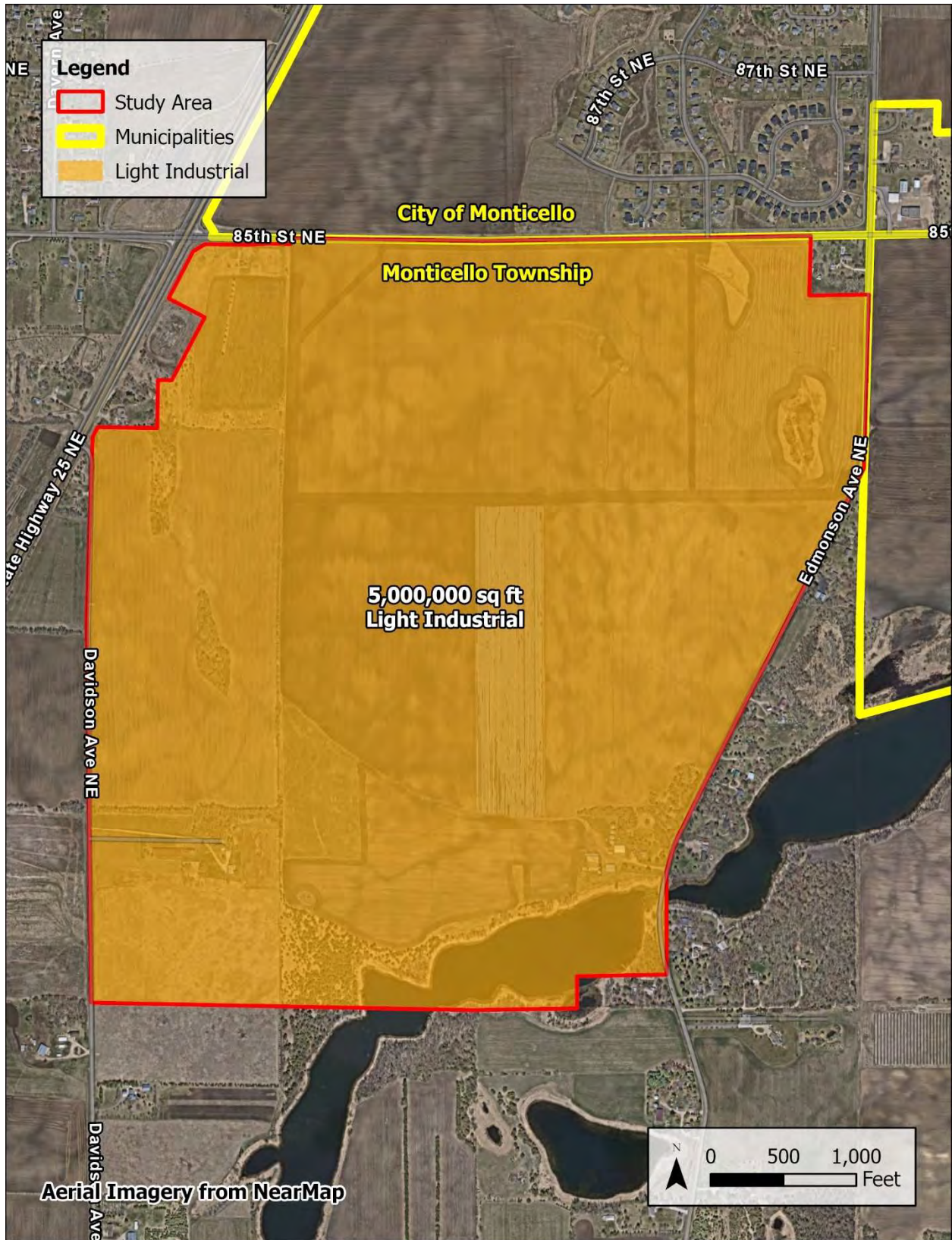
# Appendix C:

## Development Scenario Concepts

# Development Scenario 1



# Development Scenario 2



## Appendix D:

# Existing Year (2025) SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.4	4.0	1.2	0.0	0.9	0.0	0.0	0.0	3.1	0.3	3.2
Total Del/Veh (s)	33.0	25.1	2.5	30.3	31.4	2.6	3.6	2.5	0.3	5.8	8.3	1.2

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	8.0

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.4	7.0	1.3	3.7	7.7	1.2	0.3	0.6	0.0	0.2	0.3	0.1

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.0

3: MN 25 & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	3.7	0.0	0.0	0.0	3.3	0.4	3.6	0.0	0.0	0.0
Total Del/Veh (s)	10.3	13.1	4.0	13.1	13.2	7.4	16.4	8.9	2.4	20.7	10.4	3.8

3: MN 25 & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	10.2

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.8	4.5	1.5	1.1	3.2	0.0	2.0	2.9

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.4	0.2	2.4	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	1.2	2.2	1.5	0.9	0.7	0.6	4.9	11.4	3.0	3.3	5.1	2.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	2.7

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	0.0	2.9	0.9	0.0	1.4	0.6	0.7

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	20.8

Queuing and Blocking Report  
Existing (2025) - AM Peak Hour

07/22/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	100	34	73	33	12	46	68	2	27	145	41	26
Average Queue (ft)	43	2	16	10	1	7	10	0	3	54	4	2
95th Queue (ft)	84	15	47	31	5	28	38	1	16	114	30	13
Link Distance (ft)		910		3490		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	35	39
Average Queue (ft)	18	19
95th Queue (ft)	41	42
Link Distance (ft)	1038	1108
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: MN 25 & CSAH 37

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	LT	R	L	T	R	L	T	R
Maximum Queue (ft)	120	152	25	16	92	21	22	119	33
Average Queue (ft)	51	60	1	1	31	2	2	49	4
95th Queue (ft)	92	111	18	8	70	11	11	104	18
Link Distance (ft)	1468	4207			1187			3330	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			100	500		500	500		500
Storage Blk Time (%)	1	2	0						
Queuing Penalty (veh)	0	0	0						

Queuing and Blocking Report  
Existing (2025) - AM Peak Hour

07/22/2025

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	51
Average Queue (ft)	1	13
95th Queue (ft)	9	38
Link Distance (ft)	4207	4515
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	8	24	64	43
Average Queue (ft)	0	3	30	19
95th Queue (ft)	5	15	49	43
Link Distance (ft)			604	1936
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	300		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	25	41
Average Queue (ft)	6	4
95th Queue (ft)	21	22
Link Distance (ft)	1109	220
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.1	0.2	4.0	0.1	0.0	0.2	0.0	0.0	0.0	3.0	0.4	3.1
Total Del/Veh (s)	60.3	52.8	2.4	55.1	43.6	2.7	4.1	2.6	0.5	6.5	7.9	1.6

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	9.0

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.5	4.7	2.0	4.4	9.0	2.8	0.9	1.0	0.1	0.8	0.8	0.2

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.2

3: MN 25 & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.2	3.9	0.0	0.0	0.0	2.9	0.9	3.1	0.0	0.0	0.1
Total Del/Veh (s)	18.2	19.2	4.7	17.2	19.3	5.3	20.9	11.5	3.0	25.6	12.9	5.2

3: MN 25 & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	12.2

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.6	3.2	1.6	1.5	4.2	0.0	2.6	2.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	3.4	0.3	3.6	0.2	0.2	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.2	3.0	2.1	1.4	1.1	0.3	8.5	13.1	4.2	4.7	4.8	2.6

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.8

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.8	3.5	0.7	0.0	2.7	0.6	0.7

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	24.3

Queuing and Blocking Report  
Existing (2025) - PM Peak Hour

07/22/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	131	55	60	95	33	80	94	8	28	149	128	7
Average Queue (ft)	45	11	16	31	6	11	17	0	6	63	12	1
95th Queue (ft)	99	37	45	76	22	47	59	4	21	123	55	4
Link Distance (ft)		910		3490		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	48	52	25	28
Average Queue (ft)	21	26	2	2
95th Queue (ft)	46	46	12	15
Link Distance (ft)	1038	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: MN 25 & CSAH 37

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	LT	R	L	T	R	L	T	R
Maximum Queue (ft)	143	169	23	16	179	53	16	180	52
Average Queue (ft)	62	70	1	2	69	7	1	61	10
95th Queue (ft)	115	126	17	9	143	24	8	136	33
Link Distance (ft)	1468	4207			1187			3330	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			100	500		500	500		500
Storage Blk Time (%)	2	3	0						
Queuing Penalty (veh)	0	0	0						

Queuing and Blocking Report  
Existing (2025) - PM Peak Hour

07/22/2025

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	19	47
Average Queue (ft)	1	16
95th Queue (ft)	8	41
Link Distance (ft)	4207	4534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	15	3	35	80	72
Average Queue (ft)	1	0	7	37	28
95th Queue (ft)	8	2	26	63	55
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	37	81
Average Queue (ft)	9	8
95th Queue (ft)	26	42
Link Distance (ft)	1096	188
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.3	0.3	3.7	0.5	0.6	0.2	0.2	0.3	0.1	0.2	0.1
Total Del/Veh (s)	7.3	12.0	7.0	7.1	10.6	5.9	7.5	9.3	6.2	7.2	8.2	5.0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	8.7

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	11.0

Queuing and Blocking Report  
Existing (2025) - AM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	48	136	95	122	112	94
Average Queue (ft)	9	64	43	52	51	45
95th Queue (ft)	35	108	75	93	87	74
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)			0	0		
Queuing Penalty (veh)			0	0		

Network Summary

Network wide Queuing Penalty: 0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	0.4	0.3	3.5	0.4	0.5	0.2	0.1	0.1	0.2	0.2	0.2
Total Del/Veh (s)	6.3	11.4	5.8	7.1	11.8	6.7	6.5	8.1	4.3	7.5	8.7	5.3

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	9.3

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	11.9

Queuing and Blocking Report  
Existing (2025) - PM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	39	105	48	122	71	105
Average Queue (ft)	20	57	24	64	38	51
95th Queue (ft)	43	89	45	103	61	82
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Network Summary

Network wide Queuing Penalty: 0

## Appendix E:

# Opening Year (2030) No-Build SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.3	3.9	1.0	0.0	1.1	0.0	0.0	0.0	3.3	0.3	3.3
Total Del/Veh (s)	33.4	32.6	2.8	26.8	28.4	2.5	7.7	2.7	0.4	6.5	8.9	1.4

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	8.4

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Total Del/Veh (s)	3.3	6.8	1.5	3.3	7.7	1.1	0.2	0.7	0.1	0.3	0.3	0.2

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.1

3: MN 25 & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	3.8	0.0	0.0	0.0	3.7	0.4	3.6	0.0	0.0	0.0
Total Del/Veh (s)	13.5	15.0	4.5	14.7	16.9	5.0	18.7	9.3	2.6	19.8	11.1	4.2

3: MN 25 & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	11.3

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	4.8	1.7	1.5	3.9	0.0	1.4	3.0

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.2	0.3	3.0	0.1	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.1	2.3	2.0	1.1	0.9	0.1	5.6	11.7	2.6	5.7	5.6	2.0

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	2.6

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Total Del/Veh (s)	9.1	0.0	2.0	1.0	0.1	2.2	0.7	0.9

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	22.5

Queuing and Blocking Report  
 Opening Year (2030) No-Build - AM Peak Hour

07/22/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	106	39	66	39	6	44	70	12	36	143	96	16
Average Queue (ft)	49	7	17	9	0	9	13	0	5	59	7	1
95th Queue (ft)	93	29	47	32	3	32	49	8	22	115	44	8
Link Distance (ft)		910		3490		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500		500	550				500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	47	40	8
Average Queue (ft)	21	19	0
95th Queue (ft)	44	41	4
Link Distance (ft)	1038	1108	1236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: MN 25 & CSAH 37

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	LT	L	T	R	L	T	R
Maximum Queue (ft)	135	157	16	100	20	17	149	29
Average Queue (ft)	60	75	2	36	2	1	58	5
95th Queue (ft)	107	132	10	82	12	7	128	19
Link Distance (ft)	1468	4207		1187			3330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			500		500	500		500
Storage Blk Time (%)	2	4						
Queuing Penalty (veh)	0	0						

Queuing and Blocking Report  
 Opening Year (2030) No-Build - AM Peak Hour

07/22/2025

Intersection: 4: CSAH 37 & Davidson Ave

Movement	SB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	15
95th Queue (ft)	40
Link Distance (ft)	4515
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	15	6	26	53	52
Average Queue (ft)	1	0	5	27	23
95th Queue (ft)	7	3	20	44	44
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	19	59
Average Queue (ft)	7	7
95th Queue (ft)	21	35
Link Distance (ft)	1109	220
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0
---------------------------------

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.4	4.1	0.2	0.0	0.2	0.0	0.0	0.0	3.0	0.4	2.9
Total Del/Veh (s)	64.2	59.2	3.2	51.3	51.4	2.7	5.0	3.0	0.5	6.8	8.3	1.7

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	9.6

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2
Total Del/Veh (s)	4.6	5.7	1.5	4.6	9.2	2.4	0.8	1.1	0.1	1.0	0.8	0.1

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.4

3: MN 25 & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	3.9	0.0	0.0	0.0	2.9	0.9	3.1	0.0	0.0	0.0
Total Del/Veh (s)	20.4	20.5	4.6	19.4	19.3	5.7	30.1	12.7	3.5	18.0	13.8	5.6

3: MN 25 & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	13.3

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	3.0	1.8	1.2	4.6	0.0	1.4	2.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	3.3	0.4	3.0	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	2.6	3.2	1.8	1.6	1.3	0.1	9.8	14.4	5.1	8.7	5.2	3.9

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.4

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.7	4.3	0.7	0.0	4.0	1.1	1.0

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	26.4

Queuing and Blocking Report  
 Opening Year (2030) No-Build - PM Peak Hour

07/22/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	119	59	66	97	36	78	98	5	22	185	110	22
Average Queue (ft)	49	12	17	41	7	12	22	0	5	73	10	3
95th Queue (ft)	100	40	49	83	21	49	70	2	18	142	47	12
Link Distance (ft)		910		3490		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	43	58	37	20
Average Queue (ft)	24	29	2	2
95th Queue (ft)	44	50	17	13
Link Distance (ft)	1038	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: MN 25 & CSAH 37

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	LT	R	L	T	R	L	T	R
Maximum Queue (ft)	136	180	50	18	222	41	10	230	46
Average Queue (ft)	72	74	2	2	79	10	1	78	11
95th Queue (ft)	119	137	27	11	158	29	6	166	33
Link Distance (ft)	1468	4207			1187			3330	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			100	500		500	500		500
Storage Blk Time (%)	3	4	0						
Queuing Penalty (veh)	0	0	0						

**Intersection: 4: CSAH 37 & Davidson Ave**

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	15	46
Average Queue (ft)	1	18
95th Queue (ft)	7	40
Link Distance (ft)	4207	4534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	12	3	41	87	67
Average Queue (ft)	1	0	11	42	30
95th Queue (ft)	9	2	31	72	53
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 6: MN 25 & Davidson Ave**

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	38	124
Average Queue (ft)	10	17
95th Queue (ft)	27	70
Link Distance (ft)	1096	188
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Network Summary**

Network wide Queuing Penalty: 1
---------------------------------

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.3	0.4	3.7	0.6	0.5	0.2	0.2	0.3	0.2	0.2	0.2
Total Del/Veh (s)	6.6	13.7	8.4	7.5	10.8	6.3	8.7	9.8	6.6	7.6	9.5	5.7

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	9.6

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	11.8

Queuing and Blocking Report  
Opening Year (2030) No-Build - AM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	53	139	96	101	143	97
Average Queue (ft)	10	72	47	55	56	48
95th Queue (ft)	37	119	82	88	100	82
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	0.4	0.4	3.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.3
Total Del/Veh (s)	7.2	12.2	7.2	7.8	12.4	7.3	7.5	8.4	5.1	8.0	9.7	5.6

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	10.0

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	12.5

Queuing and Blocking Report  
Opening Year (2030) No-Build - PM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	47	120	57	129	80	113
Average Queue (ft)	22	61	29	67	41	58
95th Queue (ft)	46	98	50	109	67	91
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Network Summary

Network wide Queuing Penalty: 0

## Operational Results

### 2030 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	210		513		144	908		0.2312
2	NB MN 25	None	352		205		518	1064		0.3308
3	WB CSAH 37	None	211		386		171	973		0.2170
4	SB MN 25	None	443		214		383	1059		0.4181

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	4.80		4.80	0.80		A		A
2	NB MN 25	None	4.66		4.66	1.29		A		A
3	WB CSAH 37	None	4.41		4.41	0.74		A		A
4	SB MN 25	None	5.32		5.32	1.87		A		A

## Global Results

### Performance and Accidents

#### 2030 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1216		1216
Capacity	veh/hr	4004		4004
Average Delay	sec/veh	4.88		4.88
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	1.65		1.65

## Operational Results

### 2030 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	195		529		277	900		0.2166
2	NB MN 25	None	745		192		532	1071		0.6959
3	WB CSAH 37	None	226		673		264	828		0.2731
4	SB MN 25	None	588		218		681	1057		0.5561

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	4.75		4.75	0.76		A		A
2	NB MN 25	None	9.33		9.33	6.02		A		A
3	WB CSAH 37	None	5.54		5.54	1.05		A		A
4	SB MN 25	None	6.80		6.80	3.36		A		A

## Global Results

### Performance and Accidents

#### 2030 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1754		1754
Capacity	veh/hr	3856		3856
Average Delay	sec/veh	7.49		7.49
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.65		3.65

## Appendix F:

# Opening Year (2030) Build Scenario 1 SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.2	4.0	0.1	0.0	0.2	0.0	0.0	0.0	3.1	0.4	3.2
Total Del/Veh (s)	30.7	22.2	2.7	30.5	25.0	3.2	1.3	4.0	0.5	7.6	10.0	1.4

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	8.9

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.9	8.5	2.3	4.3	8.6	2.5	0.5	0.7	0.1	0.4	0.7	0.0

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.9

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	4.6	1.8	1.1	4.2	0.2	1.6	3.0

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	3.5	0.4	3.6	0.1	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	1.9	2.7	1.8	1.2	1.0	0.2	4.5	11.9	3.2	5.8	6.5	3.1

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.0

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	12.5	0.1	2.2	0.9	0.0	1.9	0.3	0.6

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Total Del/Veh (s)	1.5	1.2	3.2	2.6	5.3	3.3	2.8

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3	2.9	0.7	0.8	0.7	0.1	1.3

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	213.8

Queuing and Blocking Report  
 Opening Year (2030) Scenario 1 - AM Peak Hour

08/28/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	99	30	72	39	6	74	87	16	82	146	79	19
Average Queue (ft)	44	6	25	9	0	14	20	1	21	69	6	2
95th Queue (ft)	83	24	59	33	4	43	62	6	56	127	42	9
Link Distance (ft)		910		2183		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	56	59	20	4
Average Queue (ft)	27	29	1	0
95th Queue (ft)	48	49	7	3
Link Distance (ft)	2347	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	9	49
Average Queue (ft)	1	15
95th Queue (ft)	8	40
Link Distance (ft)	4207	4515
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report  
 Opening Year (2030) Scenario 1 - AM Peak Hour

08/28/2025

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	15	31	69	73
Average Queue (ft)	1	4	28	30
95th Queue (ft)	8	20	52	54
Link Distance (ft)			604	1936
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	300		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	19	32
Average Queue (ft)	5	4
95th Queue (ft)	18	21
Link Distance (ft)	1104	220
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: North Access & 85th St NE

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	42	55
Average Queue (ft)	3	33
95th Queue (ft)	20	50
Link Distance (ft)	2347	880
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Intersection: 9: Edmonson Ave & East Access

---

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	57	25
Average Queue (ft)	28	3
95th Queue (ft)	46	17
Link Distance (ft)	825	1968
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Zone Summary

---

Zone wide Queuing Penalty: 0

---

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.3	4.2	0.1	0.0	0.1	0.0	0.0	0.0	3.2	0.4	3.0
Total Del/Veh (s)	68.7	43.9	2.8	57.1	52.2	3.3	6.1	4.0	0.7	6.2	8.7	1.8

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	10.4

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	4.9	7.9	2.6	5.3	9.5	3.2	0.9	1.4	0.3	0.8	1.1	0.3

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.9

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3	3.0	1.9	1.5	4.5	0.0	1.4	2.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.1	3.3	0.4	3.4	0.1	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	3.0	3.0	1.9	1.5	1.3	0.3	10.3	14.5	5.0	9.5	5.7	4.8

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.5

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.5	5.2	0.8	0.1	4.4	0.3	0.7

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	1.4	1.1	2.8	2.7	5.6	3.3	3.1

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.3	3.3	0.8	0.9	0.8	0.3	1.6

Total Zone Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	139.4

Queuing and Blocking Report  
 Opening Year (2030) Scenario 1 - PM Peak Hour

08/28/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	128	49	108	110	35	97	112	8	37	162	126	16
Average Queue (ft)	53	12	35	38	7	20	33	1	11	75	19	2
95th Queue (ft)	108	38	84	85	24	63	93	4	29	144	76	8
Link Distance (ft)		910		2180		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	54	58	31	24
Average Queue (ft)	30	32	3	1
95th Queue (ft)	48	48	17	10
Link Distance (ft)	2349	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	20	42
Average Queue (ft)	1	15
95th Queue (ft)	9	38
Link Distance (ft)	4207	4534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	EB	EB	WB	NB	SB
Directions Served	L	T	R	L	LTR	LTR
Maximum Queue (ft)	27	9	1	31	84	83
Average Queue (ft)	3	0	0	9	42	40
95th Queue (ft)	15	6	1	27	74	69
Link Distance (ft)	4079			604 1936		
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	300		300		300	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	NB	SB
Directions Served	LR	T	L
Maximum Queue (ft)	55	4	34
Average Queue (ft)	12	0	6
95th Queue (ft)	34	0	26
Link Distance (ft)	1090	364	188
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: North Access & 85th St NE

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	20	63
Average Queue (ft)	1	35
95th Queue (ft)	10	55
Link Distance (ft)	2349	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Edmonson Ave & East Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	77	25
Average Queue (ft)	33	2
95th Queue (ft)	55	11
Link Distance (ft)	904	1969
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.3	0.3	3.6	0.7	0.5	0.3	0.3	0.3	0.1	0.2	0.2
Total Del/Veh (s)	6.8	15.0	9.4	9.0	11.9	6.7	11.1	11.2	8.2	7.7	9.9	5.6

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	10.7

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	13.0

Queuing and Blocking Report  
Opening Year (2030) Scenario 1 - AM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	53	196	105	125	155	104
Average Queue (ft)	9	80	57	59	65	48
95th Queue (ft)	35	146	93	97	115	83
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

Network Summary

Network wide Queuing Penalty: 0

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.4	0.5	3.5	0.5	0.5	0.2	0.2	0.2	0.3	0.2	0.2
Total Del/Veh (s)	7.5	13.1	8.1	7.8	12.7	7.8	7.7	9.0	5.5	8.4	10.1	5.8

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	10.4

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	12.9

Queuing and Blocking Report  
Opening Year (2030) Scenario 1 - PM Peak Hour

10/13/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	47	130	58	142	94	105
Average Queue (ft)	20	70	31	68	47	59
95th Queue (ft)	45	111	53	113	75	91
Link Distance (ft)		624		529	597	603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Network Summary

Network wide Queuing Penalty: 0

## Operational Results

### 2030 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	210		535		144	897		0.2340
2	NB MN 25	None	379		205		540	1064		0.3562
3	WB CSAH 37	None	218		404		180	963		0.2263
4	SB MN 25	None	458		221		401	1056		0.4338

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	4.87		4.87	0.82		A		A
2	NB MN 25	None	4.83		4.83	1.45		A		A
3	WB CSAH 37	None	4.50		4.50	0.78		A		A
4	SB MN 25	None	5.47		5.47	1.99		A		A

## Global Results

### Performance and Accidents

#### 2030 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1265		1265
Capacity	veh/hr	3981		3981
Average Delay	sec/veh	5.01		5.01
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	1.76		1.76

## Operational Results

### 2030 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	195		557		277	886		0.2200
2	NB MN 25	None	757		192		560	1071		0.7071
3	WB CSAH 37	None	235		681		268	824		0.2853
4	SB MN 25	None	607		227		689	1053		0.5765

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	4.84		4.84	0.83		A		A
2	NB MN 25	None	9.75		9.75	7.15		A		A
3	WB CSAH 37	None	5.66		5.66	1.20		A		A
4	SB MN 25	None	7.15		7.15	3.98		A		A

## Global Results

### Performance and Accidents

#### 2030 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1794		1794
Capacity	veh/hr	3833		3833
Average Delay	sec/veh	7.80		7.80
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.89		3.89

## Appendix G:

# Opening Year (2030) Build Scenario 2 SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.3	3.9	0.1	0.0	0.1	0.0	0.0	0.0	2.8	0.4	2.5
Total Del/Veh (s)	33.0	29.4	2.4	33.7	30.7	5.1	5.8	8.4	1.9	16.8	16.3	2.8

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	13.5

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	8.1	11.9	5.5	9.0	13.1	7.4	1.4	1.5	0.3	1.0	2.6	0.7

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	6.3

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.4	1.1	4.2	2.4	7.7	1.1	3.9	2.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.1	3.1	0.7	3.0	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	3.8	2.8	1.5	1.7	1.9	0.6	9.1	13.8	3.6	9.1	8.2	4.9

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	3.2

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.6	3.1	0.0	0.0	0.4
Total Del/Veh (s)	19.8	0.4	7.5	2.2	0.4	5.0	1.0	2.3

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	6.1	3.7	9.3	7.3	18.0	10.6	7.5

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.1	4.4	4.8	5.1	4.8	1.3	3.9

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	18.1

Queuing and Blocking Report  
 Opening Year (2030) Scenario 2 - AM Peak Hour

08/29/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	104	31	101	39	52	12	127	102	46	230	175	185
Average Queue (ft)	40	4	33	8	1	1	54	38	10	104	70	65
95th Queue (ft)	83	20	79	30	18	6	106	88	29	185	145	140
Link Distance (ft)		915		2167			820	820			1229	1229
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		300	500			500	550		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: MN 25 & 85th St NE

Movement	SB
Directions Served	R
Maximum Queue (ft)	10
Average Queue (ft)	1
95th Queue (ft)	5
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	500
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	83	130	66	19
Average Queue (ft)	43	60	7	1
95th Queue (ft)	72	100	35	10
Link Distance (ft)	2362	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report  
 Opening Year (2030) Scenario 2 - AM Peak Hour

08/29/2025

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	40	84
Average Queue (ft)	5	34
95th Queue (ft)	24	67
Link Distance (ft)	2117	4515
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (ft)	55	32	5	64	88
Average Queue (ft)	14	6	0	29	37
95th Queue (ft)	40	22	4	51	70
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	NB	SB
Directions Served	LR	R	L
Maximum Queue (ft)	96	20	121
Average Queue (ft)	43	1	48
95th Queue (ft)	81	8	93
Link Distance (ft)	1104		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		275	150
Storage Blk Time (%)			0
Queuing Penalty (veh)			1

Intersection: 8: North Access & 85th St NE

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	38	93	210
Average Queue (ft)	8	48	83
95th Queue (ft)	29	82	156
Link Distance (ft)	2167	2362	932
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Edmonson Ave & East Access

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	95	126	30
Average Queue (ft)	47	40	3
95th Queue (ft)	79	90	17
Link Distance (ft)	825	1968	1807
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1
---------------------------------

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.2	3.9	0.1	0.0	0.1	0.0	0.0	0.0	2.9	0.6	2.8
Total Del/Veh (s)	68.4	54.3	2.6	63.5	52.1	7.3	6.6	6.3	1.1	13.3	11.0	1.9

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	12.7

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.2
Total Del/Veh (s)	13.3	16.6	9.4	11.8	14.0	6.8	2.5	4.3	1.2	1.7	1.9	0.4

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	7.2

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.3	0.0	0.0	0.1	0.0	0.1	0.1
Total Del/Veh (s)	2.1	1.7	3.1	2.2	9.0	0.2	7.2	3.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	3.2	0.5	3.2	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	4.0	4.2	2.7	2.7	2.0	0.5	15.0	20.9	11.2	25.1	10.4	16.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	8.4

6: MN 25 & Davidson Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.9	1.4	0.6	3.0	0.0	0.0	0.4
Total Del/Veh (s)	86.9	69.1	3.8	0.8	7.3	0.7	12.8

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.4	0.4	0.2
Total Del/Veh (s)	3.6	2.1	4.1	4.0	17.8	15.0	11.1

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.4	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	14.6	11.5	2.0	2.5	2.4	0.4	7.9

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.2

Queuing and Blocking Report  
 Opening Year (2030) Scenario 2 - PM Peak Hour

08/29/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	121	45	174	114	236	32	153	141	30	133	243	222
Average Queue (ft)	52	11	74	38	36	7	50	40	2	54	99	35
95th Queue (ft)	107	36	141	86	158	22	111	102	14	104	191	134
Link Distance (ft)		910		2180			813	813			1229	1229
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		300	500			500	550		
Storage Blk Time (%)	0											
Queuing Penalty (veh)	0											

Intersection: 1: MN 25 & 85th St NE

Movement	SB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	3
95th Queue (ft)	13
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	500
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	153	103	61	36
Average Queue (ft)	72	47	13	5
95th Queue (ft)	126	82	43	22
Link Distance (ft)	2349	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report  
 Opening Year (2030) Scenario 2 - PM Peak Hour

08/29/2025

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	57	113
Average Queue (ft)	5	46
95th Queue (ft)	29	81
Link Distance (ft)	2117	4534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	R	L	R	LTR	LTR
Maximum Queue (ft)	39	1	48	11	118	214
Average Queue (ft)	5	0	14	0	50	90
95th Queue (ft)	23	1	38	6	93	176
Link Distance (ft)					604	1936
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	300	300	300	300		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: MN 25 & Davidson Ave

Movement	WB	NB	SB	B14
Directions Served	LR	T	L	T
Maximum Queue (ft)	471	12	96	11
Average Queue (ft)	193	0	37	0
95th Queue (ft)	429	7	73	8
Link Distance (ft)	1091	1332	188	813
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: North Access & 85th St NE

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	15	42	356
Average Queue (ft)	1	9	153
95th Queue (ft)	9	34	287
Link Distance (ft)	2180	2349	1028
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Edmonson Ave & East Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	256	79
Average Queue (ft)	112	11
95th Queue (ft)	205	43
Link Distance (ft)	904	1969
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0
---------------------------------

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.0	0.3	0.3	3.5	1.7	1.6	0.3	0.3	0.2	0.1	0.1	0.2
Total Del/Veh (s)	8.7	43.9	35.4	55.7	29.1	20.8	18.7	18.5	13.8	11.4	13.0	9.5

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	1.4
Total Del/Veh (s)	34.8

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	37.2

Queuing and Blocking Report  
Opening Year (2030) Scenario 2 - AM Peak Hour

10/14/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	52	444	440	751	222	142
Average Queue (ft)	8	155	197	199	81	58
95th Queue (ft)	33	375	426	706	156	106
Link Distance (ft)		1510		1297	966	918
Upstream Blk Time (%)				3		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)	400		400			
Storage Blk Time (%)		4	12	1		
Queuing Penalty (veh)		0	35	3		

Network Summary

Network wide Queuing Penalty: 39

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.4	0.4	2.8	0.6	0.6	0.3	0.2	0.3	0.3	0.2	0.2
Total Del/Veh (s)	7.4	29.1	25.5	8.7	16.5	11.0	19.7	18.5	16.4	12.4	13.7	8.6

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	18.3

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	21.1

Queuing and Blocking Report  
Opening Year (2030) Scenario 2 - PM Peak Hour

10/14/2025

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	48	331	80	199	226	141
Average Queue (ft)	23	138	40	84	104	69
95th Queue (ft)	44	267	66	153	189	117
Link Distance (ft)		1407		1499	1054	918
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	400		400			
Storage Blk Time (%)		1				
Queuing Penalty (veh)		0				

Network Summary

Network wide Queuing Penalty: 0

## Operational Results

### 2030 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	144		742		139	719		0.2002
2	EB School Blvd	None	334		444		442	876		0.3812
3	NB Fallon Ave	None	253		260		518	973		0.2600
4	WB School Blvd	None	681		200		313	1005		0.6779

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	7.75		7.75	0.72		A		A
2	EB School Blvd	None	8.89		8.89	1.74		A		A
3	NB Fallon Ave	None	6.87		6.87	0.97		A		A
4	WB School Blvd	None	13.71		13.71	5.77		B		B

## Global Results

### Performance and Accidents

#### 2030 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1412		1412
Capacity	veh/hr	3573		3573
Average Delay	sec/veh	9.74		9.74
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.82		3.82

## Operational Results

### 2030 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	235		481		139	857		0.2743
2	EB School Blvd	None	457		311		405	946		0.4830
3	NB Fallon Ave	None	369		496		272	849		0.4348
4	WB School Blvd	None	487		133		732	1040		0.4683

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	7.67		7.67	1.03		A		A
2	EB School Blvd	None	9.93		9.93	2.48		A		A
3	NB Fallon Ave	None	9.88		9.88	2.08		A		A
4	WB School Blvd	None	9.11		9.11	2.32		A		A

## Global Results

### Performance and Accidents

#### 2030 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1548		1548
Capacity	veh/hr	3691		3691
Average Delay	sec/veh	8.32		8.32
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.58		3.58

## Operational Results

### 2030 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	210		568		144	876		0.2397
2	NB MN 25	None	564		205		573	1025		0.5505
3	WB CSAH 37	None	239		520		249	806		0.2966
4	SB MN 25	None	470		242		517	1038		0.4526

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	5.02		5.02	0.93		A		A
2	NB MN 25	None	6.69		6.69	3.41		A		A
3	WB CSAH 37	None	5.43		5.43	1.15		A		A
4	SB MN 25	None	5.74		5.74	2.40		A		A

## Global Results

### Performance and Accidents

#### 2030 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1483		1483
Capacity	veh/hr	3745		3745
Average Delay	sec/veh	5.95		5.95
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	2.45		2.45

## Operational Results

### 2030 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	195		734		277	789		0.2473
2	NB MN 25	None	806		192		737	1112		0.7251
3	WB CSAH 37	None	305		707		291	786		0.3882
4	SB MN 25	None	714		297		715	1075		0.6640

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	5.56		5.56	0.97		A		A
2	NB MN 25	None	10.59		10.59	8.44		B		B
3	WB CSAH 37	None	6.66		6.66	1.87		A		A
4	SB MN 25	None	9.36		9.36	6.50		A		A

## Global Results

### Performance and Accidents

#### 2030 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	2020		2020
Capacity	veh/hr	3761		3761
Average Delay	sec/veh	9.08		9.08
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	5.09		5.09

## Appendix H:

# Design Year (2045) No-Build SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.4	4.0	1.1	0.0	0.9	0.0	0.0	0.0	3.1	0.4	3.1
Total Del/Veh (s)	32.2	27.7	2.5	29.7	28.9	2.5	8.8	3.7	0.6	6.5	12.0	1.6

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	9.9

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	2.7	7.4	1.6	3.2	7.7	2.1	1.0	0.7	0.0	0.5	0.4	0.1

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.1

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.7	0.8	2.1	1.8	4.7	2.2	1.7

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	3.1	0.3	3.9	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	2.0	2.2	1.5	1.3	1.0	0.4	7.6	12.4	3.6	8.1	6.0	3.8

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.0

6: MN 25 & Future Roadway Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.5	2.0	0.0	0.0	0.2
Total Del/Veh (s)	21.8	4.4	1.6	0.7	7.1	5.5	3.8

---

Total Network Performance

---

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	14.5

Queuing and Blocking Report  
 Design Year (2045) No-Build - AM Peak Hour

08/28/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	123	34	74	52	9	81	90	12	38	201	159	23
Average Queue (ft)	59	6	19	11	1	12	27	0	5	91	26	1
95th Queue (ft)	104	24	50	36	6	48	70	1	21	167	108	9
Link Distance (ft)		910		3490		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500		500		550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	54	49	10	5
Average Queue (ft)	23	23	1	0
95th Queue (ft)	46	45	7	3
Link Distance (ft)	1038	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	51
Average Queue (ft)	1	20
95th Queue (ft)	12	46
Link Distance (ft)	2117	1313
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	16	1	46	70	59
Average Queue (ft)	1	0	7	32	25
95th Queue (ft)	7	1	27	53	49
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 6: MN 25 & Future Roadway**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	36	42
Average Queue (ft)	10	7
95th Queue (ft)	32	27
Link Distance (ft)	1928	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Network Summary**

Network wide Queuing Penalty: 0
---------------------------------

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.3	4.1	0.0	0.0	0.1	0.0	0.0	0.0	2.7	0.5	2.9
Total Del/Veh (s)	68.3	47.6	2.6	58.4	47.1	2.6	9.7	3.7	0.5	8.3	10.9	2.3

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	11.1

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Total Del/Veh (s)	4.5	6.0	2.5	6.4	9.8	2.8	1.1	1.5	0.3	1.1	1.1	0.5

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.8

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.5	0.3	0.0	0.0	0.1	0.2	0.2
Total Del/Veh (s)	2.0	1.1	2.2	1.6	5.7	2.6	1.8

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.0	0.1	3.2	0.5	3.3	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	3.4	3.6	2.3	2.7	1.6	0.4	14.3	18.3	9.1	10.9	6.2	4.9

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	5.5

6: MN 25 & Future Roadway Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.8	3.0	0.1	0.0	0.4
Total Del/Veh (s)	32.3	6.4	1.6	0.3	9.4	6.0	3.9

---

Total Network Performance

---

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	16.3

**Intersection: 1: MN 25 & 85th St NE**

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	131	63	101	132	55	108	114	16	34	216	177	28
Average Queue (ft)	63	16	25	46	13	22	37	1	9	103	33	3
95th Queue (ft)	119	46	69	104	37	65	88	8	25	177	117	15
Link Distance (ft)		912		3490		823	823			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

**Intersection: 2: Edmonson Ave & 85th St NE**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	54	78	27	25
Average Queue (ft)	26	33	4	2
95th Queue (ft)	47	56	19	13
Link Distance (ft)	1038	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 4: CSAH 37 & Davidson Ave**

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	15	47
Average Queue (ft)	1	19
95th Queue (ft)	11	42
Link Distance (ft)	2117	1923
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	R	L	T	R	LTR	LTR
Maximum Queue (ft)	23	9	58	3	2	121	84
Average Queue (ft)	2	0	18	0	0	60	37
95th Queue (ft)	12	4	41	2	2	105	66
Link Distance (ft)				1804		604	1936
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300	300	300		300		
Storage Blk Time (%)							
Queuing Penalty (veh)							

**Intersection: 6: MN 25 & Future Roadway**

Movement	WB	SB	B3
Directions Served	LR	L	T
Maximum Queue (ft)	54	43	186
Average Queue (ft)	19	13	7
95th Queue (ft)	43	38	136
Link Distance (ft)	1786		823
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)		250	
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Network Summary**

Network wide Queuing Penalty: 0
---------------------------------

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.9	0.4	0.4	2.7	0.5	0.5	0.3	0.3	0.2	0.3	0.2	0.2
Total Del/Veh (s)	17.5	38.8	32.3	10.9	14.0	9.0	14.4	14.9	11.7	11.7	12.2	8.4

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	20.0

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	22.6

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	185	537	118	139	200	145
Average Queue (ft)	23	165	58	69	77	63
95th Queue (ft)	115	436	100	116	144	108
Link Distance (ft)		1892		1581	1695	1502
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)		13	0	0		
Queuing Penalty (veh)		2	0	0		

Network Summary

Network wide Queuing Penalty: 3

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.0	0.4	0.5	2.5	0.5	0.5	0.2	0.2	0.2	0.3	0.3	0.2
Total Del/Veh (s)	8.8	17.3	12.9	10.0	17.7	12.7	8.8	9.9	6.1	11.6	12.9	9.4

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	14.1

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	17.1

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	58	198	168	242	90	140
Average Queue (ft)	26	95	40	99	51	75
95th Queue (ft)	50	166	98	180	78	119
Link Distance (ft)		2016		1561	1734	1497
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225		150			
Storage Blk Time (%)		0		4		
Queuing Penalty (veh)		0		3		

Network Summary

Network wide Queuing Penalty: 3

## Operational Results

### 2045 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	271		500		256	915		0.2962
2	NB MN 25	None	453		265		506	1034		0.4382
3	WB CSAH 37	None	281		498		220	916		0.3068
4	SB MN 25	None	570		186		593	1074		0.5309

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	5.17		5.17	1.12		A		A
2	NB MN 25	None	5.63		5.63	2.03		A		A
3	WB CSAH 37	None	5.24		5.24	1.17		A		A
4	SB MN 25	None	6.38		6.38	2.90		A		A

## Global Results

### Performance and Accidents

#### 2045 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1575		1575
Capacity	veh/hr	3938		3938
Average Delay	sec/veh	5.75		5.75
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	2.52		2.52

## Operational Results

### 2045 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	EB CSAH 37	None	252		683		358	823		0.3063
2	NB MN 25	None	959		248		687	1042		0.9201
3	WB CSAH 37	None	292		866		340	730		0.3999
4	SB MN 25	None	759		282		876	1025		0.7404

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	5.82		5.82	1.24		A		A
2	NB MN 25	None	24.95		24.95	23.31		C		C
3	WB CSAH 37	None	7.49		7.49	1.89		A		A
4	SB MN 25	None	11.13		11.13	7.49		B		B

## Global Results

### Performance and Accidents

#### 2045 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	2262		2262
Capacity	veh/hr	3620		3620
Average Delay	sec/veh	15.93		15.93
L.O.S. (Signal)	A – F	B		B
L.O.S. (Unsig)	A – F	C		C
Total Delay	veh.hrs	10.01		10.01

## Operational Results

### 2045 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	184		456		176	870		0.2115
2	EB School Blvd	None	400		239		401	984		0.4065
3	NB Fallon Ave	None	264		306		333	949		0.2783
4	WB School Blvd	None	378		254		316	976		0.3872

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	6.89		6.89	0.75		A		A
2	EB School Blvd	None	8.55		8.55	1.90		A		A
3	NB Fallon Ave	None	7.19		7.19	1.07		A		A
4	WB School Blvd	None	8.34		8.34	1.75		A		A

## Global Results

### Performance and Accidents

#### 2045 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1226		1226
Capacity	veh/hr	3779		3779
Average Delay	sec/veh	6.95		6.95
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	2.37		2.37

## Operational Results

### 2045 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	302		500		177	847		0.3567
2	EB School Blvd	None	432		320		482	941		0.4589
3	NB Fallon Ave	None	161		485		267	855		0.1884
4	WB School Blvd	None	508		169		477	1021		0.4976

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	8.76		8.76	1.50		A		A
2	EB School Blvd	None	9.58		9.58	2.26		A		A
3	NB Fallon Ave	None	6.68		6.68	0.63		A		A
4	WB School Blvd	None	9.67		9.67	2.60		A		A

## Global Results

### Performance and Accidents

#### 2045 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1403		1403
Capacity	veh/hr	3663		3663
Average Delay	sec/veh	8.11		8.11
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.16		3.16

## Appendix I:

# Design Year (2045) Build Scenario 1 SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.4	3.9	0.2	0.0	0.2	0.0	0.0	0.0	3.0	0.5	2.8
Total Del/Veh (s)	32.5	26.8	2.6	30.9	26.6	3.2	3.5	5.3	0.6	8.0	11.7	1.9

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	10.2

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	4.8	8.9	2.8	4.9	8.7	2.7	0.5	0.9	0.2	0.5	0.7	0.1

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	3.1

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.4	0.2	0.0	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.7	0.7	2.3	1.7	5.6	3.2	1.8

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.2	0.5	3.1	0.1	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	2.7	2.5	1.4	1.4	1.3	0.3	8.6	12.9	4.1	9.0	7.5	3.6

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.4

6: MN 25 & Future Roadway Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.5	2.0	0.1	0.0	0.2
Total Del/Veh (s)	10.2	3.2	1.5	0.7	7.2	5.6	3.7

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.7	1.0	3.7	2.5	5.4	3.2	2.7

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.7	3.2	0.8	1.1	0.8	0.2	1.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	15.0

**Intersection: 1: MN 25 & 85th St NE**

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	138	43	86	51	9	92	106	10	84	194	142	37
Average Queue (ft)	60	7	28	11	0	23	32	1	23	86	20	3
95th Queue (ft)	114	29	64	36	4	66	81	7	56	157	83	18
Link Distance (ft)		910		2179		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

**Intersection: 2: Edmonson Ave & 85th St NE**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	58	53	15	14
Average Queue (ft)	32	29	1	1
95th Queue (ft)	49	50	8	6
Link Distance (ft)	2351	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 4: CSAH 37 & Davidson Ave**

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	15	60
Average Queue (ft)	1	19
95th Queue (ft)	8	45
Link Distance (ft)	2117	1313
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	22	4	33	64	93
Average Queue (ft)	2	0	7	32	36
95th Queue (ft)	13	2	24	54	65
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 6: MN 25 & Future Roadway**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	26	46
Average Queue (ft)	9	9
95th Queue (ft)	27	31
Link Distance (ft)	1928	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 8: North Access & 85th St NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	47	67
Average Queue (ft)	4	33
95th Queue (ft)	23	56
Link Distance (ft)	2351	966
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Intersection: 9: Edmonson Ave & East Access

---

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	74	31
Average Queue (ft)	31	4
95th Queue (ft)	56	19
Link Distance (ft)	1116	1968
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Network Summary

---

Network wide Queuing Penalty: 0

---

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.3	4.1	0.2	0.0	0.2	0.0	0.0	0.0	2.7	0.5	2.8
Total Del/Veh (s)	66.8	47.4	2.9	65.8	59.9	3.4	10.7	4.5	0.4	9.2	11.7	2.1

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	12.3

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	6.6	8.5	3.0	6.4	10.4	4.8	1.4	1.7	0.3	1.3	1.5	0.5

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	3.5

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.7	0.3	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	2.4	1.1	2.5	2.1	5.8	2.4	1.9

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.1	3.4	0.5	3.1	0.3	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	4.0	3.7	2.4	2.5	1.8	0.3	15.5	19.2	10.7	16.5	7.8	7.4

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	6.2

6: MN 25 & Future Roadway Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.8	2.7	0.1	0.0	0.4
Total Del/Veh (s)	36.9	8.1	1.6	0.3	10.5	6.2	4.1

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.7	1.4	3.2	2.8	5.5	3.2	3.1

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.7	3.8	0.8	1.0	0.9	0.2	1.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	17.7

**Intersection: 1: MN 25 & 85th St NE**

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	152	51	122	139	44	99	134	12	58	226	195	40
Average Queue (ft)	65	16	43	54	12	28	42	1	16	116	51	4
95th Queue (ft)	122	44	97	113	32	80	105	7	41	205	152	19
Link Distance (ft)		912		2210		823	823			1230	1230	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

**Intersection: 2: Edmonson Ave & 85th St NE**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	65	71	43	33
Average Queue (ft)	32	34	5	3
95th Queue (ft)	52	56	25	16
Link Distance (ft)	2320	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 4: CSAH 37 & Davidson Ave**

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	9	52
Average Queue (ft)	0	21
95th Queue (ft)	6	45
Link Distance (ft)	2117	1923
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	WB	NB	SB
Directions Served	L	R	L	LTR	LTR
Maximum Queue (ft)	16	9	55	139	118
Average Queue (ft)	2	0	18	61	49
95th Queue (ft)	11	5	43	111	91
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 6: MN 25 & Future Roadway**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	63	44
Average Queue (ft)	19	13
95th Queue (ft)	47	37
Link Distance (ft)	1786	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 8: North Access & 85th St NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	16	63
Average Queue (ft)	1	35
95th Queue (ft)	8	55
Link Distance (ft)	2320	1025
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Intersection: 9: Edmonson Ave & East Access

---

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	65	27
Average Queue (ft)	34	2
95th Queue (ft)	56	14
Link Distance (ft)	846	1969
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

---

Network Summary

---

Network wide Queuing Penalty: 0

---

## Operational Results

### 2045 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	271		685		187	822		0.3299
2	NB MN 25	None	480		265		691	1034		0.4644
3	WB CSAH 37	None	279		516		229	907		0.3076
4	SB MN 25	None	588		284		511	1024		0.5742

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	6.03		6.03	1.49		A		A
2	NB MN 25	None	5.88		5.88	2.52		A		A
3	WB CSAH 37	None	5.29		5.29	1.31		A		A
4	SB MN 25	None	7.32		7.32	3.97		A		A

## Global Results

### Performance and Accidents

#### 2045 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1618		1618
Capacity	veh/hr	3786		3786
Average Delay	sec/veh	6.32		6.32
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	2.84		2.84

## Operational Results

### 2045 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	252		711		358	809		0.3117
2	NB MN 25	None	971		248		715	1042		0.9316
3	WB CSAH 37	None	301		871		343	727		0.4138
4	SB MN 25	None	778		291		881	1021		0.7623

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	5.97		5.97	1.37		A		A
2	NB MN 25	None	28.85		28.85	34.09		D		D
3	WB CSAH 37	None	7.70		7.70	2.14		A		A
4	SB MN 25	None	12.28		12.28	9.77		B		B

## Global Results

### Performance and Accidents

#### 2045 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	2302		2302
Capacity	veh/hr	3599		3599
Average Delay	sec/veh	17.98		17.98
L.O.S. (Signal)	A – F	B		B
L.O.S. (Unsig)	A – F	C		C
Total Delay	veh.hrs	11.50		11.50

## Appendix J:

# Design Year (2045) Build Scenario 2 SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.4	4.0	0.1	0.0	0.1	0.0	0.0	0.0	2.7	0.9	2.5
Total Del/Veh (s)	31.2	23.9	2.6	28.7	34.1	5.3	13.0	9.7	2.6	26.2	16.9	2.2

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	15.7

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.3	0.2	0.2
Total Del/Veh (s)	8.9	11.9	5.9	10.4	14.0	10.6	1.5	1.5	0.2	0.9	2.7	0.5

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	6.7

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.3	0.3	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.8	1.3	4.4	2.8	7.2	4.5	3.1

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.0	0.8	3.0	0.2	0.2	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.8	3.2	2.6	2.0	2.3	0.8	15.8	17.6	5.8	13.3	10.2	7.3

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	4.3

6: MN 25 & Future Roadway (West Access) Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.2	0.7	2.3	0.1	0.0	0.4
Total Del/Veh (s)	33.8	13.5	3.3	1.1	13.2	8.4	7.0

**8: North Access & 85th St NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	6.7	4.1	10.1	8.2	20.1	11.4	8.2

**9: Edmonson Ave & East Access Performance by movement**

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.4	5.5	5.1	5.4	4.7	1.4	4.6

**Total Network Performance**

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	22.3

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	121	38	92	47	21	118	132	42	326	248	223	39
Average Queue (ft)	54	8	30	13	1	53	57	9	144	130	60	4
95th Queue (ft)	100	29	68	41	10	100	107	29	275	211	172	23
Link Distance (ft)		910		2179		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	100	153	55	18
Average Queue (ft)	44	65	7	1
95th Queue (ft)	76	110	34	9
Link Distance (ft)	2351	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	110	4	87
Average Queue (ft)	8	0	34
95th Queue (ft)	51	3	68
Link Distance (ft)	2117	4079	1313
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (ft)	63	35	12	89	104
Average Queue (ft)	18	9	1	35	46
95th Queue (ft)	45	28	5	65	84
Link Distance (ft)				604	1936
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300	300		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 6: MN 25 & Future Roadway (West Access)**

Movement	WB	NB	NB	SB
Directions Served	LR	T	R	L
Maximum Queue (ft)	166	9	9	113
Average Queue (ft)	61	0	0	53
95th Queue (ft)	122	5	3	98
Link Distance (ft)	1928	2309		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			275	150
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 8: North Access & 85th St NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	53	138	227
Average Queue (ft)	8	54	95
95th Queue (ft)	31	103	181
Link Distance (ft)	2179	2351	966
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

---

Intersection: 9: Edmonson Ave & East Access

---

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	136	112	36
Average Queue (ft)	53	42	4
95th Queue (ft)	102	84	20
Link Distance (ft)	1116	1968	1807
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

---

Network Summary

---

Network wide Queuing Penalty: 0

---

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.4	3.9	0.1	0.0	0.1	0.0	0.0	0.0	2.6	0.6	2.6
Total Del/Veh (s)	73.1	55.1	3.3	63.6	46.4	9.0	12.8	7.8	1.2	17.2	13.4	2.4

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	14.8

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	19.5	20.3	12.0	12.2	14.9	7.8	2.8	2.9	1.0	2.6	2.1	0.7

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	7.9

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.5	0.3	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	2.8	2.0	3.5	2.4	11.9	9.2	4.2

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.1	3.1	0.6	3.3	0.3	0.3	0.3	0.0	0.0	0.0
Total Del/Veh (s)	4.7	4.9	2.9	3.6	2.5	0.5	45.0	42.6	35.4	89.9	35.1	83.7

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	23.1

6: MN 25 & Future Roadway (West Access) Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	38.9	38.6	0.9	3.1	0.0	0.0	4.9
Total Del/Veh (s)	537.1	509.2	3.8	1.0	18.7	8.4	64.2

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.5	0.4	0.3
Total Del/Veh (s)	3.8	2.2	4.1	4.0	24.7	20.4	14.6

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.4	0.0	0.0	0.0	0.2
Total Del/Veh (s)	14.1	10.9	1.8	2.4	0.4	7.3

Total Network Performance

Denied Del/Veh (s)	2.6
Total Del/Veh (s)	53.5

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	180	60	169	186	273	50	158	166	24	155	245	214
Average Queue (ft)	71	16	86	49	56	13	70	72	3	59	135	66
95th Queue (ft)	140	46	148	121	200	35	141	143	13	117	227	177
Link Distance (ft)		912		2210			823	823			1230	1230
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		300	500			500	550		
Storage Blk Time (%)	0											
Queuing Penalty (veh)	0											

Intersection: 1: MN 25 & 85th St NE

Movement	SB
Directions Served	R
Maximum Queue (ft)	34
Average Queue (ft)	5
95th Queue (ft)	19
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	500
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	238	127	55	46
Average Queue (ft)	80	52	8	7
95th Queue (ft)	188	96	32	30
Link Distance (ft)	2320	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 4: CSAH 37 & Davidson Ave**

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	73	8	151
Average Queue (ft)	8	0	58
95th Queue (ft)	43	6	108
Link Distance (ft)	2117	4079	1923
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 5: Edmonson Ave & CSAH 37**

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	R	LTR	LTR
Maximum Queue (ft)	43	2	9	60	8	242	463
Average Queue (ft)	9	0	0	20	0	98	222
95th Queue (ft)	30	2	5	44	3	200	500
Link Distance (ft)		4079				604	1936
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300		300	300	300		
Storage Blk Time (%)							
Queuing Penalty (veh)							

**Intersection: 6: MN 25 & Future Roadway (West Access)**

Movement	WB	NB	SB	B3	B3
Directions Served	LR	T	L	T	
Maximum Queue (ft)	1643	13	119	37	39
Average Queue (ft)	946	1	49	1	1
95th Queue (ft)	1909	8	99	14	14
Link Distance (ft)	1786	1198		823	823
Upstream Blk Time (%)	13				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)			250		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: North Access & 85th St NE

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	14	47	530
Average Queue (ft)	1	8	189
95th Queue (ft)	8	30	429
Link Distance (ft)	2210	2320	1025
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Edmonson Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	235
Average Queue (ft)	109
95th Queue (ft)	197
Link Distance (ft)	846
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0
---------------------------------

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	17.3	19.1	23.4	85.1	85.0	79.9	3.3	0.5	0.4	0.2	0.2	0.2
Total Del/Veh (s)	137.3	233.2	217.7	172.6	95.8	91.2	14.1	15.8	11.1	16.6	16.3	12.1

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	43.9
Total Del/Veh (s)	123.8

Total Network Performance

Denied Del/Veh (s)	43.9
Total Del/Veh (s)	125.4

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	450	1552	450	1348	105	135	137
Average Queue (ft)	97	764	364	794	50	65	67
95th Queue (ft)	389	1625	578	1707	87	107	110
Link Distance (ft)		1504		1292		966	918
Upstream Blk Time (%)		14		36			
Queuing Penalty (veh)		0		0			
Storage Bay Dist (ft)	400		400		200		
Storage Blk Time (%)		60	61	2			
Queuing Penalty (veh)		9	216	9			

Network Summary

Network wide Queuing Penalty: 235

3: Fallon Avenue & School Boulevard Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	153.5	155.4	151.2	2.8	0.7	0.8	2.8	0.4	0.5	0.4	0.3	0.3
Total Del/Veh (s)	226.9	345.4	329.3	14.1	36.7	32.3	20.5	44.4	43.5	26.2	28.9	21.4

3: Fallon Avenue & School Boulevard Performance by movement

Movement	All
Denied Del/Veh (s)	46.5
Total Del/Veh (s)	114.5

Total Network Performance

Denied Del/Veh (s)	46.5
Total Del/Veh (s)	116.3

Intersection: 3: Fallon Avenue & School Boulevard

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	450	1446	106	369	225	446	234
Average Queue (ft)	251	1167	51	176	69	188	112
95th Queue (ft)	614	1802	85	303	203	374	199
Link Distance (ft)		1401		1493		1054	918
Upstream Blk Time (%)		56					
Queuing Penalty (veh)		0					
Storage Bay Dist (ft)	400		400		200		
Storage Blk Time (%)		90		0	0	22	
Queuing Penalty (veh)		38		0	0	12	

Network Summary

Network wide Queuing Penalty: 50

## Operational Results

### 2045 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	EB CSAH 37	None	271		715		187	803		0.3377
2	NB MN 25	None	665		265		721	1014		0.6556
3	WB CSAH 37	None	300		632		298	785		0.3822
4	SB MN 25	None	597		305		627	1008		0.5924

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	6.24		6.24	1.55		A		A
2	NB MN 25	None	8.71		8.71	5.50		A		A
3	WB CSAH 37	None	6.42		6.42	1.75		A		A
4	SB MN 25	None	7.74		7.74	4.32		A		A

## Global Results

### Performance and Accidents

#### 2045 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1833		1833
Capacity	veh/hr	3609		3609
Average Delay	sec/veh	7.65		7.65
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	3.90		3.90

## Operational Results

### 2045 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	EB CSAH 37	None	252		886		357	721		0.3493
2	NB MN 25	None	1020		248		890	1083		0.9422
3	WB CSAH 37	None	371		896		365	695		0.5337
4	SB MN 25	None	885		361		906	1041		0.8505

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	EB CSAH 37	None	7.00		7.00	1.64		A		A
2	NB MN 25	None	35.73		35.73	45.00		E		E
3	WB CSAH 37	None	9.57		9.57	3.35		A		A
4	SB MN 25	None	20.89		20.89	21.74		C		C

## Global Results

### Performance and Accidents

#### 2045 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	2528		2528
Capacity	veh/hr	3540		3540
Average Delay	sec/veh	23.83		23.83
L.O.S. (Signal)	A – F	C		C
L.O.S. (Unsig)	A – F	C		C
Total Delay	veh.hrs	16.74		16.74

## Operational Results

### 2045 AM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	186		850		179	662		0.2810
2	EB School Blvd	None	420		502		535	846		0.4966
3	NB Fallon Ave	None	329		324		598	939		0.3503
4	WB School Blvd	None	768		262		391	972		0.7902

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	9.34		9.34	1.15		A		A
2	EB School Blvd	None	10.96		10.96	2.81		B		B
3	NB Fallon Ave	None	8.08		8.08	1.50		A		A
4	WB School Blvd	None	18.78		18.78	10.21		C		C

## Global Results

### Performance and Accidents

#### 2045 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1703		1703
Capacity	veh/hr	3419		3419
Average Delay	sec/veh	12.75		12.75
L.O.S. (Signal)	A – F	B		B
L.O.S. (Unsig)	A – F	B		B
Total Delay	veh.hrs	6.03		6.03

## Operational Results

### 2045 PM Peak - 60 minutes

#### Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	SB Fallon Ave	None	308		605		181	791		0.3892
2	EB School Blvd	None	557		398		515	900		0.6187
3	NB Fallon Ave	None	416		605		350	791		0.5257
4	WB School Blvd	None	610		176		845	1017		0.5997

#### Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SB Fallon Ave	None	9.66		9.66	1.74		A		A
2	EB School Blvd	None	13.06		13.06	4.27		B		B
3	NB Fallon Ave	None	12.06		12.06	3.01		B		B
4	WB School Blvd	None	11.60		11.60	3.88		B		B

## Global Results

### Performance and Accidents

#### 2045 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1891		1891
Capacity	veh/hr	3500		3500
Average Delay	sec/veh	10.81		10.81
L.O.S. (Signal)	A – F	B		B
L.O.S. (Unsig)	A – F	B		B
Total Delay	veh.hrs	5.68		5.68

## Appendix K:

# Mitigated Design Year (2045) Build Scenario 2 SimTraffic Report

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.3	3.8	0.2	0.0	0.1	0.0	0.0	0.0	2.6	0.9	2.6
Total Del/Veh (s)	33.0	23.0	2.4	32.6	27.9	5.0	7.6	9.5	2.5	22.9	15.8	2.1

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	14.8

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	7.8	11.9	5.9	10.5	14.0	9.8	1.6	1.6	0.2	1.7	2.5	0.6

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	6.7

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.4	0.3	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.3	1.4	5.1	2.9	8.0	5.3	3.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.0	0.8	3.0	3.9	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.1	3.4	2.2	2.3	2.2	0.7	14.8	16.6	5.2	13.6	8.9	5.0

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	4.1

6: MN 25 & Future Roadway (West Access) Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	2.8	0.2	0.7	2.3	0.1	0.0	0.4
Total Del/Veh (s)	45.9	10.9	3.2	1.1	14.6	7.9	6.8

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	6.6	3.6	10.0	8.0	18.4	10.7	7.8

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.6	4.4	4.8	5.5	4.9	1.3	4.1

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	21.3

Queuing and Blocking Report  
 Design Year (2045) Scenario 2 MITIGATED - AM Peak Hour

08/29/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	L	T	L	T	T	R	L	T	T	R
Maximum Queue (ft)	149	33	74	47	17	154	130	54	275	238	177	29
Average Queue (ft)	64	5	30	11	2	52	62	8	126	116	49	3
95th Queue (ft)	120	23	67	36	9	110	122	29	231	199	143	15
Link Distance (ft)		910		2179		813	813			1229	1229	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		500			500	550			500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	79	127	64	25
Average Queue (ft)	43	63	5	1
95th Queue (ft)	71	108	32	11
Link Distance (ft)	2351	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	98	15	97
Average Queue (ft)	9	1	36
95th Queue (ft)	48	9	76
Link Distance (ft)	2117	4073	1313
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Queuing and Blocking Report

Design Year (2045) Scenario 2 MITIGATED - AM Peak Hour

08/29/2025

## Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	TR	L	TR
Maximum Queue (ft)	54	46	3	13	43	76	63	82
Average Queue (ft)	16	9	0	1	8	36	18	36
95th Queue (ft)	40	32	2	5	30	65	45	70
Link Distance (ft)			1797			606		1934
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300	300		300	250		250	
Storage Blk Time (%)								
Queuing Penalty (veh)								

## Intersection: 6: MN 25 & Future Roadway (West Access)

Movement	WB	WB	NB	NB	SB	SB	B14
Directions Served	L	R	T	R	L	T	T
Maximum Queue (ft)	53	114	4	9	148	86	22
Average Queue (ft)	10	45	0	0	56	5	1
95th Queue (ft)	33	92	3	6	110	56	12
Link Distance (ft)		1922	2309			4821	813
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	250			275	150		
Storage Blk Time (%)					1	0	
Queuing Penalty (veh)					4	0	

## Intersection: 8: North Access & 85th St NE

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	47	139	206
Average Queue (ft)	8	51	80
95th Queue (ft)	32	99	146
Link Distance (ft)	2179	2351	966
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Edmonson Ave & East Access

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	111	113	22
Average Queue (ft)	47	42	4
95th Queue (ft)	84	87	18
Link Distance (ft)	1116	1968	1807
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 4
---------------------------------

1: MN 25 & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.9	0.3	4.0	2.7	0.7	2.6	0.0	0.0	0.0	2.7	0.7	2.6
Total Del/Veh (s)	66.3	53.8	2.9	64.8	57.3	10.2	12.8	8.3	1.2	17.4	12.7	2.3

1: MN 25 & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	14.4

2: Edmonson Ave & 85th St NE Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	16.3	19.1	12.7	11.5	14.7	9.0	2.7	2.8	1.0	1.9	2.0	0.5

2: Edmonson Ave & 85th St NE Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	7.5

4: CSAH 37 & Davidson Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.2	0.3	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	2.4	2.0	3.5	2.8	11.7	8.4	4.2

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	3.2	0.6	3.4	3.9	0.4	0.3	0.0	0.0	0.0
Total Del/Veh (s)	5.7	5.0	2.7	4.3	2.4	0.4	24.8	54.2	40.4	52.8	9.7	8.5

5: Edmonson Ave & CSAH 37 Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	14.2

6: MN 25 & Future Roadway (West Access) Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	2.8	0.3	0.9	2.6	0.0	0.0	0.5
Total Del/Veh (s)	321.3	53.3	4.4	1.1	29.1	7.9	20.9

8: North Access & 85th St NE Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.7	2.4	3.7	2.9	4.2	3.4

9: Edmonson Ave & East Access Performance by movement

Movement	EBL	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.4	0.0	0.0	0.0	0.2
Total Del/Veh (s)	14.5	11.3	1.9	2.5	0.4	7.5

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	31.2

Queuing and Blocking Report  
 Design Year (2045) Scenario 2 MITIGATED - PM Peak Hour

08/29/2025

Intersection: 1: MN 25 & 85th St NE

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	143	67	170	117	308	42	178	178	22	159	210	201
Average Queue (ft)	60	18	85	43	87	13	78	75	2	66	128	64
95th Queue (ft)	117	49	157	95	265	33	156	151	12	133	203	170
Link Distance (ft)		912		2210			823	823			1230	1230
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375		300		300	500			500	550		
Storage Blk Time (%)	0											
Queuing Penalty (veh)	1											

Intersection: 1: MN 25 & 85th St NE

Movement	SB
Directions Served	R
Maximum Queue (ft)	45
Average Queue (ft)	5
95th Queue (ft)	21
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	500
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Edmonson Ave & 85th St NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	196	117	36	48
Average Queue (ft)	80	49	5	5
95th Queue (ft)	154	87	23	22
Link Distance (ft)	2320	1108	1056	1236
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

# Queuing and Blocking Report

Design Year (2045) Scenario 2 MITIGATED - PM Peak Hour

08/29/2025

## Intersection: 4: CSAH 37 & Davidson Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	60	6	127
Average Queue (ft)	6	0	56
95th Queue (ft)	32	5	99
Link Distance (ft)	2117	4073	1923
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 5: Edmonson Ave & CSAH 37

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	R	L	R	L	TR	L	TR
Maximum Queue (ft)	40	8	60	5	115	266	220	151
Average Queue (ft)	7	0	23	0	28	100	84	57
95th Queue (ft)	27	5	49	4	98	213	173	108
Link Distance (ft)						606		1934
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300	300	300	300	250		250	
Storage Blk Time (%)						3	1	0
Queuing Penalty (veh)						1	1	0

## Intersection: 6: MN 25 & Future Roadway (West Access)

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	R	L	T
Maximum Queue (ft)	285	434	4	4	204	66
Average Queue (ft)	142	160	0	0	64	0
95th Queue (ft)	297	389	3	4	147	0
Link Distance (ft)		1780	1198			4808
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	250			250	250	
Storage Blk Time (%)	13	7			0	
Queuing Penalty (veh)	24	5			3	

## Queuing and Blocking Report

Design Year (2045) Scenario 2 MITIGATED - PM Peak Hour

08/29/2025

### Intersection: 8: North Access & 85th St NE

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	67	79
Average Queue (ft)	9	45
95th Queue (ft)	40	70
Link Distance (ft)	2320	1025
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 9: Edmonson Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	233
Average Queue (ft)	112
95th Queue (ft)	195
Link Distance (ft)	846
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Network Summary

Network wide Queuing Penalty: 35

# Appendix L:

## Turn Lane Warrant Analysis

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

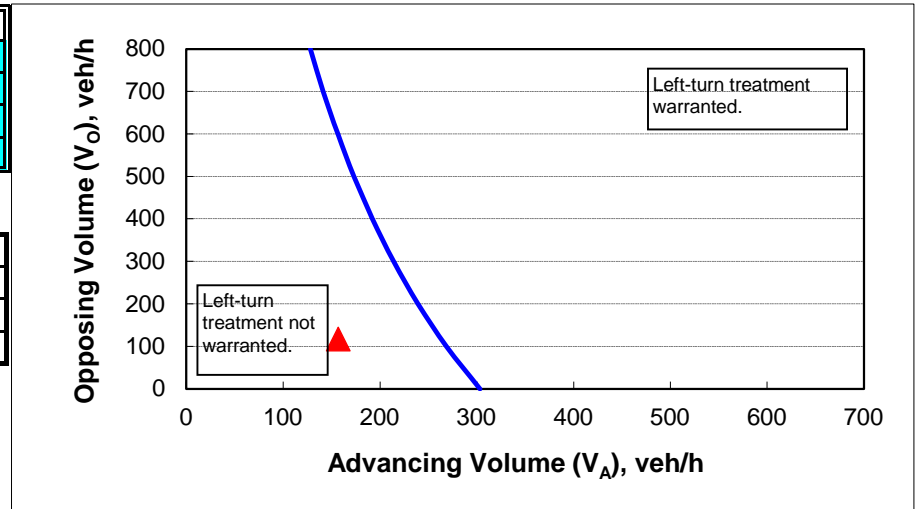
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	29%
Advancing volume ( $V_A$ ), veh/h:	157
Opposing volume ( $V_O$ ), veh/h:	117

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	263
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & East Access NBL - 2045 Scenario 1 (AM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

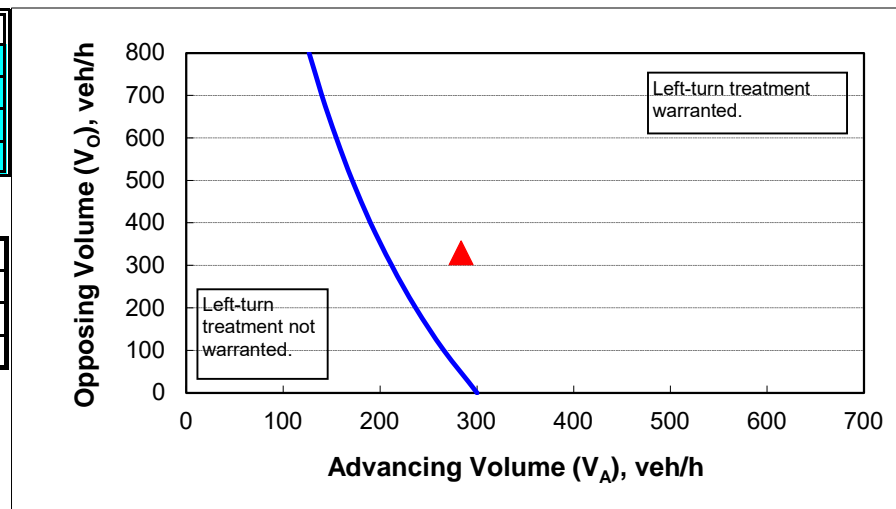
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	70%
Advancing volume ( $V_A$ ), veh/h:	284
Opposing volume ( $V_O$ ), veh/h:	329

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	205
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & East Access - 2030 Scenario 2 (AM Peak)

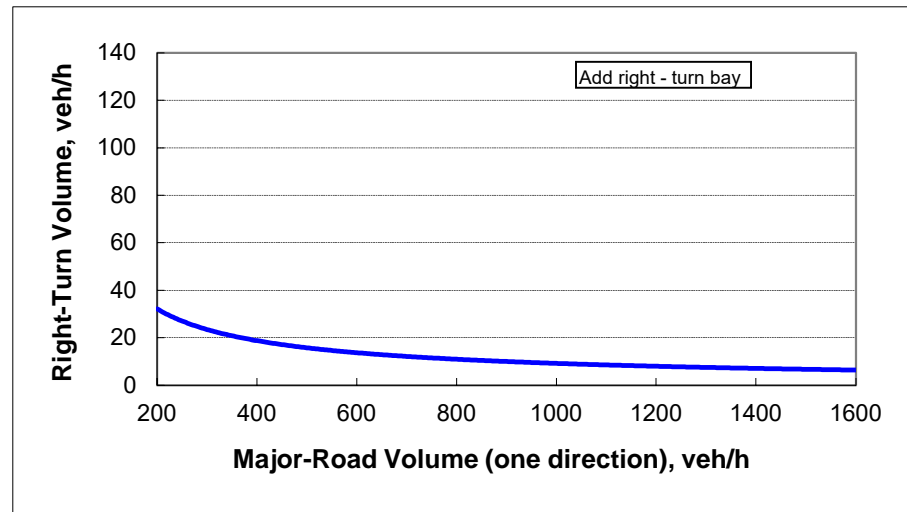
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	99
Right-turn volume, veh/h:	36

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	55
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



Edmonson Avenue & East Access SBR - 2030 Scenario 1 (AM Peak)

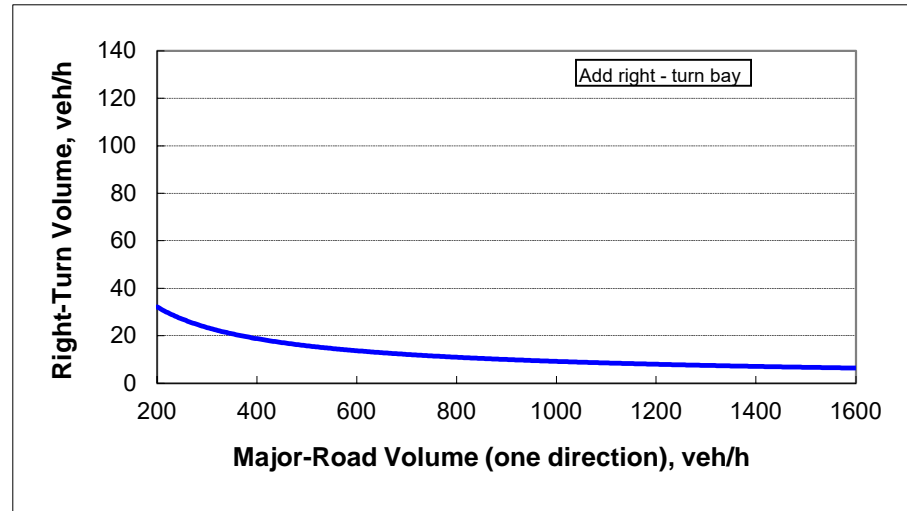
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	117
Right-turn volume, veh/h:	36

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	49
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



Edmonson Avenue & East Access SBR - 2045 Scenario 1 (AM Peak)

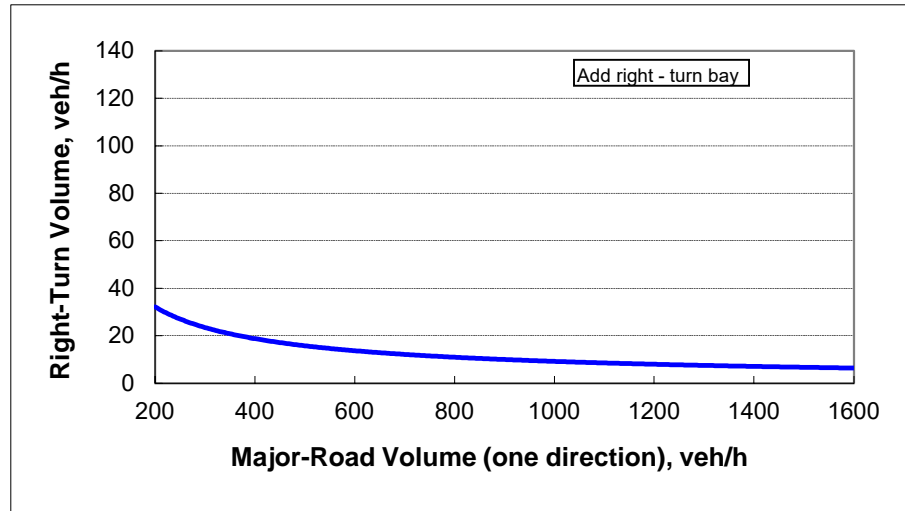
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	329
Right-turn volume, veh/h:	266

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	22
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



Edmonson Avenue & East Access SBR - 2030 Scenario 2 (AM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

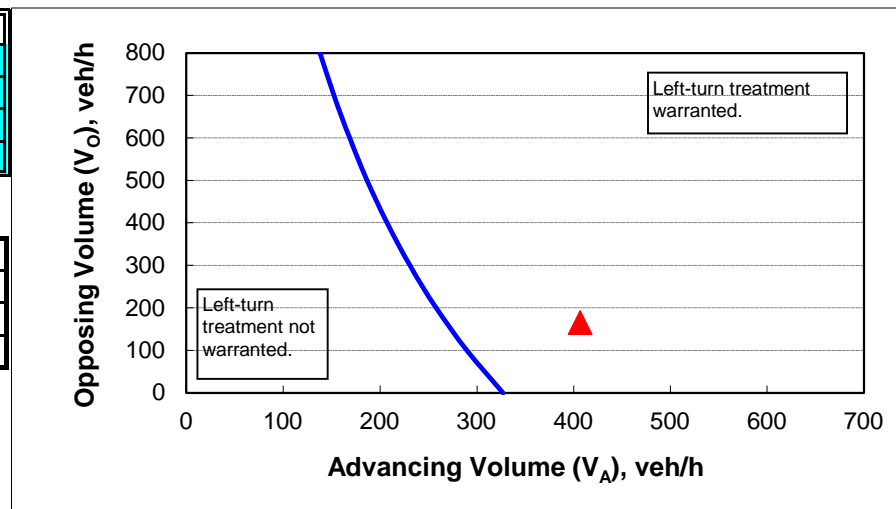
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	23%
Advancing volume ( $V_A$ ), veh/h:	407
Opposing volume ( $V_O$ ), veh/h:	165

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	268
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street NBL - 2030 Scenario 2 (PM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

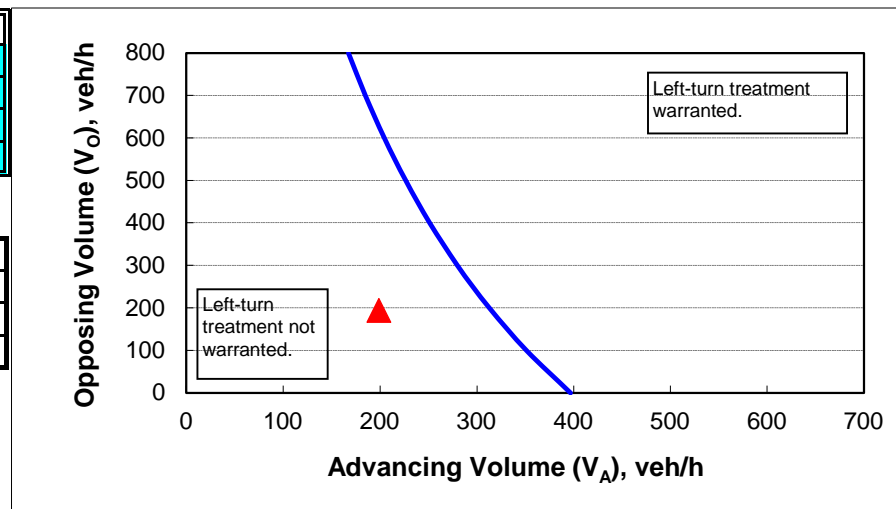
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	14%
Advancing volume ( $V_A$ ), veh/h:	199
Opposing volume ( $V_O$ ), veh/h:	194

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	315
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street NBL - 2045 No-Build (PM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

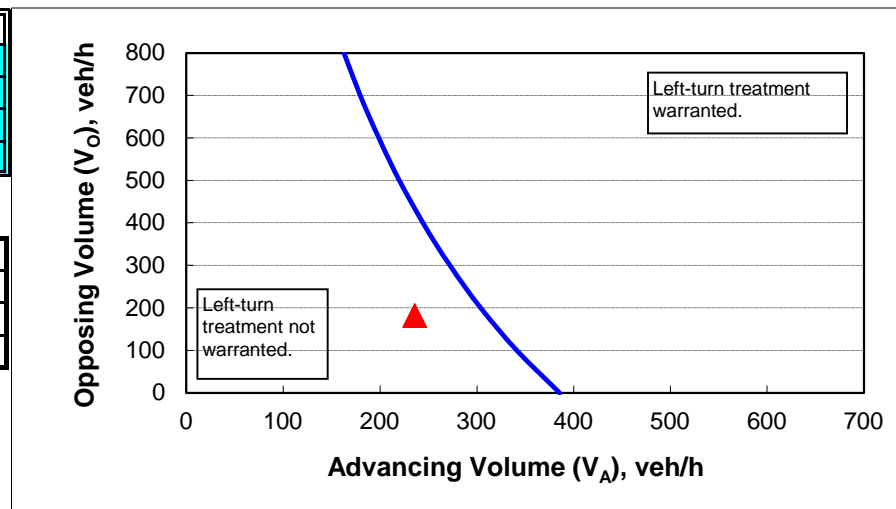
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	15%
Advancing volume ( $V_A$ ), veh/h:	236
Opposing volume ( $V_O$ ), veh/h:	182

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	310
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street NBL - 2045 Scenario 1 (PM Peak)

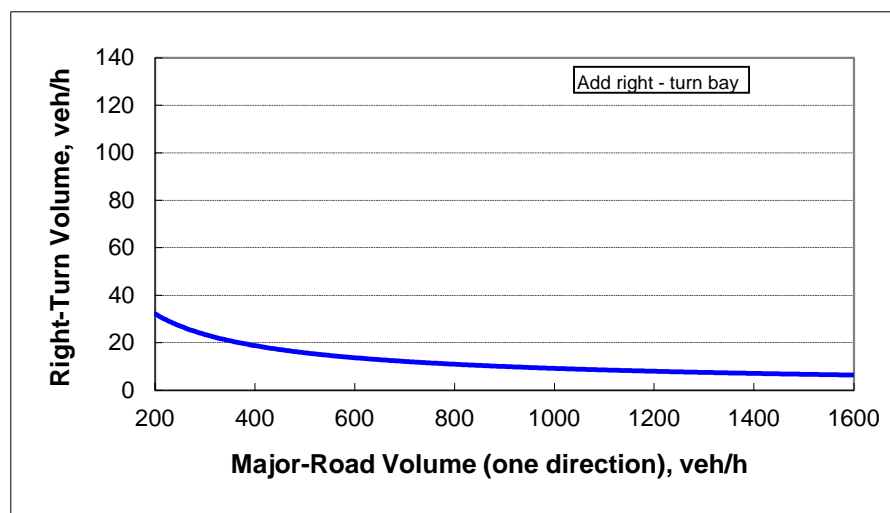
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	192
Right-turn volume, veh/h:	38

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	33
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



Edmonson Avenue & 85th Street NBR - 2030 Scenario 1 (PM Peak)

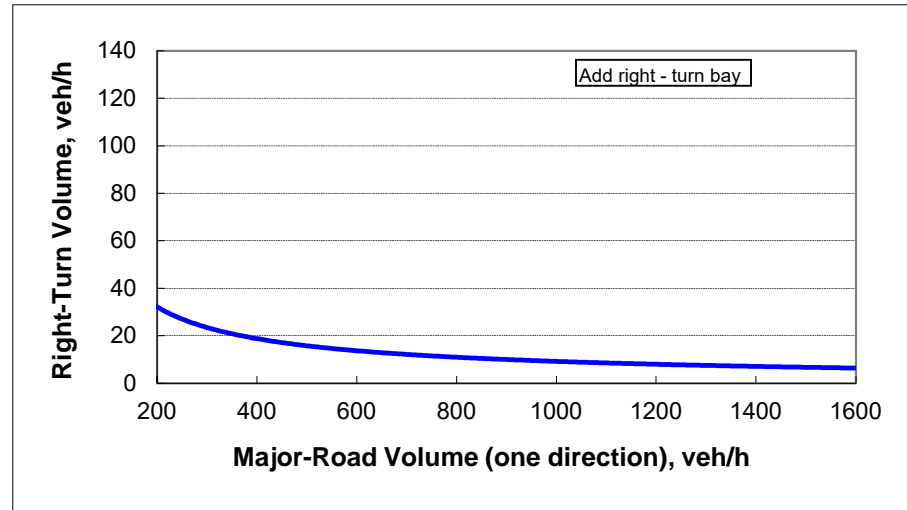
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	199
Right-turn volume, veh/h:	24

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	32
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



Edmonson Avenue & 85th Street NBR - 2045 No-Build (PM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

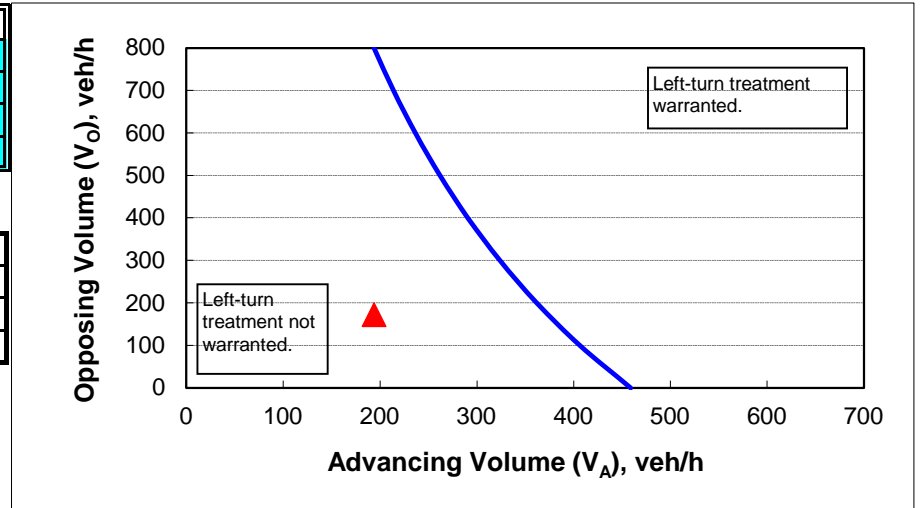
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	10%
Advancing volume ( $V_A$ ), veh/h:	194
Opposing volume ( $V_O$ ), veh/h:	172

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	374
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street SBL - 2045 No-Build (PM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

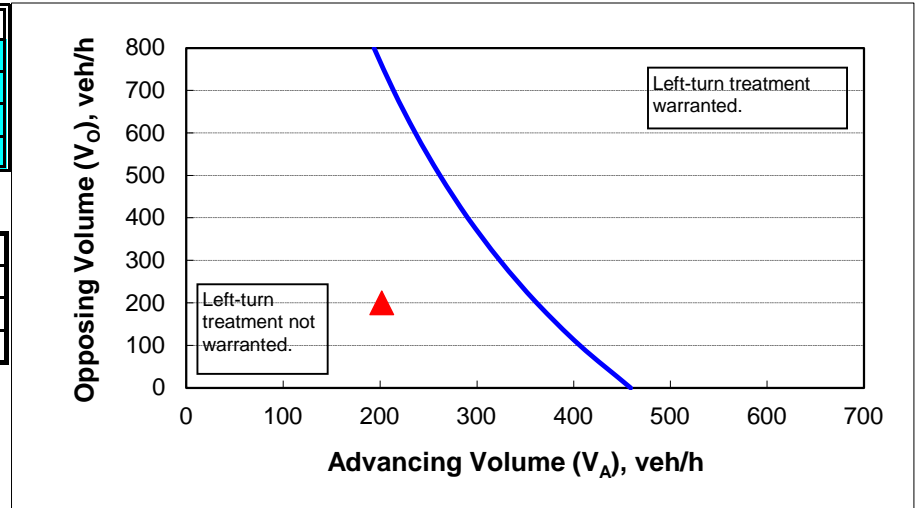
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	10%
Advancing volume ( $V_A$ ), veh/h:	202
Opposing volume ( $V_O$ ), veh/h:	200

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	362
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street SBL - 2045 Scenario 1 (PM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

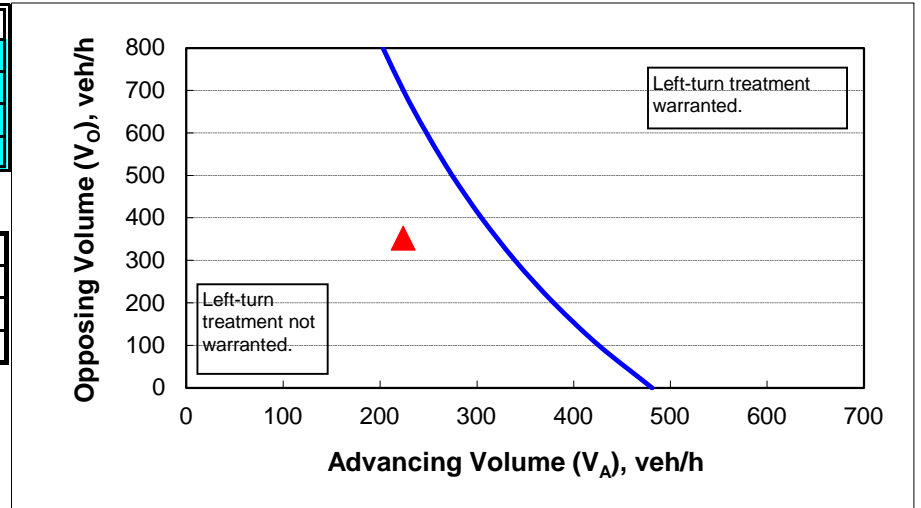
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	9%
Advancing volume ( $V_A$ ), veh/h:	224
Opposing volume ( $V_O$ ), veh/h:	352

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	321
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Edmonson Avenue & 85th Street SBL - 2045 Scenario 2 (PM Peak)

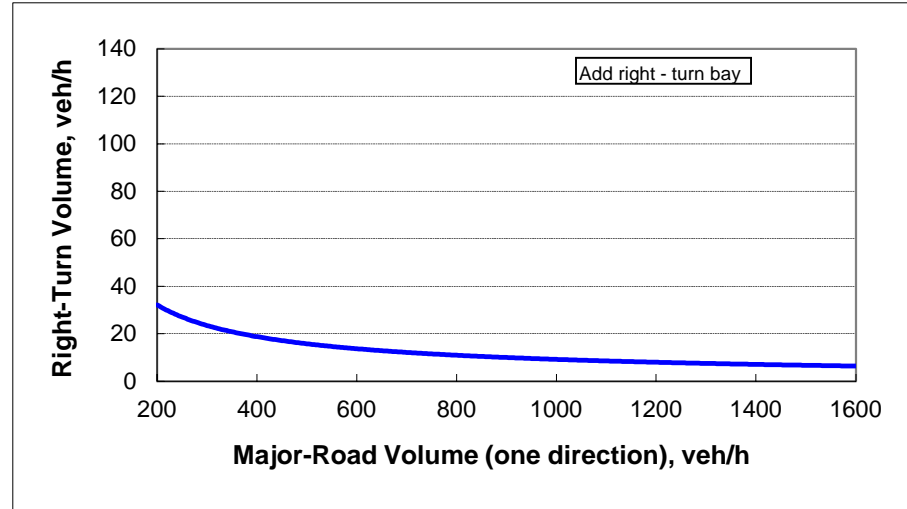
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	180
Right-turn volume, veh/h:	28

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	35
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



Edmonson Avenue & 85th Street SBR - 2030 Scenario 2 (PM Peak)

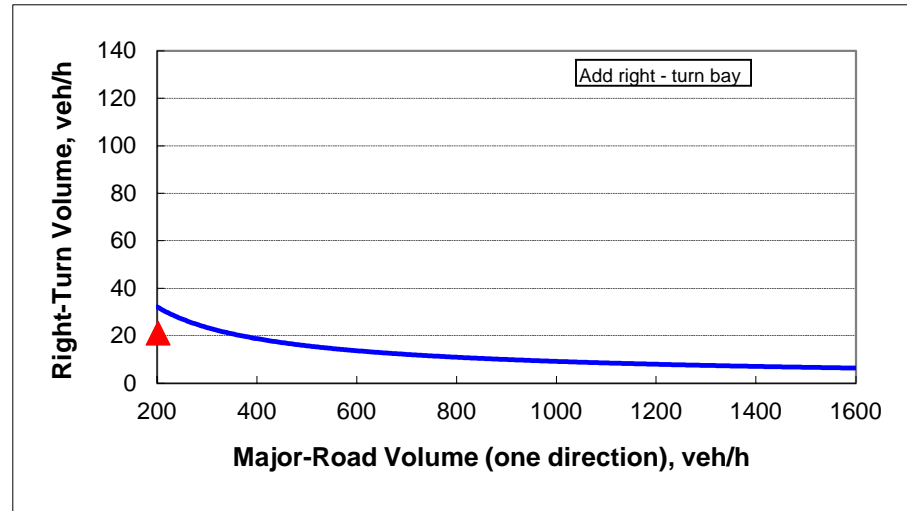
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	202
Right-turn volume, veh/h:	21

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	32
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



Edmonson Avenue & 85th Street SBR - 2045 Scenario 1 (PM Peak)

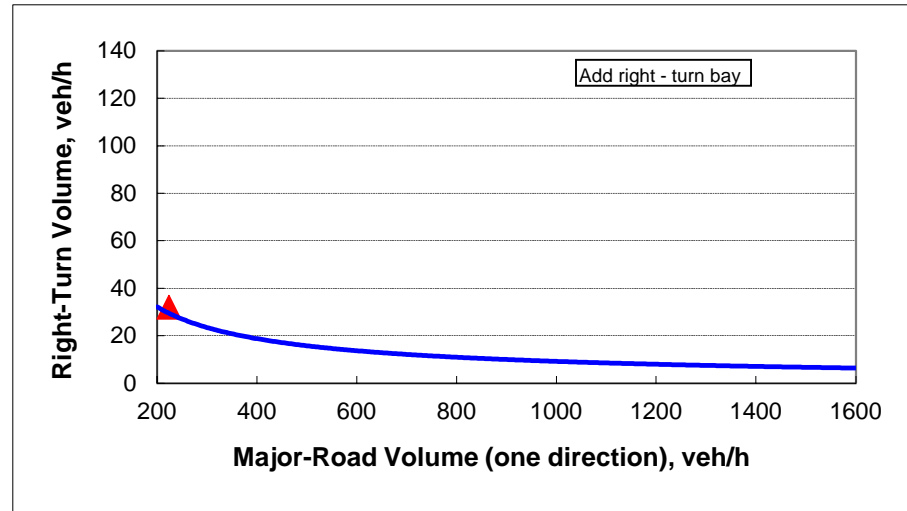
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway	
Variable	Value	
Major-road speed, mph:	55	
Major-road volume (one direction), veh/h:	224	
Right-turn volume, veh/h:	32	

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	29
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



Edmonson Avenue & 85th Street SBR - 2045 Scenario 2 (PM Peak)

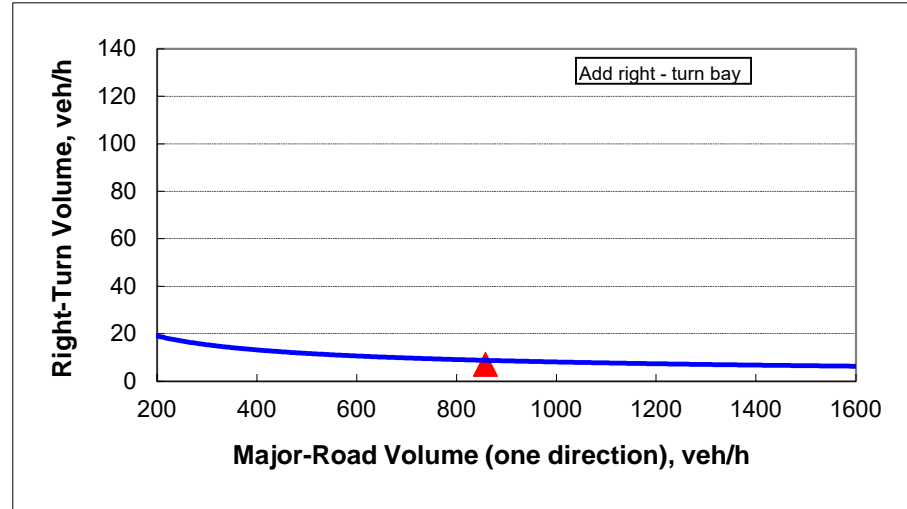
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	60
Major-road volume (one direction), veh/h:	858
Right-turn volume, veh/h:	7

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	9
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



MN 25 & Future Roadway (Proposed Collector) NBR - 2045 NB (PM Peak)

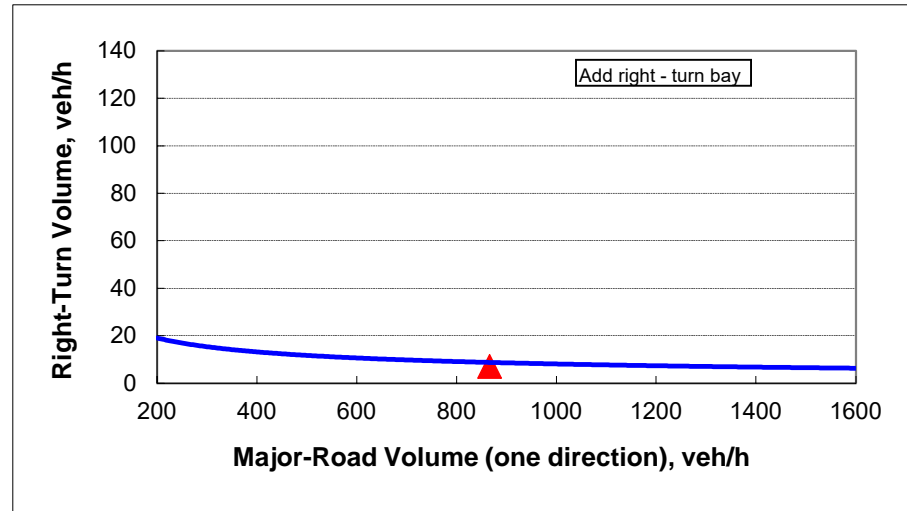
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	60
Major-road volume (one direction), veh/h:	866
Right-turn volume, veh/h:	7

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	9
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



MN 25 & Future Roadway (Proposed Collector) - 2045 Scenario 1 (PM Peak)

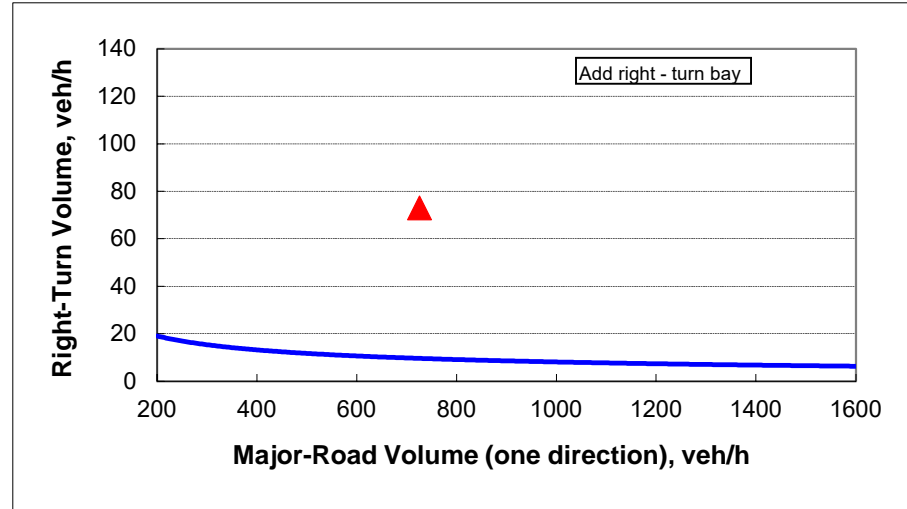
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	60
Major-road volume (one direction), veh/h:	726
Right-turn volume, veh/h:	73

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	10
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



MN 25 & Future Roadway (Proposed Collector) NBR - 2045 Scenario 2 (AM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

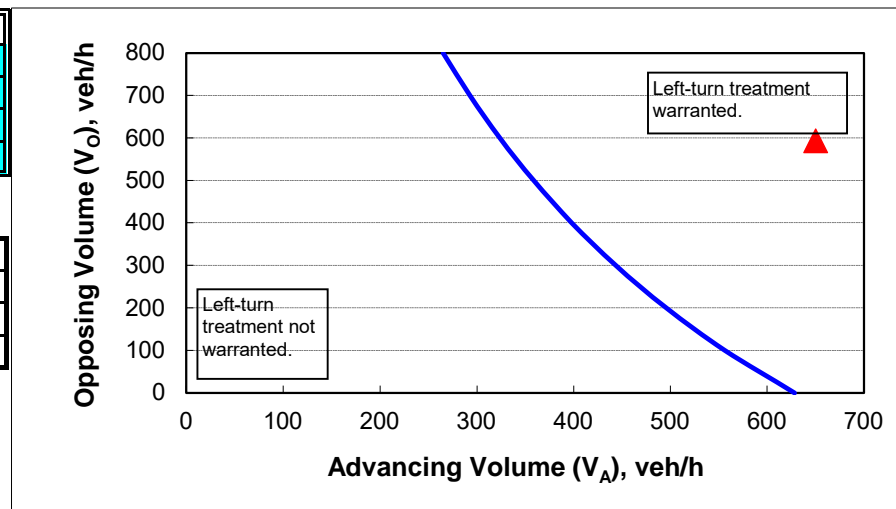
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	60
Percent of left-turns in advancing volume ( $V_A$ ), %:	4%
Advancing volume ( $V_A$ ), veh/h:	650
Opposing volume ( $V_O$ ), veh/h:	593

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	326
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

MN 25 & Future Roadway (Proposed Collector) SBL - 2045 No-Build (AM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

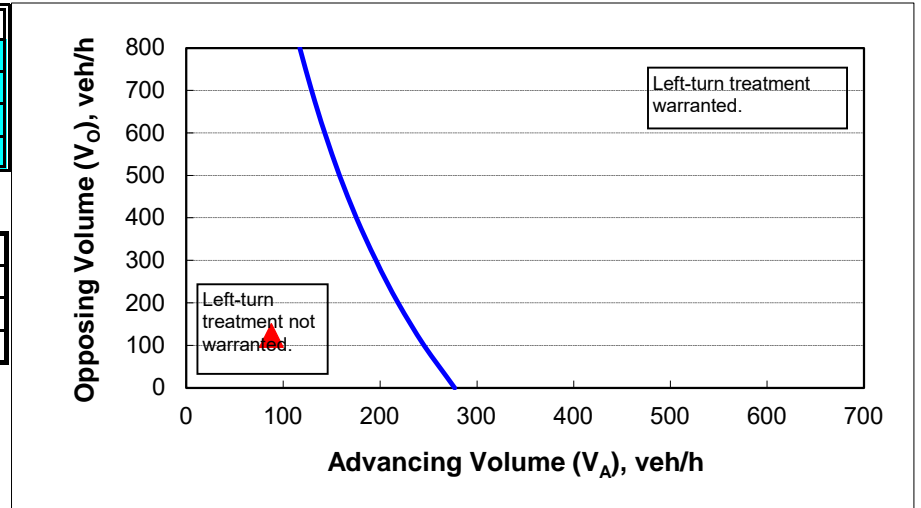
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	44%
Advancing volume ( $V_A$ ), veh/h:	88
Opposing volume ( $V_O$ ), veh/h:	123

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	239
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

85th Street & North Access - 2045 Scenario 1 (AM Peak)

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

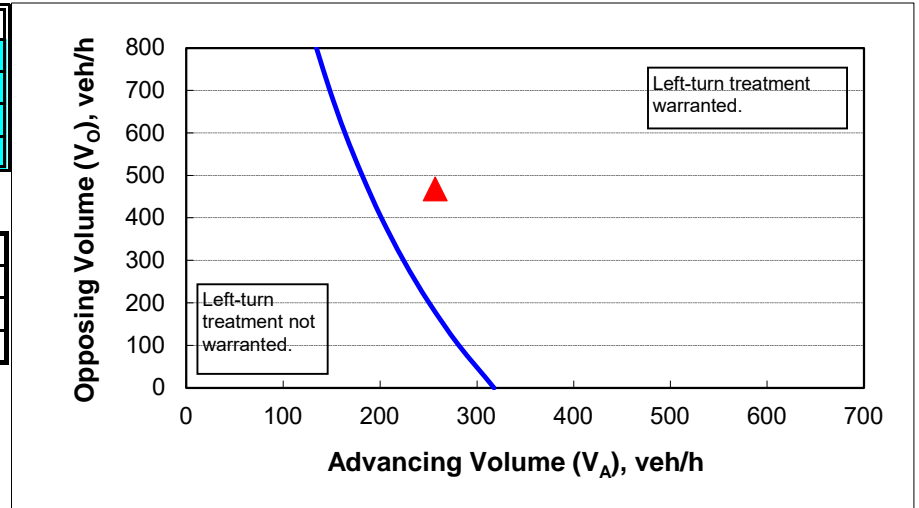
**2-lane roadway (English)**

**INPUT**

Variable	Value
85 <sup>th</sup> percentile speed, mph:	55
Percent of left-turns in advancing volume ( $V_A$ ), %:	75%
Advancing volume ( $V_A$ ), veh/h:	257
Opposing volume ( $V_O$ ), veh/h:	468

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	188
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment warranted.</b>	



**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

85th Street & North Access WBL - 2030 Scenario 2 (AM Peak)

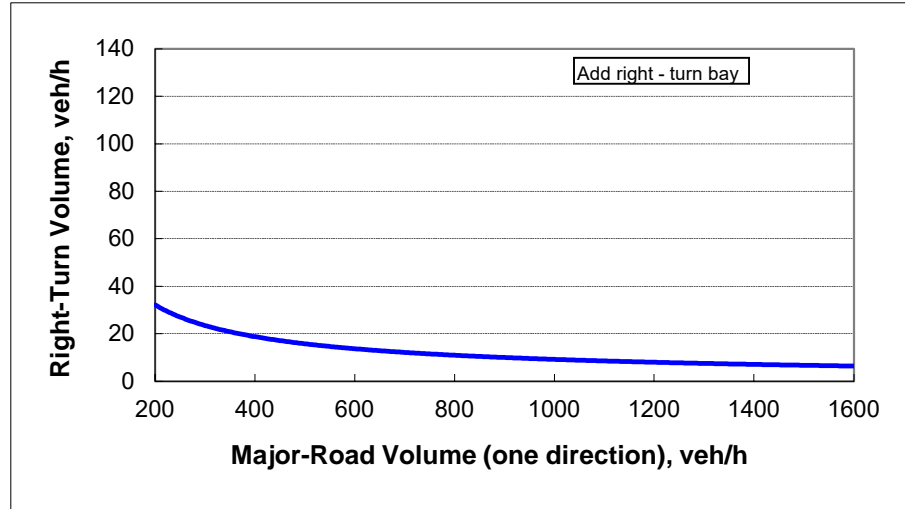
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway	
Variable	Value	
Major-road speed, mph:	55	
Major-road volume (one direction), veh/h:	114	
Right-turn volume, veh/h:	73	

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	50
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



85th Street & North Access EBR - 2030 Scenario 1 (AM Peak)

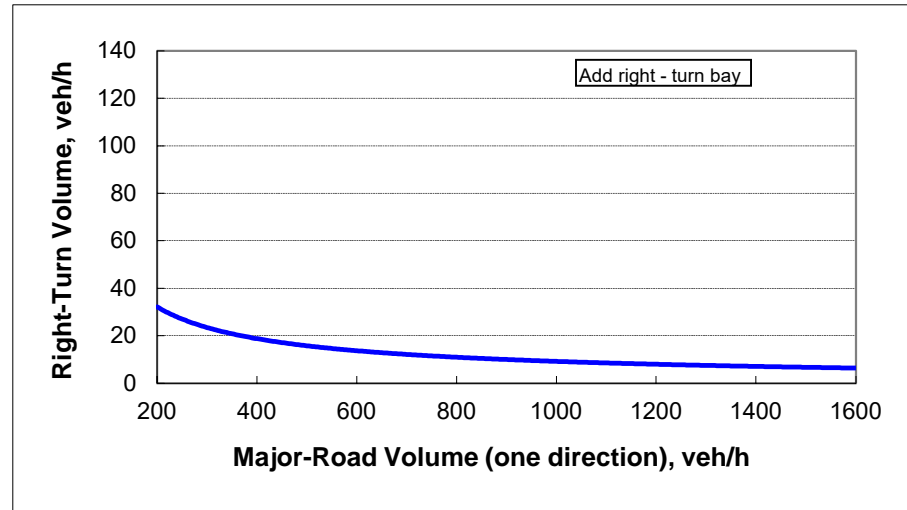
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	468
Right-turn volume, veh/h:	363

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	17
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Add right-turn bay.</b>	



85th Street & North Access EBR - 2030 Scenario 2 (AM Peak)



## MEMORANDUM

To: City of Monticello

From: Jacob Rojer, P.E., PTOE

Date: October 14, 2025

Subject: Monticello Industrial Construction Conditions Analysis (Scenario 1)

---

## INTRODUCTION

The proposed Monticello Industrial development is located west of Edmonson Avenue, east of Davidson Avenue, and south of 85<sup>th</sup> Street in Monticello, MN. The site is currently undergoing the AUAR process with two development scenarios being analyzed: a Technology Park (Scenario 1) and an Industrial Park (Scenario 2). This memorandum is focused on the construction period of Scenario 1 (Technology Park). The construction period is anticipated to see significantly higher trip generation than the typical operations of this type of development. No construction analysis was conducted for Scenario 2, as the construction is anticipated to be less trip-intensive than the typical operations of this development type.

Construction trip generation of the development was approximated, and the trips were assigned to the network to determine the Peak Construction Conditions (2030) traffic volumes. A capacity analysis was then conducted for this scenario to determine the impacts of the projected construction traffic on the roadway network.

## EXISTING ROADWAY CHARACTERISTICS

The characteristics of the major roadways near the proposed development are given below. Nearby roadways include County Roads, County State Aid Highways (CSAHs), a US Highway, and local roads.

**85<sup>th</sup> Street NE (or CR 106 West of MN 25)** is an east-west roadway that serves as the northern boundary of the AUAR area. It is a two-lane undivided roadway with dedicated right- and left-turn lanes at the intersection with MN 25. 85<sup>th</sup> Street NE is classified as a major collector, according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along 85<sup>th</sup> Street is approximately 1,797 vehicles per day (vpd) west of MN 25, as of 2024. No AADT data is available east of MN 25. The posted speed limit is 45 mph west of MN 25. There is no posted speed limit east of MN 25, and therefore the statutory speed limit is 55 mph.

**Minnesota State Highway 25 (MN 25)** is a generally north-south state highway that runs west of the AUAR area. It is a two-lane undivided roadway about 1000' south of 85<sup>th</sup> Street, where it transitions to a four-lane divided roadway to the north. There are dedicated left and right turn lanes at the intersections with 85<sup>th</sup> street NE and CSAH 37. MN 25 is classified as Principal Arterial - other,

according to the *Monticello 2040 Vision + Plan*. According to the MnDOT Traffic Mapping Application, the existing Annual Average Daily Traffic (AADT) along 85<sup>th</sup> Street is approximately 15,009 vehicles per day (vpd) north of 85<sup>th</sup> Street, as of 2024. The posted speed limit is 60 mph.

**Edmonson Avenue NE (CR 117)** is a north-south roadway that serves as the eastern boundary of the AUAR area. It is a two-lane undivided roadway that connects to the AUAR site via 85<sup>th</sup> Street NE. There are no existing turn lanes along this road. Edmonson Avenue NE is classified as a minor collector according to the *Monticello 2040 Vision + Plan*. Edmonson Avenue NE has an AADT of 1,808 vpd north of CSAH 37 and 1,930 vpd north of 85<sup>th</sup> Street NE. The posted speed limit is 55 mph.

**CSAH 37** is an east-west County State Aid Highway (CSAH) located south of the AUAR area. It is a two-lane undivided roadway. CSAH 37 is classified as a major collector south of the AUAR area according to page 99 of the 2045 Monticello Comprehensive Plan. According to the MnDOT Traffic Mapping Application, the road has an AADT of approximately 4,873 vpd west of Edmonson Avenue as of 2024. The posted speed limit is 55 mph.

**Davidson Avenue NE** is a north-south roadway that serves as the western boundary of the AUAR area. It is a two-lane undivided local roadway with no turn lanes. There is no AADT data available for Davidson Avenue NE and there is no posted speed limit. The speed limit was assumed to be 45 mph for analysis purposes.

**School Boulevard** is a three-lane undivided east-west roadway with one travel lane in each direction and a shared left turn lane. School Boulevard is classified as a minor arterial, according to the *Monticello 2040 Plan*. MnDOT reports an AADT of 5,994 west of Edmonson Avenue and 6,464 west of Fenning Avenue, as of 2024. The posted speed limit is 40 mph, with a school speed limit of 30 mph enforced when children are present.

**Fallon Avenue** is a two-lane undivided north-south roadway. Fallon Avenue is classified as a local road according to the *Monticello 2040 Plan*. MnDOT reports an AADT of 3,847 north of School Boulevard, as of 2024. The posted speed limit is 30 mph.

## STUDY AREA & INTERSECTION IMPROVEMENTS

The AUAR traffic study included a Traffic Impact Assessment of the following study intersections:

- MN 25 & 85<sup>th</sup> Street NE (Signal)
- Edmonson Avenue NE & 85<sup>th</sup> Street NE (Side-Street Stop)
- MN 25 & County Road 37 (Signal; Future Roundabout)
- County Road 37 & Davidson Drive (Side-Street Stop)
- County Road 37 & Edmonson Drive (Side-Street Stop)
- School Boulevard & Fallon Avenue (All-Way Stop)

There are plans for corridor improvements along MN 25 near the study area, with a corridor study previously conducted for MN 25 between Buffalo and Monticello. Among the improvements that are anticipated to occur, MN 25 & CSAH 37 is anticipated to be converted to a single-lane roundabout in

2026. Additionally, the Davidson Avenue connection to MN 25 is planned to be removed, but this is not assumed to occur by the Opening Year (2030) of the planned development.

### DEVELOPMENT CHARACTERISTICS

The proposed Scenario 1 development would include a 3,000,000 square-foot technology park served by two access points: a “North Access” located along 85<sup>th</sup> Street, and an “East Access” located along Edmonson Avenue.

The Scenario 1 development would have a multi-year construction phase which would generate a higher number of trips than the normal operating conditions of the development itself. For the sake of this analysis, it is assumed that construction trips would be split between the two site access points assumed for the development.

### TRIP GENERATION

Trip generation during the site’s construction will vary significantly based on factors like the total floor area of the development, the number of buildings in the development, the number of buildings being constructed concurrently, and more. Because limited information about the proposed development is known at this time, trip generation was instead estimated based on data from the Institute of Transportation Engineers’ *Trip Generation Manual, 11<sup>th</sup> Edition*, and construction trip generation of similar sites. Construction conditions of the site should be re-analyzed when site specific characteristics and knowledge of the site construction plans are available.

Based on known trip generation patterns exhibited by sites similar to the proposed Technology Park of Scenario 1, it is estimated that the peak construction trip generation could be approximately twice the peak hour trip generation of typical operations. Furthermore, the vast majority of site trips during the AM peak are expected to be entering trips while the opposite is true for the PM peak (the majority are exiting trips). It was estimated that construction trips would exhibit a 90% entering and 10% exiting split during the AM peak hour and a 10% entering and 90% exiting split during the PM peak hour.

The operational trip generation for Scenario 1 and the estimated Construction trip generation are shown below in **Table 1**. The proposed site construction for Scenario 1 is anticipated to generate a peak of 5,940 daily trips, with 660 AM peak hour trips (595 entering and 65 exiting) and 540 PM peak hour trips (55 entering and 485 exiting).

**Table 1 – Trip Generation Comparison**

Land Use Description	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Scenario 1 (LUC 160 – Data Center)	192	147	330	81	189	270
Scenario 1 Construction	595	65	660	55	485	540

### VOLUME DEVELOPMENT

For the sake of simplicity, the Opening Year (2030) No-Build traffic volumes developed for the TIA were utilized as the background traffic volumes for the Peak Construction Conditions (2030) traffic volumes. The Opening Year (2030) No-Build Traffic Volumes are shown in **Exhibit 1**.

The distribution of traffic to the proposed development was developed based on a review of the nearby roadway characteristics, existing traffic patterns, and professional engineering judgement. The following global distribution was determined for trips entering and exiting the proposed development:

- 35% to/from the north on MN 25
- 30% to/from the east on School Boulevard
- 20% to/from the east on CSAH 37
- 15% to/from the south on MN 25

The full site traffic distribution is shown in **Exhibit 2**. The global traffic distribution was applied to the construction trip generation to determine the site trip assignment for the Scenario 1 construction conditions. The total site trip assignment for construction trips is shown in **Exhibit 3**.

## CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the four study intersections during peak traffic periods. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is measured in average delay per vehicle. It is expressed in terms of level of service (LOS) which ranges from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions).

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2**. The range of control delay for each rating (as detailed in the HCM) is also shown in **Table 2**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings. HCM guidance states that a roundabout is typically treated as an unsignalized intersection for determining LOS grades.

**Table 2 - Level of Service Information**

Level of Service	Average Control Delay (seconds/vehicle)	Description
A	0-10 (Unsignalized); 0-10 (Signalized)	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	>10-15 (Unsignalized); >10-20 (Signalized)	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	>15-25 (Unsignalized); >20-35 (Signalized)	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	>25-35 (Unsignalized); >35-55 (Signalized)	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	>35-50 (Unsignalized); >55-80 (Signalized)	High control delay; average travel speed no more than 33 percent of free flow speed.
F	>50 (Unsignalized); >80 (Signalized)	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

Capacity analysis was conducted using SimTraffic within Synchro 12 for all signalized and stop-controlled intersections. Analysis of the future roundabout at MN 25 & CSAH 37 was conducted via roundabout analysis software Rodel.

**Construction Conditions (2030) Analysis**

The construction traffic assignment was determined by multiplying the construction trip generation by the construction traffic distribution. The Construction Conditions (2030) traffic volumes were determined by adding the construction site trips in Exhibit 3 to the 2030 Background traffic volumes in Exhibit 1. The resultant Construction Conditions (2030) traffic volumes are shown in **Exhibit 4**.

Results of the Construction Conditions (2030) analysis are included below in **Table 3**. All study intersections are anticipated to operate at an overall LOS B or better during the AM and PM peak hours and all individual movements/approaches at LOS D or better with the exception of two left turn movements at the signalized MN 25 & 85<sup>th</sup> Street intersection. The anticipated operating level of the network with the addition of Construction traffic is acceptable.

**Table 3: Construction Conditions (2030) Delay and LOS**

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 25 & 85th Street	Signal	EB	E (69)	D (44)	A (3)	B (10)	C (31)	C (22)	A (3)	A (9)
		WB	E (57)	D (52)	A (3)		C (31)	C (25)	A (3)	
		NB	A (6)	A (4)	A (1)		A (1)	A (4)	A (1)	
		SB	A (6)	A (9)	A (2)		A (8)	A (10)	A (1)	
Edmonson Avenue & 85th Street	Side Street Stop	EB	A (5)	A (8)	A (3)	A (10)	A (4)	A (9)	A (2)	A (9)
		WB	A (5)	A (10)	A (3)		A (4)	A (9)	A (3)	
		NB	A (1)	A (1)	A (0)		A (1)	A (1)	A (0)	
		SB	A (1)	A (1)	A (0)		A (0)	A (1)	A (0)	
MN 25 & CSAH 37	Round-about	EB	A (5)			A (5)	A (5)			A (8)
		WB	A (5)				A (6)			
		NB	A (5)				A (9)			
		SB	A (5)				A (7)			
CSAH 37 & Davidson Avenue	Side Street Stop	EB	A (5)	A (3)	-	A (5)	A (5)	A (5)	-	A (5)
		WB	-	A (2)	A (2)		-	A (2)	A (1)	
		NB	-	-	-		-	-	-	
		SB	A (5)	A (0)	A (1)		A (4)	A (0)	A (2)	
CSAH 37 & Edmonson Avenue	Side Street Stop	EB	A (3)	A (3)	A (2)	B (15)	A (2)	A (3)	A (2)	B (12)
		WB	A (2)	A (1)	A (0)		A (1)	A (1)	A (0)	
		NB	B (10)	B (15)	A (5)		A (5)	B (12)	A (3)	
		SB	A (10)	A (6)	A (5)		A (6)	A (7)	A (3)	
85th Street & North Access	Side Street Stop	EB	-	A (1)	A (1)	A (6)	-	A (2)	A (1)	A (5)
		WB	A (3)	A (3)	-		A (3)	A (3)	-	
		NB	A (6)	-	A (3)		A (5)	-	A (3)	
		SB	-	-	-		-	-	-	
Edmonson Avenue & East Access	Side Street Stop	EB	A (6)	-	A (3)	A (6)	A (5)	-	A (3)	A (5)
		WB	-	-	-		-	-	-	
		NB	A (1)	A (1)	-		A (1)	A (1)	-	
		SB	-	A (1)	A (0)		-	A (1)	A (0)	
School Boulevard & Fallon Avenue	All-Way Stop	EB	A (7)	C (20)	B (13)	B (13)	A (7)	B (14)	A (9)	B (11)
		WB	B (13)	B (14)	A (8)		A (8)	B (13)	A (8)	
		NB	B (11)	B (12)	A (9)		A (9)	A (10)	A (7)	
		SB	A (9)	B (10)	A (6)		A (10)	B (11)	A (7)	

\*Worst movement delay reported as overall delay at side street stop controlled intersections.

### CONSTRUCTION TURN LANE WARRANTS

The need for turn lanes during the construction of the site was analyzed based on the methodologies from NCHRP Report 457. This methodology accounts for the safety and operational need for turn lanes along the major road at a side street stop controlled intersection. The warrant takes into account the travel speeds along the major road and the peak hour traffic volumes at the intersection.

Results of the turn lane warrant analysis for the Construction Conditions (2030) are shown below in **Table 4**. The turn lane warrant analysis indicates that a right turn lane is warranted at both access points, and a left turn lane is warranted at the east access point along Edmonson Avenue. Additionally, a northbound right turn lane is warranted at the intersection of 85<sup>th</sup> Street & North Access.

**Table 4 – Turn Lane Warrant Results**

Intersection	Movement	Turn Lane Warrant Result
		Construction Conditions (2030)
85th Street NE & North Access	WBL	<i>Not Met</i>
	EBR	<b>Met</b>
Edmonson Avenue NE & East Access	NBL	<b>Met</b>
	SBR	<b>Met</b>
Edmonson Avenue & 85th Street NE	NBR	<b>Met</b>
	NBL	<i>Not Met</i>
	SBR	<i>Not Met</i>
	SBL	<i>Not Met</i>

### CONCLUSION & RECOMMENDATIONS

The proposed Monticello Industrial development is located at the southwest corner of 85<sup>th</sup> Street & Edmonson Avenue in Monticello, MN. The site is currently undergoing the AUAR process with two development scenarios being analyzed: a Technology Park (Scenario 1) and an Industrial Park (Scenario 2). A Construction Conditions (2030) analysis was conducted for Scenario 1 since the trip generation of a Technology Park land use is anticipated to be significantly higher during the construction phase (which would likely be completed over multiple years) than during typical operations.

Traffic was projected with Opening Year (2030) traffic volumes selected as the background traffic and the construction site trips layered on top of these volumes. Construction trip generation was estimated based on ITE trip generation data, and knowledge of developments similar to the proposed Scenario 1. Trips were distributed to the site assuming access points along 85<sup>th</sup> Street and Edmonson Avenue.

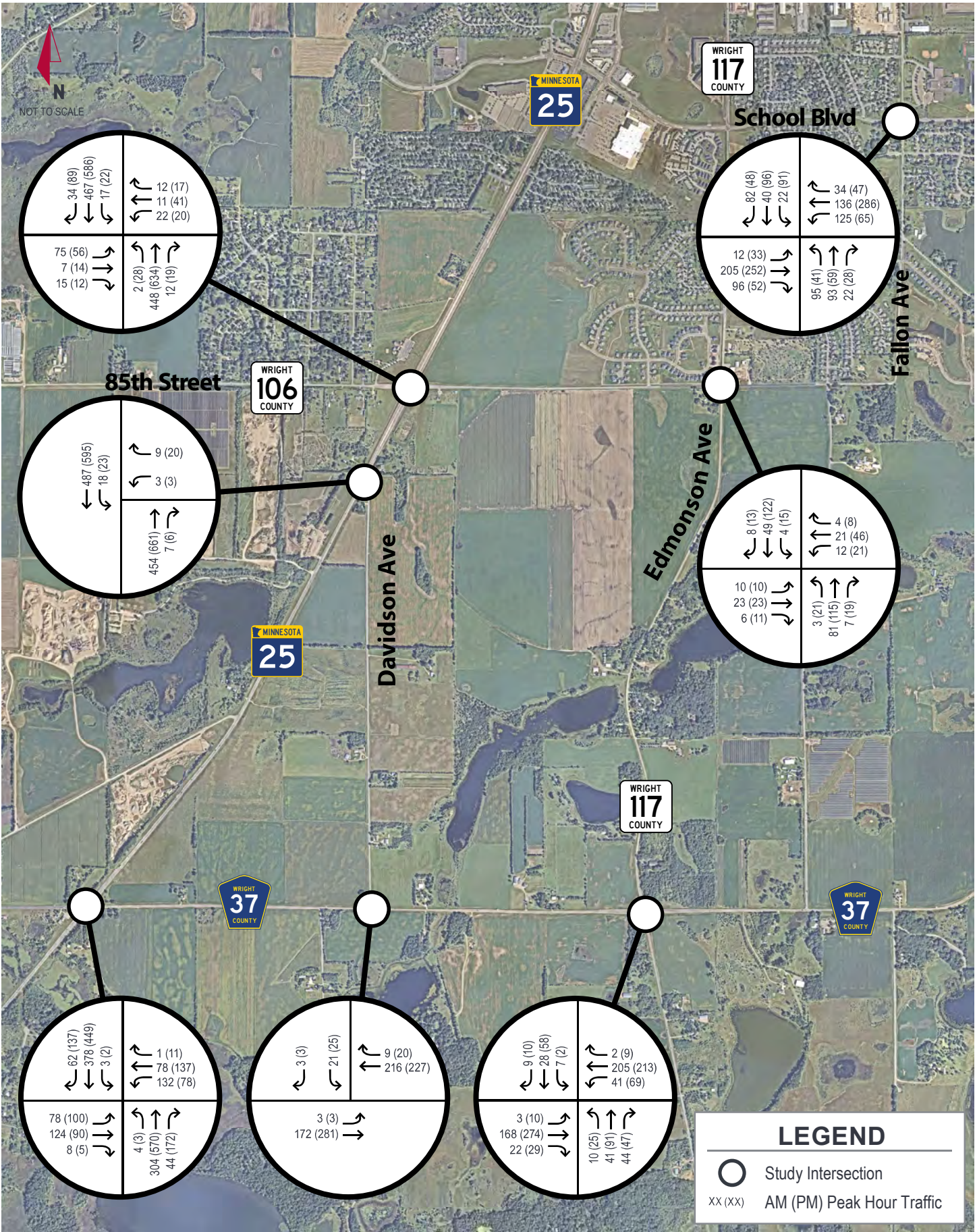
Under Construction Conditions (2030), all intersections are anticipated to operate at LOS A or B and all individual movements/approaches at the study intersections operate at LOS D or better with the exception of two left turn movements at the signalized MN 25 & 85<sup>th</sup> Street intersection. The overall network operations are anticipated to remain acceptable without mitigation.

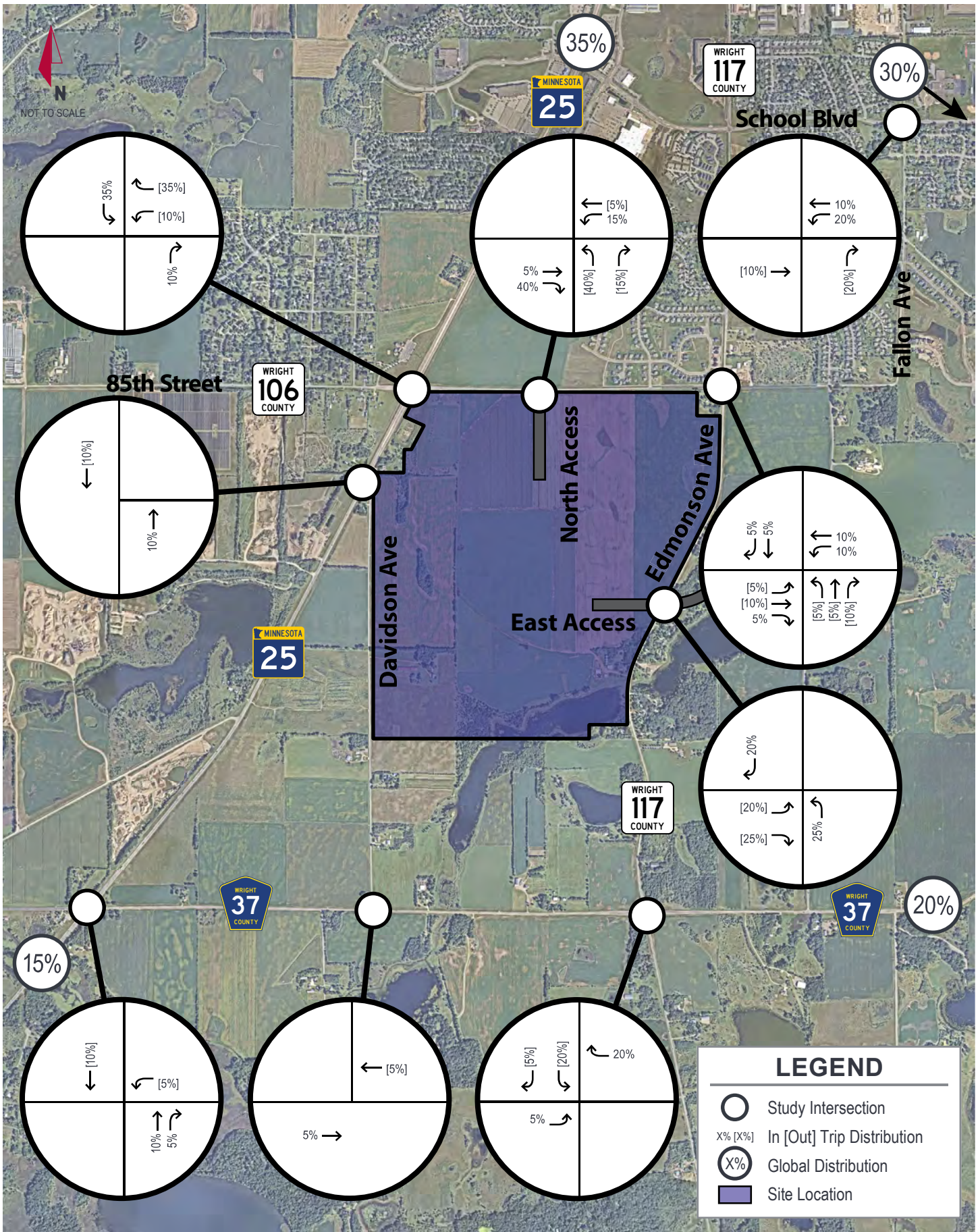
Turn lane warrants were analyzed using NCHRP methodologies for major-road turn lanes at side street stop-controlled intersections. It was found that left-and right turn lanes are warranted at the access point along Edmonson Avenue, a right turn lane is warranted at the access point along 85<sup>th</sup> Street, and a northbound right turn lane is warranted at the intersection of 85<sup>th</sup> Street & Edmonson Avenue.

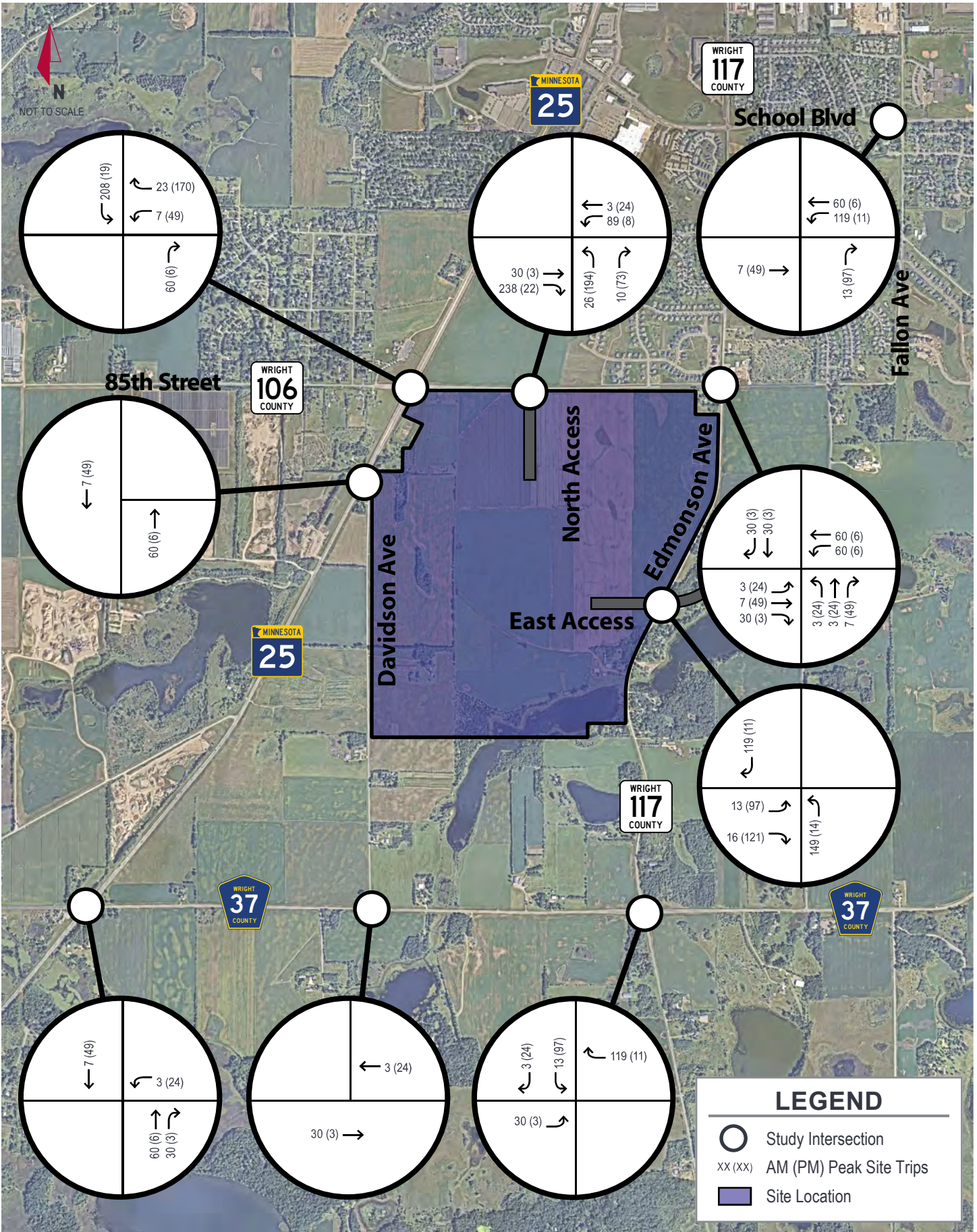
The following mitigation measures are recommended for the Scenario 1 Construction Conditions (2030):

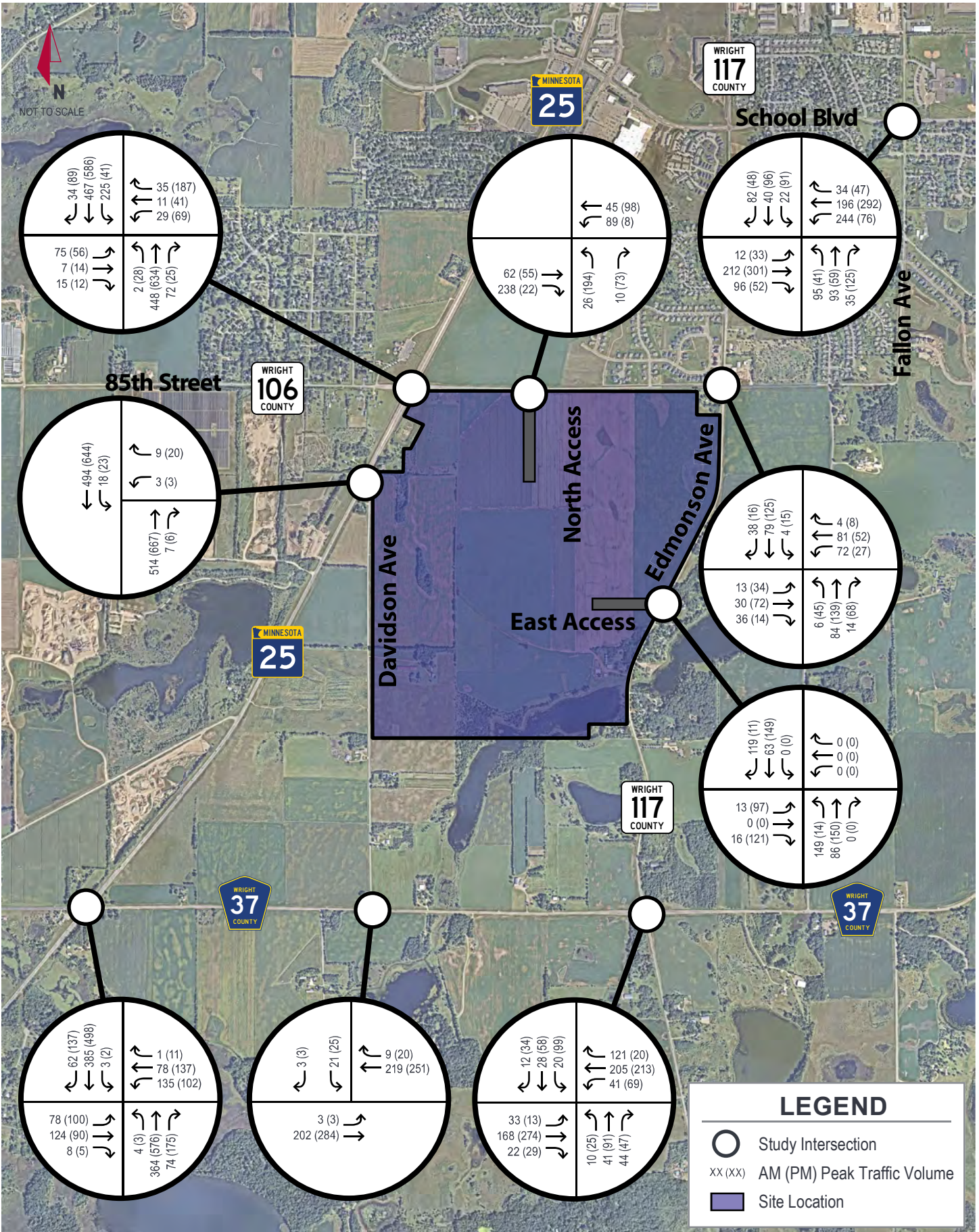
- Install side street stop control at all access points
- Install left-and right-turn lanes at access point(s) along Edmonson Avenue
- Install right turn lane at access point(s) along 85<sup>th</sup> Street
- Install a northbound right turn lane at 85<sup>th</sup> Street & Edmonson Avenue

Note that the findings of this memorandum are preliminary based on assumptions made with limited information. Further traffic analysis of the construction conditions should be conducted when site specific information is available. The mitigation listed above is subject to substantial change based on the characteristics of the proposed site and construction process.









**From:** [Cody S. Sedbrook](#)  
**To:** [Angela Schumann](#)  
**Cc:** [Chad D. Hausmann](#); [Sara C. Buermann](#)  
**Subject:** Monticello Industrial Development - AUAR  
**Date:** Wednesday, November 19, 2025 11:30:49 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

---

Hi Angela,

The County does not have any significant comments currently. Access location and design along CR 117 will be reviewed during the platting process.

Additionally, as the area around CR 117 develops would the City be interested in discussing a turn back of the roadway similar to Edmonson Ave to the north.

Thank you,



**Cody Sedbrook, P.E. • Traffic Engineer**

WRIGHT COUNTY, MINNESOTA: HIGHWAY DEPARTMENT

direct: (763) 682-7391 cell: (612) 394-1002

Highway Department Building, 3600 Braddock Ave NE, Buffalo, MN 55313

[www.co.wright.mn.us](http://www.co.wright.mn.us)

NOTICE: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This E-mail may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.

**From:** [Munsell, Anneka \(She/Her/Hers\) \(MDH\)](#)  
**To:** [Angela Schumann](#)  
**Cc:** [Shea, Abby \(She/Her/Hers\) \(MDH\)](#); [Woodside, John \(MDH\)](#); [Robertson, Steve \(MDH\)](#); [Bell, David \(MDH\)](#)  
**Subject:** Monticello Industrial AUAR - MDH Comments  
**Date:** Wednesday, December 10, 2025 2:12:59 PM  
**Attachments:** [Outlook-MDH on Fac.png](#)  
[Outlook-MDH on X.png](#)  
[Outlook-MDH on Lin.png](#)  
[Outlook-MDH on Ins.png](#)  
[Outlook-MDH on You.png](#)  
[Outlook-MDH on Thr.png](#)

---

Good afternoon,

Staff in the Source Water Protection Unit at the Minnesota Department of Health have reviewed the Draft Monticello Industrial AUAR and have no comments. We appreciate that the AUAR includes the corrections and suggestions from MDH during the AUAR Scoping.

We appreciate the opportunity to provide input.

Please reach out if you have questions or concerns.

**Anneka Munsell PE**

Hydrologist | Source Water Protection

**Minnesota Department of Health**

Office: 651-201-5841



**From:** [Alexander Coady](#)  
**To:** [Angela Schumann](#)  
**Subject:** Re: Monticello Industrial Development - Draft AUAR  
**Date:** Wednesday, November 19, 2025 11:08:51 AM  
**Attachments:** [image001.png](#)  
[image001.png](#)

---

I still don't understand why "no data centers in Monticello" isn't an option that even remotely seems to be on the table. I feel like me and a bunch of people have been very clear on not wanting these things in our town, yet the conversation on how to make data centers work persists. It makes me feel belittled, unheard, and not well represented by the council, and the stress has been having a negative impact on my health.

On Wed, Nov 19, 2025, 10:57 AM Angela Schumann  
<[Angela.Schumann@monticellomn.gov](mailto:Angela.Schumann@monticellomn.gov)> wrote:

On behalf of the City of Monticello, please find below a link to the Draft AUAR and Mitigation Plan for the Monticello Industrial Development study area. The City of Monticello approved the Draft AUAR and Mitigation Plan for distribution at the November 10, 2025, City Council Meeting.

[Environmental Reviews | Monticello, MN](#)

The AUAR process provides local governments with the opportunity to evaluate how different land uses may impact the community's environment, providing environmental analysis before major development occurs and helping inform future land use decisions. An AUAR is not a project approval document; it provides information useful to planning for the management and mitigation of impacts.

The Monticello Industrial AUAR evaluates two development land use scenarios, a light industrial park land use scenario as outlined in the Monticello 2040 Comprehensive Plan and a technology campus (data center) land use scenario. This AUAR study area encompasses approximately 550 acres on 16 parcels in Monticello Township, Minnesota. The study area is comprised of land generally located south of 85<sup>th</sup> St NE, west of Edmonson Ave NE, and east of Davidson Ave NE, within the Monticello Orderly Annexation Area.

The public is invited to review and provide comment on the Draft AUAR and mitigation plan. You are receiving this email because you have previously provided comments on the Monticello Industrial AUAR Scoping Document.

The 30-day comment period began on November 18, 2025. Comments will be accepted through 4:00 PM on December 18, 2025, and should be addressed to:  
[angela.schumann@monticellomn.gov](mailto:angela.schumann@monticellomn.gov).

An Open House on Thursday, November 20, 2025 is also scheduled as an opportunity for additional public information and feedback on the Monticello Industrial AUAR. The Open House will be held from 6-8 PM at the Monticello Community Center.

**Angela Schumann**

---

*Community Development Director*

**Development Services**

763-271-3224

505 Walnut St, Suite 1, Monticello, MN 55362

[MonticelloMN.gov](http://MonticelloMN.gov) | [Facebook](#) | [Subscribe to E-News](#)



Email correspondence to and from the City of Monticello government offices is subject to the Minnesota Government Data Practices Act and may be disclosed to third parties.

**From:** [Scott Nelson](#)  
**To:** [Angela Schumann](#)  
**Subject:** Detailed Comments on Draft Monticello Industrial AUAR and Mitigation Plan  
**Date:** Thursday, November 20, 2025 11:11:21 AM

---

Hi Angela,

Thank you for distributing the Draft AUAR and Mitigation Plan for the Monticello Industrial area. I spent time reading through the document in detail and wanted to share several specific concerns related to nighttime lighting and mechanical noise. These issues appear repeatedly throughout the AUAR but are not addressed with the level of technical clarity needed to avoid problems for nearby neighborhoods.

After reviewing Scenario 1 and Scenario 2, as well as the mitigation summaries, I noticed that lighting requirements are described only in broad terms such as buffering, screening, and site design. For example, Figures 3 and 4 show extensive new impervious areas, parking fields, and potential mechanical yards, yet there are no measurable standards referenced for lighting controls. Without technical specifications, developers could default to high intensity fixtures similar to the existing commercial sites along the Highway 25 corridor. As you know, lighting from Walmart, UMC Manufacturing, and Camping World already produces noticeable sky glow and glare because none of those installations follow dark sky guidelines. Adding 500 acres of industrial or tech campus lighting without precise requirements would compound that impact and surely drown out our current dark sky view, which allows us the ability to clearly see stars, the Northern Lights (Like the amazing views we had last week) and even the Milky Way on clear nights.

If the City intends to minimize residential lighting impacts, the mitigation plan needs measurable criteria. Examples include:

- Full cutoff fixtures with zero uplight (BUG rating of U0)
- Color temperature limits of 2700K to 3000K
- Pole height limits of 20 to 25 feet unless fully shielded
- Maximum maintained illumination levels for parking areas (0.2 to 0.5 footcandles after hours)
- Required dimming schedules for non security lighting
- Prohibition on upward directed flag lighting and façade lighting
- Use of backlight shields along property edges and wetlands

These are standard practices for dark night lighting control and can be verified with photometric plans submitted during site review. Adding these to the mitigation plan would ensure both scenarios are held to a consistent standard.

I also have concerns about mechanical noise, particularly in Scenario 1. The AUAR notes that a technology campus may require electrical substations, transmission extensions, large cooling equipment, and backup generators. However, the document does not include noise contour modeling, nighttime sound propagation analysis, or equipment performance assumptions. Minnesota's industrial noise limits are based on older standards and do not address low frequency noise, which is the most common source of complaints near data centers. Without specific controls, low frequency hum from cooling systems or tonal noise from generators could be audible well beyond the site boundary, especially at night.

To avoid this outcome, the mitigation plan should include:

- A maximum nighttime property line noise limit specifically applied to continuous mechanical equipment
- Daytime only generator testing requirements
- Sound enclosures or noise walls for generators and mechanical yards
- Low frequency noise controls, such as silencers or vibration isolation
- Placement requirements that keep mechanical yards internal to the site
- Post installation sound verification by an independent acoustical engineer

These types of requirements are common in other cities that have approved data centers, and they remove ambiguity by defining clear, enforceable expectations.

While I am not exclusively against any of the ideas laid out by the City on face value, I am very concerned that the lack of clear standards and corrective actions for lighting and noise will create undue and avoidable disruption for neighboring residents. I am also concerned that these issues may not be actively monitored or consistently enforced if not fully incorporated into the mitigation plan. For these reasons, I do not currently approve of the plan as it is written and cannot support either of the scenarios presented in the draft.

Thank you for considering these comments. I am happy to clarify any of these points or provide additional technical examples if helpful.

**From:** [candace seidl](#)  
**To:** [Angela Schumann](#)  
**Subject:** Re: Monticello Industrial Development - Draft AUAR  
**Date:** Thursday, November 20, 2025 11:19:09 AM  
**Attachments:** [image001.png](#)

---

Dear Ms. Schumann and Members of the City Council,

I am submitting this letter as part of the public comment period for the Monticello Industrial Draft AUAR. After reviewing the document in detail, I have significant concerns regarding completeness, accuracy, and adequacy of the environmental review presented. As written, this AUAR does not meet the requirements of the Minnesota Environmental Quality Board (EQB) and does not provide the public or decision-makers with the full information needed to evaluate the true impacts of the proposed development.

The AUAR appears to have been prepared with the intent to justify development rather than to objectively assess worst-case environmental impacts. Under state rules, an AUAR must evaluate potential impacts comprehensively, conservatively, and with defensible technical documentation. Unfortunately, that standard is not met in multiple sections of the current draft.

For the reasons outlined below, I am requesting that the City:

1. Reject the AUAR as incomplete,
2. Require significant revisions, and
3. Consider whether a full Environmental Impact Statement (EIS) is necessary before any approvals or annexation actions occur.

---

## 1. Groundwater Impacts Are Not Adequately Assessed

Scenario 1 (technology campus) anticipates extremely high water use, yet the AUAR does not provide:

- A hydrogeological model of aquifer drawdown.
- Analysis of impacts to private residential wells, shallow aquifers, or seasonal fluctuations.
- Cumulative groundwater demand impacts in combination with future city growth.
- Engineering feasibility for the proposed Rapid Infiltration Basin (RIB) system.
- Assessment of thermal impacts, temperature changes, or potential contamination risks.

Given that much of Monticello Township relies on private wells, the omission of aquifer sustainability modeling represents a substantial deficiency.

Request:

A full groundwater analysis, including worst-case pumping for both scenarios, must be completed before AUAR approval.

---

## 2. Surface Water & Stormwater Analyses Use Outdated Data

Although the AUAR acknowledges changing precipitation patterns, it fails to model:

- NOAA Atlas 14 updates or projected 2050–2080 storm intensities.
- Downstream flooding impacts to County Ditch systems.
- Increased runoff from converting ~444 acres of prime farmland (Table 3, p.18) to impervious surface.
- Flooding risk to nearby neighborhoods and planned residential developments.

Worst-case design must be shown; instead, the AUAR defers all critical detail to “future design phases.”

Request:

Stormwater modeling using future climate projections and complete downstream hydrological modeling.

---

## 3. Traffic & Transportation Impacts Are Severely Underestimated

The transportation analysis (Tables 24 & 25) is narrowly focused and excludes:

- Effects on Highway 25, County Road 39, and school routes.
- Freight and heavy truck trips expected under Scenario 2.
- Impacts on safety and emergency response times.
- Road deterioration, noise, and long-term city maintenance costs.

Given the scale of the development—up to 5 million square feet—the traffic study is insufficient for an AUAR.

Request:

A regional traffic impact analysis, including freight modeling, school traffic, and long-term roadway maintenance.

---

## 4. Air Quality, Noise, and Health Impacts Are Not Properly Addressed

The AUAR fails to evaluate:

- Backup diesel generator emissions for Scenario 1.
- Low-frequency and continuous cooling tower noise typical of data centers.
- 24/7 truck noise, idling, and loading activity for Scenario 2.
- Cumulative health impacts on residents, especially children and elderly populations.

These omissions conflict with the AUAR requirement to evaluate worst-case impacts.

Request:

A Health Impact Assessment, diesel generator emissions modeling, and noise propagation modeling for both scenarios.

---

## 5. Environmental, Habitat, and Farmland Impacts Are Downplayed

The AUAR acknowledges that approximately 77% of the land is currently farmland of statewide importance (Table 8, p.36), yet:

- No alternatives that preserve agricultural use are considered.
- Impacts to wildlife corridors and the planned greenway are dismissed.
- Wetland hydrology and ecological connectivity are not studied in depth.

Given the scale of land conversion, this is a major deficiency.

Request:

Inclusion of land conservation alternatives and a full ecological connectivity assessment.

---

## 6. Cumulative Impacts Section Is Critically Incomplete

The AUAR provides only minimal discussion of cumulative effects, failing to analyze:

- Combined water, sewer, and power demand with ongoing city growth.
- Combined regional traffic volumes.
- Multi-source noise, air emissions, and long-term climate impacts.

This violates EQB AUAR guidance, which explicitly requires thorough cumulative analysis.

---

## 7. Mitigation Plan Is Vague and Not Enforceable

The Draft Mitigation Plan (Table 26) lacks:

- Quantitative thresholds
- Timelines
- Monitoring requirements
- Assigned financial responsibility
- Enforcement mechanisms

State law requires that mitigation in an AUAR be specific, detailed, and binding. This mitigation plan does not meet that requirement.

---

## 8. Failure to Evaluate Reasonable Alternatives

The AUAR only evaluates two high-intensity industrial scenarios. It does not include:

- A conservation-based alternative
- Low-impact or mixed-use alternatives
- Scaled-back development alternatives
- Agricultural preservation or parkland alternatives

Minnesota environmental review rules require that an AUAR evaluate reasonable, feasible alternatives. This AUAR does not.

---

## Conclusion & Request for Action

Based on the concerns detailed above, I respectfully request that the City of Monticello:

Reject the current Draft AUAR as incomplete and inadequate,

Require significant revisions, including independent studies of groundwater, stormwater, noise, traffic, and health impacts\*\*,

Extend the public comment period after revisions are made,

Evaluate whether a full Environmental Impact Statement (EIS) is warranted, given the size, intensity, and risks associated with the proposed project.

This AUAR, as drafted, does not provide the community or decision-makers with the information necessary to ensure the protection of public health, natural resources, and quality of life for current and future residents.

Thank you for your consideration of these comments. I request written confirmation that these concerns will be addressed in the revised AUAR.

Sincerely,

Candace Seidl

On Wed, Nov 19, 2025 at 10:57 AM Angela Schumann  
<[Angela.Schumann@monticellomn.gov](mailto:Angela.Schumann@monticellomn.gov)> wrote:

On behalf of the City of Monticello, please find below a link to the Draft AUAR and Mitigation Plan for the Monticello Industrial Development study area. The City of Monticello approved the Draft AUAR and Mitigation Plan for distribution at the November 10, 2025, City Council Meeting.

[Environmental Reviews | Monticello, MN](#)

The AUAR process provides local governments with the opportunity to evaluate how different land uses may impact the community's environment, providing environmental analysis before major development occurs and helping inform future land use decisions. An AUAR is not a project approval document; it provides information useful to planning for the management and mitigation of impacts.

The Monticello Industrial AUAR evaluates two development land use scenarios, a light industrial park land use scenario as outlined in the Monticello 2040 Comprehensive Plan and a technology campus (data center) land use scenario. This AUAR study area encompasses approximately 550 acres on 16 parcels in Monticello Township, Minnesota. The study area is comprised of land generally located south of 85<sup>th</sup> St NE, west of Edmonson Ave NE, and east of Davidson Ave NE, within the Monticello Orderly Annexation Area.

The public is invited to review and provide comment on the Draft AUAR and mitigation plan. You are receiving this email because you have previously provided comments on the Monticello Industrial AUAR Scoping Document.

The 30-day comment period began on November 18, 2025. Comments will be accepted through 4:00 PM on December 18, 2025, and should be addressed to: [angela.schumann@monticellomn.gov](mailto:angela.schumann@monticellomn.gov).

An Open House on Thursday, November 20, 2025 is also scheduled as an opportunity for additional public information and feedback on the Monticello Industrial AUAR. The Open House will be held from 6-8 PM at the Monticello Community Center.

## Angela Schumann

*Community Development Director*

### Development Services

763-271-3224

505 Walnut St, Suite 1, Monticello, MN 55362

[MonticelloMN.gov](http://MonticelloMN.gov) | [Facebook](#) | [Subscribe to E-News](#)



Email correspondence to and from the City of Monticello government offices is subject to the Minnesota Government Data Practices Act and may be disclosed to third parties.

**From:** [bil keenan](#)  
**To:** [Angela Schumann](#)  
**Subject:** Data ordinance.  
**Date:** Thursday, November 20, 2025 12:55:32 PM

---

Good Morning Angela. I will not be able to attend the early meeting but will slip in for the later meeting. I read thru the ordinance and it doesnt look all that much different than the original ideas. 300 feet for a setback is far too low. The City of Monticello has the power, for now to control this and they are caving to big tech. That should be 1000 feet minimum and I see they went with the standard decibel levels. MPCA standard levels are too low, especially based on the type of frequency the noise will be. Human brains can not block it out, and it is shown to cause health issues. There is 550 acres available with a proposed 3,000,000 square feet ( which is around 70 acres). That leaves 480 acres as a buffer unless there is future development planned that we do not know about. 300 feet should not be an option. 1000 feet minimum.

My question is after reading the enviromental study is there is a woodland low area that has been used as a dumping ground for years. This would be in the field next to our property I did not see anything about abandoned vehicles and rusted out 55 gallon drums ( who knows what were in them) in the report. I would think that should have been disclosed initially. It will get buried by Fratllone and no one will say a thing.

Another question is, I see more and more investors shorting the AI market ( particularly Nvidia) for a potential bubble bust. Is Monticello concerned about this? The city of Monticello will be putting a crazy amount of infrastructure in for something that could be gone in 10 years

This whole thing is absolutely disgusting. I am hoping the city council will say no to the ordinance but I do not feel confident they will. They could at the very least table it for a year and watch what other cities are doing and the market.

MPCA standard levels are too low, especially based on the type of frequency the noise will be. Human brains cannot block it out and it is shown to cause health issues.

So much for public input. Very disheartening, but I do not think that anyone is suprised. My question is after reading the enviromental study is

there is a woodland low area that has been used a dumping ground for years. I did not see anything about abandoned vehicles and rusted out 55 gallon drums ( who knows what were in them) in the report. I would think that should have been disclosed initially. It will get buried by Fratton and no one will say a thing.

My other question is, I see more and more investors are shorting the AI market ( particularly Nvidia) for a potential bubble bust. Is Monticello concerned about this? The city of Monticello will be putting a crazy amount of infrastructure in for something that could be gone in 10 years.

MPCA standard levels are too low, especially based on the type of frequency the noise will be. Human brains cannot block it out and it is shown to cause health issues.

**From:** [DL Murdoff](#)  
**To:** [Angela Schumann](#)  
**Subject:** Greenhouse Gas Gases  
**Date:** Friday, November 21, 2025 3:10:41 PM

---

Angela,

The greenhouse gas analysis projects that the project could produce 3,013,575 tons of greenhouse gases per year--equivalent to 2.4% of ALL of Minnesota's current greenhouse gas emissions.

**This amount of** greenhouse gas emissions is outrageous! This would result in the addition of over 3 million tons of greenhouse gases to the environment every year, and it would occur right here in Monticello. That's a staggering amount.

To put into perspective, the Sherco power plant produced about 10.5 million tons of greenhouse gases in 2022. They employed around 300 people (maybe 350).

From my understanding, the data center will create around 40 ongoing jobs (and won't really have the upswing of workers coming in for outages like the power plant). So when you look at it from a greenhouse gas emissions standpoint. The data center creates more yearly CO2 per employee than a coal power plant. YIKES!!!

Thanks,

*Danielle L. Murdoff*

*My workdays are Tuesdays and Thursdays.*

*I usually reply within one workday.*

*Looking forward to connecting.*

**From:** [Shannon Bye](#)  
**To:** [Angela Schumann](#)  
**Subject:** Fwd: Monticello Industrial Development - Draft AUAR  
**Date:** Saturday, December 6, 2025 6:38:29 PM  
**Attachments:** [image001.png](#)

---

-----  
The **auar** introduces two development scenarios but provides **no rationale** for why these scenarios bracket the realistic range of impacts.

Scoping requires explaining why alternatives are reasonable, not just describing them.

Your document frequently states that mitigation “will be identified,” but does not outline:

- decision criteria for selecting mitigation, responsible parties, performance standards, or monitoring commitments.

This really weakens its usefulness for determining the scope and depth of analysis, but is that what you are after? Honestly after last night's 4 hours( I will never get back) I don't know why I bother. We do this song and dance with everything, and in the end you shove it through. Same song and dance with Havenridge, despite the efforts of the Army Corps of engineers recommendations, the supervision of recommendations was not even minimal in the end.

In this instance I am inclined to believe it isn't really about the data farm but opening up a chunk of twnshp for light industrial use, since the planning scope of other previous plans wasn't adept enough to realize commercial would tank, and allowing commercial IN the existing industrial area (fleet farm??)

At any rate here are some **expectations to improve your document**, not my first rodeo and I suspect even if you make the changes it will be like usual in that follow up is minimal regardless of the data collected

## **Insufficient evaluation of cumulative potential effects**

Scenario-based cumulative impacts are not described.

The AUAR must outline how cumulative effects will be assessed relative to:

- other planned annexations,
- regional industrial growth,
- utility system expansions,
- transportation improvements,
- climate change.

The document only states that cumulative impacts “will be discussed.” The current description does not identify the full range of realistic development intensities, nor does it justify why the two selected scenarios represent the outer bounds of potential environmental effects. Expand on the rationale and the bounding analysis should be included.**should include an analysis of**

## **greenway corridor constraints and potential fragmentation effects based on the City's adopted Natural Resource Inventory & Assessment.**

This scoping phase should identify whether protocol-level surveys, avoidance zones, or seasonal construction constraints will be required for Blanding's Turtle as noted. Don't see that coming, hasn't been given much credence for other sites. Your document does not describe potential host habitats or whether field surveys are required for butterflies or other pollinators.

The document describes plans but does not discuss potential plan amendments, conflicts, or necessary updates to the Comprehensive Plan or Orderly Annexation Agreement. **Scoping must clarify whether Scenario 1's data-center-heavy model aligns with land-use allowances.**

Climate adaptation section commits to addressing climate trends but contains **no actual climate baseline**, projections, vulnerability assessment, or preliminary findings. How about you include some actual climate projection baselines and anticipated future conditions to scope the level of analysis required by the process you are participating in???. The current language defers all meaningful analysis to the future without identifying **methodology, models, datasets, or thresholds for evaluating climate-related risk**. This undermines the ability to scope climate-related analysis meaningfully.

The scoping document appears to leave out baseline estimates for criteria pollutants, GHG emissions, noise contours, and traffic volumes for each scenario. These **baselines are necessary** to determine the depth of study required. Furthermore provides no identification of foreseeable projects, utility expansions, regional development, or transportation improvements that must be included. **Scoping must define the cumulative analysis boundary.**

## **Stormwater analysis is not yet defined**

AUAR guidance **requires a detailed stormwater approach**, including:

- conceptual pond locations,
- estimated impervious surface totals,
- infiltration feasibility,
- rate/volume control strategy,
- climate-change-adjusted hydrologic assumptions.

Instead, the document promises these will be “discussed,” offering no specifics.

## **Wetland analysis is incomplete**

While wetlands are mapped, the document does not include:

- impact estimates for either scenario,

- preliminary avoidance/minimization strategy,
- identification of likely mitigation pathways,
- whether buffers can be met,
- potential hydrologic changes.
- does not include an overlay analysis of potential fragmentation, habitat loss, or hydrologic alteration under either development scenario it also lacks an initial estimate of total inches removed and expected replacement obligations, THAT is needed to understand scale of impacts. There is **no preliminary assessment of cut/fill needs, soil export/import, mass grading extents**, or erosion-prone areas. Scenario-level earthwork analysis is required to properly scope stormwater and erosion evaluations.
- does not provide preliminary estimates of permanent or temporary wetland impacts for either scenario, nor does it evaluate hydrologic connectivity or **down-gradient effects to Pelican Lake**.
- this lacks baseline groundwater level data, anticipated drawdown under each scenario, or triggers for a water appropriations permit.
- **no scenario-level wastewater generation estimates are provided & this will be preventing scoping of system impacts. The document must include preliminary flow ranges based on land use intensities.**

This is a core requirement for AUAR scoping....The document mentions that water and wastewater needs “will be evaluated,” but provides **no preliminary capacity screening**, including but not limited to:

- existing system deficits,
- constraints of trunk sewer expansion,
- potential need for new wells,
- substation/transmission implications for Scenario 1.

Scoping must identify potential constraints, not just promise later evaluation.

**Insufficient evaluation of cumulative potential effects:** Scenario-based cumulative impacts are not described. The AUAR **must outline how cumulative effects will be assessed relative to:**

- other planned annexations,
- regional industrial growth,
- utility system expansions,
- transportation improvements,
- climate change.

The document only states that cumulative impacts “will be discussed.”

## **Insufficient evaluation of cumulative potential effects**

Scenario-based cumulative impacts are not described.

The AUAR must outline how cumulative effects will be assessed relative to:

- other planned annexations,
- regional industrial growth,
- utility system expansions,
- transportation improvements,
- climate change.

The document only states that cumulative impacts “will be discussed.”

I would expect that you need to identify **scenario-specific triggers**, thresholds for additional environmental review (e.g., fuel storage, wastewater flows), or anticipated timing of permit submittals. **Scoping should identify which permits materially influence the AUAR analysis, furthermore it lacks an initial compatibility screening, including noise, visual, traffic, stormwater, and utility conflicts with the planned single-family area east of Edmonson Avenue.**

On Wed, Nov 19, 2025 at 10:57 AM Angela Schumann

<[Angela.Schumann@monticellomn.gov](mailto:Angela.Schumann@monticellomn.gov)> wrote:

On behalf of the City of Monticello, please find below a link to the Draft AUAR and Mitigation Plan for the Monticello Industrial Development study area. The City of Monticello approved the Draft AUAR and Mitigation Plan for distribution at the November 10, 2025, City Council Meeting.

[Environmental Reviews | Monticello, MN](#)

The AUAR process provides local governments with the opportunity to evaluate how different land uses may impact the community's environment, providing environmental analysis before major development occurs and helping inform future land use decisions. An AUAR is not a project approval document; it provides information useful to planning for the management and mitigation of impacts.

The Monticello Industrial AUAR evaluates two development land use scenarios, a light industrial park land use scenario as outlined in the Monticello 2040 Comprehensive Plan and a technology campus (data center) land use scenario. This AUAR study area encompasses approximately 550 acres on 16 parcels in Monticello Township, Minnesota. The study area is comprised of land generally located south of 85<sup>th</sup> St NE, west of Edmonson Ave NE, and east of Davidson Ave NE, within the Monticello Orderly Annexation Area.

The public is invited to review and provide comment on the Draft AUAR and mitigation

plan. You are receiving this email because you have previously provided comments on the Monticello Industrial AUAR Scoping Document.

The 30-day comment period began on November 18, 2025. Comments will be accepted through 4:00 PM on December 18, 2025, and should be addressed to:

[angela.schumann@monticellomn.gov](mailto:angela.schumann@monticellomn.gov).

An Open House on Thursday, November 20, 2025 is also scheduled as an opportunity for additional public information and feedback on the Monticello Industrial AUAR. The Open House will be held from 6-8 PM at the Monticello Community Center.

## Angela Schumann

*Community Development Director*

### Development Services

763-271-3224

505 Walnut St, Suite 1, Monticello, MN 55362

[MonticelloMN.gov](http://MonticelloMN.gov) | [Facebook](#) | [Subscribe to E-News](#)



Email correspondence to and from the City of Monticello government offices is subject to the Minnesota Government Data Practices Act and may be disclosed to third parties.



# Comment Card

**Comments on the AUAR are public  
and will be included in the final AUAR document**

(Required) Name: Yvita Ceron

(Required) Contact Email Information: [REDACTED]

**Comments:**

Using information gathered from pgs. 36-38  
457.2 acres are deemed farmland  
of statewide importance.

What does that say about us as  
a community when we change things to  
satisfy Data Centers? Sounds selfish,  
like we don't care about it effects  
others so long as we benefit. 😞

**To review the Monticello Industrial AUAR, visit:  
[www.monticellomn.gov/712/Environmental-Reviews](http://www.monticellomn.gov/712/Environmental-Reviews)  
or Search Environmental Reviews**

**City Hall: (763) 295-2711  
[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)**



# Comment Card

**Comments on the AUAR are public  
and will be included in the final AUAR document**

(Required) Name: Nita Ceron

(Required) Contact Email Information: 

**Comments:**

Climate change Risks and Vulnerabilities  
clearly states on pg. 17 that  
suitable habitat may become unsuitable

So, even if adaptations are put in place  
there is no guarantee it would be  
enough to sustain fish, wildlife, plants  
and other sensitive Ecological Resources.

In my opinion we really shouldn't  
mess with Mother Nature - we need to  
leave things better than we found them. →

**To review the Monticello Industrial AUAR, visit:  
[www.monticellomn.gov/712/Environmental-Reviews](http://www.monticellomn.gov/712/Environmental-Reviews)  
or Search Environmental Reviews**

**City Hall: (763) 295-2711  
[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)**



# Comment Card

**Comments on the AUAR are public  
and will be included in the final AUAR document**

(Required) Name: Nita Ceron

(Required) Contact Email Information: [REDACTED]

**Comments:**

*What is a phase I Archaeological Survey  
as stated on page 80, paragraph 5?  
What exactly needs to be changed to  
evaluate the 122 acres that have been  
left out of this survey?  
How much time must lapse before  
it can be surveyed?*

---

---

---

---

---

---

---

---

**To review the Monticello Industrial AUAR, visit:  
[www.monticellomn.gov/712/Environmental-Reviews](http://www.monticellomn.gov/712/Environmental-Reviews)  
or Search Environmental Reviews**

**City Hall: (763) 295-2711  
[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)**



# Comment Card

**Comments on the AUAR are public  
and will be included in the final AUAR document**

(Required) Name: Nita Ceron

(Required) Contact Email Information: [REDACTED]

**Comments:**

I consider myself educated in a lot of areas. I'm finding my ignorance regarding the language of AUAR embarrassing to say the least. As I go over the draft that was available at the Thursday night presentation I found that not any citizen that tried to review it would feel just as <sup>lost</sup>. What's missing is a glossary, a list of all the acronyms so any person reading it can better educate themselves and understand what the presenter/author is trying to get across.

**To review the Monticello Industrial AUAR, visit:  
[www.monticellomn.gov/712/Environmental-Reviews](http://www.monticellomn.gov/712/Environmental-Reviews)  
or Search Environmental Reviews**

**City Hall: (763) 295-2711  
[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)**



# Comment Card

**Comments on the AUAR are public  
and will be included in the final AUAR document**

(Required) Name: Nita Coron

(Required) Contact Email Information: [REDACTED]

**Comments:**

? ? ?'s If in fact the data centers are approved,  
built and as time passes left abandoned,  
how will the soil beneath the building  
be affected? Would that area be  
buildable? Could it return to farmland  
or would it be so contaminated it  
would be deemed useless?

**To review the Monticello Industrial AUAR, visit:  
[www.monticellomn.gov/712/Environmental-Reviews](http://www.monticellomn.gov/712/Environmental-Reviews)  
or Search Environmental Reviews**

**City Hall: (763) 295-2711  
[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)**

**From:** [Allie VanVleet](#)  
**To:** [Angela Schumann](#)  
**Subject:** Data Center AUAR  
**Date:** Wednesday, December 10, 2025 8:55:40 PM

---

City of Monticello,

We have been residents of Monticello for over 5 years and have had many concerns with the direction the city has been taking over the last few years. We are in strong opposition to the proposed data center. I am sure you already know the numerous negative outcomes that these types of facilities have on the surrounding community, but the following are a few of the reasons we do not want to see this become a reality in our city.

Data centers negatively impact communities through severe noise pollution, increased air and water pollution, strained energy grids leading to higher utility costs, and high water consumption, potential health issues, decreased property values, and minimal local job creation, creating significant environmental and social burdens. These large facilities consume excessive amounts of resources and are not worth the related risks.

The environmental impacts include:

- **Water Strain:** Data centers use millions of gallons of water daily for cooling, straining local supplies in water-scarce regions.
- **Energy Demand:** They are massive energy consumers, putting pressure on power grids, sometimes leading to reliance on fossil fuels, increased emissions, and higher energy bills for residents.
- **Air Pollution:** Backup diesel generators can cause spikes in harmful air pollutants, impacting public health.

Community and health impacts include:

- **Noise Pollution:** Constant humming from cooling systems and generators causes sleep disruption, headaches, and stress for nearby residents.
- **Health Concerns:** Chronic noise and poor air quality can lead to hypertension, cardiovascular risks, and provoke lung problems.
- **Property Values:** property value of the surrounding area is driven down.

Economic impacts include:

- **Utility Costs:** Data centers can drive up electricity rates for all consumers.
- **Job Disparity:** While they consume resources, they create few local, high-paying jobs compared to their scale.
- **Land Use:** They displace other potential developments, such as housing, and can strain local infrastructure.

We ask that the city council listen to the people who are raising a family here and call this city their home rather than lining pockets with money that this type of facility claims to offer. We have heard nothing but opposition for this facility from those in our community and ask that this data center is denied entrance to ruining our home.

Thank you,  
Steven and Allie VanVleet

**From:** [Angela Schumann](#)  
**To:** [Anne Mueller](#)  
**Subject:** FW: Auar  
**Date:** Thursday, December 11, 2025 10:58:58 AM

---

**From:** Gwen&Wayne Johnson [REDACTED]  
**Sent:** Thursday, December 11, 2025 10:56 AM  
**To:** Angela Schumann <[Angela.Schumann@MonticelloMN.gov](mailto:Angela.Schumann@MonticelloMN.gov)>  
**Subject:** Auar

Hello Angela, I have read through the auar. Although the document seems pretty thorough for the most part. The one thing I don't see addressed is amount of chemical being used on the land now that may be eliminated with the change in land use.

I would be referring to farm herbicides, pesticides and chemical fertilizers.

As you are aware intensive farming practices require considerable amounts of all of these products on a regular basis.

The current farmer running a large portion of this land is a very efficient operator. He sometimes double crops areas of the farm which requires double applications of all of the above chemicals. He also grows specialty crops which generally require higher amounts of insecticides.

Although many of the current farm chemicals are not considered pfas, a few are. Some of the main chemicals such as glyphosphates are not considered pfas, although it has been proven they remain molecularly intact long enough to create health concerns.

Being that there are currently thousands of pounds of various chemicals currently being distributed on this parcel that would be mostly eliminated in the auar scenarios. It seems this would have very realistic effect on the surrounding community and the environment.

I imagine that the amount of chemicals the operator uses on this parcel may not be required to be of public record.

Thank you,

**Wayne Johnson**

**From:** [REDACTED]  
**To:** [Angela Schumann](#)  
**Subject:** Public Comment on the Monticello Draft AUAR  
**Date:** Wednesday, December 10, 2025 1:32:00 PM

---

**Hello,**

I am submitting this comment because after reviewing the Draft AUAR, it's clear that the document does not go far enough in protecting residents, groundwater, wetlands, wildlife, or the character of the surrounding neighborhoods. The AUAR reads more like a framework to make development easier than a document that seriously evaluates worst-case impacts or holds future projects to a high standard.

The area covered by this AUAR includes sensitive wetlands, wells, groundwater protection zones, and wildlife habitat. It also sits near existing neighborhoods that will be directly affected by noise, lighting, traffic, and industrial activity. Given the scale of the two scenarios—up to 3 million square feet of “technology campus” buildings or up to 5 million square feet of industrial development—the protections outlined in the AUAR are not nearly strong enough or detailed enough to ensure long-term environmental safety and quality of life.

**Major Concerns:**

**1. Groundwater and Aquifer Protection**

The AUAR acknowledges that part of the site lies within a Drinking Water Supply Management Area but still allows high-risk options like rapid infiltration basins and large-volume water use without requiring rigorous hydrogeological testing before approval. A “study later” approach is not acceptable in an area tied directly to community drinking water.

**2. Wetland Impacts**

The document allows for wetland impacts under both scenarios with vague promises of “replacement through banking credits.” Replacing wetlands on paper does not protect the local ecosystem or stormwater function of the site. Local wetland preservation should be the default expectation, not an optional mitigation tactic.

**3. Traffic and Roadway Stress**

The AUAR's traffic analysis is too general and does not realistically address truck volumes, noise, congestion, or safety risks—especially under the industrial scenario. Residents should not be left to deal with the consequences of heavy industrial traffic because the initial environmental review used optimistic estimates.

**4. Noise and Air Impacts**

The AUAR repeatedly delays noise and air-quality studies until individual projects are proposed. This undermines the purpose of an AUAR, which is supposed to evaluate cumulative, worst-case impacts. Backup generators, cooling systems, and heavy equipment could have major long-term effects on surrounding homes, yet the AUAR provides no enforceable limits.

**5. Weak Enforcement Language**

Much of the mitigation plan uses soft language like “should,” “may,” or “is expected

to.” None of these guarantee that impacts will actually be prevented. Developers could technically meet the AUAR requirements while still creating substantial harm.

### **Stronger Measures That Should Be Added Before Approval:**

1. **Mandatory full hydrogeological impact assessment before any approval**  
No project should move forward without clear evidence that groundwater, private wells, and the City’s aquifer will not be harmed.
2. **No use of infiltration basins for industrial or data-center wastewater**  
This practice introduces unnecessary risk in a DWSMA zone. Wastewater must be treated and sent through the municipal system only.
3. **Zero net loss of local wetlands**  
All wetlands on the site should be protected in place. Banking credits should not substitute for local environmental functions.
4. **Binding noise limits and generator-testing restrictions**  
The AUAR should establish strict noise thresholds, limits on hours of operation, and requirements for noise-reducing design features before any project is allowed.
5. **Comprehensive traffic impact plan with enforceable truck routes**  
Heavy truck traffic should be restricted from residential roads, and a full traffic impact study should be required before any project approval—not after.
6. **A stronger greenway and wildlife-protection requirement**  
The AUAR should guarantee continuous habitat corridors, larger buffers around wetlands, and mandatory wildlife-friendly design.
7. **Independent environmental monitoring paid for by developers**  
Annual third-party audits should be required to ensure developers follow stormwater, groundwater, noise, and air-quality commitments.
8. **Shorter AUAR validity period**  
The AUAR should expire sooner than typical to prevent outdated assumptions from allowing harmful future projects.

**In summary**, this AUAR does not go far enough to protect Monticello residents or the environment. The scale of development being considered demands stronger, clearer, and enforceable mitigation measures. Without these changes, the AUAR creates more risk than reassurance. I urge the city to adopt stricter requirements before finalizing this document.

## Monticello Industrial AUAR Schedule

TASK	START	END
<b>AUAR Order</b>		
City Council Meeting to Authorize Distribution to EQB		7/28/2025
WSB submits Draft AUAR Order and Scoping Document to EQB		7/29/2025
Draft AUAR Order and Scoping Document published in EQB Monitor		8/5/2025
<b>30-day public comment period</b>	<b>8/5/2025</b>	<b>9/4/2025</b>
KH prepares Final AUAR Order and Scoping Document	9/4/2025	9/19/2025
City Reviews/KH revises Final AUAR Order and Scoping Document	9/19/2025	9/26/2025
KH revises	9/26/2025	10/3/2025
Submit AUAR Order and Scoping Document to City (1 week prior to mtg)		10/8/2025
City adopts AUAR Order + Scoping Document at City Council meeting		10/13/2025
WSB submits Final AUAR Order and Scoping Document to EQB		10/14/2025
Final AUAR Order and Scoping Document published in EQB Monitor		10/21/2025
<b>AUAR and Mitigation Plan</b>		
120-day AUAR preparation process	10/13/2025	2/10/2026
City/Client reviews 2nd draft of Draft AUAR	9/24/2025	10/8/2025
KH revises Draft AUAR	10/8/2025	10/18/2025
City reviews/KH revises 3rd draft of Draft AUAR	10/18/2025	10/30/2025
Planning Commission Review of Draft AUAR (in PPT form & provide copy of Draft AUAR)		11/3/2025
City Council Authorization to submit Draft AUAR to EQB (final draft shared at meeting)		11/10/2025
WSB submits Draft AUAR to EQB		11/11/2025
Draft AUAR published in EQB Monitor		11/18/2025
<b>30-day public comment period</b>	<b>11/18/2025</b>	<b>12/18/2025</b>
<b>Public Open House (est. date)</b>		<b>Nov 18-20</b>
<b>Joint session with PC and CC to collect AUAR comments</b>		<b>TBD (during comment period)</b>
KH prepares Final AUAR and responses to comments	12/18/2025	12/22/2025
Meeting with city to discuss comments		12/22/2025
City reviews Final AUAR (1 week)	12/22/2025	12/29/2025
WSB submits Final AUAR to state agencies and EQB Monitor		12/30/2025
10-business day Final AUAR objection period (state agencies and the Met Council)	1/6/2026	1/21/2025
Submit Final AUAR to City		1/21/2025
<b>City adopts the Final AUAR at City Council meeting</b>		<b>1/26/2025</b>
WSB submits notice of adoption of Final AUAR to EQB and EQB distribution list		1/27/2025
Notice of adoption of Final AUAR published in EQB Monitor		2/3/2025



## Quick Reference: Alternative Urban Areawide Review (AUAR)

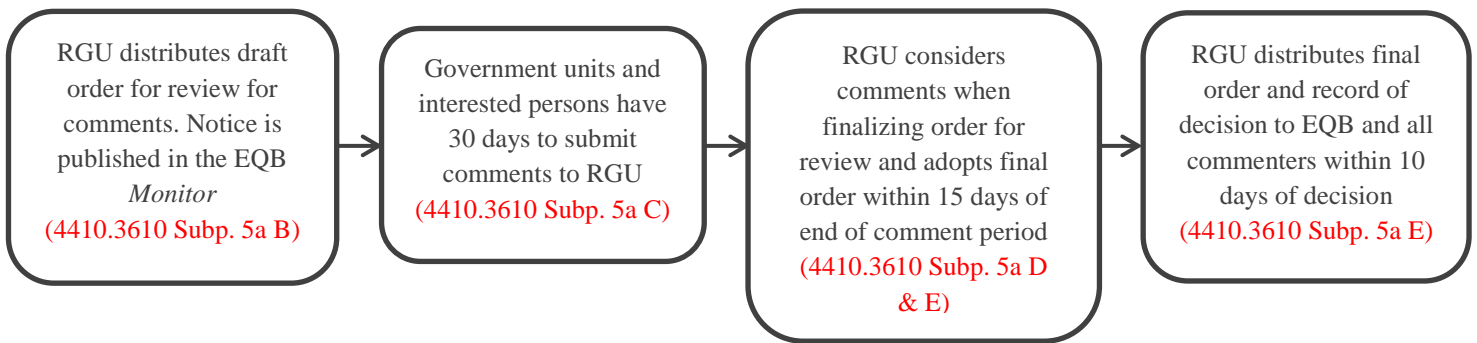
The AUAR process is a hybrid of the Environmental Assessment Worksheet (EAW) and Environmental Impact Statement (EIS) review processes. Responsible Governmental Units (RGU) can use an AUAR as a planning tool to understand how different development scenarios will affect the environment of their community before the development occurs. The process is designed to look at the cumulative impacts of anticipated development scenarios within a given geographic area. The AUAR document uses a list of questions adapted from the EAW form, but provides a level of analysis of typical urban area impacts comparable to an EIS. Environmental analysis information from an AUAR can be used to inform local planning and zoning decisions. This quick reference guide is meant to provide a brief overview of the AUAR process and the steps required to successfully complete an AUAR. For more detailed guidance on properly preparing an AUAR, please see the [Recommended Content and Format Guide](#) on the Environmental Quality Board (EQB) website.

*Please note that this quick reference guide is not intended to substitute for [Minnesota Rules 4410](#). It is designed to help RGUs and others implement the environmental review process more effectively and efficiently. The guide does not alter the rules or change their meaning; if any inconsistencies arise between this guide and the rules, the rules take precedent. Please contact EQB Staff with any questions at [Env.Review@state.mn.us](mailto:Env.Review@state.mn.us) or 651-757-2873.*

## Additional First Steps in AUAR Process for Certain Specific Large Projects (Minnesota Rules 4410.3610, Subpart 5a)

**Note:** If you do not have a large project that meets the criteria described below, please see the AUAR Process Steps on page two.

The 2009 Minnesota Rule amendments added additional required steps at the beginning of the AUAR process if the review will cover any specific projects that meet mandatory Environmental Impact Statement (EIS) requirements or comprise at least 50 percent of the geographic area to be reviewed. These steps include a public comment period on the scope of the AUAR review, specifically on the development scenarios and relevant issues to be covered. These steps must occur before a final order for review can be adopted.

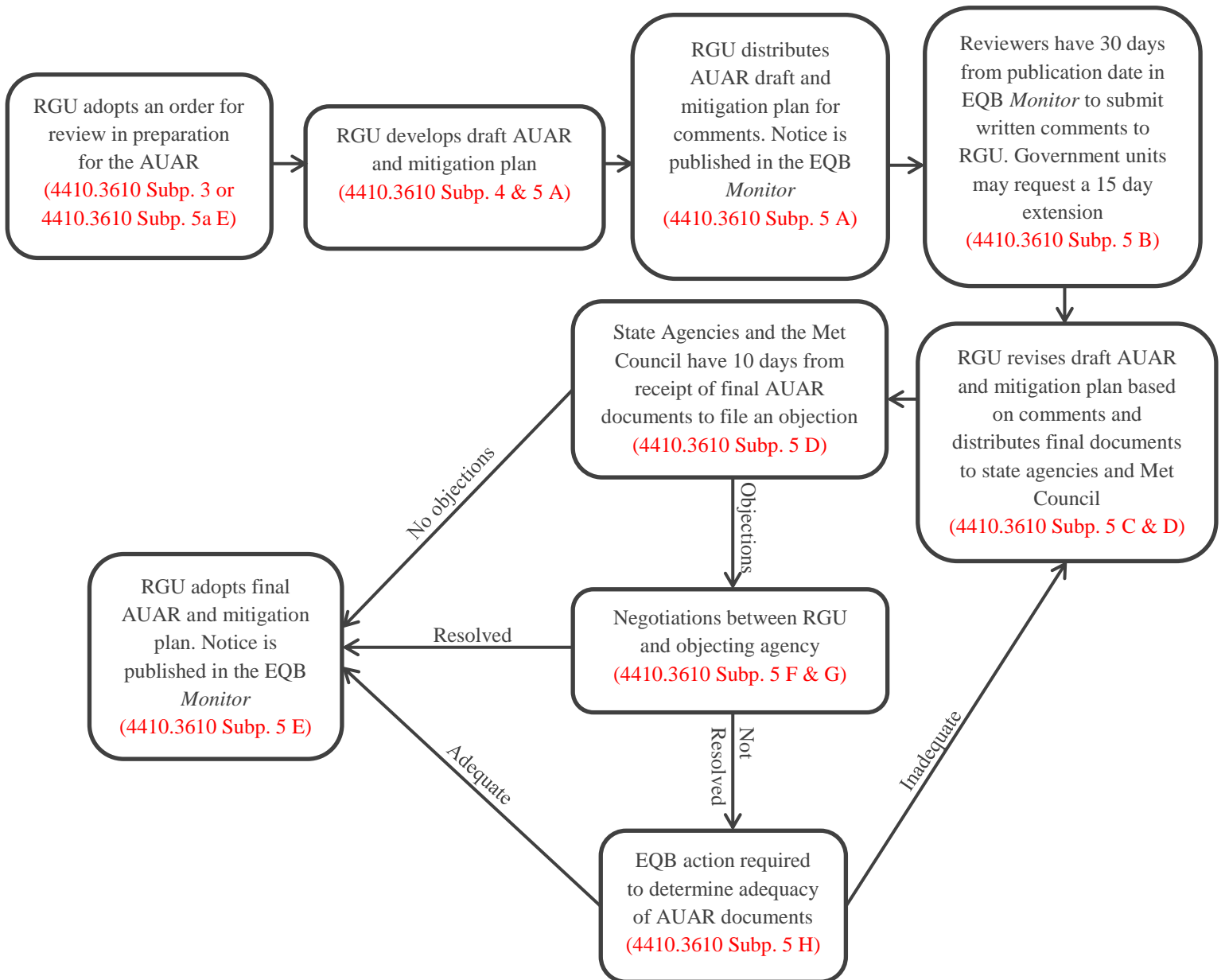




## AUAR Process Steps

(Minnesota Rules 4410.3610, Subparts 3-5)

Unless the AUAR includes additional first steps due to a large specific project as detailed on page one, the first step of the AUAR process is the adoption of an order for review by the RGU. The draft and final AUAR, along with the mitigation plan, are prepared and distributed for comments to ensure adequate review. A process for appeal to the EQB can be invoked by state agencies and the Metropolitan Council.



## AUAR Update Process Steps

(Minnesota Rules 4410.3610 Subpart 7)

Minnesota Rules provide guidance on the circumstances that require an AUAR update. Regardless of any significant changes, the AUAR must be updated every five years until all of the development in the area has been approved. An AUAR update is generally a faster process than starting a new AUAR since the update process does not require a complete revision of the AUAR document. Instead, the update process requires that the AUAR document, along with the mitigation plan, be updated to the extent necessary to reflect the changes that have occurred in the area included in the review. The updated documents are distributed in a manner similar to a final AUAR except that the documents must be sent to all parties listed on the EAW distribution list and a notice must be published in the EQB *Monitor*. The process for appeal to the EQB can still be invoked by state agencies and the Metropolitan Council as in the normal AUAR process.

