

# Youngblood Apartments

## Environmental Assessment Worksheet

September 2022

Prepared for:



Prepared by:

**Kimley»»Horn**

# Table of Contents

1. Project Title .....	1
2. Proposer .....	1
3. RGU .....	1
4. Reason for EAW Preparation .....	2
5. Project Location.....	2
6. Project Description.....	2
7. Climate Adaption and Resilience .....	4
8. Cover Types.....	8
9. Permits and Approvals Required .....	9
10. Land Use.....	10
11. Geology, Soils, and Topography/Landforms .....	12
12. Water Resources .....	13
13. Contamination/Hazardous Materials/Wastes .....	17
14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features) .....	20
15. Historic Properties .....	21
16. Visual.....	22
17. Air.....	22
18. Greenhouse Gas (GHG) Emissions/Carbon Footprint .....	23
19. Noise.....	27
20. Transportation .....	27
21. Cumulative Potential Effects .....	30
22. Other Potential Environmental Effects.....	30
RGU Certification .....	31

# List of Tables

Table 1: Project Magnitude .....	3
Table 2: Climate Considerations and Adaptations .....	6
Table 3: Cover Types .....	8
Table 4: Green Infrastructure.....	8
Table 5: Trees.....	8
Table 6: Permits and Approvals Required .....	9
Table 7: What’s in My Neighborhood Sites .....	17
Table 8: Historic Properties within 500 feet of the Project Site .....	21
Table 9: Construction Emissions .....	25
Table 10: Operational Emissions .....	25
Table 11: Trip Generation Forecast .....	28
Table 12: LOS Summary .....	29

# List of Figures

Figure 1: County Map.....	33
Figure 2: USGS Map.....	34
Figure 3: Existing Conditions .....	35
Figure 4: Existing Land Use.....	36
Figure 5: Future Land Use.....	37
Figure 6: Existing Zoning .....	38
Figure 7: Zoning Overlay Districts.....	39
Figure 8: Built Form Overlay Districts.....	40
Figure 9: Water Resources .....	41
Figure 10: What’s In My Neighborhood Sites Within 200 feet of the Project Site .....	42
Figure 11: Historic Resources Within 500 Feet of the Project Site .....	43

# List of Appendices

- Appendix A: Concept Plan
- Appendix B: Agency Correspondence
- Appendix C: Greenhouse Gas Emissions Analysis
- Appendix D: Travel Demand Management Plan

# Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's (EQB's) website at: <https://www.eqb.state.mn.us>. The EAW form provides information about a proposed project's potential environmental effects and is also used as the basis for scoping an Environmental Impact Statement. Guidance documents provide additional detail and links to resources for completing the EAW form.

**Cumulative potential effects** can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation, and the need for an EIS.

## 1. Project Title

---

Youngblood Apartments

## 2. Proposer

---

**Proposer:** Solhem Companies  
**Contact Person:** Curt Gunsbury, CEO  
**Address:** 724 N 1<sup>st</sup> Street, Suite 500  
**City, State ZIP:** Minneapolis, MN 55401  
**Phone:** 612-216-2825  
**Email:** curt@solhem.com

## 3. RGU

---

**RGU:** City of Minneapolis  
**Contact Person:** Hilary Dvorak  
**Title:** Principal City Planner  
**Address:** 505 4<sup>th</sup> Avenue South, Room 320  
**City, State, ZIP:** Minneapolis, MN 55415  
**Phone:** 612-673-2639  
**Email:** hilary.dvorak@minneapolismn.gov

#### 4. Reason for EAW Preparation

---

**Check one:**

Required:

EIS Scoping

Mandatory EAW

Discretionary:

Citizen petition

RGU discretion

Proposer initiated

**If EAW or EIS is mandatory, give EQB rule category subpart number(s) and name(s):**

Minnesota Rules, part 4410.4300, subpart 32 (Mixed residential and industrial-commercial projects)

#### 5. Project Location

---

**County:** Hennepin

**City/Township:** Minneapolis

**PLS Location (1/4, 1/4, Section, Township, Range):** SW 1/4, NW 1/4, Section 13, Township 29N, Range 24W

**Watershed (81 major watershed scale):** Mississippi River – Twin Cities

**GPS Coordinates:** 45.001546, -93.246750

**Tax Parcel Number:** 1302924230026, 1302924230027, 1302924230028, 1302924230029

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

- **County map showing the general location of the project** (see Figure 1)
- **US Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries** (see Figure 2)
- **Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.** (see Figure 3 and Appendix A)
- **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).** (see sources noted in Items 7 and 18)

#### 6. Project Description

---

- a. **Provide the brief project summary to be published in the *EQB Monitor* (approximately 50 words).**

The proposed Youngblood Apartments will be a redevelopment of an approximately 3.4-acre site in Minneapolis, Minnesota that was formerly the location of the Youngblood Lumber Company. The site is bounded by 14<sup>th</sup> Avenue NE on the north, Tyler Street NE on the east, 13<sup>th</sup> Avenue NE on the south, and Central Avenue NE (Highway 65) on the west. The proposed project is anticipated to include up to 600 residential units, 7,500 square feet of retail, 30,000 square feet of production space, and 600 parking spaces.

- b. **Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion, include a description of the existing facility. Emphasize 1) construction and operation methods and features**

**that will cause physical manipulation of the environment or will produce wastes; 2) modifications to existing equipment or industrial processes; 3) significant demolition, removal, or remodeling of existing structures; and 4) timing and duration of construction activities.**

The 3.4-acre project site is the former location of the Youngblood Lumber Company and is bounded by 14<sup>th</sup> Avenue NE on the north, Tyler Street NE on the east, 13<sup>th</sup> Avenue NE on the south, and Central Avenue NE (Highway 65) on the west in Minneapolis, Minnesota. See Figure 1 and Figure 2 for project location and Figure 3 for the existing site conditions.

The proposed project will include two buildings with up to 600 residential units, 30,000 square feet of production space, 7,500 square feet of retail space, and 600 underground parking spaces. The buildings will be connected by skyways. The concept plan is included in Appendix A. All existing buildings on the site will be demolished to accommodate the redevelopment. No utility relocations or extensions are anticipated.

Truck access to the site and the garage entrance will be from Tyler Street NE and loading docks will be accessible from 14<sup>th</sup> Avenue NE. Sidewalks will be reconstructed along the perimeter of the site, and an east-west pedestrian connection will be provided through the site.

Construction is anticipated to begin in the spring of 2023 and by complete in late 2025.

**c. Project magnitude**

*Table 1: Project Magnitude*

Measure	Magnitude
Total Project Acreage	3.4 acres
Number and Type of Residential Units	600 multifamily units
Residential Building Area	381,000 square feet
Commercial Building Area	37,500 square feet
Structure Height(s)	7 stories (85 feet)

**d. Explain the project purpose. If the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.**

The purpose of this project is to redevelop the project site into a mixed-use development that will include residential, production, and retail spaces.

**e. Are future stages of this development, including development on any other property, planned or likely to happen?  Yes  No**

**If yes, briefly describe future stages, relationship to present project, timeline, and plans for environmental review.**

Not applicable.

**f. Is this project a subsequent stage of an earlier project?  Yes  No**

**If yes, briefly describe the past development, timeline, and past environmental review.**

Not applicable.

## 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 Representative Concentration Pathways (RCPs), which are greenhouse gas concentration scenarios used by the Intergovernmental Panel on Climate Change. RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040, and RCP 8.5 is a worst-case scenario in which emissions continue to rise through the 21<sup>st</sup> century.<sup>1</sup>

### *Temperature*

According to the Minnesota Climate Explorer,<sup>2</sup> the historical average temperature in Hennepin County between 2001-2021 was approximately 45.56°F, with the lowest average in 2014 (41.63°F) and the highest average in 2012 (48.96°F). The average annual temperature in Hennepin County is projected to be 48.87°F from 2040-2059 under RCP 4.5. In 2080-2099, the average annual temperature is projected to be 51.27°F and 55.03°F under RCP 4.5 and 8.5, respectively.

### *Urban Heat Island*

Surfaces and structures such as roads, parking lots, and buildings absorb and re-emit more heat from the sun than natural landscapes. This can significantly raise air temperature and overall extreme heat vulnerability in urban areas where there are dense concentrations of these surfaces. This is referred to as urban heat island effect. According to the Metropolitan Council's Extreme Heat Map Tool, based on the land surface temperature at the project site during a heatwave in 2016, the site is susceptible to extreme heat.<sup>3</sup>

### *Precipitation*

According to the Minnesota Climate Explorer, historic average precipitation in Hennepin County between 2001-2021 was approximately 31.56 inches, with the lowest average in 2008 (23.43 inches) and the highest average in 2019 (41.49 inches). Average annual precipitation in Hennepin County from 2040-2059 is projected to be 32.12 inches under RCP 4.5. From 2080-2099, average annual precipitation is projected to be 32.94 inches under RCP 4.5 and 35.70 inches under RCP 8.5.

### *Localized Flood Risk*

The Metropolitan Council's Localized Flood Map Screening Tool<sup>4</sup> identifies localized flood hazards, referred to as Bluespots, which are broken into categories based on potential flood

---

<sup>1</sup> Climate Explorer Metadata. Available at <https://www.dnr.state.mn.us/climate/climate-explorer-metadata.html>.

<sup>2</sup> Minnesota Climate Explorer. Minnesota Department of Natural Resources. Available at <https://arcgis.dnr.state.mn.us/ewr/climateexplorer/main/historical>.

<sup>3</sup> Extreme Heat Map Tool. Metropolitan Council. Available at <https://metro council.org/Communities/Planning/Local-Planning-Assistance/CVA/Tools-Resources.aspx>

<sup>4</sup> Localized Flood Map Screening Tool. Metropolitan Council. Available at <https://metro council.org/Communities/Planning/Local-Planning-Assistance/CVA/Tools-Resources.aspx>.

water depth. This tool shows a Shallow Bluespot along Central Avenue NE between 13<sup>th</sup> and 14<sup>th</sup> Avenues NE (maximum depth of 0.99 feet) and at the intersection of Central and 14<sup>th</sup> Avenues NE (maximum depth of 0.39 feet). There are also Primary and Secondary Bluespots in the northwest corner of the site, with a maximum depth of 2.23 feet. Primary Bluespots are the first areas to fill with water, followed by Secondary.

#### *Cooling Degree Days*

As defined by the National Weather Service, degree days are based on the assumption that when the outside temperature is 65°F, heating or cooling is not needed to be comfortable. Degree days are the difference between the daily temperature mean and 65°F. If the temperature mean is above 65°F, 65 is subtracted from the mean and the result is the cooling degree days. For example, if the mean temperature over a 24-hour period is 70°F, then there have been five cooling degree days.<sup>5</sup> Cooling degree days are used as a proxy to estimate cooling needs for buildings.

According to Heat Vulnerability in Minnesota,<sup>6</sup> the number of cooling degree days in 2019 for Hennepin County was 408. The number of cooling days in 2050 for Hennepin County is projected to be 482 and 631 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.**

Climate considerations and adaptations under consideration for the proposed project are described in Table 2.

---

<sup>5</sup> "What Are Heating and Cooling Degree Days." National Weather Service. Available at [https://www.weather.gov/key/climate\\_heat\\_cool](https://www.weather.gov/key/climate_heat_cool).

<sup>6</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/).



Table 2: Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations
Project Design	Aspects of the building architecture/materials choices and site design may negatively affect urban heat island conditions in the area considering changing climate zones, temperature trends, and potential for extended heat waves.	The site is in an area with risk of urban heat island effect, increased temperature and precipitation, and increased frequency of freeze/thaw cycles.	<ul style="list-style-type: none"> <li>• Landscaping and stormwater management systems will reduce runoff and urban heat island effect.</li> <li>• Permeable pavers may be used and would reduce runoff by allowing water into the stormwater systems.</li> <li>• Planting additional trees will reduce runoff and provide shade.</li> <li>• Tree trenches will be used to provide additional stormwater capacity.</li> </ul>
Land Use	Changes in land cover caused by the project could result in: <ul style="list-style-type: none"> <li>• Increased urban heat island effect</li> <li>• Reduction in air quality</li> </ul>	<ul style="list-style-type: none"> <li>• Additional impervious surfaces and dark materials can contribute to an increase in urban heat island affect.</li> <li>• New construction contributes to energy demand and fossil fuel consumption for construction and operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Stormwater management facilities will be designed to minimize standing water and reduce the risk of flooding on the project site. These facilities would improve water quality and stormwater runoff in the project vicinity.</li> </ul>
Water Resources	Changes in land cover caused by the project could: <ul style="list-style-type: none"> <li>• Affect site surface hydrology, resulting in more stormwater runoff and nutrient loading</li> </ul>	<ul style="list-style-type: none"> <li>• Additional impervious surfaces may result in increases in receiving water flows and base flow, increase in downstream flood risk, and/or an increase or change in the generation of pollutants in runoff.</li> </ul>	<ul style="list-style-type: none"> <li>• Using native plants and perennials for landscaping and stormwater features will absorb water and reduce the water demand for irrigation.</li> </ul>

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations
	<ul style="list-style-type: none"> <li>Diminish water supply and quality</li> </ul>	<ul style="list-style-type: none"> <li>Change in weather could cause higher frequency of freeze/thaw cycles, resulting in the need for increased salting.</li> <li>Chlorides from salting degrade nearby water quality and impact aquatic life.</li> </ul>	<ul style="list-style-type: none"> <li>The stormwater system will be sized for the additional impervious areas and changes in stormwater requirements.</li> </ul>
Contamination/ Hazardous Materials/ Wastes	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.	<ul style="list-style-type: none"> <li>Increased emissions and particulate matter.</li> <li>Increased moisture added to waste material or debris, which will in turn increase methane gas production and add to greenhouse gasses.</li> </ul>	<ul style="list-style-type: none"> <li>Any hazardous waste products generated or stored within the proposed development will be registered and kept in accordance with Minnesota Pollution Control Agency (MPCA) requirements.</li> </ul>
Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)	Project is located in a previously developed site in an urban area. It is not anticipated to affect this resource category.	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>

## 8. Cover Types

**Estimate the acreage of the site with each of the following cover types before and after development.**

Cover type acreages within the project site before and after development are summarized in Table 3.

Table 3: Cover Types

Cover Type	Before (Acres)	After (Acres)
Wetlands and Shallow Lakes (less than 2 meters deep)	0	0
Deep Lakes (more than 2 meters deep)	0	0
Rivers/Streams	0	0
Wooded/Forest	0	0
Brush/Grassland	0	0
Cropland	0	0
Livestock Rangeland/Pastureland	0	0
Lawn/Landscaping	0.2	0.21
Green Infrastructure (total from Table 4)	0	0.09
Impervious Surface	3.2	3.1
Stormwater Pond (wet sedimentation basin)	0	0
Other (describe)	0	0
<b>Total</b>	<b>3.4</b>	<b>3.4</b>

Green infrastructure proposed within the project site includes tree trenches, permeable pavements, and additional tree canopy (see Table 4 and Table 5).

Table 4: Green Infrastructure

Green Infrastructure	Before (Acres)	After (Acres)
Constructed Infiltration Systems (infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, swales with impermeable check dams)	0	0
Constructed Tree Trenches and Tree Boxes	0	0.04
Constructed Wetlands	0	0
Constructed Green Roofs	0	0
Constructed Permeable Pavements	0	0.05
Other (describe)	0	0
<b>Total</b>	<b>0</b>	<b>0.09</b>

Table 5: Trees

Trees	Before	After
Percent Tree Canopy	0% (0 trees)	1% (5 trees)

In addition to the trees within the site noted in Table 5, in coordination with the City, the project proposes the installation of approximately 0.16 acres of tree trench within the boulevard along the streets adjacent to the site. This area will include approximately 60 new boulevard trees as

well as over 500 shrubs and perennials. This approach is consistent with the City's street design guidelines for landscaping in the urban realm.

## 9. Permits and Approvals Required

**List all known local, state, and federal permits, approvals, certifications, and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing, and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules Chapter 4410.3100.**

Table 6: Permits and Approvals Required

Unit of Government	Type of Application	Status
<b>State</b>		
Minnesota Department of Health	Water Main Installation Permit	To be applied for
Minnesota Department of Natural Resources	Water Appropriation Permit	To be applied for, if needed
Minnesota Pollution Control Agency	Construction Contingency Plan and Response Action Plan Approval	To be applied for, if needed
	Disturbance Permit	To be applied for, if needed
	Notice of Intent of Demolition	To be applied for
	National Pollutant Discharge Elimination System Permit	To be applied for, if needed
	Sanitary Sewer Extension Permit	To be applied for, if needed
<b>Regional</b>		
Metropolitan Council	Encroachment Agreement	To be applied for, if needed
	Sewer Connection Permit	To be applied for, if needed
Mississippi Water Management Organization	Stormwater Management Plan Approval	To be applied for, if needed
<b>Local</b>		
City of Minneapolis	After Hours Work Permit	To be applied for, if needed
	Building Permit	To be applied for
	Certificate of Occupancy	To be applied for
	Demolition Permit	To be applied for
	Emergency Generator Fuel Storage	To be applied for, if needed
	Encroachment Permit	To be applied for
	Environmental Permits	To be applied for
	Erosion and Sedimentation Control Plan Approval and Grading Permit	To be applied for
	Excavation and Grading Permit	To be applied for, if needed
	Hydrant or Temporary Meter Permit	To be applied for
	Obstruction Permit	To be applied for
	Plumbing Permits	To be applied for

Unit of Government	Type of Application	Status
	Public Works Construction Permits (Water, Meter, Sewer, Stormwater)	To be applied for
	Right-of-way and Utility Easement vacations	To be applied for, if needed
	Sidewalk Construction Permit	To be applied for
	Sign Permit	To be applied for, if needed
	Site Plan Review and other Land Use Applications, as needed	To be applied for
	Soil Erosion Permit	To be applied for
	Street Lighting Permit	To be applied for
	Temporary Water Discharge Permit	To be applied for, if needed
	Testing and Inspection Permit	To be applied for, if needed
	Utility Repair Permit	To be applied for, if needed
	Water Main Installation	To be applied for, if needed

## 10. Land Use

### a. Describe:

- i. **Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, and prime or unique farmlands.**

The existing site is a former lumberyard with accompanying offices buildings (see Figure 3). Adjacent existing land uses include vacant land to the north, mixed use to the east, industrial/utility and office/commercial to the south, and park/recreational (the Northeast Ice Arena), residential, office/commercial, and vacant to the west (see Figure 4). Additionally, there is a rail line northeast of the site.

There are three parks within ¼ mile of the project site, including Northeast Park to the east, Beltrami Park to the southeast, and Community Commons Park to the southwest.

There are no trails, cemeteries, or prime or unique farmland within or adjacent to the project site.

- 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.**

*Minneapolis 2040* is the City's comprehensive plan and was adopted in 2019. The comprehensive plan contains both future land use and future built form guidance for the entire city. Future land use guidance is used to inform future development in terms of allowable uses, while the future built form guidance is used to guide the scale of development. These work in tandem by providing both an assortment of allowable uses and range of acceptable building scales to guide future development throughout the city.

The *Minneapolis 2040* land use map designates the future land use for the project site as Production Mixed Use (see Figure 5). This land use designation allows both production and non-production uses, recognizing that while many buildings in these areas are no longer viable for modern production industries, they are increasingly occupied by a wide variety of uses that contribute to the economic health and diversity of the city. Residential uses are allowed as part of mixed-use buildings that provide production space and must incorporate mitigation strategies to address potential conflicts between existing production uses and new residences.

The built form district for the project site is Corridor 6. The Corridor 6 district is typically applied along high frequency transit routes as well as in areas near METRO stations. Building heights should be 2 to 6 stories to take advantage of the access to transit, jobs, and goods and services provided by the Corridor 6 district.

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

*Existing Zoning*

The project site is currently zoned I2 - Medium Industrial (see Figure 6). This district is established to provide locations for medium industrial uses and other specific uses which have the potential to produce greater amounts of noise, odor, vibration, glare, or other objectionable influences than uses allowed in the I1 – Light Industrial district and which may have an adverse effect on surrounding properties.

*Overlay Districts*

Overlay districts are additional districts that are established by the zoning regulations that may be more or less restrictive than the primary zoning district. Parcels within an overlay district are subject to the provisions of both the primary zoning district and the overlay district. When these provisions conflict, the overlay district governs.

The entire project site is within the BFC6 Corridor 6 Built Form Overlay District (see Figure 8). In the BFC6 Corridor 6 Built Form Overlay District, building heights should be 2 to 6 stories to take advantage of the access to transit, jobs, and goods and services provided by the Corridor 6 district. Requests to exceed 6 stories are evaluated on the basis of whether or not a taller building is a reasonable means for further achieving comprehensive plan goals.

**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, and the project site is not located within a FEMA 100-year floodplain area.

- b. Discuss the project’s compatibility with nearby land uses, zoning, and plans listed in Item 10a above, concentrating on implications for environmental effects.**

The proposed mixed-use development is compatible with nearby land uses and the planned land use for the site. In order to build residential in the I2 Medium Industrial District, the site will need to be rezoned to add the IL Industrial Living Overlay District, which already covers many surrounding properties (see Figure 7). The proposed 7-story height of the building exceeds the maximum height for the BFC6 Corridor 6 Built Form Overlay District. To increase the height of the building, an Administrative Height Increase will be needed.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.**

As noted above in Item 10b, the site will need to be rezoned to add the IL Industrial Living Overlay District and an Administrative Height Increase will be required for the proposed building height. No other land use or zoning incompatibilities were identified.

## **11. Geology, Soils, and Topography/Landforms**

---

- 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.**

According to the Geologic Atlas of Hennepin County (2018),<sup>7</sup> bedrock geology of the project site consists of Platteville and Glenwood Formations, fine-grained limestone containing thin shale partings near the top and base, underlain by green, sandy shale. The estimated depth to bedrock is approximately 0 to 25 feet below grade. The surficial geology consists of terrace sand and gravel.

No sinkholes, unconfined/shallow aquifers, or karst conditions were identified in the project area.

- b. Soils and Topography – Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability, or other 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 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 12.b.ii.**

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, there is one soil type within the site, which covers the entire site: Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes. Due to the location of the site and the

---

<sup>7</sup> Available at [https://conservancy.umn.edu/bitstream/handle/11299/200919/plate\\_2.pdf?sequence=2&isAllowed=y](https://conservancy.umn.edu/bitstream/handle/11299/200919/plate_2.pdf?sequence=2&isAllowed=y)

classification of the soil, the soil type is not rated for an erosion hazard rating, meaning that there is not enough information to make a determination regarding soil erodibility.

Site grading for the proposed development will occur, with approximately 65,000 cubic yards of excavation proposed for site grading and development.

## 12. Water Resources

---

**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, shoreland classification and floodplain/floodway, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

There are no surface waters located on the project site or within 1 mile of the project site (see Figure 9).

- ii. Groundwater – aquifers, springs, and seeps. Include 1) depth to groundwater; 2) if project is within a MDH wellhead 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 Minnesota Department of Natural Resources' (DNR's) Minnesota Hydrogeology Atlas, depth to groundwater varies from 20 to 40 feet across the site. Based on geotechnical borings completed on the site, there may be perched groundwater approximately 6 to 8 feet below ground surface.

According to the Minnesota Department of Health's (MDH's) Minnesota Well Index, there are no wells on the project site. The project site is not within a wellhead protection area or drinking water supply management area.

**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.**
- 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.**

There is an existing 36-inch sanitary sewer along Central Avenue NE flowing south and an existing 12-inch sanitary sewer along 13<sup>th</sup> Avenue NE flowing west that joins the 36-inch sewer at the intersection of Central Avenue NE and 13<sup>th</sup>



Avenue NE. The proposed project may connect to more than one of these sanitary sewers. The maximum flow for the proposed site is 140,500 gallons per day (GPD).

The property will be served by the publicly owned Metropolitan Wastewater Treatment Plant in Saint Paul. The plant currently treats approximately 160 million GPD, with a total capacity of 314 million GPD according to the Metropolitan Council Environmental Services Plant Inflow Summary Report for the period ending in June 2022. Based on the Twin Cities Metropolitan Council Sewer Availability Charge Guidelines, the estimated wastewater from the proposed development is anticipated to consist primarily of normal domestic sewage. The proposed site is expected to generate approximately 140,500 GPD. The Metropolitan Council's Metropolitan Wastewater Treatment Plant has the capacity to treat the proposed project without pretreatment or other plant facility improvements.

- 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. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion.**

Not applicable.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.**

Not applicable.

- 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.**

Post-construction quality of stormwater runoff from the project site will be improved by best management practices (BMPs) to meet the City's treatment requirements for total suspended solids (TSS) removal, as well as Minnesota Pollution Control Agency (MPCA) treatment requirements. Stormwater quantity will be controlled such that volume and discharge rates do not exceed existing for the 2-, 10-, and 100-year Soil Conservation Service Type II/24-hour storm events. The ultimate discharge of the BMPs will be public storm sewer pipes that discharge to the Mississippi River 1.2 miles south of the site. All proposed BMPs for the project site will occur onsite. Completed conveyance systems and BMPs for the project will be designed according to acceptable industry standards and conform to jurisdictional requirements. Proprietary filtration treatment devices may be utilized to meet the City's water quality standards similar to several other projects where space for BMPs is limited.

The final design of the site, once determined, will achieve all the outcomes stated above to manage stormwater within the project boundaries and will comply with all stormwater requirements stated within the Minneapolis Code of Ordinances, including Chapter 54, which states revisions for water quality and rate control. BMPs have not yet been determined for the project but may include one or more of the following practices, among others: roof detention systems, underground detention systems, and proprietary filter structures.

A Stormwater Pollution Prevention Plan (SWPPP) will be developed in accordance with the National Pollutant Discharge Elimination System (NPDES) permit administered by the MPCA. The SWPPP will cover temporary measures to prevent pollution during construction (erosion and sediment control as well as controls to minimize spills, leaks, or other discharges of pollutants) and permanent measures to prevent stormwater pollution after construction. These BMPs may include one or more of the following: silt fencing, sediment traps, rock filter dikes, fiber logs, temporary seeding, riprap and erosion control blankets for disturbed areas, and seeding or placement of sod or other plant material for final restoration. Additionally, an Erosion and Sediment Control Plan is required by the City of Minneapolis (Chapter 52 of the Minneapolis Code of Ordinances) for all land disturbance activities exceeding 5,000 square feet or 500 cubic yards of earth moved. An Erosion Control Plan checklist will be followed by the developer to meet the City code requirements, minimize drainage problems, soil erosion, and prevent sediment from entering curb and gutter systems and storm sewer inlets.

Additionally, the developer will look for methods to minimize chloride use and improve treatment of stormwater runoff to minimize potential impacts to downstream waters.

- 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.**

As noted under Item 12.a.ii., there may be perched groundwater approximately 6 to 8 feet below ground surface. However, permanent dewatering is not expected as a part of this project. A DNR Water Appropriation Permit would be required for any temporary dewatering that is above 10,000 gallons per day, or one million gallons per year. A City of Minneapolis Temporary Water Discharge Permit would also be obtained for any temporary dewatering for construction.

If previously unidentified wells are found during construction, the MPCA and 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.

**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.**

No wetlands are located within the project site; therefore, no impacts are anticipated.

- 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.**

No surface waters are located on or within 1 mile of the project site; therefore, no impacts to surface water features are anticipated.

### 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 MPCA’s What’s in My Neighborhood database was reviewed to determine if any known contaminated properties or potential environmental hazards are located within or adjacent to the site, and 14 sites were identified (see Table 7 and Figure 10). Of the 14 sites, 11 have activities that are listed as active.

Table 7: What’s in My Neighborhood Sites

Site ID	Site Name	Active	Activity	Program
248272	Youngblood Lumber	Yes	Brownfields, Petroleum Brownfield and Voluntary Investigation and Cleanup	Investigation and Cleanup
17556	Metro Electrostatic	No	Hazardous Waste	Hazardous Waste
17637	Gopher Towing Inc	Yes	Hazardous Waste	Hazardous Waste
144606	1321 Tyler Building #10	Yes	Aboveground Tanks	Tanks
33670	Crown Iron Works Company	Yes	Hazardous Waste	Hazardous Waste

Site ID	Site Name	Active	Activity	Program
37834	Horizon Fabricators Inc	No	Hazardous Waste	Hazardous Waste
100004	Libson Twin City Auto - Truck Parts	Yes	Hazardous Waste, Minimal quantity generator	Hazardous Waste
196208	Central Foundry	Yes	Site Assessment	Investigation and Cleanup
35290	Former Eide Saw & Tool Service	Yes	Hazardous Waste	Hazardous Waste
32523	Dean's Tank Inc	Yes	Hazardous Waste; Underground Tanks	Multiple Programs
16957	Eide Saw & Tool Service Inc	Yes	Brownfields, Petroleum Brownfield and Voluntary Investigation and Cleanup; Hazardous Waste; Petroleum Remediation, Leak Site; Underground Tanks	Multiple Programs
17752	General Metalware Company	Yes	Brownfields, Voluntary Investigation and Cleanup; Hazardous Waste; Site Assessment	Multiple Programs
52361	Horizons Fabricators	No	Industrial Stormwater	Stormwater
94616	Former Hutchen's Tire & Service	Yes	Aboveground Tanks; Petroleum Remediation, Leak Site; Underground Tanks; Wastewater, Industrial NPDES/SDS Permit	Multiple Programs

A Phase I Environmental Site Assessment (ESA) conducted in 2019 identified fill soil on site containing debris including ashes, brick, and concrete. It also identified the potential for petroleum or non-petroleum contamination to have migrated beneath the site from adjacent and nearby properties, potentially impacting the soil, groundwater, or soil vapor. In 2021, a Limited Phase II ESA was conducted to further investigate the recognized environmental conditions identified in the Phase I ESA, which identified contamination exceeding regulatory criteria in soil and soil vapor samples. A Response Action Plan (RAP), including a Construction Contingency Plan, will be prepared to identify clean-up objectives and protocols for management of contaminated soil and/or groundwater that may be encountered during construction.

- 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.**

According to Hennepin County Ordinance 2 and Ordinance 7, Hennepin 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.

### *Waste Generated During Construction*

Demolition debris and earth materials will be generated during demolition of the existing facilities. Demolition debris is inert material such as concrete, brick, bituminous, and rock. The solid wastes generated during demolition will be recycled or disposed of at a state-permitted landfill.

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

### *Waste Generated During Operation*

The proposed development will generate new demands on solid waste management and sanitation services provided in the project area. For solid waste generated during operations, a source recycling/separation plan will be implemented, and wastes that cannot be recycled will be managed in accordance with state regulations and guidelines.

- 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 new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size, and age of existing tanks on the property that the project will use. 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.**

No existing above ground or underground storage tanks have been identified within the project site. A natural gas emergency generator is anticipated as part of the proposed development, which will not require a storage tank. Grain storage bins for the production use are anticipated.

Any hazardous waste materials used/stored during construction and/or operation of the project will be disposed of in the manner specified by local or state regulation or by the manufacturer. A spill prevention plan will be developed, and proper spill prevention controls will be in place for any vehicle refueling or maintenance that occurs on site during construction.

- 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.**

Removal of the existing structures within the site will not generate new hazardous waste. Toxic or hazardous waste to be stored within the site during construction will include fuel and oil necessary to operate heavy construction equipment and during operations may include commercial cleaning supplies. Regulated material and/or waste generated or stored

during construction and operations will be managed in accordance with state and local requirements.

#### **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.**

The existing site is almost entirely impervious surface with a small area of landscaping. There are no fish or wildlife habitats on or near the project site. The Mississippi River and Mississippi River Critical Area are over a mile southwest of the site and will not be impacted as a result of the proposed project.

Based on information from the U.S. Fish and Wildlife Service, the project site is located within a low potential zone of the rusty patched bumble bee, and the disturbed nature of the site does not provide suitable habitat.

The project is not located within or adjacent to any regionally significant ecological areas.

**b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-965) 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.**

A review of the DNR Natural Heritage Inventory System was conducted per license agreement LA-1074 for the project site and the area within approximately one mile of the project site. The database includes known occurrences of any state endangered, threatened, or special concern species. The review identified one species that may be found near this area:

- Tricolored Bat (*Perimyotis subflavus*) – special concern

Tricolored bats, also known as the eastern pipistrelle, are known to colonize along the banks and caves of the Mississippi River. The project area will not impact the Mississippi River and no trees or suitable winter habitat for the tricolored bat are located within the project site; therefore, no impacts to the tricolored bat is anticipated.

**c. Discuss how the identified fish, wildlife, plant communities, rare features, and ecosystems may be affected by the project, including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.**

### *Wildlife Habitat and Threatened and Endangered Species*

No impacts to fish, wildlife, plant communities, rare features, or ecosystems are anticipated. The DNR completed a Natural Heritage Review for the proposed project and concurred with these findings (see correspondence in Appendix B).

### *Invasive Species*

Invasive species are plants and animals that are not native to an area and are capable of causing harm. Certain measures can be taken to limit the likelihood of introducing invasive species, such as securing local materials to avoid the long-range movement of goods or washing vehicles prior to accessing the project site. Additionally, landscape designs should include native, non-invasive plants.

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

Invasive species will be controlled on site during construction, and proposed landscaping will not include any DNR-identified invasive species. Additionally, best management practices will be followed when relocating construction equipment from other sites.

## **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 State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.**

A search of the Minnesota State Historic Preservation Office's (SHPO) Statewide Inventory was requested to identify known historic properties and archaeological sites in the vicinity of the project. The database search identified no archaeological records in the project area. Within Township 29N, Range 24W, Section 13, the database search identified one property listed in the National Register of Historic Places (NRHP), one property that has been determined eligible for the NRHP, and multiple properties that are considered eligible for the NRHP. "Considered eligible" means that a federal agency has recommended that the property is eligible for listing in the NRHP and SHPO has accepted the recommendation for the purposes of the environmental review process. However, these properties need to be further assessed before they are officially listed in the NRHP. Two of the properties identified within the section are within 500 feet of the project site (see Table 8 and Figure 11).

*Table 8: Historic Properties within 500 feet of the Project Site*

<b>Address</b>	<b>Property Name</b>	<b>Status</b>
1505 Central Ave NE	Aaron Carlson Company	Listed in the NRHP
N/A	St. Paul and Pacific Railroad Corridor	Considered eligible

The Aaron Carlson Company is located northeast of the project site across the BNSF railroad tracks. While a specific address is not provided for the St. Paul and Pacific Railroad Corridor, given its location within Township 29N, Range 24W, Section 13, it is presumed to be one of the



railroad corridors now owned by BNSF (one is located to the northeast of the project site and one is located to the southwest, as shown on Figure 11). The proposed project is not anticipated to result in adverse impacts to the Aaron Carlson Company property or either railroad corridor.

In July 2022 the project proposer applied for a historic review letter with the City of Minneapolis, and City staff found that, based on the information currently available, the project site does not appear to meet the local historic designation criteria listed in Section 599.210 of the Minneapolis Code of Ordinances and has been determined to not be a historic resource.

It is not anticipated that unknown archaeological sites will be uncovered during the construction of this project as the site has been previously disturbed. However, if cultural materials are encountered during construction, unanticipated discovery protocols will be followed.

## 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.**

There are no designated scenic views or vistas on or near the project site. The building design is proposed to be 7 stories, which will be taller than most immediately adjacent buildings. However, there are taller buildings in the vicinity, such as the 25-story Parker Skyview residential building located approximately four blocks north of the project site. Views from the surrounding area would be similar to those experienced currently. The proposed project will conform with the City's regulations for building height, building form, landscape screening, and lighting. Adverse visual effects are not anticipated.

## 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 and criteria pollutants. 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.**

No stationary source air emissions are anticipated; therefore, no mitigation is required.

**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.**

Motor vehicles emit a variety of air pollutants including carbon monoxide (CO), hydrocarbons, nitrogen oxides, and particulates. The primary pollutant of concern is CO, which is a byproduct of the combustion process of motor vehicles. CO concentrations are highest where vehicles idle for extended periods of time. For this reason, CO concentrations

are generally highest in the vicinity of signalized intersections where vehicles are delayed and emitting CO. Generally, concentrations approaching state air quality standards are found within about 100 feet of a roadway source. Further from the road, the CO in the air is dispersed by the wind such that concentrations rapidly decrease.

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. 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 impacted by the project 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 discussed under Item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

The project may generate temporary fugitive dust emissions during construction. These emissions would be controlled by sweeping, watering, or sprinkling, as appropriate or as prevailing weather and soil conditions dictate. Dust emissions are not anticipated during operations as all surfaces will either be impervious or vegetated.

The construction and operation of the project are not expected to generate objectionable odors.

## **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.**

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>8</sup>

This section includes an estimated quantification of the following GHG emissions associated with the proposed project:

- 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 the project. Emissions were estimated using the US Environmental Protection Agency's Simplified GHG Emissions Calculator (Version 7 June 2021)<sup>9</sup> and are summarized in Table 9 and Table 10 by project phase (i.e., construction and operations) and source type (e.g., combustion from mobile equipment, off-site electricity (see Appendix C for background analysis).

Construction emissions are based on length of construction and are from mobile equipment including passenger cars, light-duty trucks, medium and heavy-duty trucks, and construction equipment (both gasoline and diesel). Emissions associated with construction materials were not analyzed, as these are outside the scope of this analysis.

Emissions from cooling and refrigeration systems are not accounted for in this operational emissions analysis as GHGs from refrigerants are approximately less than 5 percent of the total GHG emissions of a building.<sup>10</sup> The project does not include any owned or leased vehicles anticipated to be used by the organization during operation, plans to purchase gases during operation, or land use conversions.

---

<sup>8</sup> Summarized from U.S. EPA, Overview of Greenhouse Gases: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

<sup>9</sup> Source: <https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator>

<sup>10</sup> Source: [https://practicegreenhealth.org/sites/default/files/2019-06/PracticeGreenhealth\\_GHG\\_Toolkit\\_0.pdf](https://practicegreenhealth.org/sites/default/files/2019-06/PracticeGreenhealth_GHG_Toolkit_0.pdf)

Table 9: Construction Emissions

Scope <sup>11</sup>	Emission Type	Emission Sub-Type	Emitant	Project-Related CO <sub>2e</sub> Equivalent Emissions (tons)
1	Combustion <sup>12</sup>	Mobile equipment	CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub>	53,425
<b>Total</b>				53,425

Table 10: Operational Emissions<sup>13</sup>

Scope	Emission Type	Emission Sub-Type	Emitant	CO <sub>2e</sub> Equivalent Emissions (tons per year)
1	Combustion <sup>14</sup>	Stationary equipment	CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub>	875
2	Off-site electricity <sup>15 16</sup>	Grid-based	CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub>	2,478
3	Off-site waste management <sup>17</sup>	Area	CO <sub>2</sub> , CH <sub>4</sub>	553
<b>Total</b>				3,906

The existing buildings on site are vacant, and utilities were turned off in 2019; therefore, operational emissions from the existing facility were not calculated.

**b. GHG Assessment**

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

Design strategies and other sustainability measures anticipated to be implemented in the proposed development to reduce emissions include:

- Use energy efficient appliances, equipment, and lighting.
- Energy efficient building shells.

<sup>11</sup> Emissions are categorized as either direct or indirect. Scope 1 emissions are direct emissions that are released directly from properties owned or under the control of the project proposer. This includes, for example, the use of mobile equipment during construction. Scope 2 and 3 emissions are indirect emissions. Scope 2 emissions are associated with the offsite generation of purchased electricity and/or steam. Scope 3 emissions are from the offsite provision of waste management services, including land disposal (landfilling), recycling, and solid waste composting.

<sup>12</sup> Number of construction vehicles estimated based on information in the Technical and Economic Assessment Memorandum published by the EQB (available at <https://www.eqb.state.mn.us/sites/default/files/documents/Technical%20Assessment%20Memorandum.pdf>). Miles traveled was estimated based on approximate fuel economy values (using the most conservative year – 2007). Fuel usage was estimated based on duration of construction and based on 10 hours/day, 6 days/week, except for nonroad diesel operational sources, which were estimated at 5 hours/week.

<sup>13</sup> Assumes a standard 50-year design life.

<sup>14</sup> This includes emissions from monthly testing of emergency generators.

<sup>15</sup> Electricity usage by building activity quantified using U.S. EIA electricity consumption values, available at: [Energy Information Administration \(EIA\)- About the Commercial Buildings Energy Consumption Survey \(CBECS\)](#). Emission factors based on U.S. EPA Midwest eGRID Subregion, available at: [Power Profiler | US EPA](#)

<sup>16</sup> Number is based on location-based scope emissions, which considers average emission factors for the electricity grids that provide electricity in the region.

<sup>17</sup> Based on calculations from: CalRecycle's website titled "Estimated Solid Waste Generation Rates"

- Encourage the use of alternative modes of transportation to and from the project.
- Implement waste best management practices and to recycle and compost appropriate material when applicable.
- On-site landscaping will absorb water.
- Trees and tree trenches are being considered and additional landscaping will be planted to improve local air quality, absorb greenhouse gas emissions, and reduce local urban heat island effect.
- Purchase grid-based wind and solar power.
- Provide electric vehicle charging infrastructure.

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

The proposed mitigation listed in Item 18.b.i. includes best management practices for new construction and reducing GHG emissions where practicable during operations. Additionally, the project has developed a Travel Demand Management Plan in compliance with the City’s transportation policies to reduce use of single-occupancy motor vehicles and increase walking, bicycling, and transit as primary modes of travel to reduce GHG emissions from mobile sources (see Appendix D).

**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<sup>18</sup> 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, which equates to an estimated 284,725 CO<sub>2</sub>e metric tons over the lifetime of the building (including both construction and operations phases). The proposer is committed to implementing the sustainability measures listed in Item 18.b.i. to reduce operational emissions to the extent practicable. The proposed project will be built in compliance with state regulations and City of Minneapolis code.

---

<sup>18</sup> Available at <https://www.pca.state.mn.us/air/state-and-regional-initiatives>

## 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.**

### *Existing Noise*

The project site is in an urban area, and existing noise at the site is largely from the surrounding roadways. Nearby sensitive receptors include residences to the west.

### *Construction Noise*

Typical construction noise will be temporarily generated by construction activities. The Minneapolis Code of Ordinances regulates both the hours of operation for construction equipment and allowable noise levels. Construction of the project will adhere to requirements identified in Minneapolis Code of Ordinance, Chapter 59.30, which states "operation of construction equipment without a permit is allowed only on Monday through Friday 7:00 a.m. to 6:00 p.m., not including federal holidays." A permit will be obtained from the City for work outside these hours. Additionally, all equipment used during construction will be muffled and will use quieter backup alarms, where appropriate.

### *Operational Noise*

The Minneapolis Code of Ordinances and the MPCA regulate noise. The proposed project will be required to comply with the local and state regulations.

## 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*

The proposed project is anticipated to include approximately 600 parking stalls in the parking garage. The parking garage will have direct access to the street network onto Tyler Street NE. With up to 30,000 square feet of production space for a brewery, up to a 7,500 square foot tap room, and up to 600 apartments, the maximum number of parking stalls allowed by the City would be 1,410 for the entire development.

### *Traffic Generation*

It is estimated that the development will generate 250 trips during the weekday a.m. peak hour, 330 trips during the weekday p.m. peak hour, and 3,335 daily trips. Trip generation estimates were based on land use codes 110 (General Light Industrial), 221 (Mid-rise multifamily housing), and 971 (Tap Room) in the ITE Trip Generation Manual, 11<sup>th</sup> Edition. The

total trip generation is shown in Table 11. The complete traffic study conducted for the AUAR can be found in Appendix D.

Table 11: Trip Generation Forecast

	AM Peak Hour			PM Peak Hour			Daily
	Total	In	Out	Total	In	Out	
Total Trip Generation	250	75	175	330	190	140	3,335

*Pedestrians and Bicycles*

There are sidewalks bordering the project site on Central Avenue NE, 14<sup>th</sup> Avenue NE, and 13<sup>th</sup> Avenue NE. The sidewalks vary from 5 to 8 feet in width. There are not currently sidewalks along Tyler Street, but a sidewalk would be constructed as part of the proposed project. There are marked crosswalks on all legs of the Central Avenue NE and 14<sup>th</sup> Avenue intersection. No other study area intersections have marked crosswalks.

There are painted bike lanes on Central Avenue NE, directly adjacent to the site, which connects to many of the other on-street bike facilities in Minneapolis. The City of Minneapolis has also identified streets in the area such as Broadway Street NE for bikeways in the future.

*Transit Service*

Route 10 is a local bus route between downtown Minneapolis and Blaine. It operates seven days a week and is part of Metro Transit’s High Frequency Network, with approximately 15-minute headways during peak hours on the weekdays and weekends. Service during nights and weekends provides 15 to 30-minute headways. The closest Route 10 bus stop to the project site is located on the corner of Central Avenue NE and 14<sup>th</sup> Avenue NE.

Route 30 is a local bus route between Golden Valley and the METRO Green Line Westgate Station in Saint Paul. It operates seven days a week with service at 30-minute headways. The closest Route 30 bus stop to the project site is located on the corner of Central Avenue NE and Broadway Avenue NE.

The METRO F Line is a planned bus rapid transit (BRT) route that will serve the Central Avenue corridor, largely replacing the Route 10. Service is currently anticipated to begin in 2026.

- 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.***

A traffic impact study was completed in August 2022 based on the projected trip generation of the site (see Appendix D). Based on the detailed findings of this study, the area’s transportation network is expected to support the development within the project site with

current intersection geometry. Metrics for traffic analysis include intersection delay as measured by level of service (LOS) and 95<sup>th</sup> percentile queue lengths. LOS grades range from A to F, with LOS A being the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F being the lowest (oversaturated conditions). LOS D or better is generally considered acceptable operating conditions.

The traffic impact study includes intersection capacity analyses for intersections adjacent to the project site along Central Avenue NE, 14<sup>th</sup> Avenue NE, 13<sup>th</sup> Avenue NE, and Tyler Street NE, and included the review of intersection operations at the proposed access point on Tyler Street NE. Based on the results of the traffic impact study capacity analysis, all intersections are anticipated to operate with acceptable LOS in all analysis scenarios. Table 12 shows the LOS for the study area intersections in each analysis scenario.

Table 12: LOS Summary

Intersection	Existing Year (2022)				Opening Year (2025) No-Build				Opening Year (2025) Build				Horizon Year (2040) No-Build				Horizon Year (2040) Build			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Central Avenue NE & 14th Avenue NE	9.4	A	10.3	B	9.2	A	10.2	B	8.8	A	11.0	B	9.4	A	10.1	B	9.0	A	11.2	B
Central Avenue NE & 13th Avenue NE	8.0	A	12.3	B	8.7	A	10.9	B	8.9	A	16.2	C	10.5	B	13.0	B	9.6	A	17.7	C
Tyler Street NE & 14th Avenue NE	4.0	A	1.2	A	3.9	A	1.1	A	3.9	A	1.2	A	3.8	A	1.3	A	3.8	A	1.3	A
Tyler Street NE & 13th Avenue NE	5.7	A	4.6	A	5.6	A	4.6	A	7.1	A	6.4	A	5.5	A	5.3	A	6.6	A	7.0	A
Tyler Street NE & Site Access	-	-	-	-	-	-	-	-	5.0	A	5.8	A	-	-	-	-	5.1	A	5.9	A

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

In all five analysis conditions, all study intersections are anticipated to operate at LOS C or better with no queuing issues. Additionally, the site access is anticipated to operate at LOS A in all build scenarios.

The addition of site traffic is not expected to have significant impacts to operations of the existing network. No geometric mitigations are recommended as a result of the proposed project.



## 21. Cumulative Potential Effects

---

- 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 potential 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>19</sup> The geographic areas considered for cumulative potential effects are those near the project site (within approximately one-half mile), and the timeframe considered includes projects that would be constructed in the reasonably foreseeable future.

- 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.**

According to the 2021 City Planning Commission Applications interactive map,<sup>20</sup> there are two reasonably foreseeable projects within approximately one-half mile:

- A mixed-use development at 950 13<sup>th</sup> Avenue NE (currently under construction).
- The Logan Park Industrial Project, which includes reconstruction of numerous street segments in the Logan Park neighborhood (scheduled for 2027).

- 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.**

The identified reasonably foreseeable future projects may result in impacts to transportation, utilities, or other resources. However, potential impacts of these projects will be addressed as required by regulatory permitting and approval processes, minimizing the potential for cumulative effects.

## 22. Other Potential Environmental Effects

---

**If the project may cause any additional environmental effects not addressed by Items 1 to 21, 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.**

All known potentially adverse environmental impacts are addressed in the preceding EAW items.

---

<sup>19</sup> Minnesota Rules, part 4410.0200, subpart 11a

<sup>20</sup> Available at

<https://cityoflakes.maps.arcgis.com/apps/webappviewer/index.html?id=79f619be57e04e538faafb42fae8c824>

## RGU Certification

---

The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages, or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively,
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Title \_\_\_\_\_

# Figures

Figure 1: County Map

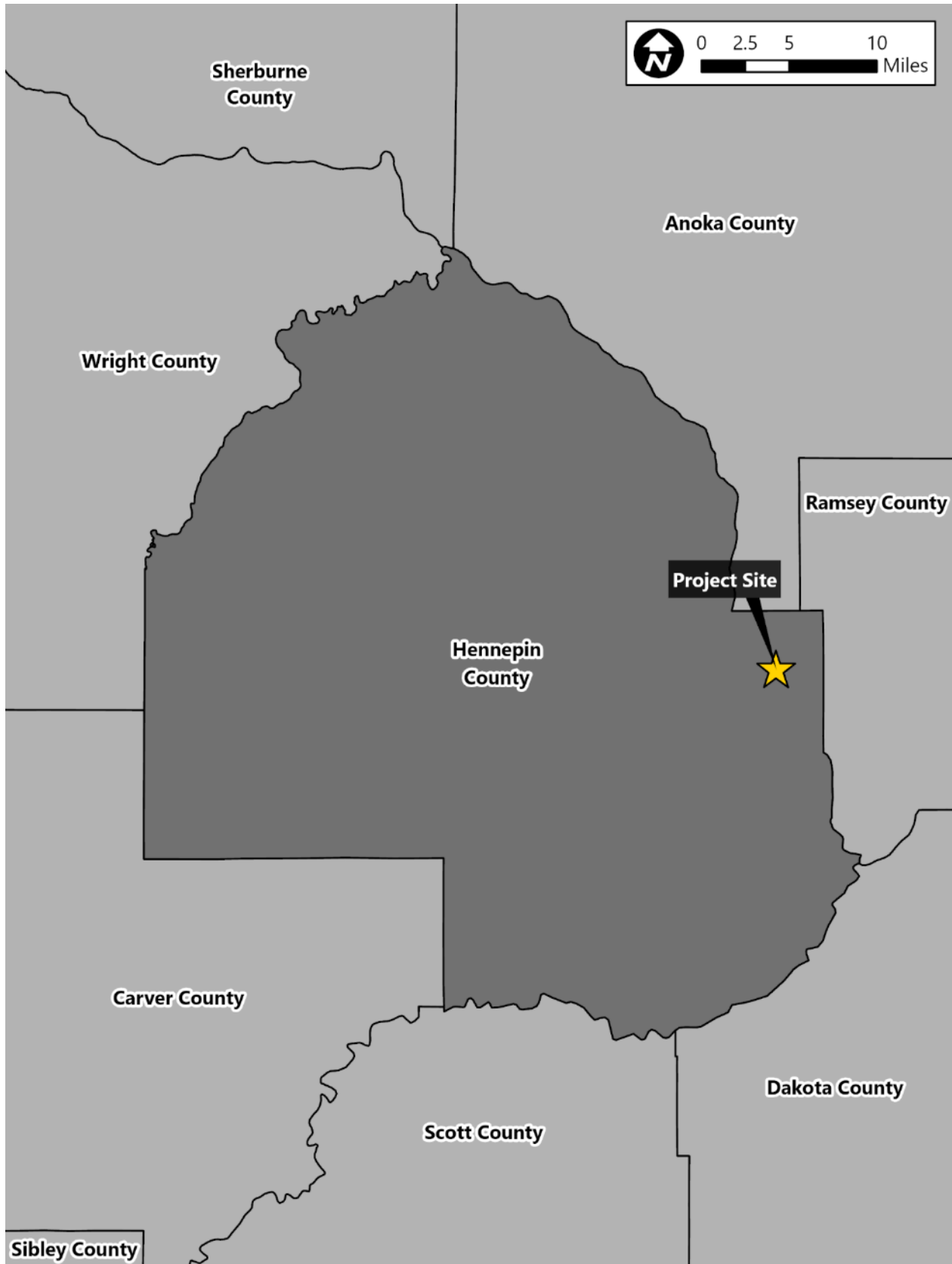


Figure 2: USGS Map

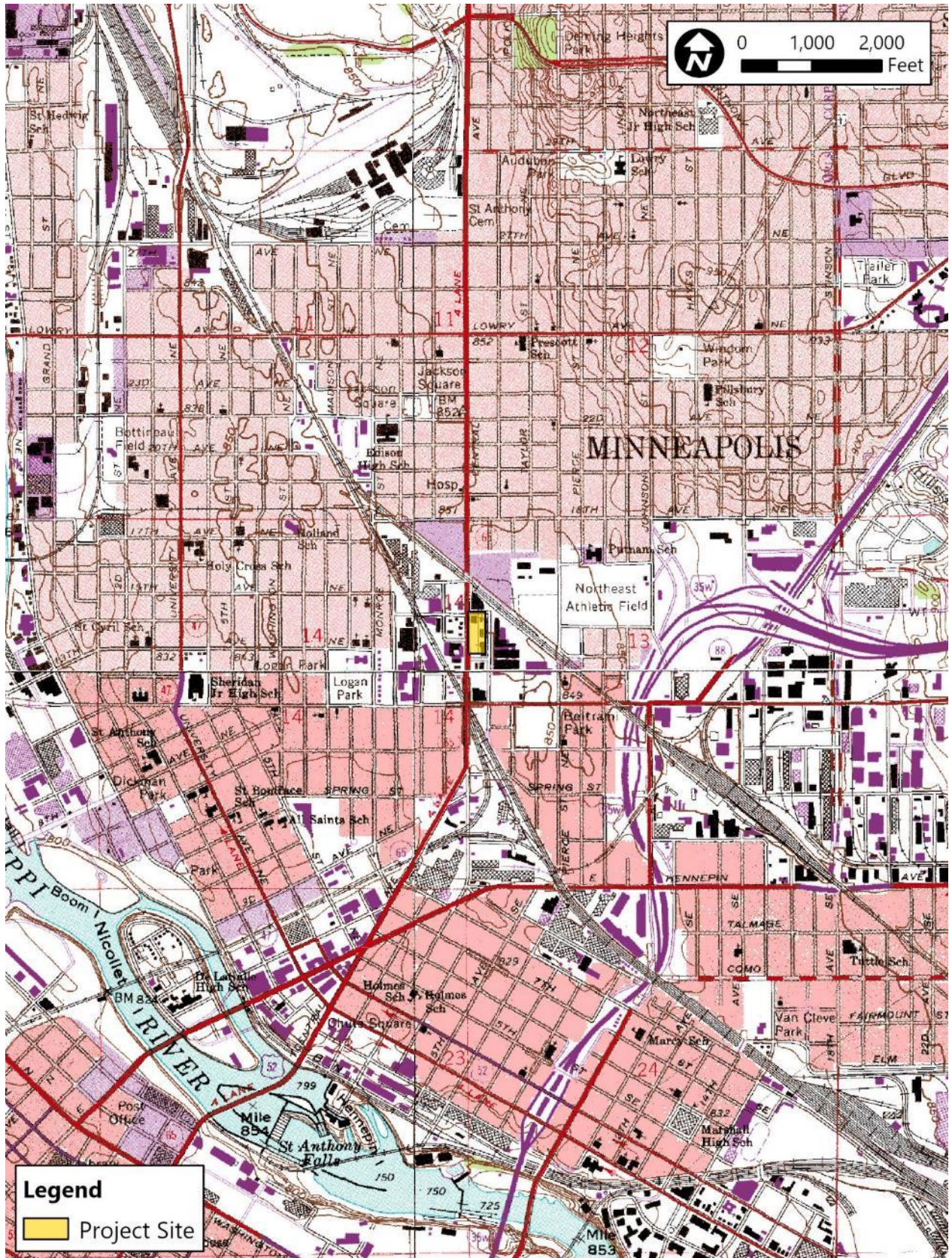


Figure 3: Existing Conditions



Figure 4: Existing Land Use

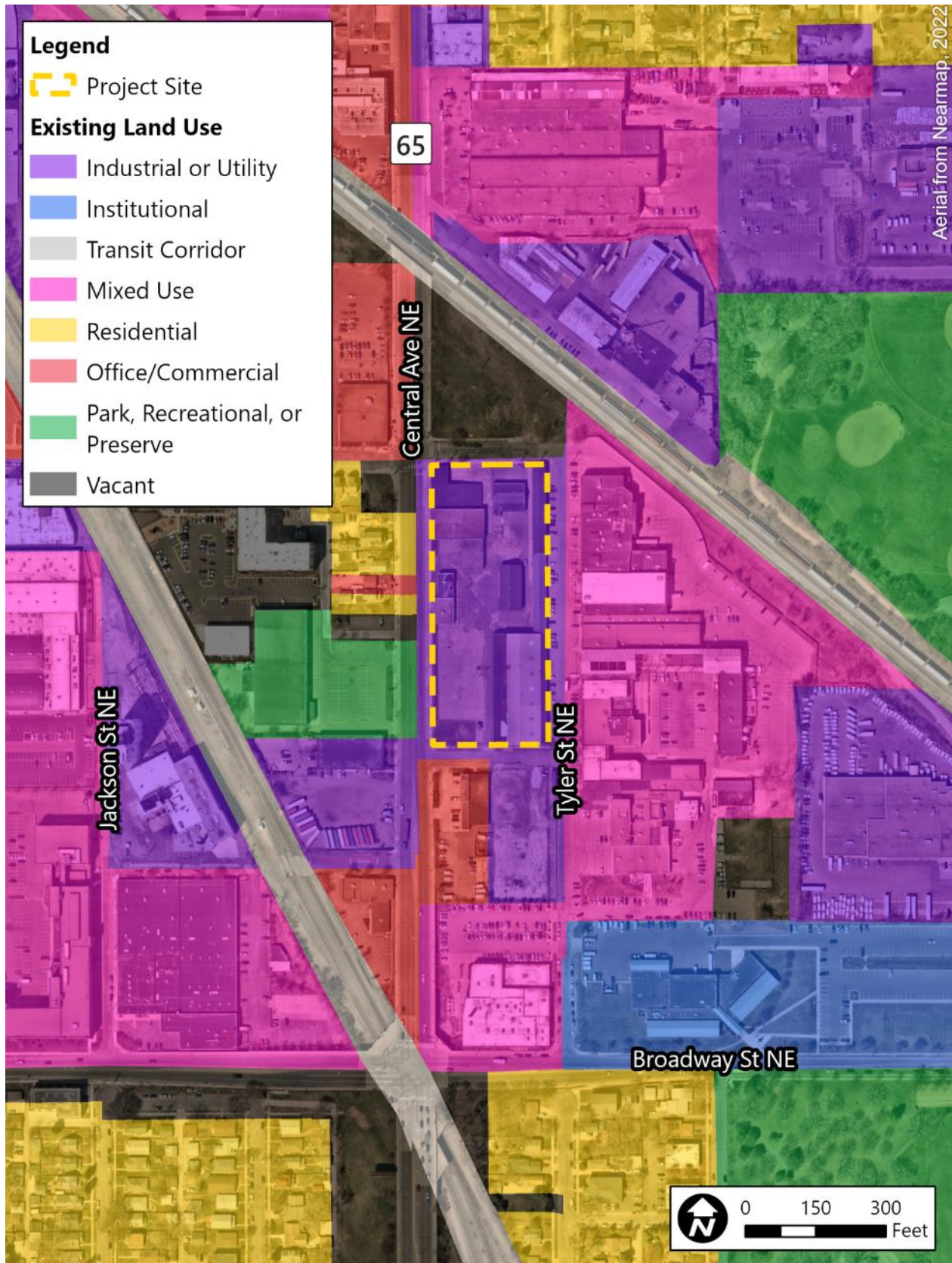


Figure 5: Future Land Use

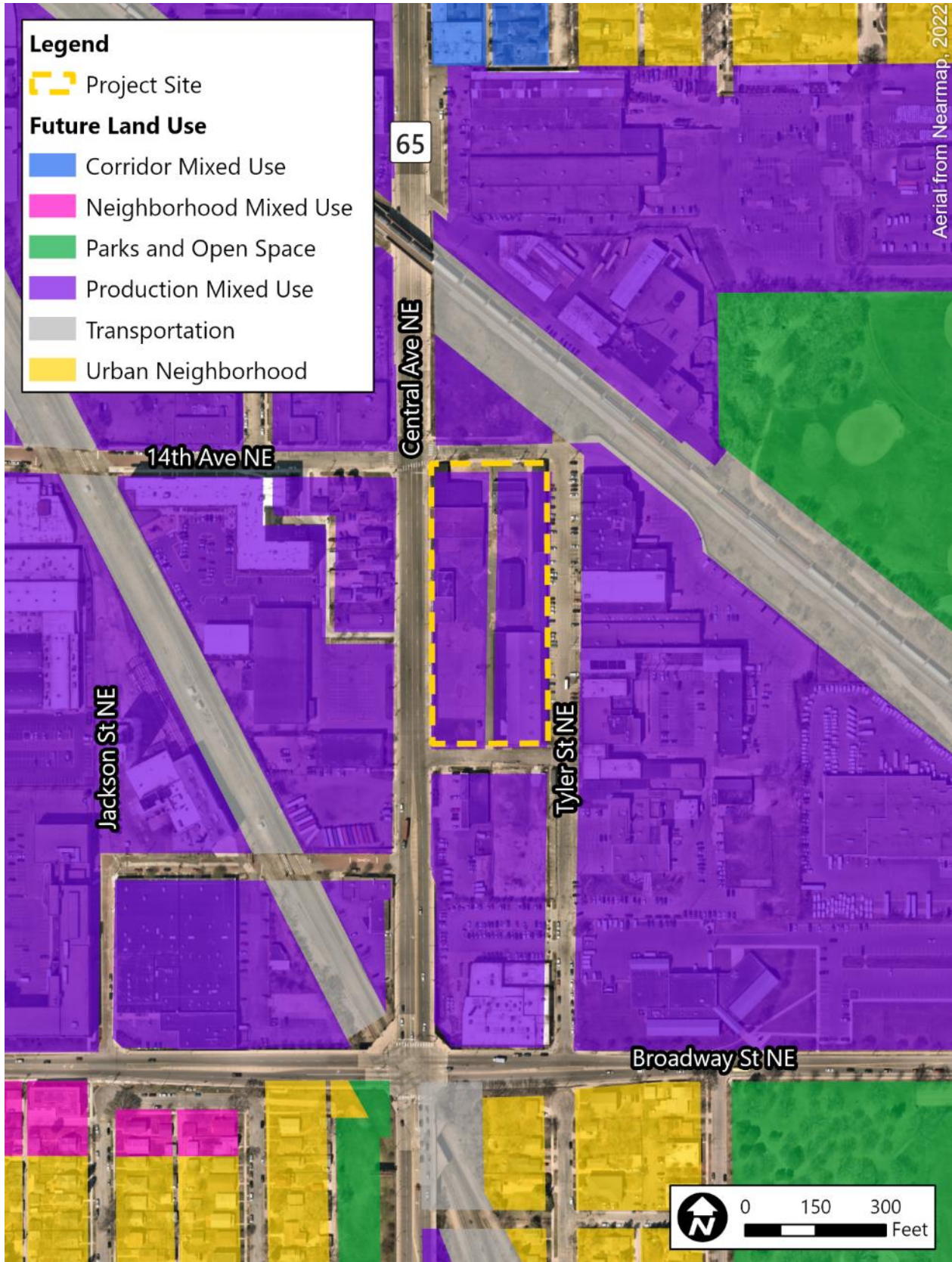




Figure 6: Existing Zoning

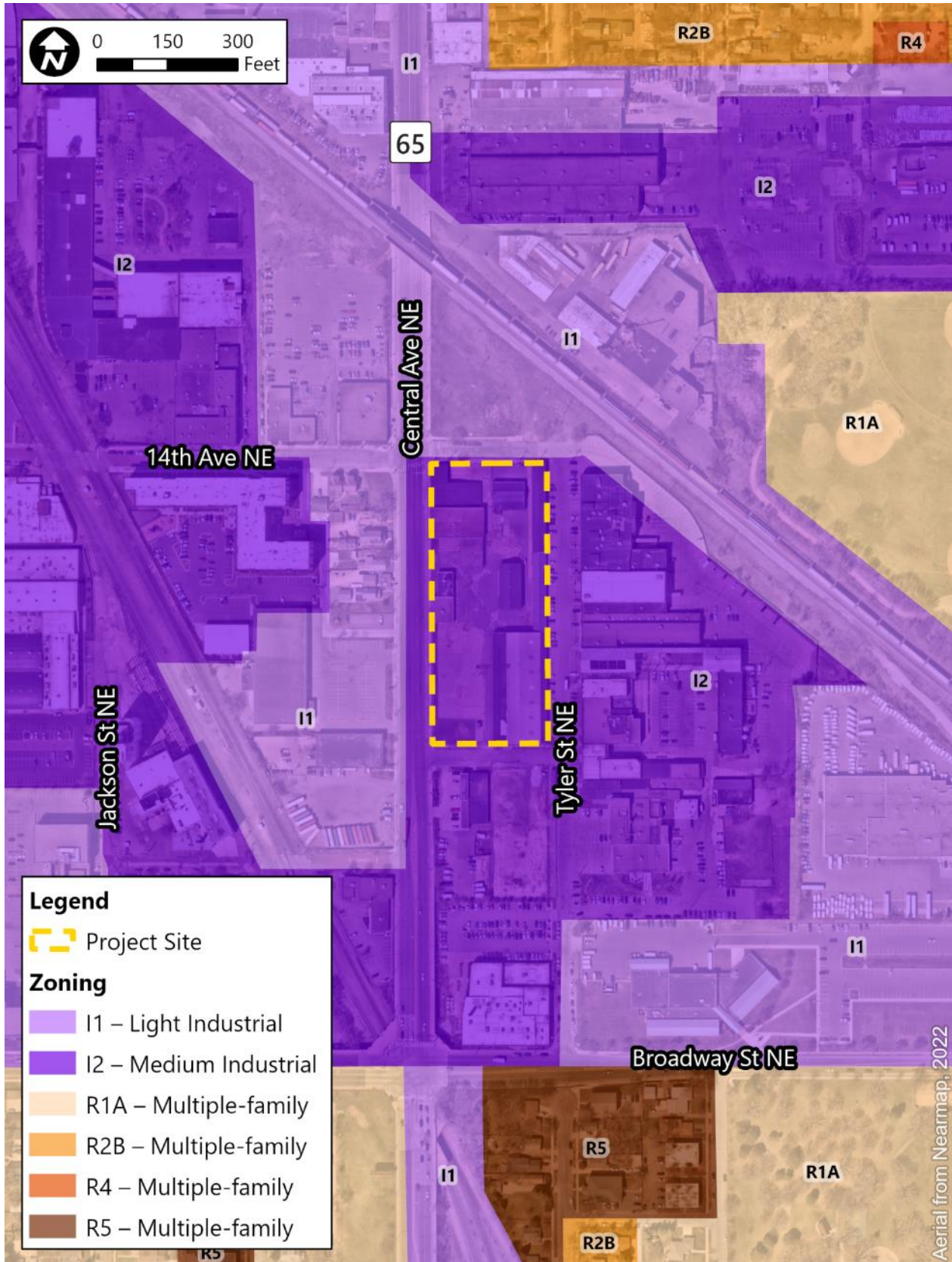


Figure 7: Zoning Overlay Districts

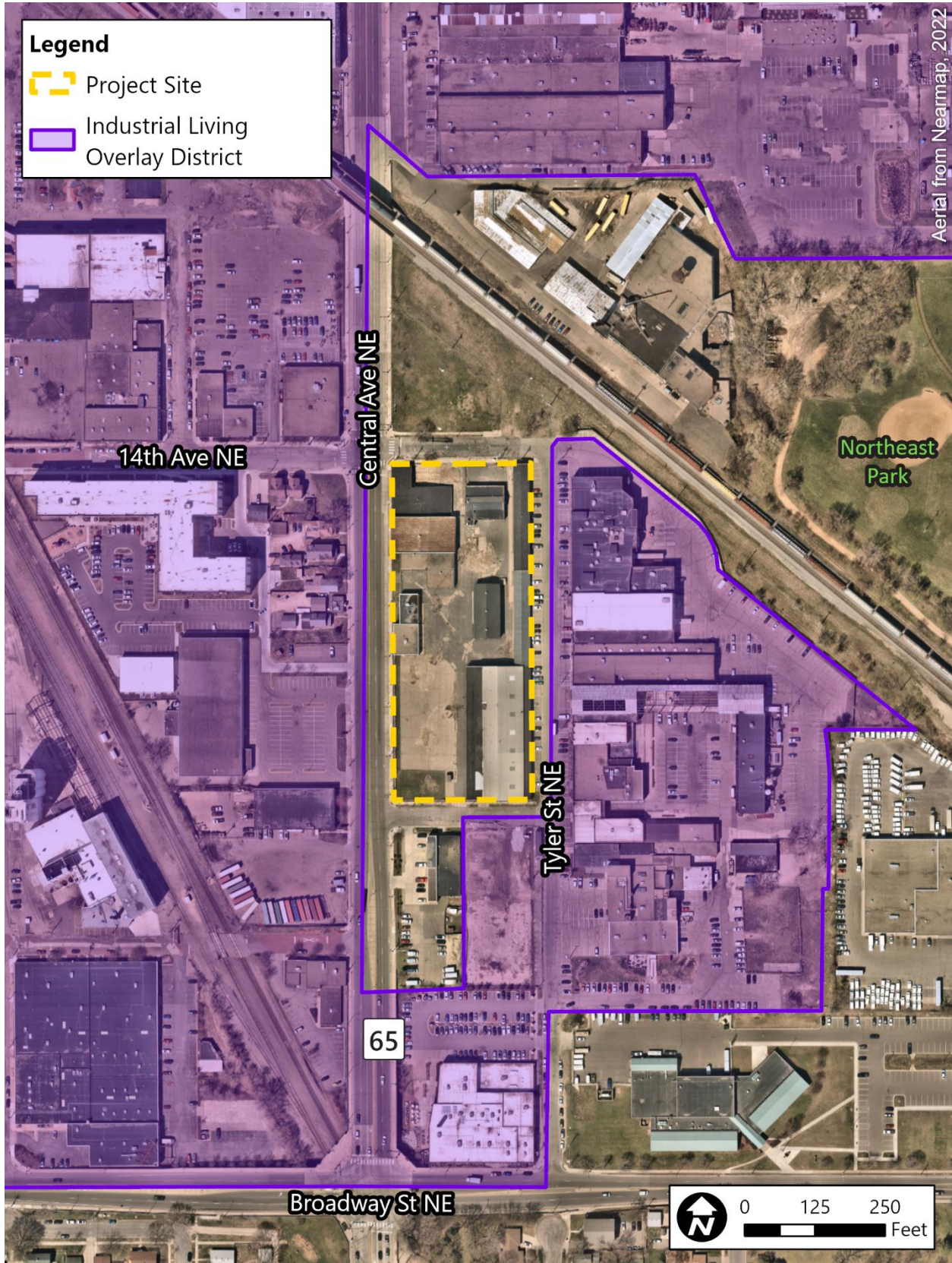


Figure 8: Built Form Overlay Districts

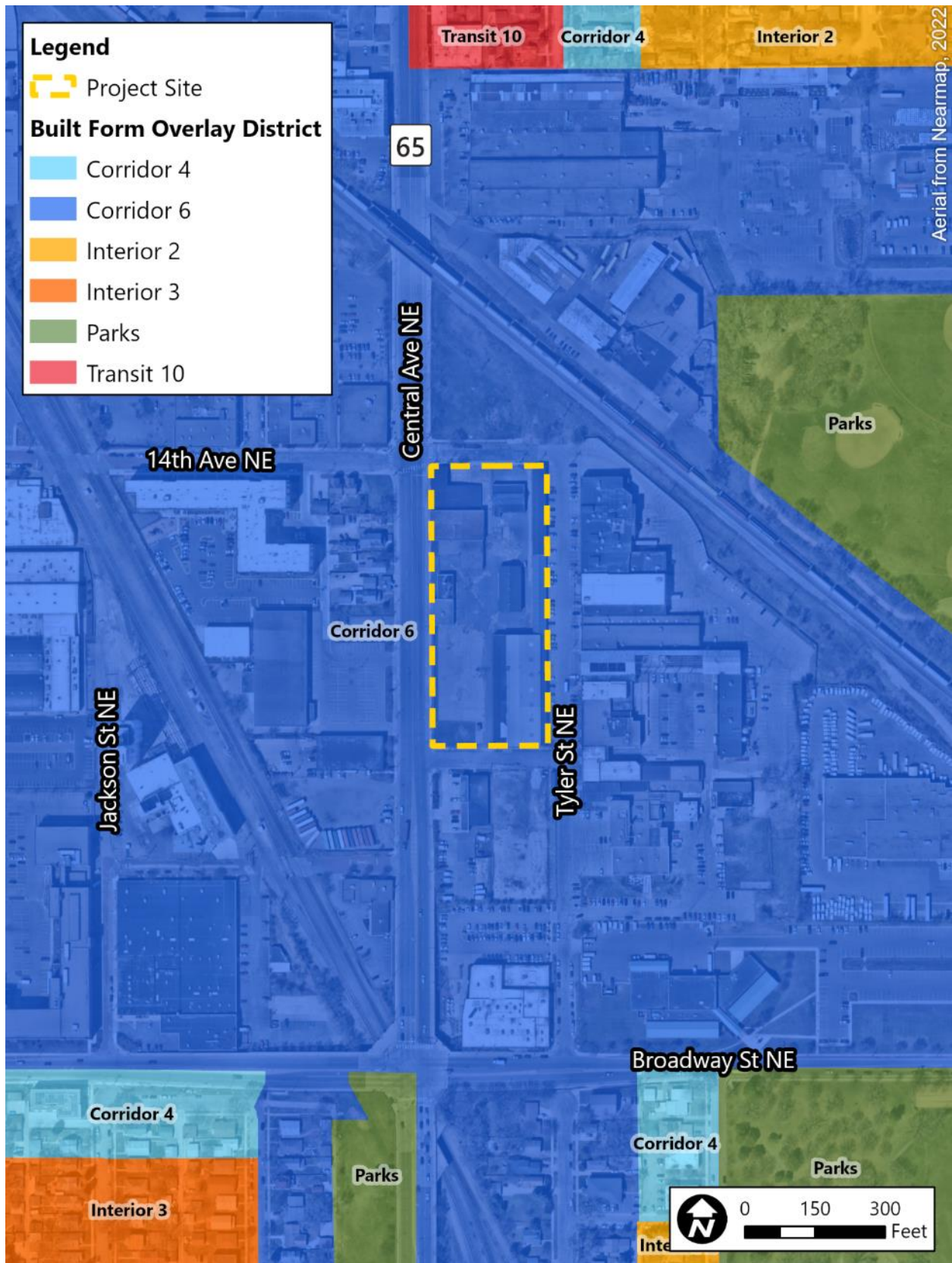


Figure 9: Water Resources



Figure 10: What's In My Neighborhood Sites Within 200 feet of the Project Site

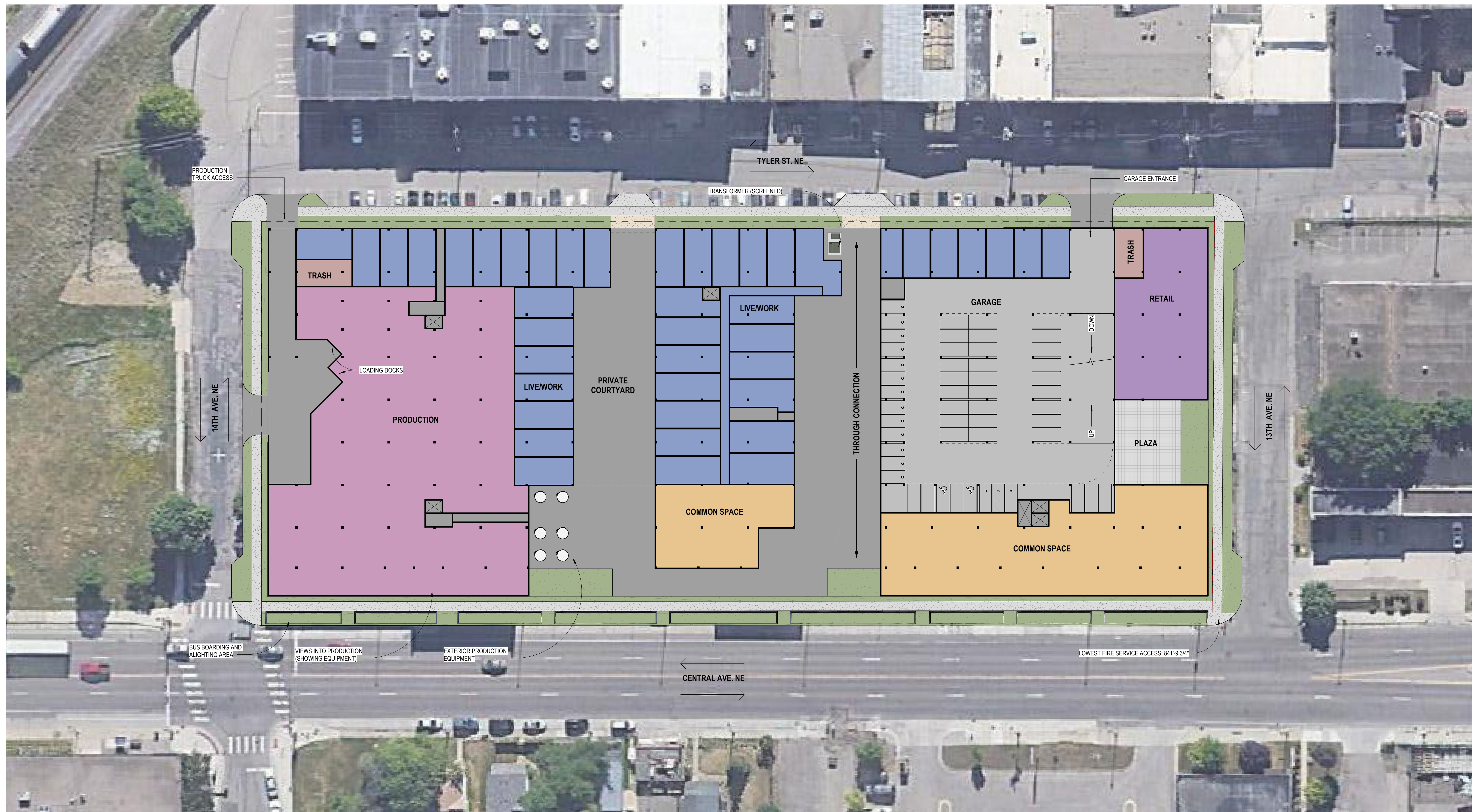


Figure 11: Historic Resources Within 500 Feet of the Project Site

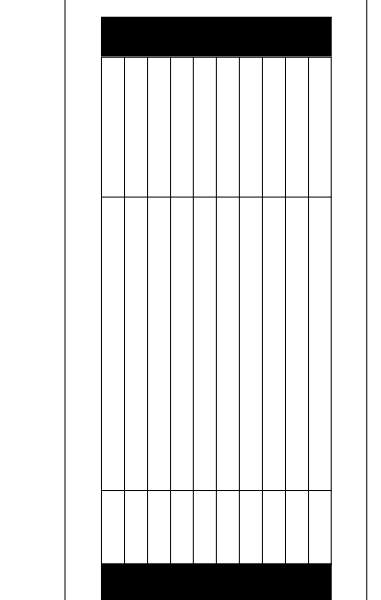
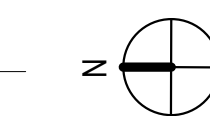


# Appendix A

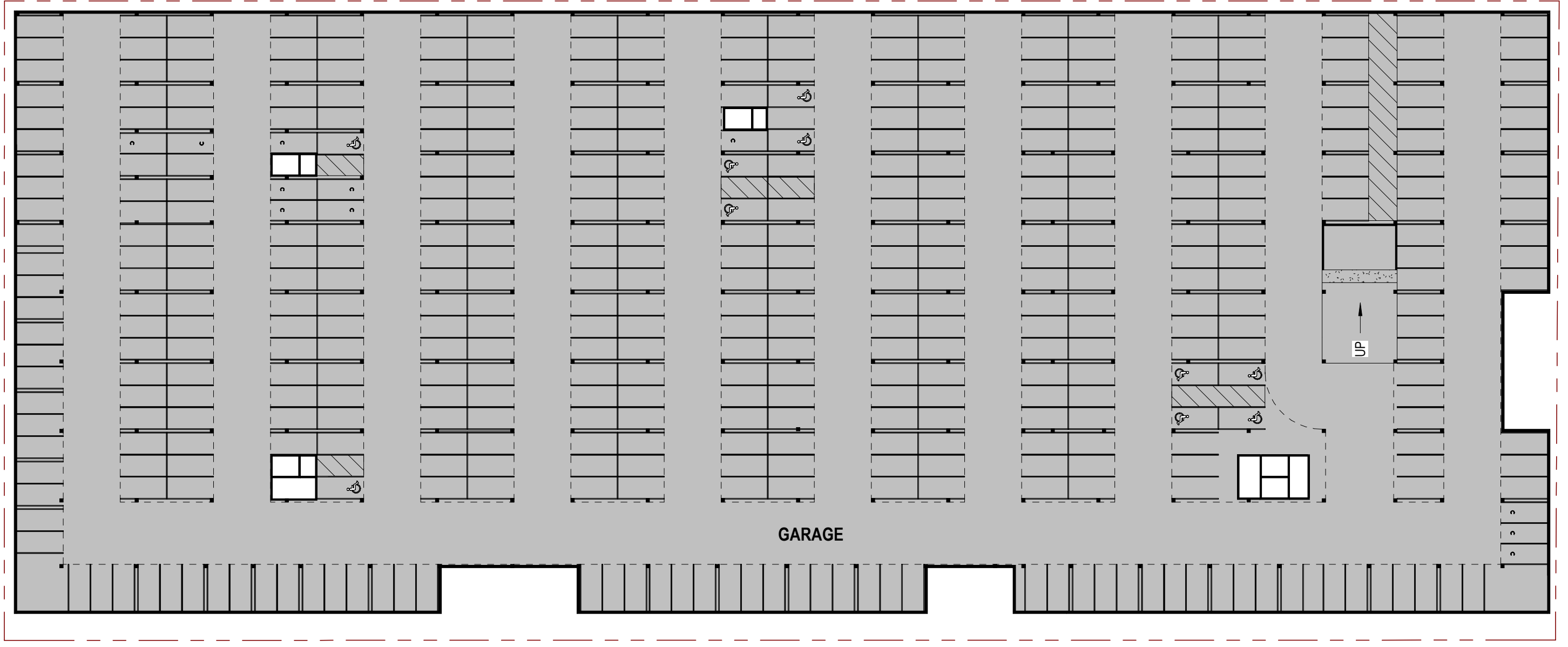
## Concept Plan



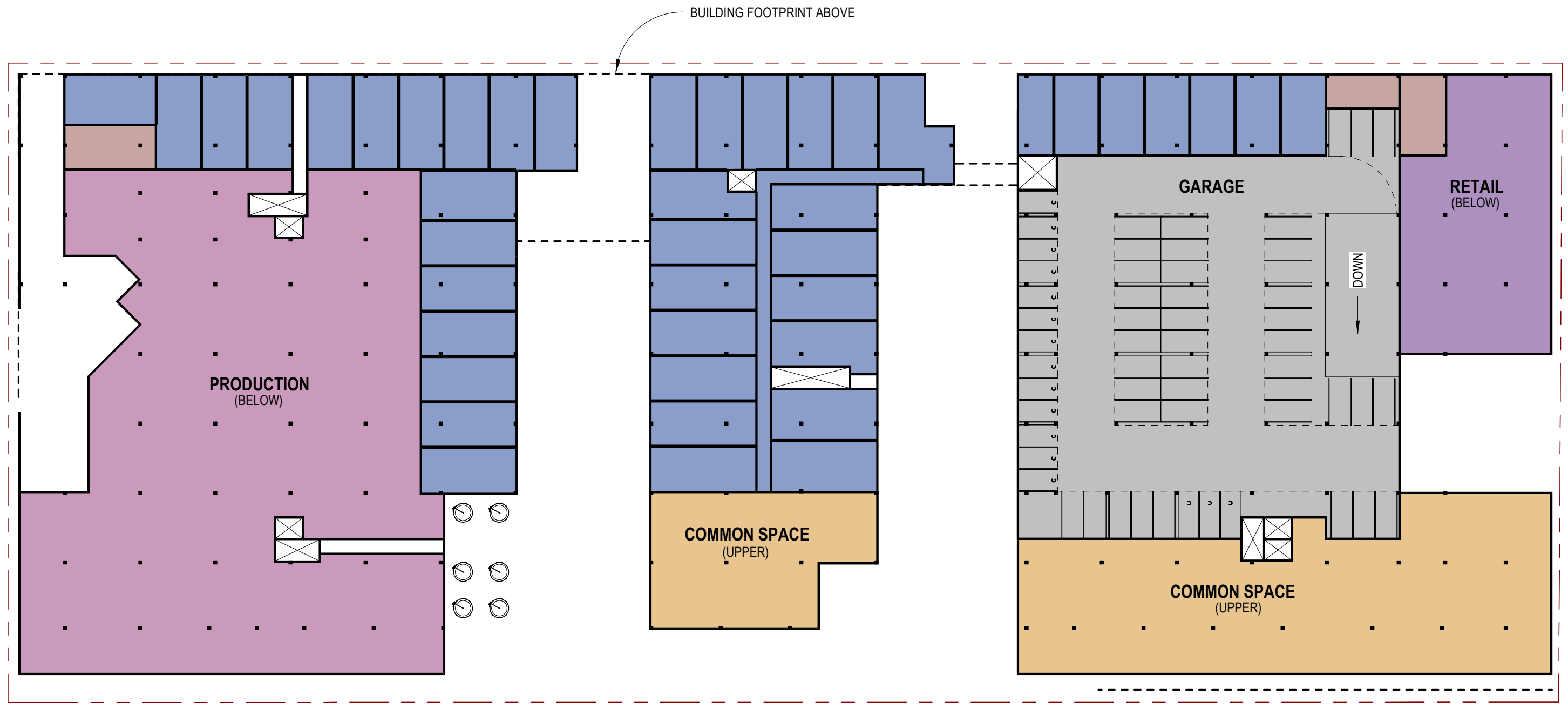
**SITE PLAN/ FIRST FLOOR**  
1" = 30'-0"



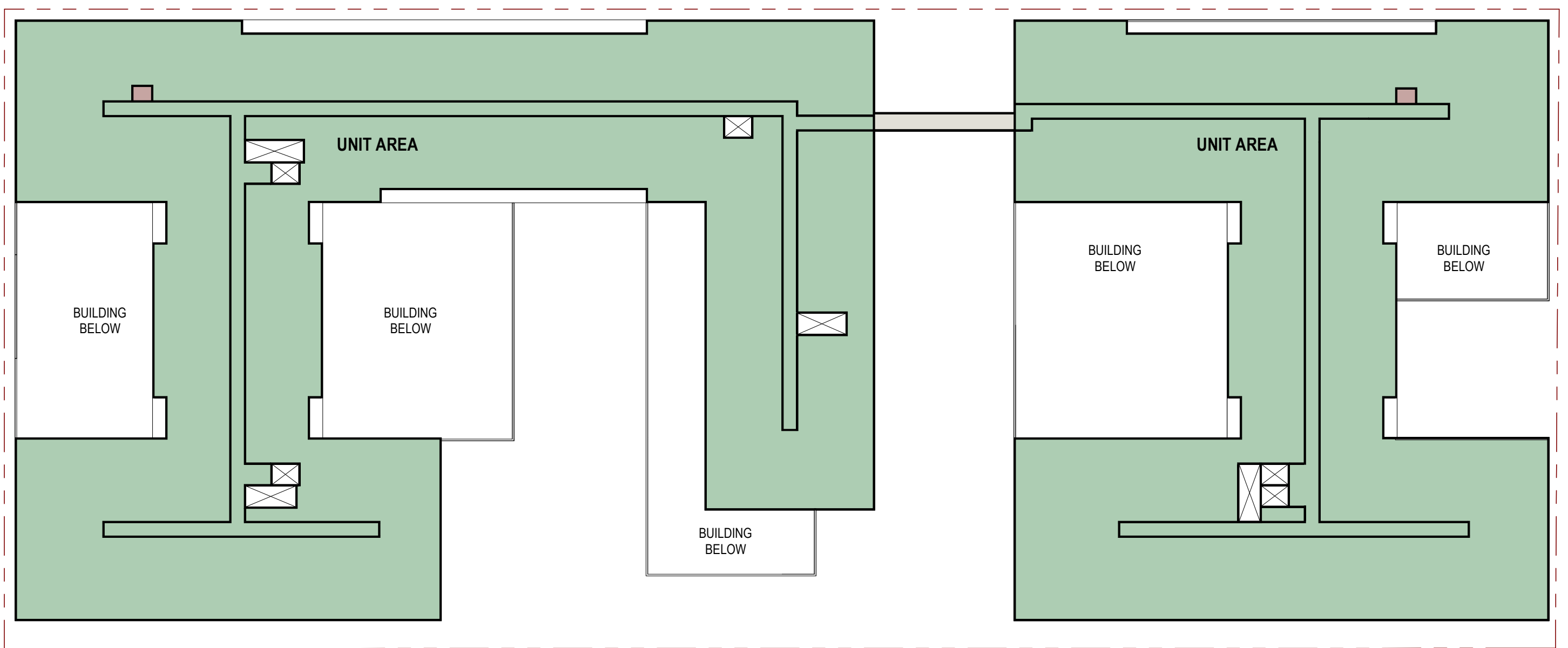




**LOWER FLOOR PLAN**  
1" = 40'-0"

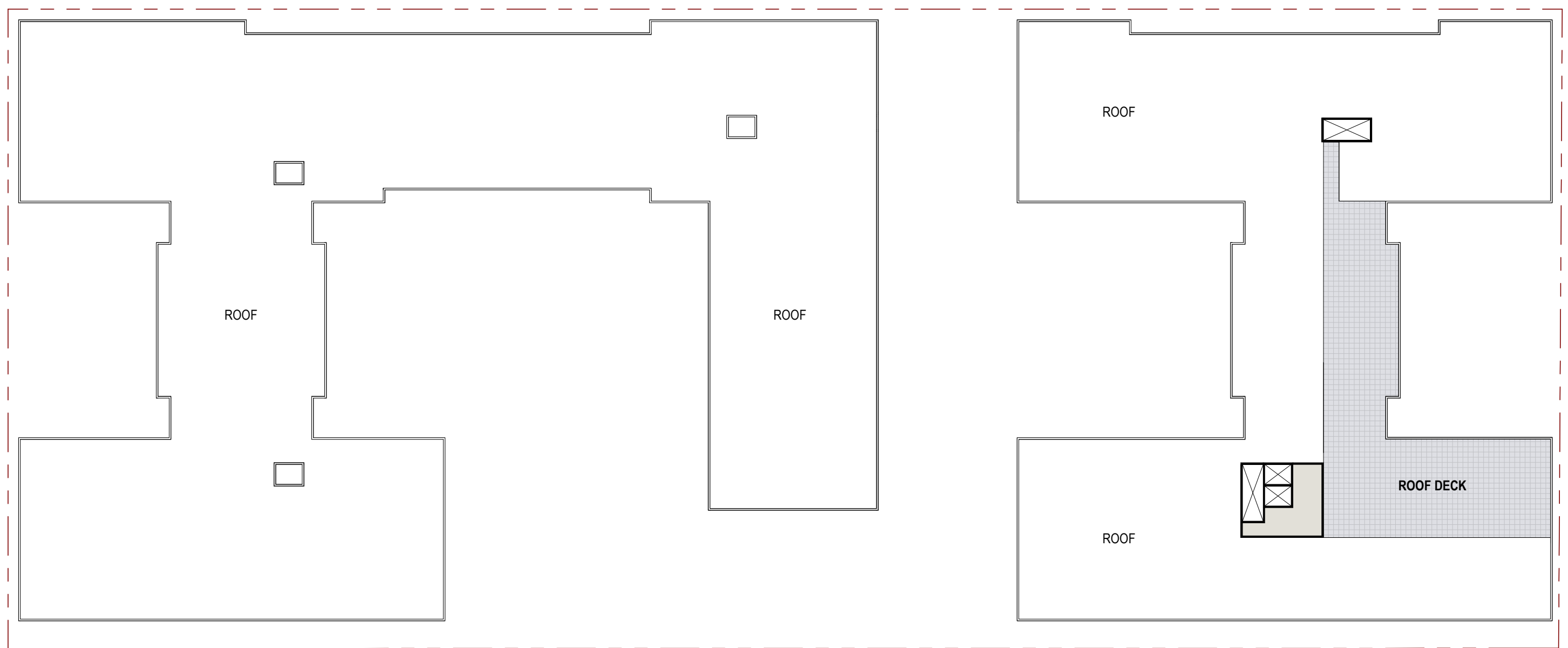


**2ND FLOOR PLAN**  
1" = 40'-0"

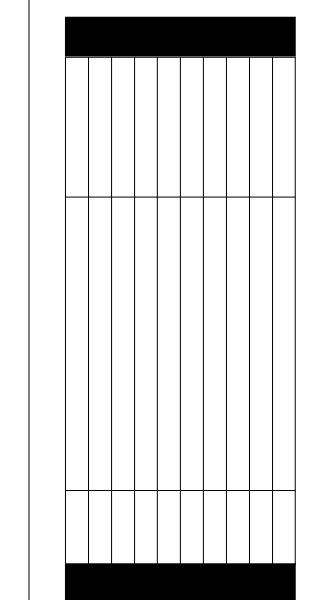
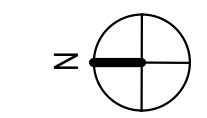


**3RD - 7TH FLOOR PLAN**  
1" = 40'-0"

(THIRD FLOOR SHOWN)



**ROOF PLAN**  
1" = 40'-0"



# **Appendix B**

## **Agency Correspondence**



## 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:** Youngblood EAW

**Project Proposer:** Solhem Development

**Project Type:** Development, Mixed Use

**Project Type Activities:** Structure Removal or Bridge Removal

**TRS:** T29 R24 S13

**County(s):** Hennepin

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

**Reason Requested:** State EAW

**Project Description:** The proposed Youngblood Apartments will be a redevelopment of an approximately 3.4-acre site located at 1335 Central Avenue NE in Minneapolis. The project ...

**Existing Land Uses:** The site has been previously developed as the site of the Youngblood Lumber Company, existing of a large surface lot, several warehouses, and supporting office/commercial uses.

**Landcover / Habitat Impacted:** Impervious surfaces, manicured lawn

**Waterbodies Affected:** N/A

**Groundwater Resources Affected:** N/A

**Previous Natural Heritage Review:** No

**Previous Habitat Assessments / Surveys:** No

### SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	No Comments	No Further Review Required
Ecologically Significant Area	No Comments	No Further Review Required
State-Listed Endangered or Threatened Species	No Comments	No Further Review Required
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	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

August 1, 2022

Project ID: MCE #2022-00474

Koehl Simmons  
Kimley-Horn and Associates, Inc.  
767 Eustis Street, Suite 100  
St. Paul, MN 55114

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

Dear Koehl Simmons,

As requested, the above project has been reviewed for potential effects to rare features. Based on this review, the following rare features may be adversely affected by the proposed project:

*Ecologically Significant Area*

No ecologically significant areas have been documented in the vicinity of the project.

*State-Listed Endangered or Threatened Species*

No state-listed endangered or threatened species have been documented in the vicinity of the project.

*State-Listed Species of Special Concern*

Taxonomic Group	Common Name	Scientific Name	Water Regime	Habitat	Federal Status
Vertebrate Animal	Tricolored Bat	Perimyotis subflavus		Subterranean, Mesic Hardwood Forest, Fire Dependent Forest	

- The above table identifies state-listed species of special concern that have been documented in the vicinity of your project. If suitable habitat for any of these species occurs within your project footprint or activity impact area, the project may negatively impact those species. To avoid impacting state-listed species of special concern, the DNR recommends modifying the location of project activities to avoid suitable habitat or modifying the timing of project activities to avoid the presence of the species. Please visit the [DNR Rare Species Guide](#) for more information on the habitat use of these species and recommended measures to avoid or minimize impacts. For further assistance, please contact the appropriate [DNR Regional Nongame Specialist](#) or [Regional Ecologist](#). Species-specific

comments, if any, appear below.

#### *Federally Listed Species*

The Natural Heritage Information System does not contain any records for federally listed species within one mile of the proposed project. However, to ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online [Information for Planning and Consultation \(IPaC\) tool](#).

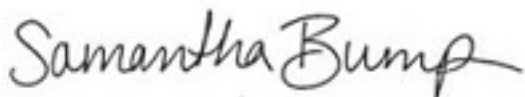
The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, 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.

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 effects 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,

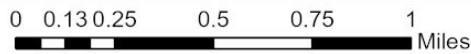
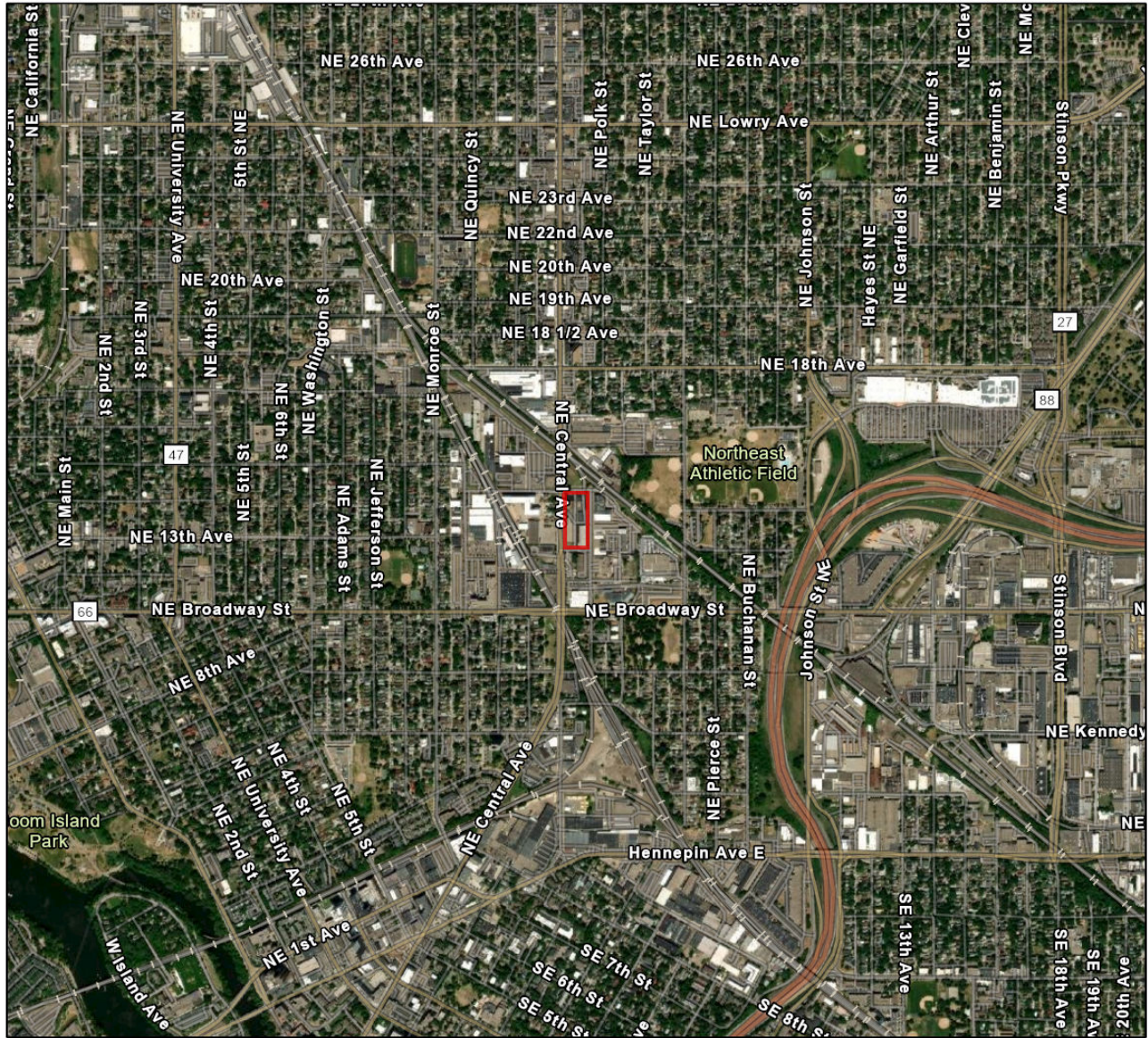


Samantha Bump  
Natural Heritage Review Specialist  
[Samantha.Bump@state.mn.us](mailto:Samantha.Bump@state.mn.us)

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)

# Youngblood EAW

## Aerial Imagery With Locator Map



 Project Boundary

Project Type: Development, Mixed Use

Project Size (acres): 3.39

County(s): Hennepin

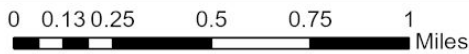
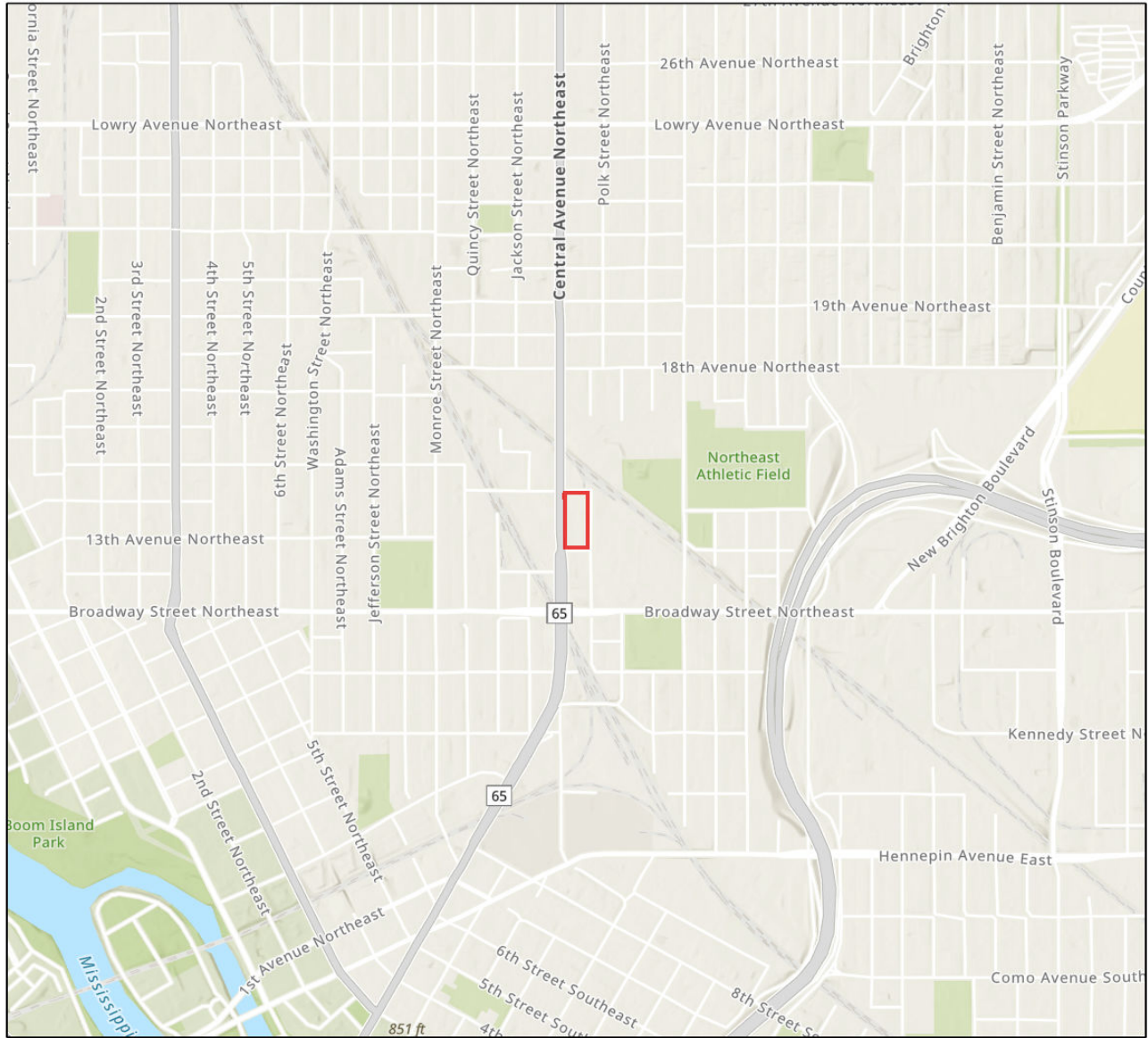
TRS: T29 R24 S13

City of Minneapolis, Metropolitan Council, MetroGIS, Three Rivers Park District, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



# Youngblood EAW

## USA Topo Basemap With Locator Map



 Project Boundary

Project Type: Development, Mixed Use

Project Size (acres): 3.39

County(s): Hennepin

TRS: T29 R24 S13

Esri, NASA, NGA, USGS, FEMA  
City of Minneapolis, Metropolitan Council, MetroGIS, Three Rivers Park District,  
Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,



# Appendix C

## Greenhouse Gas Emissions Analysis





**EPA Simplified GHG Emissions Calculator (SGEC)**

Version 7 June 2021

The EPA Simplified GHG Emissions Calculator ("the Calculator") is designed as a simplified calculation tool to help organizations estimate and inventory their annual greenhouse gas (GHG) emissions for US-based operations. All methodologies and default values provided are based on the most current Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance Documents and the Emission Factors Hub. The Calculator will quantify the direct and indirect emissions from sources at an organization when activity data are entered into the various sections of the workbook for one annual period.

**Before entering data, please: 1) Enable Macros and 2) Familiarize yourself with the [Guide to Greenhouse Gas Management for Small Business & Low Emitters](#).**

Download the guide: <https://www.epa.gov/climateleadership/center-corporate-climate-leadership-small-business-and-low-emitters-guide>

**There are three primary steps in completing a GHG inventory. Each emissions source also has these three steps.**

(1) **DEFINE:** The first step in completing a GHG inventory is to determine the boundaries and emissions sources included within those boundaries. After you have defined your organizational and operational boundaries, you can use the questions on the "Boundary Questions" worksheet to help you determine which emissions sources are relevant to your business.

[Go to Boundary Questions](#)

(2) **COLLECT:** The second step is to collect data for the defined annual period. This step is typically the most time consuming, since the data can be difficult to gather. This Calculator has help sheets with suggestions and guidance for each emissions source and a general help sheet for data management. **Click the drop down menu boxes below to navigate to these sheets.**

Help - Data Management

(3) **QUANTIFY:** The third step is to calculate emissions. This Calculator is designed to complete the emissions quantification step for you. Once the user enters data in this MS Excel spreadsheet, the emissions will be calculated and totaled on the "Summary" sheet.

**Calculator Guidance - Important Information**

- (A) Navigate to the data entry sheets using the drop down menu in the dark grey cell below and then clicking on the "Go To Data Entry Sheet" button. On the data entry sheets enter data in ORANGE cells only.
- (B) This Calculator has several "Tool Sheets" with useful reference data such as unit conversions, heat contents, and emission factors. Click on the buttons below to go to the appropriate Tool Sheet.
- (C) Data must be entered in the units specified on the data entry sheets. Use the "Unit Conversions" or "Heat Content" sheets if unit conversion is necessary prior to entering data into the Calculator.
- (D) If more guidance is needed, you can reference the emission factor data sources found on the "Emission Factors" sheet.

Tool Sheets	Quick Data Entry Navigation
Unit Conversions	Fire Suppression
Heat Content	
Emission Factors	

**Calculator Notes**

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>). The Calculator allows the user to estimate GHG emissions from scope 1 (direct), scope 2 (indirect), and some scope 3 (other indirect) sources.

The Calculator uses U.S.-specific cross-sector emission factors from the *Emission Factors Hub*. Many industrial sectors also have process-related emissions sources that are specific to their sector. EPA's Greenhouse Gas Reporting Program provides guidance and tools that can aid in the calculation and reporting of these emissions:

<https://www.epa.gov/ghgreporting>

The GHG Protocol also provides guidance on calculating emissions from industrial processes.

## Emissions Summary

### Guidance

The total GHG emissions from each source category are provided below. You may also use this summary sheet to fill out the *Annual GHG Inventory Summary and Goal Tracking Form* as this calculator only quantifies one year of emissions at a time.

<https://www.epa.gov/climateleadership/center-corporate-climate-leadership-annual-ghg-inventory-summary-and-goal-tracking>

By entering the data below into the appropriate cell of the *Annual GHG Inventory Summary and Goal Tracking Form*, you will be able to compare multiple years of data.

If you have multiple Calculator files covering sub-sets of your inventory for a particular reporting period, sum each of the emission categories (e.g. Stationary Combustion) to an organizational total, which then can be entered into the *Annual GHG Inventory Summary and Goal Tracking Form*.

(A) Enter organization information into the orange cells. Other cells on this sheet will be automatically calculated from the data entered in the sheets in this workbook. Blue cells indicate required emission sources if applicable. Green cells indicate scope 3 emission sources and offsets, which organizations may optionally include in their inventory.

(B) The "Go To Sheet" buttons can be used to navigate to the data entry sheets.

### Organizational Information:

Organization Name:	Youngblood Apartments EAW	
Organization Address:		
Inventory Reporting Period:	Construction Phase	
	Start:	End:
Name of Preparer:	Kimley-Horn	
Phone Number of Preparer:		
Date Prepared:	8/22/2022	

### Summary of Organization's Emissions:

#### Scope 1 Emissions

Go To Sheet	Stationary Combustion	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Mobile Sources	53,426	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Refrigeration / AC Equipment Use	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Fire Suppression	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Purchased Gases	0	CO <sub>2</sub> -e (metric tons)

#### Location-Based Scope 2 Emissions

Go To Sheet	Purchased and Consumed Electricity	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Purchased and Consumed Steam	0	CO <sub>2</sub> -e (metric tons)

#### Market-Based Scope 2 Emissions

Go To Sheet	Purchased and Consumed Electricity	0	CO <sub>2</sub> -e (metric tons)
-------------	------------------------------------	---	----------------------------------

Go To Sheet

Purchased and Consumed Steam

0 CO<sub>2</sub>-e (metric tons)

**Total organization Emissions**

Total Scope 1 & Location-Based Scope 2

0 CO<sub>2</sub>-e (metric tons)

Total Scope 1 & Market-Based Scope 2

0 CO<sub>2</sub>-e (metric tons)

## Emissions Summary

### Guidance

The total GHG emissions from each source category are provided below. You may also use this summary sheet to fill out the *Annual GHG Inventory Summary and Goal Tracking Form* as this calculator only quantifies one year of emissions at a time.

<https://www.epa.gov/climateleadership/center-corporate-climate-leadership-annual-ghg-inventory-summary-and-goal-tracking>

By entering the data below into the appropriate cell of the *Annual GHG Inventory Summary and Goal Tracking Form*, you will be able to compare multiple years of data.

If you have multiple Calculator files covering sub-sets of your inventory for a particular reporting period, sum each of the emission categories (e.g. Stationary Combustion) to an organizational total, which then can be entered into the *Annual GHG Inventory Summary and Goal Tracking Form*.

(A) Enter organization information into the orange cells. Other cells on this sheet will be automatically calculated from the data entered in the sheets in this workbook. Blue cells indicate required emission sources if applicable. Green cells indicate scope 3 emission sources and offsets, which organizations may optionally include in their inventory.

(B) The "Go To Sheet" buttons can be used to navigate to the data entry sheets.

### Organizational Information:

Organization Name:	Youngblood Apartments EAW		
Organization Address:			
Inventory Reporting Period:	Operation Phase (Annual)		
	Start:		End:
Name of Preparer:	Kimley-Horn		
Phone Number of Preparer:			
Date Prepared:	8/22/2022		

### Summary of Organization's Emissions:

#### Scope 1 Emissions

Go To Sheet	Stationary Combustion	875	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Mobile Sources	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Refrigeration / AC Equipment Use	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Fire Suppression	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Purchased Gases	0	CO <sub>2</sub> -e (metric tons)

#### Location-Based Scope 2 Emissions

Go To Sheet	Purchased and Consumed Electricity	2,478	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Purchased and Consumed Steam	0	CO <sub>2</sub> -e (metric tons)

#### Market-Based Scope 2 Emissions

Go To Sheet	Purchased and Consumed Electricity	2,478	CO <sub>2</sub> -e (metric tons)
-------------	------------------------------------	-------	----------------------------------

Go To Sheet

Purchased and Consumed Steam	0	CO <sub>2</sub> -e (metric tons)
------------------------------	---	----------------------------------

***Total organization Emissions***

Total Scope 1 & Location-Based Scope 2	3,353	CO <sub>2</sub> -e (metric tons)
Total Scope 1 & Market-Based Scope 2	3,353	CO <sub>2</sub> -e (metric tons)

**Reductions**

Go To Sheet	Offsets	0	CO <sub>2</sub> -e (metric tons)
	Net Scope 1 and 2 Location-Based Emissions	3,353	CO <sub>2</sub> -e (metric tons)
	Net Scope 1 and 2 Market-Based Emissions	3,353	CO <sub>2</sub> -e (metric tons)

**Scope 3 Emissions**

Go To Sheet	Employee Business Travel	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Employee Commuting	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Product Transport	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Waste	553	CO <sub>2</sub> -e (metric tons)

**Required Supplemental Information**

Go To Sheet	Biomass CO <sub>2</sub> Emissions from Stationary Sources	0	CO <sub>2</sub> -e (metric tons)
Go To Sheet	Biomass CO <sub>2</sub> Emissions from Mobile Sources	0	CO <sub>2</sub> -e (metric tons)

Scope 1 Emissions from Stationary Combustion Sources



Guidance

- (A) Enter annual data for each combustion unit, facility, or site (by fuel type) in ORANGE cells on Table 1. Example entry is shown in first row (GREEN Italics).
- Select "Fuel Combusted" from drop down box.
- Enter "Quantity Combusted" and choose the appropriate units from the drop down box in the unit column. If it's necessary to convert units, common heat contents can be found on the "Heat Content" sheet and unit conversions on the "Unit Conversion" sheet.
(B) If fuel is consumed in a facility but stationary fuel consumption data are not available, an estimate should be made for completeness. See the "Items to Note" section of the Help sheet for suggested estimation approaches.
(C) Biomass CO2 emissions are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Stationary Source Fuel Combustion

Table with 6 columns: Source ID, Source Description, Source Area (sq ft), Fuel Combusted, Quantity Combusted, Units. Includes example data for East Power Plant, Residential, and Commercial.

GHG Emissions

Total Organization-Wide Stationary Source Combustion by Fuel Type

Table with 3 columns: Fuel Type, Quantity Combusted, Units. Lists various fuel types and their corresponding quantities and units.

Total Organization-Wide CO2, CH4 and N2O Emissions from Stationary Source Fuel Combustion

Table with 4 columns: Fuel Type, CO2 (kg), CH4 (g), N2O (g). Shows emissions for various fuel types and totals for fossil, non-fossil, and all fuels.

Total CO2 Equivalent Emissions (metric tons) - Stationary Combustion 874.8

Total Biomass CO2 Equivalent Emissions (metric tons) - Stationary Combustion 0.0





**Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH<sub>4</sub>/N<sub>2</sub>O Emissions**

Vehicle Type	Vehicle Year	Mileage (miles)	CH <sub>4</sub> (g)	N <sub>2</sub> O (g)	
Passenger Cars - Gasoline	1984-93		0	0.0	
	1994		0	0.0	
	1995		0	0.0	
	1996		0	0.0	
	1997		0	0.0	
	1998		0	0.0	
	1999		0	0.0	
	2000		0	0.0	
	2001		0	0.0	
	2002		0	0.0	
	2003		0	0.0	
	2004		0	0.0	
	2005		0	0.0	
	2006		0	0.0	
	2007		4,240,774	30,533.6	22,052.0
	2008		0	0.0	0.0
	2009		0	0.0	0.0
	2010		0	0.0	0.0
	2011		0	0.0	0.0
2012		0	0.0	0.0	
2013		0	0.0	0.0	
2014		0	0.0	0.0	
2015		0	0.0	0.0	
2016		0	0.0	0.0	
2017		0	0.0	0.0	
2018		0	0.0	0.0	
Light-Duty Trucks - Gasoline (Vans, Pickup Trucks, SUVs)	1987-93		0	0.0	
	1994		0	0.0	
	1995		0	0.0	
	1996		0	0.0	
	1997		0	0.0	
	1998		0	0.0	
	1999		0	0.0	
	2000		0	0.0	
	2001		0	0.0	
	2002		0	0.0	
	2003		0	0.0	
	2004		0	0.0	
	2005		0	0.0	
	2006		0	0.0	
	2007		29,697	305.9	181.2
	2008		0	0.0	0.0
	2009		0	0.0	0.0
	2010		0	0.0	0.0
	2011		0	0.0	0.0
2012		0	0.0	0.0	
2013		0	0.0	0.0	
2014		0	0.0	0.0	
2015		0	0.0	0.0	
2016		0	0.0	0.0	
2017		0	0.0	0.0	
2018		0	0.0	0.0	
Heavy-Duty Vehicles - Gasoline	1985-86		0	0.0	
	1987		0	0.0	
	1988-1989		0	0.0	
	1990-1995		0	0.0	
	1996		0	0.0	
	1997		0	0.0	
	1998		0	0.0	
	1999		0	0.0	
	2000		0	0.0	
	2001		0	0.0	
	2002		0	0.0	
	2003		0	0.0	
	2004		0	0.0	
	2005		0	0.0	
	2006		0	0.0	
	2007		0	0.0	
	2008		0	0.0	
	2009		0	0.0	
	2010		0	0.0	
	2011		0	0.0	
2012		0	0.0		
2013		0	0.0		
2014		0	0.0		
2015		0	0.0		
2016		0	0.0		
2017		0	0.0		
2018		0	0.0		
Motorcycles - Gasoline	1960-1995		0	0.0	
	1996-present		0	0.0	

**Total Organization-Wide On-Road Non-Gasoline Mobile Source Mileage and CH<sub>4</sub>/N<sub>2</sub>O Emissions**

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH <sub>4</sub> (g)	N <sub>2</sub> O (g)
Passenger Cars - Diesel	Diesel	1960-1982		0	0.0
		1983-1995		0	0.0
		1996-2006		0	0.0
		2007-2018		0	0.0
Light-Duty Trucks - Diesel	Diesel	1960-1982		0	0.0
		1983-1995		0	0.0

Scope 2 Emissions from Purchase of Electricity

Guidance

The Indirect Emissions from Purchased Electricity Guidance document provides guidance for quantifying two scope 2 emissions totals, using a location-based method and a market-based method. The organization should quantify and report both totals in its GHG inventory. The location-based method considers average emission factors for the electricity grids that provide electricity. The market-based method considers contractual arrangements under which the organization procures electricity from specific sources, such as renewable energy.

- (A) Enter total annual electricity purchased in kWh and each eGRID subregion for each facility or site in ORANGE cells of Table 1.
(B) If electricity consumption data are not available for a facility, an estimate should be made for completeness.
(C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."
(D) See the market-based emission factor hierarchy on the market-based method Help sheet. If any of the first four types of emission factors are applicable, enter the factors in the yellow cells marked as "<enter factor>".

Help - Market-Based Method

Tips: Enter electricity usage by location and then look up the eGRID subregion for each location. If you purchase renewable energy that is less than 100% of your site's electricity, see the example in the market-based method Help sheet.

Table 1. Total Amount of Electricity Purchased by eGRID Subregion

Table with 15 columns: Source ID, Source Description, Source Area (sq ft), eGRID Subregion, Electricity Purchased (kWh), and three columns for Market-Based Emissions (CO2, CH4, N2O) and three columns for Location-Based Emissions (CO2, CH4, N2O). Includes data for Bldg-012 and a Total Emissions for All Sources row.

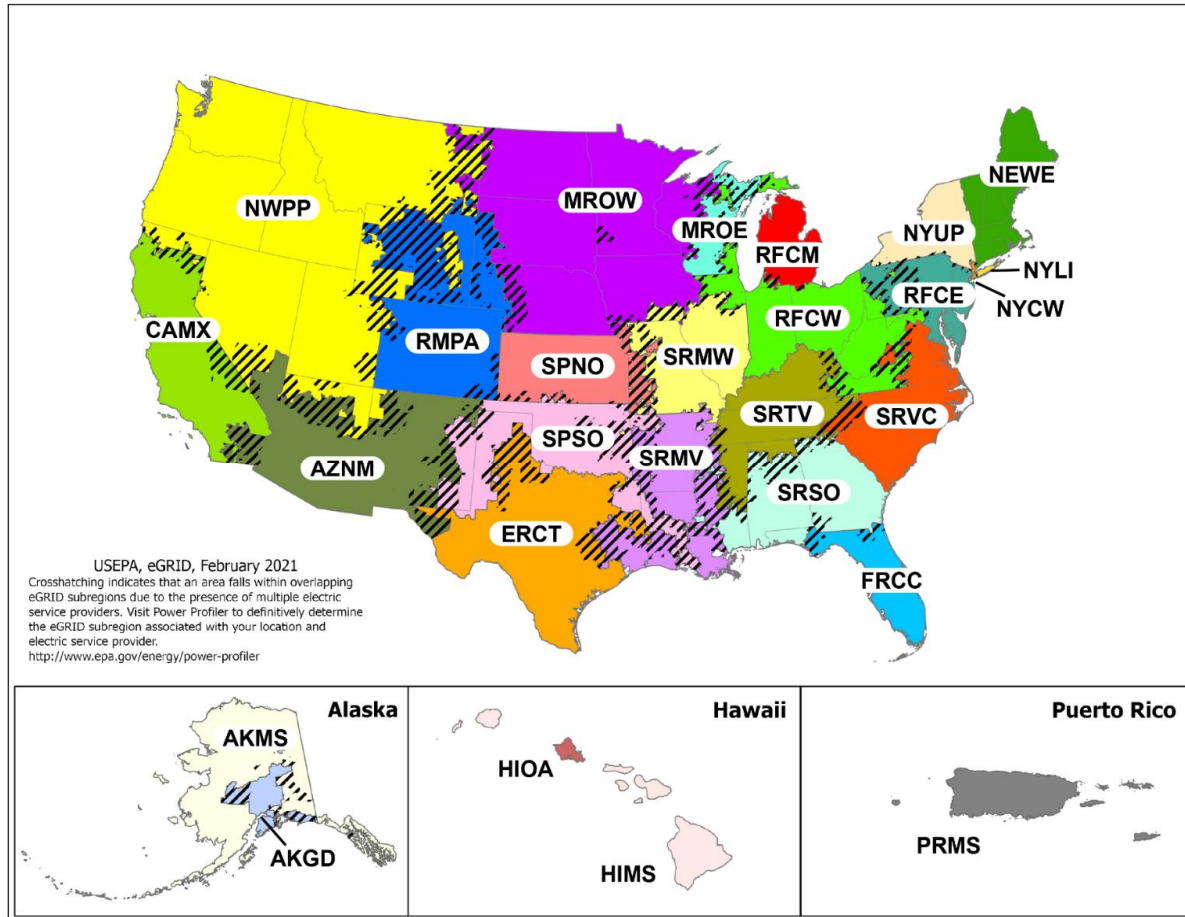
**GHG Emissions**

<b>CO<sub>2</sub> Equivalent Emissions (metric tons)</b>	
Location-Based Electricity Emissions	2,478.2
Market-Based Electricity Emissions	2,478.2

Notes:

- CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions are estimated using methodology provided in EPA's Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance - Indirect Emissions from Purchased Electricity (January 2016).

Figure 1. EPA eGRID2019, February 2021.



Scope 3 Emissions from Waste

- Guidance (A) Enter annual waste data in ORANGE cells. Example entry is shown in first row (GREEN Italics). (B) Choose the appropriate material and disposal method from the drop down options. For the average-data method, use one of the mixed material types, such as mixed MSW. If the exact waste material is not available, consider an appropriate proxy. For example, dimensional lumber can be used as a proxy for wood furniture. (C) Choose an appropriate disposal method. Note that not all disposal methods are available for all materials. If there is a #NA or # Value error in the emissions column, you must pick a new material type or appropriate disposal method.

Table 1. Waste Disposal Weight by Waste Material and Disposal Method (CO2, CH4 and N2O)

Table with 7 columns: Source ID, Source Description, Waste Material, Disposal Method, Weight, Unit, CO2e Emissions (kg). Includes data for Bldg-012, East Power Plant Finished Goods, Steel Cans, Landfilled, 1,000 metric ton, 22,040 kg.

GHG Emissions

Total Emissions by Disposal Method

Summary table with 2 columns: Waste Material, CO2e (kg). Rows include Recycled (117,132), Landfilled (428,634), Composted (7,306), and Anaerobically Digested (0).

Total CO2 Equivalent Emissions (metric tons) - Waste

553.1

# Appendix D

## Travel Demand Management Plan



# TRAVEL DEMAND MANAGEMENT PLAN

## YOUNGBLOOD DEVELOPMENT

MINNEAPOLIS, MINNESOTA

*Prepared for:*

*Solhem Development*

*Prepared by:*

**Kimley-Horn and Associates, Inc.**

767 Eustis Street, Suite 100  
St. Paul, MN 55114

**September 2022**

**Kimley»»Horn**



# TRAVEL DEMAND MANAGEMENT PLAN

## YOUNGBLOOD DEVELOPMENT

MINNEAPOLIS, MINNESOTA

### *PLAN APPROVAL*

#### **Solhem Development**

By: \_\_\_\_\_ Dated: \_\_\_\_\_

#### **Minneapolis Community Planning and Economic Development Department**

By: \_\_\_\_\_ Dated: \_\_\_\_\_

#### **Minneapolis Public Works Department**

By: \_\_\_\_\_ Dated: \_\_\_\_\_

# TRAVEL DEMAND MANAGEMENT PLAN

## YOUNGBLOOD DEVELOPMENT

MINNEAPOLIS, MINNESOTA

### *REPORT CERTIFICATION*

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

\_\_\_\_\_

Jacob Rojer, P.E., PTOE

License No. 56767

09/14/2022 \_\_\_\_\_

Date



## Contents

1.0	Background .....	1
2.0	Zoning and Land Uses .....	3
3.0	Pedestrian, Bicycle, and Transit .....	4
4.0	Parking .....	6
5.0	Traffic Operations .....	7
6.0	Travel Demand Management Strategies .....	20
7.0	Appendix .....	21

## Tables

Table 5-1:	Site Trip Generation Based on Proposed Land Uses .....	9
Table 5-3:	Level of Service Information .....	11
Table 5-4:	Existing Year (2022) AM Peak Hour Level of Service Results .....	12
Table 5-5:	Existing Year (2022) PM Peak Hour Level of Service Results .....	12
Table 5-6:	Opening Year (2025) No-Build AM Peak Hour Level of Service Results .....	13
Table 5-7:	Opening Year (2025) No-Build PM Peak Hour Level of Service Results .....	13
Table 5-8:	Opening Year (2025) Build AM Peak Hour Level of Service Results .....	15
Table 5-9:	Opening Year (2025) Build PM Peak Hour Level of Service Results .....	16
Table 5-10:	Horizon Year (2040) No-Build AM Peak Hour Level of Service Results .....	17
Table 5-11:	Horizon Year (2040) No-Build PM Peak Hour Level of Service Results .....	17
Table 5-12:	Horizon Year (2040) Build AM Peak Hour Level of Service Results .....	18
Table 5-13:	Horizon Year (2040) Build PM Peak Hour Level of Service Results .....	19

## Exhibits (Provided in Appendix A)

Exhibit 1-1: Project Site Location and Study Area

Exhibit 3-1: Bicycle Infrastructure

Exhibit 3-2: Transit Infrastructure

Exhibit 5-1: Existing Geometry and Intersection Control

Exhibit 5-2: Existing Year (2022) Peak Hour Traffic Volumes

Exhibit 5-3: Opening Year (2025) No-Build Peak Hour Traffic Projections

Exhibit 5-4: Horizon Year (2040) No-Build Peak Hour Traffic Projections

Exhibit 5-5: Site Trip Distribution

Exhibit 5-6: Site Trip Assignment

Exhibit 5-7: Opening Year (2025) Build Peak Hour Traffic Projections

Exhibit 5-8: Horizon Year (2040) Build Peak Hour Traffic Projections

## 1.0 BACKGROUND

The proposed Youngblood Development will be a redevelopment of an approximately 3.4-acre site located at 1335 Central Avenue NE in Northeast Minneapolis. The site consists of four parcels, which are currently occupied by several one-story and two-story buildings and a lumber shed. The project is anticipated to include up to 30,000 square feet of production space for a brewery, up to a 7,500 square foot tap room and up to 600 apartments. In addition, there will be one large underground parking level, at-grade, and second story parking level with approximately 600 parking spaces. The project location is shown in **Exhibit 1-1** with the proposed development site in blue. All exhibits are provided in **Appendix A**.

The parking levels would be accessed via the proposed full access on Tyler Street. The site plan is shown in **Appendix B**.

### CITY OF MINNEAPOLIS TRANSPORTATION GOALS

The following policies for transportation are included in *Minneapolis 2040*, adopted in 2019 by the Minneapolis City Council and effective as of January 1, 2020:

Policy 1: Increase the supply of housing and its diversity of location and types.

Policy 2: Support employment growth downtown and in places well-served by public transportation.

Policy 4: Improve access to goods and services via walking, biking and transit.

Policy 5: Ensure a high-quality and distinctive physical environment in all parts of the city through building and site design requirements for both large and small projects.

Policy 6: Regulate land uses, building design, and site design of new development consistent with a transportation system that prioritizes walking first, followed by bicycling and transit use, and lastly motor vehicle use.

Policy 16: Reduce the energy, carbon, and health impacts of transportation through reduced single-occupancy vehicle trips and phasing out of fossil fuel vehicles.

Policy 17: Plan, design, build, maintain, and operate the city's transportation system in a way that prioritizes pedestrians first, followed by bicycling and transit use, and lastly motor vehicle use.

Policy 18: Improve the pedestrian environment in order to encourage walking and the use of mobility aids as a mode of transportation.

Policy 19: Improve and expand bicycle facilities in order to encourage bicycling as a mode of transportation.

Policy 46: Proactively address health hazards in housing and advance design that improves physical and mental health.

Policy 58: Support thriving business districts and corridors that build on cultural assets and serve the needs of Minneapolis residents.

Policy 80: Support development and public realm improvements near existing and planned METRO stations that result in walkable districts for living, working, shopping, and recreating.

## TRAVEL DEMAND MANAGEMENT GOALS

In an effort to work toward the goals outlined in *Minneapolis 2040*, the City of Minneapolis adopted ordinances in 2021 amending the regulations related to off-street street parking and loading as well as travel demand management. The ordinance requires the preparation of a Travel Demand Management Plan (TDMP) for all non-residential development or additions over 25,000 square feet or more of gross floor area and any residential development with greater than 50 units. TDMP requirements are tiered between minor and major to distinguish higher standards for larger projects. Major TDMPs also require a traffic study. The TDMP ordinance also institutes a system in which projects are awarded points for certain Travel Demand Strategies. The proposed development project requires a major TDMP and must employ Travel Demand Strategies equaling 6 or more points.

This TDMP details the proposed project, including the site's design and a site traffic study. It will outline any traffic issues identified as part of the traffic study. It also describes the proposed strategies that will foster the use of alternate transportation modes by employees and guests. This TDMP contains an acknowledgement that the strategies must be maintained by the property owner/manager throughout the life of the project and the building owner/manager must provide self-reported audits every two (2) years to the planning director and city engineer that confirms ongoing compliance with required strategies until it is deemed that the development is sufficiently meeting city transportation goals.

## 2.0 ZONING AND LAND USES

The existing primary zoning of the site is I2 Medium Industrial District. The City of Minneapolis describes the I2 district as follows:

*“The I2 Medium Industrial District is established to provide locations for medium industrial uses and other specific uses which have the potential to produce greater amounts of noise, odor, vibration, glare or other objectionable influences than uses allowed in the I1 District and which may have an adverse effect on surrounding properties”*

The site is within the BFC6 Corridor 6 Built Form Overlay District. The City of Minneapolis describes the Corridor 6 Built Form Overlay District as follows:

*“New and remodeled buildings in the Corridor 6 district should reflect a variety of building types on both moderate and large sized lots. Building heights should be 2 to 6 stories. Building heights should be at least 2 stories in order to best take advantage of the access to transit, jobs, and goods and services provided by the Corridor 6 district.”*

## 3.0 PEDESTRIAN, BICYCLE, AND TRANSIT

### PEDESTRIAN

There is an existing network of sidewalks within Northeast Minneapolis that allows residents, customers, and employees of the development to walk to their destinations rather than rely on a vehicle. There are sidewalks bordering the project site on Central Avenue NE, 14<sup>th</sup> Avenue NE, and 13<sup>th</sup> Avenue NE. The sidewalks vary from 5 to 8 feet in width. There are not currently sidewalks along Tyler Street NE, but a sidewalk would be constructed as part of the proposed project. There are marked crosswalks on all legs of the Central Avenue NE and 14<sup>th</sup> Avenue intersection. No other study area intersections have marked crosswalks.

The development is expected to improve upon existing pedestrian conditions. The development will provide a mid-block plaza to better connect Tyler Street NE and Central Avenue NE for pedestrians. Buffer space will be added between the sidewalk and the roadway on Central Avenue NE. The site improvements are anticipated to improve the overall pedestrian experience in the site area.

### BICYCLE

The site is well-situated to promote bicycling as a viable mode of transportation. **Exhibit 3-1** shows the existing bicycle infrastructure accessible from the site, including shared bicycle routes and on-street bicycle lanes. There are painted bike “sharrows” on Central Avenue NE, directly adjacent to the site, which connects to many of the other on-street bike facilities in Minneapolis. The City of Minneapolis has also identified streets in the area such as Broadway Street NE for bikeways in the future.

To promote bicycle use, the developer plans to provide secure, long-term bicycle storage in addition to providing short-term surface bicycle parking spaces. The development will also provide shower and locker rooms for bicyclists. The Zoning Code requires at least one bicycle parking space per dwelling unit for multifamily developments, with at least 90 percent of these spaces meeting the requirements for long-term bicycle parking. For light industrial developments (the brewery), 2 spaces or 1 space per 20,000 square feet of GFA whichever is greater, with at least 50 percent of these spaces meeting the requirements for long-term bicycle parking and 5 percent meeting the requirements for short-term bicycle parking. The Zoning Code requires at least one bicycle parking space per 5,000 square feet of GFA and a minimum of three parking spaces for general retail sales and services, with at least 50 percent of these spaces meeting the requirements for short-term bicycle parking. The general retail sales and services is anticipated to represent the proposed tap room most accurately. For this development, the code (section 541.320) requires a minimum of 605 total bicycle parking spaces with a minimum of 541 long-term spaces and a minimum of 32 short-term spaces. This number could fluctuate depending on the final number of dwelling units. The number of long-term and short-term bicycle parking stalls has not been finalized by the developer.

### TRANSIT

Transit service in the project area is available with routes adjacent to the proposed site. **Exhibit 3-2** shows the project area with transit routes near the site.

### BUS SERVICE

Route 10 is a local bus route between downtown Minneapolis and Blaine. It operates seven days a week and is part of Metro Transit’s High Frequency Network, with approximately 15-minute headways during peak hours on the weekdays and weekends. Service during nights and weekends provides 15 to 30-minute headways.

The closest Route 10 bus stop to the project site is located on the corner of Central Avenue NE and 14<sup>th</sup> Avenue NE.

Route 30 is a local bus route between Golden Valley and the METRO Green Line Westgate Station in Saint Paul. It operates seven days a week with service at 30-minute headways. The closest Route 30 bus stop to the project site is located on the corner of Central Avenue NE and Broadway Avenue NE.

The METRO F Line is a planned bus rapid transit (BRT) route that will serve the Central Avenue NE corridor, largely replacing the Route 10. Service is currently anticipated to begin in 2026.

---

## LIGHT RAIL SERVICE

**METRO Blue Line** is a light rail transit line between downtown Minneapolis and the Mall of America in Bloomington. It operates weekdays, Saturdays and Sundays. This line is part of the High Frequency Network, with frequencies every 15 minutes or less from 6:00 am to 7:00 pm weekdays and 9:00 a.m. to 6:00 p.m. on Saturdays. Service during nights and weekends provides 15-30 minutes headways. The METRO Blue Line runs approximately 2 miles south of the site.

**METRO Green Line** is a light rail transit line between downtown Minneapolis and downtown Saint Paul. It operates weekdays, Saturdays and Sundays. This line is part of the High Frequency Network, with frequencies every 15 minutes or less from 6:00 am to 7:00 pm weekdays and 9:00 a.m. to 6:00 p.m. on Saturdays. Service during nights and weekends provides 10-30 minutes headways. The METRO Green Line runs approximately 2 miles south of the site.

While The METRO Blue Line and METRO Green Line are a significant distance from the site, both routes can be accessed from the Route 10 bus and connect to many additional bus routes through transfers.

## 4.0 PARKING

### EXISTING SITE

The proposed site is in a I2 medium industrial zoning district. The site is also located in a Corridor 6 Built Form overlay district which is typically applied along high frequency transit routes as well as in areas near METRO stations. The district supports public transit usage by encouraging high density developments near transit routes. The parking requirements and the proposed number of spaces for each of the land uses within the proposed redevelopment site are provided in this section.

The site consists of four parcels, which are currently occupied by several one-story and two-story buildings and a lumber shed.

### REDEVELOPED SITE

According to Chapter 541: Off-Street Parking, Loading, and Mobility within the Minneapolis Code of Ordinances, the off-street parking requirements for multi-family residential land uses is a maximum of two parking space per dwelling unit with no defined minimum number of spaces (Code 541.310). The off-street parking requirements for restaurant land uses (tap room) is a maximum of one parking space per 75 square feet of gross floor area with no defined minimum number of spaces (Code 541.310). The off-street parking requirements for light industrial land uses (brewery) is a maximum of one parking space per 200 square feet of gross floor area up to 20,000 square feet plus one parking space per 1,000 square feet of gross floor area in excess of 20,000 square feet with no defined minimum number of spaces (Code 541.310). This results in a total maximum parking up to 1,410 spaces (1,200 spaces for multifamily residential, 100 spaces for the tap room, and 110 spaces for the brewery).

For the proposed development, it is anticipated that a proportion of daily trips by residents, employees, and customers will be taken via alternative modes of transportation, including transit, bike, and walk trips. Recognizing that excessive off-street parking for automobiles conflicts with the City of Minneapolis' policies related to transportation, land use, and urban design, the developer is proposing to provide approximately 600 spaces. The structured parking will utilize an access point located on Tyler Street NE, approximately 100 feet north of 13<sup>th</sup> Avenue NE. With up to 600 potential multifamily units planned for the development, the parking ratio for multifamily parking is approximately one stall per dwelling unit, this calculation does not take into account the parking needed for the tap room and brewery because all on-site parking will be dedicated to the residential land use.



## 5.0 TRAFFIC OPERATIONS

An analysis of the potential traffic impacts associated with the proposed development site was completed. The assumptions, methodology, results, and recommended improvements are detailed in this section. The following study intersections were analyzed for potential traffic impacts:

- Central Avenue NE and 14<sup>th</sup> Avenue NE
- Central Avenue NE and 13<sup>th</sup> Avenue NE
- Tyler Street NE and 14<sup>th</sup> Avenue NE
- Tyler Street NE and 13<sup>th</sup> Avenue NE

The traffic conditions at these intersections were analyzed under five scenarios during the AM and PM peak hours of traffic using SimTraffic 11:

- Existing Year (2022) Conditions
- Opening Year (2025) No-Build Conditions
- Opening Year (2025) Build Conditions
- Horizon Year (2040) No-Build Conditions
- Horizon Year (2040) Build Conditions

Street types listed in the following section are based on the functional classifications defined in *MnDOT's Interactive BaseMap*. The annual average daily traffic (AADT) volumes reported in the following section were obtained from MnDOT's Traffic Mapping Application.

### EXISTING TRAFFIC CONDITIONS

**Central Avenue NE (MN 65)** is a four-lane minor arterial that runs north-south. Central Avenue NE is undivided, with no left or right turn lanes at the study intersections. The posted speed limit on Central Avenue NE in the project vicinity is 30 miles per hour (mph). The 2021 AADT volume on Central Avenue NE was 14,170 vehicles per day in the study area. On-street parking is permitted on the west side of Central Avenue NE. There are a few existing driveways along the west side of Central Avenue NE and one access on the east side between 14<sup>th</sup> Avenue NE and 13<sup>th</sup> Avenue NE. There are sidewalks on both sides of Central Avenue NE in the project vicinity. The intersection of Central Avenue NE with 14<sup>th</sup> Avenue NE is signalized, while Central Avenue NE and 13<sup>th</sup> Avenue NE is side street stop controlled.

**Tyler Street NE** is a two-lane, two-way local street that runs north-south. There is no posted speed limit on Tyler Street NE, by city ordinance the speed limit is 20 mph. There is no AADT data for Tyler Street NE. 90 degree on-street parking is permitted on both sides of Tyler Street NE. There are no pedestrian facilities on Tyler Street NE. The intersections of Tyler Street NE with 14<sup>th</sup> Street NE and 13<sup>th</sup> Street NE are both unsignalized.

**14<sup>th</sup> Avenue NE** is a two-lane, local roadway that runs east-west There is no posted speed limit on 14<sup>th</sup> Avenue NE, by city ordinance the speed limit is 20 mph. On-street parking is permitted on the north and south sides of 14<sup>th</sup> Avenue NE in the project vicinity. There are four driveways along the south side of 14<sup>th</sup> Avenue NE and no access on the north side of 14<sup>th</sup> Avenue NE between Central Avenue NE and Tyler Street NE. There are sidewalks on both sides of 14<sup>th</sup> Avenue NE in the project vicinity.

**13<sup>th</sup> Avenue NE** is a two-lane, local roadway that runs east-west There is no posted speed limit on 13<sup>th</sup> Avenue NE, by city ordinance the speed limit is 20 mph. No on-street parking is permitted on 13<sup>th</sup> Avenue NE in the project vicinity. There are multiple driveways along the north and south side of 13<sup>th</sup> Avenue NE between Central Avenue NE and Tyler Street NE. There are sidewalks on the north side of 13<sup>th</sup> Avenue NE in the project vicinity.

The existing lane configurations of these roadways at the study intersections are provided in **Exhibit 5-1**.

---

## EXISTING TRAFFIC VOLUMES

Turning movement counts (TMCs) were collected at all four study intersections on Thursday, July 14, 2022. The network peak hours were determined to occur from 8:00 to 9:00 AM and from 5:00 to 6:00 PM. The raw turning movement counts are provided in **Appendix C**. These counts were used for the existing volumes. **Exhibit 5-2** provides the Existing Year (2022) Peak Hour Traffic Volumes.

---

## BACKGROUND GROWTH

The proposed development is expected to be completed in 2025. Therefore, the No-Build and Build traffic analyses were conducted for the Opening Year (2025). Additionally, a Horizon Year analysis was completed for the year 2040, to evaluate the long-term improvements needed to maintain acceptable operations in the study area.

An annual growth rate of 0.5% was applied to existing volumes along Central Avenue NE to grow volumes to Opening Year (2025) and Horizon Year (2040) conditions, based on conversations with City of Minneapolis staff. No background growth was applied to Tyler Street NE, 14<sup>th</sup> Avenue NE, and 13<sup>th</sup> Avenue NE. **Exhibits 5-3 and 5-4** provide the projected peak hour volumes for Opening Year (2025) No-Build conditions and Horizon Year (2040) No-Build conditions, respectively.

---

## TRIP GENERATION

In order to calculate site trips anticipated to be generated by the proposed development, data was referenced from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition*. The *Trip Generation Manual* provides peak hour trip rates and inbound-outbound percentages.

As previously stated, the proposed development is anticipated to include up to 600 multifamily dwelling units, a tap room up to 7,500 square feet, and up to 30,000 square feet of brewery/warehouse space. **Table 5-1** shows the anticipated trip generation for a development of this size. Land Use Code (LUC) 110 General Light Industrial, LUC 221 Multifamily housing, and LUC 971 tap room were used for the development.

A brewery, separate from the tap room, is a unique land use and one that is not specifically included in the ITE *Trip Generation Manual, 11<sup>th</sup> Edition*. The Brewery will begin with 12 employees with room to accommodate a total of 24 employees. General Light Industrial was assumed for this land use. The number of employees and the number of peak hour trips projected by ITE are comparable to the projected employees.

**Table 5-1: Site Trip Generation Based on Proposed Land Uses**

Land Use Code	Land Use Description	Units	Intensity	AM Peak Hour			PM Peak Hour		
				Trips Enter	Trips Exit	Total Trips	Trips Enter	Trips Exit	Total Trips
110	General Light Industrial	KSF	30	19	3	22	3	17	20
221	Multifamily Housing	Dwelling Units	600	51	171	222	143	91	234
971	Tap Room	KSF	7.5	4	1	5	44	30	74
<b>Total Rounded Site Trips</b>				<b>75</b>	<b>175</b>	<b>250</b>	<b>190</b>	<b>140</b>	<b>330</b>

As shown, the proposed land uses are anticipated to generate up to 250 AM peak hour trips and 330 PM peak hour trips. The trip generation outlined in Table 5-1 was used for analysis.

## TRIP DISTRIBUTION AND ASSIGNMENT

The site trips were distributed to adjacent roadways based on the current traffic patterns in the area and a general assessment of the major regional roadways surrounding the study area. It is anticipated that the site traffic will primarily originate to/from the south. The following distribution was assumed on the regional highway network for both entering and exiting trips:

- 40% to/from the south on Tyler Street NE
- 40% to/from the south on Central Avenue NE
- 20% to/from the north on Central Avenue NE

**Exhibit 5-5** provides the distribution for the proposed site traffic.

The AM and PM peak hour trips were then assigned to the surrounding roadway network using the site distribution listed above and the previously mentioned trip generation. **Exhibit 5-6** provides the site trip assignment to the roadway network.

## BUILD TRAFFIC

**Exhibit 5-7** provides the total peak hour traffic volumes for Opening Year (2025) Build Conditions. This is a combination of the Opening Year (2025) No-Build traffic volumes and the site-generated traffic volumes for the proposed development.

**Exhibit 5-8** provides the total peak hour traffic volumes for Horizon Year (2040) Build Conditions. This is a combination of the Horizon Year (2040) No-Build traffic volumes and the site-generated traffic volumes for the proposed development.

## ANALYSIS RESULTS

Models of each scenario were developed using Synchro/SimTraffic, and the delay and vehicle queueing were evaluated for each volume condition.

The Existing Year (2022) Conditions were analyzed to provide an understanding of current operations and to calibrate the model. Opening Year (2025) No-Build Conditions and Horizon Year (2040) No-Build Conditions were analyzed to provide an understanding of any potential delay or queueing issues within the project area that are likely to occur without the development of the site. Lastly, the Opening Year (2025) Build Conditions

and Horizon Year (2040) Build Conditions were analyzed to identify any locations within the network that may be directly impacted by the development of the site and the new trips it is anticipated to generate.

## INTERSECTION CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service (LOS) at the five study intersections to determine the operational impacts of background traffic and site generated traffic during the weekday AM and PM peak hours. The capacity analysis was performed using Synchro/SimTraffic.

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 5-3**. The range of control delay for each rating (as detailed in the HCM) is also shown in Table 5-3. 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. For the purposes of this study, LOS A through LOS D are considered acceptable service levels. For side street stop-controlled intersections the highest individual movement delay was reported as overall intersection delay.

**Table 5-3: 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.

The 95<sup>th</sup> percentile queue results for each scenario were compared to the existing storage length for each intersection movement to determine if any spillback occurs. For this study, the storage length is considered to be the measured length of exclusive turn lanes or corresponds to the distance to the nearest upstream full-access public intersection or signalized intersection for through lanes or where exclusive turn lanes are not provided. The queuing results of short unstriped storage lanes that were added to the traffic model are not discussed in the capacity analysis because these lanes were only modeled to replicate real-world conditions. Any potential queue spillback from them does not necessarily indicate an operations issue.

Existing geometric conditions were used for all intersections and existing signal timings, provided by the City of Minneapolis, were used at the signalized study intersection. In 2024-2025 the City of Minneapolis will retime all signals citywide. The new timings will utilize a similar framework to today's timings and it is expected that the major findings of the reported analyses below will remain accurate with the new signal timings.

### Existing Year (2022) Conditions

The SimTraffic intersection delay results for Existing Year (2022) Conditions are shown in **Table 5-4 & 5-5** for the AM and PM peak hours, respectively. The SimTraffic reports, which include the 95<sup>th</sup> percentile queuing results, are provided in **Appendix D**. This analysis assumed the existing geometry and signal timings at all study intersections.

**Table 5-4: Existing Year (2022) AM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	33.9	C	32.6	C	12.5	B	9.4	A
		WB	32.1	C	25.1	C	8.3	A		
		NB	12.2	B	8.4	A	1.7	A		
		SB	10.1	B	7.5	A	2.5	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	8.0	A
		WB	8.0	A	-	-	4.6	A		
		NB	-	-	0.2	A	0.3	A		
		SB	4.8	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	5.2	A	5.0	A	4.0	A
		WB	-	-	5.0	A	-	-		
		NB	5.4	A	0.1	A	5.6	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	5.5	A	5.5	A	5.4	A	5.7	A
		WB	-	-	4.2	A	-	-		
		NB	5.7	A	5.5	A	5.7	A		
		SB	-	-	2.8	A	5.4	A		

**Table 5-5: Existing Year (2022) PM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	31.0	C	32.0	C	12.1	B	10.3	B
		WB	29.1	C	24.1	C	8.6	A		
		NB	12.0	B	8.1	A	3.5	A		
		SB	16.1	B	9.2	A	3.1	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	12.3	B
		WB	12.3	B	0.4	A	5.2	A		
		NB	-	-	0.4	A	0.4	A		
		SB	4.4	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	0.1	A	0.1	A	1.2	A
		WB	1.1	A	0.0	A	-	-		
		NB	4.1	A	-	-	2.9	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	4.4	A	4.6	A	2.8	A	4.6	A
		WB	3.5	A	3.9	A	2.7	A		
		NB	1.2	A	0.2	A	0.1	A		
		SB	1.4	A	0.1	A	0.0	A		

All study intersections are anticipated to operate at LOS B or better in both AM & PM peak hours. Additionally, all individual movements are anticipated to operate at LOS C or better in the AM & PM peak hours.

95<sup>th</sup> percentile queues were compared to provided storage bays and distances to upstream intersections to determine queueing issues. All 95<sup>th</sup> percentile queues are accommodated within their respective storage bay or link length.

### Opening Year (2025) No-Build Conditions

The SimTraffic intersection delay results for Opening Year (2025) No-Build Conditions are shown in **Table 5-6 & 5-7** for the AM and PM peak hours, respectively. The SimTraffic reports, which include the 95<sup>th</sup> percentile queueing results, are provided in **Appendix D**. This analysis assumed the existing geometry and signal timings at all study intersections.

**Table 5-6: Opening Year (2025) No-Build AM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	33.0	C	32.0	C	11.6	B	9.2	A
		WB	27.5	C	26.8	C	4.9	A		
		NB	12.3	B	8.0	A	2.1	A		
		SB	10.1	B	7.5	A	2.7	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	8.7	A
		WB	8.7	A	-	-	3.3	A		
		NB	-	-	0.3	A	0.3	A		
		SB	4.7	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	5.1	A	4.9	A	3.9	A
		WB	-	-	4.4	A	-	-		
		NB	5.6	A	0.1	A	5.9	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	5.6	A	5.6	A	5.3	A	5.6	A
		WB	-	-	4.6	A	-	-		
		NB	2.9	A	0.2	A	0.4	A		
		SB	-	-	0.0	A	0.0	A		

**Table 5-7: Opening Year (2025) No-Build PM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	29.1	C	36.5	D	10.8	B	10.2	B
		WB	30.7	C	23.4	C	10.4	B		
		NB	12.8	B	7.4	A	2.7	A		
		SB	15.4	B	9.9	A	3.5	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	10.9	B
		WB	10.9	B	2.3	A	4.9	A		
		NB	-	-	0.4	A	0.4	A		
		SB	5.0	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	0.1	A	0.1	A	1.1	A
		WB	1.3	A	0.0	A	-	-		
		NB	4.0	A	-	-	2.6	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	3.9	A	4.6	A	3.0	A	4.6	A
		WB	3.7	A	4.0	A	2.4	A		
		NB	1.1	A	0.1	A	0.1	A		
		SB	1.2	A	0.1	A	0.0	A		

All study intersections are anticipated to operate at LOS B or better in both AM & PM peak hours. Additionally, all individual movements are anticipated to operate at LOS D or better in the AM & PM peak hours. Comparing results to Existing Year (2022) Conditions the results are similar, with no change in intersection LOS in the AM or PM peak hours.

95<sup>th</sup> percentile queues were compared to provided storage bays and distances to upstream intersections to determine queueing issues. All 95<sup>th</sup> percentile queues are accommodated within their respective storage bay or link length. This is consistent with Existing Year (2022) results.



## Opening Year (2025) Build Conditions

The SimTraffic intersection delay results for Opening Year (2025) Build Conditions are shown in **Table 5-8 & 5-9** for the AM and PM peak hours, respectively. The SimTraffic reports, which include the 95<sup>th</sup> percentile queuing results, are provided in **Appendix D**. This analysis assumed the existing geometry and signal timings at all study intersections.

**Table 5-8: Opening Year (2025) Build AM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	28.1	C	36.4	D	6.4	A	8.8	A
		WB	35.3	D	36.1	D	7.5	A		
		NB	13.1	B	8.0	A	2.7	A		
		SB	11.1	B	7.6	A	2.7	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	8.9	A
		WB	8.9	A	-	-	4.4	A		
		NB	-	-	0.3	A	0.4	A		
		SB	4.3	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	2.4	A	5.0	A	3.9	A
		WB	-	-	5.1	A	-	-		
		NB	6.0	A	0.2	A	5.9	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	6.5	A	7.1	A	5.8	A	7.1	A
		WB	-	-	5.6	A	-	-		
		NB	3.2	A	0.3	A	0.1	A		
		SB	-	-	0.3	A	0.3	A		
Tyler Street NE & Site Access	Side Street Stop	EB	5.0	A	-	-	3.4	A	5.0	A
		WB	-	-	-	-	-	-		
		NB	2.5	A	1.1	A	-	-		
		SB	-	-	2.3	A	2.1	A		

**Table 5-9: Opening Year (2025) Build PM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	30.8	C	35.0	C	9.0	A	11.0	B
		WB	29.5	C	26.8	C	11.0	B		
		NB	13.7	B	8.6	A	4.5	A		
		SB	16.5	B	10.6	B	3.5	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	16.2	C
		WB	16.2	C	-	-	9.5	A		
		NB	-	-	0.5	A	0.7	A		
		SB	6.2	A	1.5	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	0.1	A	0.1	A	1.2	A
		WB	1.5	A	0.1	A	-	-		
		NB	4.3	A	-	-	3.1	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	5.5	A	5.9	A	3.8	A	6.4	A
		WB	5.3	A	6.4	A	3.6	A		
		NB	2.0	A	0.3	A	0.2	A		
		SB	2.4	A	0.9	A	0.9	A		
Tyler Street NE & Site Access	Side Street Stop	EB	5.8	A	-	-	4.2	A	5.8	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	0.5	A	-	-		
		SB	-	-	0.1	A	0.1	A		

All study intersections are anticipated to operate at LOS C or better in both AM & PM peak hours. Additionally, all individual movements are anticipated to operate at LOS D or better in the AM & PM peak hours. Comparing results to Opening Year (2025) No-Build Conditions, the results are similar with no notable changes in LOS.

95<sup>th</sup> percentile queues were compared to provided storage bays and distances to upstream intersections to determine queueing issues. All 95<sup>th</sup> percentile queues are accommodated within their respective storage bay or link length. Queueing results are similar to Opening Year (2025) No-Build results.

**Horizon Year (2040) No-Build Conditions**

The SimTraffic intersection delay results for Horizon Year (2040) No-Build Conditions are shown in **Table 5-10 & 5-11** for the AM and PM peak hours, respectively. The SimTraffic reports, which include the 95<sup>th</sup> percentile queueing results, are provided in **Appendix D**. This analysis assumed the existing geometry and signal timings at all study intersections.

**Table 5-10: Horizon Year (2040) No-Build AM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	36.0	D	22.8	C	9.0	A	9.4	A
		WB	29.3	C	26.2	C	5.1	A		
		NB	14.7	B	8.0	A	3.1	A		
		SB	10.1	B	7.9	A	3.0	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	10.5	B
		WB	10.5	B	-	-	3.6	A		
		NB	-	-	0.2	A	0.2	A		
		SB	4.8	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	4.9	A	4.9	A	3.8	A
		WB	-	-	4.9	A	-	-		
		NB	5.9	A	0.0	A	5.6	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	5.5	A	5.3	A	5.3	A	5.5	A
		WB	-	-	5.2	A	-	-		
		NB	2.9	A	0.2	A	0.3	A		
		SB	-	-	0.0	A	0.0	A		

**Table 5-11: Horizon Year (2040) No-Build PM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	26.7	C	33.8	C	9.5	A	10.1	B
		WB	31.9	C	28.8	C	11.2	B		
		NB	12.5	B	7.9	A	3.3	A		
		SB	14.6	B	9.6	A	3.2	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	13.0	B
		WB	13.0	B	2.3	A	6.3	A		
		NB	-	-	0.4	A	0.5	A		
		SB	5.3	A	1.3	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	0.1	A	0.0	A	1.3	A
		WB	1.4	A	0.0	A	-	-		
		NB	4.1	A	-	-	2.9	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	4.5	A	5.3	A	2.9	A	5.3	A
		WB	3.9	A	3.9	A	2.7	A		
		NB	1.2	A	0.2	A	0.1	A		
		SB	1.2	A	0.1	A	0.1	A		

All study intersections are anticipated to operate at LOS B or better in both AM & PM peak hours. Additionally, all individual movements are anticipated to operate at LOS D or better in the AM & PM peak hours.

95<sup>th</sup> percentile queues were compared to provided storage bays and distances to upstream intersections to determine queueing issues. All 95<sup>th</sup> percentile queues are accommodated within their respective storage bay or link length. All queueing results are similar to Opening Year (2025) No-Build results.

## Horizon Year (2040) Build Conditions

The SimTraffic intersection delay results for Horizon Year (2040) Build Conditions are shown in **Table 5-12 & 5-13** for the AM and PM peak hours, respectively. The SimTraffic reports, which include the 95<sup>th</sup> percentile queuing results, are provided in **Appendix D**. This analysis assumed the existing geometry and signal timings at all study intersections.

**Table 5-12: Horizon Year (2040) Build AM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	28.7	C	32.6	C	7.8	A	9.0	A
		WB	32.5	C	44.0	D	6.9	A		
		NB	13.1	B	8.0	A	2.8	A		
		SB	10.2	B	8.0	A	2.2	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	9.6	A
		WB	9.6	A	-	-	4.7	A		
		NB	-	-	0.3	A	0.4	A		
		SB	4.5	A	1.2	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	2.4	A	5.0	A	3.8	A
		WB	-	-	4.4	A	-	-		
		NB	6.0	A	0.3	A	5.8	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	6.6	A	6.5	A	5.7	A	6.6	A
		WB	-	-	5.0	A	-	-		
		NB	3.1	A	0.3	A	0.3	A		
		SB	-	-	0.3	A	0.3	A		
Tyler Street NE & Site Access	Side Street Stop	EB	5.1	A	-	-	3.3	A	5.1	A
		WB	-	-	-	-	-	-		
		NB	2.5	A	1.1	A	-	-		
		SB	-	-	2.3	A	2.1	A		

**Table 5-13: Horizon Year (2040) Build PM Peak Hour Level of Service Results**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Central Avenue NE & 14th Avenue NE	Signal	EB	29.6	C	28.9	C	11.5	B	11.2	B
		WB	32.8	C	41.1	D	13.3	B		
		NB	13.5	B	8.6	A	4.5	A		
		SB	15.7	B	10.7	B	3.4	A		
Central Avenue NE & 13th Avenue NE	Side Street Stop	EB	-	-	-	-	-	-	17.7	C
		WB	17.7	C	-	-	8.4	A		
		NB	-	-	0.5	A	0.7	A		
		SB	7.6	A	1.5	A	-	-		
Tyler Street NE & 14th Avenue NE	All way Stop	EB	-	-	0.1	A	0.1	A	1.3	A
		WB	1.4	A	0.0	A	-	-		
		NB	4.0	A	-	-	3.1	A		
		SB	-	-	-	-	-	-		
Tyler Street NE & 13th Avenue NE	Side Street Stop	EB	6.0	A	7.0	A	3.8	A	7.0	A
		WB	5.2	A	6.3	A	3.5	A		
		NB	1.6	A	0.3	A	0.1	A		
		SB	2.5	A	0.9	A	0.9	A		
Tyler Street NE & Site Access	Side Street Stop	EB	5.9	A	-	-	4.1	A	5.9	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	0.5	A	-	-		
		SB	-	-	0.1	A	0.1	A		

All study intersections are anticipated to operate at LOS C or better in both AM & PM peak hours. Additionally, all individual movements are anticipated to operate at LOS D or better in the AM & PM peak hours. Comparing results to Horizon Year (2040) No-Build Conditions, the results are very similar with no notable changes in LOS.

95<sup>th</sup> percentile queues were compared to provided storage bays and distances to upstream intersections to determine queueing issues. All 95<sup>th</sup> percentile queues are accommodated within their respective storage bay or link length. All queueing results are similar to Horizon Year (2040) No-Build results.

## CAPACITY ANALYSIS SUMMARY

A capacity analysis was completed for the study intersections for five scenarios:

- Existing Year (2022) Conditions
- Opening Year (2025) No-Build Conditions
- Opening Year (2025) Build Conditions
- Horizon Year (2040) No-Build Conditions
- Horizon Year (2040) Build Conditions

In all five analysis conditions, all study intersections are anticipated to operate at LOS C or better with no queueing issues. Additionally, the site access is anticipated to operate at LOS A in all build scenarios.

The addition of site traffic is not expected to have significant impacts to operations in the study network. There are no geometric mitigation recommendations as a result of the development.

## 6.0 TRAVEL DEMAND MANAGEMENT STRATEGIES

The purpose of this TDMP is to assist the City of Minneapolis to achieve their overall transportation goals as they relate specifically to the Youngblood development.

This section outlines specific travel demand management strategies to be implemented by the developer. The strategies detail the duties of the developer in addressing the transportation issues cited in this document. Minneapolis city ordinance requires that the proposed development project be accompanied by a major TDMP and must employ Travel Demand Strategies equaling 6 or more points. This Travel Demand Management Plan meets the requirements for a major TDMP under City of Minneapolis ordinance. The following section details the travel demand strategies, and associated point values, that will be implemented by the development in order to meet the required 6 points.

The property owner, by accepting the responsibility of implementing the items below for the proposed development, desires to help the City of Minneapolis achieve their goal of enhancing the local transportation system by lowering peak hour demand and helping to achieve a balance in the needs of all transportation system users. This TDMP contains an acknowledgement that the strategies must be maintained by the property owner/manager throughout the life of the project and the building owner/manager must provide self-reported audits every two (2) years to the planning director and city engineer that confirms ongoing compliance with required strategies until it is deemed that the development is sufficiently meeting city transportation goals.

### STRATEGY COMMITMENTS

The developer specifically commits to the implementation of the following measures for the project:

- **Pedestrian realm improvements (3 Points):** Improvements shall be implemented in the public right-of-way to support pedestrian activity. The sidewalk adjacent to the development will be improved by adding green buffer space between the sidewalk and Central Avenue NE. Sidewalk facilities will be added to Tyler Street NE to fill in the gap in the pedestrian network. All sidewalk facilities will be 6 feet wide and street trees will be added in an enhanced planting bed buffer zone on Central Avenue NE, Tyler Street NE, 14<sup>th</sup> Avenue NE, and 13<sup>th</sup> Avenue NE. The site layout creates a pedestrian plaza and an east-west pedestrian connection between Central Avenue NE and Tyler Street NE. Sidewalks will be paved with materials that meet or exceed standards for sidewalk finishes.
- **Unbundling and pricing of parking (1 Point):** The property owner/manager commits to charge a fee for residential parking separate from the lease of a dwelling unit.

The development team is working through additional TDMP measures to obtain the remaining two points necessary for development. Once the measures are determined this document will be amended to reflect the total of 6 points required for the development.

## 7.0 APPENDIX

- A. Exhibits
- B. Site Plan
- C. Raw Traffic Count Data
- D. SimTraffic Reports

# Appendix A: Exhibits

Exhibit 1-1: Project Site Location and Study Area

Exhibit 3-1: Bicycle Infrastructure

Exhibit 3-2: Transit Infrastructure

Exhibit 5-1: Existing Geometry and Intersection Control

Exhibit 5-2: Existing Year (2022) Peak Hour Traffic Volumes

Exhibit 5-3: Opening Year (2025) No-Build Peak Hour Traffic Projections

Exhibit 5-4: Horizon Year (2040) No-Build Peak Hour Traffic Projections

Exhibit 5-5: Site Trip Distribution

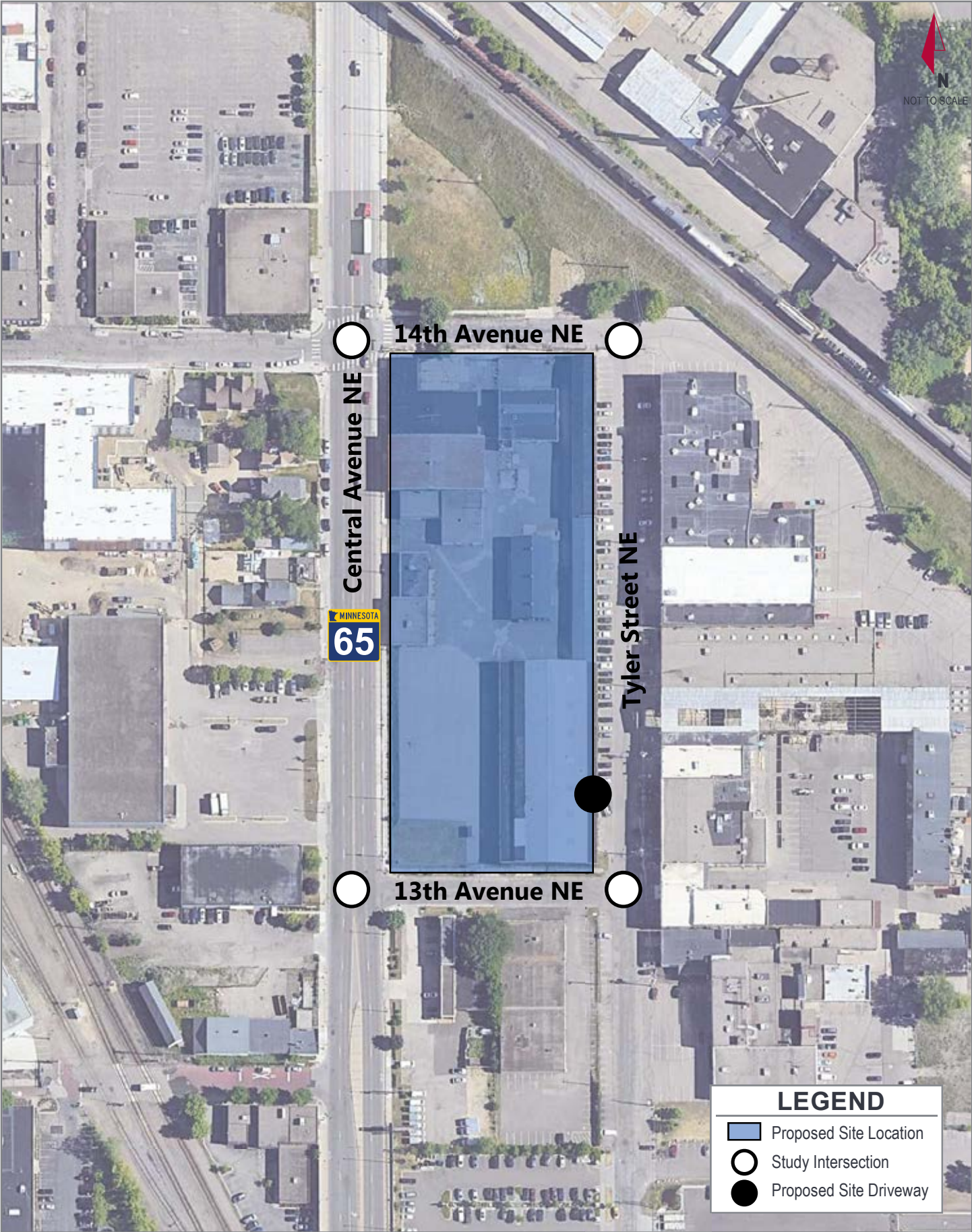
Exhibit 5-6: Site Trip Assignment

Exhibit 5-7: Opening Year (2025) Build Peak Hour Traffic Projections

Exhibit 5-8: Horizon Year (2040) Build Peak Hour Traffic Projections

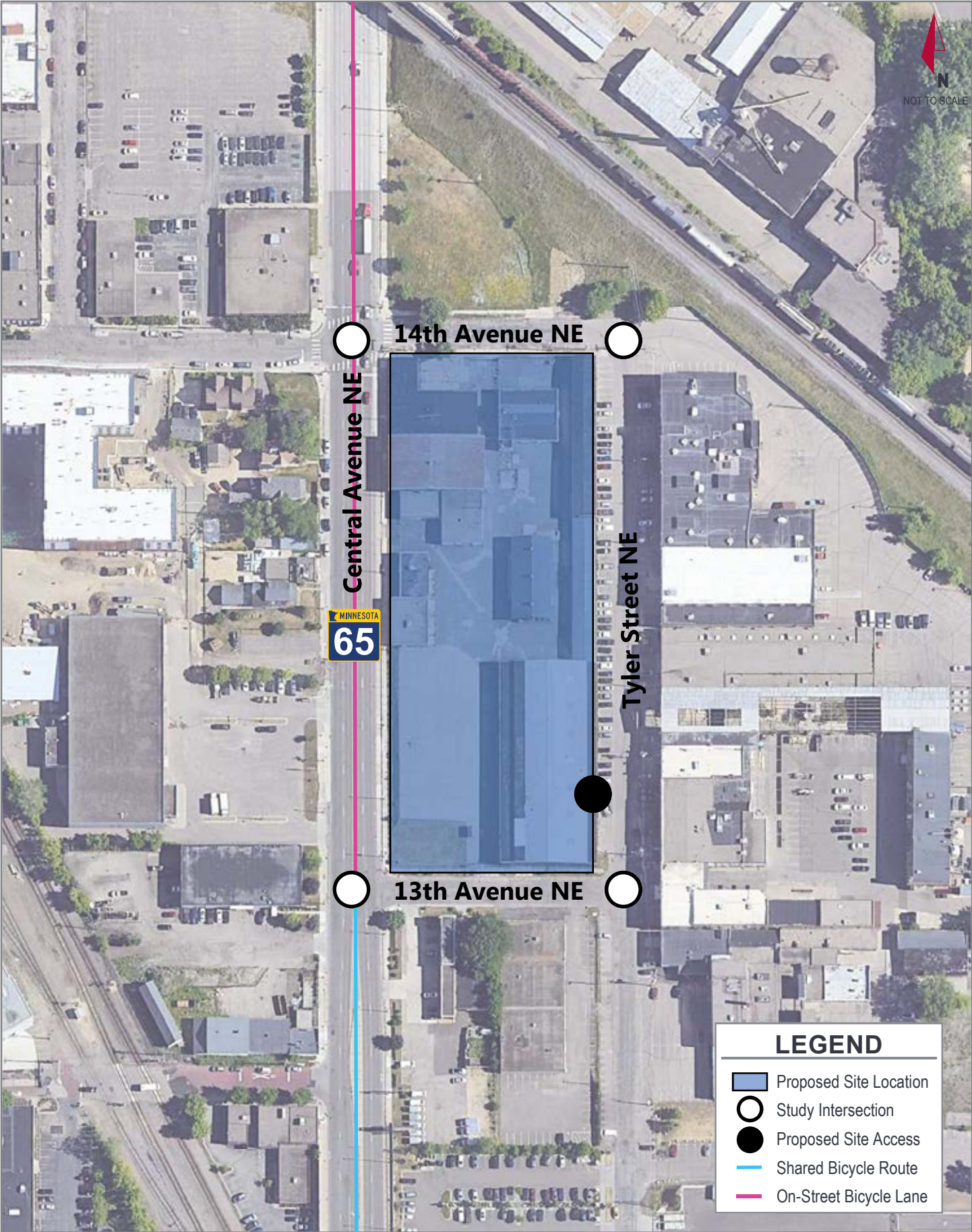






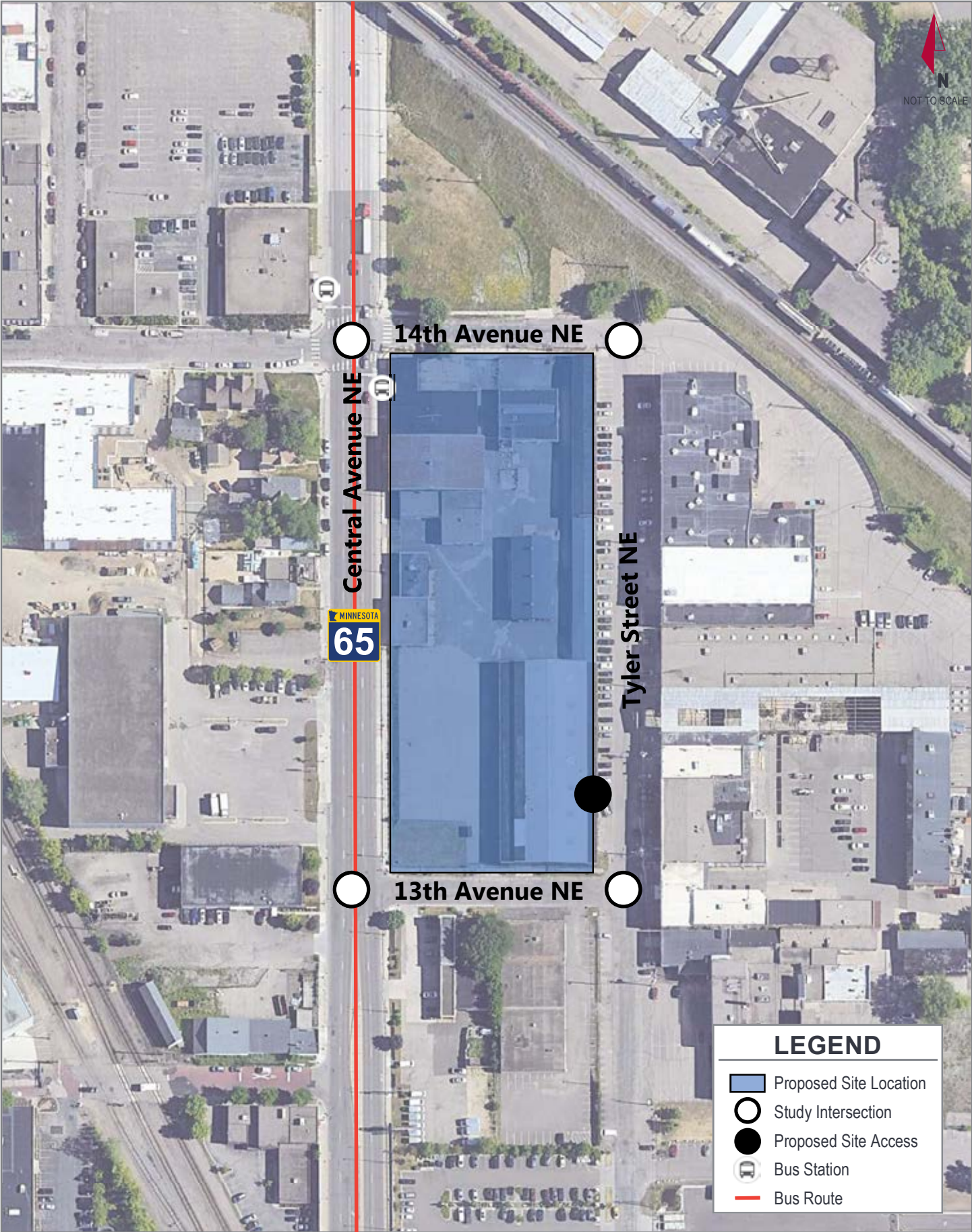
**LEGEND**

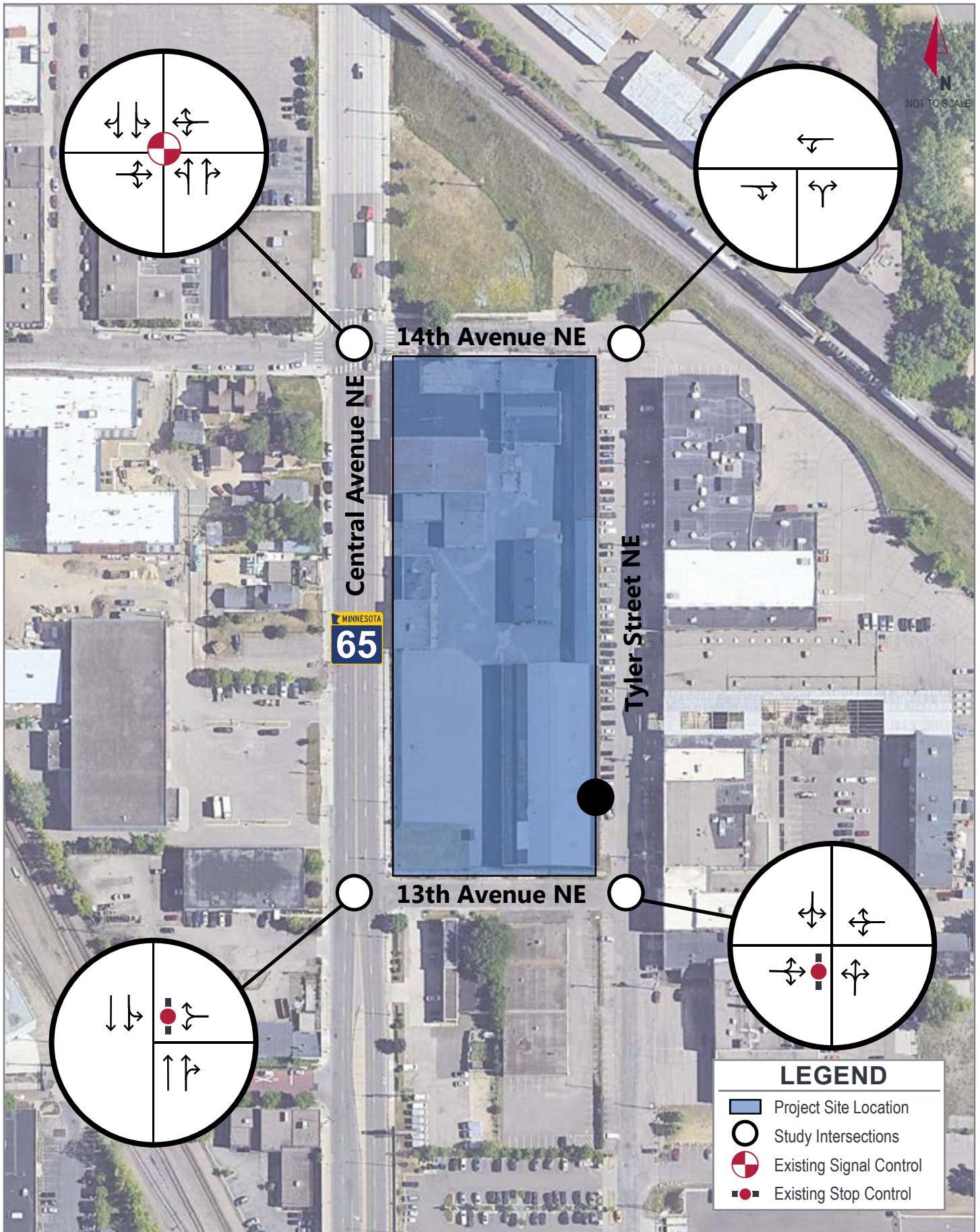
- Proposed Site Location
- Study Intersection
- Proposed Site Driveway

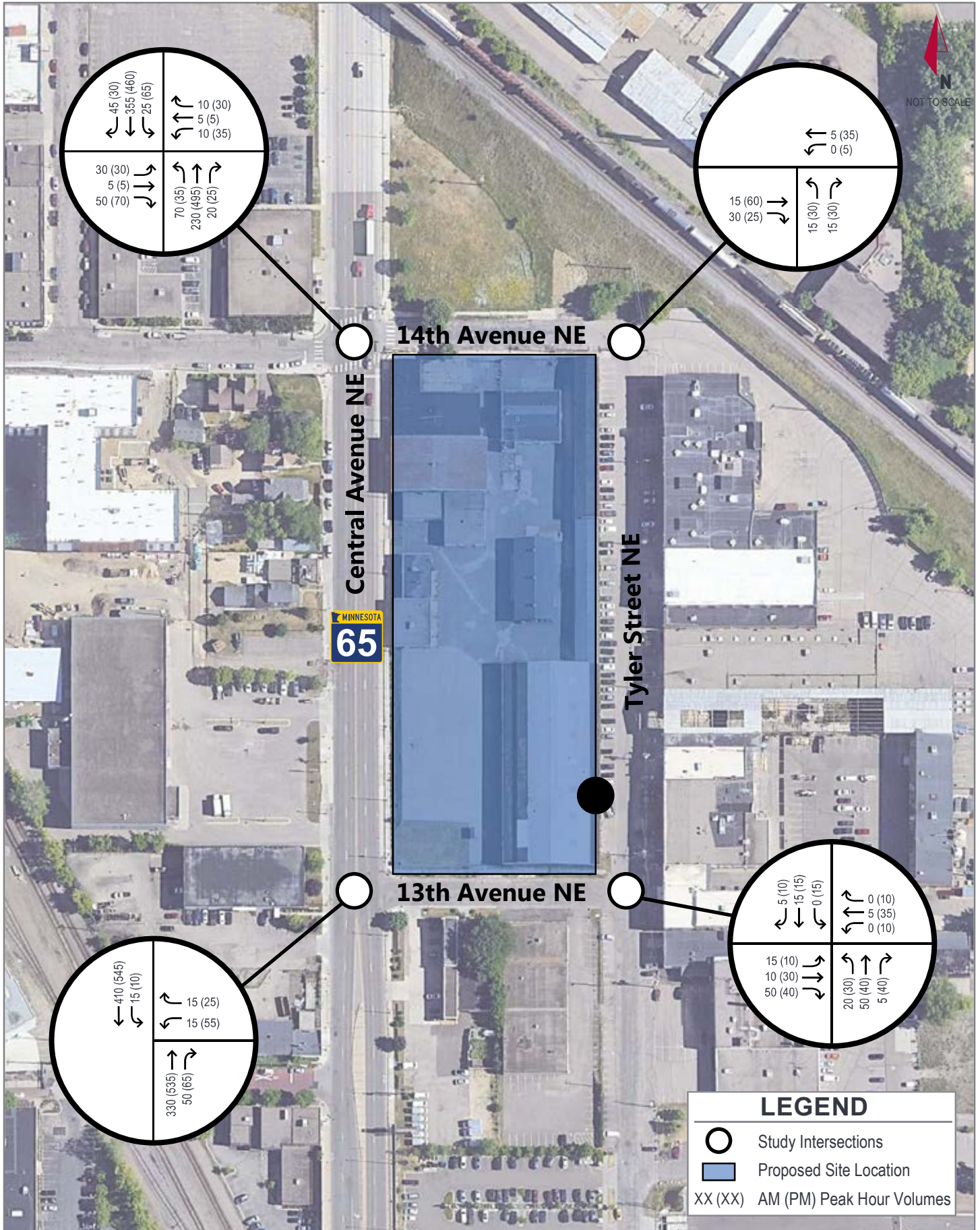


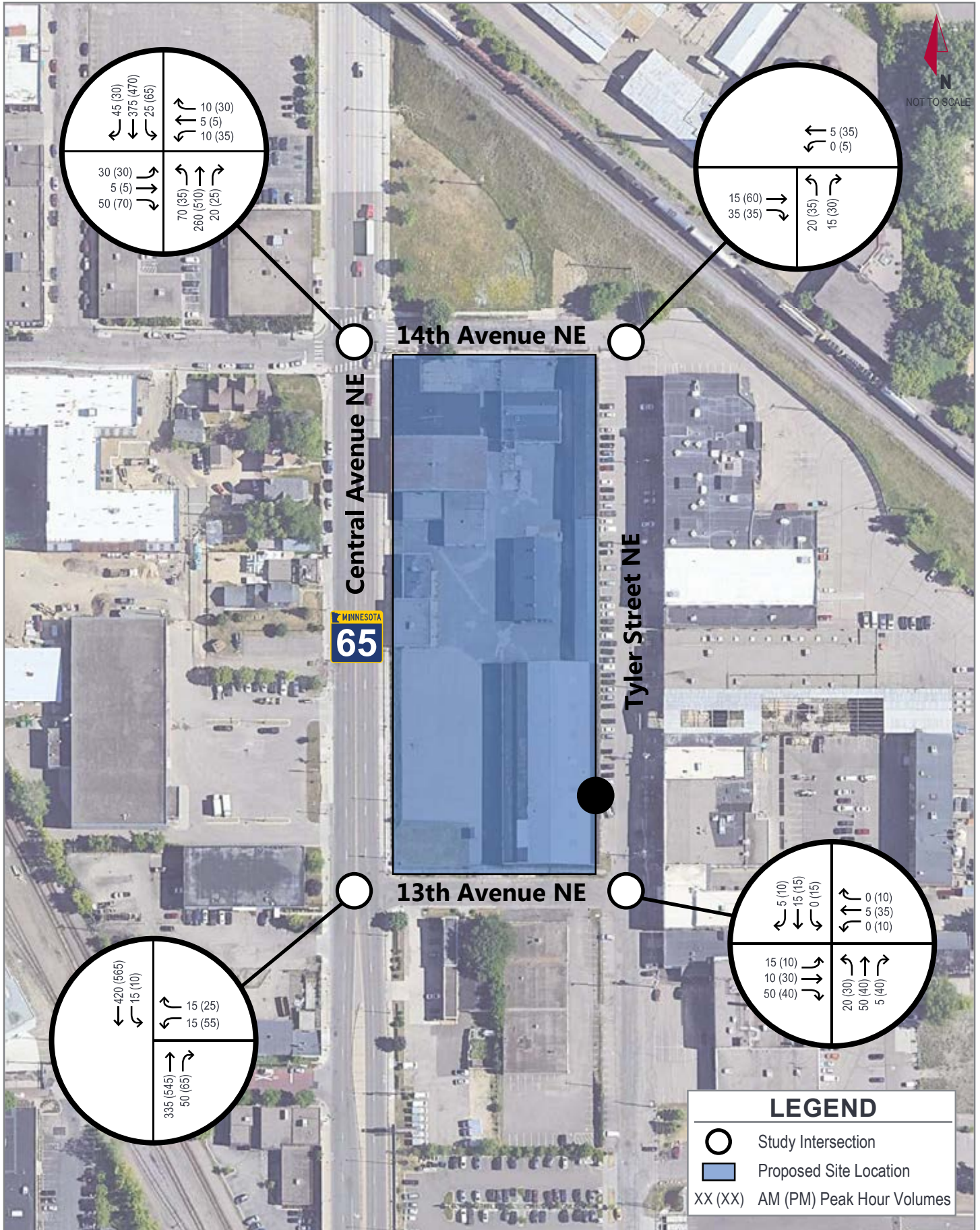
**LEGEND**

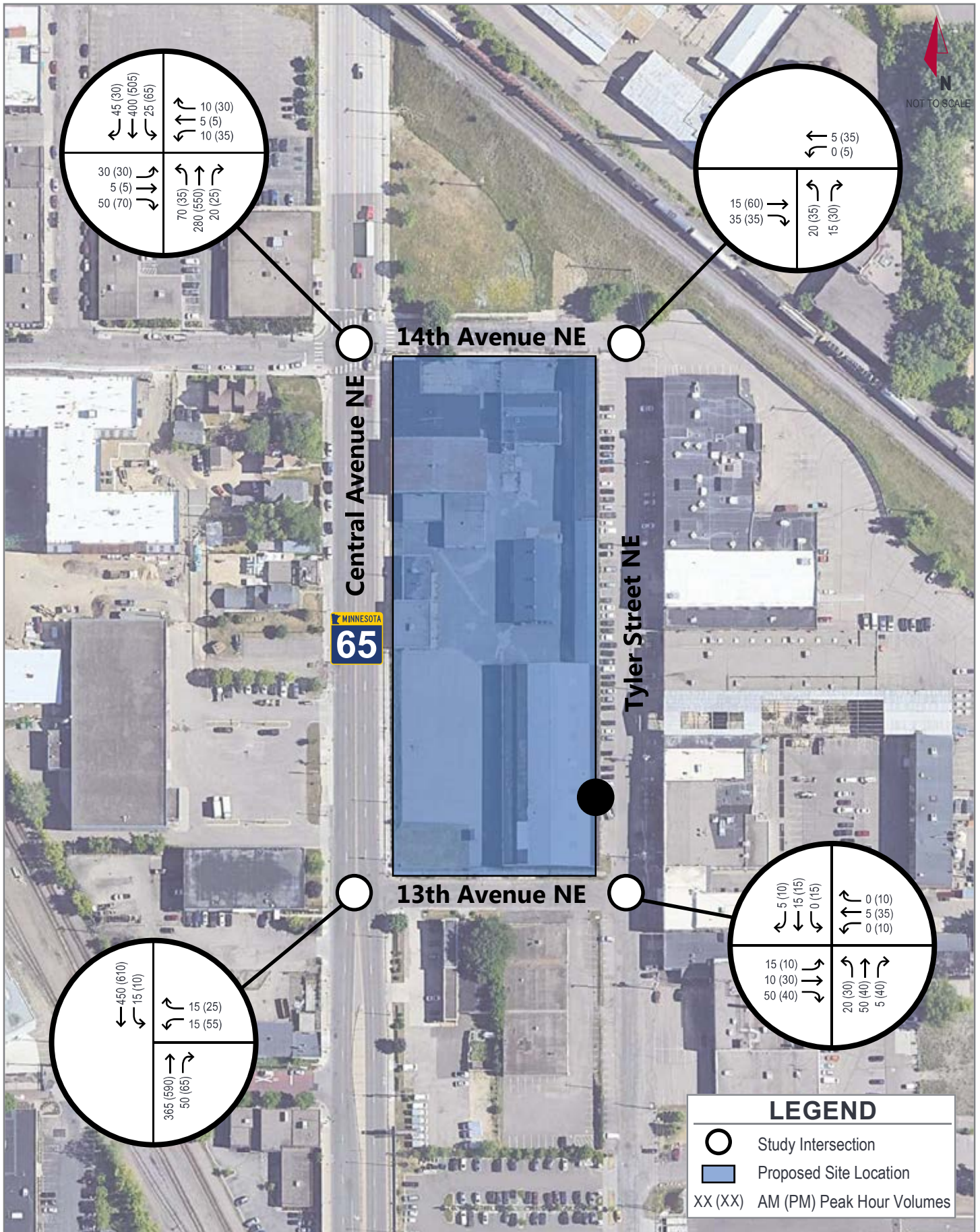
- Proposed Site Location
- Study Intersection
- Proposed Site Access
- Shared Bicycle Route
- On-Street Bicycle Lane

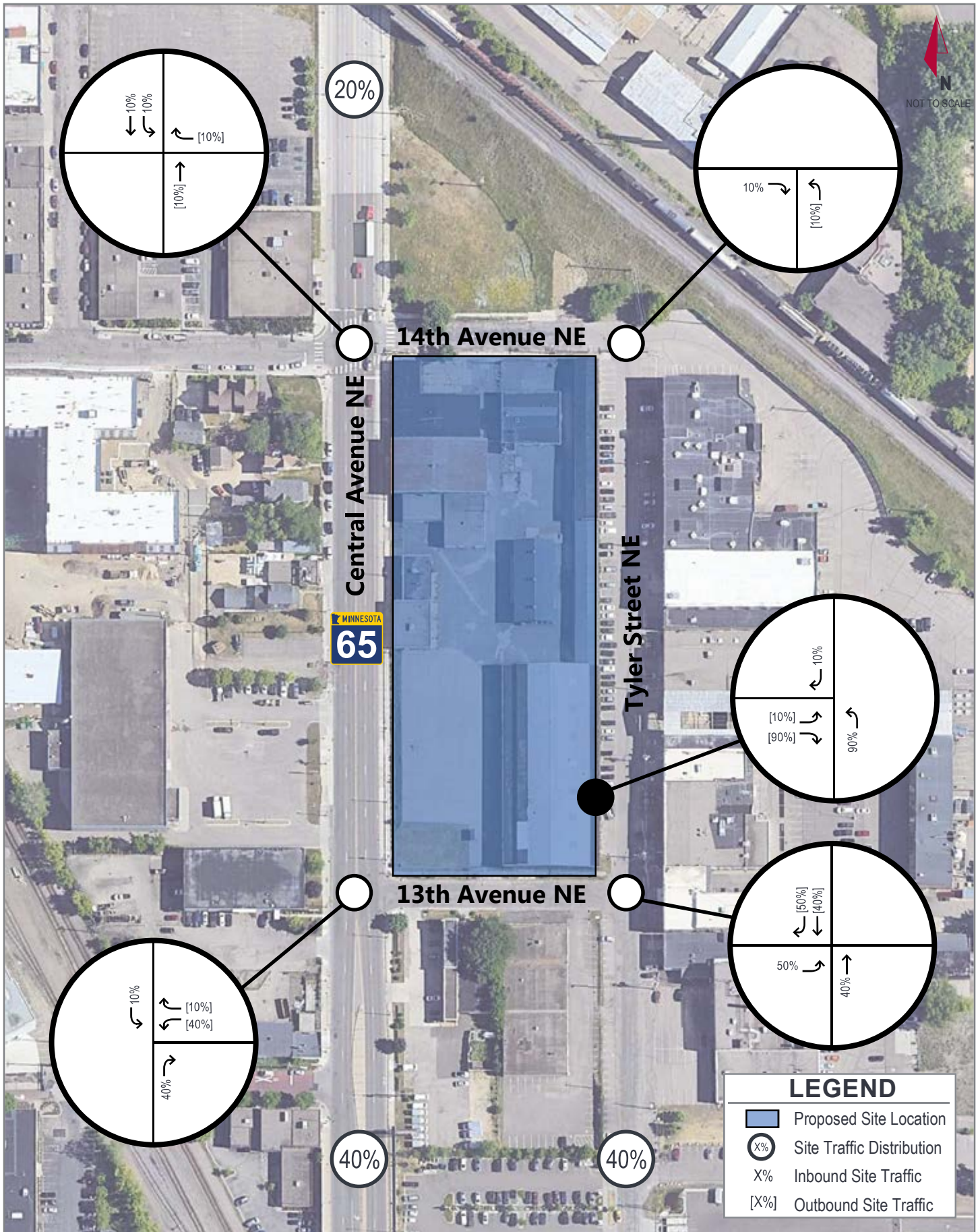




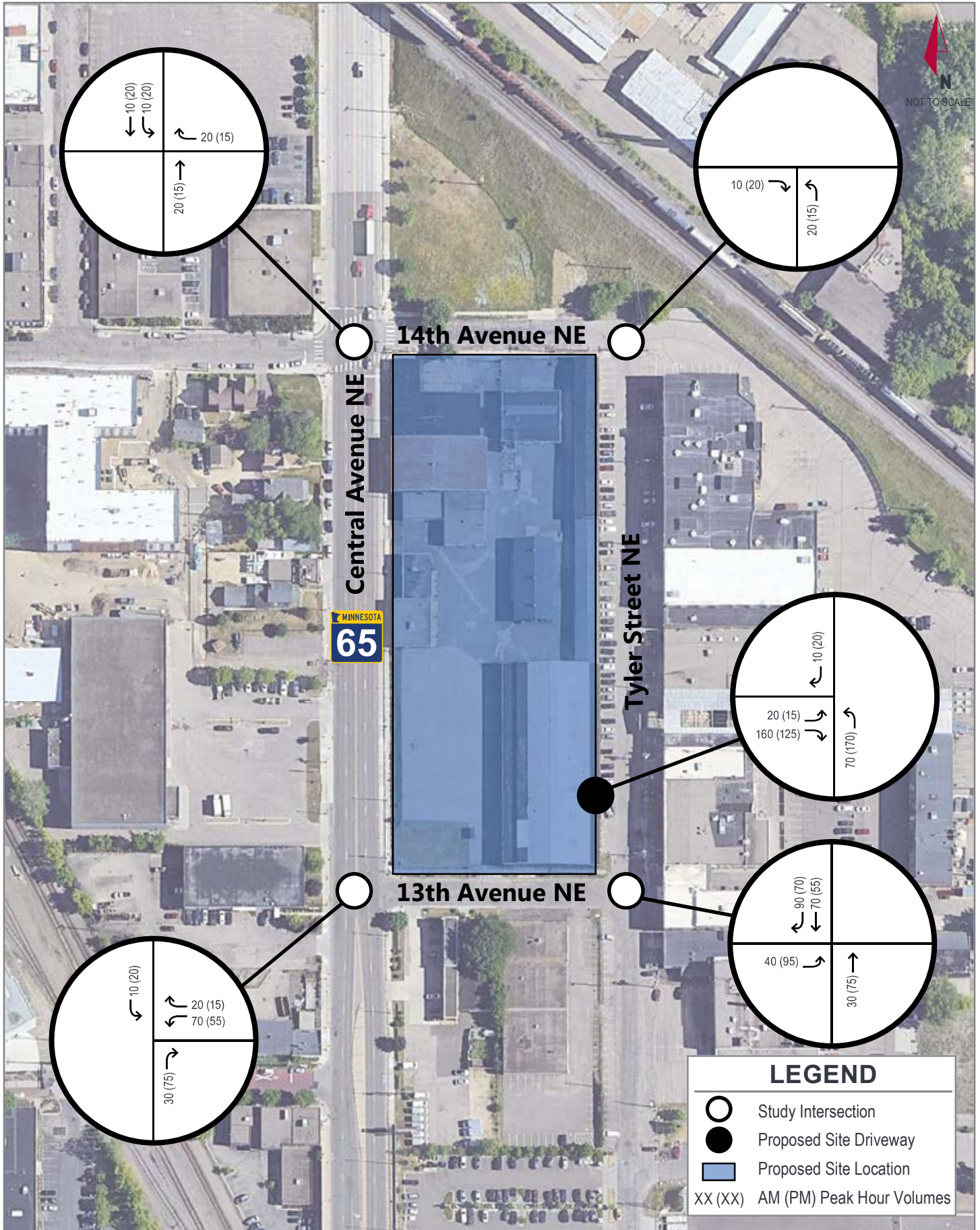


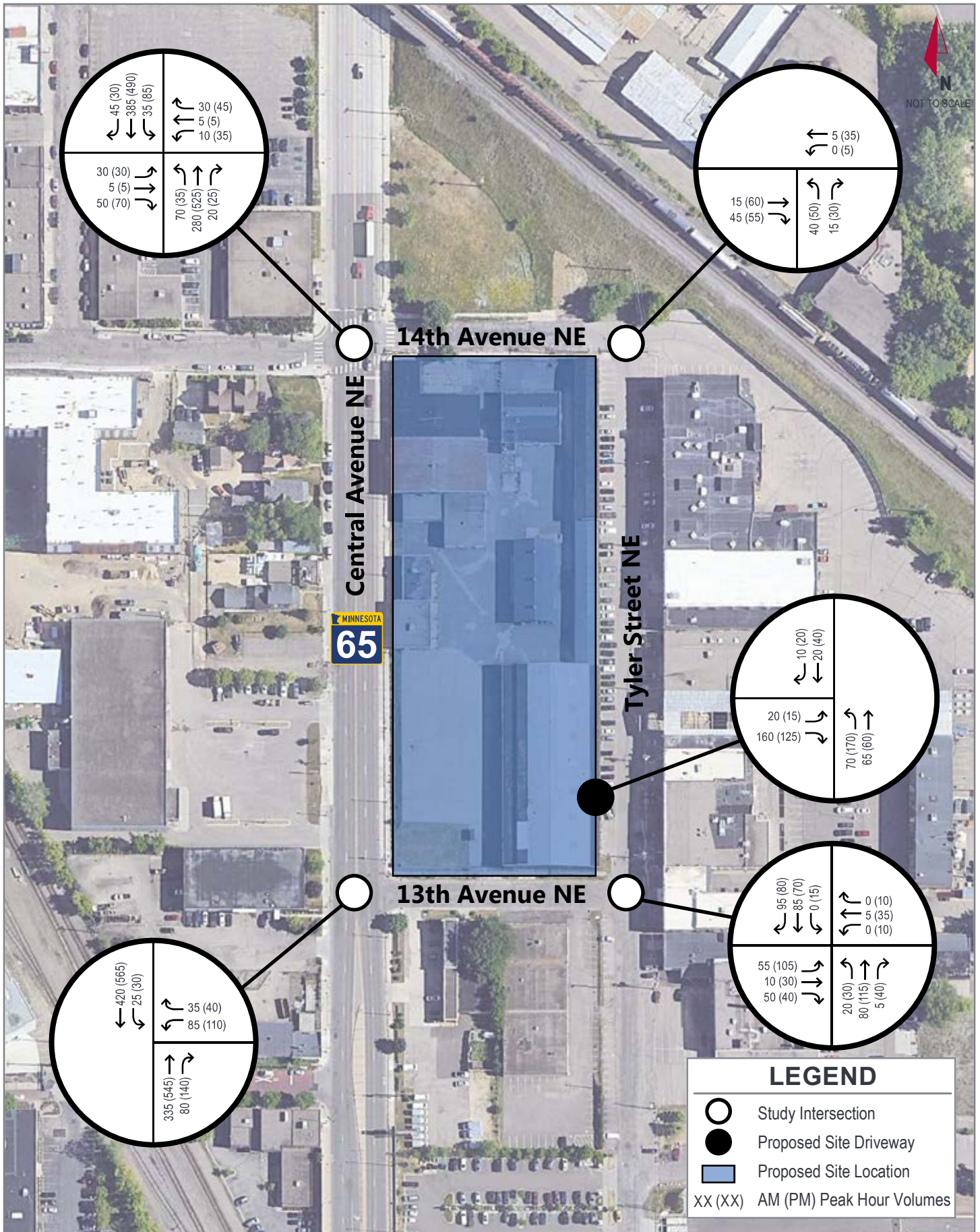


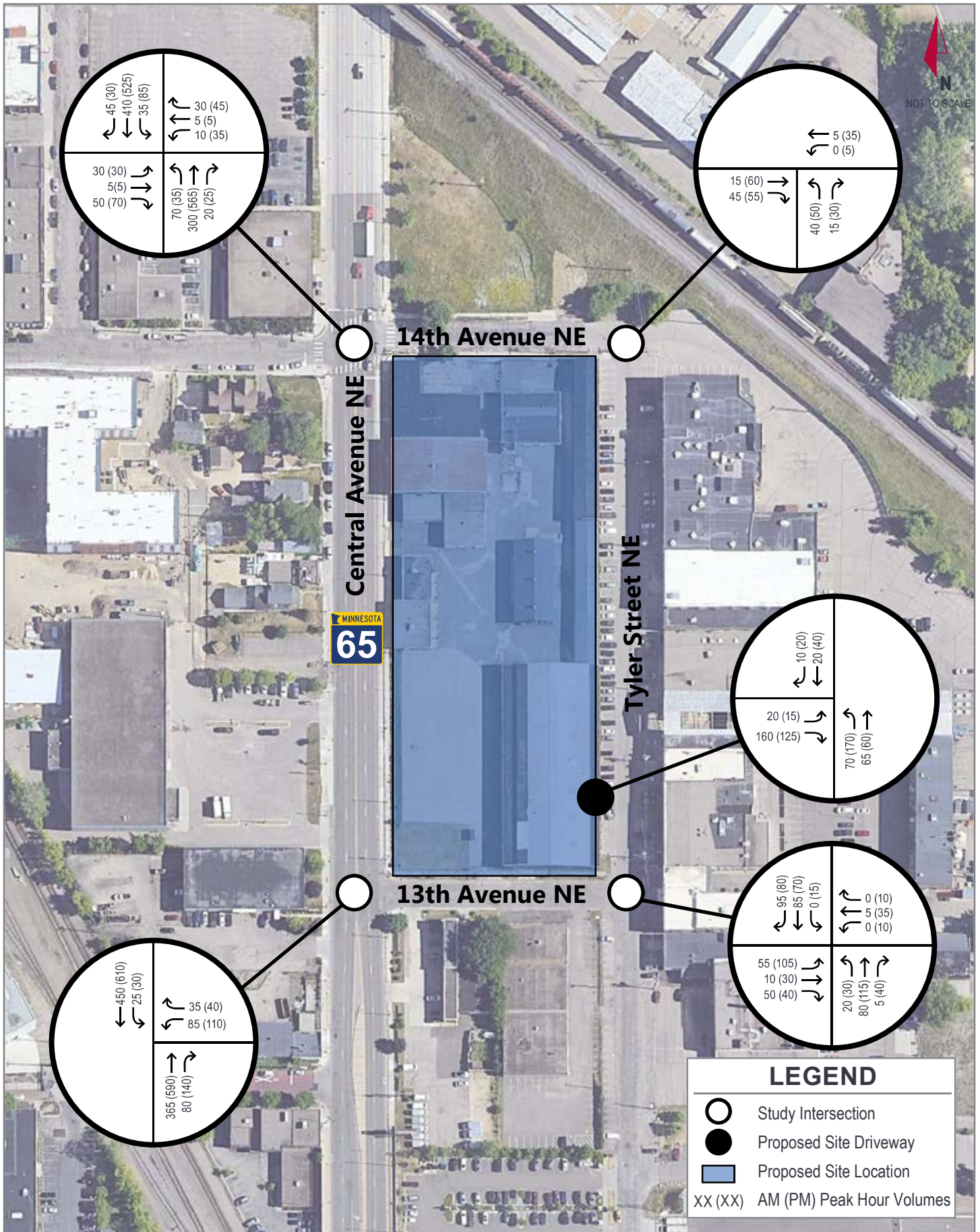










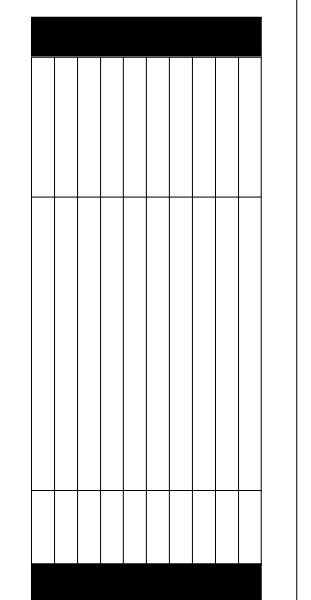


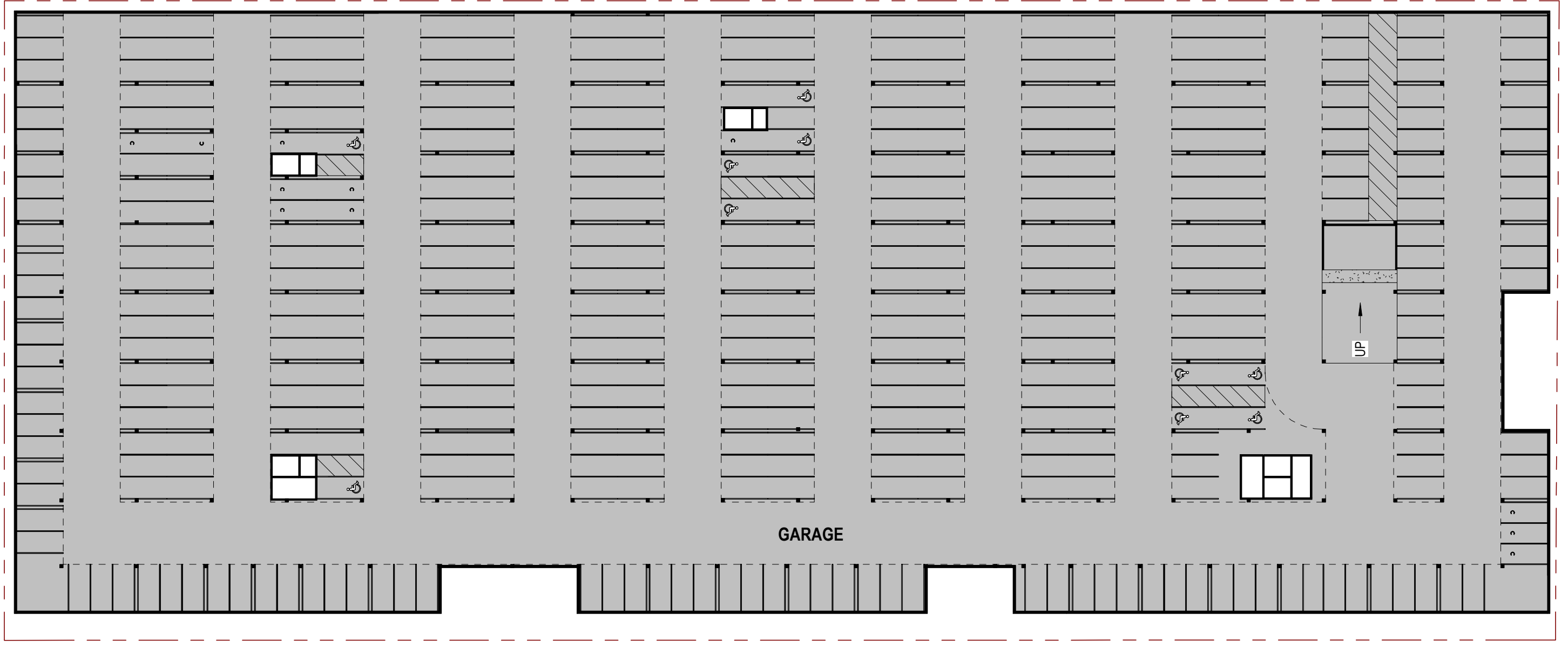
# Appendix B: Site Plan



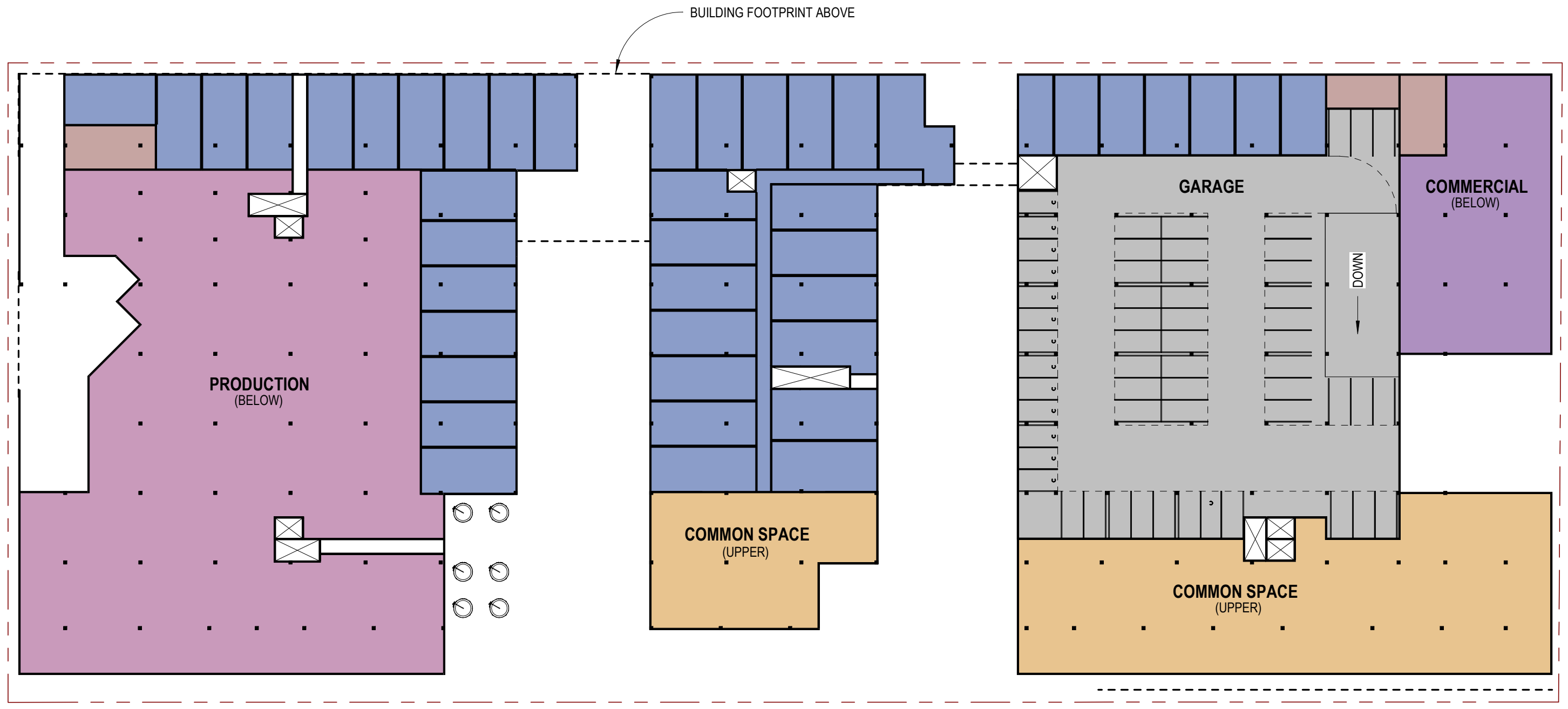


**SITE PLAN/ FIRST FLOOR**  
1" = 30'-0"

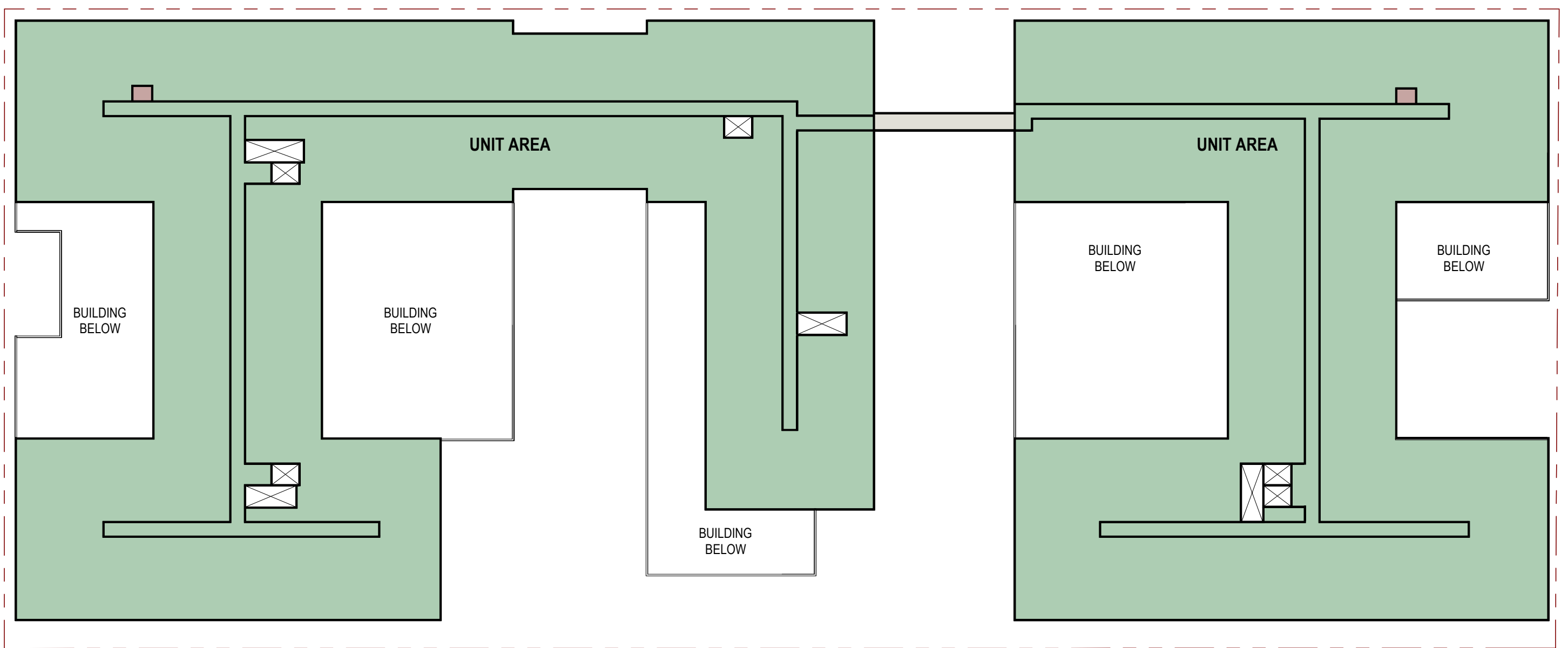




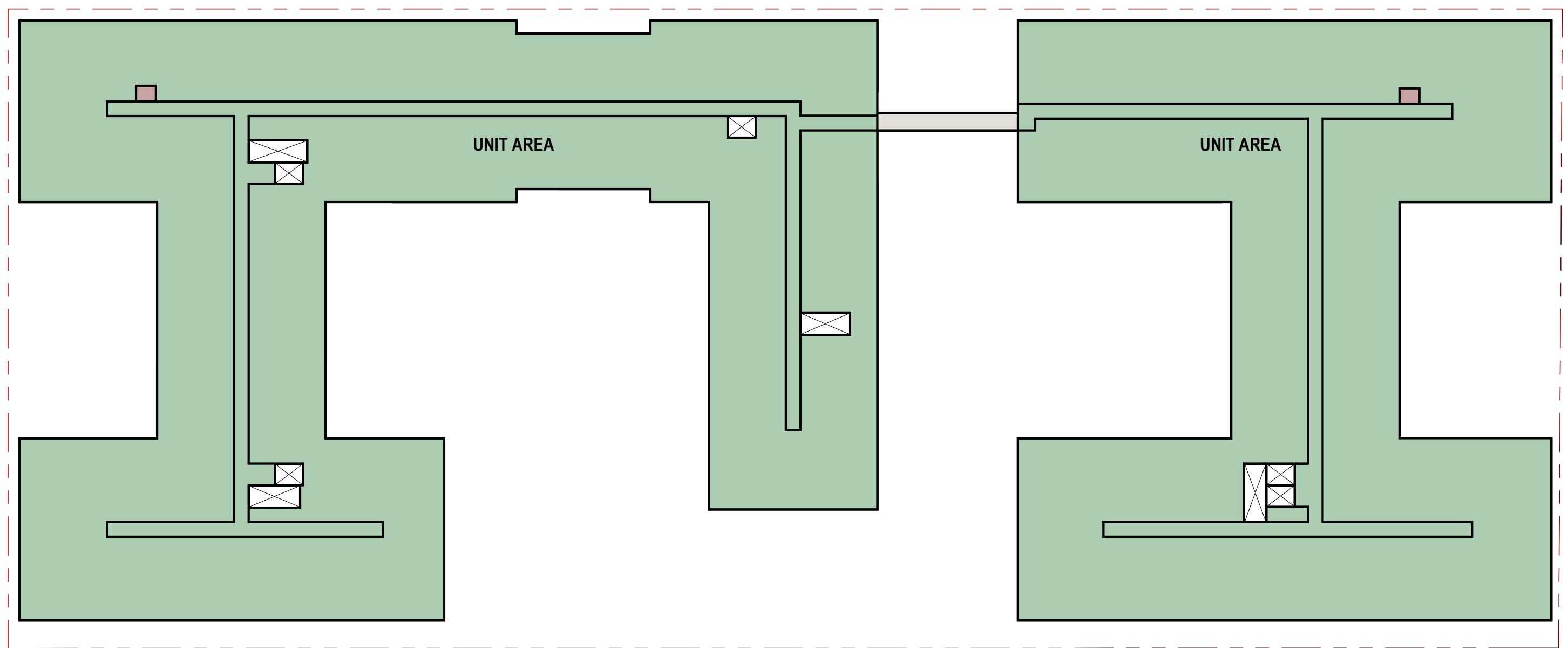
**LOWER FLOOR PLAN**  
1" = 40'-0"



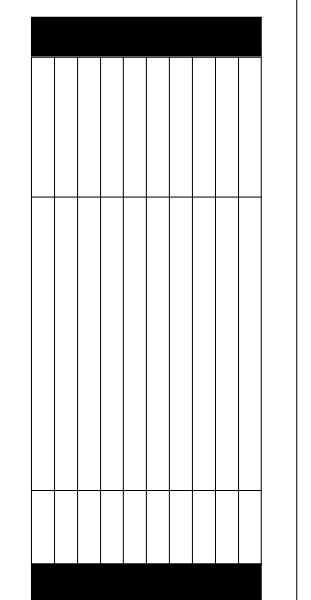
**2ND FLOOR PLAN**  
1" = 40'-0"



**3RD FLOOR PLAN**  
1" = 40'-0"



**4TH - 7TH FLOOR PLAN**  
1" = 40'-0"



# Appendix C: Raw Traffic Count Data



MN 65 & 14th Ave NE - TMC

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound						14th Ave NE Westbound						MN 65 Northbound						MN 65 Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2022-07-14 7:00AM	0	0	3	0	3	4	1	1	3	0	5	2	2	32	0	0	34	0	1	58	2	0	61	1	103
7:15AM	1	1	5	0	7	0	0	0	1	0	1	1	3	32	2	0	37	0	0	74	4	0	78	1	123
7:30AM	3	0	8	0	11	0	0	0	0	0	0	4	18	50	0	0	68	0	1	92	8	0	101	2	180
7:45AM	1	3	6	0	10	4	0	1	3	0	4	0	10	43	3	0	56	1	1	105	14	0	120	0	190
Hourly Total	5	4	22	0	31	8	1	2	7	0	10	7	33	157	5	0	195	1	3	329	28	0	360	4	596
8:00AM	4	0	9	0	13	3	2	0	2	0	4	6	16	56	2	0	74	1	8	96	10	0	114	3	205
8:15AM	7	1	12	0	20	3	1	0	3	0	4	2	19	46	6	0	71	0	7	79	17	0	103	1	198
8:30AM	7	1	8	0	16	0	3	2	3	0	8	0	17	59	4	0	80	2	4	96	6	0	106	0	210
8:45AM	9	1	18	0	28	1	0	2	1	0	3	1	16	65	7	1	89	3	4	81	12	0	97	0	217
Hourly Total	27	3	47	0	77	7	6	4	9	0	19	9	68	226	19	1	314	6	23	352	45	0	420	4	830
4:00PM	12	3	24	0	39	0	7	0	4	0	11	2	8	121	3	0	132	0	2	99	6	0	107	0	289
4:15PM	7	1	16	0	24	0	7	0	8	0	15	1	15	131	0	0	146	1	1	123	4	0	128	1	313
4:30PM	7	0	26	0	33	1	5	1	5	0	11	0	4	128	3	0	135	3	7	95	2	0	104	1	283
4:45PM	7	0	11	0	18	1	7	1	4	0	12	0	3	120	3	1	127	1	9	118	6	0	133	0	290
Hourly Total	33	4	77	0	114	2	26	2	21	0	49	3	30	500	9	1	540	5	19	435	18	0	472	2	1175
5:00PM	9	2	25	0	36	9	17	0	9	0	26	2	9	131	1	0	141	3	8	113	7	0	128	0	331
5:15PM	11	0	15	0	26	4	8	0	5	0	13	1	5	129	5	0	139	5	17	100	5	0	122	2	300
5:30PM	2	1	13	1	17	1	1	1	6	0	8	2	12	120	9	0	141	0	10	131	8	0	149	0	315
5:45PM	7	2	13	0	22	1	5	0	7	0	12	2	8	111	8	0	127	1	26	113	6	0	145	0	306
Hourly Total	29	5	66	1	101	15	31	1	27	0	59	7	34	491	23	0	548	9	61	457	26	0	544	2	1252
<b>Total</b>	94	16	212	1	323	32	64	9	64	0	137	26	165	1374	56	2	1597	21	106	1573	117	0	1796	12	3853
<b>% Approach</b>	29.1%	5.0%	65.6%	0.3%	-	-	46.7%	6.6%	46.7%	0%	-	-	10.3%	86.0%	3.5%	0.1%	-	-	5.9%	87.6%	6.5%	0%	-	-	-
<b>% Total</b>	2.4%	0.4%	5.5%	0%	8.4%	-	1.7%	0.2%	1.7%	0%	3.6%	-	4.3%	35.7%	1.5%	0.1%	41.4%	-	2.8%	40.8%	3.0%	0%	46.6%	-	-
<b>Lights</b>	89	16	207	1	313	-	63	8	64	0	135	-	161	1282	55	2	1500	-	103	1484	115	0	1702	-	3650
<b>% Lights</b>	94.7%	100%	97.6%	100%	96.9%	-	98.4%	88.9%	100%	0%	98.5%	-	97.6%	93.3%	98.2%	100%	93.9%	-	97.2%	94.3%	98.3%	0%	94.8%	-	94.7%
<b>Articulated Trucks and Single-Unit Trucks</b>	5	0	3	0	8	-	1	1	0	0	2	-	2	64	1	0	67	-	3	64	2	0	69	-	146
<b>% Articulated Trucks and Single-Unit Trucks</b>	5.3%	0%	1.4%	0%	2.5%	-	1.6%	11.1%	0%	0%	1.5%	-	1.2%	4.7%	1.8%	0%	4.2%	-	2.8%	4.1%	1.7%	0%	3.8%	-	3.8%
<b>Buses</b>	0	0	2	0	2	-	0	0	0	0	0	-	2	28	0	0	30	-	0	25	0	0	25	-	57
<b>% Buses</b>	0%	0%	0.9%	0%	0.6%	-	0%	0%	0%	0%	0%	-	1.2%	2.0%	0%	0%	1.9%	-	0%	1.6%	0%	0%	1.4%	-	1.5%
<b>Pedestrians</b>	-	-	-	-	-	19	-	-	-	-	-	26	-	-	-	-	-	14	-	-	-	-	-	9	-
<b>% Pedestrians</b>	-	-	-	-	-	59.4%	-	-	-	-	-	100%	-	-	-	-	-	66.7%	-	-	-	-	-	75.0%	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	13	-	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	3	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	40.6%	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	25.0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



**MN 65 & 14th Ave NE - TMC**

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

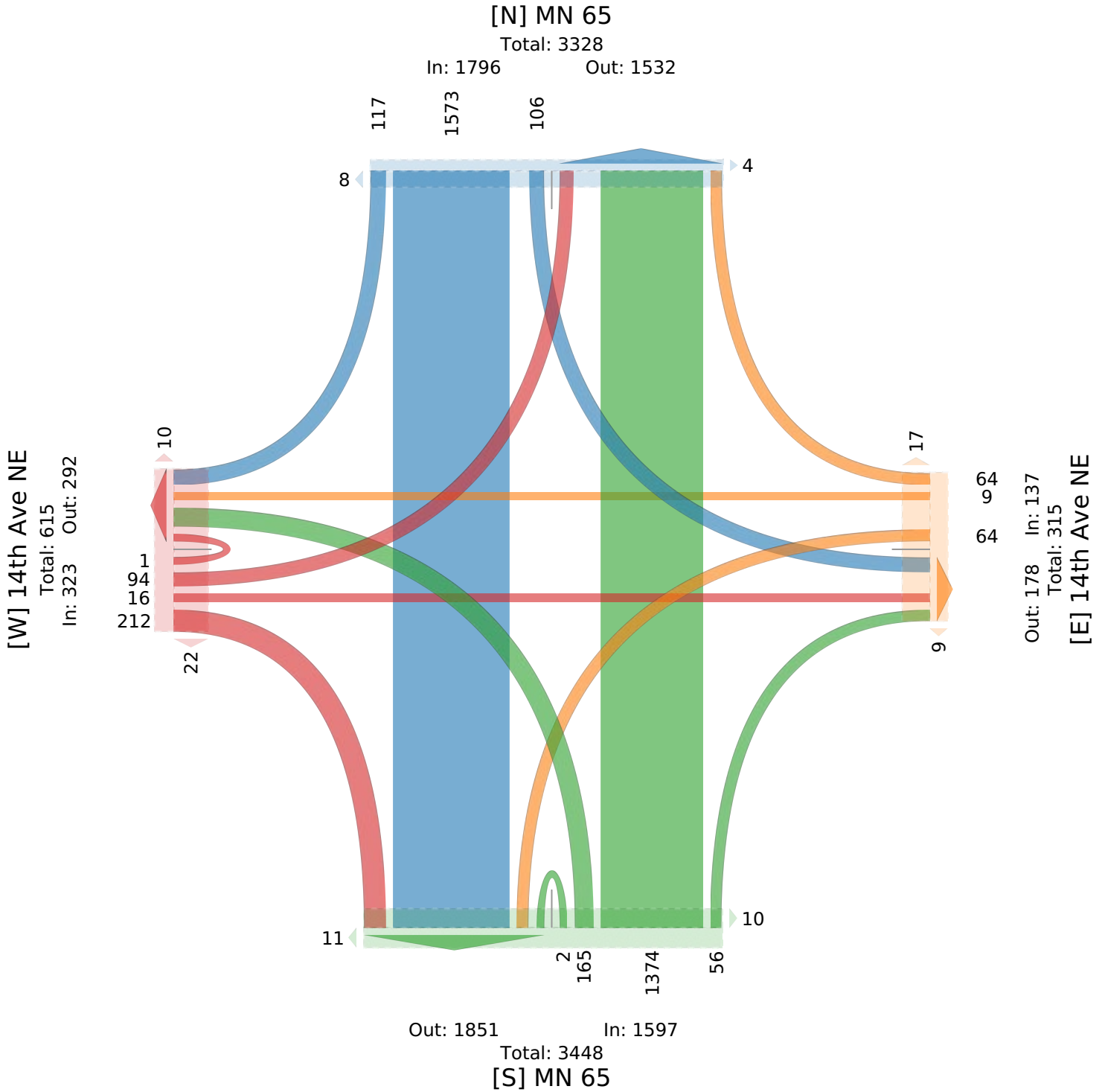
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



**MN 65 & 14th Ave NE - TMC**

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound						14th Ave NE Westbound						MN 65 Northbound						MN 65 Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2022-07-14 8:00AM	4	0	9	0	13	3	2	0	2	0	4	6	16	56	2	0	74	1	8	96	10	0	114	3	205
8:15AM	7	1	12	0	20	3	1	0	3	0	4	2	19	46	6	0	71	0	7	79	17	0	103	1	198
8:30AM	7	1	8	0	16	0	3	2	3	0	8	0	17	59	4	0	80	2	4	96	6	0	106	0	210
8:45AM	9	1	18	0	28	1	0	2	1	0	3	1	16	65	7	1	89	3	4	81	12	0	97	0	217
<b>Total</b>	27	3	47	0	77	7	6	4	9	0	19	9	68	226	19	1	314	6	23	352	45	0	420	4	830
<b>% Approach</b>	35.1%	3.9%	61.0%	0%	-	-	31.6%	21.1%	47.4%	0%	-	-	21.7%	72.0%	6.1%	0.3%	-	-	5.5%	83.8%	10.7%	0%	-	-	-
<b>% Total</b>	3.3%	0.4%	5.7%	0%	9.3%	-	0.7%	0.5%	1.1%	0%	2.3%	-	8.2%	27.2%	2.3%	0.1%	37.8%	-	2.8%	42.4%	5.4%	0%	50.6%	-	-
<b>PHF</b>	0.750	0.750	0.653	-	0.688	-	0.500	0.500	0.750	-	0.594	-	0.895	0.869	0.679	0.250	0.882	-	0.719	0.917	0.662	-	0.921	-	0.956
<b>Lights</b>	23	3	43	0	69	-	6	3	9	0	18	-	65	196	18	1	280	-	22	319	44	0	385	-	752
<b>% Lights</b>	85.2%	100%	91.5%	0%	89.6%	-	100%	75.0%	100%	0%	94.7%	-	95.6%	86.7%	94.7%	100%	89.2%	-	95.7%	90.6%	97.8%	0%	91.7%	-	90.6%
<b>Articulated Trucks and Single-Unit Trucks</b>	4	0	2	0	6	-	0	1	0	0	1	-	1	22	1	0	24	-	1	25	1	0	27	-	58
<b>% Articulated Trucks and Single-Unit Trucks</b>	14.8%	0%	4.3%	0%	7.8%	-	0%	25.0%	0%	0%	5.3%	-	1.5%	9.7%	5.3%	0%	7.6%	-	4.3%	7.1%	2.2%	0%	6.4%	-	7.0%
<b>Buses</b>	0	0	2	0	2	-	0	0	0	0	0	-	2	8	0	0	10	-	0	8	0	0	8	-	20
<b>% Buses</b>	0%	0%	4.3%	0%	2.6%	-	0%	0%	0%	0%	0%	-	2.9%	3.5%	0%	0%	3.2%	-	0%	2.3%	0%	0%	1.9%	-	2.4%
<b>Pedestrians</b>	-	-	-	-	-	6	-	-	-	-	-	9	-	-	-	-	-	6	-	-	-	-	-	4	-
<b>% Pedestrians</b>	-	-	-	-	-	85.7%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	14.3%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**MN 65 & 14th Ave NE - TMC**

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

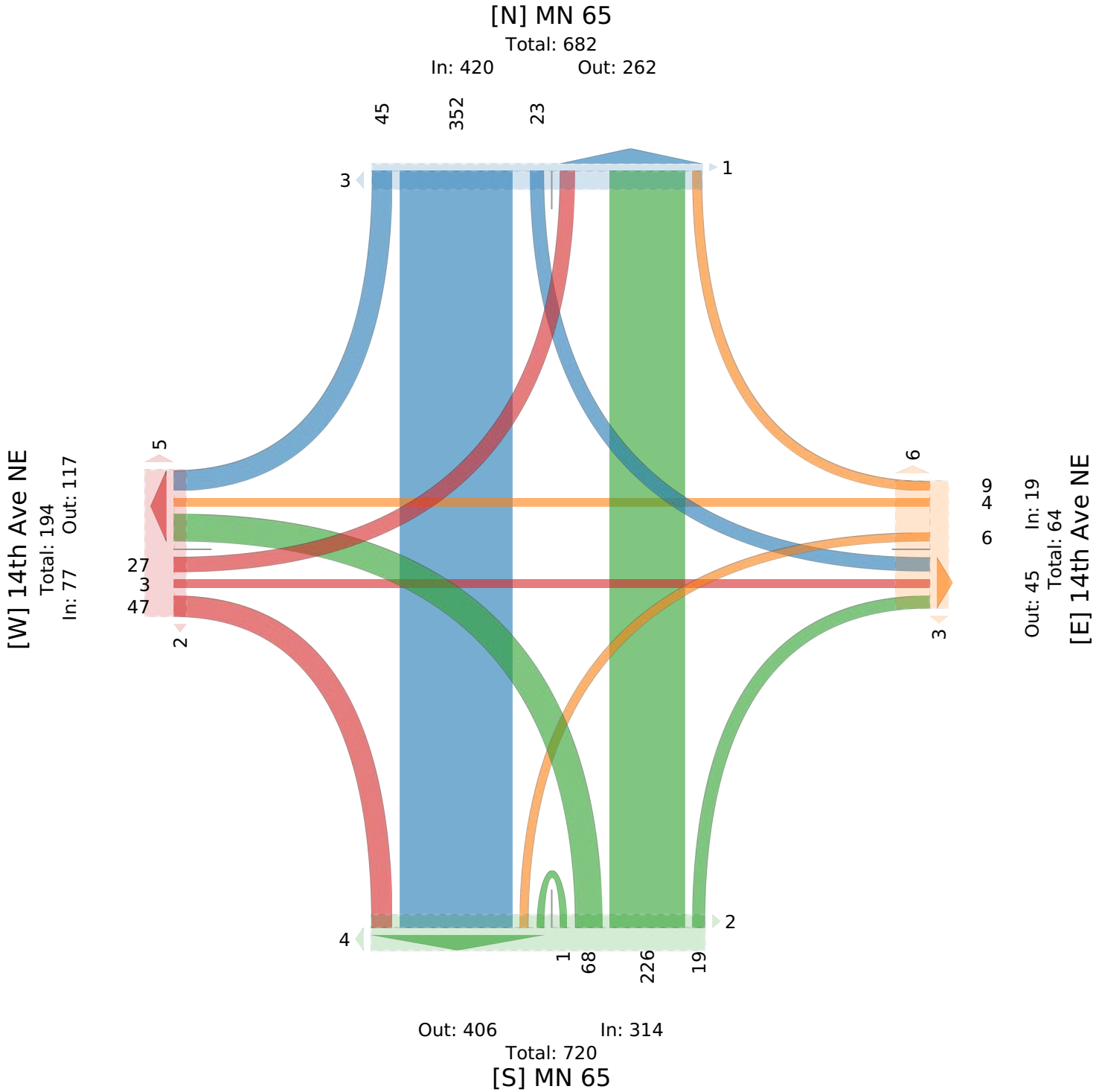
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



**MN 65 & 14th Ave NE - TMC**

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound						14th Ave NE Westbound						MN 65 Northbound						MN 65 Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-07-14 5:00PM	9	2	25	0	36	9	17	0	9	0	26	2	9	131	1	0	141	3	8	113	7	0	128	0	331
5:15PM	11	0	15	0	26	4	8	0	5	0	13	1	5	129	5	0	139	5	17	100	5	0	122	2	300
5:30PM	2	1	13	1	17	1	1	1	6	0	8	2	12	120	9	0	141	0	10	131	8	0	149	0	315
5:45PM	7	2	13	0	22	1	5	0	7	0	12	2	8	111	8	0	127	1	26	113	6	0	145	0	306
<b>Total</b>	29	5	66	1	101	15	31	1	27	0	59	7	34	491	23	0	548	9	61	457	26	0	544	2	1252
<b>% Approach</b>	28.7%	5.0%	65.3%	1.0%	-	-	52.5%	1.7%	45.8%	0%	-	-	6.2%	89.6%	4.2%	0%	-	-	11.2%	84.0%	4.8%	0%	-	-	-
<b>% Total</b>	2.3%	0.4%	5.3%	0.1%	8.1%	-	2.5%	0.1%	2.2%	0%	4.7%	-	2.7%	39.2%	1.8%	0%	43.8%	-	4.9%	36.5%	2.1%	0%	43.5%	-	-
<b>PHF</b>	0.659	0.625	0.660	0.250	0.701	-	0.456	0.250	0.750	-	0.567	-	0.708	0.937	0.639	-	0.972	-	0.587	0.872	0.813	-	0.913	-	0.946
<b>Lights</b>	29	5	65	1	100	-	31	1	27	0	59	-	34	468	23	0	525	-	61	443	26	0	530	-	1214
<b>% Lights</b>	100%	100%	98.5%	100%	99.0%	-	100%	100%	100%	0%	100%	-	100%	95.3%	100%	0%	95.8%	-	100%	96.9%	100%	0%	97.4%	-	97.0%
<b>Articulated Trucks and Single-Unit Trucks</b>	0	0	1	0	1	-	0	0	0	0	0	-	0	17	0	0	17	-	0	10	0	0	10	-	28
<b>% Articulated Trucks and Single-Unit Trucks</b>	0%	0%	1.5%	0%	1.0%	-	0%	0%	0%	0%	0%	-	0%	3.5%	0%	0%	3.1%	-	0%	2.2%	0%	0%	1.8%	-	2.2%
<b>Buses</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	6	0	0	6	-	0	4	0	0	4	-	10
<b>% Buses</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	1.2%	0%	0%	1.1%	-	0%	0.9%	0%	0%	0.7%	-	0.8%
<b>Pedestrians</b>	-	-	-	-	-	6	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	0	-
<b>% Pedestrians</b>	-	-	-	-	-	40.0%	-	-	-	-	-	100%	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	2	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	60.0%	-	-	-	-	-	0%	-	-	-	-	-	66.7%	-	-	-	-	-	100%	-

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**MN 65 & 14th Ave NE - TMC**

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

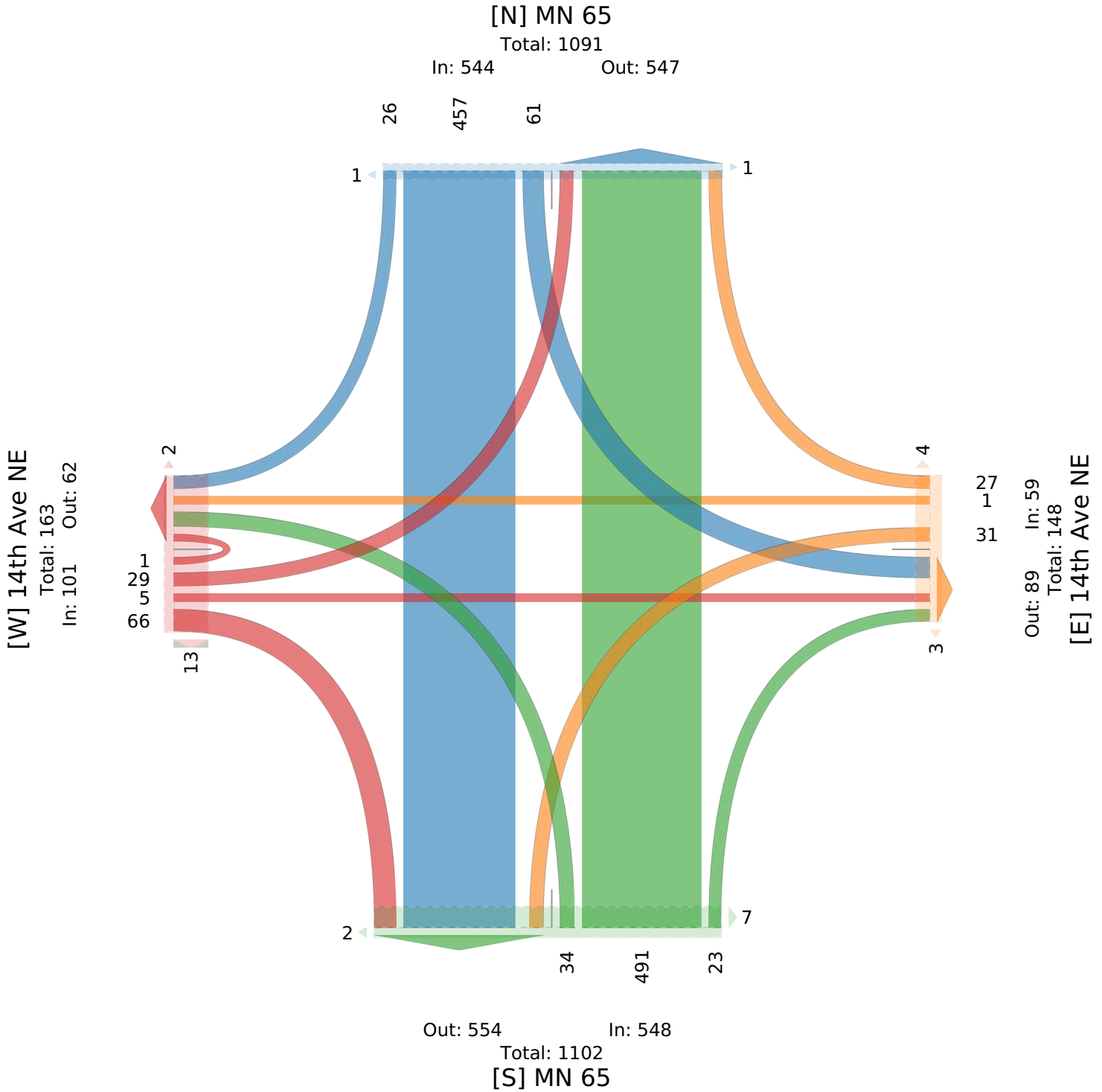
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971168, Location: 45.002297, -93.247351

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Westbound					MN 65 Northbound					MN 65 Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
Time																
2022-07-14 7:00AM	2	2	0	4	0	37	1	0	38	0	1	67	0	68	0	110
7:15AM	3	1	0	4	1	41	4	0	45	0	0	75	0	75	0	124
7:30AM	1	5	0	6	2	64	10	0	74	0	2	108	0	110	0	190
7:45AM	8	1	0	9	1	54	6	1	61	2	3	112	0	115	0	185
Hourly Total	14	9	0	23	4	196	21	1	218	2	6	362	0	368	0	609
8:00AM	6	2	0	8	1	79	7	0	86	2	0	113	0	113	0	207
8:15AM	4	0	0	4	0	73	10	1	84	0	4	92	0	96	0	184
8:30AM	2	3	0	5	0	78	17	0	95	0	3	106	0	109	0	209
8:45AM	3	6	0	9	0	96	16	0	112	0	6	99	0	105	0	226
Hourly Total	15	11	0	26	1	326	50	1	377	2	13	410	0	423	0	826
4:00PM	15	2	0	17	1	144	10	0	154	0	1	134	1	136	0	307
4:15PM	9	6	0	15	0	143	10	1	154	0	4	139	0	143	0	312
4:30PM	22	7	0	29	0	136	8	0	144	0	5	123	0	128	0	301
4:45PM	11	6	0	17	0	127	11	1	139	0	3	141	0	144	0	300
Hourly Total	57	21	0	78	1	550	39	2	591	0	13	537	1	551	0	1220
5:00PM	21	5	0	26	2	134	9	0	143	0	4	159	0	163	0	332
5:15PM	15	5	0	20	1	137	24	0	161	0	3	121	0	124	0	305
5:30PM	6	8	0	14	0	134	14	0	148	0	2	139	0	141	0	303
5:45PM	9	4	0	13	2	127	16	0	143	0	1	123	0	124	0	280
Hourly Total	51	22	0	73	5	532	63	0	595	0	10	542	0	552	0	1220
<b>Total</b>	137	63	0	200	11	1604	173	4	1781	4	42	1851	1	1894	0	3875
<b>% Approach</b>	68.5%	31.5%	0%	-	-	90.1%	9.7%	0.2%	-	-	2.2%	97.7%	0.1%	-	-	-
<b>% Total</b>	3.5%	1.6%	0%	5.2%	-	41.4%	4.5%	0.1%	46.0%	-	1.1%	47.8%	0%	48.9%	-	-
<b>Lights</b>	132	63	0	195	-	1499	172	3	1674	-	41	1751	0	1792	-	3661
<b>% Lights</b>	96.4%	100%	0%	97.5%	-	93.5%	99.4%	75.0%	94.0%	-	97.6%	94.6%	0%	94.6%	-	94.5%
<b>Articulated Trucks and Single-Unit Trucks</b>	5	0	0	5	-	75	1	1	77	-	1	72	1	74	-	156
<b>% Articulated Trucks and Single-Unit Trucks</b>	3.6%	0%	0%	2.5%	-	4.7%	0.6%	25.0%	4.3%	-	2.4%	3.9%	100%	3.9%	-	4.0%
<b>Buses</b>	0	0	0	0	-	30	0	0	30	-	0	28	0	28	-	58
<b>% Buses</b>	0%	0%	0%	0%	-	1.9%	0%	0%	1.7%	-	0%	1.5%	0%	1.5%	-	1.5%
<b>Pedestrians</b>	-	-	-	-	9	-	-	-	-	4	-	-	-	-	0	-
<b>% Pedestrians</b>	-	-	-	-	81.8%	-	-	-	-	100%	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	18.2%	-	-	-	-	0%	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

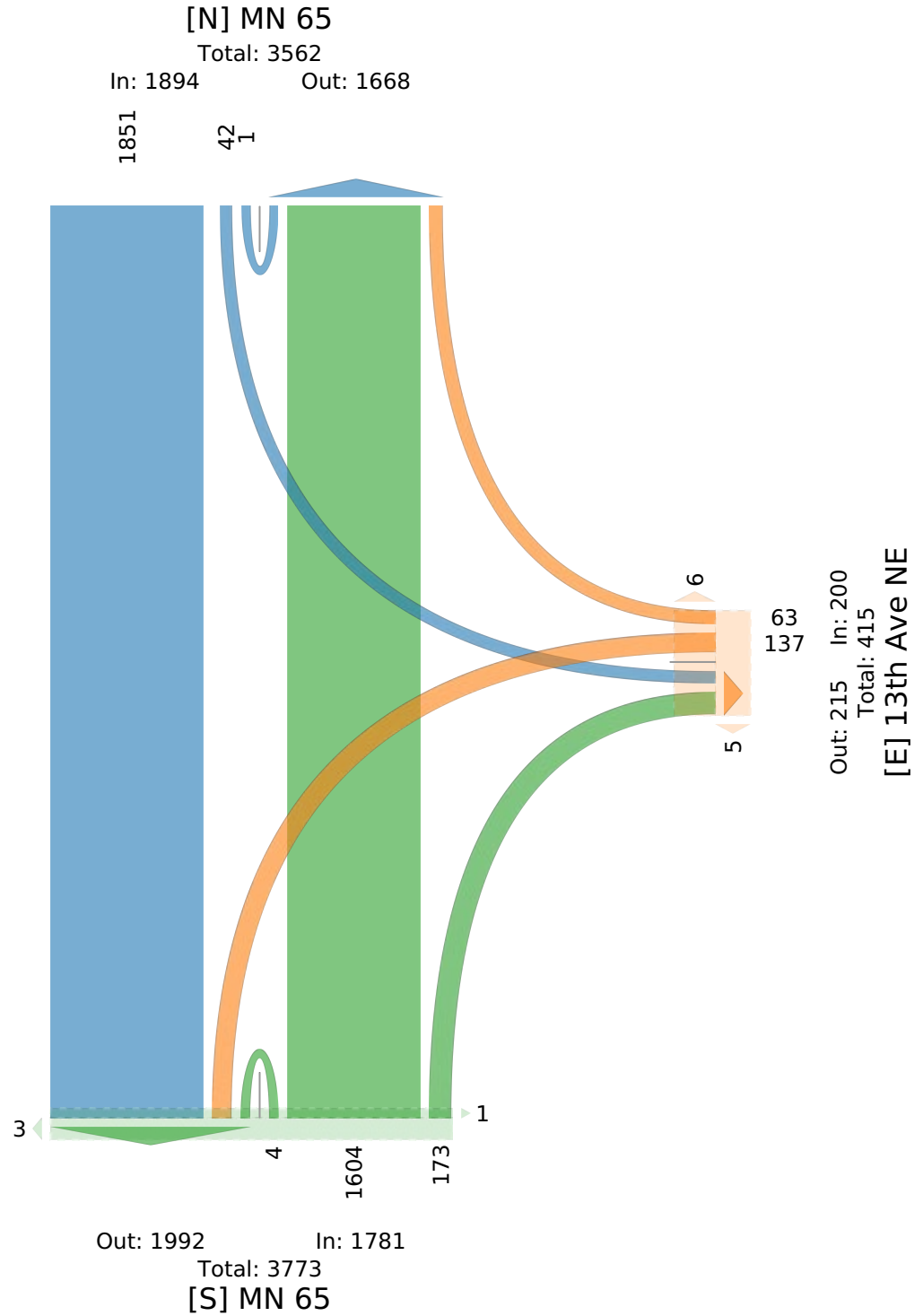
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Westbound					MN 65 Northbound					MN 65 Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
Time																
2022-07-14 8:00AM	6	2	0	8	1	79	7	0	86	2	0	113	0	113	0	207
8:15AM	4	0	0	4	0	73	10	1	84	0	4	92	0	96	0	184
8:30AM	2	3	0	5	0	78	17	0	95	0	3	106	0	109	0	209
8:45AM	3	6	0	9	0	96	16	0	112	0	6	99	0	105	0	226
<b>Total</b>	15	11	0	26	1	326	50	1	377	2	13	410	0	423	0	826
<b>% Approach</b>	57.7%	42.3%	0%	-	-	86.5%	13.3%	0.3%	-	-	3.1%	96.9%	0%	-	-	-
<b>% Total</b>	1.8%	1.3%	0%	3.1%	-	39.5%	6.1%	0.1%	45.6%	-	1.6%	49.6%	0%	51.2%	-	-
<b>PHF</b>	0.625	0.458	-	0.722	-	0.849	0.735	0.250	0.842	-	0.542	0.907	-	0.936	-	0.914
<b>Lights</b>	13	11	0	24	-	287	50	1	338	-	13	370	0	383	-	745
<b>% Lights</b>	86.7%	100%	0%	92.3%	-	88.0%	100%	100%	89.7%	-	100%	90.2%	0%	90.5%	-	90.2%
<b>Articulated Trucks and Single-Unit Trucks</b>	2	0	0	2	-	29	0	0	29	-	0	29	0	29	-	60
<b>% Articulated Trucks and Single-Unit Trucks</b>	13.3%	0%	0%	7.7%	-	8.9%	0%	0%	7.7%	-	0%	7.1%	0%	6.9%	-	7.3%
<b>Buses</b>	0	0	0	0	-	10	0	0	10	-	0	11	0	11	-	21
<b>% Buses</b>	0%	0%	0%	0%	-	3.1%	0%	0%	2.7%	-	0%	2.7%	0%	2.6%	-	2.5%
Pedestrians	-	-	-	-	1	-	-	-	-	2	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

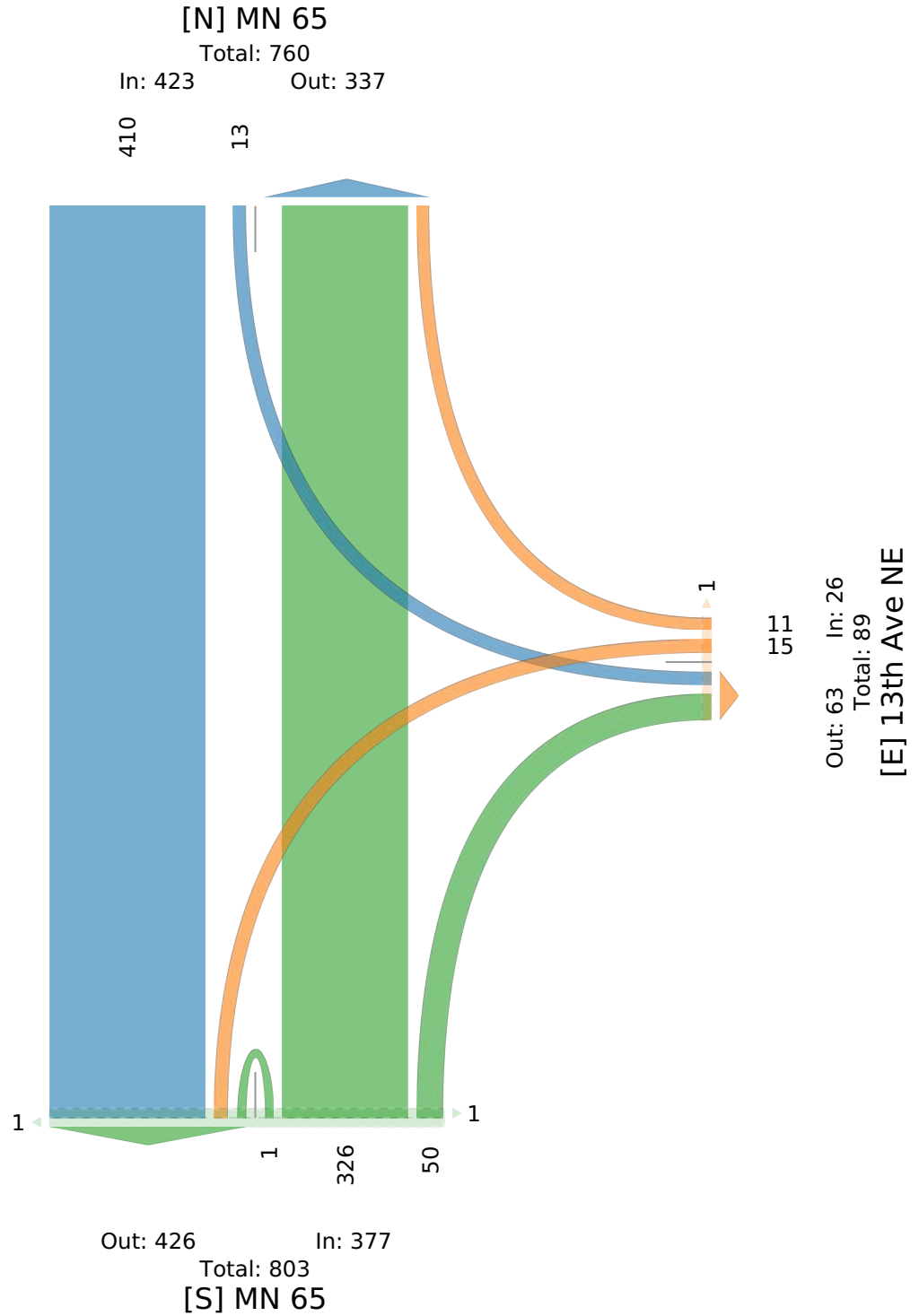
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Westbound					MN 65 Northbound					MN 65 Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
Time																
2022-07-14 4:15PM	9	6	0	15	0	143	10	1	154	0	4	139	0	143	0	312
4:30PM	22	7	0	29	0	136	8	0	144	0	5	123	0	128	0	301
4:45PM	11	6	0	17	0	127	11	1	139	0	3	141	0	144	0	300
5:00PM	21	5	0	26	2	134	9	0	143	0	4	159	0	163	0	332
<b>Total</b>	63	24	0	87	2	540	38	2	580	0	16	562	0	578	0	1245
<b>% Approach</b>	72.4%	27.6%	0%	-	-	93.1%	6.6%	0.3%	-	-	2.8%	97.2%	0%	-	-	-
<b>% Total</b>	5.1%	1.9%	0%	7.0%	-	43.4%	3.1%	0.2%	46.6%	-	1.3%	45.1%	0%	46.4%	-	-
<b>PHF</b>	0.716	0.857	-	0.750	-	0.944	0.864	0.500	0.942	-	0.800	0.884	-	0.887	-	0.938
<b>Lights</b>	61	24	0	85	-	517	38	1	556	-	15	545	0	560	-	1201
<b>% Lights</b>	96.8%	100%	0%	97.7%	-	95.7%	100%	50.0%	95.9%	-	93.8%	97.0%	0%	96.9%	-	96.5%
<b>Articulated Trucks and Single-Unit Trucks</b>	2	0	0	2	-	17	0	1	18	-	1	11	0	12	-	32
<b>% Articulated Trucks and Single-Unit Trucks</b>	3.2%	0%	0%	2.3%	-	3.1%	0%	50.0%	3.1%	-	6.3%	2.0%	0%	2.1%	-	2.6%
<b>Buses</b>	0	0	0	0	-	6	0	0	6	-	0	6	0	6	-	12
<b>% Buses</b>	0%	0%	0%	0%	-	1.1%	0%	0%	1.0%	-	0%	1.1%	0%	1.0%	-	1.0%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**MN 65 & 13th Ave NE - TMC**

Thu Jul 14, 2022

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

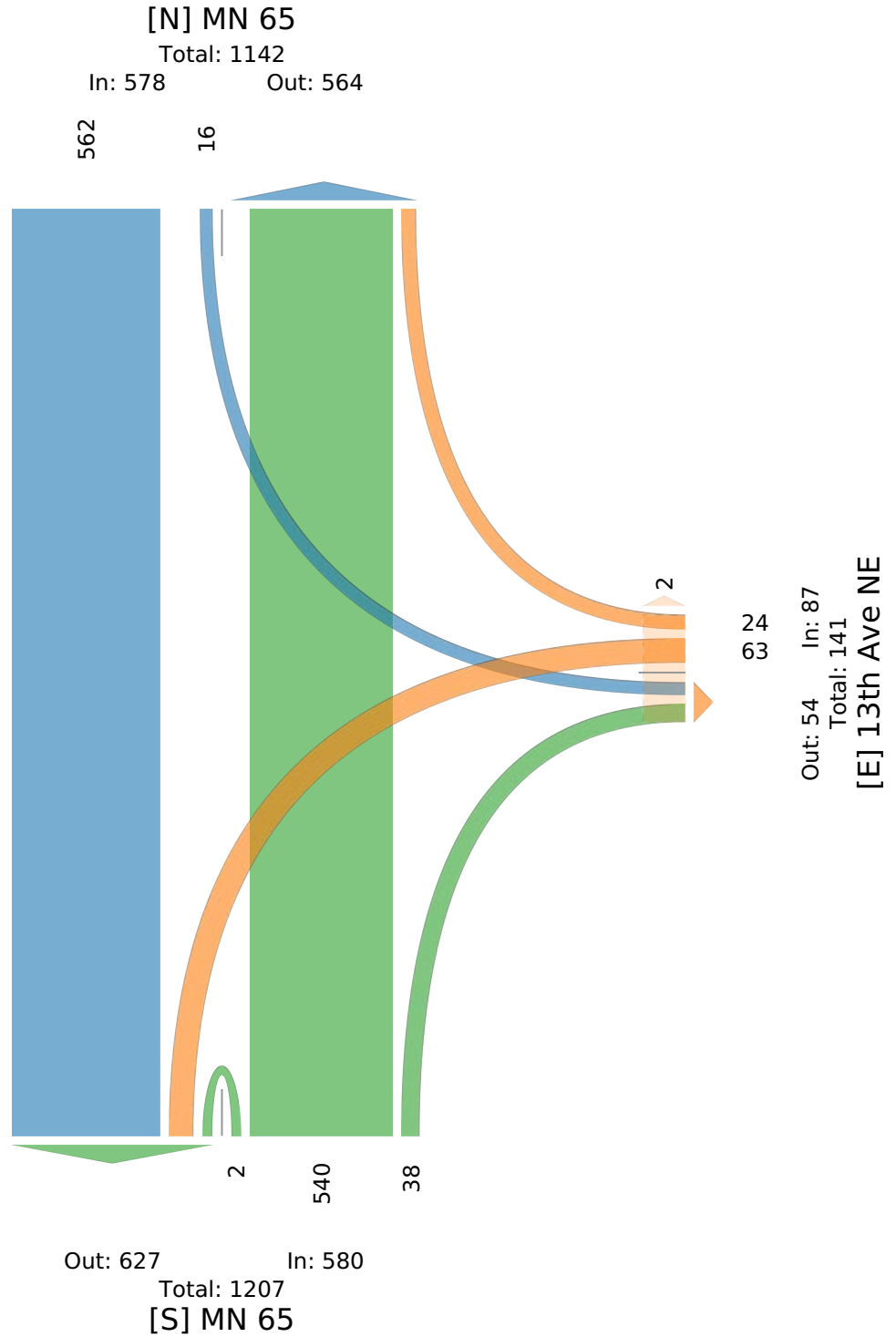
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971171, Location: 45.000519, -93.247337

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



14th Ave NE & Tyler St NE - TMC

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound					14th Ave NE Westbound					Tyler St NE Northbound					Int
	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	
2022-07-14 7:00AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2	2
7:15AM	1	2	0	3	0	0	0	0	0	0	0	1	0	1	0	4
7:30AM	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	2
7:45AM	2	5	0	7	0	0	0	0	0	0	0	1	0	1	0	8
Hourly Total	3	9	0	12	2	0	0	0	0	0	0	4	0	4	3	16
8:00AM	3	7	0	10	0	0	0	0	0	0	3	3	0	6	1	16
8:15AM	3	10	0	13	0	0	0	0	0	0	3	4	0	7	0	20
8:30AM	5	4	0	9	0	0	3	0	3	0	5	4	0	9	0	21
8:45AM	4	6	0	10	0	0	1	0	1	0	2	4	0	6	0	17
Hourly Total	15	27	0	42	0	0	4	0	4	0	13	15	0	28	1	74
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00PM	6	2	0	8	0	0	2	0	2	0	9	0	0	9	0	19
4:15PM	1	1	0	2	1	0	11	0	11	0	5	0	0	5	1	18
4:30PM	3	6	0	9	0	0	5	0	5	0	6	1	0	7	0	21
4:45PM	5	7	0	12	0	1	6	0	7	0	6	1	0	7	0	26
Hourly Total	15	16	0	31	1	1	24	0	25	0	26	2	0	28	1	84
5:00PM	7	2	0	9	0	1	17	0	18	0	11	0	0	11	1	38
5:15PM	15	8	0	23	1	1	5	0	6	0	6	7	0	13	0	42
5:30PM	15	5	0	20	0	2	3	0	5	0	6	9	0	15	0	40
5:45PM	21	6	0	27	0	1	6	0	7	0	5	11	0	16	0	50
Hourly Total	58	21	0	79	1	5	31	0	36	0	28	27	0	55	1	170
6:00PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	92	73	0	165	4	6	59	0	65	0	67	48	0	115	6	345
<b>% Approach</b>	55.8%	44.2%	0%	-	-	9.2%	90.8%	0%	-	-	58.3%	41.7%	0%	-	-	-
<b>% Total</b>	26.7%	21.2%	0%	47.8%	-	1.7%	17.1%	0%	18.8%	-	19.4%	13.9%	0%	33.3%	-	-
<b>Lights</b>	90	72	0	162	-	6	58	0	64	-	67	48	0	115	-	341
<b>% Lights</b>	97.8%	98.6%	0%	98.2%	-	100%	98.3%	0%	98.5%	-	100%	100%	0%	100%	-	98.8%
<b>Articulated Trucks and Single-Unit Trucks</b>	2	1	0	3	-	0	1	0	1	-	0	0	0	0	-	4
<b>% Articulated Trucks and Single-Unit Trucks</b>	2.2%	1.4%	0%	1.8%	-	0%	1.7%	0%	1.5%	-	0%	0%	0%	0%	-	1.2%
<b>Buses</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Buses</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Pedestrians</b>	-	-	-	-	4	-	-	-	-	0	-	-	-	-	-	6
<b>% Pedestrians</b>	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**14th Ave NE & Tyler St NE - TMC**

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

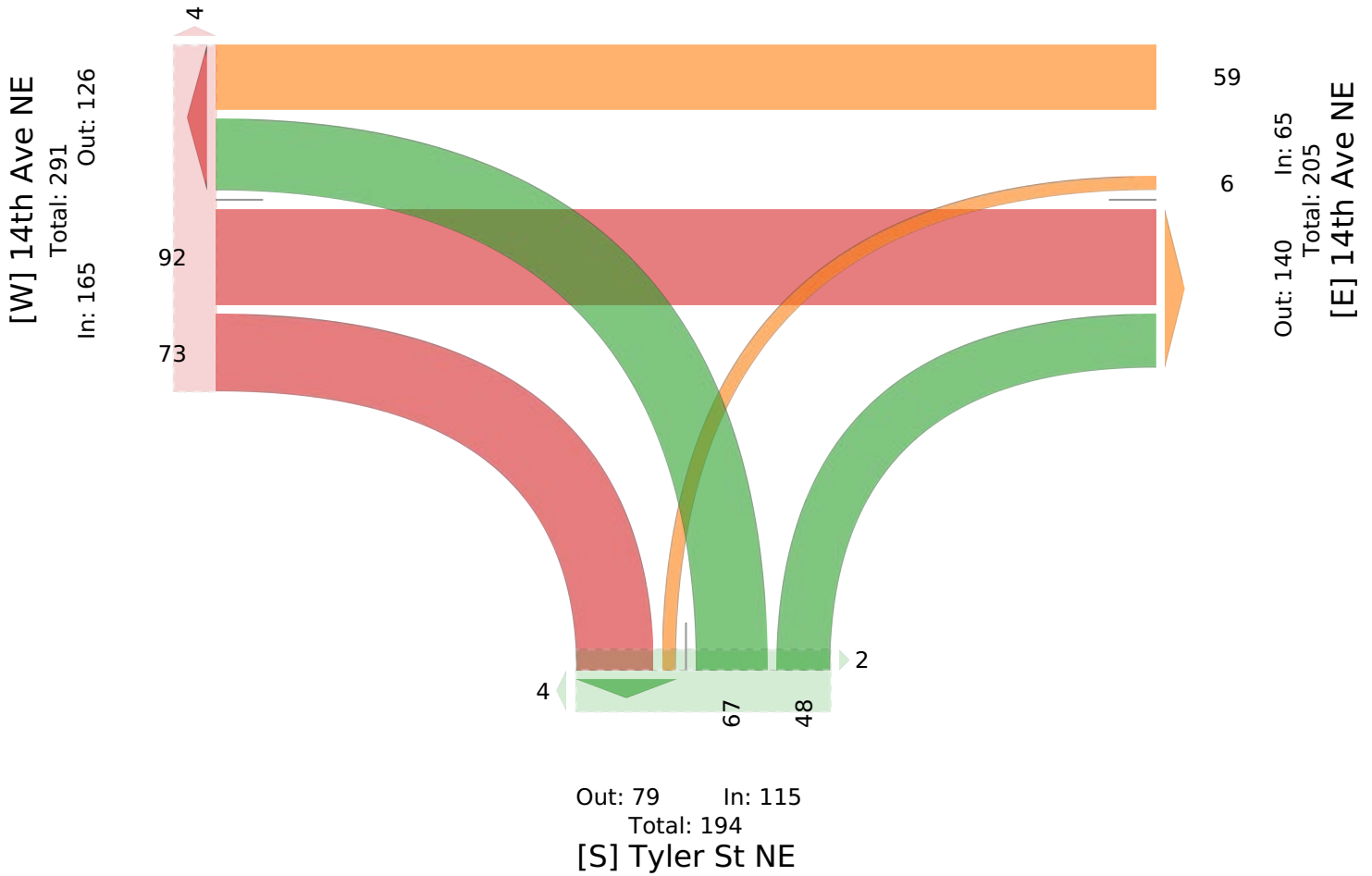
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



14th Ave NE & Tyler St NE - TMC

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound					14th Ave NE Westbound					Tyler St NE Northbound					Int
	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	
Time																
2022-07-14 8:00AM	3	7	0	10	0	0	0	0	0	0	3	3	0	6	1	16
8:15AM	3	10	0	13	0	0	0	0	0	0	3	4	0	7	0	20
8:30AM	5	4	0	9	0	0	3	0	3	0	5	4	0	9	0	21
8:45AM	4	6	0	10	0	0	1	0	1	0	2	4	0	6	0	17
<b>Total</b>	15	27	0	42	0	0	4	0	4	0	13	15	0	28	1	74
<b>% Approach</b>	35.7%	64.3%	0%	-	-	0%	100%	0%	-	-	46.4%	53.6%	0%	-	-	-
<b>% Total</b>	20.3%	36.5%	0%	56.8%	-	0%	5.4%	0%	5.4%	-	17.6%	20.3%	0%	37.8%	-	-
<b>PHF</b>	0.750	0.675	-	0.808	-	-	0.333	-	0.333	-	0.650	0.938	-	0.778	-	0.881
<b>Lights</b>	14	27	0	41	-	0	3	0	3	-	13	15	0	28	-	72
<b>% Lights</b>	93.3%	100%	0%	97.6%	-	0%	75.0%	0%	75.0%	-	100%	100%	0%	100%	-	97.3%
<b>Articulated Trucks and Single-Unit Trucks</b>	1	0	0	1	-	0	1	0	1	-	0	0	0	0	-	2
<b>% Articulated Trucks and Single-Unit Trucks</b>	6.7%	0%	0%	2.4%	-	0%	25.0%	0%	25.0%	-	0%	0%	0%	0%	-	2.7%
<b>Buses</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Buses</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

14th Ave NE & Tyler St NE - TMC

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

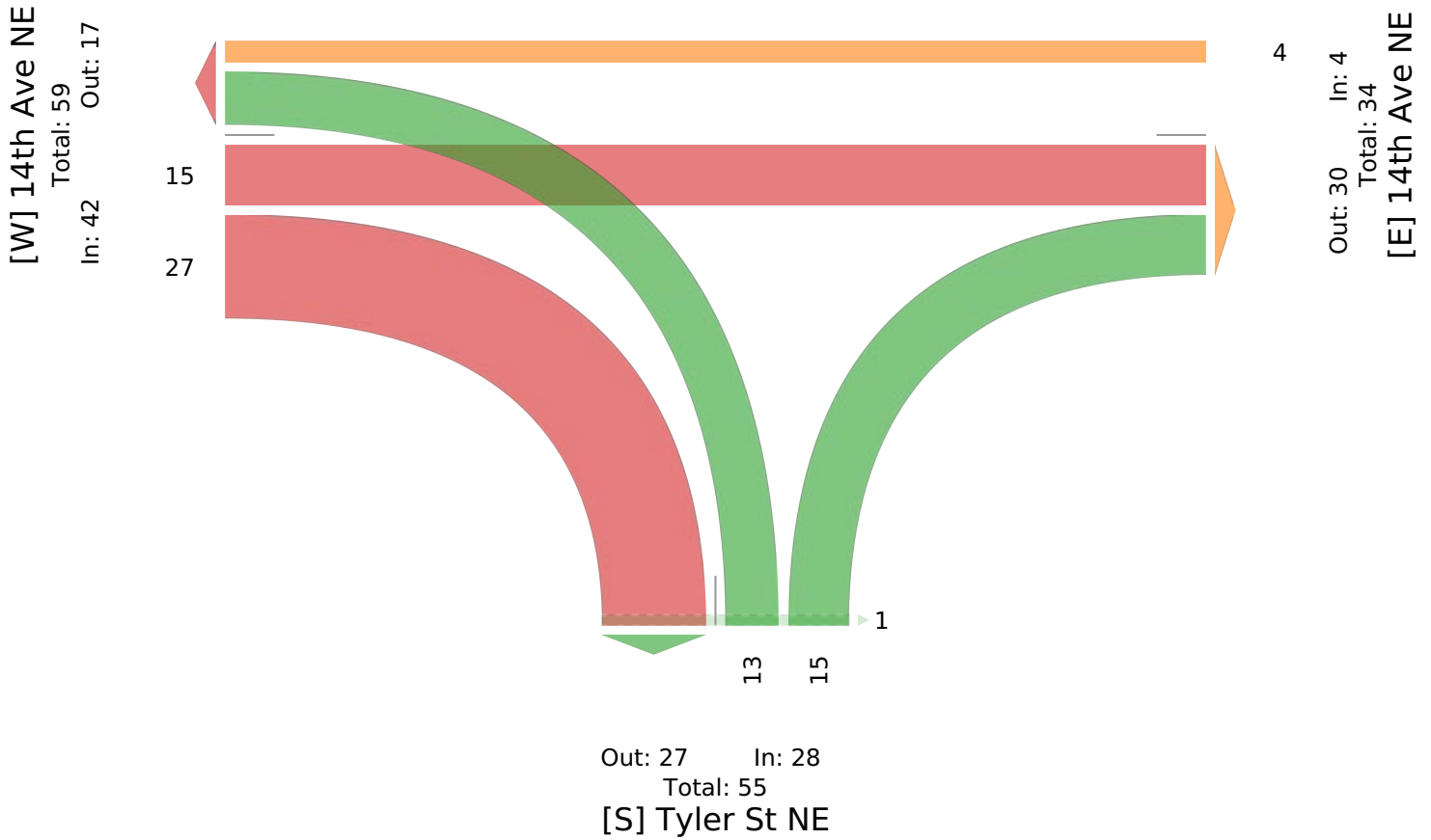
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



14th Ave NE & Tyler St NE - TMC

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates,

Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	14th Ave NE Eastbound					14th Ave NE Westbound					Tyler St NE Northbound					Int
	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	
Time																
2022-07-14 5:00PM	7	2	0	9	0	1	17	0	18	0	11	0	0	11	1	38
5:15PM	15	8	0	23	1	1	5	0	6	0	6	7	0	13	0	42
5:30PM	15	5	0	20	0	2	3	0	5	0	6	9	0	15	0	40
5:45PM	21	6	0	27	0	1	6	0	7	0	5	11	0	16	0	50
<b>Total</b>	58	21	0	79	1	5	31	0	36	0	28	27	0	55	1	170
<b>% Approach</b>	73.4%	26.6%	0%	-	-	13.9%	86.1%	0%	-	-	50.9%	49.1%	0%	-	-	-
<b>% Total</b>	34.1%	12.4%	0%	46.5%	-	2.9%	18.2%	0%	21.2%	-	16.5%	15.9%	0%	32.4%	-	-
<b>PHF</b>	0.690	0.656	-	0.731	-	0.625	0.456	-	0.500	-	0.636	0.614	-	0.859	-	0.850
<b>Lights</b>	58	21	0	79	-	5	31	0	36	-	28	27	0	55	-	170
<b>% Lights</b>	100%	100%	0%	100%	-	100%	100%	0%	100%	-	100%	100%	0%	100%	-	100%
<b>Articulated Trucks and Single-Unit Trucks</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Articulated Trucks and Single-Unit Trucks</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Buses</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Buses</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	1	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



14th Ave NE & Tyler St NE - TMC

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

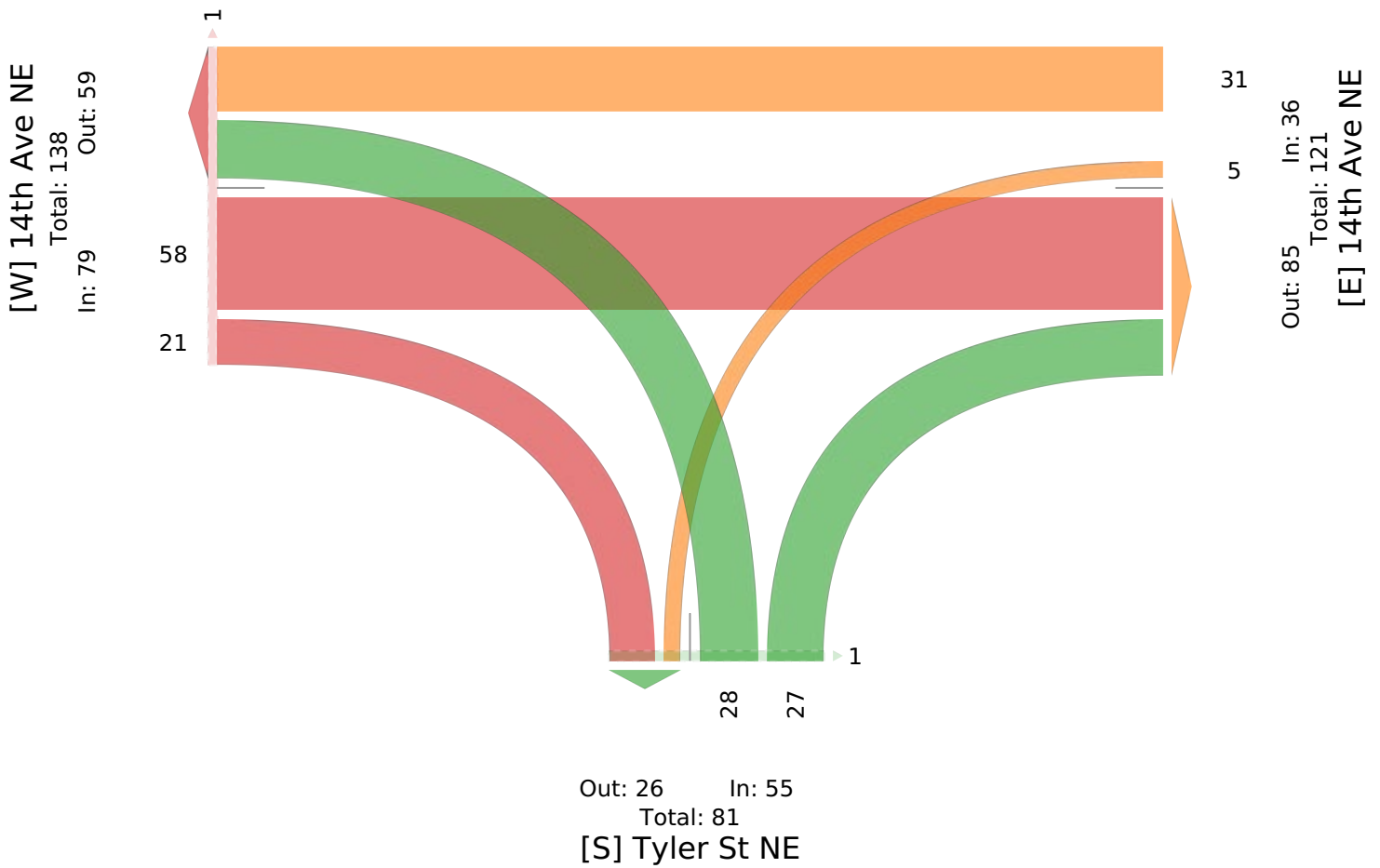
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 972295, Location: 45.00229, -93.246143

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Eastbound						East Westbound						Tyler St NE Northbound						Tyler St NE Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2022-07-14 7:00AM	0	0	3	0	3	2	0	0	0	0	0	2	3	8	0	0	11	0	0	1	0	0	1	0	15
7:15AM	1	1	2	0	4	2	0	1	0	0	1	0	3	6	0	0	9	0	0	1	0	0	1	0	15
7:30AM	2	1	8	0	11	0	0	1	0	0	1	0	4	3	0	0	7	0	0	1	0	0	1	0	20
7:45AM	3	0	8	0	11	3	0	0	0	0	0	0	11	3	0	0	14	2	0	3	1	0	4	0	29
Hourly Total	6	2	21	0	29	7	0	2	0	0	2	2	21	20	0	0	41	2	0	6	1	0	7	0	79
8:00AM	3	1	4	1	9	1	0	0	0	0	0	0	4	7	0	0	11	1	0	4	2	0	6	1	26
8:15AM	2	4	10	1	17	0	0	0	0	0	0	0	3	10	1	1	15	0	0	2	0	0	2	0	34
8:30AM	3	3	15	0	21	2	0	1	0	0	1	4	2	17	1	1	21	1	0	3	2	0	5	0	48
8:45AM	3	1	19	0	23	0	0	0	0	0	0	0	9	15	2	0	26	3	0	4	1	0	5	0	54
Hourly Total	11	9	48	2	70	3	0	1	0	0	1	4	18	49	4	2	73	5	0	13	5	0	18	1	162
4:00PM	1	5	6	0	12	0	1	8	1	0	10	0	3	6	1	0	10	0	1	4	6	0	11	1	43
4:15PM	1	5	6	0	12	0	0	4	1	0	5	0	7	4	3	0	14	0	2	2	2	0	6	0	37
4:30PM	0	6	8	0	14	0	1	6	1	0	8	1	11	6	3	0	20	0	1	5	11	0	17	0	59
4:45PM	0	3	11	0	14	0	2	3	0	0	5	0	7	6	3	0	16	0	2	5	6	0	13	0	48
Hourly Total	2	19	31	0	52	0	4	21	3	0	28	1	28	22	10	0	60	0	6	16	25	0	47	1	187
5:00PM	1	6	5	0	12	0	3	11	1	0	15	2	11	2	4	0	17	0	2	2	5	1	10	0	54
5:15PM	1	10	15	0	26	0	2	9	0	0	11	0	6	12	8	0	26	0	3	7	4	0	14	0	77
5:30PM	2	4	12	0	18	0	1	6	4	0	11	0	7	11	9	0	27	0	5	4	1	0	10	1	66
5:45PM	3	7	4	0	14	0	1	7	4	0	12	0	5	12	15	0	32	0	4	1	0	0	5	0	63
Hourly Total	7	27	36	0	70	0	7	33	9	0	49	2	29	37	36	0	102	0	14	14	10	1	39	1	260
<b>Total</b>	26	57	136	2	221	10	11	57	12	0	80	9	96	128	50	2	276	7	20	49	41	1	111	3	688
<b>% Approach</b>	11.8%	25.8%	61.5%	0.9%	-	-	13.8%	71.3%	15.0%	0%	-	-	34.8%	46.4%	18.1%	0.7%	-	-	18.0%	44.1%	36.9%	0.9%	-	-	-
<b>% Total</b>	3.8%	8.3%	19.8%	0.3%	32.1%	-	1.6%	8.3%	1.7%	0%	11.6%	-	14.0%	18.6%	7.3%	0.3%	40.1%	-	2.9%	7.1%	6.0%	0.1%	16.1%	-	-
<b>Lights</b>	26	57	131	0	214	-	11	57	12	0	80	-	92	128	50	0	270	-	20	48	41	1	110	-	674
<b>% Lights</b>	100%	100%	96.3%	0%	96.8%	-	100%	100%	100%	0%	100%	-	95.8%	100%	100%	0%	97.8%	-	100%	98.0%	100%	100%	99.1%	-	98.0%
<b>Articulated Trucks and Single-Unit Trucks</b>	0	0	5	2	7	-	0	0	0	0	0	-	4	0	0	2	6	-	0	1	0	0	1	-	14
<b>% Articulated Trucks and Single-Unit Trucks</b>	0%	0%	3.7%	100%	3.2%	-	0%	0%	0%	0%	0%	-	4.2%	0%	0%	100%	2.2%	-	0%	2.0%	0%	0%	0.9%	-	2.0%
<b>Buses</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
<b>% Buses</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
<b>Pedestrians</b>	-	-	-	-	-	10	-	-	-	-	-	9	-	-	-	-	-	7	-	-	-	-	-	3	
<b>% Pedestrians</b>	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

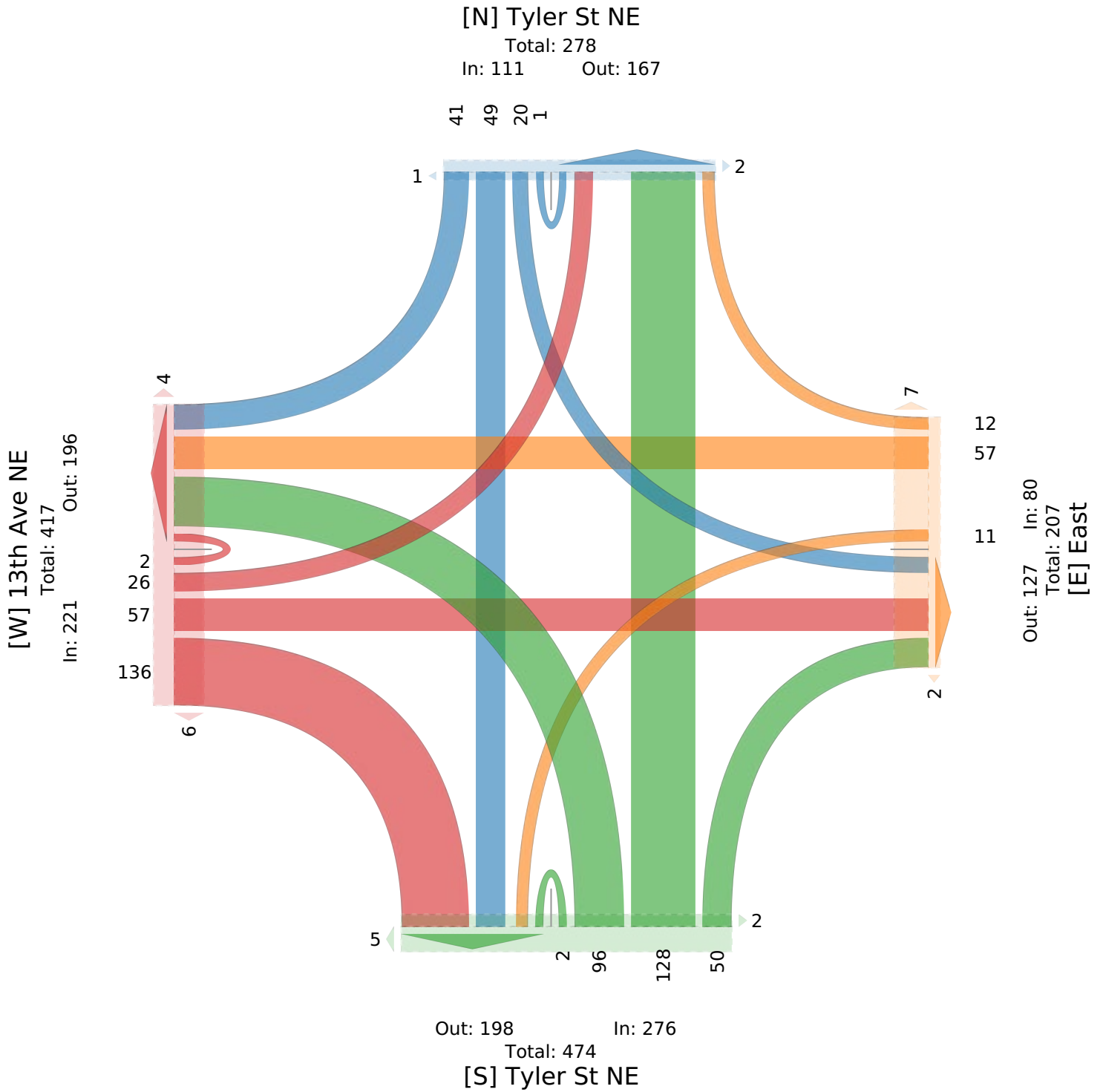
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Eastbound							East Westbound							Tyler St NE Northbound							Tyler St NE Southbound							
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int				
2022-07-14 8:00AM	3	1	4	1	9	1	0	0	0	0	0	0	4	7	0	0	11	1	0	4	2	0	6	1	26				
8:15AM	2	4	10	1	17	0	0	0	0	0	0	0	3	10	1	1	15	0	0	2	0	0	2	0	34				
8:30AM	3	3	15	0	21	2	0	1	0	0	1	4	2	17	1	1	21	1	0	3	2	0	5	0	48				
8:45AM	3	1	19	0	23	0	0	0	0	0	0	0	9	15	2	0	26	3	0	4	1	0	5	0	54				
<b>Total</b>	11	9	48	2	70	3	0	1	0	0	1	4	18	49	4	2	73	5	0	13	5	0	18	1	162				
<b>% Approach</b>	15.7%	12.9%	68.6%	2.9%	-	-	0%	100%	0%	0%	-	-	24.7%	67.1%	5.5%	2.7%	-	-	0%	72.2%	27.8%	0%	-	-	-				
<b>% Total</b>	6.8%	5.6%	29.6%	1.2%	43.2%	-	0%	0.6%	0%	0%	0.6%	-	11.1%	30.2%	2.5%	1.2%	45.1%	-	0%	8.0%	3.1%	0%	11.1%	-	-				
<b>PHF</b>	0.917	0.563	0.632	0.500	0.761	-	-	0.250	-	-	0.250	-	0.500	0.721	0.500	0.500	0.702	-	-	0.813	0.625	-	0.750	-	0.750				
<b>Lights</b>	11	9	45	0	65	-	0	1	0	0	1	-	14	49	4	0	67	-	0	13	5	0	18	-	151				
<b>% Lights</b>	100%	100%	93.8%	0%	92.9%	-	0%	100%	0%	0%	100%	-	77.8%	100%	100%	0%	91.8%	-	0%	100%	100%	0%	100%	-	93.2%				
<b>Articulated Trucks and Single-Unit Trucks</b>	0	0	3	2	5	-	0	0	0	0	0	-	4	0	0	2	6	-	0	0	0	0	0	-	11				
<b>% Articulated Trucks and Single-Unit Trucks</b>	0%	0%	6.3%	100%	7.1%	-	0%	0%	0%	0%	0%	-	22.2%	0%	0%	100%	8.2%	-	0%	0%	0%	0%	0%	-	6.8%				
<b>Buses</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0				
<b>% Buses</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%				
<b>Pedestrians</b>	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	1					
<b>% Pedestrians</b>	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-				
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0					
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-				

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

AM Peak (8 AM - 9 AM)

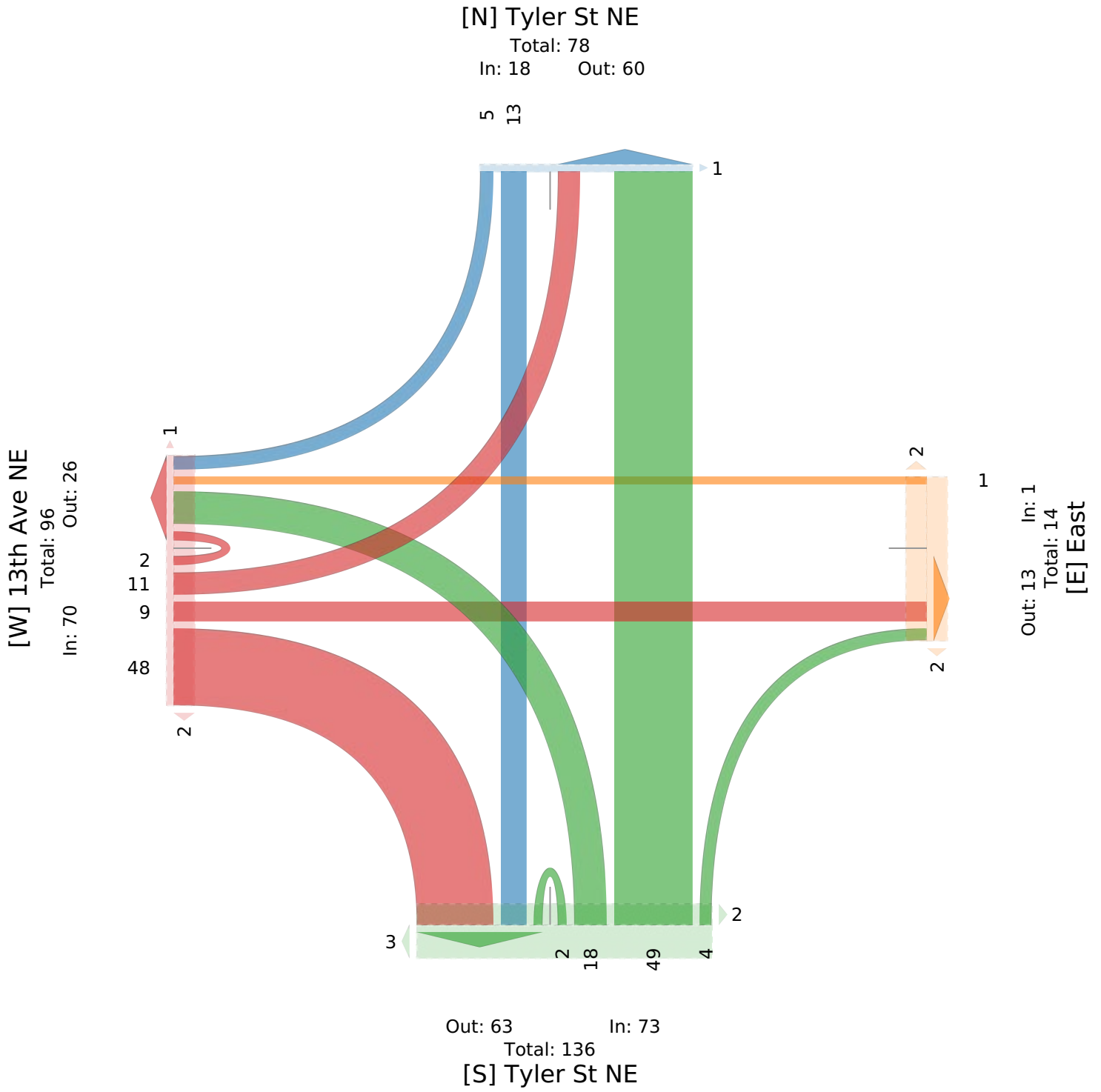
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,

Saint Paul, MN, 55114, US

Leg Direction	13th Ave NE Eastbound						East Westbound						Tyler St NE Northbound						Tyler St NE Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-07-14 5:00PM	1	6	5	0	12	0	3	11	1	0	15	2	11	2	4	0	17	0	2	2	5	1	10	0	54
5:15PM	1	10	15	0	26	0	2	9	0	0	11	0	6	12	8	0	26	0	3	7	4	0	14	0	77
5:30PM	2	4	12	0	18	0	1	6	4	0	11	0	7	11	9	0	27	0	5	4	1	0	10	1	66
5:45PM	3	7	4	0	14	0	1	7	4	0	12	0	5	12	15	0	32	0	4	1	0	0	5	0	63
<b>Total</b>	7	27	36	0	70	0	7	33	9	0	49	2	29	37	36	0	102	0	14	14	10	1	39	1	260
<b>% Approach</b>	10.0%	38.6%	51.4%	0%	-	-	14.3%	67.3%	18.4%	0%	-	-	28.4%	36.3%	35.3%	0%	-	-	35.9%	35.9%	25.6%	2.6%	-	-	-
<b>% Total</b>	2.7%	10.4%	13.8%	0%	26.9%	-	2.7%	12.7%	3.5%	0%	18.8%	-	11.2%	14.2%	13.8%	0%	39.2%	-	5.4%	5.4%	3.8%	0.4%	15.0%	-	-
<b>PHF</b>	0.583	0.675	0.600	-	0.673	-	0.583	0.750	0.563	-	0.817	-	0.659	0.771	0.600	-	0.797	-	0.700	0.500	0.500	0.250	0.696	-	0.844
<b>Lights</b>	7	27	36	0	70	-	7	33	9	0	49	-	29	37	36	0	102	-	14	14	10	1	39	-	260
<b>% Lights</b>	100%	100%	100%	0%	100%	-	100%	100%	100%	0%	100%	-	100%	100%	100%	0%	100%	-	100%	100%	100%	100%	100%	-	100%
<b>Articulated Trucks and Single-Unit Trucks</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
<b>% Articulated Trucks and Single-Unit Trucks</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
<b>Buses</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
<b>% Buses</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
<b>Pedestrians</b>	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

13th Ave NE & Tyler ST NE - TMC

Thu Jul 14, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

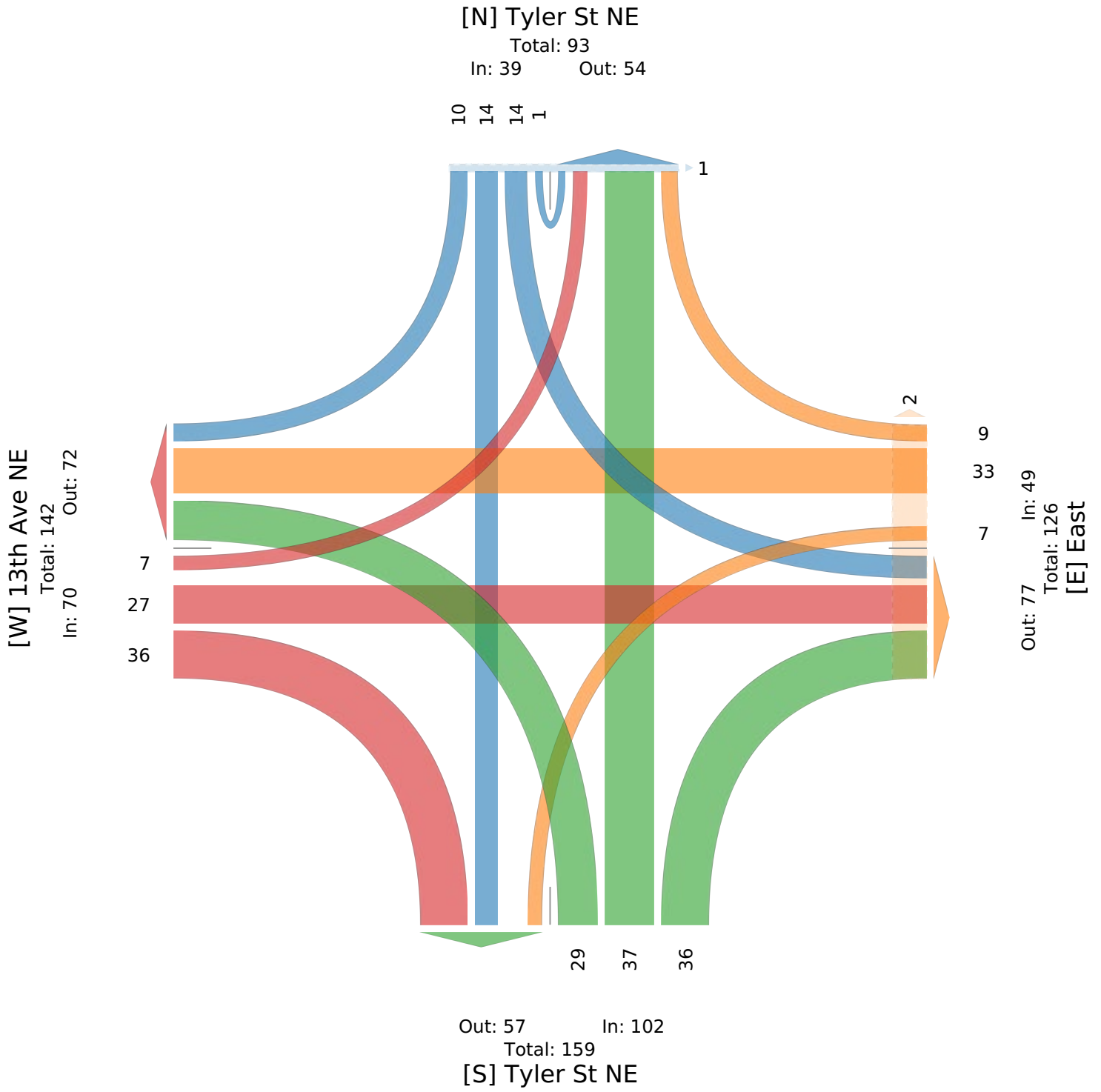
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 971170, Location: 45.000517, -93.246086

Provided by: Kimley-Horn and Associates, Inc.

767 Eustis Street, Suite 100,  
Saint Paul, MN, 55114, US



# Appendix D: SimTraffic Reports





**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	33.9	32.6	12.5	32.1	25.1	8.3	12.2	8.4	1.7	10.1	7.5	2.5

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	9.4

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	8.0	4.6	0.2	0.3	4.8	1.2	1.0

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.2	5.0	5.0	5.4	0.1	5.6	4.0

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.5	5.5	5.4	4.2	5.7	5.5	5.7	2.8	5.4	5.0

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.7

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	108	64	141	121	158	86
Average Queue (ft)	40	16	68	35	81	30
95th Queue (ft)	89	47	120	88	139	72
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	35	53
Average Queue (ft)	20	7
95th Queue (ft)	44	33
Link Distance (ft)	247	581
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	47	30	31
Average Queue (ft)	27	4	22
95th Queue (ft)	48	20	44
Link Distance (ft)	68	114	381
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	54	30	55	30
Average Queue (ft)	30	5	29	15
95th Queue (ft)	49	23	50	38
Link Distance (ft)	247	88	186	146
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2
Total Del/Veh (s)	31.0	32.0	12.1	29.1	24.1	8.6	12.0	8.1	3.5	16.1	9.2	3.1

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.3

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	12.3	0.4	5.2	0.4	0.4	4.4	1.2	1.3

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.1	1.1	0.0	4.1	2.9	1.2

**4: Tyler Street NE & 13th Avenue 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	0.2	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	4.4	4.6	2.8	3.5	3.9	2.7	1.2	0.2	0.1	1.4	0.1	0.0

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.1

**Total Network Performance**

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	11.4

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	138	104	154	151	218	177
Average Queue (ft)	59	38	87	67	107	53
95th Queue (ft)	116	80	144	133	182	131
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	83	4	39
Average Queue (ft)	36	0	3
95th Queue (ft)	65	3	20
Link Distance (ft)	247	653	581
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	56
Average Queue (ft)	0	30
95th Queue (ft)	5	53
Link Distance (ft)	114	381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	60	54	24	24
Average Queue (ft)	33	28	2	1
95th Queue (ft)	53	48	13	10
Link Distance (ft)	247	88	186	146
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Total Del/Veh (s)	33.0	32.0	11.6	27.5	26.8	4.9	12.3	8.0	2.1	10.1	7.5	2.7

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	9.2

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	8.7	3.3	0.3	0.3	4.7	1.2	1.0

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.1	4.9	4.4	5.6	0.1	5.9	3.9

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	5.6	5.6	5.3	4.6	2.9	0.2	0.4	0.0	0.0	2.5

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.8

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	124	61	143	121	149	120
Average Queue (ft)	46	17	68	39	76	33
95th Queue (ft)	94	48	122	94	131	80
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	52	4	48
Average Queue (ft)	20	0	6
95th Queue (ft)	45	3	30
Link Distance (ft)	247	653	581
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	52	30	39
Average Queue (ft)	26	3	23
95th Queue (ft)	51	17	45
Link Distance (ft)	68	114	381
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			



Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	54	24	17
Average Queue (ft)	30	3	1
95th Queue (ft)	49	18	9
Link Distance (ft)	247	88	186
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2
Total Del/Veh (s)	29.1	36.5	10.8	30.7	23.4	10.4	12.8	7.4	2.7	15.4	9.9	3.5

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.2

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	10.9	2.3	4.9	0.4	0.4	5.0	1.2	1.3

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.1	1.3	0.0	4.0	2.6	1.1

**4: Tyler Street NE & 13th Avenue 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	0.2	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	3.9	4.6	3.0	3.7	4.0	2.4	1.1	0.1	0.1	1.2	0.1	0.0

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.0

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.2

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	121	92	150	131	219	163
Average Queue (ft)	49	40	80	59	115	56
95th Queue (ft)	97	83	135	122	186	128
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	70	4	58
Average Queue (ft)	34	0	5
95th Queue (ft)	61	0	28
Link Distance (ft)	247	653	581
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	68
Average Queue (ft)	0	30
95th Queue (ft)	6	57
Link Distance (ft)	114	381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	65	67	18	23
Average Queue (ft)	32	28	1	1
95th Queue (ft)	54	56	8	9
Link Distance (ft)	247	88	186	146
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Total Del/Veh (s)	28.1	36.4	6.4	35.3	36.1	7.5	13.1	8.0	2.7	11.1	7.6	2.7

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	8.8

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0		0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	8.9		4.4	0.3	0.4	4.3	1.2	1.6

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	5.0	5.1	6.0	0.2	5.9	3.9

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	6.5	7.1	5.8	5.6	3.2	0.3	0.1	0.3	0.3	2.2

**5: Tyler Street NE & Site Access Performance by movement**

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.0	3.4	2.5	1.1	2.3	2.1	2.7

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.6

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	118	82	147	107	147	124
Average Queue (ft)	40	28	61	38	80	34
95th Queue (ft)	80	66	103	86	133	84
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB	SB
Directions Served	LR	TR	LT	T
Maximum Queue (ft)	84	4	40	6
Average Queue (ft)	40	0	8	0
95th Queue (ft)	64	3	31	5
Link Distance (ft)	247	653	581	581
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	48	30	56
Average Queue (ft)	27	6	27
95th Queue (ft)	47	25	50
Link Distance (ft)	67	115	366
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 4: Tyler Street NE & 13th Avenue NE**

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	87	30	30
Average Queue (ft)	38	5	4
95th Queue (ft)	63	23	20
Link Distance (ft)	247	90	186
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 5: Tyler Street NE & Site Access**

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	85	34
Average Queue (ft)	44	2
95th Queue (ft)	68	14
Link Distance (ft)	174	163
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Network Summary**

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Total Del/Veh (s)	32.8	28.5	9.9	35.9	21.2	10.1	14.1	8.4	4.0	16.6	10.7	2.8

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.2

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0		0.0	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	15.4		10.2	0.5	0.7	6.8	1.5	2.4

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	1.4	0.0	4.1	3.0	1.2

**4: Tyler Street NE & 13th Avenue 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	0.3	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.9	6.7	3.7	5.2	6.2	3.5	2.1	0.3	0.2	2.6	1.0	0.9

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.7

**5: Tyler Street NE & Site 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	0.1
Total Del/Veh (s)	6.2	4.1	1.8	0.6	0.2	0.2	2.1

**Total Network Performance**

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	12.5



**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	124	122	145	137	239	193
Average Queue (ft)	56	43	88	71	123	60
95th Queue (ft)	104	90	139	127	196	145
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	142	4	17	80	46
Average Queue (ft)	57	0	1	19	2
95th Queue (ft)	108	3	7	58	20
Link Distance (ft)	247	653	653	581	581
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	18	61
Average Queue (ft)	1	31
95th Queue (ft)	8	52
Link Distance (ft)	115	366
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 4: Tyler Street NE & 13th Avenue NE**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	108	64	61	39
Average Queue (ft)	46	29	8	3
95th Queue (ft)	79	55	36	20
Link Distance (ft)	247	90	186	163
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 5: Tyler Street NE & Site Access**

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	80	60	4
Average Queue (ft)	40	11	0
95th Queue (ft)	62	40	3
Link Distance (ft)	174	163	366
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Network Summary**

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Total Del/Veh (s)	36.0	22.8	9.0	29.3	26.2	5.1	14.7	8.0	3.1	10.1	7.9	3.0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	9.4

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	10.5	3.6	0.2	0.2	4.8	1.2	1.0

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.9	4.9	4.9	5.9	0.0	5.6	3.8

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	5.5	5.3	5.3	5.2	2.9	0.2	0.3	0.0	0.0	2.5

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.0

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	111	52	136	113	159	133
Average Queue (ft)	41	18	76	45	84	34
95th Queue (ft)	84	48	122	100	139	86
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	44	4	48
Average Queue (ft)	19	0	6
95th Queue (ft)	44	3	29
Link Distance (ft)	247	653	581
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	63	30	35
Average Queue (ft)	27	7	20
95th Queue (ft)	51	29	44
Link Distance (ft)	68	114	381
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	54	30	12
Average Queue (ft)	29	4	1
95th Queue (ft)	49	21	8
Link Distance (ft)	247	88	186
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.2
Total Del/Veh (s)	26.7	33.8	9.5	31.9	28.8	11.2	12.5	7.9	3.3	14.6	9.6	3.2

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.1

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	13.0	2.3	6.3	0.4	0.5	5.3	1.3	1.4

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.0	1.4	0.0	4.1	2.9	1.3

**4: Tyler Street NE & 13th Avenue 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	0.2	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.5	5.3	2.9	3.9	3.9	2.7	1.2	0.2	0.1	1.2	0.1	0.1

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.0

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.3

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	136	117	173	162	206	170
Average Queue (ft)	49	44	90	73	111	56
95th Queue (ft)	104	88	145	138	177	132
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB
Directions Served	LR	T	LT
Maximum Queue (ft)	80	4	57
Average Queue (ft)	38	0	7
95th Queue (ft)	68	3	35
Link Distance (ft)	247	653	581
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	12	73
Average Queue (ft)	0	30
95th Queue (ft)	6	57
Link Distance (ft)	114	381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Tyler Street NE & 13th Avenue NE

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	74	68	23	12
Average Queue (ft)	33	27	1	1
95th Queue (ft)	59	53	12	8
Link Distance (ft)	247	88	186	146
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0



**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Total Del/Veh (s)	28.7	32.6	7.8	32.5	44.0	6.9	13.1	8.0	2.8	10.2	8.0	2.2

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	9.0

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	9.6	4.7	0.3	0.4	4.5	1.2	1.6

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	5.0	4.4	6.0	0.3	5.8	3.8

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.6	6.5	5.7	5.0	3.1	0.3	0.3	0.3	0.3	2.1

**5: Tyler Street NE & Site Access Performance by movement**

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.1	3.3	2.5	1.1	2.3	2.1	2.7

**Total Network Performance**

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.7

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	101	68	143	125	159	145
Average Queue (ft)	37	26	70	43	85	38
95th Queue (ft)	77	60	124	99	147	94
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	92	48
Average Queue (ft)	41	6
95th Queue (ft)	70	28
Link Distance (ft)	247	581
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	47	30	59
Average Queue (ft)	25	4	28
95th Queue (ft)	47	21	50
Link Distance (ft)	67	115	366
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 4: Tyler Street NE & 13th Avenue NE**

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	62	30	29
Average Queue (ft)	34	4	3
95th Queue (ft)	52	19	17
Link Distance (ft)	247	90	186
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Intersection: 5: Tyler Street NE & Site Access**

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	76	35
Average Queue (ft)	42	2
95th Queue (ft)	67	16
Link Distance (ft)	174	163
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Network Summary**

Network wide Queuing Penalty: 0

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Total Del/Veh (s)	30.3	34.1	10.5	34.2	33.5	11.6	13.1	8.2	4.9	16.3	10.6	3.4

**1: Central Avenue & 14th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.9

**2: Central Avenue & 13th Avenue NE Performance by movement**

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1		0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	18.9		9.1	0.5	0.7	7.2	1.6	2.7

**3: Tyler Street NE & 14th Avenue NE Performance by movement**

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	1.9	0.0	4.1	3.0	1.3

**4: Tyler Street NE & 13th Avenue 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	0.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.5	6.3	3.7	5.3	6.3	3.7	1.7	0.4	0.2	2.6	0.9	0.9

**4: Tyler Street NE & 13th Avenue NE Performance by movement**

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	2.6

**5: Tyler Street NE & Site Access Performance by movement**

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.7	4.1	1.7	0.5	0.1	0.1	2.1

**Total Network Performance**

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	12.6

**Intersection: 1: Central Avenue & 14th Avenue NE**

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	121	109	165	143	220	180
Average Queue (ft)	53	44	92	74	129	65
95th Queue (ft)	100	88	143	136	204	149
Link Distance (ft)	282	153	581	581	764	764
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Central Avenue & 13th Avenue NE**

Movement	WB	NB	SB	SB
Directions Served	LR	TR	LT	T
Maximum Queue (ft)	128	13	78	37
Average Queue (ft)	60	1	21	1
95th Queue (ft)	113	8	61	19
Link Distance (ft)	247	653	581	581
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 3: Tyler Street NE & 14th Avenue NE**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	18	62
Average Queue (ft)	1	32
95th Queue (ft)	9	54
Link Distance (ft)	115	366
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 4: Tyler Street NE & 13th Avenue NE**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	85	70	54	25
Average Queue (ft)	45	29	8	3
95th Queue (ft)	71	57	36	17
Link Distance (ft)	247	90	186	163
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 5: Tyler Street NE & Site Access**

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	79	43
Average Queue (ft)	39	9
95th Queue (ft)	63	33
Link Distance (ft)	174	163
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Network Summary**

Network wide Queuing Penalty: 0