Farmington Technology Park

FINAL ALTERNATIVE URBAN AREAWIDE REVIEW

OCTOBER 2024

PREPARED FOR:

CITY OF FARMINGTON MINNESOTA

PREPARED BY:

Kimley»Horn

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Final Alternative Urban Areawide Review

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

1. PROJECT TITLE

Farmington Technology Park

2. PROPOSER

Proposer: Tract Management Company, LP
Contact Person: Kristin Dean
Address: 3300 E. 1st Ave, Suite 600
City, State, ZIP: Denver, CO 80206
Email: kristin.dean@tract.com

3. RGU

RGU: City of Farmington
Contact Person: Tony Wippler
Title: Planning Manager
Address: 430 Third St
City, State, ZIP: Farmington, MN 55024
Phone: 651-280-6800
Email: twippler@farmingtonmn.gov

4. REASON FOR PREPARATION

AUAR Guidance: Not applicable to an AUAR.

5. PROJECT LOCATION

County: Dakota
City/Township: Farmington
PLS Location (¼, ¼, Section, Township, Range): Section 5, Township 113N, Range 19W
Watershed (81 major watershed scale): Mississippi River & Lake Pepin
Tax Parcel Numbers: 140050001012, 070050076011, 070050076012
At a minimum, attach each of the following to the AUAR:

- **US Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries** (see **Figure 1)**
- **Map depicting the boundaries of the AUAR and any subdistricts used in the AUAR analysis** (see **Figure 2** through Figure **4**)
- List of data sources, models, and other resources (from the Item-by-Item Guidance: Climate Adaptation and Resilience or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in Item 7)
- **Cover type map as required for Item 8** (see **Figure 6**)
- **Land use and planning and zoning maps as required in conjunction with Item 10** (see **Figure 7**, **Figure 8**, and **Figure 9**)

Figure 1: USGS Map

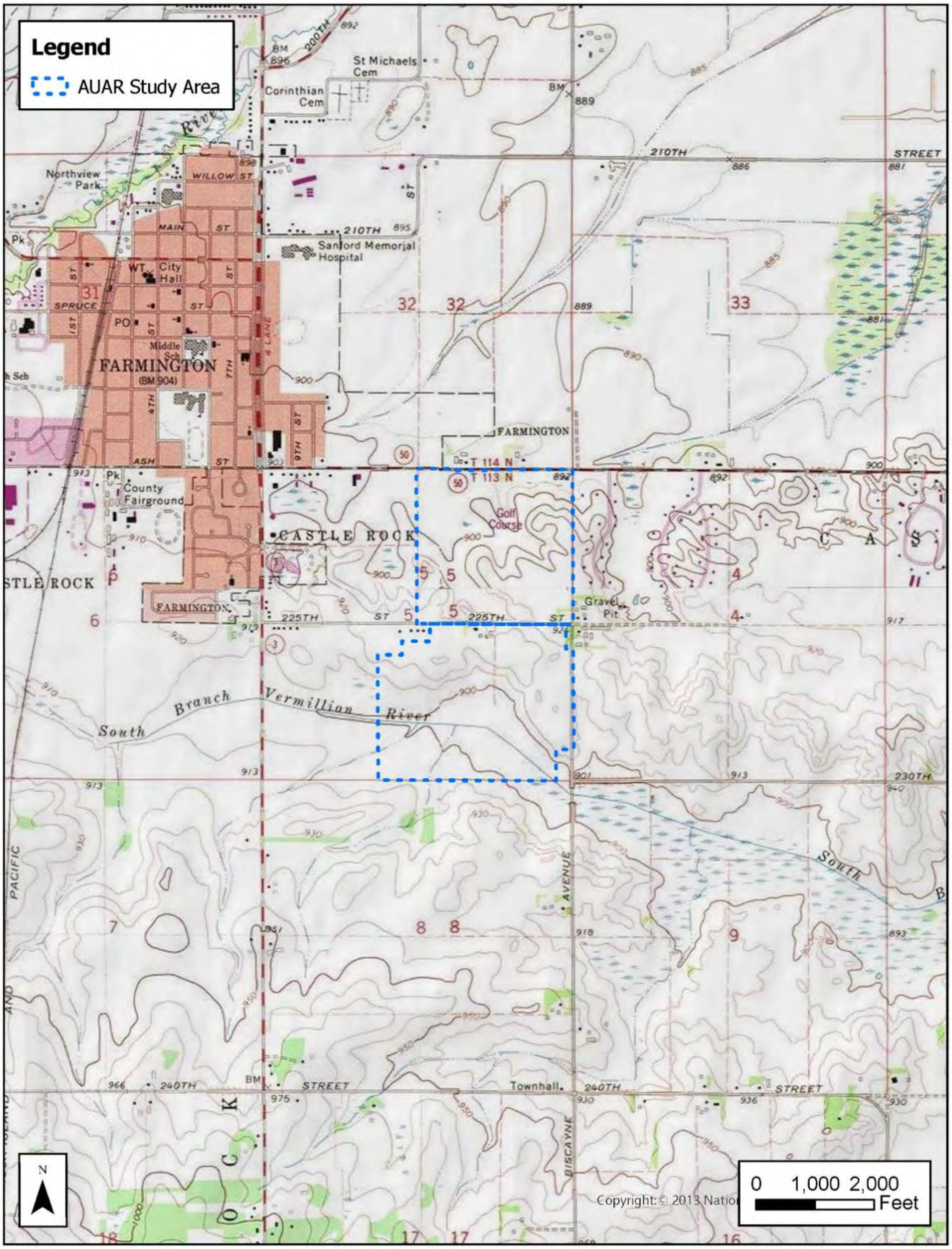
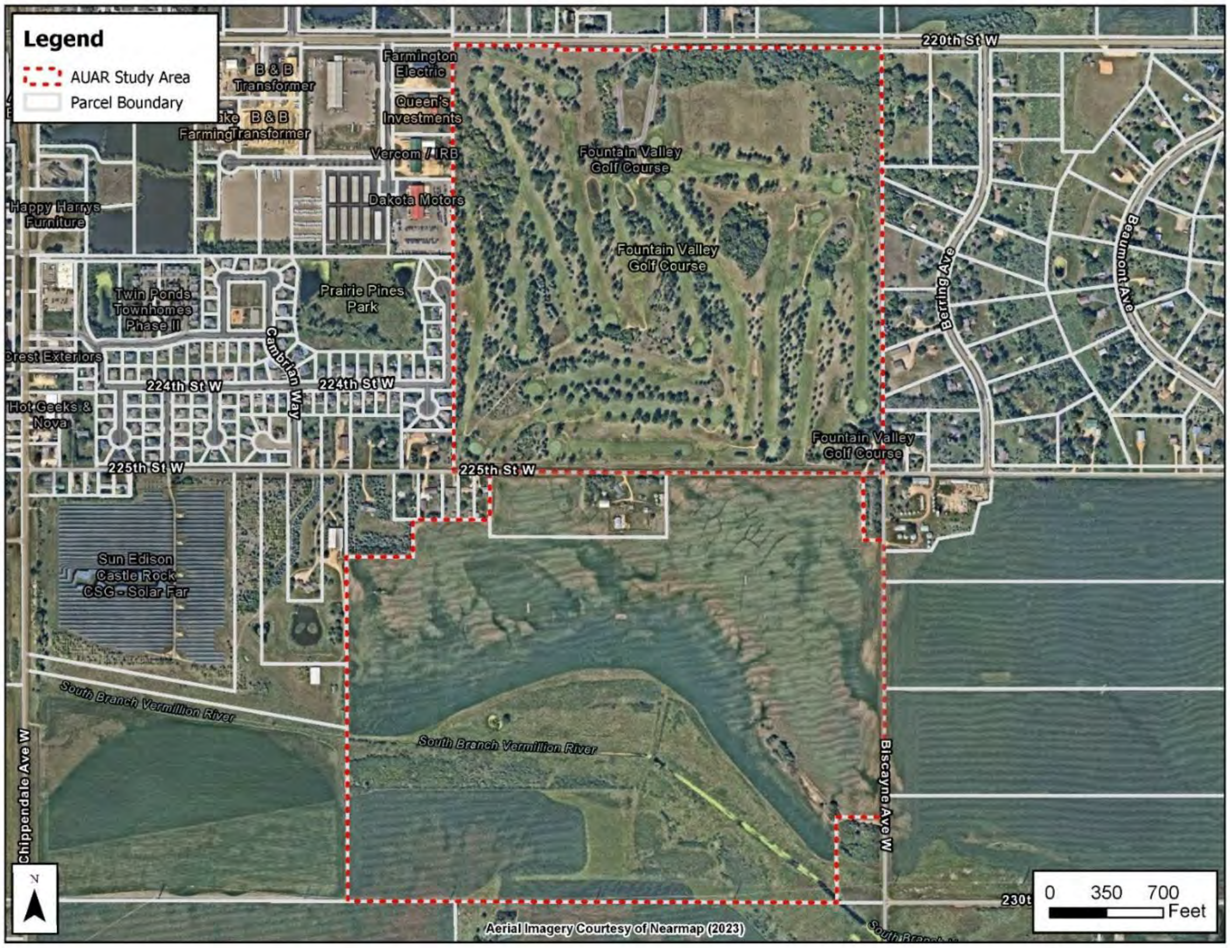


Figure 2: AUAR Study Area



6. PROJECT DESCRIPTION

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

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

The AUAR study area encompasses an area totaling approximately 343 acres on three parcels in the City of Farmington, Dakota County, Minnesota (shown on **Figure 2**). Tract Management Company, LP is proposing to redevelop the study area from existing agriculture and golf course use to data center uses.

Development Scenarios

The development scenarios, Scenario 1 and Scenario 2, are outlined in **Table 1**. Scenario 1 includes multiple buildings for a total of 2.53 million square feet of proposed light industrial development (see **Figure 3**). Scenario 2 consists of up to 675 residential units, 100,000 square feet of commercial space, and agricultural land (see **Figure 4**).

The intent of the AUAR is to recognize the worst-case potential impacts and identify mitigation measures that may be taken to compensate for those impacts. Development of the study area would include new infrastructure, including water service, sewer, stormwater, streets, and utilities. All new services would be extensions to existing infrastructure or upgrades to existing systems to support the new development.

Scenario 1

Scenario 1 represents proposed technology park development. Construction is anticipated to begin in 2025 (see **Figure 3**).

Scenario 2

Scenario 2 represents proposed residential and commercial development. Construction is anticipated to take place over multiple phases from 2024 to 2040 (see **Figure 4**).

Table 1: Development Scenarios

Component	Scenario 1	Scenario 2
Industrial	2.53 million sq ft	-
Residential	-	675 units
Commercial	-	100,000 sq ft
Park/Open Space[1]	-	17.0 acres

[1] Land Dedication Required For Parks, Trails And Open Space: Minnesota Statutes Annotated section 462.358, subdivision 2b provides that municipal subdivision regulations may require that a reasonable portion of any proposed subdivision be dedicated to the public or preserved for conservation purposes or for public use as parks, playgrounds, trails, wetlands, or open space, and that the municipality may alternatively accept an equivalent amount in cash.

Figure 3: Development Scenario 1

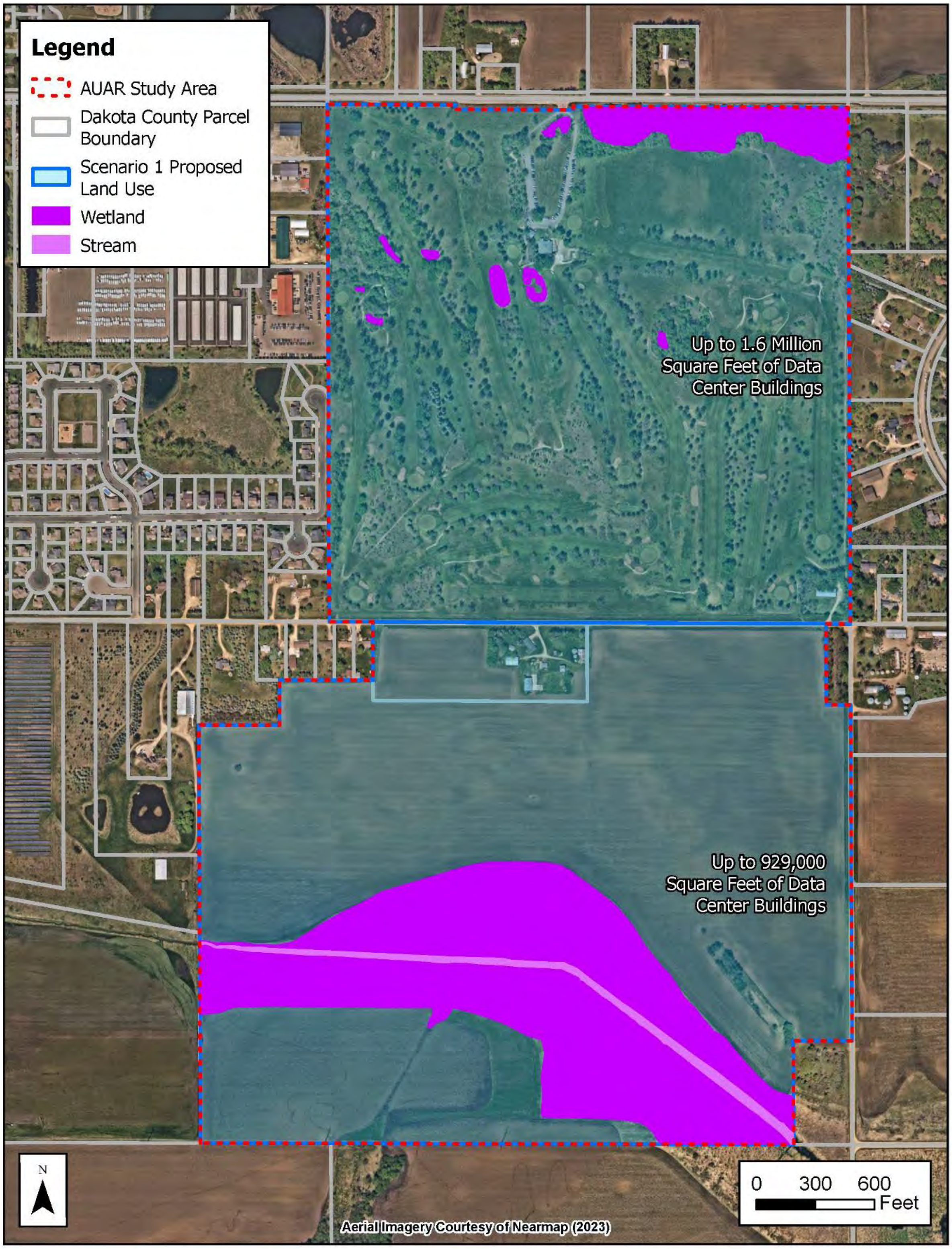
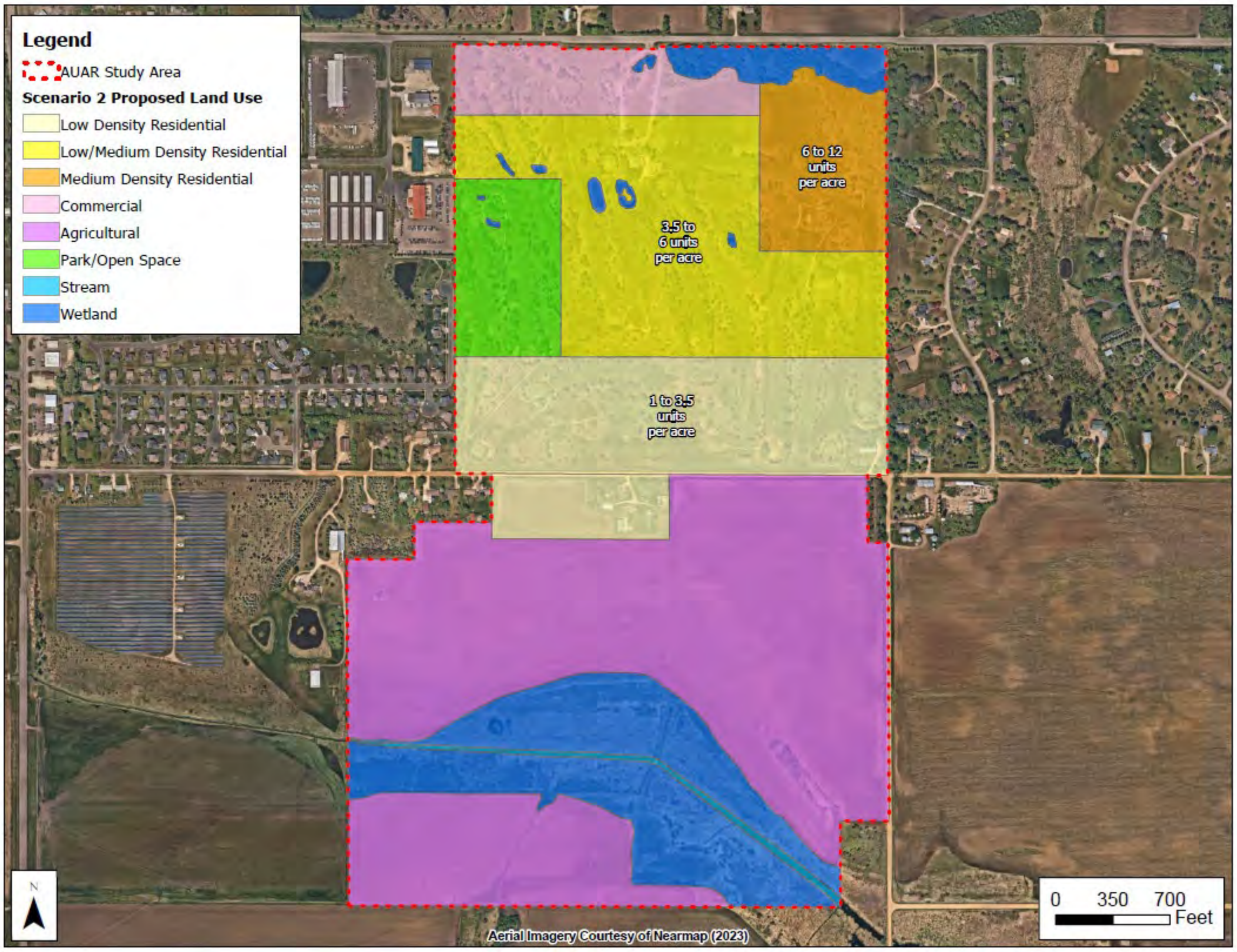


Figure 4: Development Scenario 2



7. CLIMATE ADAPTATION AND RESILIENCE

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

Trends in temperature, precipitation, flood risk, and cooling degree days are described below for the general project location. Some of the climate projections summarized below use shared socioeconomic pathways (SSPs) or representative concentration pathways (RCP) which are greenhouse gas concentration scenarios used by the Intergovernmental Panel on Climate Change. SSP 245 and RCP 4.5 are intermediate scenarios in which emissions decline after peaking around 2040, and SSP 370 and RCP 8.5 are high-emissions scenarios in which emissions continue to rise through the 21st century.

Temperature

According to the Minnesota Climate Mapping and Analysis Tool (CliMAT), the annual daily average temperature in the study area from 1995 to 2014 was 45.4°F[2]. The annual daily average temperature in the study area is projected to increase to 49.2°F from 2040 to 2059 under an intermediate emissions pathway (SSP 245). In 2080-2099, annual daily average temperature is projected to further increase to 52.2°F and 54.5°F under an intermediate (SSP 245) and high emissions pathway (SSP 370), 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, the AUAR study area is located in an area of low to medium heat vulnerability.[3]

Precipitation

According to the Minnesota CliMAT, historic average precipitation in the study area between 1995 and 2014 was approximately 34.2 inches. Average annual precipitation in the study area from 2040-2059 is projected to be 34.8 inches under SSP 245. From 2080-2099, average annual precipitation is projected to be 33.3 inches under SSP 245 and 33.5 inches under SSP 370.

According to the EPA Climate Resilience Evaluation and Awareness Tool (CREAT) Climate Change Scenarios Projection Map, there is a projected 2.9% to 13.7% increase in 100-year storm intensity by 2035 and a projected 5.6% to 26.6% increase in 100-year storm intensity by 2060[4].

Flood Risk

In many places, climate change is exacerbating the frequency and intensity of the extreme rainfall events and associated flooding. According to the Metropolitan Council Localized Flood Map Screening Tool, a tool that identifies potential surface flooding locations, the study area is located within Primary, Secondary, Tertiary, and Shallow Flood Impact Zones (FIZ) as shown in **Figure 5**.[5] Primary, Secondary, and Tertiary FIZ describe the first areas to fill with water during a flood event, with Primary filling first, followed by Secondary and Tertiary. Shallow FIZ are separate low areas generally considered low risk, but this depth may still be a concern for certain types of infrastructure.

[2] Minnesota CliMAT. University of Minnesota. Available at https://app.climate.umn.edu/?output_type=modelVal&scenario=ssp370_2080-2099&model=ensemble&variable=tmax-degF&time_frame=yearly&aoi=none#intro_pane

[3] Extreme Heat Map Tool, Metropolitan Council. Available at https://metrocouncil.org/Communities/Planning/Local-Planning-Assistance/CVA/Extreme-Heat.aspx

[4] CREAT Climate Change Scenarios Projection Map. US EPA. Available at https://www.arcgis.com/home/item.html?id=3805293158d54846a29f750d63c6890e

[5] Localized Flood Map Screening Tool. Metropolitan Council. Available at https://metrocouncil.org/Communities/Planning/Local-Planning-Assistance/CVA/Tools-Resources.aspx

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 5 cooling degree days.[6] Cooling degree days are used as a proxy to estimate cooling needs for buildings.

According to Heat Vulnerability in Minnesota, the number of cooling degree days in 2019 for Dakota County was 424. The number of cooling days in 2050 for Dakota County is projected to be 505 and 652 for RCP 4.5 and 8.5, respectively.[7]

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

Table 2: Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations (Scenario 1 and Scenario 2)
Project Design	Aspects of building architecture/materials choices and site design may impact urban heat island conditions in the surrounding area, including changing climate zones, temperature trends, and potential for extended heat waves.	In the coming decades, the location of the study area is anticipated to experience: ● Increased annual temperatures ● Increased annual precipitation and more frequent heavy rainfall events ● Increased freeze thaw cycles ● Medium urban heat island effect	● Energy end-use efficient appliances and equipment and energy efficient lighting will be incorporated into building design ● Building shells will be energy efficient ● Proposed native trees and landscaping will reduce runoff and mitigate heat island effect ● Parking areas will be evaluated to potentially reduce impervious areas within the AUAR Study Area. ● Water efficient design will be incorporated in landscaping

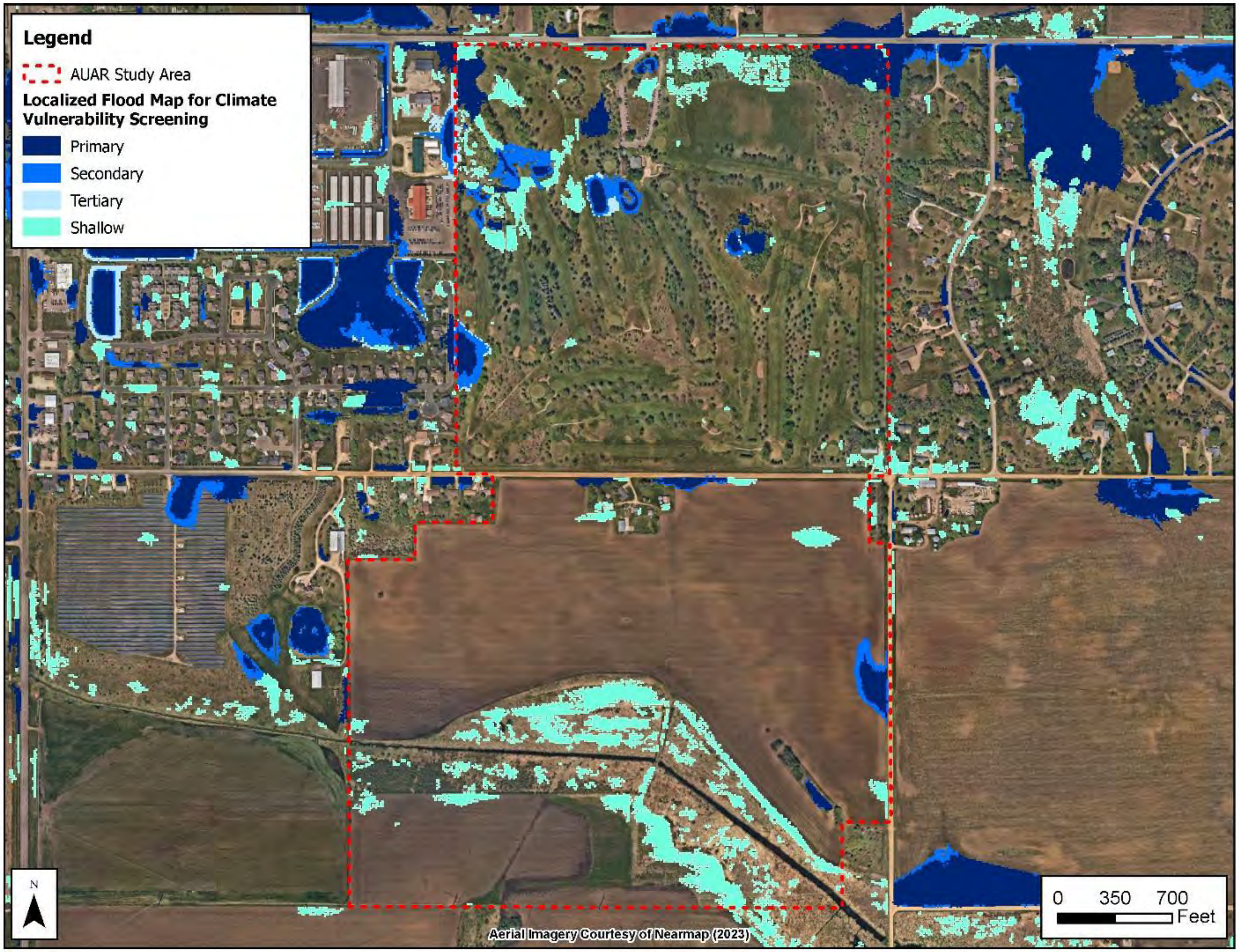
[6] "What Are Heating and Cooling Degree Days," National Weather Service. Available at https://www.weather.gov/key/climate_heat_cool.

[7] Heat Vulnerability in Minnesota. Minnesota Department of Health and the University of Minnesota. Available at https://maps.umn.edu/climatehealthtool/heat_app/.

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations (Scenario 1 and Scenario 2)
Land Use	No critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed. Portions of the study area are within FEMA 100-Year floodplains.	Portions of the proposed development may experience flooding during extreme rain events.	Design of the site and stormwater management facilities will be completed to reduce the risk of flooding in the AUAR study area. Infiltration areas will be used to improve water quality and stormwater runoff in the project vicinity.
Water Resources	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence water resources.	Water resources in the general project area may become warmer, more polluted, and change in volume due to increased temperatures and runoff. There may be more evaporation and water available when it rains leading to an increase in the flood potential. It is projected that there will be more severe storm events with high, intense rain amounts which will require drainage systems to be adequately maintained to accommodate for the increase in water volume.	• Developer will consider using native plants and perennials for landscaping and stormwater features will absorb water and reduce the water demand for irrigation • Developer will use native plants and perennials for landscaping within water resource buffers • Water reuse systems may be implemented to reduce water usage • Stormwater BMP's shall be designed to meet City of Farmington criteria for rate control and runoff volume reduction and criteria for MPCA water quality requirements

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations (Scenario 1 and Scenario 2)
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.	The proposed development is not anticipated to generate hazardous waste or materials.	Not applicable
Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence the local species and suitable habitat.	Suitable habitat for species may become unsuitable due to land use changes, increased temperature, and increased runoff	Climate-appropriate native plantings and stormwater BMPs will provide suitable habitat for small mammals, insects, and bird species.

Figure 5: Flood Impact Zones



8. COVER TYPES

AUAR Guidance: The following information should be provided:

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

The AUAR study area is approximately 343 acres and contains agricultural land and a golf course. There are several buildings and structures within the study area. Existing cover types within the study area are shown in **Table 3** and on **Figure 6** and were determined by reviewing 2024 aerial photography.

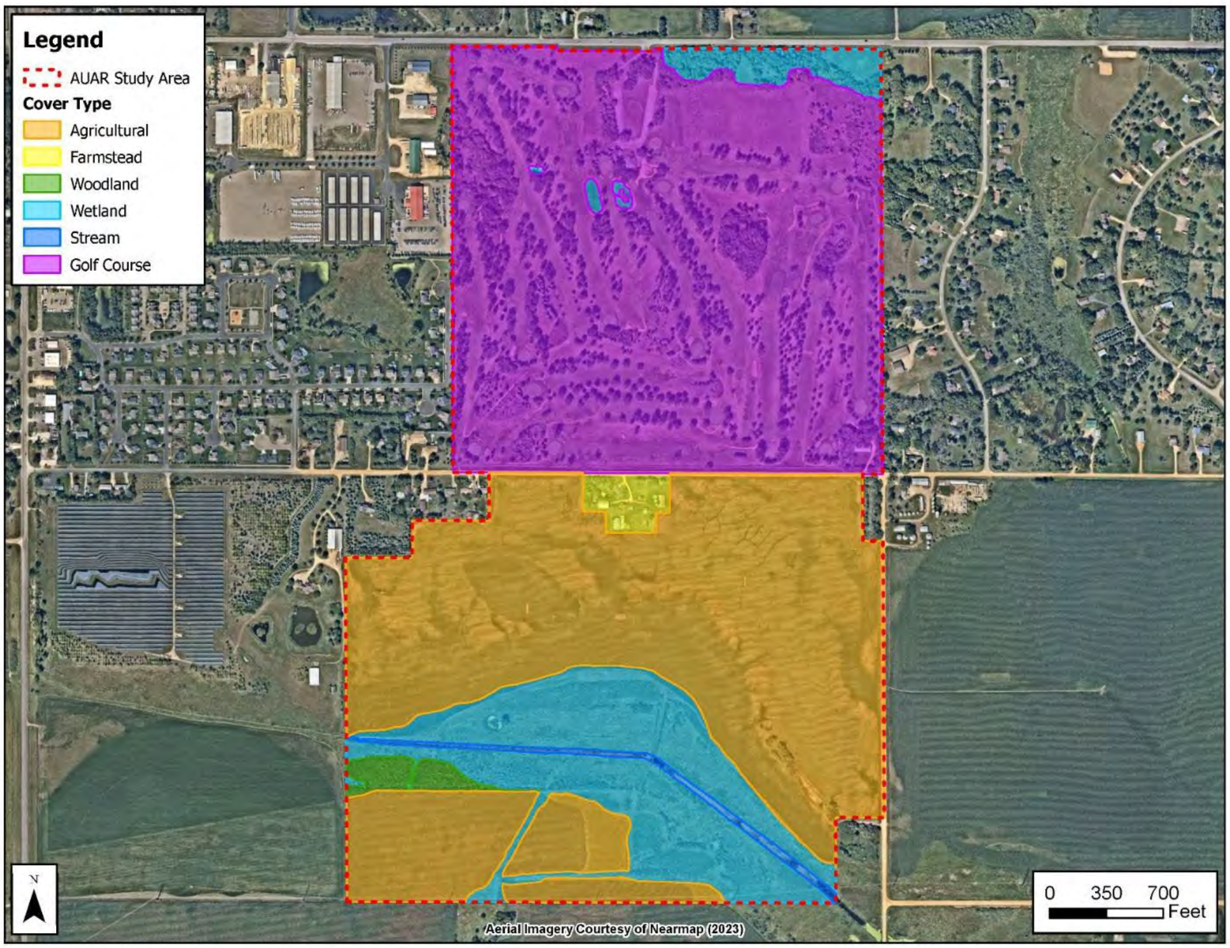
Table 3: Existing Cover Types

Cover Type	Existing (acres)	Scenario 1 (acres)	Scenario 2 (acres)
Wetlands and Shallow Lakes (less than 2 meters deep)	51.53	51.53	51.53
Rivers/Streams	2.59	2.59	2.59
Wooded/Forest	3	1.5	1.5
Farmstead	3.86	-	3.86
Agricultural Land	134	-	134
Lawn/Landscaping	148.02	116.78	82.52
Green Infrastructure (total from Table 4)	-	7.0	3.5
Impervious Surface	-	149.6	58
Stormwater Pond (wet sedimentation basins)	-	14.0	5.5
Total	**343 acres**	**343 acres**	**343 acres**

Table 4: Green Infrastructure

Green Infrastructure	Before (acres)	Scenario 1 (acres)	Scenario 2 (acres)
Constructed Infiltration Systems (infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, vegetated swales with impermeable check dams)	0	7.0	3.5
Total	**0**	**7.0**	**3.5**

Figure 6: Cover Types



9. PERMITS AND APPROVALS REQUIRED

AUAR Guidance: A listing of major approvals (including any comprehensive plan amendments and zoning amendments) and public financial assistance and infrastructure likely to be required by the anticipated types of development projects should be given for each major development scenario.

This list will help orient reviewers to the framework that will protect environmental resources. The list can also serve as a starting point for the development of the implementation aspects of the mitigation plan to be developed as part of the AUAR.

Table 5: Anticipated Permits and Approvals

Unit of Government	Type of Application	Status
Federal		
US Army Corps of Engineers	Section 404 Permit	To be applied for, if applicable
State		
Minnesota Pollution Control Agency	Section 401 Water Quality Certification	To be applied for, if applicable
	National Pollutant Discharge Elimination System Stormwater Permit for Construction Activities	To be applied for, if applicable
	Sanitary Sewer Extension Permit	To be applied for, if applicable
	Construction Contingency Plan and Response Action Plan approval	To be applied for, if applicable
	Notice of Intent of Demolition	To be applied for, if applicable
	Industrial Wastewater Permit	To be applied for, if applicable
	Significant Industrial User Permit	To be applied for, if applicable
	Environmental Assessment Worksheet[8]	To be applied for, if applicable
Minnesota Department of Natural Resources	Temporary Groundwater Appropriation Permit for Construction Dewatering	To be applied for, if applicable
	Water Appropriation Permit	To be applied for, if applicable
Minnesota Department of Health	Water Main Installation Permit	To be applied for, if applicable
Minnesota Pollution Control Agency	Air Permit	To be applied for, if applicable
Regional		
Metropolitan Council	Sewer Extension Permit	To be applied for, if applicable
	Sewer Connection Permit to Connect	To be applied for, if applicable
	Direct Connection Permit	To be applied for, if applicable
	Industrial Waste Discharge Permit	To be applied for, if applicable
County		
Dakota County	Building Permit	To be applied for, if applicable
	Right-of-Way Permit	To be applied for, if applicable

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

Unit of Government	Type of Application	Status
Watershed District		
Vermillion River Watershed Joint Powers Organization	Review of Diversions, Intercommunity flows (upon request from adjoining communities), project site size of 40 acres or more, and projects that are adjacent to or appear to impact watercourses or unique natural resources	To be applied for, if applicable
City		
City of Farmington	Preliminary/Final Plat	To be applied for, if applicable
	Sign Permit	To be applied for, if applicable
	Site Plan Approval	To be applied for, if applicable
	Building Permit	To be applied for, if applicable
	Erosion Control, Grading, and Stormwater Permit	To be applied for, if applicable
	Right-of-Way permit	To be applied for, if applicable
	WCA Review and Approval	To be applied for, if applicable
	Wetland Buffer Zone Management Plan approval	To be applied for, if applicable
	Zoning Map Amendment	To be applied for, if applicable
	Demolition Permit	To be applied for, if applicable
	AUAR Approval	In process
	Comprehensive Plan Amendment	To be applied for, if applicable
	Re-Zoning Application	In process

10. LAND USE

a. Describe:

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

The AUAR study area is located in a semirural area south of 220th Street W in Farmington, Minnesota. The study area consists of three existing parcels. The study area is bisected by 225th Street West, with a farmstead and agricultural land to the south, and a golf course to the north. Commercial and residential areas are present west and east of the golf course. West of the farmstead is agricultural land and a small solar farm, and east of the farmstead is agricultural land. North and south of the study area is agricultural land.

There is one park, Prairie Pines Park, west of the study area.

According to the Natural Resources Conservation Service (NRCS), 42.8 percent of the study area is considered prime farmland, 12.8 percent of the study area is considered farmland of statewide importance, and the remainder of the study area is considered prime farmland if protected from flooding. Impacts to farmland will occur as a result of

Scenario 1 and Scenario 2, however, the AUAR Study Area is within the city limits; therefore, no further evaluation or mitigation is required.

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.**

Farmington 2040 Comprehensive Plan

The City of Farmington adopted the *City of Farmington 2040 Comprehensive Plan*[9] in 2019. The Comprehensive Plan designates a specific mix of future land use designations throughout the city and describes Farmington as an "emerging suburban edge" community that is continuing to develop into urbanized levels of development. One of the goals of the Comprehensive Plan update is to "establish the community's long-term vision, guiding principles, goals, policies, and maps to shape and manage future changes in the community." Anticipated phasing for future development in the AUAR study area is predicted to occur between 2020 and 2040. The study area is identified as Agriculture, Low, Low/Medium, and Medium Density Residential, Commercial, and Parks/Open Space in the 2040 future land uses, see **Table 6.** The City is currently in the process of completing an off-cycle comprehensive plan that will be complete in the fall of 2024. This comprehensive plan update was initiated in 2023 and includes updates across the City. The comprehensive plan update will not be fully adopted until later 2024.

Table 6: Farmington 2040 Comprehensive Plan designations within the AUAR Study Area

Future Land Use Designation	Purpose
Agriculture	Intended to preserve land where agricultural uses are currently occurring, rural residential not connected to urban services, as well as to create an urban reserve for such time when there is a need for additional urban development and urban services may be extended.
Low Density Residential	Land guided for development of single-family detached dwellings, including manufactured homes, connected to urban services with a density range of 1.0 to 3.5 units per net acre.
Low/Medium Density Residential	Land guided for a variety of low to medium density housing types, including single-family detached dwellings, duplexes, and twin homes that are connected to urban services with a density range of 3.5 to 6.0 dwelling units per net acre. It also incorporates existing older residential development in the city.

[9] Source: City of Farmington 2040 Comprehensive Plan. Available at: https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_745675/File/Government/Departments/PlanningandZoning/2040/2040CompPlan_Dec2020.pdf

Future Land Use Designation	Purpose
Medium Density Residential	Land guided for medium density multi-family housing types, including townhouses and row houses, in areas with access to jobs, services, public facilities, transit and urban services with a density range of 6.0 to 12.0 dwelling units per net acre.
Commercial	Land guided for commercial businesses, such as retail sales of goods, services, food and beverage, entertainment, and offices.
Parks/Open Space	Land guided for recreational and leisure opportunities through publicly owned land and recognizes vital environmental resources including steep slopes, wetlands, and floodplains.

Dakota County 2040 Comprehensive Plan

The Dakota County 2040 Comprehensive Plan[10] is used to guide the County's housing, transportation, county facilities, parks, and land use planning over the next 20 years. Farmington is classified as an emerging suburban edge community. Communities with the emerging suburban edge classification include areas managing rapid growth and change. These areas have significant amounts of land for future development. Primary concerns in suburban edge communities include protecting water supplies and preserving open space.

In Dakota County, cities independently administer zoning and comprehensive planning land use controls; the County does not have land use or zoning authority in Farmington.

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

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

Existing Zoning

According to the City of Farmington Zoning Map[11] (**Figure 9**), the majority of the study area is zoned as R-2, Low/Medium Density Residential. The study area is also zoned as R-1 (Low Density Residential), R-3 (Medium Density Residential), P/OS (Parks/Open Space), and B-1 (Highway Business). The AUAR study area is currently used as a golf course and for agricultural purposes (crop cultivation), but in the future, agricultural land in the City of Farmington is expected to be developed for different land uses.

[10] Source: Dakota County 2040 Comprehensive Plan. Available at: https://www.co.dakota.mn.us/Government/Planning/CompPlan/Documents/2040ComprehensivePlanAmendment.pdf
[11] Source: City of Farmington Zoning Map. Available at: https://experience.arcgis.com/experience/1615bea8f9cd47199e8432980612823e

Any new development, redevelopment, is required to be consistent with the current City's Comprehensive Plan.

FEMA National Flood Hazard

According to the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (panel numbers 27037C0219E, 27037C0238E, 27037C0360E, and 27037C0380E, effective 12/02/2011), the majority of the AUAR study area is located in an area of minimal flooding area. The southern portion of the study area is located in Zone AE, a 100-year floodplain. No impacts to the floodplain are anticipated.

Vermillion River Watershed Joint Powers Organization

The study area is located within the Vermillion River watershed, which is administered by the Vermillion River Watershed Joint Powers Organization (VRWJPO). The VRWJPO seeks to protect surface water, ground water, and natural resources within the Vermillion River watershed. Jurisdiction of the VRWJPO is provided under the Metropolitan Surface Water Management Act and the Metropolitan Area Local Water Management Rules. A Water Quality Corridor extends through the southern portion of the AUAR study area. This type of waterway classification has specific vegetated buffer or setback requirements that could have an impact to development scenarios evaluated in the AUAR.

Farmington Surface Water Management Plan

The Farmington Surface Water Management Plan Wetland Classifications Map[12] identifies wetlands within the study area. This plan lays out the City's rules regarding development within and near wetlands. Development adjacent to wetlands must adhere to several standards listed in Farmington Wetland Ordinance 10-6-17 Wetland Standards including the buffer width and setbacks listed in **Table 7**. The City of Farmington uses a functional value index to define wetlands classifications. The functional value index is based on a weighted average that incorporates the wetland community and the functional value. Per the Farmington Wetland Ordinance, "To achieve no net loss of wetlands except as authorized by a wetland alteration permit issued by the city, a person may not drain, grade, fill, remove healthy native vegetation, or otherwise alter or destroy a wetland of any size or type. Any alteration to a wetland permitted by a wetland alteration permit, must be fully mitigated so that there is no net loss of wetlands. (Ord. 002-469, 2-19-2002)."

[12] Available at: https://cityoffarmington.hosted.civiclive.com/government/departments/engineering/engineering_comprehensive_plans

Table 7: Wetland Buffer Strips and Setbacks[13]

Wetland Classification	Functional Value Index	Average Buffer Width (Feet)	Minimum Buffer (Feet)	Structure Setback from Outer Edge of Buffer (Feet)
Protect	1-0.6	75	75	10
Manage 1	0.59-0.5	50	30	10
Manage 2	0.49-0.3	30	25	10

Shoreland

The development is not located within shoreland.

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

No critical facilities are proposed as part of the project.

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

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

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

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

[13] Source: City of Farmington Wetland Ordinance. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_745675/File/Government/Departments/NaturalResources/Water/WetlandOrdinance.pdf

document must discuss the compatibility of the plan with the various development scenarios studied, with emphasis on any incompatible elements.

Existing Land Use

Scenario 1 and Scenario 2

The existing agricultural land and golf course is expected to transition to different land uses as development in the AUAR study area progresses and an update to the Comprehensive Plan will be needed.

Existing Zoning

Scenario 1 and Scenario 2

Scenario 1 proposes technology park use. A rezoning is needed for the proposed development scenario. Scenario 2 proposes residential, commercial, and agriculture use. These uses would be consistent with the current comprehensive plan.

2040 Comprehensive Plan

The city has certified that the updated 2040 Comprehensive Plan will comply with the requirements set forth in Minnesota Rules, part 4410.3610, subpart 1.

Scenario 1

Scenario 1, which includes technology park use, will require a comprehensive plan amendment. The City is currently working on an off-cycle comprehensive plan amendment which will update the identified zoning and land uses for the properties within the AUAR study area. The southern parcels were annexed into the City in the Spring of 2024 and are currently zoned agricultural use. The comprehensive plan update will amend the land use and zoning for that portion of the study area for industrial use.

Scenario 2

Scenario 2, which includes residential, commercial, and agriculture use, is consistent with the land uses allowed under the comprehensive plan.

Farmington Surface Water Management Plan

Scenario 1 and Scenario 2

Jurisdictional wetlands and wetland buffer areas in the AUAR study area will be avoided to the greatest extent practicable for the development proposed in Scenario 1 and Scenario 2. The development is not anticipating to impose on any wetland buffers.

Prairie Pines Park

The development proposed in Scenario 1 and Scenario 2 will not have impacts on the Prairie Pines Park as it is approximately one-quarter mile from the proposed development site.

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

Scenario 1 would require a rezoning and a comprehensive plan amendment or update. It is anticipated that this will be completed through a Planned Unit Development (PUD) process. An off-cycle comprehensive plan update is currently in process and will be include the needed updates based on Scenario 1. Scenario 2 is in compliance with the current comprehensive plan; therefore, no mitigation would be needed.

Figure 7: Existing Land Use

Figure 8: Future Land Use

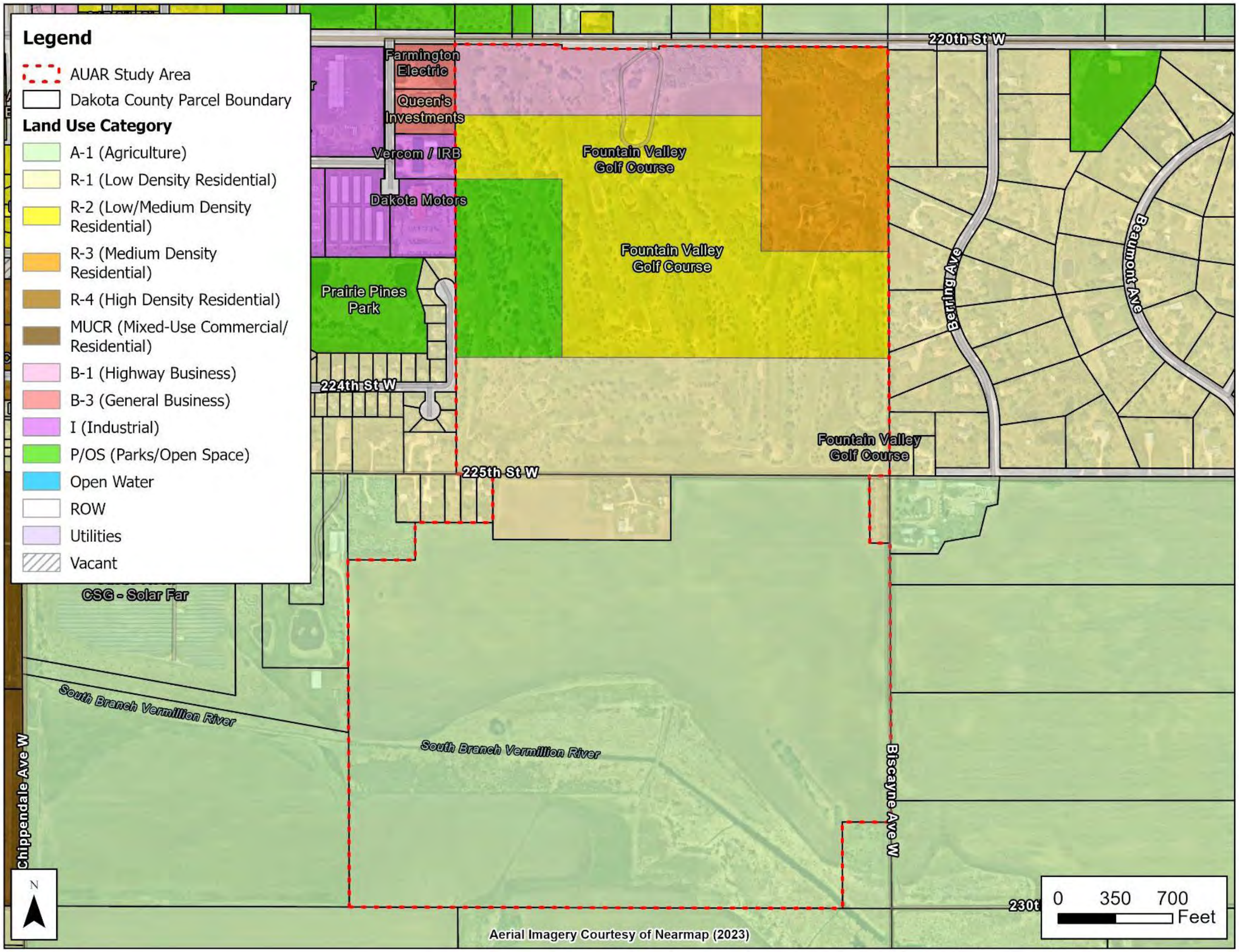
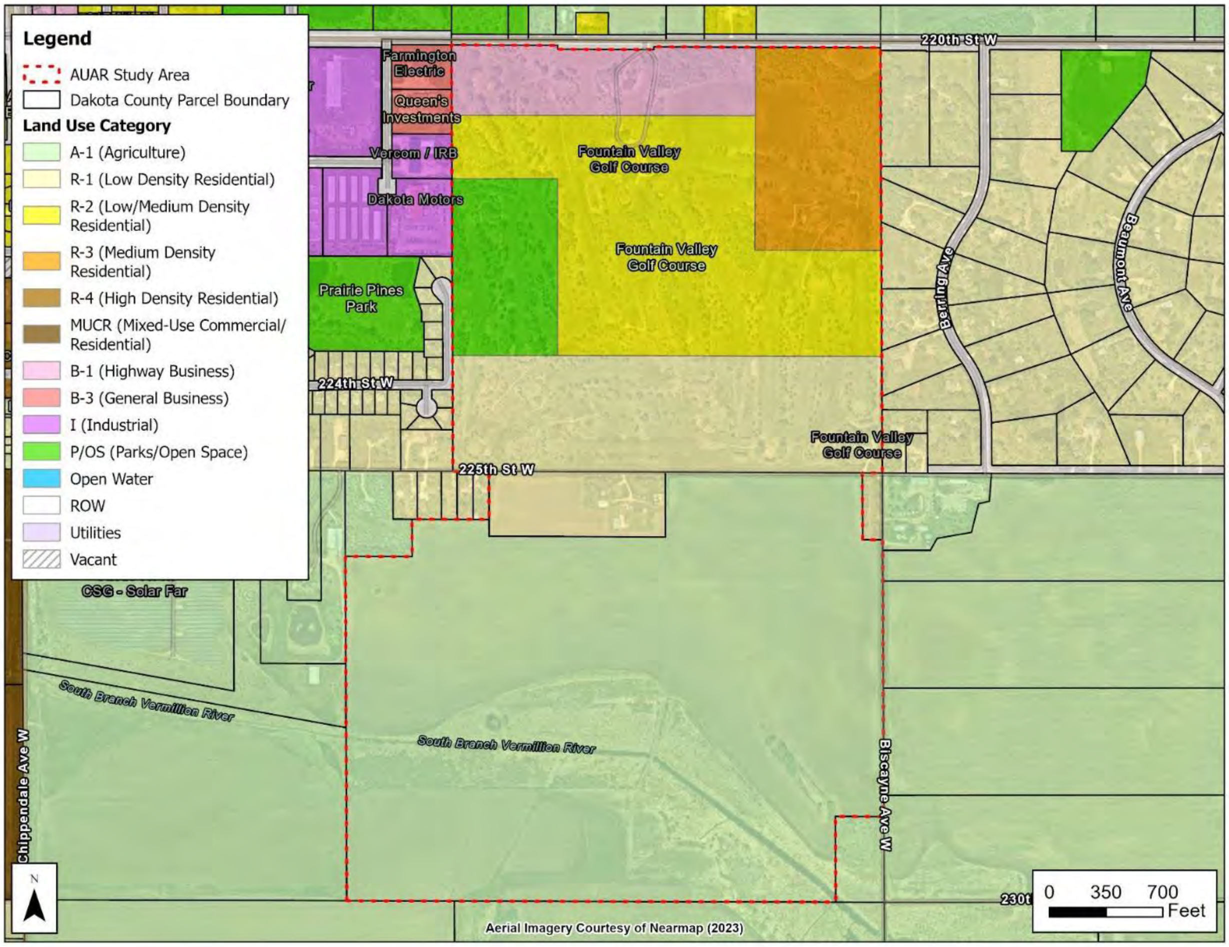


Figure 9: Existing Zoning Map



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.

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

According to the Geologic Atlas of Dakota County, the AUAR study area lies above Paleozoic bedrock. The bedrock formation generally lies within the lower Ordovician system, which consists of dolostone and shaly, including the Shakopee formation, and Oneota dolomite of the Prairie du Chien Group. The mean depth to bedrock is approximately 196 feet below ground surface. Bedrock is composed of sandstone and chert.

There are no known sinkholes or unconfined/shallow aquifers located within the AUAR study area. There are karst conditions located approximately 5,000 feet from the study area.

According to the Minnesota Pollution Control Agency (MPCA), karst is a landscape formed by the dissolution of a layer or layers of soluble bedrock, such as limestone, dolomite, or gypsum. One of the distinctive features of karst landscapes is the potential presence of caves and sinkholes. Cracks and fissures form and grow in the bedrock as runoff passes through the ground, forming passages, caves, and possibly even sinkholes. Prior to development, the study area will be investigated to identify subsurface voids, cavities, fractures, or other discontinuities which could pose an environmental concern or a construction hazard to future development. If karst conditions are found to be present, the project proposer will follow City of Farmington and MPCA design guidelines. Karst landscapes provide conditions where runoff and potential contaminants can flow more easily into groundwater.

According to the Geologic Atlas of Dakota County (Minnesota Geological Survey, 1990), groundwater is present at approximately 20 feet below grade, excluding the wetlands located within the study area. With the proposed stormwater BMPs and proposed construction, no adverse impacts to groundwater are anticipated as a result of the project.

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 11.b.ii.

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

According to the Natural Resources Conservation Service (NRCS) Web Soil, the area comprises 17 different soil types. Soil information is included in **Table 8** and **Figure 10**. The erosion hazard rating included in **Table 8.** indicates the hazard of soil loss from off-road areas after disturbance activities that expose the soil surface. Within the project site, 3.6% of the soil surface is mapped with a “moderate” rating, indicating that some erosion is likely in these areas and that erosion control measures may be needed. The remaining 96.4% of the study area is mapped with a “slight” rating, meaning that erosion is unlikely under ordinary climatic conditions.

Topography within the study area varies from 892 feet in elevation in the northeast corner of the site to 930 feet in elevation in the south-central portion of the site. The northern portion of the study area generally drains to the northeast towards local depressions, or along roadside ditches.

The soils across the AUAR study area primarily consists of hydraulic group B and are well-suited for infiltration, and more specifically biofiltration. Soil infiltration and stormwater management are discussed further in Section 12.

Scenario 1 and 2

Scenario 1 and Scenario 2 will require over 1,000,000 total cubic yards of excavation over 275 acres. Where appropriate, slope stabilization will be provided by means of vegetation establishment, erosion control blankets, or other standard methods of erosion and sediment control. Scenario 1 and Scenario 2 will require compliance with the VRWJPO and the City of Farmington's erosion and sediment control standards.

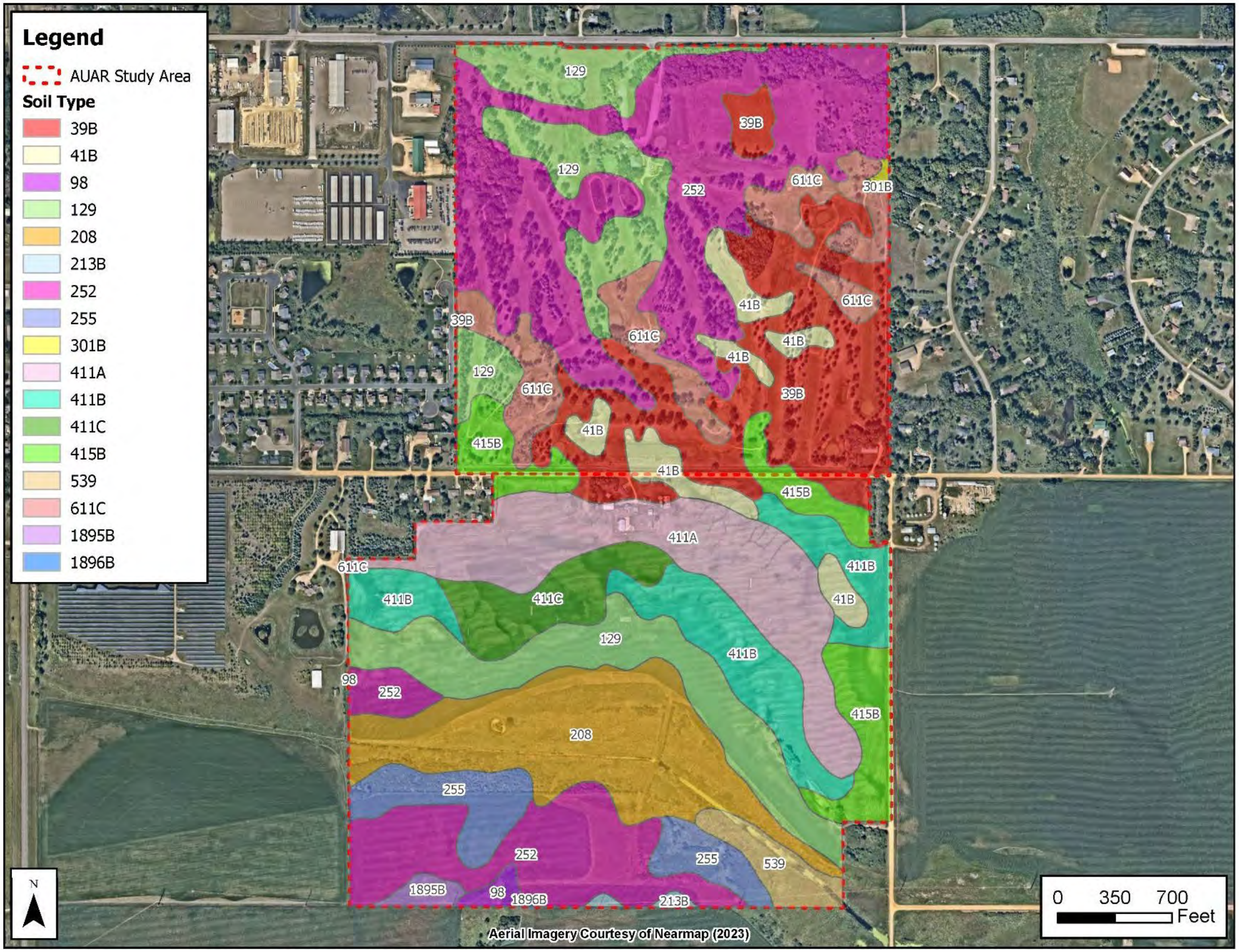
A National Pollutant Discharge Elimination System (NPDES) and Stormwater Pollution Prevention Program Construction Stormwater Permit (SWPPP) will be obtained prior to any earthwork or grading activities within the AUAR study area.

Table 8: Soil Types

Map Unit Symbol	Hydrologic Soil Group	Map Unit Name	Acres in AOI	Percent of AOI	Farmland Classification	Hydric Rating	Erosion Hazard Rating
39B	B	Wadena loam, 2 to 6 percent slopes	43.8	12.6%	All areas are prime farmland	0	Slight
41B	A	Estherville sandy loam, 2 to 6 percent slopes	11.3	3.3%	Farmland of statewide importance	1	Slight
98	B/D	Colo silt loam, occasionally flooded	1.3	0.4%	Prime farmland if protected from flooding or not frequently flooded during the growing season	95	Slight
129	B/D	Cylinder loam, 0 to 2 percent slopes	48.0	13.8%	All areas are prime farmland	15	Slight
208	B/D	Kato silty clay loam	34.3	9.9%	Prime farmland if drained	95	Slight
213B	B/D	Klinger silt loam, 1 to 5 percent slopes	0.7	0.2%	All areas are prime farmland	5	Slight

Map Unit Symbol	Hydrologic Soil Group	Map Unit Name	Acres in AOI	Percent of AOI	Farmland Classification	Hydric Rating	Erosion Hazard Rating
252	B/D	Marshan silty clay loam	87.4	25.1%	Prime farmland if drained	90	Slight
255	B/D	Mayer silt loam	12.7	3.6%	Prime farmland if drained	90	Slight
301B	B	Lindstrom silt loam, till plain, 2 to 6 percent slopes	0.4	0.1%	All areas are prime farmland	5	Moderate
411A	B	Waukegan silt loam, 0 to 1 percent slopes	30.7	8.8%	All areas are prime farmland	0	Slight
411B	B	Waukegan silt loam, 1 to 6 percent slopes	23.5	6.8%	All areas are prime farmland	0	Slight
411C	B	Waukegan silt loam, 6 to 12 percent slopes	10.3	3.0%	Farmland of statewide importance	0	Moderate
415B	B	Kanaranzi loam, 2 to 6 percent slopes	17.5	5.0%	Farmland of statewide importance	0	Slight
539	C/D	Klossner muck, 0 to 1 percent slopes	5.1	1.5%	Farmland of statewide importance	100	Slight
611C	A	Hawick gravelly sandy loam, 6 to 12 percent slopes	19.0	5.5%	Not prime farmland	0	Slight
1895B	B	Carmi loam, 2 to 8 percent slopes	1.7	0.5%	All areas are prime farmland	5	Moderate
1896B	B	Ostrander-Carmi loams, 2 to 6 percent slopes	0.2	0.0%	All areas are prime farmland	0	Slight

Figure 10: Soil Types



12. WATER RESOURCES

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

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

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

Kimley-Horn completed a wetland delineation on May 30 and June 13, 2024, and identified ten wetlands within the study area, described in **Table 10**. A formal wetland approval process will be initiated with Dakota County to review the delineated wetland boundaries and types; a NOD has not yet been issued.

According to the National Hydrography Dataset (NHD), there are three flowline features within the southern portion of the study area. The main flowline transecting the study area east to west is the South Branch Vermillion River. A MPCA 303d Impaired Water is depicted aligning with the mapped NHD feature in the southern portion of the study area, labeled Vermilion River, South Branch (AUID 07040001-706). The Impaired Water designation is described in **Table 9**. A DNR Public Watercourse is depicted aligning with the mapped NHD and impaired water feature, but stops just before the study area, approximately 440 feet southeast of the study area boundary. There is one unnamed DNR Public Water basin within one mile of the study area to the west. The Mississippi River Corridor Critical Area is not within one mile of the AUAR Study Area.

The AUAR study area is located within the Vermillion River Watershed Joint Powers Organization area. The City was issued a MCPA MS-4 permit in 2021 and have adopted water resource standards into their City ordinances. The City has adopted ordinances in conformance with the minimums established by the VRWJPO Standards. As a result, VRWJPO approvals are not required as those requirements will be governed by the City.

Runoff from the study area generally drains northeast towards an unnamed stream (AUID 07040001-668), see **Figure 11**.

Figure 11: Surface Water Resources

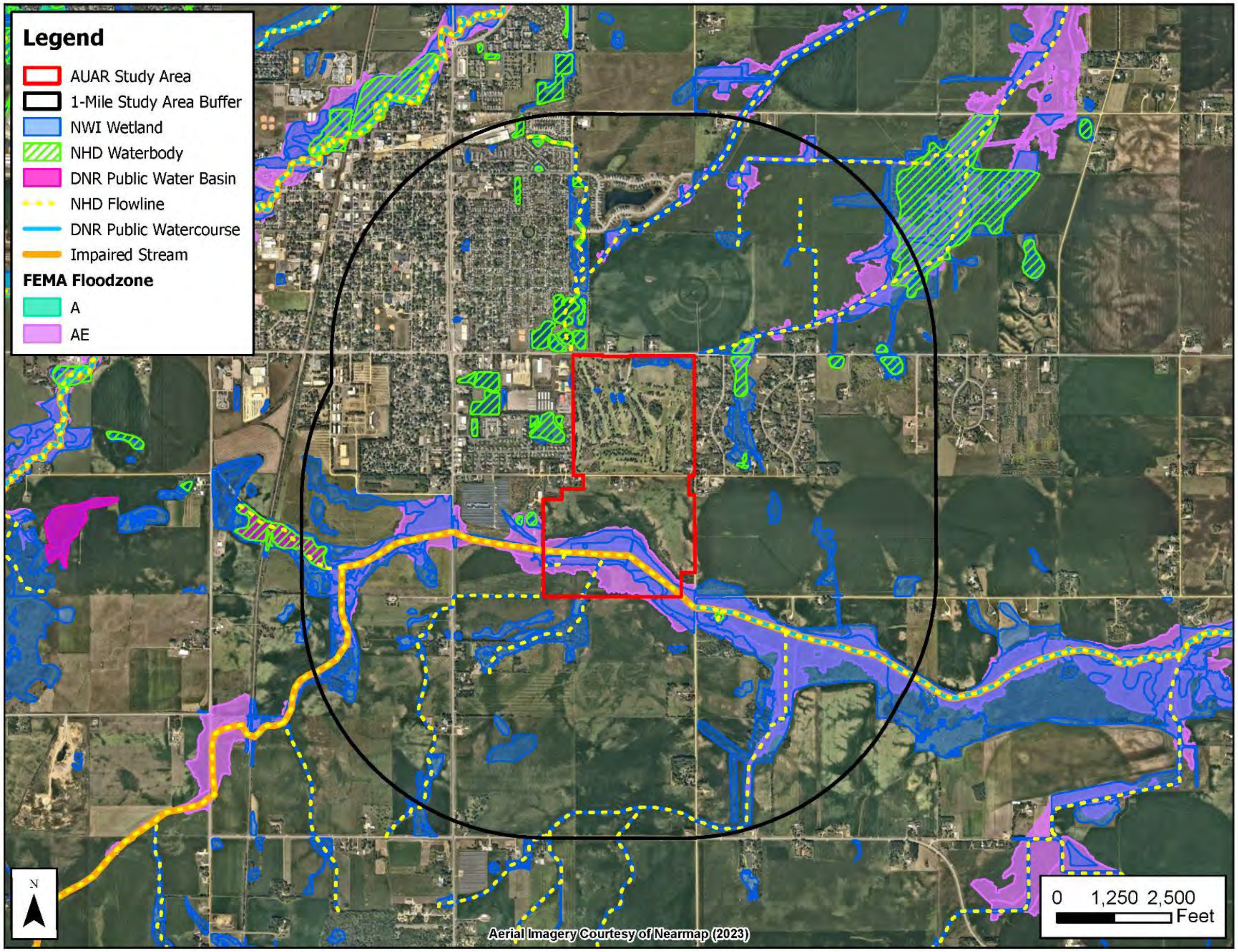


Table 9: Impaired Waters Within One Mile of the AUAR Study Area

Assessment Unit ID	Name	Impaired Used	Total Maximum Daily Loads (TMDLs)
07040001-706	Vermillion River, South Branch	Aquatic recreation	Approved for fecal coliform

Figure 12: Wetland Delineation Summary

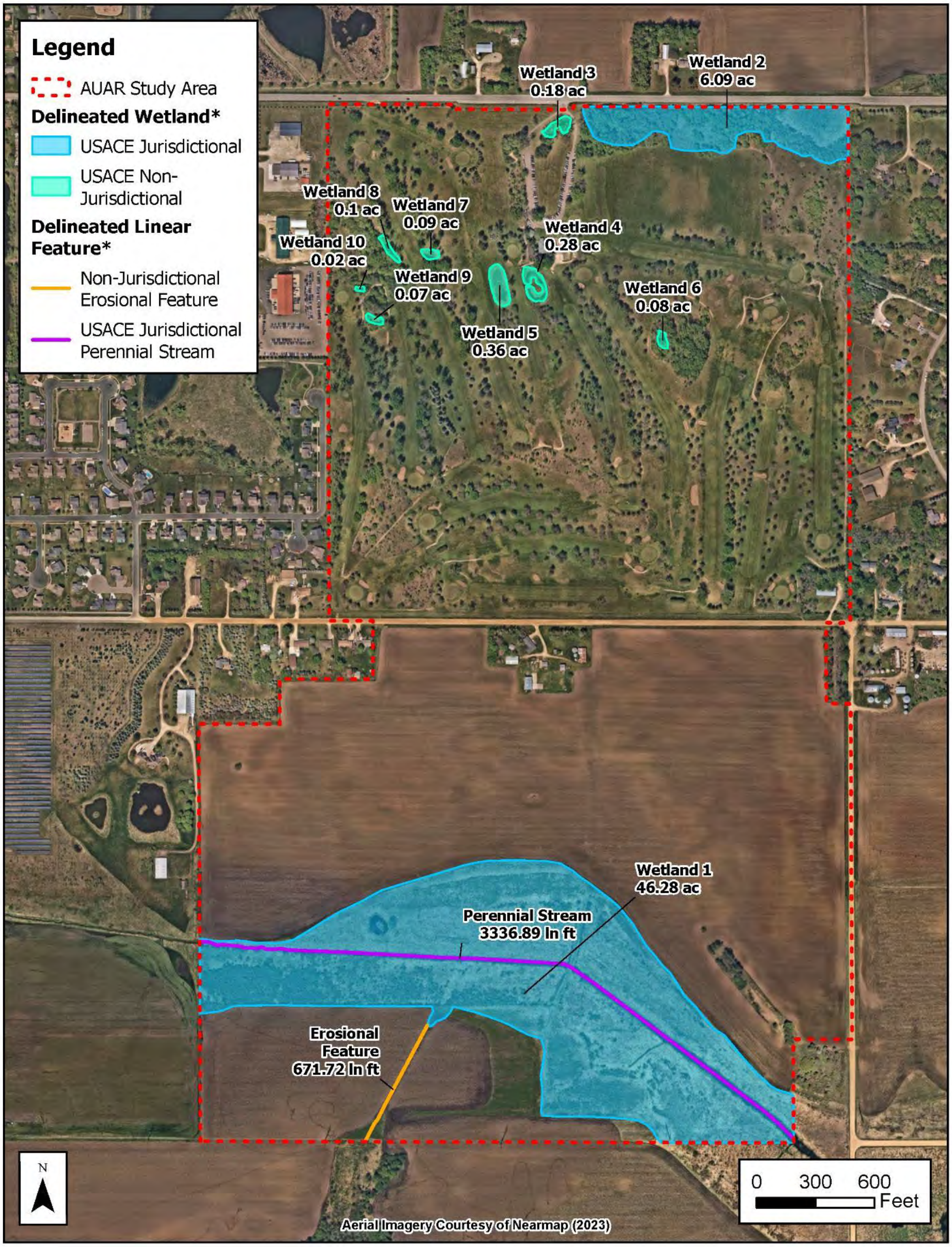


Table 10: Delineation Summary

Resource ID	Wetland Plant Community	C-39 Type	Notes	Wetland Classification[14]
Wetland 1	Seasonally Flooded Basin/Floodplain Wet Meadow Shrub/Carr	Type 1 Type 2 Type 6	Wetland complex located in the southern portion of the study area, in the floodplain of the South Branch Vermillion River. The complex consisted of fresh wet meadow plant community on the margins adjacent to the agricultural fields and shrub/carr plant communities in the southeast portion of the wetland and along the banks of the South Branch Vermillion River.	Protect/Manage 1
Wetland 2	Seasonally Flooded Basin Fresh Wet Meadow	Type 1 Type 2	Wetland complex located in a wooded area in the northeast corner of the study area. The complex consisted of a seasonally flooded basin within the forested area, as well as a fresh wet meadow where the wooded portion transitions into an open area. The wetland collects runoff from the surrounding landscape.	Manage 1/Manage 3
Wetland 3	Seasonally Flooded Basin	Type 1	Wetland 3 is a seasonally flooded basin located adjacent to the northern boundary of the study area, south of the golf course driveway turn out. The wetland collects runoff from the surrounding golf course and roadway. The wetland does not appear to have any surficial connections.	Manage 1
Wetland 4	Shallow Pond	Type 5	Wetland 4 is an excavated shallow pond, referred to as the Fountain Valley Golf Course Pond. The wetland is located directly south of the golf course clubhouse and collects water from the surrounding golf green. The wetland does not appear to have any surficial connections.	Manage 1
Wetland 5	Shallow Pond	Type 5	Wetland 5 is an excavated shallow pond directly west of Wetland 4. The wetland collects runoff from the surrounding landscape. The wetland does not appear to have any surficial connections.	Manage 1

[14] Wetlands within the study area are classified in the Farmington Local Surface Water Management Plan. Available at: https://cityoffarmington.hosted.civiclive.com/government/departments/engineering/engineering_comprehensive_plans

Resource ID	Wetland Plant Community	C-39 Type	Notes	Wetland Classification[14]
Wetland 6	Seasonally Flooded Basin	Type 1	Wetland 6 is a seasonally flooded basin dominated by reed canary grass located on the west side of a wooded area in the eastern portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding golf green and does not appear to have any surficial connections.	Protect
Wetland 7	Seasonally Flooded Basin	Type 5	Wetland 7 is an excavated shallow pond dominated by cattail and common reed, located in the northwest portion of the Fountain Valley golf course. The wetland collects runoff from the surrounding landscape and does not appear to have any surficial connections.	Manage 1
Wetland 8	Seasonally Flooded Basin	Type 1	Wetland 8 is a linear seasonally flooded basin located between a wooded area and a golfing green in the northwest portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and does not appear to have any surficial connections.	Not determined
Wetland 9	Seasonally Flooded Basin	Type 1	Wetland 9 is a small seasonally flooded basin located in a wooded depression in the west portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and does not appear to have any surficial connections.	Not determined
Wetland 10	Seasonally Flooded Basin	Type 5	Wetland 10 is a seasonally flooded basin located in a wooded depression in the northwest portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and does not appear to have any surficial connections.	Not determined

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

According to the Geologic Atlas of Dakota County (Minnesota Geological Survey, 1990), groundwater is present at greater than 20 feet in the northern and southern portions, and less than 20 feet in the central portion.

Based on Dakota County's well records, there are six wells located within the AUAR study area, see **Table 11**. Wells located within the AUAR study area would be properly sealed by a licensed well contractor prior to redevelopment within the AUAR study area per MPCA and MDH well sealing requirements.

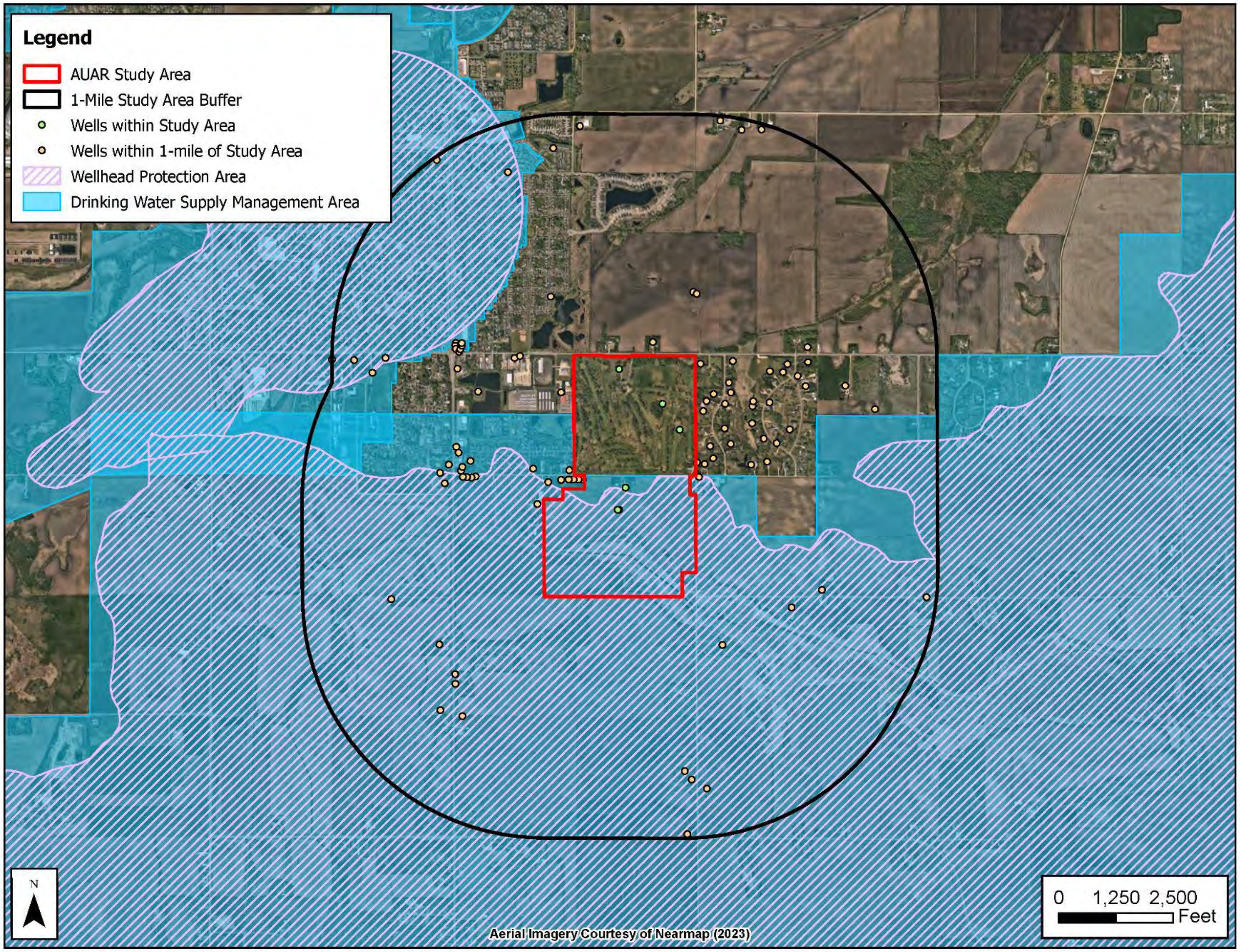
If unidentified wells are found, the MPCA and Minnesota Department of Health must be contacted to determine the course of action, which may include sealing, relocating, or preserving by a licensed well contractor according to Minnesota Rules Chapter 4725.

The southern portion of the AUAR study area is located within a wellhead protection area (Hastings) and a Drinking Water Supply Management Area (DWSMA) (Hastings, high vulnerability). Coordination with the city would be required to verify suitability of stormwater infiltration on site due to the DWSMA requirements.

Table 11: Wells within the AUAR Study Area

Well Unique Number	Index Status	Well Use	Well Depth (feet)
146869	Active	Domestic	247
270148	Active	-	250
W05102	Active	Domestic	125
W05103	Active	Irrigation	250
W05838	Active	Irrigation	385
H3294	Sealed	Abandoned	14

Figure 13: Groundwater Resources



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

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

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

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

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

The northern portion of the AUAR study area (north of 225th St) is located within the 2020 Metropolitan Urban Service Area (MUSA) and the south portion of the study area is located in the "Orderly Annexation Area"; therefore, a comprehensive plan update is needed to connect the southern portion of the AUAR study area into the existing sanitary sewer system.

Data centers can have a wide range of cooling options which impact the wastewater discharges depending on either the use of a non-water cooled or a water-cooled system. For Scenario 1, it is anticipated that a water-cooled system will be utilized. It is anticipated that Scenario 1 will generate a peak day discharge of industrial non-contact cooling water of a range between 970,000 and 2,350,000 gallons per day (GPD) for an approximately 6-month period. It is anticipated that one-third of wastewater generated will be industrial wastewater and two-thirds will be for domestic wastewater for the campus. The domestic wastewater will have typical BOD and TSS characteristics as normal domestic strength waste for a typical office setting. The industrial cooling water will contain little to no organic waste and will have mineral concentrations as much as 10 to 100 times the levels in the drinking water depending on the type of water treatment that will be required for the system.

For Scenario 2, the anticipated GPD for wastewater was estimated using the Metropolitan Council's Sewer Availability Charge (SAC) tool. It is anticipated that up to 300,000 GPD of wastewater would be generated for Scenario 2. Wastewater discharges for Scenario 1 and Scenario 2 are summarized in **Table 12**.

Table 12: Wastewater Discharges

Scenario 1	970,000 - 2,350,000 GPD
Scenario 2	300,000 GPD

Wastewater from the development proposed in Scenario 1 and Scenario 2 is proposed to be collected by an onsite conveyance system that will route wastewater to the Metropolitan Council Environmental Services (MCES) Interceptor. It is anticipated that wastewater from the property will flow to the Metropolitan Council Environmental Services (MCES) Empire Wastewater Treatment Plant (WWTP) in the City of Empire, Dakota County.

The Empire Wastewater Treatment Plant WWTP is an advanced secondary treatment plant with ultraviolet disinfection. As of May 2023, the plant has a maximum capacity of 28.6 million gallons per day. The plant currently experiences average flows of 10.7 million gallons per day. Based on the wastewater quality and flows, MCES will review the plant to ensure no detrimental performance from accepting the flows. In the event that there are some wastewater flow or constituent concerns, storage may help attenuate peaks, and other forms of industrial wastewater discharge will be investigated. The developer will consider incorporating water reuse within its operations as practicable to reduce this impact on wastewater capacity for the region.

To offset the peak daily flows to the MCES system, a flow equalization system or some other method of disposal of the cooling water may be implemented to maintain the anticipated flows. If needed, the proposed project may require a permit from MPCA for a cooling water discharge, a flow equalization tank, or other reuse options of the cooling water will be evaluated.

The developments proposed in Scenario 1 and Scenario 2 are consistent with the City's planned sanitary sewer usage from the 2040 Comprehensive Plan for the north portion of the site, however, the south portion of the site is located outside of the current

MUSA staging area. A comprehensive plan amendment may be needed to re-guide the staging from outside of the MUSA to within the MUSA.

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

   No subsurface sewage treatment systems are anticipated within the AUAR study area for Scenario 1 and Scenario 2.

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

   No wastewater discharge to surface waters is anticipated for Scenario 1 and Scenario 2. If needed, the project proposer will evaluate surface discharge of treated non-contact cooling water with the MPCA and DNR as a potential partial relief to wastewater treatment plant discharge.

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

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

- *It is expected that an AUAR will have a detailed analysis of stormwater issues*
- *A map of the proposed stormwater management system and of the water bodies that will receive stormwater should be provided*

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

Environmental Effects

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

Existing conditions

There is currently minimal impervious surface area within the study area, largely along the central access road and other impervious surfaces associated with the golf course. Runoff from the study area generally drains south towards the South Branch Vermillion River, see **Figure 11** and **Figure 12**.

During Construction

During construction, erosion and sediment control best management practices (BMPs) will be implemented to prevent impacts to aquatic ecosystems per the City of

Farmington Design Standards. The following design/construction standards are to be adhered to during construction:

- Provide necessary precautions to prevent soil erosion, damage to adjacent property and control runoff to surface water.
- The erosion and sediment control measures shall be maintained and repaired throughout construction and until such time as the property has been either sodded or a seeded vegetative cover has taken hold.
- Temporary rock entrances are required on every construction site and are required after backfilling of foundation.
- Exposed soil, including stock piles shall be stabilized immediately where activity has permanently or temporarily ceased on any portion of this site and will not resume for a period of time exceeding 14 days.
- After connecting drainage ditches or swales that drain water from the site, the last two hundred (200) linear feet must be stabilized within 24 hours after connecting to surface water.
- If dewatering is to take place, adequate treatment must be provided so that nuisance conditions will not result from the discharge.
- The City will require water quality ponds to be designed with outlet skimmers, energy dissipation, sediment storage, stabilized banks and permanent vegetation to maximize pollutant removal and control.
- Design for minimum freeboard of 2 feet above the 100-year high water level, or 1 foot above the emergency overflow elevation whichever is more restrictive.
- Compliance with the NPDES General Construction Permit requirements, as well as require conveyance channels be constructed to withstand velocities from a 10-year storm event without erosion.

Post Construction

Overall impervious surface area is proposed to increase in Scenario 1 and Scenario 2, increasing the runoff rate. To mitigate this, the stormwater basins on-site are proposed to be sized to accommodate runoff from these impervious areas and the outlet control structures designed to discharge at a rate less than that in the existing condition. Under Scenario 1, stormwater from the impervious areas of the site would be directed to stormwater management BMPs on-site where the stormwater is proposed to be treated according to the published MPCA guidelines and City of Farmington requirements. Infiltration and filtration is discussed further below. As it leaves the site, stormwater will be routed to the existing wetland basins to the north or existing river to the south of the site. Pretreatment of stormwater is required prior to discharge to an infiltration basin and would be required to infiltrated in less than 48 hours per state requirements.

The soils across the AUAR study area primarily consists of hydraulic group B and are well-suited for infiltration, and more specifically biofiltration. The project will be required to meet the City of Farmington's Engineering Guidelines and Surface Water Management Plan requirements. The project will be required to retain the 100-year, 24-

hour rainfall event, as well as the larger of either 2-year, 24-hour storm events or 1 inch of runoff from impervious surface. To meet the City's rate control standards, runoff rates should not exceed rates for the 1-year, 2-year, 10-year, and 100-year 24-hour (MSE 3 MN distribution or Atlas 14 nested distribution) rainfall events. Additionally, new stormwater infrastructure will be designed to meet the City's requirements for no net increase of total phosphorus and total suspended solids to the maximum extent possible. Finally, existing off-site flows directed to the project will need to be retained and managed on-site.

Additional detailed stormwater analysis will be provided at later stages of the design phase. The following stormwater management requirements will be adhered to:

- Farmington City Code, Title 11, Chapter 4, Section 5: Post Construction Stormwater Management
- City of Farmington Local Surface Water Management Plan
- Vermillion River Joint Watershed Powers Organization Standards
- National Pollution Discharge Elimination System permit requirements will be determined for each new development within the AUAR study area.
- City of Farmington Engineering Guidelines

Additionally, to mitigate additional winter salt use associated with the planned increase in impervious surfaces, the project proposer will implement a chloride management plan for the Scenario 1 and Scenario 2.

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

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

A Water Use Appropriations Permit would be obtained if permanent dewatering is determined to be necessary for construction of development in Scenario 1 and 2. A Water Use Appropriation permit is required for permanent water dewatering and applies to users withdrawing more than 10,000 gallons of water per day or one million gallons per year.

Existing Conditions:

The AUAR study area is currently an agricultural field, rural residential farmstead and a golf course. The agricultural field and rural residential farmstead are currently served by private wells and the golf course is currently served by a multiple wells for domestic use and irrigation. The golf course property is served by a 6-inch watermain and contains irrigation wells for the golf course use.

The water supply for the study area will be obtained from the City of Farmington. The City's water system consists of seven active wells, one elevated storage tank, one standpipe, and a network of trunk and lateral watermains varying in sizes from 4-inches to 24-inches. The groundwater wells range in depth from 402 to 512 feet deep and draw water from the Jordan aquifer and the Prairie Du Chien-Jordan aquifer. According to the City's comprehensive plan, the City's firm pumping capacity is 7,200 gallons per minute as of 2019.

Data centers can have a wide range of cooling options which impact the water demand depending on either the use of a non-water cooled or a water-cooled system. It is anticipated that Scenario 1 will utilize a water-cooled system. Based on the anticipated size of Scenario 1, it could have a peak water demand up to approximately 2.35 million gallons per day (MGPD) during the summer months. However, the water use could be much less based on the cooling technologies that are employed in the data centers and based on the time of year. It is estimated that under Scenario 2, 382,000 gallons per day for peak water flow would be utilized. Water demands for Scenario 1 and Scenario 2 are summarized in **Table 13**.

Table 13: Water Demand

Scenario 1 Demand	2,350,000 GPD
Scenario 2 Demand	382,000 GPD

The City is completing a water study and reviewing the model to understand the potential water demand and needs for future growth and projects within the City including Scenarios 1 and 2. The City is anticipating the need for additional storage in the AUAR study area vicinity and is in the process of siting 2.5 million gallons of additional storage utilizing an elevated storage tank. The City's would potentially need to revise their water appropriations permit with the DNR for additional pumping capacity or a new well.

Using the pumping capacities identified in the existing water system plan and assuming a capacity of 2,000 gallons per minute for Well 9, the pumping capacity of the city production wells is shown in **Table 14**.

Table 14: City Production Wells Pumping Capacity

Well No.	Well field	Depth (feet)	Rate (gpm)	Year Constructed	Aquifer	Status
1	South	402	1000	1938	Prairie du Chien/Jordan	Active
2	South	399			Prairie du Chien/Jordan	Inactive
3	South	424	600	1959	Prairie du Chien/Jordan	Active
4	North	477	1000	1973	Jordan	Active
5	North	417	1200	1999	Jordan	Active
6	North	485	2000	2002	Jordan	Active
7	North	501	1400	2002	Jordan	Active
8	North	460	2000	2006	Jordan	Active
9	North	477	2000	2019	Jordan	Active
10						To Be Installed

As Well No. 1 is seldom used, the city intends to decommission the installation in 2024. The pumping capacity with one of the 2,000 gpm wells being out of service after Well No. 1 is decommissioned is 11.81 MGD. The 2020 demands were 2.14 MGD and 5.77 MGD for average daily and maximum daily demands, respectively.

In February of 2021, the Department of Natural Resources (DNR) authorized an amendment of the city's DNR Water Appropriation Permit 1959-0725 to authorize the use of Well No. 9, and, additionally, the withdrawal of up to 1,000 million gallons of water per year for municipal/public water supply. The City's recent water use, as identified in the annual report to the DNR, is described in **Table 15**.

Table 15: City of Farmington Water Use

Year	Water Use (gallons)
2023	834,984,000
2022	810,939,011
2021	824,915,341
2020	749,989,000

Table 14 refers to Well 10 as "to be installed", however, a Groundwater Technical Review completed by the DNR in 2020 concluded that the annual use volumes have been decreasing since 2007. This indicates that a request for increase in annual volume does not appear likely before the next WSP in 2027.

The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis.

iv. **Surface Waters**

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

The development proposed in both Scenario 1 and Scenario 2 is planned in a manner to avoid impacting the wetlands in the AUAR study area. If development plans change, the project proposer would be required to comply with all federal, state, and local wetland requirements including wetland mitigation requirements through the purchase of wetland banking credits. The City of Farmington has buffer requirements outlined in the Farmington Wetland Ordinance that may be applicable to adjacent development. More information on the Farmington Wetland Ordinance can be found in Section 10.

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

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

No alterations to other surface waters are anticipated as part of either development scenario. The AUAR study does not contain and is not adjacent to any recreational water bodies.

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.

A Phase I Environmental Site Assessment (ESA) was completed in February 2024. Regulatory database information pertaining to the study area and surrounding area was obtained. Sites identified within and adjacent to the study area are listed in **Table 16**. There are also three A/C units, one pesticide storage tank and chemical pesticide sprayer, two aboveground storage tanks, two rusty unmarked drums, overhead power distribution lines along the eastern boundary, natural gas pipeline markers, de minimis dumping of various materials, and one well located within the study area.

Table 16: Phase I ESA: Identified Sites

Site Name	Address	Description	Risk
Alyn Angus Farm	2806 225th St W	Former City of Farmington dump site	Undetermined
Formerly Garvey Construction (GC Construction and Farmington Truck) facility	22098 Canton Ct	Historic spill	Low

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

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

According to Dakota County Ordinances 110 and 111, Dakota County will ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes, section 473.811.

Construction Generated Solid Waste

Construction of Scenario 1 and 2 would generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would either be recycled or disposed of in the proper facilities in accordance with state regulations and guidelines.

Operation Generated Solid Waste

Recycling for industrial buildings in the AUAR study area will be conducted in accordance with the 2016 Recycling Law (Minnesota Statutes Chapter 115A, Section 115A.151 and Section 115A.552). Furthermore, Dakota County Ordinance 15.08 requires all solid waste haulers to offer source separated recycling services and curbside pick-up within the county.

Scenario 1 and Scenario 2 would generate new demands on solid waste management and sanitation services provided in the project area as summarized in **Table 17**.

Table 17: Estimated Solid Waste Generation[15]

	Existing Conditions	Scenario 1	Scenario 2
Residential Units	1	0	675
Residential Waste (tons per year)[16]	1	0	681
Non-Residential Area (square feet)	5,800	2,530,000	100,000
Non-Residential Waste (tons per year)	33	2,184	570
Total Waste (tons per year)	**34**	**2,184**	**1,251**

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

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

Scenario 1 could include several hundred diesel-powered backup generators for emergency use. Each of these generators would have a 6,100-gallon diesel belly tank that will be installed and maintained in compliance with applicable state regulations for aboveground storage tanks, including:

- New tanks and piping would be designed to applicable industry standards and guidance.

[15] The US Environmental Protection Agency's website titled "National Overview: Facts and Figures on Materials, Wastes and Recycling" was consulted as a basis for estimating municipal solid waste generation for the proposed development.

[16] It is estimated that 4.9 pounds of municipal solid waste (MSW) will be generated per person per day. An average household occupancy of 2.62 was applied to the estimated residential units based on 2015-2019 US Census Bureau data.

- Tank upgrades and repairs would follow applicable industry standards.
- Tank owners would clearly label all tanks and piping.
- Underground storage tanks of any size will not be used as above ground storage tanks.
- Spill prevention and clean up plan

Scenario 2 is not anticipated to include any storage tanks.

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

AUAR Guidance: Not required for an AUAR.

Not applicable.

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

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

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

The majority of the land within the AUAR study area has been previously disturbed through farming and recreational use (golf course), but also includes wetlands, dense wooded areas, and a stream. Suitable habitat is present throughout the study area. Potential suitable habitat for listed federal and state species is present within the AUAR study area. Habitat within the study area include woodlands, wetlands, and the South Branch of the Vermillion River, as seen in **Figure 6**. Wildlife that can be found within the study area include fishes, birds, mammals, reptiles, amphibians, and insects. No MnDNR native plant communities or Minnesota Biological Sites (MBS sites) of biodiversity significance were identified within a mile of the AUAR study area. A MnDNR Regionally Significant Ecological Area is located approximately one mile to the southeast of the study area.

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

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

State-Listed Species

Kimley-Horn conducted a review of the DNR Natural Heritage Information System (NHIS) in April 2024 per license agreement LA2024-006 for the study area and an area within a one-mile buffer for state-listed threatened, endangered, and special concern species. The review identified the state-endangered loggerhead shrike (*Lanius ludovicianus)* within the vicinity of the study area.

Loggerhead Shrike

The loggerhead shrike is a Minnesota state-listed endangered species and is documented within a mile of the AUAR study area. The loggerhead shrike is a species of open landscapes and in Minnesota is largely restricted to areas that were historically prairie or oak savanna. While Minnesota's forested regions may have large tracts of cultivated fields and non-native grasslands, loggerhead shrikes rarely occur in these areas. Nests are well hidden in trees or brush and are usually less than 2 meters above the ground. Because the study area is largely agricultural or non-native uncropped areas, the potential for the loggerhead shrike to occur in the study area is low.

Federally-Listed Species

The U.S. Fish and Wildlife (USFWS) Service Information for Planning and Conservation (IPaC) tool was used to identify federally listed species within or near the AUAR Study Area. This review identified two federally listed endangered species, northern long-eared bat (*Myotis septentrionalis*) and rusty patched bumble bee (*Bombus affinis*). This review also identified a federally listed proposed endangered species, the tricolored bat (*Perimyotis subflavus)*, a federally listed candidate species, monarch butterfly (*Danaus plexippus)* and a non-essential experimental population, whooping crane (*Grus americana*). There are no critical habitats identified within the study area. The entirety of the AUAR study area was identified as within the High Potential Zone for the Rusty Patched Bumble Bee. The IPaC Species List is included in Appendix D.

Northern Long-Eared Bat

A record for the northern long-eared bat (NLEB) is located within Dakota County. Based on the 2024 USFWS Range Map for the NLEB, there are no known records of the NLEB in Farmington. NLEB was designated a federally endangered species by USFWS in April 2023. According to the MnDNR, in the southern part of the state, NLEB may use attics, bridges, caves, mines, and buildings for hibernating. In summer, the species is often found within forested habitats, especially around wetlands. Summer roosts may include trees, in buildings, behind signs or shutters, caves, mines, and quarry tunnels. Suitable summer roost trees include live or dead hardwood trees which have shingle-like bark, and trees with cavities, splits, crevices, hollow sections, and other damage. The spread of white-nose syndrome across the eastern portion of the United States has become the major threat to the NLEB, with an estimated decline of more than 97% in affected colonies. Suitable habitat (several trees) was identified within the study area. Because suitable habitat for the NLEB exists within the study area, and the NLEB is known to occur in Dakota County, there is potential for the NLEB to occur within the study area.

Tricolored Bat

The tricolored bat was proposed to be designated as a federally endangered species by the USFWS in September 2022. According to the USFWS, during the winter, tricolored bats are often found in caves and abandoned mines. During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures. Like the NLEB, the spread of white-nose syndrome across the eastern portion of the United States has become the major threat to the tricolored bat, with an estimated decline of more than 90% in affected colonies. Suitable habitat (several trees) was identified with the study area. According to the DNR's Rare Species Guide, there are no known maternity colonies within the state of Minnesota and the tricolored bat has never been found in large numbers. Additionally, there are no known sighting records of the tricolored bat near Farmington. While suitable habitat for the tricolored bat exists within the study area, because there are no known sighting records of the tricolored bat in the vicinity of the study area and known sightings in the state are historically low, it is possible but unlikely for the tricolored bat to occur within the study area.

Monarch Butterfly

The monarch butterfly is a candidate species for official listing by the USFWS. The preferred habitat for this species is prairie, grasslands, or wetlands where milkweed and flowers are present. According to the USFWS, there are many potential reasons for the butterfly's decline, including habitat loss at breeding and overwintering sites, disease, pesticides, logging at overwintering sites, and climate change. Suitable habitat could be present in the unmanicured portions of the study area; therefore, there is potential for the monarch butterfly to occur within the study area.

Whooping Crane

The whooping crane is designated as an experimental population, non-essential species by the USFWS. Non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land and as a proposed species on private land. The preferred habitat for the species includes shallow marshes and adjacent, open grasslands or cultivated agricultural land. The Proposed Action would be completed on lands outside of a National Wildlife Refuge or National Park. There are no known sighting records of the whooping crane near Farmington. While suitable habitat for the whooping crane exists within the study area, because there are no known sighting records of the whooping crane in the vicinity of the study area, it is possible but unlikely for the whooping crane to occur within the study area.

Rusty Patched Bumble Bee

The rusty patched bumble bee is listed as a federally endangered species by USFWS. From April through October this species uses underground nests in upland grasslands, shrublands, and forest edges, and forages where nectar and pollen are available. From October through April the species overwinters under tree litter in upland forests and woodlands. The study area is within a mapped rusty patched bumble bee high potential zone. In high potential zones, USFWS will assume the rusty patched bumble bee to be present in any suitable habitat. Suitable foraging habitat could be present in the unmanicured portions of the study area, and suitable overwintering habitat could be present in the forested portions of the study area. There is potential for the rusty patched bumble bee to occur within the study area.

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

State-listed Species

Loggerhead Shrike

Scenario 1 and Scenario 2 will require tree clearing. The trees and shrubs located within the AUAR study area may represent suitable habitat for loggerhead shrikes. Tree and shrub removal activities related to the redevelopment of the site may have a negative impact on this species.

Federally-listed Species

Northern Long-eared Bat

Scenario 1 and Scenario 2 will require tree clearing. According to the USFWS, tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season (June 1 to August 15 in Minnesota) when females are forming maternity roosting colonies, and the pups cannot yet fly. On November 30, 2022, the USFWS published in the Federal Register (87 FR 73488) a final rule which reclassified this species as an endangered species. The rule went into effect March 31, 2023. USFWS issued updated range-wide NLEB survey guidelines in March 2024. Tree removal is anticipated for the project. All trees will be cleared in the inactive season (November 1- March 31). The Proposed Action is unlikely to adversely affect the NLEB.

Tricolored Bat

Scenario 1 and Scenario 2 will require tree clearing. Similar to the NLEB, tree removal can negatively impact tricolored bats. According to the USFWS, the tricolored bat uses forested areas for roosting and foresting during the spring, summer, and fall. Tree removal is anticipated for the project. All trees will be cleared in the inactive season (November 1- March 31). The Proposed Action is unlikely to jeopardize the continued existence of the tricolored bat.

Monarch Butterfly

The Proposed Action may affect monarch butterflies and/or suitable monarch habitat; however, ground and vegetation disturbing activities are not expected to appreciably diminish the quality or extent of available suitable habitat in the vicinity of the study area. In addition, proposed native seed mix establishment will provide additional suitable habitat and benefit the species. The study area has been disturbed for agricultural use and contains natural prairie vegetation around the southern wetland, which will be avoided.

Whooping Crane

The Proposed Action would be completed on lands outside of a National Wildlife Refuge or National Park. The Proposed Action is not expected to diminish the quality or extent of whooping crane suitable habitat within the study area vicinity. Therefore, the project is not anticipated to jeopardize the continued existence of the whooping crane.

Rusty Patched Bumble Bee

The Proposed Action may affect rusty patched bumble bees and/or suitable habitat. Impacts to unmanicured and wooded areas should be minimized or avoided if possible.

Invasive Species

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

Stormwater

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

Tree Removal

The AUAR study area contains approximately 3.4 acres of woodland area, and 150 acres of golf course with a high density of trees. Forests and forested areas provide an important natural resource in Minnesota. Forest clearing and tree removal creates a variety of environmental impacts including habitat destruction, biodiversity impairment, soil erosion, and loss of carbon sinks. Although some tree removal will be necessary, the scope of removal will be limited as much as feasible to support the proposed development. Tree removal will adhere to the City's tree preservation requirements. The City of Farmington regulates tree preservation and requires builders to submit a tree preservation plan prior to construction. City staff review these plans and attempt to identify and save as many significant trees as feasible[17]. The developer will coordinate with USFWS to determine tree removal commitments with regard to the NLEB the rusty patched bumble bee.

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

State-listed Species

Loggerhead Shrike

[17] Source: Farmington, Minn., City Code 10-6-11

To avoid potential impacts to loggerhead shrikes, tree and shrub removal activities are anticipated to avoided during the breeding season for the loggerhead shrike, April 1-July 31. Any loggerhead shrike sightings will be reported to the DNR.

Federally-listed Species

Northern Long-eared Bat

Tree clearing activities should be restricted to when Northern long-eared bats are not likely to be present, between November 1 to March 31. Coordination with USFWS before tree clearing is recommended.

Tricolored Bat

To prevent impacts to bat species, tree trimming or removal should occur during the winter months (November 1 – March 31).

Monarch Butterfly

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

Whooping Crane

No mitigation measures are anticipated to be required.

Rusty Patched Bumble Bee

The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area. Further coordination with USFWS is recommended.

Invasive Species

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

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

Tree Removal

Although tree removal will be required for development, some existing trees may be preserved in areas around the perimeter of the property. Scenario 1 will preserve a forty (40) foot natural buffer around the perimeter of the facility.

Prior to construction, a tree preservation plan will be submitted and reviewed by city staff. Tree replacement will be conducted as required by the city.

Stormwater

Scenario 1 and Scenario 2 include stormwater management and treatment of all stormwater run-off within the AUAR study area.

15. HISTORIC PROPERTIES

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

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

The Minnesota Statewide Historic Inventory Portal (MnSHIP) was reviewed to identify historic resources. According to MnSHIP, there are no historic resources within the study area. According to the Minnesota Office of the State Archeologist (OSA) Public Viewer map, there are no known archeological records in the vicinity of the site.

Based on the results of the database review and absent a federal nexus, a Phase I Archaeological Assessment is not required for the project. If a federal nexus is identified during preparation of project permits (if a U.S. Army Corps of Engineer permit is required due to impacts to regulated wetlands), a Phase I Archaeological Assessment may be necessary.

16. VISUAL

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

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

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

The AUAR study area includes existing agricultural land that is not near any unique designated scenic views or vistas. Any development of agricultural land will have an impact on the visual look of a property. Future development would conform with the city ordinances for building height, building form, landscape screening, and lighting to avoid impacts to neighboring properties and species. No significant visual impacts are anticipated.

As building and site designs advance, lighting practices will be selected to address known ecological concerns and prevent avoidable impacts to insects, wildlife, rare plants, and adjacent natural areas. Guidance from the USFWS to minimize blue light, uplight, and backlight will be adhered to the extent practicable.

17. AIR

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

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

Not applicable to an AUAR.

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

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

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

c. Dust and Odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under Item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

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

Scenario 1 and Scenario 2 may generate temporary fugitive dust emissions during construction. The City of Farmington regulates dust in accordance with the standards set by the MPCA.[18] Dust emissions can be controlled by sweeping, watering, sprinkling, as appropriate or as prevailing weather and soil conditions dictate. Dust emissions are not anticipated during operations as all ground surfaces will either be impervious or vegetated.

18. GREENHOUSE GAS (GHG) EMISSIONS/CARBON FOOTPRINT

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

About Greenhouse Gases (GHGs)

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

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that

[18] Source: Farmington, Minnesota, Code of Ordinances § 10-6-27 (A)

contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); 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.[19]

Project-related GHG Emissions

This section describes the GHG emissions from the existing buildings within the study area and includes an estimated quantification of the following GHG emissions associated with the proposed scenarios.

- Carbon dioxide (CO_2)
- Nitrous oxide (N_2O)
- Methane (CH_4)

The projected GHG emissions are provided on an average annual basis using the CO_2 equivalent (CO_2e) and include the proposer's best estimate of average annual emissions over the proposed life/design service life of future development. The estimates also include emissions from the construction and operating phases of the scenario. Emissions were estimated using the US Environmental Protection Agency's Simplified GHG Emissions Calculator (SGEC) (Version 7 June 2021)[20] and are summarized in **Table 18** and **Table 19** by project phase (i.e., construction and operations) and source type (e.g., combustion from mobile equipment, off-site electricity).

Construction emissions for the two proposed scenarios are based on length of construction and are from mobile equipment including passenger cars, light-duty trucks, and medium and heavy-duty trucks, and construction equipment (both gasoline and diesel).

[19] Summarized from U.S. EPA, Overview of Greenhouse Gases: https://www.epa.gov/ghgemissions/overview-greenhouse-gases
[20] Source: https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator

Table 18: Construction Emissions

Scope	Emission Type	Emission Sub-Type	Emitant	Existing CO_{2e} Emissions (total)	Scenario 1 Project-Related CO_{2e} Emissions (total)	Scenario 2 Project-Related CO_{2e} Emissions (total)
Scope 1	Combustion	Mobile equipment	CO_2, N_2O, CH_4	n/a	22,408	13,551
Total				**n/a**	**22,408**	**13,551**

Table 19: Annual Operational Emissions

Scope	Emission Type	Emission Sub-Type	Emitant	Existing CO_{2e} Emissions (tons/year)	Scenario 1 Proposed CO_{2e} Emissions (tons/year)	Scenario 2 Proposed CO_{2e} Emissions (tons/year)
Scope 1	Combustion	Stationary equipment	CO_2, N_2O, CH_4	53	18	2,287
Scope 2	Off-site electricity	Grid-based	CO_2, N_2O, CH_4	131	25,649	3,835
Scope 3	Off-site waste management	Area	CO_2, CH_4	21	1,275	789
Total				**205**	**26,943**	**6,911**

b. **GHG Assessment**

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

Scenario 1 and Scenario 2

Unless otherwise noted differently, the following are potential design strategies and sustainability measures that are under consideration for the Scenario 1 and Scenario 2 to reduce emissions for both scenarios:

- Use energy efficient appliances, equipment, and lighting
- Energy efficient building shells
- Implement waste best management practices and recycle and compost appropriate material when applicable
- Trees and additional landscaping will be planted as part of the new development
- Provide electric vehicle-ready charging infrastructure
- Purchase grid-based wind and solar power (for Scenario 1)

Implementation of the above strategies will be evaluated on a case-by-case basis based on code requirements, feasibility, availability of materials, schedule, and tenant considerations. The project proposer will work with the City to identify additional mitigation strategies that could be implemented to reduce greenhouse gas emissions or offset the carbon footprint of the proposed project.

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

- Both scenarios would require new appliances, equipment, and lighting during operation. The use of energy efficient technologies would reduce the amount of electricity used per product. Collectively, the implementation of these technologies would reduce overall energy use and in-turn, GHG emissions.
- Both scenarios would require heating and cooling during operation. One of the highest sources of energy use is energy spent heating and cooling buildings. The use of energy efficient building shells reduces the amount of energy needed for heating and cooling, therefore reducing energy use and GHG emissions.
- Waste would be generated during operation of both scenarios. By implementing waste best management practices and recycle and compost appropriate material when applicable, GHG emitted from wastes during operations can be reduced.
- Trees and additional landscaping can reduce the GHG footprint of the project by absorbing greenhouse gas emissions. For both scenarios, tree replacement will occur per city requirements.

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

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

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

The current AUAR study area currently generates 205 $CO2_e$ metric tons per year, which equates to 0.14% of total annual city-wide emissions. Under Scenario 1, this amount will increase to 26,943 $CO2_e$ metric tons per year, for a 18.6% increase in annual city-wide emissions. Under Scenario 2, this amount will increase to 6,911 $CO2_e$ metric tons per year, for a 4.8% increase in annual city-wide emissions.

The expected lifespan of the project is 50 years, this equates to a total estimated 1,369,535 $CO2_e$ metric tons over the lifetime of the development under Scenario 1 and 359,177 $CO2_e$ metric tons over the lifetime of the development under Scenario 2 (including both construction and operations phases). The proposer will evaluate implementing the sustainability measures listed in Item 18.b.i to reduce operational emissions to the extent practicable. The proposed project will be built in compliance with state regulations and city building codes.

19. NOISE

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

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

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

Existing Noise

The AUAR study area is currently agricultural land and existing golf course. The existing noise sources at the site consist mainly of the surrounding roadways.

Construction Noise

As stated in the AUAR guidelines, construction noise need not be addressed unless there is some unusual reason to do so. No unusual circumstances have been identified that would necessitate a detailed construction noise analysis. Construction of the proposed project would comply with MPCA noise standards.

Traffic Generated Noise

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

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

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

Operational Noise

For Scenario 1, the main sources of noise include computers and ventilation systems within the building, and the use of generators tested once a month and in the case of emergency. Sensitive receptors within the project site vicinity include adjacent residential houses, parks, and businesses. Further noise evaluation will be completed as design progresses and best practices to reduce noise spill will be implemented for the technology park uses to ensure compliance with local and state noise regulations. Noise attenuation measures will be incorporated into project design to ensure that MPCA noise rules and City noise ordinances are followed.

20. TRANSPORTATION

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

Parking

Minimum off-street parking requirements listed in Section 10-6-4 of the City of Farmington's Code of Ordinances or other metric acceptable to the City and agreed upon through the rezoning process will be adhered to.

Existing Conditions

The existing roadway network within the study area includes MN 3 (Chippendale Avenue) / MN 50 (220th Street), MN 3 (Chippendale Avenue) / 225th Street, and MN 3 (Chippendale Avenue) / County Highway 50 (Elm Street).

The roadway network is described below:

- MN 3 (Chippendale Avenue) is a north-south State Highway which is a two-lane undivided roadway south of MN 50 and a four-lane divided roadway at the intersection and to the north. The Dakota County 2040 Comprehensive Plan envisions MN 3 as a future Principal Arterial. The MnDOT Traffic Mapping Application reports an annual average daily traffic (AADT) of 7,400 vehicles per day (vpd) in 2022 north of MN 50 and 7,200 vpd in 2022 south of MN 50. The posted speed limit is 45 mph and changes to 55 mph south of 225th Street.
- MN 50 (220th Street) is an east-west two-lane undivided roadway with a three-lane section west of MN 3. The roadway is a State Highway (MN 50) east of the MN 3 intersection and is under MnDOT jurisdiction there. West of MN 3, the road is under Dakota County jurisdiction and is a County State Aid Highway (CSAH 74). The Dakota County 2040 Comprehensive Plan envisions 220th Street as a future Principal Arterial, with a planned connection of CSAH 74 to 215th Street W in Lakeville. The MnDOT Traffic Mapping Application reports an AADT of

6,200 vpd in 2022 east of MN 3 and 4,700 vpd in 2022 west of MN 3. The posted speed limit on 220th Street is 30 mph west of MN 3, 35 mph between MN 3 and 10th Street and 55 east of 10th Street.

- 225th Street is an east-west two-lane undivided roadway with one travel lane in each direction and no turn lanes provided. The roadway is unpaved east of Cambrian Way. 225th Street is a local road, and the MnDOT Traffic Mapping Application has no traffic data for the roadway. The posted speed limit on 225th Street is 40 mph.
- County State Aid Highway 50 (Elm Street) is an east-west three-lane undivided roadway west of MN 3 with one travel lanes in each direction a shared left turn lane in the center, east of MN3 Elm Street is a two-lane roadway. The Dakota County 2040 Comprehensive Plan envisions the roadway as a future Other Arterial. According to the MnDOT Traffic Mapping Application, the roadway has an AADT of 12,400 west of 7th Street, as of 2022. The posted speed limit on CSAH 50 is 30 mph. The 2023 AADT shows 10,590 west of MN 3 for this section.
- Biscayne Avenue is an unpaved local roadway which makes up the eastern boundary of the site. There is no posted speed limit.

Traffic Generation

The trip generation of the two previously shown development scenarios were estimated based on data from the ITE Trip Generation Manual, 11th Edition. Scenario 1 utilized the Land Use Code (LUC) for Data Center (LUC 160) as the best available representation of the number of trips generated by a Technology Park, while Scenario 2 utilized the codes for Single Family Detached Housing (LUC 210) and Shopping Plaza (LUC 821). The trip generation is shown in **Table 20**. The full traffic study conducted for the AUAR can be found in **Appendix B**.

Table 20: Trip Generation Forecasts

Scenario	AM Peak Hour			PM Peak Hour			Daily
	Total	In	Out	Total	In	Out	
Scenario 1	277	152	125	227	68	159	2,498
Scenario 2	645	225	420	1,154	654	500	13,116

Availability of Transit

There are no transit services available near the project vicinity.

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

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

A Traffic Impact Analysis (TIA) was completed in June 2024 based on the projected trip generation of the proposed scenarios. The results of this study can be found in Appendix B. Based on the detailed findings of the Farmington Technology Park TIA, the area's transportation network is expected to support redevelopment within the AUAR study area with mitigation. The TIA identified improvements that could be constructed to mitigate possible future traffic impacts associated with development within the AUAR study area. Metrics for traffic analysis include intersection delay as measured by Level of Service (LOS) and queue lengths.

The traffic analysis report includes intersection capacity analyses for intersections at the site access points as well as intersection operations within the vicinity of the project (see locations identified on **Exhibit 1 of the TIA**). The accesses along MN 50, and 225th Street meet the access spacing requirement in the Dakota County 2040 Transportation Plan. Based on the results of the TIA capacity analysis, all intersections are anticipated to operate acceptably in both scenarios, with minimal increases in delay due to the addition of site traffic and background growth. Some minor queueing issues are anticipated under Scenario 2 conditions which will require mitigation. The following turn lanes were determined to be at or over capacity under future Scenario 2 conditions:

- Northbound left and southbound right at MN 3 & CSAH 50
- Southbound left at MN 3 & MN 50

Projected traffic volumes at key turning movements for the project were analyzed via MnDOT's guidelines for installation of left and right turn bays. The findings indicated that the following turn lane improvements are recommended based on the MnDOT Guidelines:

- Westbound left at the primary access point along MN 50
- Northbound right and southbound left at the intersection of MN 3 & 225th Street

Analysis was conducted for the anticipated opening year of the development (2029) and a long-term design year (2040) to align with the Farmington and Dakota County 2040 forecasting. **Table 21** shows the LOS for the study area intersections in each analysis scenario and study year. Note that LOS at side-street stop-controlled intersections is defined as the LOS of the worst side-street movement.

Table 21: Existing and Projected Intersection LOS

Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS	
	2024	2029	2040	2029	2040	2029	2040
AM Peak Hour							
MN 3 & MN 50 (220th Street)	B	B	B	B	B	B	B

Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS	
	2024	2029	2040	2029	2040	2029	2040
MN 3 & 225th Street	A	A	A	A	A	A	A
MN 3 & CSAH 50 (Elm Street)	B	B	B	B	B	B	B
MN 50 & North Access	-	-	-	A	A	B	B
225th Street & South Access	-	-	-	A	A	A	A
PM Peak Hour							
MN 3 & MN 50 (220th Street)	B	B	B	B	B	B	C
MN 3 & 225th Street	B	A	A	B	B	B	C
MN 3 & CSAH 50 (Elm Street)	B	B	B	B	B	C	C
MN 50 & North Access	-	-	-	A	A	D	D
225th Street & South Access	-	-	-	A	A	A	A

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

The following provides a summary of mitigation improvements that were identified as part of the traffic analysis for the Farmington Technology Park property.

Existing (2024) No-Build Conditions

- No Mitigation Necessary

Short-Term (2029) No-Build Conditions

- No Mitigation Necessary

Short-Term (2029) Scenario 1 Conditions

- Install northbound right and southbound left turn lanes at MN 3 & 225th Street.
- Install a westbound left turn lane at the site access along MN 50.

Short-Term (2029) Scenario 2 Conditions

- Install northbound right and southbound left turn lanes at MN 3 & 225th Street.
- Install a westbound left turn lane at the site access along MN 50.
- Extend southbound left turn lane at MN 3 & MN 50 to a length of at least 350’.

Long-Term (2040) No-Build Conditions

- No Mitigation Necessary

Long-Term (2040) Scenario 1 Conditions

- Same improvements as the short-term Scenario 1
- Install northbound right and southbound left turn lanes at MN 3 & 225th Street.
- Install a westbound left turn lane at the site access along MN 50.

Long-Term (2040) Scenario 2 Conditions

- Install northbound right and southbound left turn lanes at MN 3 & 225th Street.
- Install a westbound left turn lane at the site access along MN 50.
- Extend southbound left turn lane at MN 3 & MN 50 to a length of at least 350’.
- Extend the southbound right turn lane at MN 3 & CSAH 50 to at least 200’.
- Extend the northbound left turn lane at MN 3 & CSAH 50 to at least 400’.

21. CUMULATIVE POTENTIAL EFFECTS

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

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

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

Cumulative effects are defined as the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.”[21] The geographic areas considered for cumulative effects are those areas adjacent to the AUAR study area, and the timeframe considered includes projects that would be constructed in the reasonably foreseeable future.

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.

[21] Minnesota Rules, part 4410.0200, subpart 11a

There are four reasonably foreseeable future projects that may interact with the environmental effects of the proposed project:

- Vita Attiva: A roadway extension will be construction from the west end of the development to County Highway 50. Construction will likely start in 2024 or 2025.
- An anticipated construction of a 168-unit apartment complex at the northwest corner of Dushane Parkway/Spruce Street. Construction anticipated to begin in 2024.
- R&L Carriers: Anticipated expansion of their facility southeast of Pilot Knob Road/208th Street.
- The site on the south side of Knutsen Drive is considering development.
- Farmington West Industrial: Development in the northwest quadrant of Highway 50 and Pilot Knob Road.

Future private development projects may result in impacts to transportation, water resources, and utilities. These impacts will be addressed via the regulatory permitting and approval processes and will be individually mitigated to ensure minimal cumulative impacts occur.

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.

Not applicable.

22. OTHER POTENTIAL ENVIRONMENTAL EFFECTS

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

There are no other potential environmental effects that have not been addressed in preceding sections.

FINAL MITIGATION PLAN

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

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

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

In addition to the anticipated permits and approvals listed in, the mitigation measures developed in the AUAR process are outlined in **Table 22**. There were no impacts or mitigation strategies identified in Item 15 therefore, this area is not included in the Final Mitigation Plan. The remaining AUAR items have identified regulatory requirements and/or mitigation measures that reduce the level of potential impact of development within the study area. The plan is formatted consistent with the sections of the AUAR for ease of reference.

Table 22: Final Mitigation Plan

Resource Area	Mitigation
Land Use	**Scenario 1 and 2:** Any zoning inconsistencies (one parcel zoned as A-1, Agriculture) will be addressed through a re-zoning.
	Scenario 1 and 2: the City will coordinate with the Metropolitan Council to increase the TAZ allocations, if needed.
Geology, Soils, and Topography	**Scenario 1 and 2:** Erosion prevention and sediment control practices will be implemented on-site per the NPDES General Stormwater Permit requirements.
	Scenario 1 and 2: Site specific subsurface investigations should be completed prior to work commencement. If karst conditions are found to be present, follow the VRWJPO, City of Farmington, and the MPCA design guidelines.
Water Resources	**Scenarios 1 and 2:** Infrastructure will be built within the AUAR study area to convey stormwater to stormwater management areas to help achieve the appropriate water quality treatment. As required by the City, the quantity and rate of stormwater runoff from the 1-, 10-, and 100-year, 24-hour rainfall events in post-development conditions will be managed to not exceed the existing conditions.
	Scenarios 1 and 2: Maintenance and monitoring of the stormwater management areas will be performed to ensure long term effectiveness of the facilities.
	Scenarios 1 and 2: Obtain a permit from the Metropolitan Council and MPCA for a sewer extension and permit to connect.
	Scenarios 1 and 2: Obtain a permit from MDH for a watermain installation
	Scenarios 1 and 2: Groundwater wells will be properly sealed by a licensed well contractor prior to redevelopment within the AUAR study area per MPCA and MDH well sealing requirements. If any unverified wells are identified during construction, they will be examined by a licensed well contractor or a Dakota County well inspector to determine the status.
	Scenarios 1 and 2: A chloride management plan will be implemented, which will meet state and local requirements.
	Scenarios 1 and 2: Best management practices pertaining to stormwater management will be adhered to during construction.

Resource Area	Mitigation
	Scenarios 1 and 2: Avoidance measures will be taken to avoid impacts to the wetlands within the AUAR study area. If proposed design plans change and impacts to wetlands are necessary, the project proposer will purchase wetland banking credits from the wetland bank within the Vermillion River Watershed, if available. Buffers will be installed around wetlands to protect water quality from adjacent development.
	Scenario 1: Future development may use effluent water from the MCES Empire treatment facility for non-contact cooling.
	Scenarios 1 and 2: The existing water infrastructure is planned to be extended and upsized to ensure adequate capacity for all future planned growth in this area of the City, including the subject development site. The City may need a water storage tank of up to 2.5 million gallons in the project vicinity to accommodate future growth in this section of the City. The City will review the current water appropriations and well capacity to determine if any new wells or an amendment to their current water appropriations permit is needed. Coordination with the DNR will be needed if an amendment to the water appropriations permit or a new well is needed is this part of the City.
	Scenario 1: If needed to offset the peak daily flows to the MCES system, a flow equalization system or some other method of disposal of the cooling water may be implemented to maintain the anticipated flows. If needed, the proposed project may require a permit from MPCA for a cooling water discharge, a flow equalization tank, or other reuse options of the cooling water will be evaluated. Further coordination with MCES and MPCA is needed depending on the anticipated wastewater discharge for the future development.
Contamination/ Hazardous Waste	**Scenarios 1 and 2:** Development would both generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would be either recycled or disposed in the proper facilities; Products will be kept in their original containers unless they cannot be resealed. Original labels and Material Safety Data Sheets will be made available. Surplus materials will be properly removed from the property upon completion of use.
	Scenarios 1 and 2: Ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes 2020, section 473.811, subdivision 5c.
	Scenarios 1 and 2: Coordinate with the MPCA regarding the required plans, material handling, and disposal.
	Scenario 1 and 2: Wildlife friendly erosion control methods will be utilized within the study area to minimize impacts to wildlife using the site during construction.

Resource Area	Mitigation
Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources	**Scenario 1 and 2:** Invasive species will be controlled during site construction. Additionally, appropriate measures will be taken to control the spread of invasive species will be controlled during construction and landscaping: ● Inspecting construction equipment and removing any visible plant, seeds, mud, dirt clods, and animals when arriving and leaving a site. ● Using certified weed-free products such as weed-free seed or hay whenever possible. ● Using mulch, soil, gravel, etc., that is free of invasive species whenever possible. ● Inspecting soil and plant material during planting for signs of invasive species and removing or destroying the invasive species or the plant and associated soil if the invasive species cannot be separated out. ● Native and drought-tolerant species will be utilized in landscaped areas.
	Scenario 1 and 2: Tree and shrub clearing activities will be restricted to winter months when NLEB and migratory birds are not likely to be present (November 1 - March 31). If winter tree clearing is not feasible, technical assistance from the USFWS and Minnesota DNR is required. A specific tree replacement plan will be created and approved by the City prior to development.
Visual	**Scenario 1 and 2:** Lighting practices will be selected to address known ecological concerns and prevent avoidable impacts to insects, wildlife, rare plants, and adjacent natural areas. Guidance from the USFWS that recommends a lighting system that minimizes uplight and backlight would be adhered to the extent practicable.
Air	**Scenario 1 and 2:** Construction will generate temporary fugitive dust emissions during construction. These emissions will be controlled by sweeping, watering, sprinkling, as appropriate or as prevailing weather and soil conditions dictate. The City of Farmington regulates dust in accordance with the standards set by the MPCA.
GHG Emissions/Carbon Footprint	**Scenario 1 and Scenario 2:** Unless otherwise noted differently, the following are potential design strategies and sustainability measures that are under consideration for Scenario 1 and Scenario 2 to reduce emissions for both scenarios: ● Use energy efficient appliances, equipment, and lighting ● Energy efficient building shells ● Implement waste best management practices and recycle and compost appropriate material when applicable ● Trees and additional landscaping will be planted as part of the new development
Noise	**Scenario 1 and 2:** Construction activities may result in temporarily elevated noise levels. To the extent possible, construction activities will be conducted to minimize noise levels and nighttime construction activities. Permits related to construction noise must be obtained from the City at least 7 working days prior to the start of construction. **Scenario 1:** Further noise evaluation will be completed as design progresses and best practices to reduce noise will be implemented. **Scenario 1 and 2:** Noise attenuation measures will be incorporated into project design to ensure that MPCA noise rules and City noise ordinances are followed.

Resource Area	Mitigation
Transportation	**Short-Term (2029) Scenario 1 Conditions** ● Install northbound right and southbound left turn lanes at MN 3 & 225th Street. ● Install a westbound left turn lane at the site access along MN 50.
	Short-Term (2029) Scenario 2 Conditions ● Install northbound right and southbound left turn lanes at MN 3 & 225th Street. ● Install a westbound left turn lane at the site access along MN 50. ● Extend southbound left turn lane at MN 3 & MN 50 to a length of at least 350’.
	Long-Term (2040) Scenario 1 Conditions ● Install northbound right and southbound left turn lanes at MN 3 & 225th Street. ● Install a westbound left turn lane at the site access along MN 50.
	Long-Term (2040) Scenario 2 Conditions ● Install northbound right and southbound left turn lanes at MN 3 & 225th Street. ● Install a westbound left turn lane at the site access along MN 50. ● Extend southbound left turn lane at MN 3 & MN 50 to a length of at least 350’. ● Extend the southbound right turn lane at MN 3 & CSAH 50 to at least 200’. ● Extend the northbound left turn lane at MN 3 & CSAH 50 to at least 400’.

Appendix A

Wetland Delineation Report

Wetland Delineation Report

Farmington Technology Park

City of Farmington

Dakota County, Minnesota

Prepared for:

Tract Management Company, LP
3300 E. 1st Ave, Suite 600
Denver, CO 80206

Prepared by:

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Saint Paul, MN 55114

July 2024

DRAFT

Kimley»Horn

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Executive Summary

Wetland scientists Cassie Baumgartner (CMWP #1447), Mason Kunkel, and Max Forsman, with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Tract Management Company, LP and the Farmington Technology Park Project in the city of Farmington, Dakota County, Minnesota. The wetland investigation and delineation included Parcel ID 140050001012, 070050076011, and 070050076012 (the “study area”). A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on May 30 and June 13, 2024.

In total, 10 wetlands and 1 perennial stream were delineated and are described in Table 1.

1 Introduction

Wetland scientists Cassie Baumgartner (CMWP # 1447), Mason Kunkel, and Max Forsman, with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Tract Management Company, LP and the Farmington Technology Park project in the city of Farmington, Dakota County, Minnesota. The wetland investigation and delineation included Parcel ID 140050001012, 070050076011, and 070050076012 (the “study area”). The study area is shown in **Figure 1.** The study area consists of the Fountain Valley Golf Course north of 225th Street West. The study area to the south consists of active cropland, the South Branch Vermillion River, roadway, and a farmstead. Cover types within the study area include cultivated crops, developed (medium intensity), developed (open space), and pasture/hay.

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on May 30 and June 13, 2024. The purpose of this delineation was to identify the extent of wetlands within the study area. The information will be used to facilitate project design and determine if aquatic resource impacts are avoidable and/or if minimization of impacts can result from design modifications.

2 Project Description

Tract Management Company, LP is proposing to develop the parcel into a series of buildings, security fencing, and associated utilities and roadways.

3 Statement of Qualifications

Kimley-Horn has extensive experience completing wetland investigations and delineations across the United States. Kimley-Horn’s personnel has been trained to use the *1987 Corps of Engineers Wetlands Delineation Manual (USACE, 1987)* along with the applicable regional supplements. Kimley-Horn has experience completing off-site hydrology analysis, historic aerial reviews, and difficult or atypical situation delineations.

Ashley Payne earned a Bachelor of Arts Degree in Environmental Biology from Saint Mary’s University of Minnesota. She is an environmental scientist with 16 years of experience specializing in wetland services environmental documentation and assessments, and geographic information systems mapping and data collection. During the last 16 years, she has successfully completed hundreds of delineations for various types of projects. In the last seven years, Ashley’s primary focus has been the delineation of agricultural fields for future development. She is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. Ashley has also obtained environmental permits for clients through efficient and thorough preparation of permit applications, and by coordinating with agency personnel. Ashley is a certified delineator in the state of Minnesota and her primary focus is environmental work in the Midwest. She has extensive experience working in Minnesota, Illinois, Wisconsin, Michigan, Iowa, and South Dakota.

Cassie Baumgartner earned a Bachelor of Science degree in Environmental Science, Policy, and Management, from the University of Minnesota. Cassie has experience in Phase I Environmental Site Assessments, natural resource surveying and permitting, threatened and endangered species due diligence, NPDES stormwater compliance, and specializes in wetland delineations and geographic information systems mapping. She has completed wetland delineations for both public and private sector clients throughout the Midwest and is proficient in wetland delineations in agricultural areas.

Mason Kunkel earned a Bachelor of Science Degree in Biology with an emphasis in Wildlife Conservation from Western Colorado University. He is a biologist who specializes in wetland delineation and geographic information systems mapping. He has assisted with the delineation of agricultural fields, roadway corridors, and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types. He is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. He has extensive experience working in Minnesota, Iowa, Illinois, and Michigan.

Max Forsman holds a Bachelor of Science in Biology (Ecology, Evolution, Behavior) and Environmental Science from the University of Minnesota Duluth. Max is proficient in environmental permitting, wetland delineations, botany, and Geographic Information Systems mapping. He has completed delineations throughout the Midwest in peatlands, developed areas, roadway corridors, pipeline corridors, and agricultural fields. Max has experience in a variety of natural resource survey methodologies and habitat conservation planning. Max has completed wetland delineations for both public and private sector clients in Missouri, Minnesota, Wisconsin, Iowa, North Dakota, and South Dakota.

4 Regulatory Requirements

A summary of the permit requirements that may pertain to the project is provided below. Any activity planned within areas identified as wetland must be coordinated with and approved by the appropriate agencies prior to commencement of such activities.

Agencies in Minnesota that regulate activities that affect lakes, rivers, streams, and wetlands include:

- U.S. Army Corps of Engineers (USACE)
  - Section 404 of the Clean Water Act
- Local Governmental Units (LGUs)
  - Wetland Conservation Act (WCA)

The LGU for this project is the Dakota County SWCD. The WCA applies to nearly all wetlands not regulated by the DNR.

The regulatory authority of the U.S. Army Corps of Engineers (USACE) covers Waters of the United States (WOTUS) in accordance with Section 404 of the Clean Water Act. Generally, the USACE reviews delineations to determine whether wetlands are jurisdictional (i.e., WOTUS). On December 30, 2022, the U.S. Environmental Protection Agency and Department of the Army ("the agencies") announced the final "Revised Definition of 'Waters of the United States'" rule. The rule took effect on March 20, 2023. Based on a preliminary federal injunction on April 12, 2023, the Revised Definition was revoked and the pre-2015 regulatory regime is in effect for 27 states. In Minnesota, the 2023 Revised Definition of the Waters of the United States is in effect as of the date of this report. As of September 8, 2023, the EPA and the Department of the Army amended the WOTUS rule to conform to the 2023 Supreme Court decision in Sackett v. EPA.

Based on the May 25, 2023 ruling of Sackett v. EPA (2023), the Clean Waters Act's use of "waters" encompasses only relatively permanent, standing, or continuously flowing bodies, ordinarily called streams, oceans, rivers, and lakes. Wetlands qualify as WOTUS only if "indistinguishable from waters of the United States," having a continuous surface connection to bodies that are waters of the United States in their own right, with no clear division between waters and wetlands.

In Minnesota, a joint application process has been developed for projects with anticipated wetland impacts. Applications are coordinated between the USACE, DNR, and LGU.

5 Mapping and Background Information

Prior to field reconnaissance, potential wetland areas within the project study areas were identified through a desktop review of United States Geological Survey (USGS) Topographic maps, National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), Department of Natural Resources (DNR) Public Waters Inventory (PWI), LiDAR, the soil survey for Dakota County, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), aerial photography, and antecedent precipitation for a location near the study area. The selected resources are described below:

5.1 Topographic Map

The Farmington, Castle Rock, Randolph, and Coates 7.5-minute United States Geological Survey (USGS) topographic maps and LiDAR data from USGS were reviewed for the study area. According to the USGS topographic map (see **Figure 2**), the study area is depicted as a Golf Course to the north of 225th. The southern portion is depicted as largely undeveloped land which is transected by a portion of the South Branch Vermillion River with two associated intermittent stream branches. Several buildings are depicted in the central portion of the study area. The LiDAR map depicts the north portion of the study area generally sloping to the northwest. The southern portion of the study area slopes south to the South Branch Vermillion River site sloping south towards the South Branch Vermillion River, and northeast towards the forested marsh. The site ranges from 892 feet (above mean sea level) to 930 feet, see Appendix A.

5.2 National Wetlands Inventory

NWI mapping, available from the Minnesota DNR (updated in 2022), depicts potential wetland areas and waterbodies based on stereoscopic analysis of high altitude and aerial photographs and was reviewed for the study area. According to the NWI map, there are portions of 20 wetland types or features within the study area, see **Figure 3**. Wetland types included 10 seasonally flooded basins/floodplains (PEM1A, PEM1Ad, PEM1Af, PEM1C, PEM1Cd), three freshwater ponds (PABH, PABHx), two scrub-shrub communities (PSS1A), three intermittent streams (R4SBC), one perennial stream (R2UBFx), and one wooded swamp (PFO1A).

5.3 National Hydrography Dataset

The National Hydrography Dataset (NHD), available from USGS, depicts drainage networks and related features, including rivers, streams, canals, lakes, and ponds. The NHD dataset is not field verified. According to NHD mapping, there are portions of three flowline features within the southern portion of the study area. One flowline is identified as South Branch Vermillion River. Two additional NHD features converge with the South Branch Vermillion River, see **Figure 3**.

5.4 DNR Public Waters Inventory

The Department of Natural Resources (DNR) Public Waters Inventory (PWI) depicts DNR Public Waterways and Waterbodies. According to the PWI inventory, there are no Public Waters within the study area; however, the portion of South Branch Vermillion River to the east of the study area is identified as a Public Waterway, see **Figure 3**.

5.5 Soil Survey

The Natural Resources Conservation Service's (NRCS) *Web Soil Survey* for Dakota County was reviewed for the study area. According to the survey, there are 17 soil mapping units within the study area which are generally loams and silty clay loams, with some silt loams, sandy loams, gravelly sandy loam, and muck. Approximately 42 percent of the study area was mapped with soils with a non-hydric soil rating of 0 percent.

Approximately 40 percent of the study area was mapped with soils with a predominantly hydric or hydric rating between 90-100 percent. The remaining portions of the study area were mapped with predominantly non-hydric soils between 1-15 percent. Maps and information obtained from the NRCS online web soil survey are included in **Appendix A**.

5.6 Federal Emergency Management Agency Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the project study area. According to the FEMA FIRM, portions of the southern half of the study area are located in Zone AE of panels 27037C0360E and 27037C0380E (effective December 2, 2011), which is within the designated 100-year floodplain zone. The remainder of the study area is located in Zone X of panels 27037C0219E and 27037C0238E (effective December 2, 2011) which is outside the designated 100-year floodplain zone, see **Figure 5**.

5.7 Precipitation

Minnesota State Climatology Office data were reviewed for climate stations within the vicinity of the study area to determine the current hydrologic conditions for the site and if those conditions are typical for this time of year. Ninety-day rolling precipitation levels leading up to the field review were compared to historical data. The data show that February had drier than normal, March had wetter than normal, April had normal, and May had wetter than normal precipitation levels. In summary, the field visit constituted wetter than normal precipitation conditions. This information is included in **Appendix C**.

5.8 Aerial Photography Review

Aerial photography, acquired from Google Earth, was reviewed to identify the potential for wetlands across the site. Eleven photos were reviewed between 1991 and 2024, available in **Appendix B**. These photos were used to determine the presence of wetland hydrology using industry accepted offsite hydrology analysis for areas showing crop stress or other potential wetland signatures. Each image was interpreted for the presence or lack of hydrologic indicators.

Two Areas of Investigation (AOIs) were identified in the study area. AOIs 1 and 2 had wetland signatures in at least 30% of the historic aerials with normal precipitation conditions, met primary hydrology indicators during the field delineation, and was delineated as part of Wetland 1. The AOIs are shown in **Appendix B.**

6 Field Investigation

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on May 30 and June 13, 2024.

During the onsite delineation, vegetation, soils, and current hydrologic characteristics were evaluated at each wetland area and area of investigation identified within the study area. Wetland boundaries were flagged with wetland flags until one or more of the three criteria were no longer present. The sample point locations, wetland boundaries, and aquatic features were surveyed with a Juniper Geode GPS and are shown in **Figure 6**.

In addition to wetlands that were investigated and delineated, non-wetland aquatic features were sought but none were delineated. Non-wetland aquatic features are defined based on the observation of the following characteristics:

- Flow
    - Perennial: contains water at all times of the year except during extreme drought

    - Intermittent: contains water occasionally or seasonally
    - Ephemeral: contains water only during and immediately after periods of rainfall or snowmelt
- Ordinary High-Water Mark (OHWM): The limit line on the shore established by the fluctuation of the water surface. It is shown by such things as a clear line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, the presence of litter and debris, or other features influenced by the surrounding area
- Bank Shape
    - Undercut: banks that overhang the stream channel
    - Steep: bank slope of approximately greater than 30 degrees
    - Gradual: bank slope of approximately 30 degrees or less

Sample points were completed for all observed wetlands. Historic aerials were reviewed for sample points taken in agricultural fields, see **Appendix B**. The field data sheets are included in **Appendix D**. Site photos and a photo locations map can be found in **Appendix E**.

7 Summary of Results

Table 1: Delineation Summary

Resource ID	Wetland Plant Community	C-39 Type[1]	Cowardin Classification[2]	Size (acres/linear feet)[3]	NWI?	Hydric Soils?[4]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[5]
Wetlands										
Wetland 1	Seasonally Flooded Basin Fesh Wet Meadow Shrub/Carr Shallow Pond	Types 1 / 2 / 5 / 6	PEM1Af PEM1B PSS1A PABH	46.28 acres	PEM1Af PEM1Ad PEM1Cd PSS1A PSS1/EM1A R2UBFx R4SBC	Yes	3, 5, 7, 8, 9	SP-15, 17, 19 (Wet) SP-16, 18 (Up)	Wetland complex located in the southern portion of the study area, in the floodplain of the South Branch Vermillion River. The complex consists of an extensive wet meadow floodplain plant community, a small shallow open water pond, a small seasonally flooded basin, and shrub/carr communities. The wetland collects runoff from the surrounding area and conveys southeast offsite via South Branch Vermillion River.	Jurisdictional (USACE): wetland contributes surface water flow to an offsite Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW).
Wetland 2	Seasonally Flooded Basin Fresh Wet Meadow	Types 1 / 2	PFO1A PEM1C	6.09 acres	PFO1A PEM1A PEM1C	Yes	10, 11, 12, 13	SP-3, 5 (Wet) SP-4, 6 (Up)	Wetland complex located in a wooded area in the northeast corner of the study area. The complex consists of a wooded seasonally flooded basin, as well as a fresh wet meadow where the wooded portion transitions into an open	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.

[1] The Circular 39 wetland types are found here: https://bwsr.state.mn.us/sites/default/files/2018-12/WETLANDS_delin_Circular_39_MN.pdf
[2] The Cowardin Classification System codes are found here: https://www.fws.gov/wetlands/documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf
[3] Size of wetland features and additional areas investigated provided in acres and size of non-wetland, linear features provided in linear feet.
[4] Areas identified as hydric contain partially hydric soils (equal to or greater than 33% of soil component) mapped within the resource area.
[5] Regulatory Status is based on best professional judgment and has not been verified with agency staff.

Resource ID	Wetland Plant Community	C-39 Type[1]	Cowardin Classification[2]	Size (acres/linear feet)[3]	NWI?	Hydric Soils?[4]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[5]
									area. The wetland collects runoff from the surrounding area and is surficially isolated from other aquatic resources.	
Wetland 3	Seasonally Flooded Basin / Shrub Carr	Types 1 / 6	PEM1A PSS1A	0.18 acres	-	Yes	14, 15	SP-1 (Wet) SP-2 (Up)	Wetland 3 is a seasonally flooded basin located adjacent to the northern boundary of the study area and south of the golf course driveway turn out. The wetland collects runoff from the surrounding area and is surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Wetland 4	Shallow Marsh	Type 3	PEM1C	0.28 acres	PABHx	Yes	16	SP-14 (Wet) SP-2 (Up)	Wetland 4 is a shallow marsh, referred to as the Fountain Valley Golf Course Pond. The wetland collects runoff from the surrounding area and is surficially isolated from other aquatic resources. The wetland was documented with representative sample points SP-14 and SP-2.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Wetland 5	Shallow Marsh	Type 3	PEM1C	0.36 acres	PABHx	Yes	17	SP-14 (Wet) SP-2 (Up)	Wetland 5 is a shallow marsh directly west of Wetland 4. The wetland collects runoff from the surrounding landscape. The wetland appears to be surficially isolated from other aquatic resources. The wetland was documented with representative sample points SP-14 and SP-2.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Wetland 6	Seasonally Flooded Basin / Fresh Wet Meadow	Types 1 / 2	PEM1A	0.08 acres	-	No	18, 19	SP-7 (Wet) SP-8 (Up)	Wetland 6 is a seasonally flooded basin dominated by reed canary grass located in a wooded portion of the	Non-Jurisdictional (USACE): does not have a continuous surficial

Resource ID	Wetland Plant Community	C-39 Type[1]	Cowardin Classification[2]	Size (acres/linear feet)[3]	NWI?	Hydric Soils?[4]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[5]
									Fountain Valley Golf Course. The wetland collects runoff from the surrounding area and is surficially isolated from other aquatic resources.	connection to a TNW or RPW.
Wetland 7	Seasonally Flooded Basin / Shallow Marsh	Types 1 / 3	PEM1A PEM1C	0.09 acres	PEM1C	Yes	20	SP-14 (Wet) SP-2 (Up)	Wetland 7 is an excavated shallow pond dominated by cattail and common reed, located in the northwest portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding area and is surficially isolated from other aquatic resources. The wetland was documented with representative upland point SP-2.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Wetland 8	Seasonally Flooded Basin	Type 1	PEM1A	0.10 acres	-	Yes	21, 22	SP-12 (Wet) SP-13 (Up)	Wetland 8 is a linear, seasonally flooded basin located between a wooded area and a golfing green in the northwest portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and is surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Wetland 9	Fresh Wet Meadow	Type 2	PEMB	0.07 acres	-	Yes	23	SP-9 (Wet) SP-10 (Up)	Wetland 9 is a fresh wet meadow bordering a wooded depression in the west portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and is surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.

Resource ID	Wetland Plant Community	C-39 Type[1]	Cowardin Classification[2]	Size (acres/linear feet)[3]	NWI?	Hydric Soils?[4]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[5]
Wetland 10	Seasonally Flooded Basin	Type 1	PEM1A	0.02 acres	-	Yes	25	SP-11 (Wet) SP-10 (Up)	Wetland 10 is a seasonally flooded basin located in a depression in the wooded northwest portion of the Fountain Valley Golf Course. The wetland collects runoff from the surrounding landscape and is surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW.
Non-Wetland Aquatic Resources										
Perennial Stream A	-	-	R2UB	3,337 ln ft	R2UBFx	Yes	1	-	Perennial Stream A (South Branch Vermillion River) transects the southern wooded portion of the study area east to west. The stream collects runoff from the surrounding area including Wetland 1 and flows southeast offsite. Perennial Stream A is a tributary of the Vermillion River. The stream is approximately 4 to 19 feet wide and had shallow banks approximately 0.5 to 3 feet in height.	USACE-Jurisdictional: tributary classifies as a Relatively Permanent Water (RPW) and contributes surface water flow to an offsite Traditionally Navigable Water (TNW).

8 Report Preparation

The procedures followed for this wetland delineation are in accordance with the *Corps of Engineers Wetlands Delineation Manual* and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010).

This report describes site conditions for a specific date in time and is generally valid for a period of five years from the date of the final field investigation and delineation, which was May 30 and June 13, 2024.

9 Conclusion

The field delineation identified 10 wetlands, 1 perennial stream, and 1 erosional feature within the study area. Each of the delineated resources is described in Table 1. Two of the wetlands and the perennial stream are anticipated to be USACE-jurisdictional and WCA-regulated. Eight of the wetlands and the erosional feature are not anticipated to be regulated.

10 Disclaimer

Kimley-Horn has prepared this document based on limited field observations and our interpretation, as scientists, of applicable regulations and agency guidance. While Kimley-Horn believes our interpretation to be accurate, final authority to interpret the regulations lies with the appropriate regulatory agencies. Regulatory agencies occasionally issue guidance that changes the interpretation of published regulations. Guidance issued after the date of this report has the potential to invalidate our conclusions and/or recommendations and may cause a need to reevaluate our conclusions and/or recommendations.

Because Kimley-Horn has no regulatory authority, the Client understands that proceeding based solely upon this document does not protect the Client from potential sanction or fines from the applicable regulatory agencies. The Client acknowledges that they have the opportunity to submit documentation to the regulatory agencies for concurrence prior to proceeding with any work. If the Client elects not to do so, then the Client proceeds at their sole risk.

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Figures

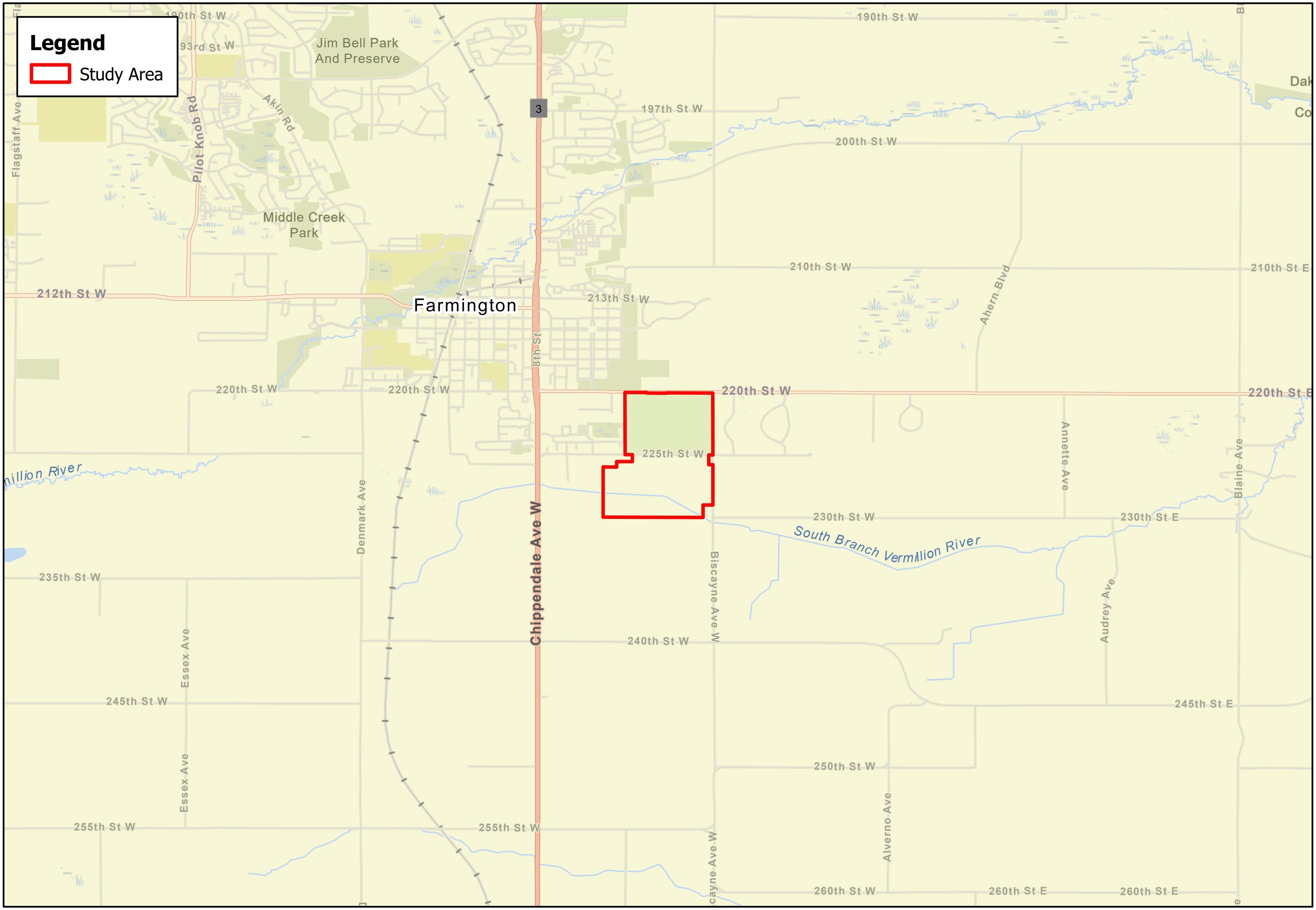

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Figure 1. Project Location
Farmington Technology Park
Tract Management Company, LP

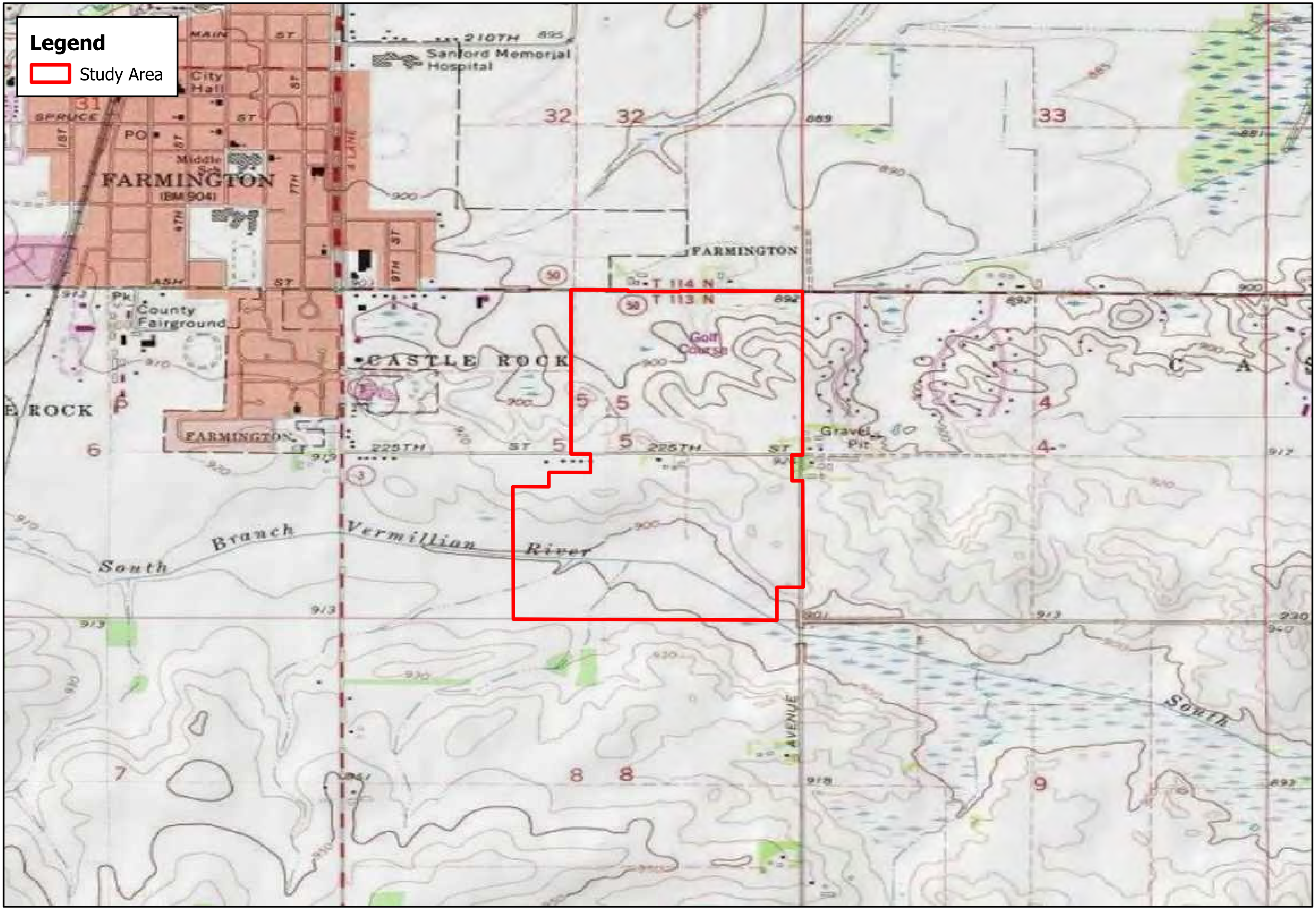

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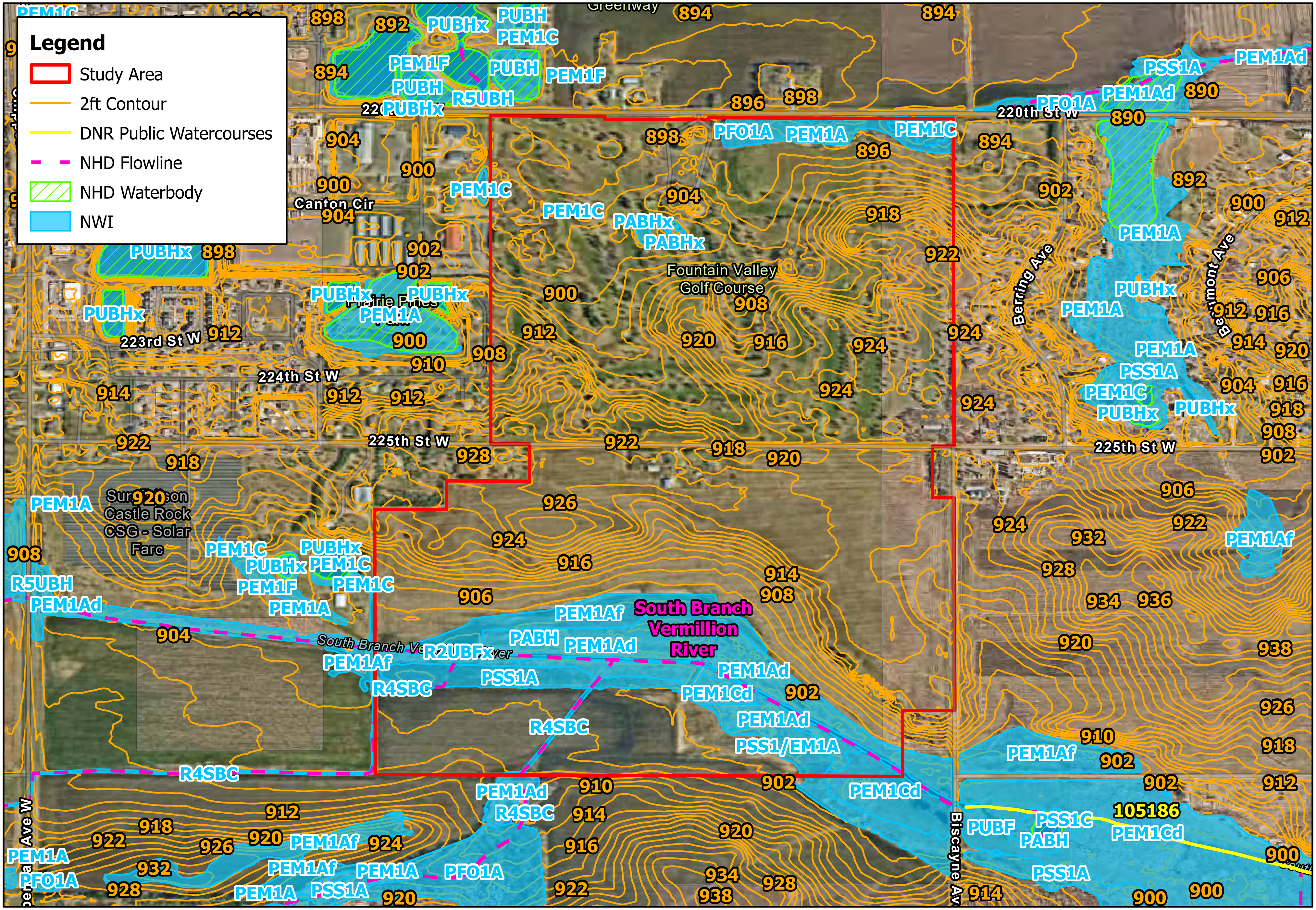
Figure 2. USGS Topographic Map
Farmington Technology Park
Tract Management Company, LP



0 500 1,000
US Feet

N

Kimley»Horn

Figure 3. PWI - NWI - NHD - 2ft Contours
Farmington Technology Park
Tract Management Company, LP

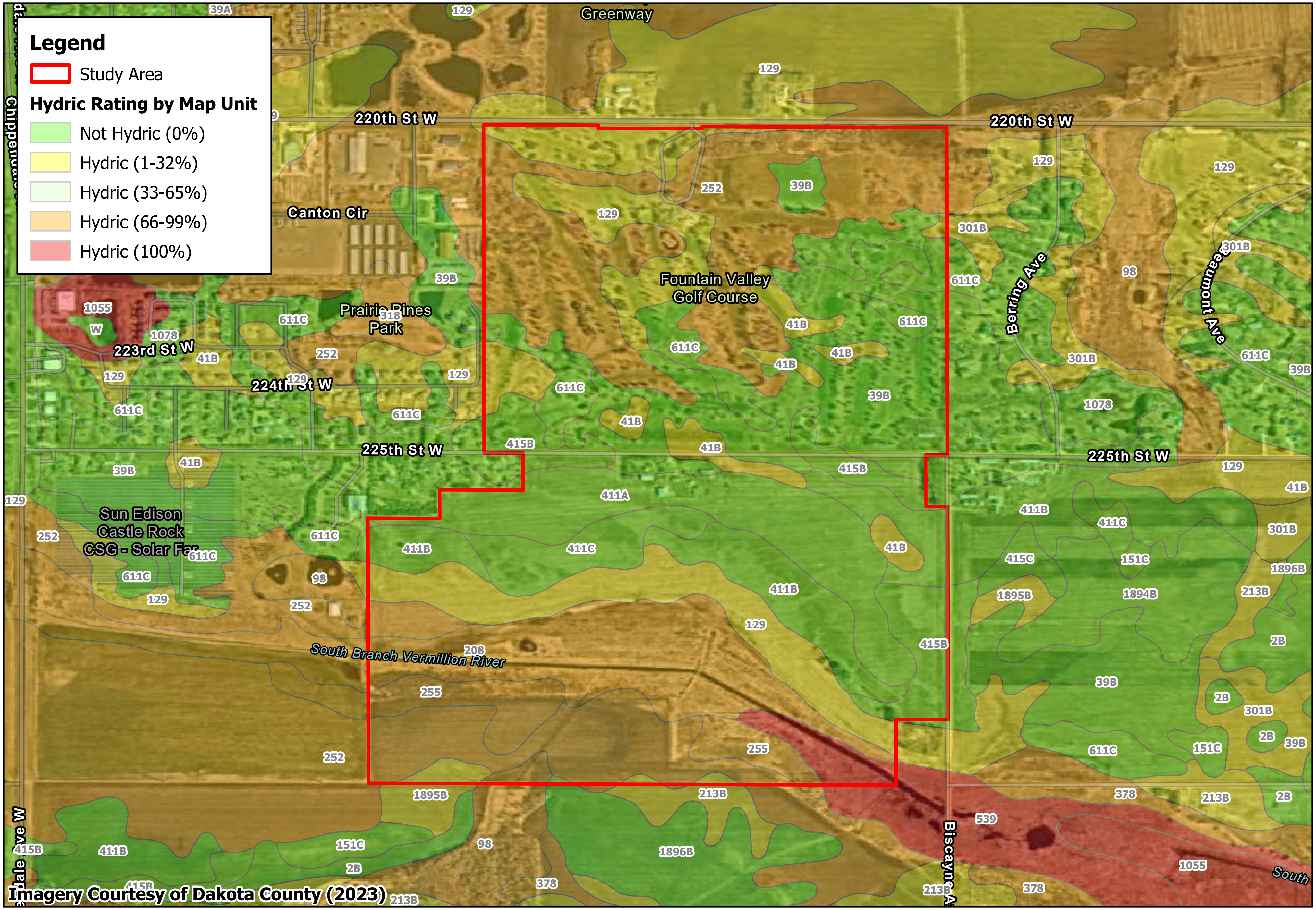


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Figure 4. Hydric Soils Map
Farmington Technology Park
Tract Management Company, LP

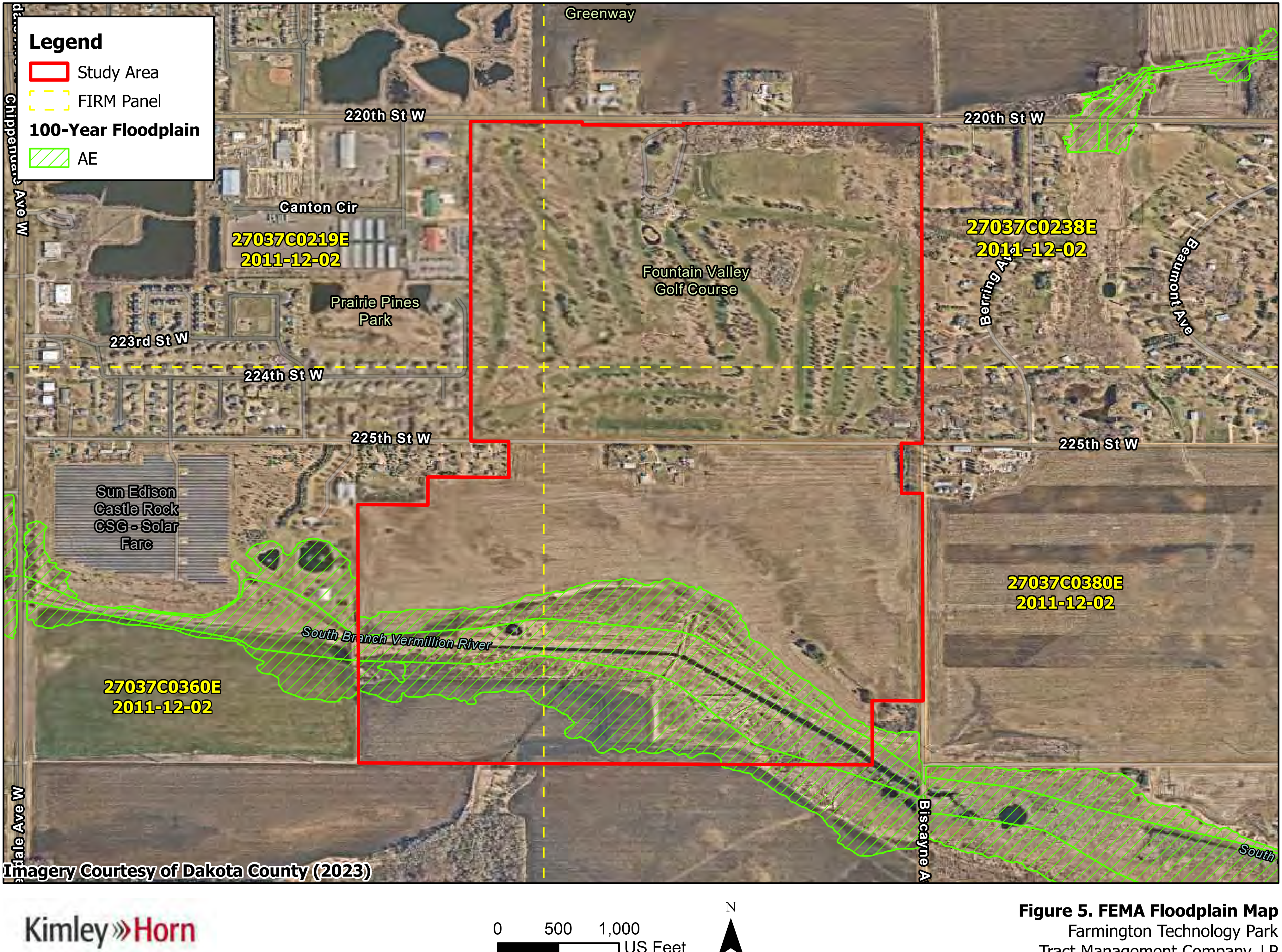

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Figure 5. FEMA Floodplain Map
Farmington Technology Park
Tract Management Company, LP

Legend

- Study Area
- Sample Point

Delineated Wetland

- Type 1 / Seasonally Flooded Basin
- Type 2 / Fresh Wet Meadow
- Type 3 / Shallow Marsh
- Type 5 / Shallow Open Water
- Type 6 / Scrub Shrub Swamp

Linear Feature

- Erosional Feature
- Perennial Stream

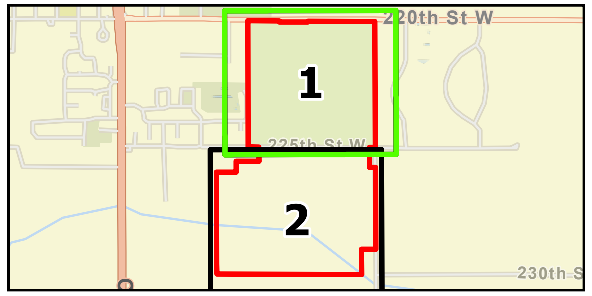


Figure 6.1 Delineation Summary Map
Farmington Technology Park
Tract Management Company, LP

N

0 200 400 US Feet

Legend
- Study Area
- Sample Point

Delineated Wetland
- Type 1 / Seasonally Flooded Basin
- Type 2 / Fresh Wet Meadow
- Type 3 / Shallow Marsh
- Type 5 / Shallow Open Water
- Type 6 / Scrub Shrub Swamp

Linear Feature
- Erosional Feature
- Perennial Stream

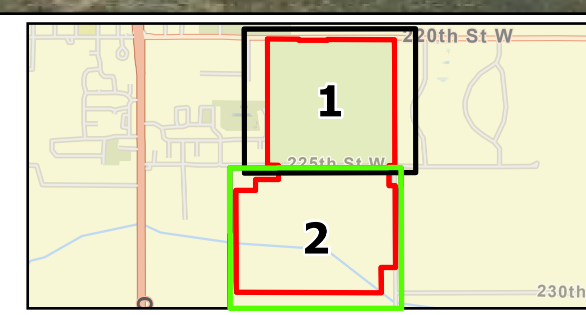
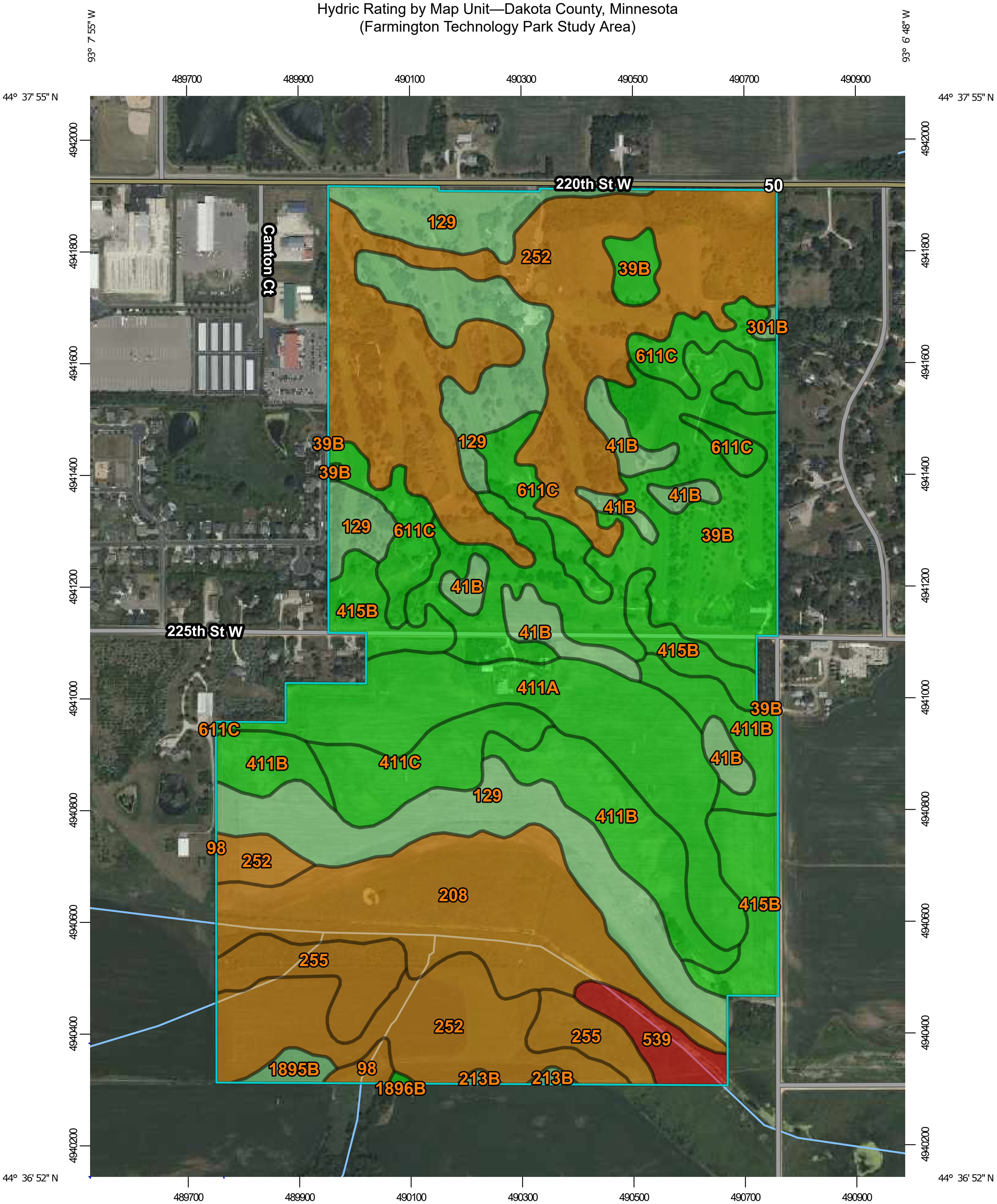


Figure 6.2 Delineation Summary Map
Farmington Technology Park
Tract Management Company, LP

N
0 200 400 US Feet

Appendix A: Hydric Soils Information

Hydric Rating by Map Unit—Dakota County, Minnesota
(Farmington Technology Park Study Area)



Map Scale: 1:9,420 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0, 100, 200, 400, 600

Feet: 0, 450, 900, 1800, 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Lines

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Points

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dakota County, Minnesota
Survey Area Data: Version 19, Sep 9, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 29, 2023—Sep 13, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
39B	Wadena loam, 2 to 6 percent slopes	0	43.8	12.6%
41B	Estherville sandy loam, 2 to 6 percent slopes	1	11.3	3.3%
98	Colo silt loam, occasionally flooded	95	1.3	0.4%
129	Cylinder loam, 0 to 2 percent slopes	15	48.0	13.8%
208	Kato silty clay loam	95	34.3	9.9%
213B	Klinger silt loam, 1 to 5 percent slopes	5	0.7	0.2%
252	Marshan silty clay loam	90	87.4	25.1%
255	Mayer silt loam	90	12.7	3.6%
301B	Lindstrom silt loam, till plain, 2 to 6 percent slopes	5	0.4	0.1%
411A	Waukegan silt loam, 0 to 1 percent slopes	0	30.7	8.8%
411B	Waukegan silt loam, 1 to 6 percent slopes	0	23.5	6.8%
411C	Waukegan silt loam, 6 to 12 percent slopes	0	10.3	3.0%
415B	Kanaranzi loam, 2 to 6 percent slopes	0	17.5	5.0%
539	Klossner muck, 0 to 1 percent slopes	100	5.1	1.5%
611C	Hawick gravelly sandy loam, 6 to 12 percent slopes	0	19.0	5.5%
1895B	Carmi loam, 2 to 8 percent slopes	5	1.7	0.5%
1896B	Ostrander-Carmi loams, 2 to 6 percent slopes	0	0.2	0.0%
Totals for Area of Interest			**347.8**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Appendix B: Historic Aerial Review

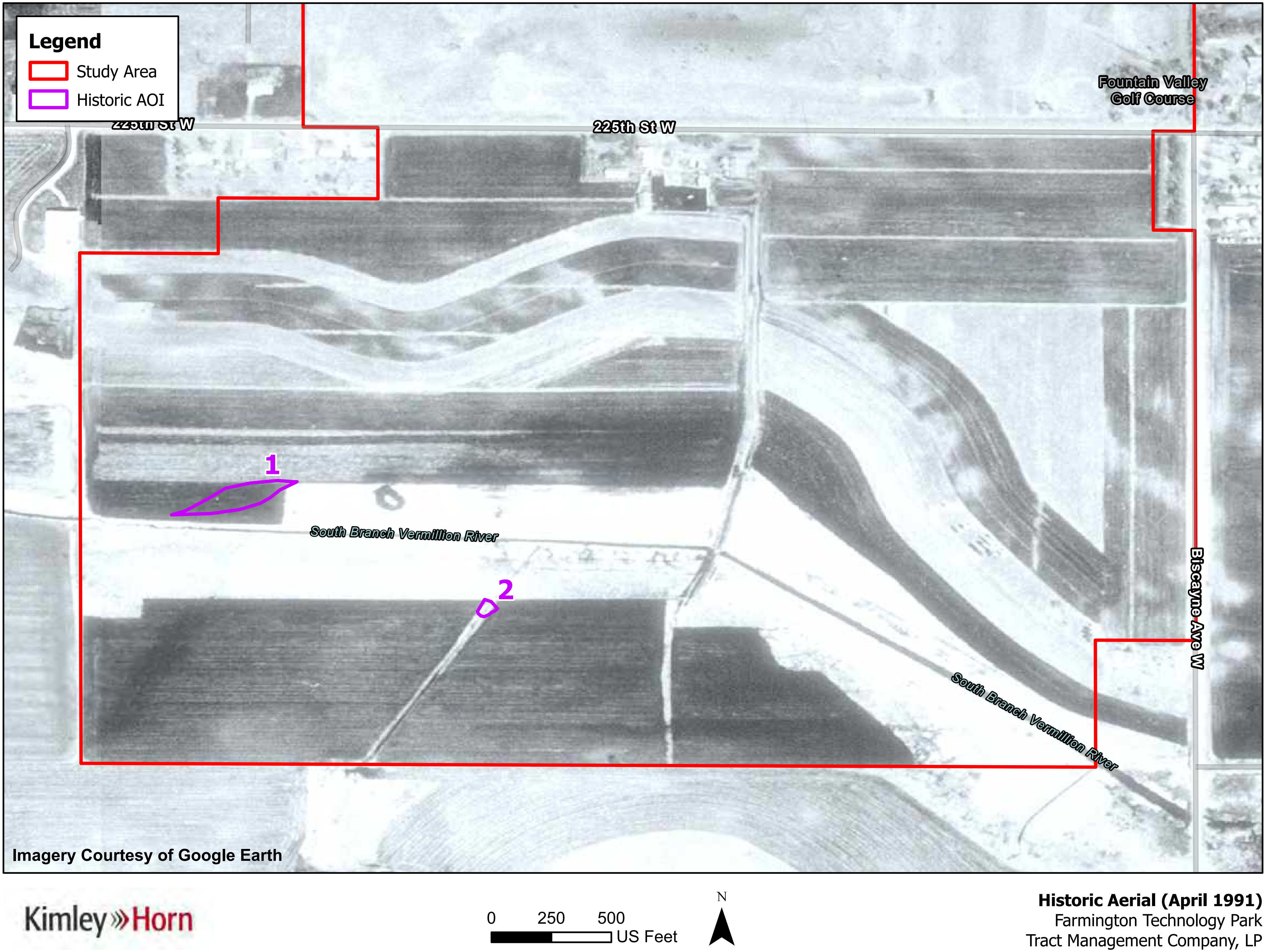
Appendix B. Historic Aerial Review*

Date Image Taken	Climate Condition***	Image Interpretation** (Area of Investigation) 1	2
4/16/1991	Normal Conditions	NV	NC
9/17/2002	Wetter than Normal	NV	NC
3/31/2004	Normal Conditions	NV	NC
4/3/2012	Normal Conditions	SS	SS
9/15/2013	Normal Conditions	SS	SS
11/12/2015	Normal Conditions	SS	NV
6/4/2020	Normal Conditions	SS	SW
8/12/2021	Drier than Normal	CS	NV
5/20/2023	Wetter than Normal	SS	SS
4/24/2024	Normal Conditions	SS	SS
Number of normal years		7	7
Number of normal years with wet signatures		6	6
Percent of normal years with wet signatures		86%	86%
Hydric Soils present		Yes	No
Identified on NWI		Yes	Yes
Hydrology indicators observed during field review?		Yes	Yes
Has wetland signature in 30% or more in normal years?		Yes	Yes
Wetland Present?		Yes	Yes
Wetland Number		1	1

**Methodology for determining the presence of wetland explained in Guidance for Offsite Hydrology/ Wetland Determinations from Minnesota Board of Water and Soil Resources (BWSR) and St Paul District Corps of Engineers (July 1, 2016)*

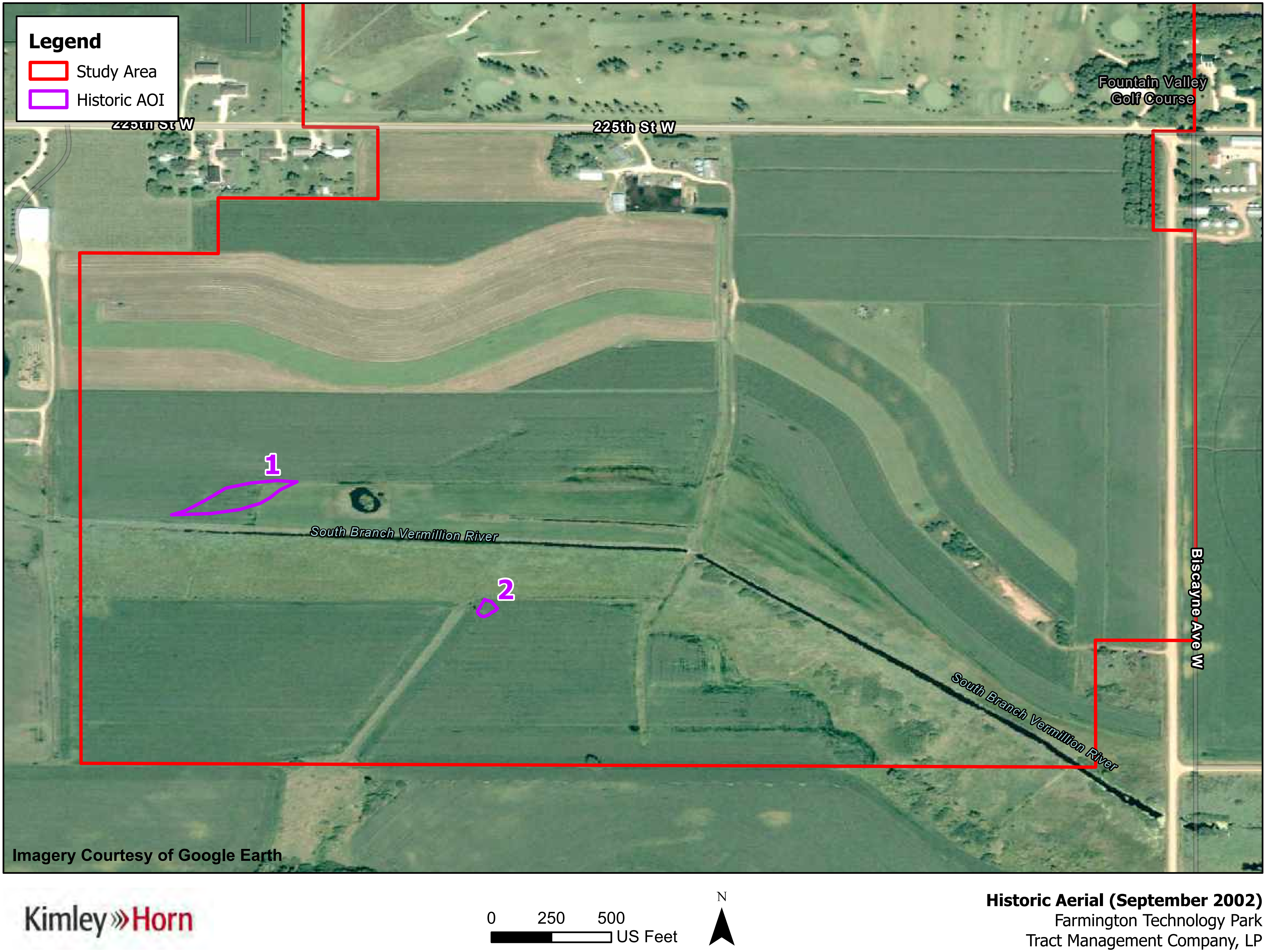
***CS = Crop Stress, NC = Not Cropped, SS = Soil Wetness Signature, SW = Standing Water, AP = Altered Pattern, NV = Normal Vegetative Cover, DO= Drowned Out*

****Climate condition based on USACE APT 90-day rolling precipitation total for wetland hydrology determination for the given photo date. Methodology is described in report.*



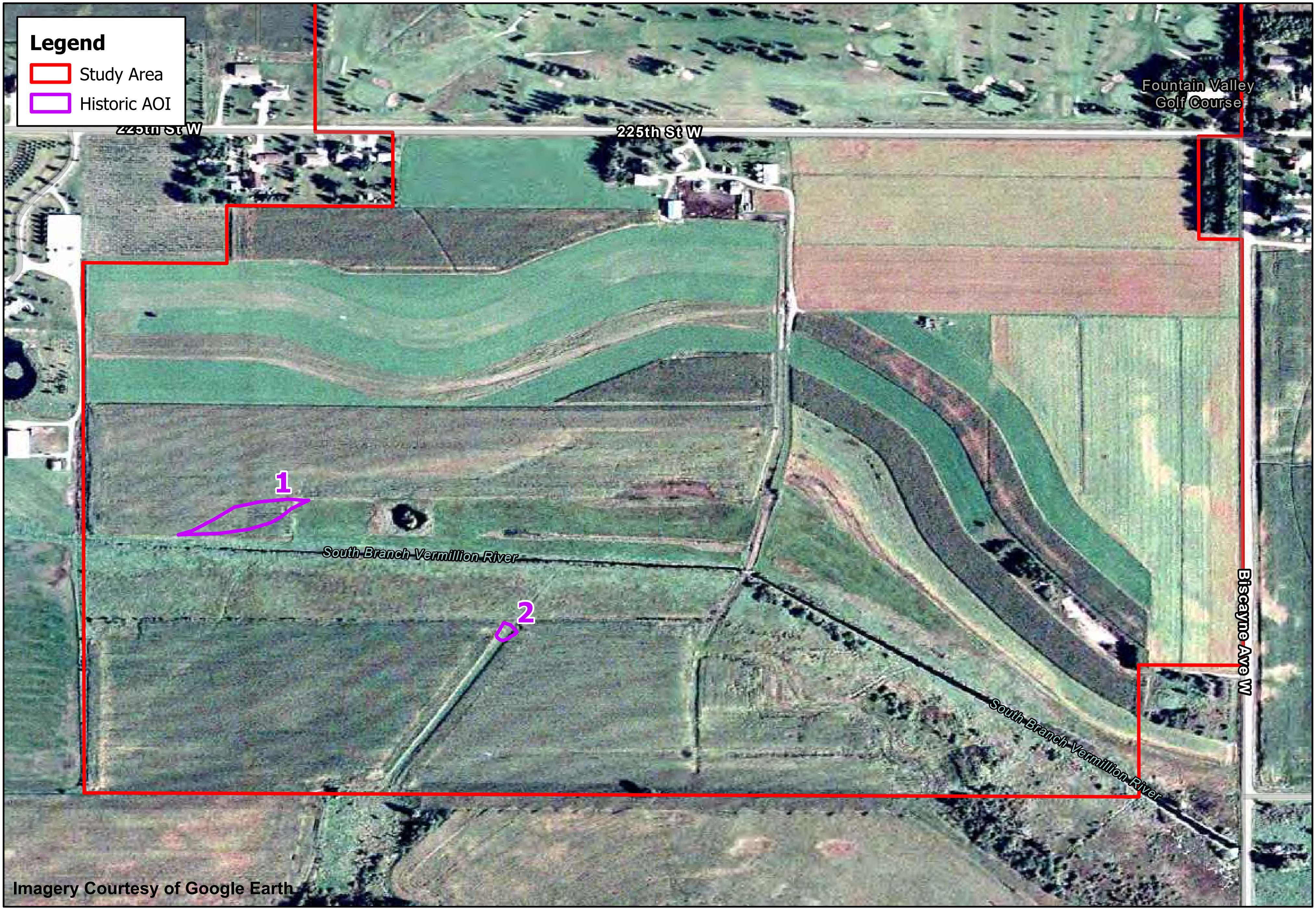
Kimley»Horn

Historic Aerial (April 1991)
Farmington Technology Park
Tract Management Company, LP



Kimley»Horn

Historic Aerial (September 2002)
Farmington Technology Park
Tract Management Company, LP

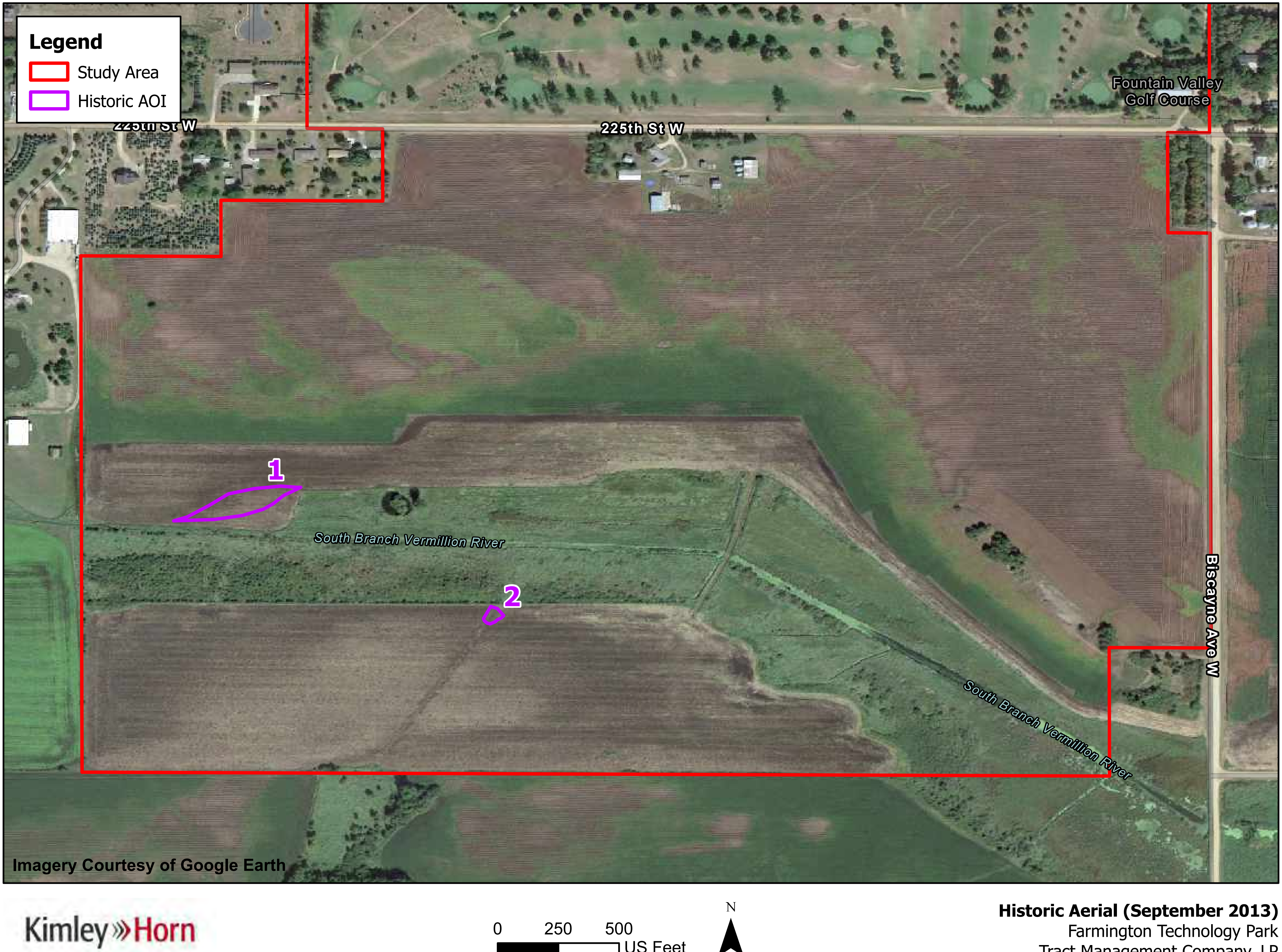


Kimley»Horn

Historic Aerial (March 2004)
Farmington Technology Park
Tract Management Company, LP

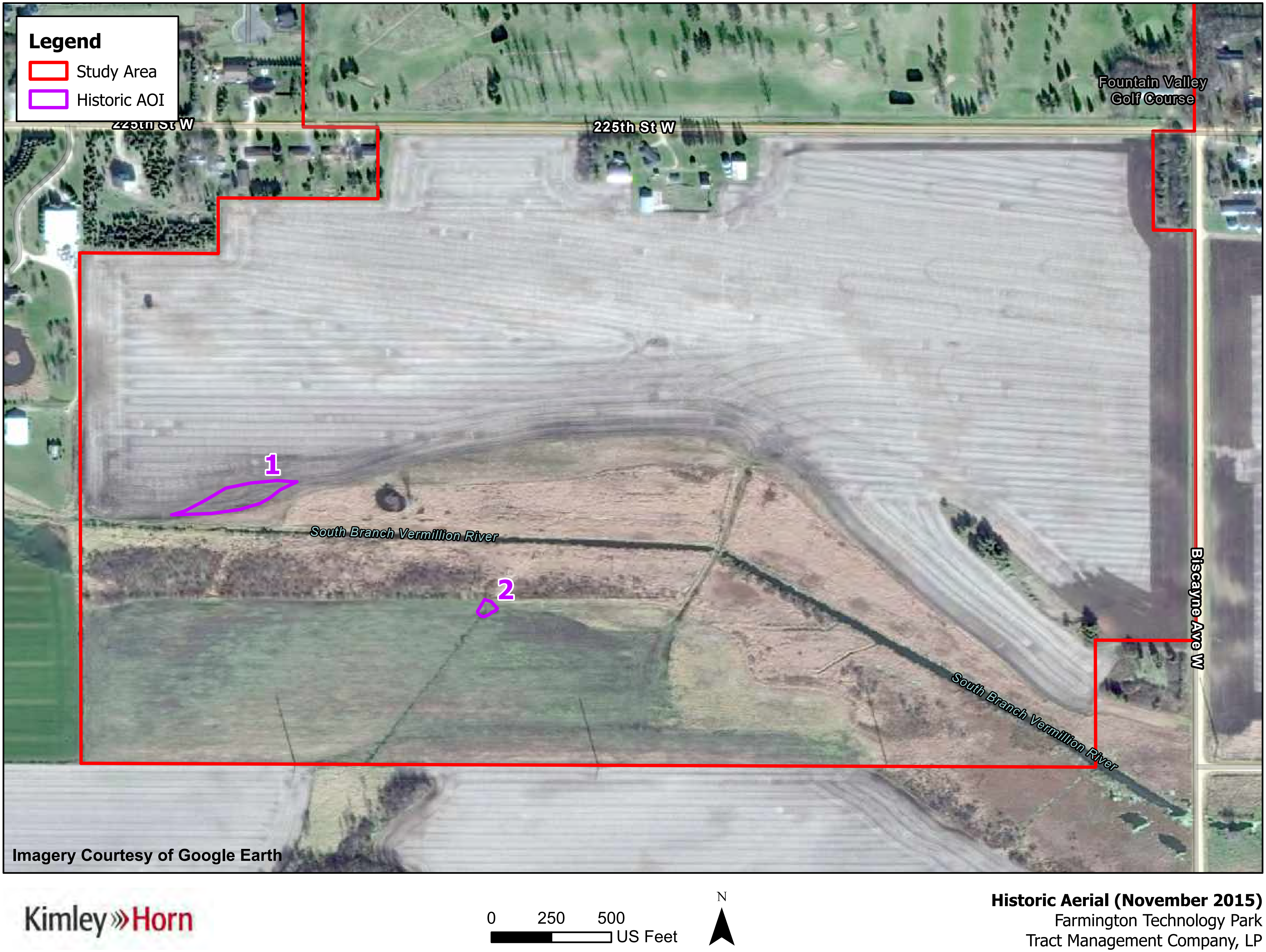
Kimley»Horn

Historic Aerial (April 2012)
Farmington Technology Park
Tract Management Company, LP



Kimley»Horn

Historic Aerial (September 2013)
Farmington Technology Park
Tract Management Company, LP



Kimley»Horn

Historic Aerial (November 2015)
Farmington Technology Park
Tract Management Company, LP

Kimley»Horn

0 250 500 US Feet

N

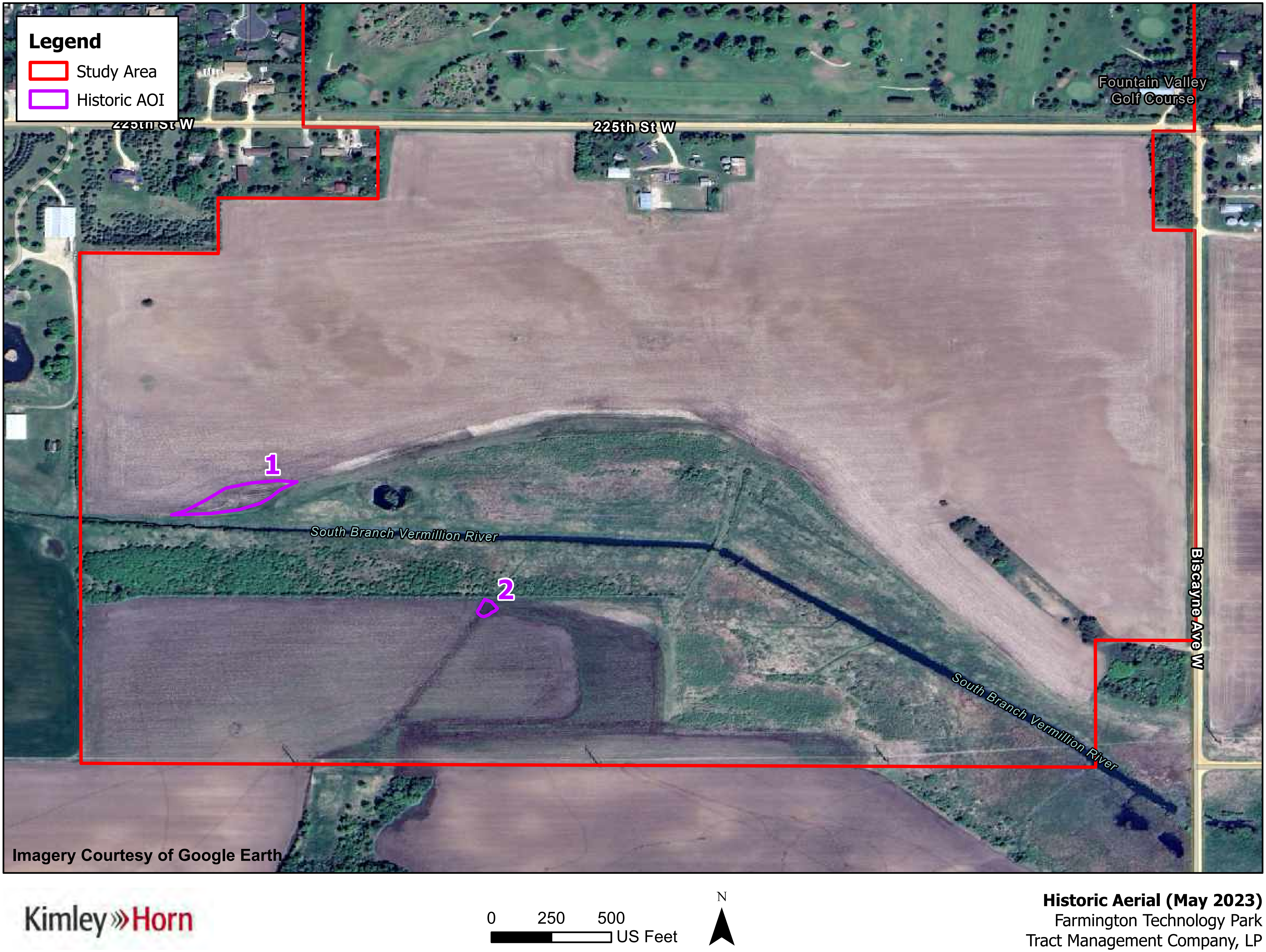
Historic Aerial (June 2020)
Farmington Technology Park
Tract Management Company, LP

Kimley»Horn

0 250 500
US Feet

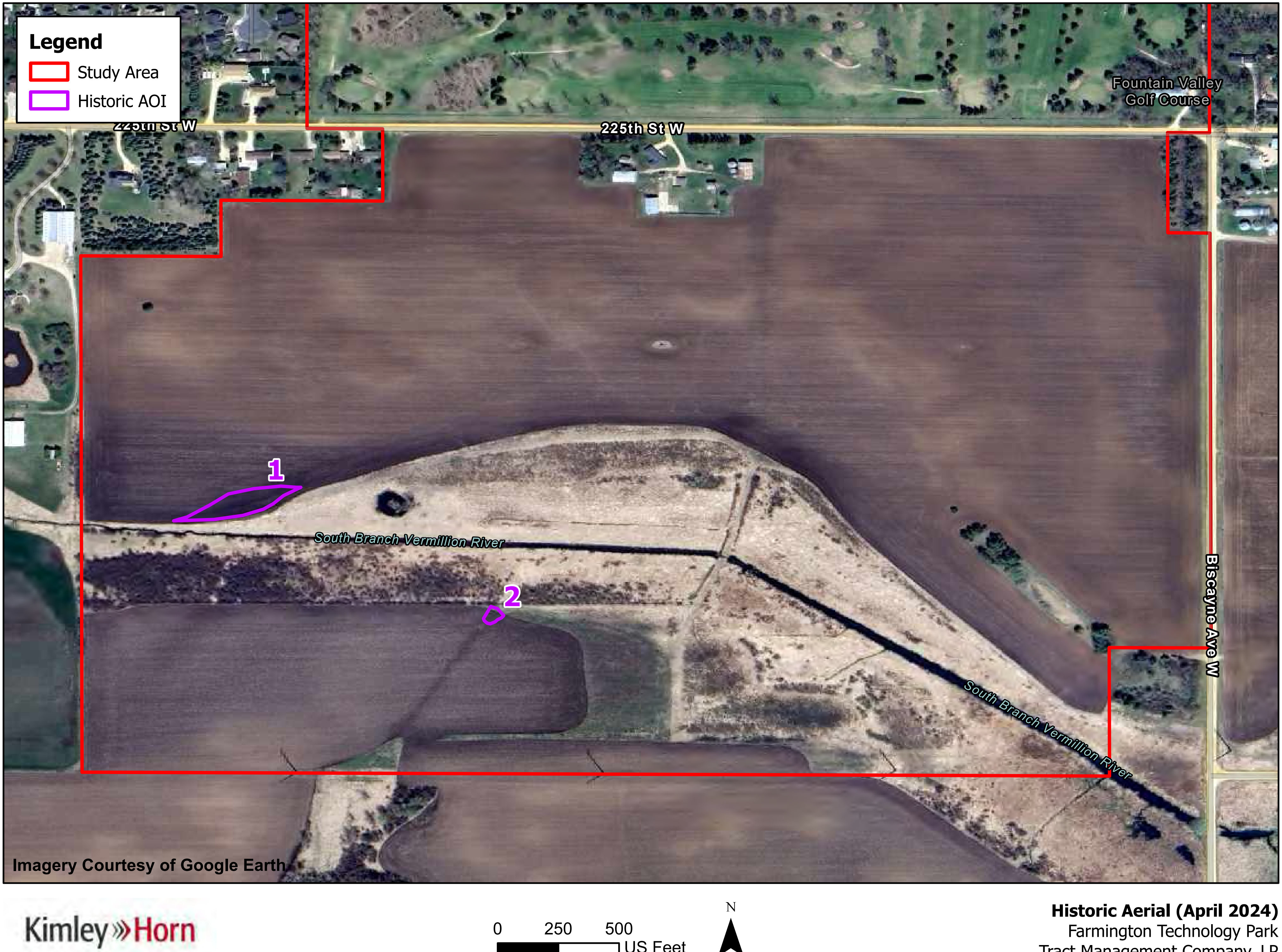
N

Historic Aerial (August 2021)
Farmington Technology Park
Tract Management Company, LP



Kimley»Horn

Historic Aerial (May 2023)
Farmington Technology Park
Tract Management Company, LP



Kimley»Horn

Historic Aerial (April 2024)
Farmington Technology Park
Tract Management Company, LP

Appendix C: Precipitation Data

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: **Mar-91**	second prior month: **Feb-91**	third prior month: **Jan-91**
estimated precipitation total for this location:	**2.88**	**0.85**	**0.16**
there is a 30% chance this location will have less than:	1.11	0.56	0.55
there is a 30% chance this location will have more than:	2.07	1.16	1.09
type of month: dry normal wet	**wet**	**normal**	**dry**
monthly score	**3 * 3 = 9**	**2 * 2 = 4**	**1 * 1 = 1**
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	**14 (Normal)**		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: **Aug-02**	second prior month: **Jul-02**	third prior month: **Jun-02**
estimated precipitation total for this location:	**8.08**	**4.87**	**9.46**
there is a 30% chance this location will have less than:	3.42	2.5	3.82
there is a 30% chance this location will have more than:	5.77	4.88	5.26
type of month: dry normal wet	**wet**	**normal**	**wet**
monthly score	**3 * 3 = 9**	**2 * 2 = 4**	**1 * 3 = 3**
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	**16 (Wet)**		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Feb-04	second prior month: Jan-04	third prior month: Dec-03
estimated precipitation total for this location:	1.42	0.35	0.71
there is a 30% chance this location will have less than:	0.56	0.55	0.76
there is a 30% chance this location will have more than:	1.16	1.09	1.4
type of month: dry normal wet	wet	dry	dry
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	12 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Mar-12	second prior month: Feb-12	third prior month: Jan-12
estimated precipitation total for this location:	1.82	2.06	0.54
there is a 30% chance this location will have less than:	1.11	0.56	0.55
there is a 30% chance this location will have more than:	2.07	1.16	1.09
type of month: dry normal wet	normal	wet	dry
monthly score	3 * 2 = 6	2 * 3 = 6	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	13 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Aug-13	second prior month: Jul-13	third prior month: Jun-13
estimated precipitation total for this location:	1.5	4.71	5.29
there is a 30% chance this location will have less than:	3.42	2.5	3.82
there is a 30% chance this location will have more than:	5.77	4.88	5.26
type of month: dry normal wet	dry	normal	wet
monthly score	3 * 1 = 3	2 * 2 = 4	1 * 3 = 3
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	10 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Oct-15	second prior month: Sep-15	third prior month: Aug-15
estimated precipitation total for this location:	1.94	5.24	4.14
there is a 30% chance this location will have less than:	1.5	1.94	3.42
there is a 30% chance this location will have more than:	3.39	5.34	5.77
type of month: dry normal wet	normal	normal	normal
monthly score	3 * 2 = 6	2 * 2 = 4	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	12 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: May-20	second prior month: Apr-20	third prior month: Mar-20
estimated precipitation total for this location:	6.51	1.29	2.69
there is a 30% chance this location will have less than:	3.02	1.98	1.11
there is a 30% chance this location will have more than:	5.19	3.49	2.07
type of month: dry normal wet	wet	dry	wet
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 3 = 3
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	14 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Jul-21	second prior month: Jun-21	third prior month: May-21
estimated precipitation total for this location:	1.26	2.42	4.17
there is a 30% chance this location will have less than:	2.5	3.82	3.02
there is a 30% chance this location will have more than:	4.88	5.26	5.19
type of month: dry normal wet	dry	dry	normal
monthly score	3 * 1 = 3	2 * 1 = 2	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	7 (Dry)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Apr-23	second prior month: Mar-23	third prior month: Feb-23
estimated precipitation total for this location:	2.66	2.18	2.24
there is a 30% chance this location will have less than:	1.98	1.11	0.56
there is a 30% chance this location will have more than:	3.49	2.07	1.16
type of month: dry normal wet	normal	wet	wet
monthly score	3 * 2 = 6	2 * 3 = 6	1 * 3 = 3
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	15 (Wet)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Mar-24	second prior month: Feb-24	third prior month: Jan-24
estimated precipitation total for this location:	2.46R	0.5	0.16
there is a 30% chance this location will have less than:	1.11	0.56	0.55
there is a 30% chance this location will have more than:	2.07	1.16	1.09
type of month: dry normal wet	wet	dry	dry
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	12 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: Apr-24	second prior month: Mar-24	third prior month: Feb-24
estimated precipitation total for this location:	3.15R	2.46R	0.5
there is a 30% chance this location will have less than:	1.98	1.11	0.56
there is a 30% chance this location will have more than:	3.49	2.07	1.16
type of month: dry normal wet	normal	wet	dry
monthly score	3 * 2 = 6	2 * 3 = 6	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	13 (Normal)		

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: May-24	second prior month: Apr-24	third prior month: Mar-24
estimated precipitation total for this location:	6.87R	3.33	2.29
there is a 30% chance this location will have less than:	3.03	1.98	1.11
there is a 30% chance this location will have more than:	5.17	3.48	2.07
type of month: dry normal wet	wet	normal	wet
monthly score	3 * 3 = 9	2 * 2 = 4	1 * 3 = 3
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	16 (Wet)		

Appendix D: Field Data Sheets

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-05-30

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-1

Investigator(s): Mason Kunkel, Max Forsman | Section, Township, Range: S05 T113NR19W

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave

Slope (%): 3 | Lat: 44.63016964 | Long: -93.12227217 | Datum: WGS 84

Soil Map Unit Name: 129 - Cylinder loam, 0 to 2 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	f yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a deep depression in a wooded area, surrounded by the Fountain Valley Golf Course.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	35	Y	FACW
2 *Salix nigra*	25	Y	OBL
3			
4			
5			
	60	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Lonicera japonica*	60	Y	FACU
2 *Rhamnus cathartica*	15	Y	FAC
3			
4			
5			
	75	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Equisetum arvense*	15	Y	FAC
2 *Galium aparine*	5	N	FACU
3 *Parthenocissus quinquefolia*	5	N	FACU
4 *Rubus idaeus*	5	N	FACU
5			
6			
7			
8			
9			
10			
	30	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across all Strata:	5	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	80.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	25	x 1 =	25	
FACW species	35	x 2 =	70	
FAC species	30	x 3 =	90	
FACU species	75	x 4 =	300	
UPL species	0	x 5 =	0	
Column totals	165	(A)	485	(B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 3	10YR 3/2	100					Sandy Loam	
3 - 16	10YR 4/2	95	5YR 5/6	5	C	M	Sand	
16 - 24	10YR 4/2	100					Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
X Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-05-30
Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-2
Investigator(s): Mason Kunkel, Max Forsman | Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none):
Slope (%): 2 | Lat: 44.62994966 | Long: -93.12228894 | Datum: WGS 84
Soil Map Unit Name: 129 - Cylinder loam, 0 to 2 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	N	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on a hillslope between the ends of the Fountain Valley Golf Course and a forested depression.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	20	Y	FACW
2 *Lonicera japonica*	15	Y	FACU
3			
4			
5			
	35	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Lonicera japonica*	35	Y	FACU
2 *Rhamnus cathartica*	20	Y	FAC
3 *Salix interior*	10	N	FACW
4			
5			
	65	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Poa pratensis*	45	Y	FAC
2 *Lotus corniculatus*	10	N	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	55	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	5	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	60.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	65	x 3 =	195
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column totals	155 (A)		495 (B)

Prevalence Index = B/A = 3.19

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 24	10YR 3/1	100					Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ______
Depth (inches): ______

Hydric soil present? N

Remarks:
Hydric soils were not observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was not observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-05-30

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-3

Investigator(s): Mason Kunkel, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.63015904 | Long: -93.1214966 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	Is the sampled area within a wetland?	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a large forested depression between 220th Street W and the Fountain Valley Golf Course.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Ulmus americana*	50	Y	FACW
2 *Acer negundo*	30	Y	FAC
3 *Fraxinus pennsylvanica*	15	N	FACW
4			
5			
	95	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Rhamnus cathartica*	30	Y	FAC
2 *Fraxinus pennsylvanica*	15	Y	FACW
3			
4			
5			
	45	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Urtica dioica*	30	Y	FACW
2 *Solanum dulcamara*	25	Y	FAC
3 *Galium aparine*	15	N	FACU
4 *Phalaris arundinacea*	10	N	FACW
5			
6			
7			
8			
9			
10			
	80	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across all Strata:	6	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	85	x 3 =	255
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	220 (A)		555 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 14	10YR 2/1	100					Silty Clay Loam	
18 - 24	10YR 4/2	98	2.5Y 6/8	2	C	M	Silty Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
X Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-05-30

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-4

Investigator(s): Mason Kunkel, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.6301093 | Long: -93.12141387 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	N
Is the sampled area within a wetland?	N
f yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a forested area 6 inches upslope of wetland.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	30	Y	FACW
2 *Ulmus americana*	25	Y	FACW
3 *Acer saccharinum*	20	Y	FACW
4			
5			
	75	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Rhamnus cathartica*	40	Y	FAC
2 *Acer negundo*	15	Y	FAC
3			
4			
5			
	55	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Urtica dioica*	35	Y	FACW
2 *Galium aparine*	20	Y	FACU
3 *Parthenocissus quinquefolia*	20	Y	FACU
4 *Rubus idaeus*	20	Y	FACU
5 *Phalaris arundinacea*	5	N	FACW
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across all Strata:	9	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	66.67%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	115	x 2 =	230
FAC species	55	x 3 =	165
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column totals	230 (A)		635 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 24	10YR 3/1	100					Silty Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? N

Remarks:
Hydric soils were not observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
One secondary hydrology indicator was observed, but does not constitute wetland hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Farmington Technology Park City/County: Dakota County Sampling Date: 2024-05-30
Applicant/Owner: Tract Management State: MN Sampling Point: SP-5
Investigator(s): Mason Kunkel, Max Forsman Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 Lat: 44.63000624 Long: -93.11786757 Datum: WGS 84
Soil Map Unit Name 252 - Marshan silty clay loam NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?		f yes, optional wetland site ID:	
Indicators of wetland hydrology present?			

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a semi-forested slight depression with sedge/grass understory, between 220th Street W and the Fountain Valley Golf Course.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	20	Y	FACW
2 *Populus tremuloides*	10	Y	FAC
3			
4			
5			
	30	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Rubus idaeus*	20	Y	FACU
2			
3			
4			
5			
	20	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Carex lacustris*	55	Y	OBL
2 *Carex utriculata*	25	Y	OBL
3 *Vitis riparia*	10	N	FACW
4 *Eutrochium purpureum*	5	N	FAC
5 *Persicaria sagittata*	5	N	OBL
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across all Strata:	5	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	80.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	85	x 1 =	85
FACW species	30	x 2 =	60
FAC species	15	x 3 =	45
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column totals	150 (A)		270 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 16	10YR 2/1	100					Sandy Loam	
16 - 26	10YR 2/1	100					Sandy Clay Loam	
26 - 30	10YR 4/1	96	7.5YR 4/6	4	C	M	Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
X Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-05-30

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-6

Investigator(s): Mason Kunkel, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): Concave

Slope (%): 2 | Lat: 44.63001932 | Long: -93.11785676 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? ____ (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? ____

f yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Populus tremuloides*	20	Y	FAC
2 *Fraxinus pennsylvanica*	5	Y	FACW
3			
4			
5			
	25	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Populus tremuloides*	20	Y	FAC
2 *Fraxinus pennsylvanica*	5	Y	FACW
3			
4			
5			
	25	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Poa pratensis*	60	Y	FAC
2 *Parthenocissus quinquefolia*	10	N	FACU
3 *Solidago canadensis*	10	N	FACU
4 *Cirsium arvense*	5	N	FACU
5			
6			
7			
8			
9			
10			
	85	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across all Strata:	5	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	100	x 3 =	300
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column totals	135 (A)		420 (B)

Prevalence Index = B/A = 3.11

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? ____

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 16	10YR 2/1	100					Sandy Loam	
16 - 24	10YR 2/1	96	7.5YR 5/6	4	C	M	Sandy Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-7

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.6272097 | Long: -93.1200777 | Datum: WGS 84

Soil Map Unit Name: 39B - Wadena loam, 2 to 6 percent slopes | NWI Classification: PSS1A

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in an opening in a buckthorn thicket dominated by sedge and grass species.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Fraxinus pennsylvanica*	25	Y	FACW
2			
3			
4			
5			
	25	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Carex utriculata*	40	Y	OBL
2 *Phalaris arundinacea*	15	Y	FACW
3 *Equisetum fluviatile*	5	N	OBL
4			
5			
6			
7			
8			
9			
10			
	60	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	45	x 1 =	45
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	85 (A)		125 (B)

Prevalence Index = B/A = 1.47

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 24	10YR 5/1	96	10YR 5/8	4	C	M	Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Farmington Technology Park City/County: Dakota County Sampling Date: 2024-06-13
Applicant/Owner: Tract Management State: MN Sampling Point: SP-8
Investigator(s): Cassie Baumgartner, Max Forsman Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): None
Slope (%): 2 Lat: 44.62721358 Long: -93.12022785 Datum: WGS 84
Soil Map Unit Name 39B - Wadena loam, 2 to 6 percent slopes NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? N

Is the sampled area within a wetland? N
f yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on a slight slope, less than 0.5 feet above a wetland depression.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Populus deltoides*	50	Y	FAC
2 *Frangula alnus*	10	N	FACW
3			
4			
5			
	60	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Cornus alternifolia*	50	Y	FAC
2 *Frangula alnus*	30	Y	FACW
3 *Fraxinus pennsylvanica*	10		FACW
4			
5			
	90	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Carex utriculata*	40	Y	OBL
2 *Phalaris arundinacea*	15	Y	FACW
3 *Equisetum fluviatile*	5	N	OBL
4			
5			
6			
7			
8			
9			
10			
	60	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	45	x 1 =	45
FACW species	65	x 2 =	130
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	210 (A)		475 (B)

Prevalence Index = B/A = 2.26

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 4	10YR 3/1	100					Silty Clay Loam	
4 - 24	10YR 3/1	95	5YR 4/6	5	C	M	Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-9

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.6275424 | Long: -93.12559779 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a depression dominated by reed canary grass.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Fraxinus pennsylvanica*	5	Y	FACW
2			
3			
4			
5			
	5	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Phalaris arundinacea*	80	Y	FACW
2 *Typha x glauca*	10	N	OBL
3 *Fraxinus pennsylvanica*	5	N	FACW
4 *Cirsium arvense*	2	N	FACU
5			
6			
7			
8			
9			
10			
	97	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	2	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	10	x 1 =	10
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column totals	102 (A)		198 (B)

Prevalence Index = B/A = 1.94

Hydrophytic Vegetation Indicators:

X Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 16	10YR 2/1	100					Sandy Clay Loam	
16 - 32	10YR 2/1	95	5YR 4/6	5	C	M	Sandy Clay Loam	
32 - 38	10YR 5/1	90	5YR 4/6	10	C	M	Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
X Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-10

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): None

Slope (%): 1 | Lat: 44.62798936 | Long: -93.12587363 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	Is the sampled area within a wetland?	N
Hydric soil present?	N	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on a terrace above a wetland depression with standing water, adjacent to a gravel trail.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	30	Y	FACW
2 *Frangula alnus*	15	Y	FACW
3			
4			
5			
	45	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Rhamnus cathartica*	30	Y	FAC
2 *Ribes americanum*	10	Y	FACW
3			
4			
5			
	40	= Total Cover	
Herb stratum (Plot size: 5')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across all Strata:	4	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	85 (A)		200 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 14	10YR 2/1	100					Silt Loam	
14 - 24	10YR 4/1	45	10YR 5/6	10	C	M	Sandy Clay Loam	
14 - 24	10YR 3/1	35					Sandy Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? N

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

	Yes	No	Depth (inches)
Surface water present?		X	
Water table present?		X	
Saturation present? (includes capillary fringe)		X	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
hydrology was observed

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-11

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 0 | Lat: 44.627988 | Long: -93.12583953 | Datum: WGS 84

Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ___, soil ___, or hydrology ___ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ___, soil ___, or hydrology ___ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	30	Y	FACW
2			
3			
4			
5			
	30	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	30 (A)		60 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
X Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were assumed due to the presence of standing water and a dominance of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

	Yes	No	Depth (inches)
Surface water present?	X		6
Water table present?		X	
Saturation present? (includes capillary fringe)		X	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13
Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-12
Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.62856937 | Long: -93.12548427 | Datum: WGS 84
Soil Map Unit Name: 252 - Marshan silty clay loam | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ___ , soil ___ , or hydrology ___ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ___ , soil ___ , or hydrology ___ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a linear depression dominated by reed canary grass, west of a golfing green.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1 *Fraxinus pennsylvanica*	20	Y	FACW
2 *Acer saccharinum*	10	Y	FACW
3 *Populus deltoides*	10	Y	FAC
4			
5			
	40	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Populus deltoides*	25	Y	FAC
2			
3			
4			
5			
	25	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Phalaris arundinacea*	50	Y	FACW
2 *Cornus alternifolia*	20	Y	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	70	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across all Strata: 6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	135 (A)		325 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 12	10YR 4/1	95	10YR 5/8	5	C	M	Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	8
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	6

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology indicators were observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-13

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): Convex

Slope (%): 4 | Lat: 44.62856937 | Long: -93.12548427 | Datum: WGS 84

Soil Map Unit Name 252 - Marshan silty clay loam | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y	**Is the sampled area within a wetland?** N
Hydric soil present? Y	If yes, optional wetland site ID:
Indicators of wetland hydrology present? N	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on a forested rise, west of a forested depression.

VEGETATION -- Use scientific names of plants.

		Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')				
1	*Fraxinus pennsylvanica*	20	Y	FACW
2	*Acer saccharinum*	10	Y	FACW
3	*Populus deltoides*	10	Y	FAC
4				
5				
		40	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')				
1	*Populus deltoides*	30	Y	FAC
2	*Acer ginnala*	5	N	FAC
3				
4				
5				
		35	= Total Cover	
Herb stratum (Plot size: 5')				
1	*Phalaris arundinacea*	30	Y	FACW
2	*Cornus rugosa*	20	Y	FAC
3	*Equisetum pratense*	5	N	FACW
4				
5				
6				
7				
8				
9				
10				
		55	= Total Cover	
Woody vine stratum (Plot size: 30')				
1	*Vitis riparia*	5	Y	FACW
2				
		5	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	7	(A)
Total Number of Dominant Species Across all Strata:	7	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	65	x 3 =	195
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	135 (A)		335 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 16	10YR 3/1	90	10YR 5/4	5	C	M	Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes		No	X	Depth (inches):
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
One secondary indicator was observed, and therefore does not constitute wetland hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Farmington Technology Park City/County: Dakota County Sampling Date: 2024-06-13
Applicant/Owner: Tract Management State: MN Sampling Point: SP-14
Investigator(s): Cassie Baumgartner, Max Forsman Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 0 Lat: 44.62847957 Long: -93.12487575 Datum: WGS 84
Soil Map Unit Name 252 - Marshan silty clay loam NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in a depression with cattails and standing water, surrounded by a golfing green.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Typha x glauca*	30	Y	OBL
2 *Phragmites australis*	10	Y	FACW
3			
4			
5			
6			
7			
8			
9			
10			
	40	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	30	x 1 =	30
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	40 (A)		50 (B)

Prevalence Index = B/A = 1.25

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
X Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were assumed due to the presence of standing water and dominance of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

	Yes		No		Depth (inches):
Surface water present?	Yes	X	No	X	Depth (inches):
Water table present?	Yes		No	X	Depth (inches):
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-15

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.61957187 | Long: -93.121406 | Datum: WGS 84

Soil Map Unit Name: 208 - Kato silty clay loam | NWI Classification: PEM1Af

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in an unmanicured depression directly southwest of an agricultural field.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Phalaris arundinacea*	20	Y	FACW
2 *Scirpus atrovirens*	15	Y	OBL
3 *Solidago lepida*	15	Y	FACU
4 *Trifolium pratense*	10	N	FACU
5 *Juncus tenuis*	5		FAC
6 *Salix petiolaris*	5	N	OBL
7			
8			
9			
10			
	70	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	66.67%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	20	x 1 =	20
FACW species	20	x 2 =	40
FAC species	5	x 3 =	15
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column totals	70 (A)		175 (B)
Prevalence Index = B/A =	2.50		

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 14	10YR 2/1	100					Sandy Clay Loam	
14 - 26	10YR 2/1	95	10YR5/6	5	C	M		
26 - 32	10YR 5/1	60	10YR 3/1	30	C	M	Sandy Clay Loam	
26 - 32			2.5Y 6/8	5	C	M	Sandy Clay Loam	
26 - 32			10YR 5/8	5	C	M	Sandy Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
X Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
X Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-16

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 0 | Lat: 44.61957187 | Long: -93.121406 | Datum: WGS 84

Soil Map Unit Name: 208 - Kato silty clay loam | NWI Classification: PEM1Af

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation X , soil ___ , or hydrology ___ significantly disturbed?

Are vegetation ___ , soil ___ , or hydrology ___ naturally problematic?

Are "normal circumstances" present? ___

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N		
Hydric soil present?		Is the sampled area within a wetland?	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on the edge of an agricultural field and NWI wetland.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Solidago lepida*	25	Y	FACU
2 *Chenopodium album*	10	Y	FACU
3 *Equisetum arvense*	5	N	FAC
4 *Zea mays*	1	N	UPL
5			
6			
7			
8			
9			
10			
	41	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across all Strata:	2	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	35	x 4 =	140
UPL species	1	x 5 =	5
Column totals	41 (A)		160 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was not observed.

SOIL

Sampling Point: SP-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 18	10YR 2/1	100					Silty Clay	
18 - 30	10YR 3/1	95	10YR 4/6	5	C	M	Silty Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was not observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13
Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-17
Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 44.61783685 | Long: -93.12452899 | Datum: WGS 84
Soil Map Unit Name: 208 - Kato silty clay loam | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X , soil ___ , or hydrology ___ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ___ , soil ___ , or hydrology ___ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
The sample point was located on the north egde of an agricultural field, at the lowest part of an erosional feature that extends southwest of the field.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Glycine max*	1		UPL
2			
3			
4			
5			
6			
7			
8			
9			
10			
	1	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	1	x 5 =	5
Column totals	1 (A)		5 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- X Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)
Planted soybean crops have observable crop stress.

SOIL

Sampling Point: SP-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0 - 10	10YR 2/1	100					Silty Clay Loam	
10 - 18	10YR 5/1	95	10YR 5/6	5	C	M	Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
X Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
X Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
X Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches):	___
Water table present?	Yes	___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site	Farmington Technology Park	City/County:	Dakota County	Sampling Date:	2024-06-13
Applicant/Owner:	Tract Management	State:	MN	Sampling Point:	SP-18
Investigator(s):	Cassie Baumgartner, Max Forsman	Section, Township, Range:	S05 T113N R19W		
Landform (hillslope, terrace, etc.):	Slope	Local relief (concave, convex, none):	Convex		
Slope (%):	1	Lat:	44.61789052	Long:	-93.12471548
Datum:	WGS 84				
Soil Map Unit Name	208 - Kato silty clay loam	NWI Classification:	N/A		

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation X , soil ___ , or hydrology ___ significantly disturbed?

Are vegetation ___ , soil ___ , or hydrology ___ naturally problematic?

Are "normal circumstances" present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	Y
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N

If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located on a gradual slope approximately 0.5 feet upslope of the wetland sample point. Soybean crops are healthier; ther is no visible sign of crop stress.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Glycine max*	8	Y	UPL
2			
3			
4			
5			
6			
7			
8			
9			
10			
	8	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	8	x 5 =	40
Column totals	8 (A)		40 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was not observed.

SOIL

Sampling Point: SP-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 10	10YR 2/1	100					Silty Clay Loam	
10 - 20	10YR 5/1	95	10YR 5/6	5	C	M	Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
X Depleted Below Dark Surface (A11)
X Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

	Yes		No		Depth (inches):
Surface water present?	Yes		No	X	
Water table present?	Yes		No	X	
Saturation present? (includes capillary fringe)	Yes		No	X	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was not observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Farmington Technology Park | City/County: Dakota County | Sampling Date: 2024-06-13

Applicant/Owner: Tract Management | State: MN | Sampling Point: SP-19

Investigator(s): Cassie Baumgartner, Max Forsman | Section, Township, Range: S05 T113N R19W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 1 | Lat: 44.61816178 | Long: -93.12676398 | Datum: WGS 84

Soil Map Unit Name 255 - Mayer silt loam | NWI Classification: PSS1A

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point was located in an opening in a buckthorn thicket dominated by *Carex* species.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30')			
1	30	Y	
2			
3			
4			
5			
	30	= Total Cover	
Sapling/Shrub stratum (Plot size: 15')			
1 *Rhamnus cathartica*	30	Y	FAC
2			
3			
4			
5			
	30	= Total Cover	
Herb stratum (Plot size: 5')			
1 *Carex cristatella*	90	Y	FACW
2 *Fragaria virginiana*	5	N	FACU
3 *Solidago lepida*	5	N	FACU
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	66.67%	(A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	30	x 3 =	90
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column totals	130 (A)		310 (B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

- __ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- __ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- __ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

A dominance of hydrophytic vegetation was observed.

SOIL

Sampling Point: SP-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type*	Loc**	Texture	Remarks
0 - 26	10YR 2/1	100					Silty Clay	
26 - 32	10YR 4/1	90	10YR 5/8	10	C	M	Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric soil present? Y

Remarks:
Hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology was observed.

Appendix E: Photos


Photo 1: Perennial Stream A, facing west. Image date February 2024.


Photo 2: Erosional Feature A, facing southwest.


Photo 3: Wet meadow portion of Wetland 1 near SP-15 facing west.


Photo 4: Boundary between wetland and upland at Wetland 1 near SP-16 facing west.


Photo 5: Farmed portion of Wetland 1 near SP-17, facing southwest.


Photo 6: Upland area near Wetland 1 in a planted soybean field, facing east towards a farmed wetland depression.

Photo 7: Shrub-Carr portion of Wetland 1 at SP-19.

Photo 8: Southwest corner of Wetland 1, with red-osier, green ash, buckthorn, and reed canary grass. Image date February 2024.

Photo 9: Southeast boundary of Wetland 1, facing northeast. Image date February 2024.

Photo 10: Forested wetland at SP-3, facing west.

Photo 11: Forested upland area at SP-4, facing west.

Photo 12: Wet Meadow portion of Wetland 2 at SP-5 facing north.


Photo 13: Upland area at SP-6, facing north towards Wetland 2.


Photo 14: Forested portion of Wetland 1 at SP-1 facing north.


Photo 15: Upland area at SP-2, facing north towards Wetland 3.


Photo 16: Wetland 4, facing southwest. Image date February 2024.


Photo 17: Wetland 5, facing south. Image date February 2024.


Photo 18: Forested portion of Wetland 6 at SP-7 facing west.

Photo 19: Upland area at SP-8, facing east towards Wetland 6.

Photo 20: Wetland 7, at SP-14 facing south.

Photo 21: Forested wetland area portion of Wetland 8 at SP-12 facing west.

Photo 22: Upland area at SP-13, facing east towards Wetland 8.

Photo 23: Wet meadow within Wetland 9 at SP-9 facing west.

Photo 24: Upland area at SP-11, facing east. Wetland 10 is adjacent to the north. Wetland 9 is across the gravel trail to the south.

Photo 25: Wetland 10 at SP-11 facing south. Image date February 2024.

Kimley»Horn

Legend

- Study Area
- Sample Point
- Photo Point

Delineated Wetland

- Type 1 / Seasonally Flooded Basin
- Type 2 / Fresh Wet Meadow
- Type 3 / Shallow Marsh
- Type 5 / Shallow Open Water
- Type 6 / Scrub Shrub Swamp

Linear Feature

- Erosional Feature
- Perennial Stream

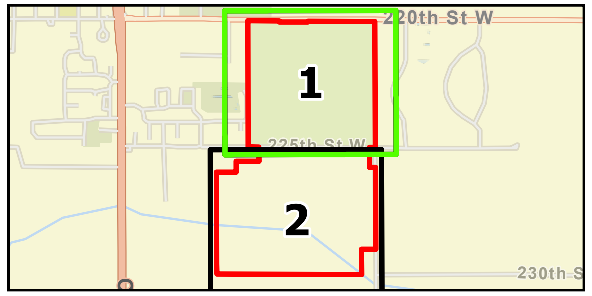


Figure 6.1 Delineation Summary Map
Farmington Technology Park
Tract Management Company, LP

N
0 200 400
US Feet

Legend

- Study Area
- Sample Point
- Photo Point

Delineated Wetland

- Type 1 / Seasonally Flooded Basin
- Type 2 / Fresh Wet Meadow
- Type 3 / Shallow Marsh
- Type 5 / Shallow Open Water
- Type 6 / Scrub Shrub Swamp

Linear Feature

- Erosional Feature
- Perennial Stream

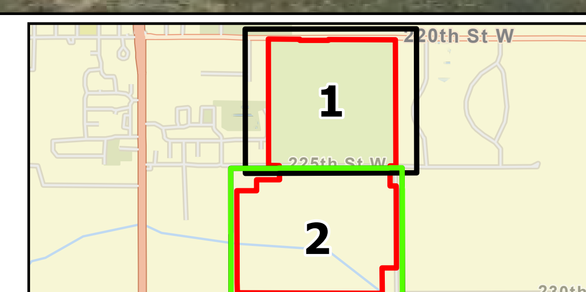


Figure 6.2 Delineation Summary Map

Farmington Technology Park

Tract Management Company, LP

N

0 200 400 US Feet

Appendix B

Traffic Impact Analysis

TRAFFIC IMPACT ANALYSIS

FARMINGTON TECHNOLOGY PARK

FARMINGTON, MINNESOTA

Prepared for:

Tract Management Company

Prepared By:

Kimley-Horn and Associates, Inc.
11995 Single Tree Lane, Suite 225
Eden Prairie, MN 55344

AUGUST 2024

Kimley»Horn

TRAFFIC IMPACT ANALYSIS

FARMINGTON TECHNOLOGY PARK

FARMINGTON, 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.

August 15, 2024

Jacob Rojer, P.E., PTOE

Date

License No. 56767

TABLE OF CONTENTS

APPENDIX

A. Exhibits

B. Turning Movement Counts

C. Site Layout Exhibit

D. SimTraffic Analysis Results

INTRODUCTION

Tract Management Company is proposing two development scenarios at the northwest and southwest corners of the intersection of 225th Street and Biscayne Drive in Farmington, MN. Scenario 1 includes technology park which would be a total of 2,523,000 Square Feet (SF), with 929,000 SF proposed on the unoccupied site south of 225th Street and 1,594,000 SF proposed on the site which is currently occupied by the Fountain Valley Golf Club. Scenario 2 consists of 675 single family detached residential units and 74,000 SF of retail space in the northern portion. The southern portion of the site would remain undeveloped in this scenario. **Exhibit 1** shows the proposed project location. All exhibits are included in **Appendix A.**

EXISTING ROADWAY CONDITIONS

The proposed data center would be located on the southwest and northwest corners of 225th Street & Biscayne Drive in Farmington, Minnesota. The following intersections are included in the traffic analysis:

- MN 3 (Chippendale Avenue) & MN 50 / CSAH 74 (220th Street)
- MN 3 (Chippendale Avenue) & 225th Street
- MN 3 (Chippendale Avenue) & CSAH 50 / Elm Street

The study intersections listed above are shown in **Exhibit 1**.

EXISTING ROADWAYS

Access to the development will be provided via three access points, with two on 225th Street and one on MN 50. The following provides a detailed description of the surrounding roadways.

MN 3 (Chippendale Avenue) is a north-south State Highway which is a two-lane undivided roadway south of MN 50 and a four-lane divided roadway at the intersection and to the north. The Dakota County 2040 Comprehensive Plan envisions MN 3 as a future Principal Arterial. The MnDOT Traffic Mapping Application reports an annual average daily traffic (AADT) of 7,400 vehicles per day (vpd) in 2022 north of MN 50 and 7,200 vpd in 2022 south of MN 50. The posted speed limit is 45 mph north of 225th Street and 55 mph south of 225th Street.

MN 50 (220th Street) is an east-west undivided roadway. The roadway has one travel lane in each direction and, west of MN 3, has a shared left turn lane in the center. The roadway is a State Highway (MN 50) east of the MN 3 intersection and is under MnDOT jurisdiction there. West of MN 3, the road is under Dakota County jurisdiction and is a County State Aid Highway (CSAH 74). The Dakota County 2040 Comprehensive Plan envisions 220th Street as a future Principal Arterial, with a planned connection of CSAH 74 to 215th Street W in Lakeville. The MnDOT Traffic Mapping Application reports an AADT of 6,200 vpd in 2022 east of MN 3 and 4,700 vpd in 2022 west of MN 3. The posted speed limit on 220th Street is 30 mph west of MN 3, 35 mph between MN 3 and 10th Street and 55 mph about 400' east of 10th Street.

225th Street is a two lane, undivided east-west roadway with no turn lanes provided. The roadway is unpaved east of Cambrian Way. 225th Street is a local road, and the MnDOT Traffic Mapping Application has no traffic data for the roadway. The posted speed limit on 225th Street is 40 mph.

County State Aid Highway 50 (Elm Street) is an east-west three-lane undivided roadway with one travel lane in each direction plus a shared left turn lane in the center west of MN 3. The Dakota County 2040 Comprehensive Plan envisions the roadway as a future Other Arterial. According to the MnDOT Traffic Mapping Application, the roadway has an AADT of 10,600 west of 7th Street, as of 2022. The posted speed limit on CSAH 50 is 30 mph.

Biscayne Avenue is an unpaved local roadway which makes up the eastern boundary of the site. There is no posted speed limit.

Exhibit 2 provides the existing intersection geometry and intersection control for the study intersections.

EXISTING TRAFFIC VOLUMES

To analyze the traffic operations at the study intersection, weekday peak period turning movement counts were collected at the three existing study intersections. Through counts were taken at the golf course access which is the location of the proposed primary access for the north site.

Peak hour turning movements counts (TMCs) were collected on Thursday, March 7, 2024. **Exhibit 3** provides a summary of the weekday AM and PM peak hour turning traffic volumes. The turning movement count data is provided in **Appendix B**.

The network AM peak hour was determined to be 7:15 AM to 8:15 AM and the network PM peak hour was determined to be 4:30 PM to 5:30 PM.

FUTURE BACKGROUND GROWTH

Growth rates of the surrounding roadways were calculated using the projected 2040 Traffic Volumes shown in the City of Farmington 2040 Comprehensive Plan. The Comprehensive Plan projected the volumes using a travel demand model, based on the most recent AADT data available at the time (2014-2015). The Existing AADT at the time of the report and the forecasted 2040 AADTs included in the report are shown below in **Table 1**.

Table 1 – Background Growth

Roadway	Location Description	Existing Year	Existing AADT	Grown Year	Grown AADT	Growth
MN 3	South of Vermillion River Trail	2015	12,700	2040	20,200	1.9%
MN 3	North of MN 50	2015	9,700	2040	12,800	1.1%
220th Street	West of MN 3	2014	4,450	2040	6,700	1.6%
MN 50	East of MN 3	2014	5,100	2040	7,700	1.6%

Based on the data shown in **Table 1**, growth rates are relatively consistent for the surrounding roadways and a growth rate of 1.6% was therefore selected for all roadways within the network.

Exhibit 4 shows the Opening Year No-Build (2029) turning movement volumes and **Exhibit 5** shows the Design Year No-Build (2040) turning movement volumes.

PEDESTRIANS AND BICYCLES

Currently there is a sidewalk on the north side of 220th Street for the section west of MN 3, a sidewalk on the east side of MN 3 north of CSAH 50 and sidewalks on both sides of CSAH 50 / Elm Street. According to the City of Farmington 2040 Comprehensive Plan, city trails are proposed for MN 3, 220th Street, and 225th Street. The buildout of these trails is uncertain.

PROPOSED DEVELOPMENT

SITE ACCESS POINTS

The proposed Scenario 1 includes two parcels as part of the proposed development, with a north site and a south site which each have two access points. The north site will have one access on MN 50 and one access on 225th Street while the south site will have one access on 225th street and one access on Biscayne Avenue.

The north parcel, located at the site of the existing golf course, would have its primary access located along MN 50 at the location of the golf course access. The secondary access point is located along 225th Street about 300 feet west of Biscayne Avenue.

The south parcel, located south of 225th Street, would have its primary access point located along 225th Street, just under ½ a mile west of Biscayne Avenue. The secondary access is proposed along Biscayne Avenue, about 500 feet north of 230th Street.

The majority of site traffic is anticipated to utilize the primary access points, so for the purposes of this study traffic is not assigned to the secondary access points. The proposed Scenario 1 site plan is included in **Appendix C**.

Under the proposed Scenario 2 conditions, the access would be similar, with an access point along 220th Street providing access to the north portion and an access point along 225th Street. The proposed Scenario 2 site plan is included in **Appendix C**.

SITE TRIP GENERATION

The trip-generating potential of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Eleventh Edition*. Standard ITE trip rates were used to develop the anticipated total trips generated by the site. For this analysis, it was assumed that all site trips will be vehicle trips. It was assumed that all site trips would be new trips and no mode split reductions for trips via transit, bike or walking were used.

To determine the trip generation of Scenario 1, the average rate for ITE Land Use Code (LUC) 160 (Data Center) was used to calculate the trip generation potential of the site. Average rate was applied based on guidance given in the ITE Trip Generation Handbook. The site was divided between the north data center and the south data center in order to split the trips between the two primary access points. **Table 2** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours. As shown, Scenario 1 is anticipated to generate 277 new trips during the AM peak hour (152 entering, 125 exiting) and 227 new trips during the PM peak hour (68 entering, 159 exiting). Scenario 1 is anticipated to generate 2,498 daily trips.

Table 2 – Scenario 1 Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
North Data Center - LUC 160	1594 kSF	1,578	96	79	175	43	100	143
South Data Center - LUC 160	929 kSF	920	56	46	102	25	59	84
Total Site Trips		2,498	152	125	277	68	159	227

To determine the trip generation of Scenario 2, the average rates for, LUC 210 (Single Family Detached Residential) and LUC 821 (Shopping Plaza) were used to calculate the trip generation potential of the site. Average rate was applied for each as it results in a higher (more conservative) trip generation estimate than the fitted curve does for these land uses. **Table 3** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours. As shown, Scenario 2 is anticipated to generate 645 new trips during the AM peak hour (225 entering, 420 exiting) and 1,154 new trips during the PM peak hour (654 entering, 500 exiting). Scenario 2 is anticipated to generate 13,116 weekday daily trips.

Table 3 – Scenario 2 Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Detached - LUC 210	675 Units	6,365	118	354	472	400	235	635
Shopping Plaza - LUC 821	100 kSF	6,751	107	66	173	254	265	519
Total Site Trips		13,116	225	420	645	654	500	1,154

SITE TRIP DISTRIBUTION

The site trips were distributed to the adjacent roadways based on the current traffic patterns in the area and a general assessment of the major regional roadways surrounding the study area. In general, the following global trip distribution was assumed for Scenario 1:

- 30% to/from the west on Elm Street
- 25% to/from the east on MN 50
- 20% to/from the north on MN 3
- 15% to/from the south on MN 3
- 5% to/from the south on Biscayne Ave
- 5% to/from the west on 220th Street

Separate trip distributions were applied to the northern and southern portions of the technology park, with the trip generation applied separately to each respective distribution. For the north data center, the 5% of trips from Biscayne Avenue to the south are instead added onto MN 3 to the south (totaling 20%), with the global distributions being the same otherwise.

The trip distribution for the north site is shown in **Exhibit 6** and the site traffic is shown in **Exhibit 7**. The trip distribution for the south site is shown in **Exhibit 8** and the site traffic is shown in **Exhibit 9**.

The Opening Year (2029) Scenario 1 traffic volumes (shown in **Exhibit 10**) were developed by adding the site Traffic in **Exhibit 9** to the Opening Year (2029) No-Build Traffic volumes in **Exhibit 4**. The Design Year (2040) Scenario 1 traffic volumes (shown in **Exhibit 11**) were developed by adding the site Traffic in **Exhibit 9** to the Design Year (2040) No-Build Traffic volumes in **Exhibit 5**.

A separate distribution was utilized for Scenario 2 since the different land uses are anticipated to see different traffic patterns. In general, the following global distribution was assumed for Scenario 2:

- 30% to/from the west on Elm Street

- 25% to/from the east on MN 50
- 20% to/from the north on MN 3
- 15% to/from the south on MN 3
- 5% to/from the south on Biscayne Ave
- 5% to/from the west on 220th Street

The trip distribution for Scenario 2 site is shown in **Exhibit 12** and the site traffic is shown in **Exhibit 13**. The trip distribution for the south site is shown in **Exhibit 8** and the site traffic is shown in **Exhibit 9**.

The Opening Year (2029) Scenario 2 traffic volumes (shown in **Exhibit 14**) were developed by adding the site Traffic in **Exhibit 13** to the Opening Year (2029) No-Build Traffic volumes in **Exhibit 4**. The Design Year (2040) Scenario 2 traffic volumes (shown in **Exhibit 15**) were developed by adding the site Traffic in **Exhibit 13** to the Design Year (2040) No-Build Traffic volumes in **Exhibit 5**.

CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the study intersections during the weekday AM and PM peak hours. The capacity analysis was performed using Synchro/SimTraffic. Existing signal timings used in the analysis were obtained from MnDOT.

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 4**. The range of control delay for each rating (as detailed in the HCM) is also shown in Table 2. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings.

Table 4 – 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.

Traffic models for each scenario were developed using Synchro/SimTraffic, and the delay and queueing were evaluated for each scenario. The scenarios that were analyzed are as follows:

- Existing Year (2024)
- Opening Year (2029) No-Build Conditions
- Opening Year (2029) Completed Build Conditions
- Design Year (2040) No-Build Conditions
- Design Year (2040) Build Conditions

EXISTING YEAR (2024) CONDITIONS

A capacity analysis was performed for Existing Year (2024) conditions in order to develop baseline operating conditions for the current year. The analysis was performed using Synchro/SimTraffic. The three (3) study intersections were modeled with the existing geometry and intersection control as summarized in **Exhibit 2**. Signal timings were obtained from MnDOT. The traffic volumes are provided in **Exhibit 3**.

The results of the analysis are provided in **Table 5**.

Table 5 – Existing Year (2024) Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall Intersection/ Worst Side Street Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	32.8	C	26.5	C	7.7	A	12.6	B
		WB	8.8	A	22.3	C	3.6	A		
		NB	13.6	B	6.5	A	-	-		
		SB	10.9	B	11.7	B	5.8	A		
MN 3 & MN 50 (220th Street)	Signal	EB	35.7	D	29.3	C	12.0	B	11.9	B
		WB	34.2	C	27.7	C	6.3	A		
		NB	7.5	A	7.7	A	1.3	A		
		SB	9.1	A	5.3	A	2.3	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	3.8	A
		WB	3.8	A	-	-	2.6	A		
		NB	-	-	0.3	A	0.0	A		
		SB	1.8	A	0.8	A	-	-		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	32.2	C	26.8	C	11.2	B	16.4	B
		WB	24.3	C	21.5	C	3.1	A		
		NB	17.5	B	10.5	B	2.9	A		
		SB	12.0	B	17.3	B	5.6	A		
MN 3 & MN 50 (220th Street)	Signal	EB	36.5	D	-	-	17.6	B	12.1	B
		WB	36.2	D	33.4	C	7.5	A		
		NB	7.5	A	8.9	A	1.4	A		
		SB	8.3	A	3.7	A	1.5	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	10.5	B
		WB	10.5	B	-	-	6.0	A		
		NB	-	-	0.4	A	0.3	A		
		SB	4.8	A	0.9	A	-	-		

Based on the Existing Year (2024) capacity analysis, the study intersections currently operate at LOS B or better in the AM and PM peak hour. All individual movements are anticipated to operate at LOS D or better.

All 95^{th} percentile queues are anticipated to remain within their respective storage bays. The SimTraffic reports are provided in **Appendix D.**

OPENING YEAR (2029) NO-BUILD CONDITIONS

A capacity analysis was performed for Opening Year (2029) No-Build conditions in order to develop baseline operating conditions for the opening year. The analysis was performed using Synchro/SimTraffic.

The three study intersections were modeled with the existing geometry, intersection control, and signal timings, as summarized in **Exhibit 2**. The traffic volumes are provided in **Exhibit 4**. The results are provided in **Table 6**.

Table 6 – Opening Year (2029) No-Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall Intersection/ Worst Side Street Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	33.0	C	24.9	C	8.5	A	13.6	B
		WB	-	-	24.9	C	3.7	A		
		NB	15.7	B	6.8	A	-	-		
		SB	10.9	B	13.7	B	6.6	A		
MN 3 & MN 50 (220th Street)	Signal	EB	33.1	C	27.8	C	11.1	B	12.6	B
		WB	32.7	C	28.8	C	6.5	A		
		NB	8.7	A	9.6	A	1.4	A		
		SB	10.6	B	7.2	A	2.3	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	5.2	A
		WB	5.2	A	-	-	2.2	A		
		NB	-	-	0.3	A	-	-		
		SB	1.8	A	0.8	A	-	-		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	31.9	C	24.3	C	12.9	B	16.6	B
		WB	17.0	B	19.4	B	3.8	A		
		NB	17.9	B	11.1	B	1.1	A		
		SB	13.6	B	17.7	B	5.8	A		
MN 3 & MN 50 (220th Street)	Signal	EB	35.8	D	-	-	17.0	B	13.0	B
		WB	36.3	D	33.1	C	7.5	A		
		NB	8.5	A	10.9	B	1.4	A		
		SB	11.3	B	4.6	A	1.9	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	7.8	A
		WB	7.8	A	-	-	6.4	A		
		NB	-	-	0.3	A	0.4	A		
		SB	4.7	A	1.1	A	-	-		

With the addition of background traffic growth, the study area intersections are projected to experience minimal change in delay with the majority of movements and approaches projected to operate at the same LOS as compared to existing conditions. All intersections are anticipated to operate at LOS B or better in the AM and PM peak hours.

All 95th percentile queues are anticipated to remain within their respective storage bays. The SimTraffic reports are provided in **Appendix D**

DESIGN YEAR (2040) NO-BUILD CONDITIONS

A capacity analysis was performed for Design Year (2040) No-Build conditions in order to develop baseline operating conditions for the design year. The three study intersections were modeled with the existing geometry, intersection control, and signal timings, as summarized in **Exhibit 2**. The traffic volumes are provided in **Exhibit 5**. The results of the analysis are provided in **Table 7.**

Table 7 – Design Year (2040) No-Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall Intersection/ Worst Side Street Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	33.2	C	22.4	C	8.7	A	15.3	B
		WB	26.7	C	22.3	C	3.8	A		
		NB	18.9	B	8.4	A	-	-		
		SB	9.0	A	16.7	B	7.5	A		
MN 3 & MN 50 (220th Street)	Signal	EB	32.8	C	24.5	C	11.0	B	14.4	B
		WB	28.5	C	27.2	C	6.8	A		
		NB	9.8	A	12.1	B	1.4	A		
		SB	13.8	B	12.1	B	3.6	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	7.0	A
		WB	7.0	A	-	-	2.6	A		
		NB	-	-	0.4	A	-	-		
		SB	1.6	A	1.0	A	-	-		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	33.0	C	28.4	C	13.7	B	18.6	B
		WB	27.7	C	23.2	C	3.3	A		
		NB	22.6	C	13.5	B	0.3	A		
		SB	14.2	B	20.2	C	6.9	A		
MN 3 & MN 50 (220th Street)	Signal	EB	36.5	D	-	-	17.1	B	14.9	B
		WB	33.0	C	32.4	C	7.8	A		
		NB	11.4	B	14.3	B	1.5	A		
		SB	13.7	B	7.8	A	3.1	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	6.6	A
		WB	6.6	A	-	-	6.4	A		
		NB	-	-	0.4	A	0.0	A		
		SB	5.4	A	1.4	A	-	-		

With additional background traffic growth, the study area intersections are projected to experience some change in delay, with few movements projected to operate at a lower LOS as compared to Opening Year (2029) No-Build Conditions.

All intersections are anticipated to operate at LOS B or better during the AM and PM peak hours. All individual movements are anticipated to operate at LOS D or better during the AM and PM peak hours.

The SimTraffic reports are provided in **Appendix D**. All 95^{th} percentile queues are anticipated to remain within their respective storage bays.

OPENING YEAR (2029) SCENARIO 1 CONDITIONS

Opening Year (2029) Scenario 1 conditions were analyzed to determine any traffic impacts from the addition of the site traffic to the study intersections. The three study intersections were modeled with the existing geometry, intersection control, and signal timings, as summarized in **Exhibit 2**. The site accesses were modeled as side street stop control and no turn lanes were initially assumed for the analysis. Opening Year (2029) Scenario 1 turning movement volumes are shown in **Exhibit 10**. The results of the analysis are provided in **Table 8**.

Table 8 – Opening Year (2029) Scenario 1 Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall/Worst Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	32.0	C	31.9	C	10.2	B	14.9	B
		WB	-	-	21.6	C	3.7	A		
		NB	18.8	B	8.4	A	-	-		
		SB	8.3	A	15.8	B	7.4	A		
MN 3 & MN 50 (220th Street)	Signal	EB	32.5	C	22.7	C	9.5	A	13.7	B
		WB	28.8	C	28.5	C	7.5	A		
		NB	9.5	A	13.1	B	1.5	A		
		SB	14.4	B	9.4	A	3.6	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	8.0	A
		WB	8.0	A	-	-	4.0	A		
		NB	-	-	0.7	A	0.2	A		
		SB	2.3	A	1.4	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	-	-	3.7	A	7.3	A
		WB	3.3	A	0.9	A	-	-		
		NB	7.3	A	-	-	3.5	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	-	-	8.2	A	3.0	A	8.2	A
		WB	6.6	A	5.8	A	-	-		
		NB	6.2	A	-	-	2.3	A		
		SB	-	-	-	-	-	-		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	32.9	C	29.0	C	13.6	B	17.8	B
		WB	37.5	D	22.7	C	3.6	A		
		NB	22.3	C	11.2	B	2.0	A		
		SB	13.5	B	18.5	B	6.7	A		
MN 3 & MN 50 (220th Street)	Signal	EB	35.3	D	30.7	C	14.9	B	13.2	B
		WB	32.8	C	35.3	D	8.5	A		
		NB	9.4	A	11.8	B	1.5	A		
		SB	12.7	B	5.8	A	2.1	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	10.9	B
		WB	10.9	B	1.0	A	8.7	A		
		NB	-	-	0.4	A	0.4	A		
		SB	5.1	A	1.5	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	5.2	A	4.9	A	8.9	A
		WB	5.3	A	1.0	A	-	-		
		NB	8.9	A	-	-	7.0	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	-	-	7.4	A	5.0	A	7.4	A
		WB	-	-	5.3	A	-	-		
		NB	6.3	A	-	-	3.7	A		
		SB	-	-	-	-	-	-		

With the addition of site-generated traffic, the study area intersections are projected to have minimal change in delay with the majority of movements and approaches projected to operate at the same LOS as compared to Opening Year (2029) No-Build Conditions.

All intersections are anticipated to operate at LOS B or better during the AM and PM peak hours, and all individual movements are anticipated to operate at LOS D or better.

The SimTraffic reports are provided in **Appendix D**. All 95th percentile queues are anticipated to remain within their respective storage bays.

DESIGN YEAR (2040) SCENARIO 1 CONDITIONS

Design Year (2040) Scenario 1 conditions were analyzed to determine any traffic impacts from the addition of the site traffic to the study intersections in the long-term. The three study intersections were modeled with the existing geometry, intersection control, and signal timings, as summarized in **Exhibit 2**. The site accesses were modeled as side street stop control and no turn lanes were initially assumed for the analysis.

Design Year (2040) Scenario 1 traffic volumes were developed from the addition of the Design Year (2040) No-Build volumes in **Exhibit 5** and the Scenario 1 site trips in **Exhibits 7 and 9**. The Design Year (2040) Scenario 1 turning movement volumes are shown in **Exhibit 11**. The results of the analysis are provided in **Table 9**.

Table 9 – Design Year (2040) Scenario 1 Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall/Worst Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	35.2	D	21.6	C	9.7	A	19.7	B
		WB	24.1	C	20.5	C	3.3	A		
		NB	28.2	C	12.0	B	-	-		
		SB	14.4	B	21.9	C	14.8	B		
MN 3 & MN 50 (220th Street)	Signal	EB	30.2	C	23.5	C	12.3	B	16.6	B
		WB	30.0	C	29.0	C	8.4	A		
		NB	11.4	B	16.9	B	1.6	A		
		SB	19.2	B	15.6	B	6.5	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	8.9	A
		WB	8.9	A	-	-	4.6	A		
		NB	-	-	0.9	A	0.3	A		
		SB	3.1	A	1.9	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	-	-	5.1	A	7.6	A
		WB	4.2	A	1.1	A	-	-		
		NB	7.6	A	-	-	3.8	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	-	-	6.9	A	2.5	A	12.5	B
		WB	12.5	B	6.2	A	-	-		
		NB	7.2	A	-	-	3.4	A		
		SB	-	-	-	-	-	-		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	34.4	C	24.3	C	14.2	B	23.0	C
		WB	17.5	B	19.0	B	4.0	A		
		NB	32.8	C	19.0	B	2.7	A		
		SB	18.4	B	27.8	C	10.4	B		
MN 3 & MN 50 (220th Street)	Signal	EB	28.5	C	26.0	C	16.0	B	16.6	B
		WB	37.3	D	31.9	C	8.9	A		
		NB	12.9	B	18.9	B	1.8	A		
		SB	21.5	C	10.5	B	4.1	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	12.3	B
		WB	12.3	B	1.1	A	9.4	A		
		NB	-	-	0.5	A	0.4	A		
		SB	5.9	A	1.8	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	5.4	A	5.5	A	9.2	A
		WB	6.1	A	1.3	A	-	-		
		NB	9.2	A	-	-	7.2	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	-	-	7.7	A	5.4	A	7.7	A
		WB	-	-	6.0	A	-	-		
		NB	6.2	A	-	-	2.9	A		
		SB	-	-	-	-	-	-		

With additional site traffic and background traffic growth, the study area intersections are projected to experience minimal change in delay, with most of movements projected to operate at the same LOS as the Opening Year (2029) Build Conditions. All intersections are anticipated to operate at LOS C or better in the AM and PM peak hours and all individual movements are anticipated to operate at LOS D or better. The proposed Scenario 1 Geometry and Intersection Control is shown in **Exhibit 16**.

The SimTraffic reports are provided in **Appendix D**. All 95th percentile queues are anticipated to remain within their respective storage bays.

OPENING YEAR (2029) SCENARIO 2 CONDITIONS

Opening Year (2029) Scenario 2 conditions were analyzed to determine any traffic impacts from the addition of the site traffic to the study intersections. The three study intersections were modeled with the existing geometry and intersection control, as summarized in **Exhibit 2**. The site accesses were modeled as side street stop control with one approach lane (except for the access along 220th Street which was assumed to have 2 approach lanes due to the anticipated traffic levels) and no turn lanes were initially assumed for the analysis.

Opening Year (2029) Scenario 2 turning movement volumes were developed by adding the site trips in **Exhibit 13** to the Opening Year (2029) No-Build turning movement volumes in **Exhibit 4**. The Opening Year (2029) Build turning movement volumes are shown in **Exhibit 14**. Signal timings were optimized at key study area intersections. The results of the analysis are provided in **Table 10**.

Table 10 – Opening Year (2029) Scenario 2 Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall/Worst Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	33.6	C	35.2	D	10.3	B	16.2	B
		WB	-	-	22.3	C	4.0	A		
		NB	21.7	C	9.0	A	-	-		
		SB	11.0	B	18.1	B	9.0	A		
MN 3 & MN 50 (220th Street)	Signal	EB	29.5	C	21.4	C	10.5	B	14.4	B
		WB	26.0	C	26.7	C	9.5	A		
		NB	11.3	B	14.0	B	1.4	A		
		SB	17.8	B	11.7	B	4.5	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	6.9	A
		WB	6.9	A	-	-	4.3	A		
		NB	-	-	0.9	A	0.1	A		
		SB	2.4	A	1.5	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	-	-	4.9	A	10.1	B
		WB	3.8	A	2.0	A	-	-		
		NB	10.1	B	-	-	4.2	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	1.6	A	1.4	A	-	-	3.2	A
		WB	-	-	0.4	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	3.2	A		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	32.8	C	25.1	C	16.4	B	22.6	C
		WB	56.0	E	18.2	B	3.6	A		
		NB	31.3	C	18.4	B	6.5	A		
		SB	17.0	B	27.6	C	9.5	A		
MN 3 & MN 50 (220th Street)	Signal	EB	32.4	C	28.7	C	17.3	B	18.4	B
		WB	37.9	D	34.4	C	9.9	A		
		NB	12.4	B	22.7	C	1.8	A		
		SB	25.7	C	10.0	A	3.4	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	14.6	B
		WB	14.6	B	0.2	A	9.4	A		
		NB	-	-	0.5	A	0.6	A		
		SB	5.9	A	2.4	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	6.9	A	7.3	A	33.3	D
		WB	8.1	A	4.5	A	-	-		
		NB	33.3	D	-	-	8.0	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	-	-	4.3	A	0.2	A	4.3	A
		WB	-	-	3.3	A	-	-		
		NB	4.3	A	-	-	-	-		
		SB	-	-	-	-	-	-		

With the addition of Scenario 2 traffic, the study area intersections are projected to have some change in delay. All intersections and movements are anticipated to operate at LOS D or better, with the exception of the westbound left turn movement at MN 3 & CR 50 (Elm Street). Because movement is very minor, with only three (3) westbound left turns anticipated during the PM peak hour, the anticipated level of operations (LOS E) is not concerning.

The 95th percentile queueing results were reviewed at the intersections and all queues are anticipated to remain within their respective storage bays except for the southbound left turn queues at MN 3 & MN 50 (220th Street) which is anticipated to be at its queueing capacity during the PM peak hour.

The SimTraffic reports are provided in **Appendix D**.

DESIGN YEAR (2040) SCENARIO 2 CONDITIONS

Design Year (2040) Scenario 2 conditions were analyzed to determine any traffic impacts from the addition of the site traffic to the study intersections in the long-term. The three study intersections were modeled with the existing geometry and intersection control, as summarized in **Exhibit 2**. The site accesses were modeled as side street stop control with one approach lane (except for the access along 220th Street which was assumed to have 2 approach lanes due to the anticipated traffic levels) and no turn lanes were initially assumed for the analysis.

The Design Year (2040) Scenario 2 traffic volumes were developed from the addition of the Design Year (2040) No-Build volumes in **Exhibit 5** and the Scenario 2 Site Trips in **Exhibit 13**. The Design Year (2040) Scenario 2 turning movement volumes are shown in **Exhibit 15**. The site accesses were modeled as side street stop control. The results of the analysis are provided in **Table 11**.

Table 11 – Design Year (2040) Scenario 2 Intersection Analysis

Intersection	Control	Approach	Operations by Movement						Overall/Worst Movement	
			Left		Through		Right			
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	35.1	D	21.2	C	9.9	A	19.0	B
		WB	-	-	22.4	C	3.9	A		
		NB	29.0	C	10.9	B	-	-		
		SB	11.9	B	21.8	C	11.7	B		
MN 3 & MN 50 (220th Street)	Signal	EB	28.5	C	23.9	C	11.4	B	16.3	B
		WB	30.6	C	28.3	C	9.9	A		
		NB	12.4	B	17.2	B	1.6	A		
		SB	19.8	B	14.8	B	6.2	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	8.4	A
		WB	8.4	A	-	-	4.9	A		
		NB	-	-	1.0	A	0.1	A		
		SB	2.9	A	1.8	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	-	-	5.0	A	12.5	B
		WB	5.0	A	1.2	A	-	-		
		NB	12.5	B	-	-	4.8	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	1.8	A	1.1	A	-	-	3.2	A
		WB	-	-	0.3	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	3.2	A		
PM Peak Hour										
MN 3 & CR 50 (Elm St)	Signal	EB	33.7	C	27.0	C	16.7	B	26.0	C
		WB	16.6	B	17.0	B	3.8	A		
		NB	39.2	D	21.5	C	-	-		
		SB	2.6	A	20.4	C	34.1	C		
MN 3 & MN 50 (220th Street)	Signal	EB	31.7	C	26.9	C	16.4	B	20.7	C
		WB	33.9	C	34.1	C	9.9	A		
		NB	14.2	B	27.2	C	1.7	A		
		SB	30.4	C	14.3	B	5.9	A		
MN 3 & 225th Street	Side Street Stop	EB	-	-	-	-	-	-	15.1	C
		WB	15.1	C	0.5	A	10.2	B		
		NB	-	-	0.6	A	0.5	A		
		SB	6.7	A	2.8	A	-	-		
220th Street & North Access	Side Street Stop	EB	-	-	7.1	A	7.3	A	34.9	D
		WB	8.0	A	1.9	A	-	-		
		NB	34.9	D	-	-	8.9	A		
		SB	-	-	-	-	-	-		
225th Street & South Access	Side Street Stop	EB	5.9	A	3.9	A	-	-	5.9	A
		WB	-	-	0.2	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	3.3	A		

With additional site traffic and background traffic growth, the study area intersections are projected to operate at acceptably, with all intersections and individual movements anticipated to operate at LOS D or better during the AM and PM peak hours.

The SimTraffic reports are provided in **Appendix D**. The 95th percentile queueing results, and the following movements are anticipated to have queues at or near their respective storage capacities:

- Southbound right at MN 3 & CSAH 50 (AM & PM peak hour)
- Northbound left at MN 3 & CSAH 50 (PM peak hour)
- Southbound left at MN 3 & MN 50 (220th Street)

Based on the results, the southbound right turn lane at MN 3 & CSAH 50 should be extended to a length of at least 200' in order to provide sufficient storage length for the movement during all peak hours. The northbound left turn at the same intersection should be extended to a length of at least 400' to provide sufficient storage, while the southbound left at MN 3 & MN 50 (220th Street) should be extended to at least 350' in length. The proposed Scenario 2 Geometry and Intersection Control is shown in **Exhibit 17**.

TURN LANE WARRANT ANALYSIS

MnDOT provides guidance on the need for left-turn and right-turn lanes based on the major road AADT and the cross street AADT. **Table 12** comes directly out of Chapter 3 of the MnDOT Access Management Manual, where Figure 3.40 provides a warrant for left-turn lanes and Figure 3.41 provides a warrant for right-turn lanes.

Table 12 – MnDOT Turn Lane Warrants

Figure 3.40: Warrant 9 for Left-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
1500 to 2999	3000 to 5999	> 1500	Left-turn lane warranted
3000 to 3999	6000 to 7999	> 1200	Left-turn lane warranted
4000 to 4999	8000 to 9999	> 1000	Left-turn lane warranted
5000 to 6499	10,000 to 12,999	> 800	Left-turn lane warranted
≥ 6500 AADT	≥ 13,000 AADT	101 to 400 > 400	Left-turn lane or bypass lane Left-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

Figure 3.41: Warrant 9 for Right-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
≥ 1500 AADT	≥ 3000 AADT	> 100	Right-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

Currently, MN 50 has an AADT of 5,500 vehicles per day (vpd), east of the proposed access point (as of 2022). With the addition of the 1,578 daily site trips from Scenario 1, the AADT is expected to exceed 6,500 vpd in the Opening Year (2029) Build Scenario. Since the driveway is anticipated to have over one thousand daily trips, the access point along MN 50 is anticipated to meet the MnDOT turn lane warrants for eastbound right and westbound left turn lanes.

The AADT along MN 3 south of 225th Street is about 4,800 vpd. With the addition of site traffic and background growth at a 1.6% annual rate, the roadway is anticipated to exceed 6,500 vpd in the Opening Year (2029) Scenario 1 build conditions. With site traffic alone accounting for over 400 daily trips along the cross street, the intersection of MN 3 & 225th Street is anticipated to meet the MnDOT warrants for northbound right and southbound left turn lanes.

With both cross-street volumes anticipated to be well over 1,500 vpd under Scenario 2 conditions, all turn lane warrants for the access points will be met in the Opening Year (2029) Scenario 2 build conditions.

CONCLUSIONS AND RECOMMENDATIONS

Tract Management Company is proposing two development scenarios for the area near the intersection of 225th Street and Biscayne Drive in Farmington, MN. Scenario 1 consists of Technology Park which would be a total of 2,523,000 SF, with 929,000 SF proposed on the unoccupied site south of 225th Street and 1,594,000 SF proposed on the site which is currently occupied by the Fountain Valley Golf Club. Scenario 2 includes 920,000 SF of industrial park, along with 74,000 SF of retail space and 675 single family detached housing units.

Under Scenario 1, the north portion of the technology park, located at the site of the existing golf course, would have its primary access located along MN 50 at the location of the golf course access. The secondary access point is located along 225th Street, at the currently unpaved section about 300’ west of Biscayne Avenue. The south technology park, located south of 225th Street, would have its primary access point located along 225th Street, just under ½ a mile west of Biscayne Avenue. The secondary access is proposed along Biscayne Avenue, about 500’ north of 230th Street.

Under scenario 2, the north portion of the site would be mixed use with retail and residential land, while the southern portion would not be developed. The retail and residential areas would have the same access along 220th Street as Scenario 1 as well as an access point along 225th Street.

The trip generation of Scenario 1 was evaluated based on data from the ITE Trip Generation Manual, 11th Edition by applying ITE Land Use Code 160 (Data Center). Scenario 1 is anticipated to generate a total of 277 trips during the AM peak hour (152 entering 125 exiting) and 227 trips during the PM peak hour (68 entering 159 exiting).

The trip generation of Scenario 2 was evaluated based on data from the ITE Trip Generation Manual, 11th Edition by applying LUC 210 (Single Family Detached Residential) and LUC 821 (Shopping Plaza). Scenario 2 is anticipated to generate a total of 645 new trips during the AM peak hour (225 entering, 420 exiting) and 1,154 new trips during the PM peak hour (654 entering, 500 exiting). Scenario 2 is anticipated to generate 13,116 weekday trips.

A capacity analysis was performed for Existing Year (2024), Opening Year (2029) No-Build, Opening Year (2029) Scenario 1, Opening Year (2029) Scenario 2, Design Year (2040) No-Build, Design Year (2040) Scenario 1, and Design Year (2040) Scenario 2. In all conditions the study intersections are anticipated to operate acceptably. Some minor queueing issues are anticipated under scenario 2 conditions which will require mitigation.

Turn lane warrants were analyzed at the proposed access point along MN 50 and the intersection of MN 3 & 225th Street. It was found that eastbound right and westbound left turn lanes will likely be warranted in the Opening Year (2029) Scenario 1 conditions at the site access along MN 50, along with northbound right and southbound left turn lanes at the intersection of MN 3 & 225th Street. The same was found to be true for the Scenario 2 conditions.

The recommended mitigation measures under Scenario 1 conditions (as shown in **Exhibit 16**) are:

- Install side street stop control at the site accesses.
- Install a westbound left turn lane at the north access (on MN 50).
- Install a southbound left turn lane and northbound right turn lane at the intersection of MN 3 & 225th Street.
- Optimize signal timings at adjacent intersections.

The recommended mitigation measures under Scenario 2 conditions (as shown in **Exhibit 17**) are:

- Install side street stop control at the site accesses.
- Install a westbound left turn lane at the north access (on MN 50).
- Install a southbound left turn lane and northbound right turn lane at the intersection of MN 3 & 225th Street.
- Optimize signal timings at all adjacent intersections.
- Extend the northbound left turn lane at MN 3 & CSAH 50 to 400’ (currently 300’).
- Extend the southbound right turn lane at MN 3 & CSAH 50 to 200’ (currently 150’).
- Extend the southbound left turn lane at MN 3 & MN 50 to 350’ (currently 275’)

APPENDIX

A. **Exhibits**

B. **Turning Movement Counts**

C. **Site Layout Exhibit**

D. **SimTraffic Analysis Results**

A. Exhibits

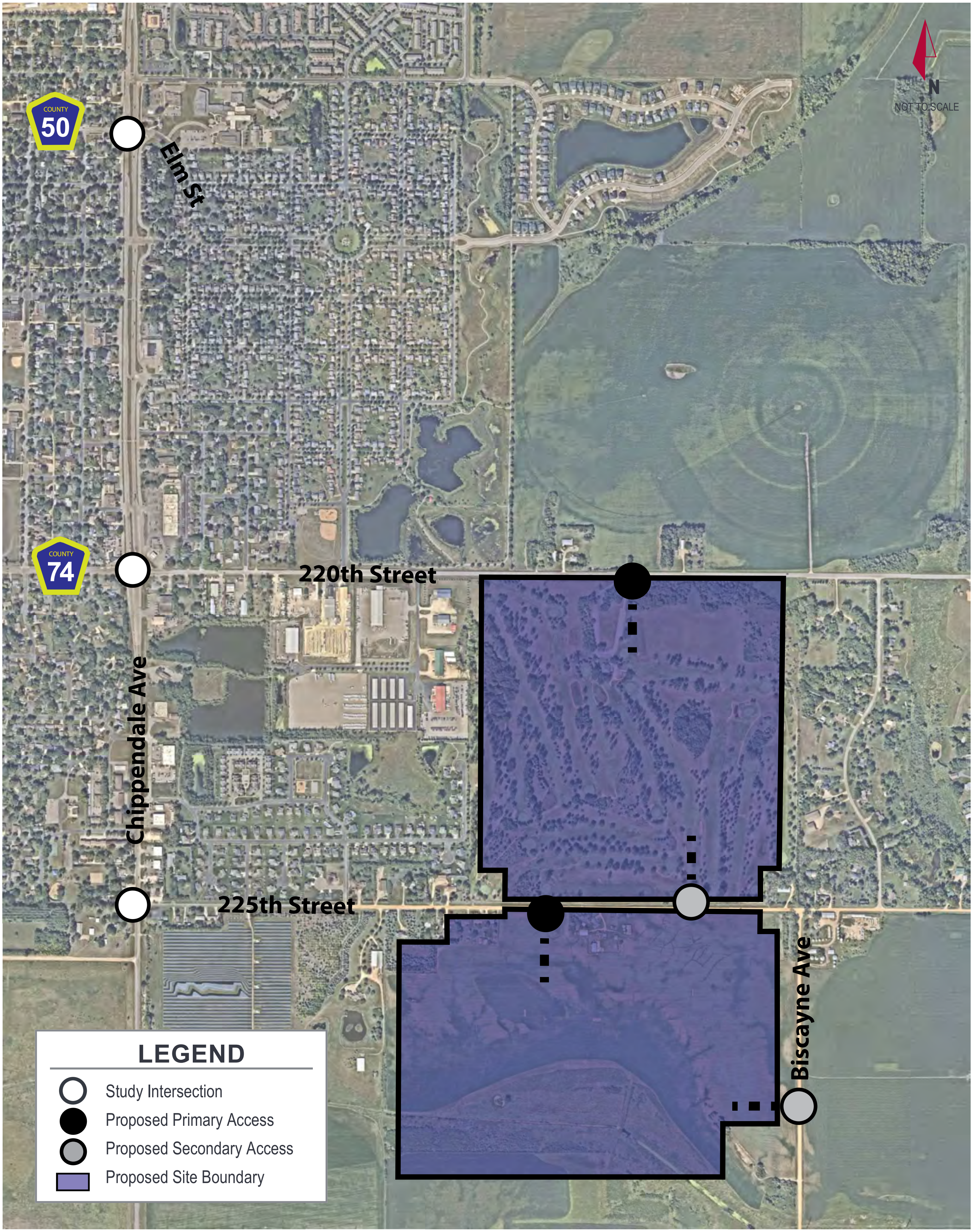


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EXHIBIT 1
PROJECT LOCATION MAP

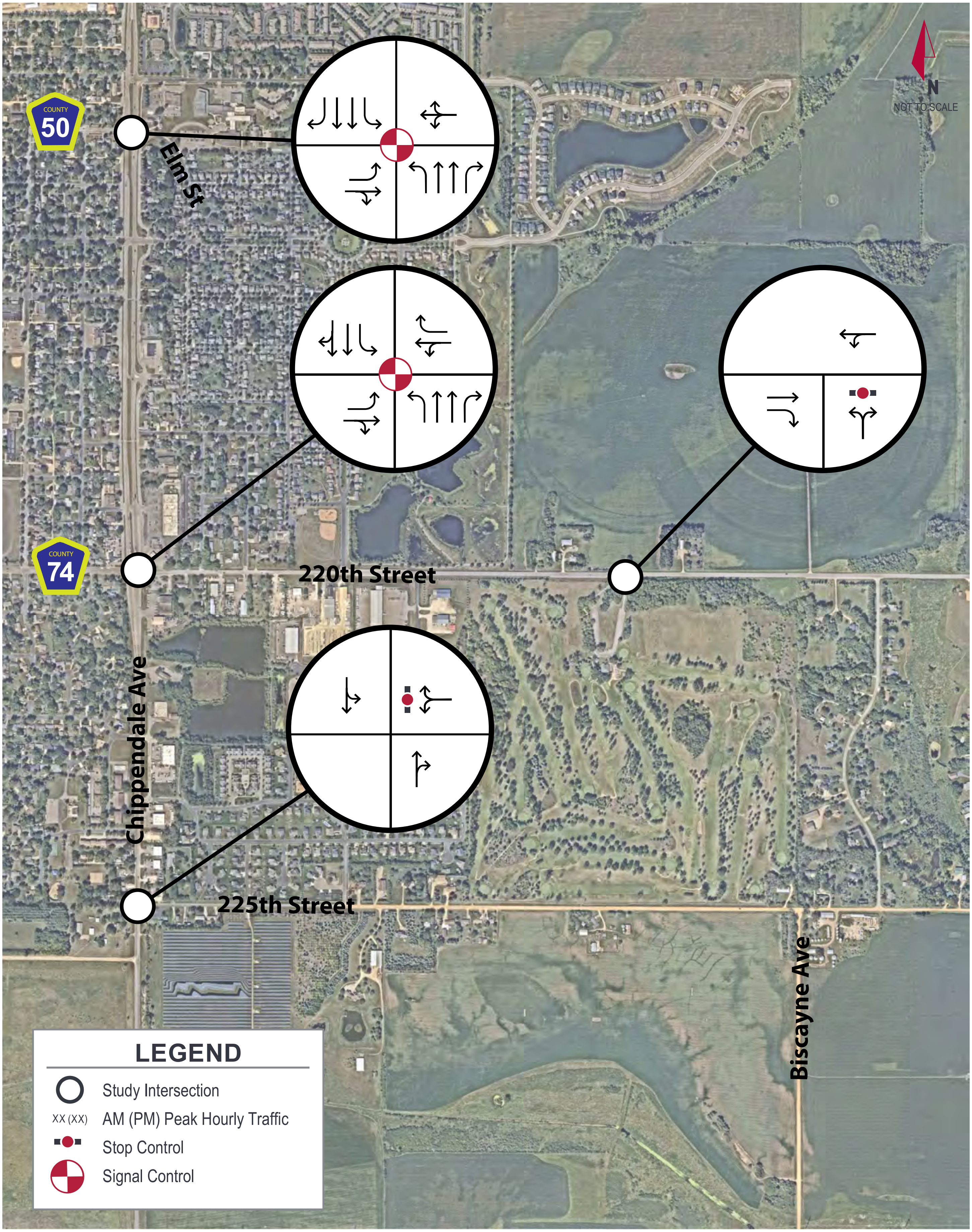

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EXHIBIT 2
EXISTING GEOMETRY AND INTERSECTION CONTROL

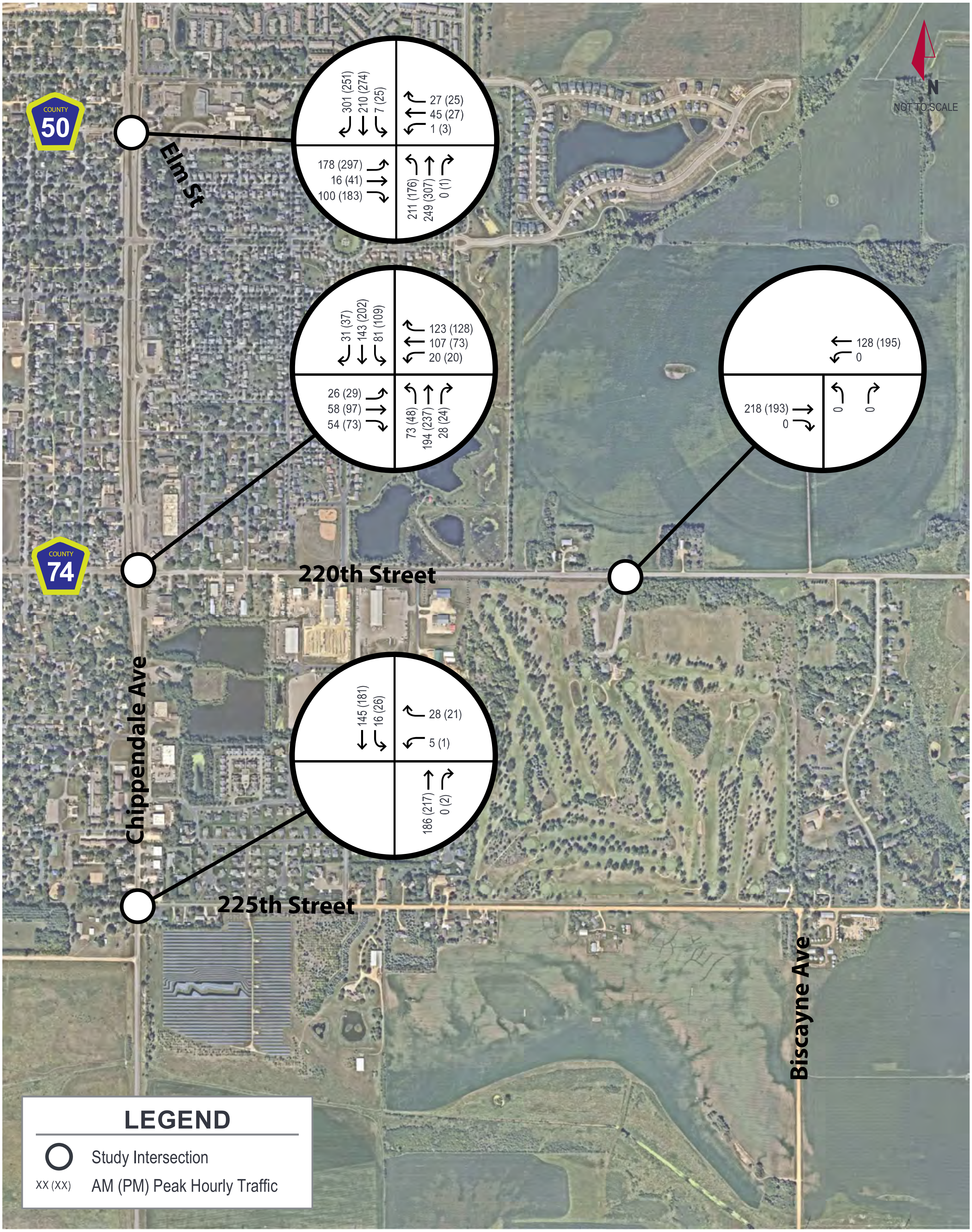

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EXHIBIT 3

EXISTING (2024) TRAFFIC VOLUMES

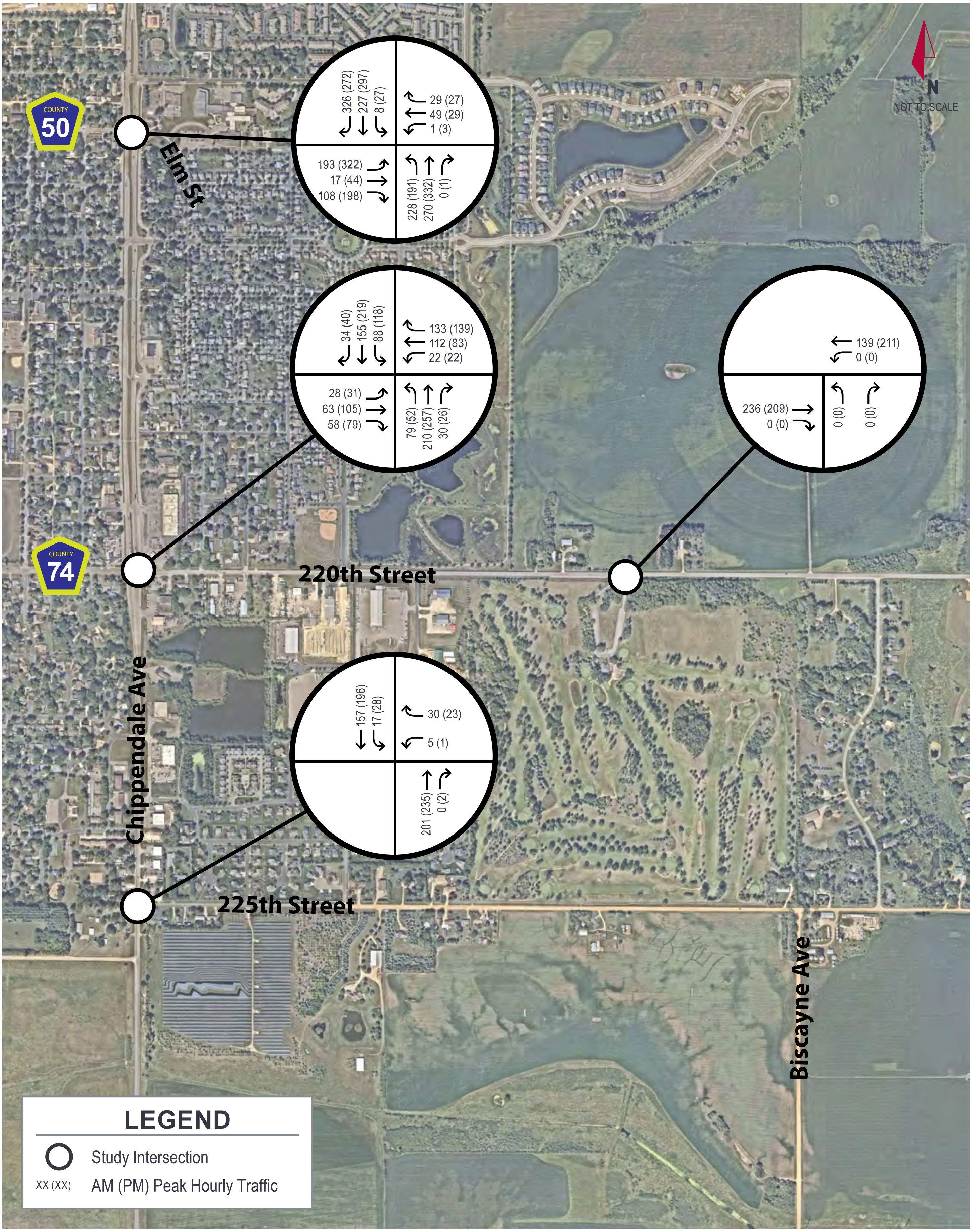

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EXHIBIT 4
OPENING YEAR (2029) NO BUILD TRAFFIC VOLUMES

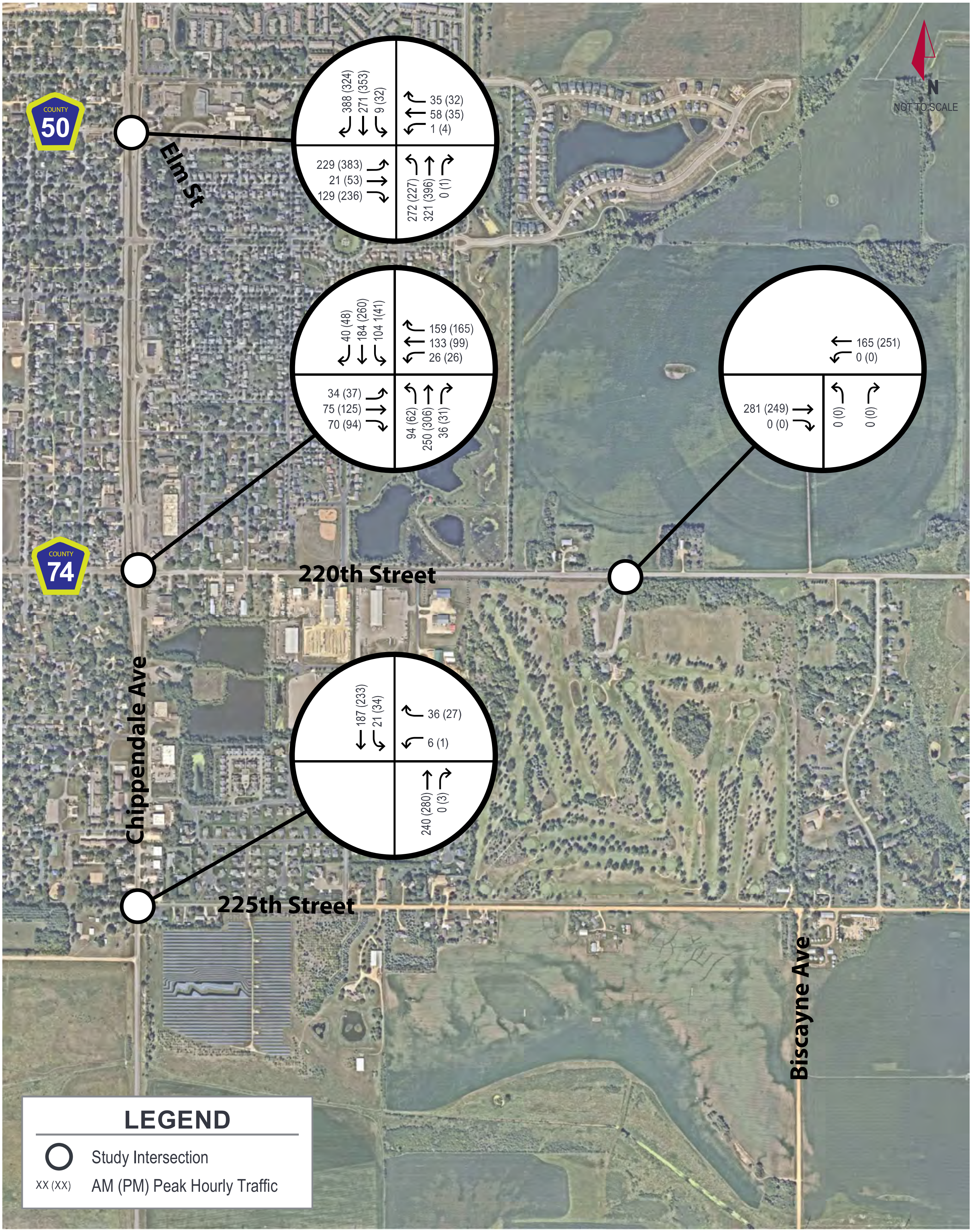

EXHIBIT 5

DESIGN YEAR (2040) NO-BUILD TRAFFIC VOLUMES

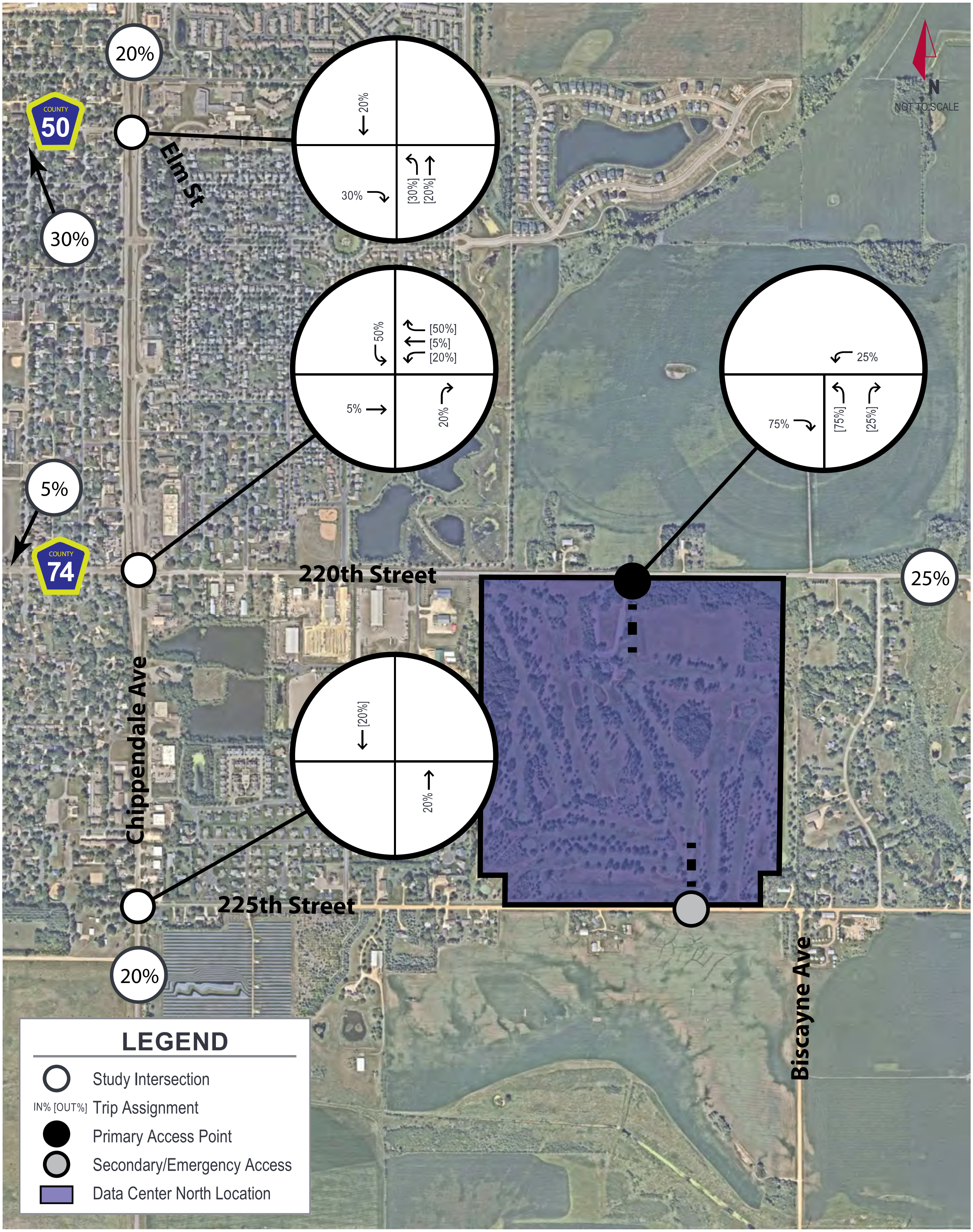

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EXHIBIT 6

SCENARIO 1 - NORTH DATA CENTER SITE TRAFFIC DISTRIBUTION

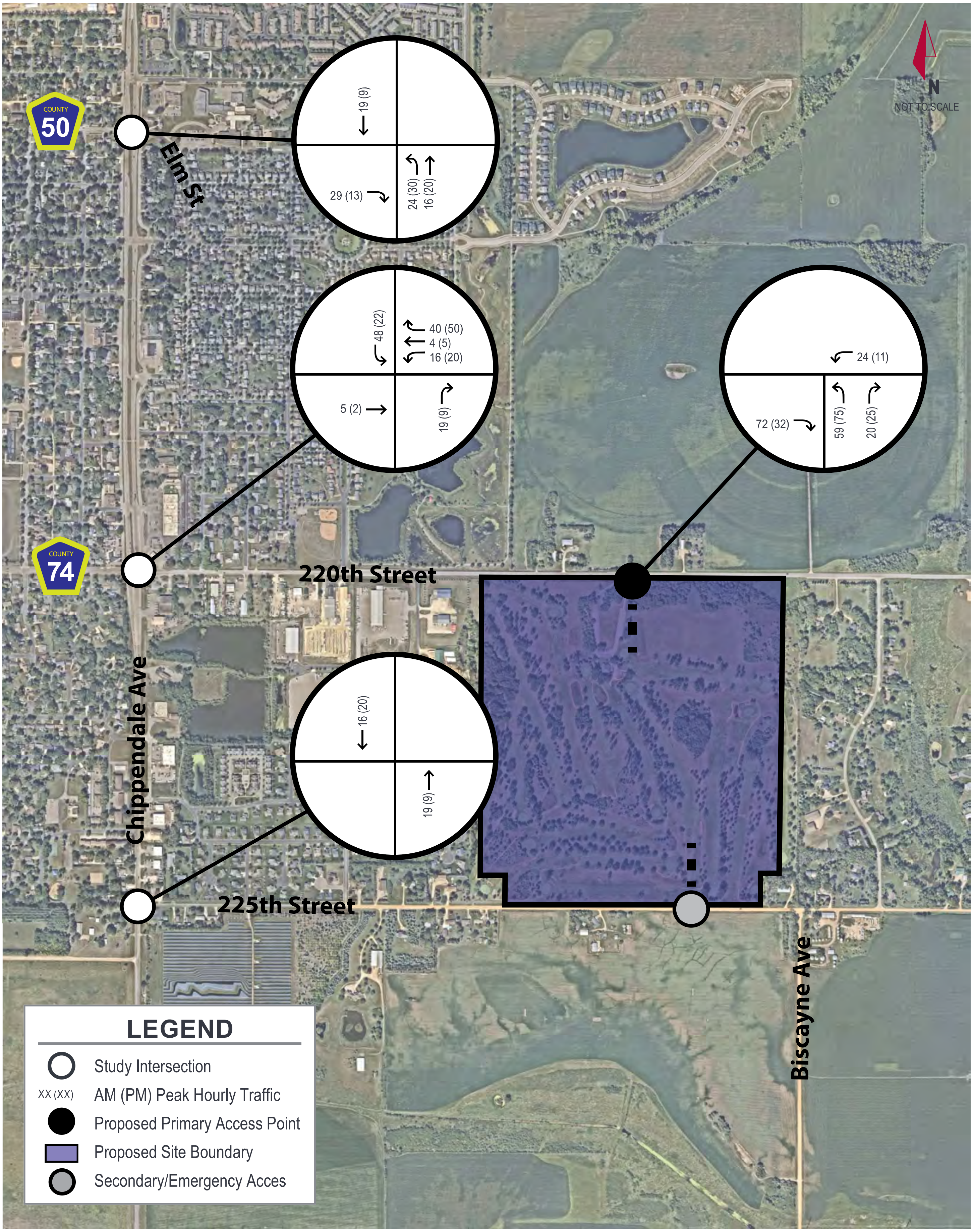

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EXHIBIT 7

SCENARIO 1 - NORTH DATA CENTER SITE TRIPS

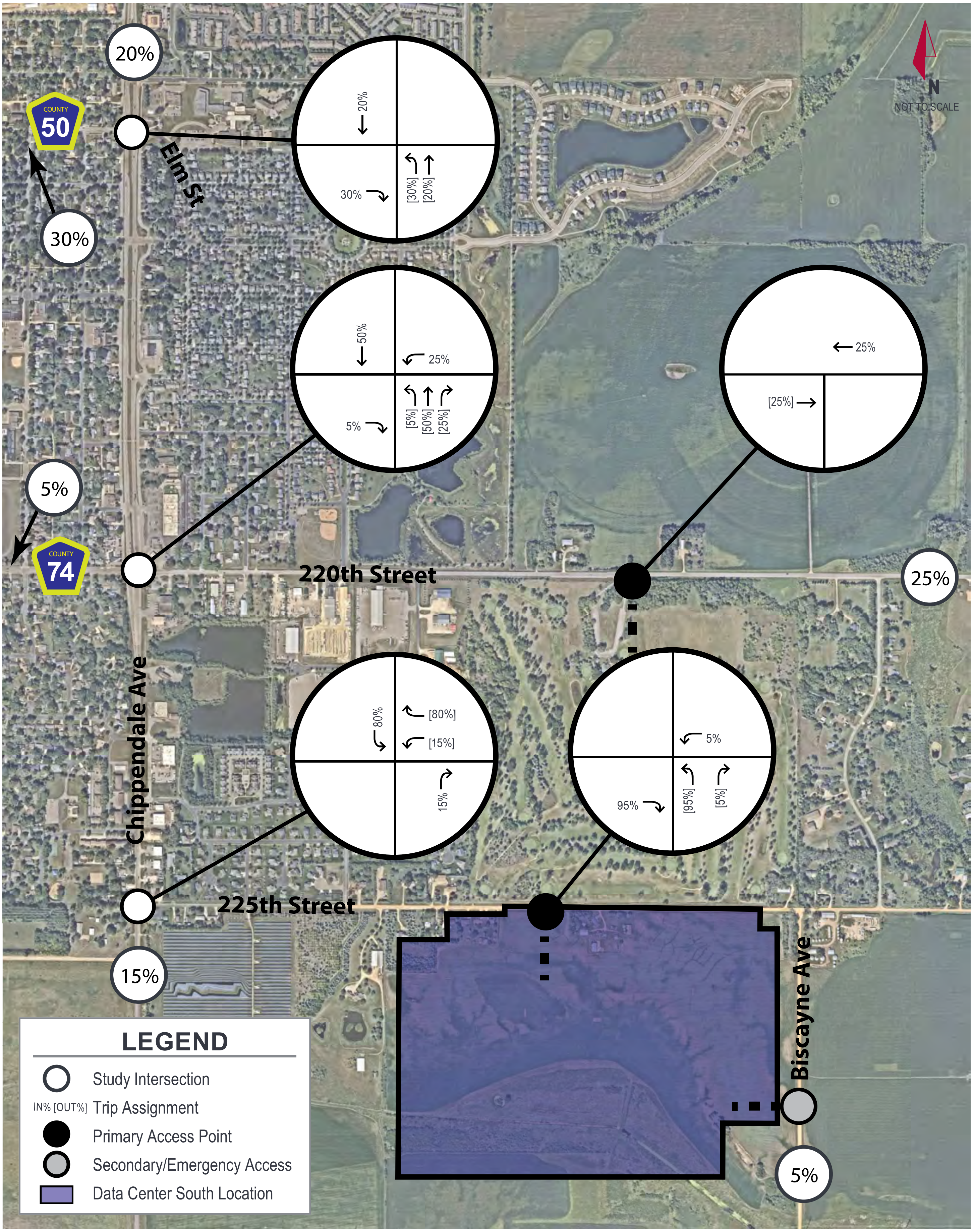

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EXHIBIT 8

SCENARIO 1 - SOUTH DATA CENTER SITE TRAFFIC DISTRIBUTION

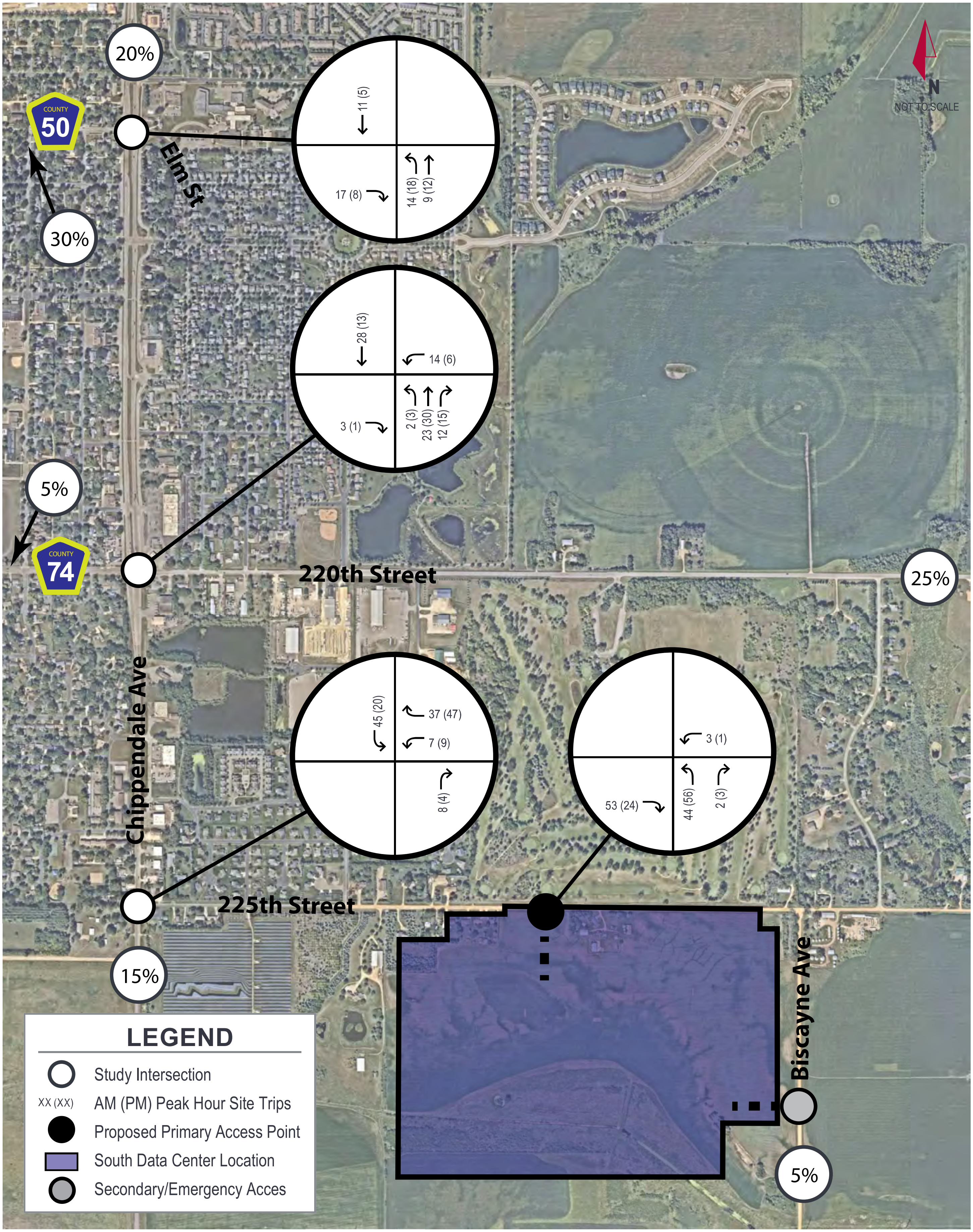

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EXHIBIT 9

SCNEARIO 1 - SOUTH DATA CENTER SITE TRIPS

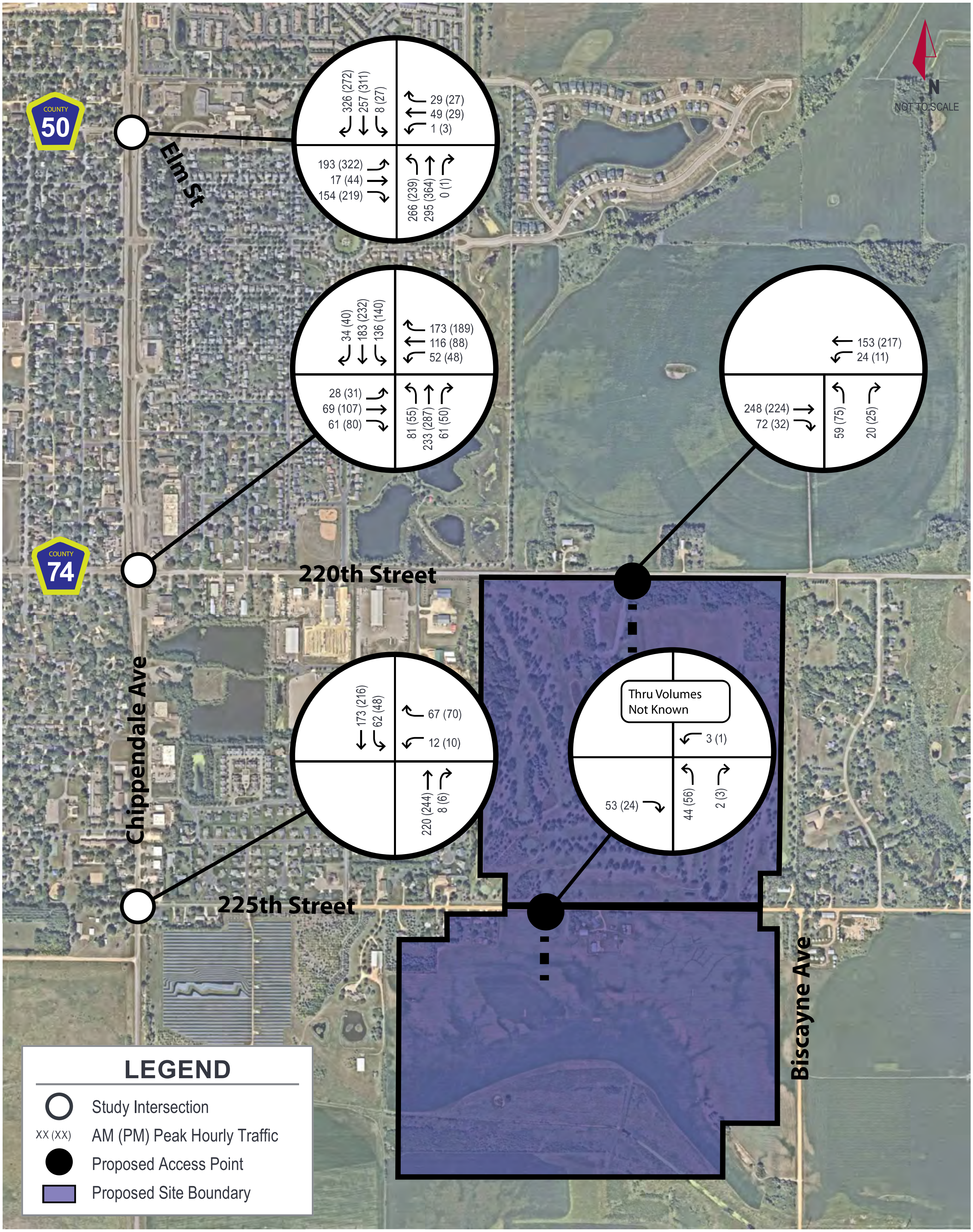

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EXHIBIT 10

OPENING YEAR (2029) SCENARIO 1 BUILD TRAFFIC VOLUMES

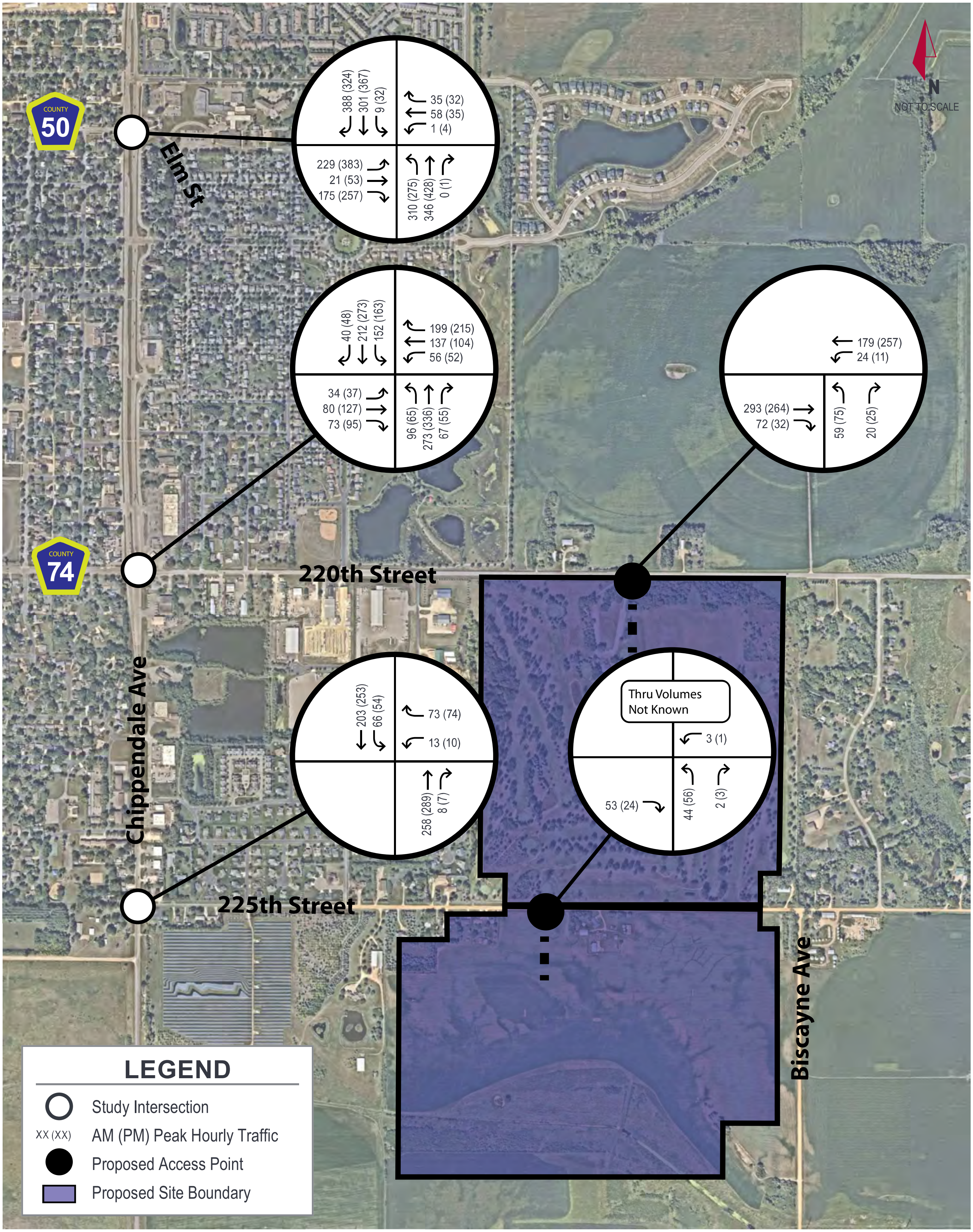

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EXHIBIT 11

HORIZON YEAR (2040) SCENARIO 1 BUILD TRAFFIC VOLUMES

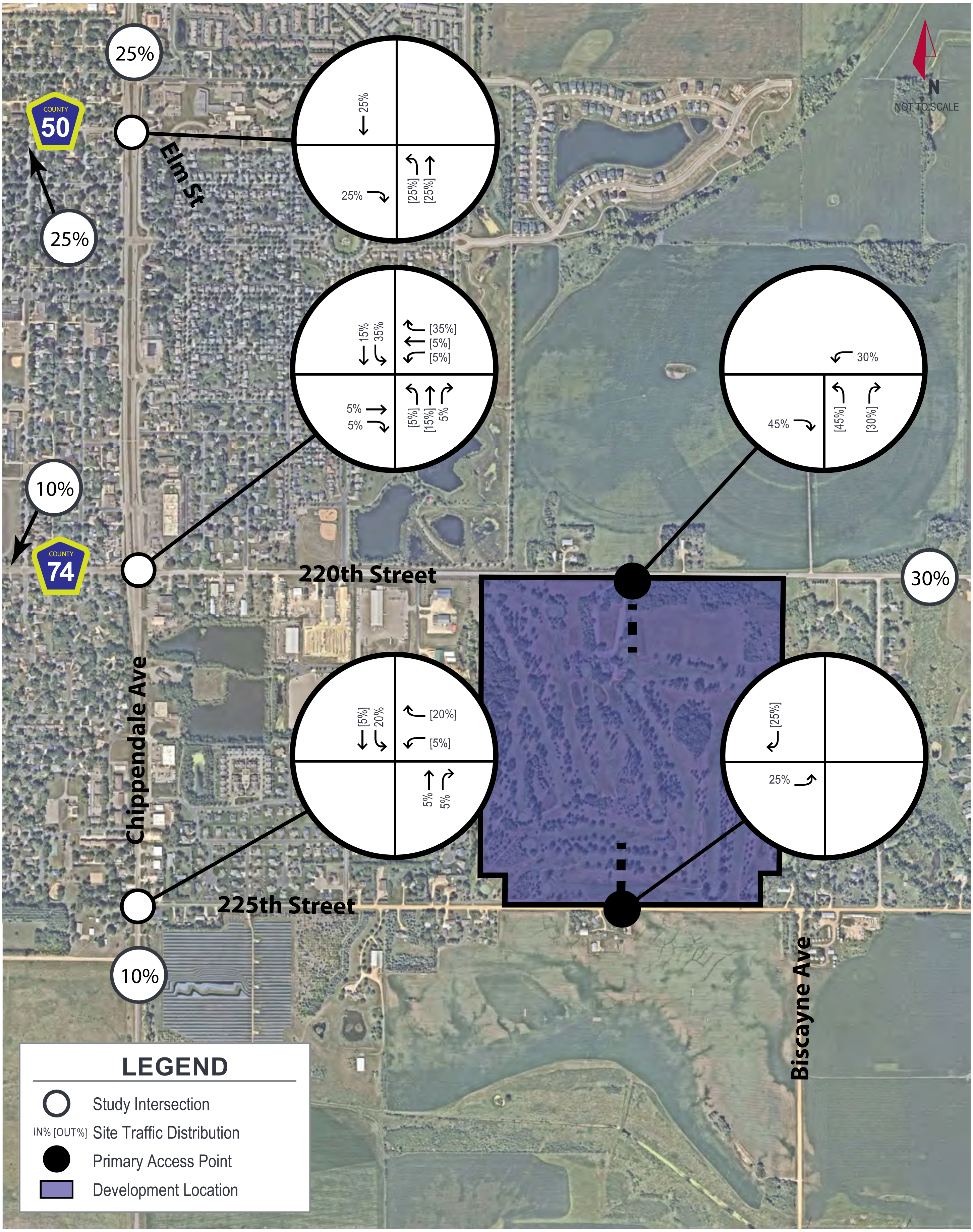

EXHIBIT 12

SCENARIO 2 SITE TRAFFIC DISTRBUTION

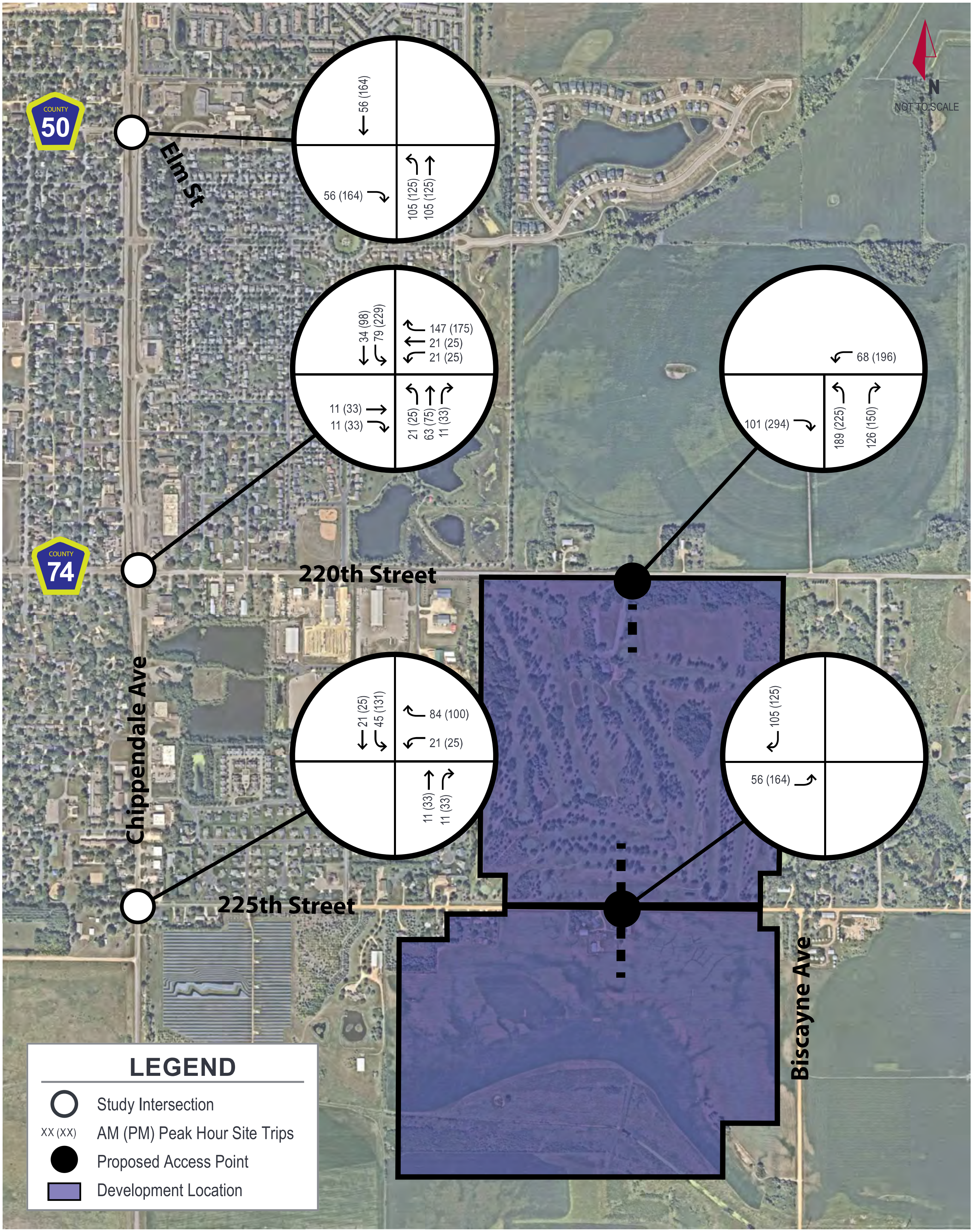

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EXHIBIT 13

SCNEARIO 2 PEAK HOUR SITE TRAFFIC

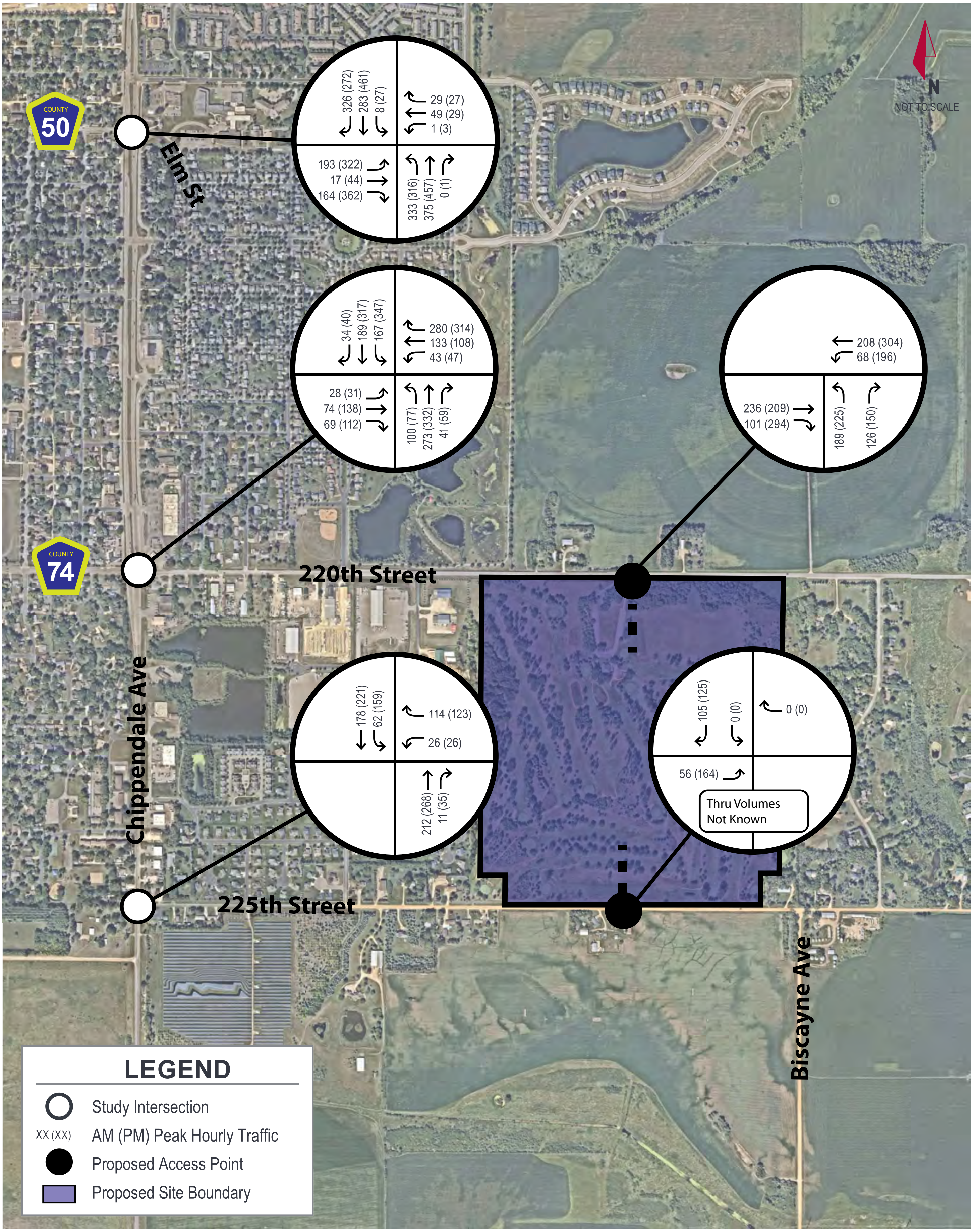

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EXHIBIT 14

OPENING YEAR (2029) SCENARIO 2 BUILD TRAFFIC VOLUMES

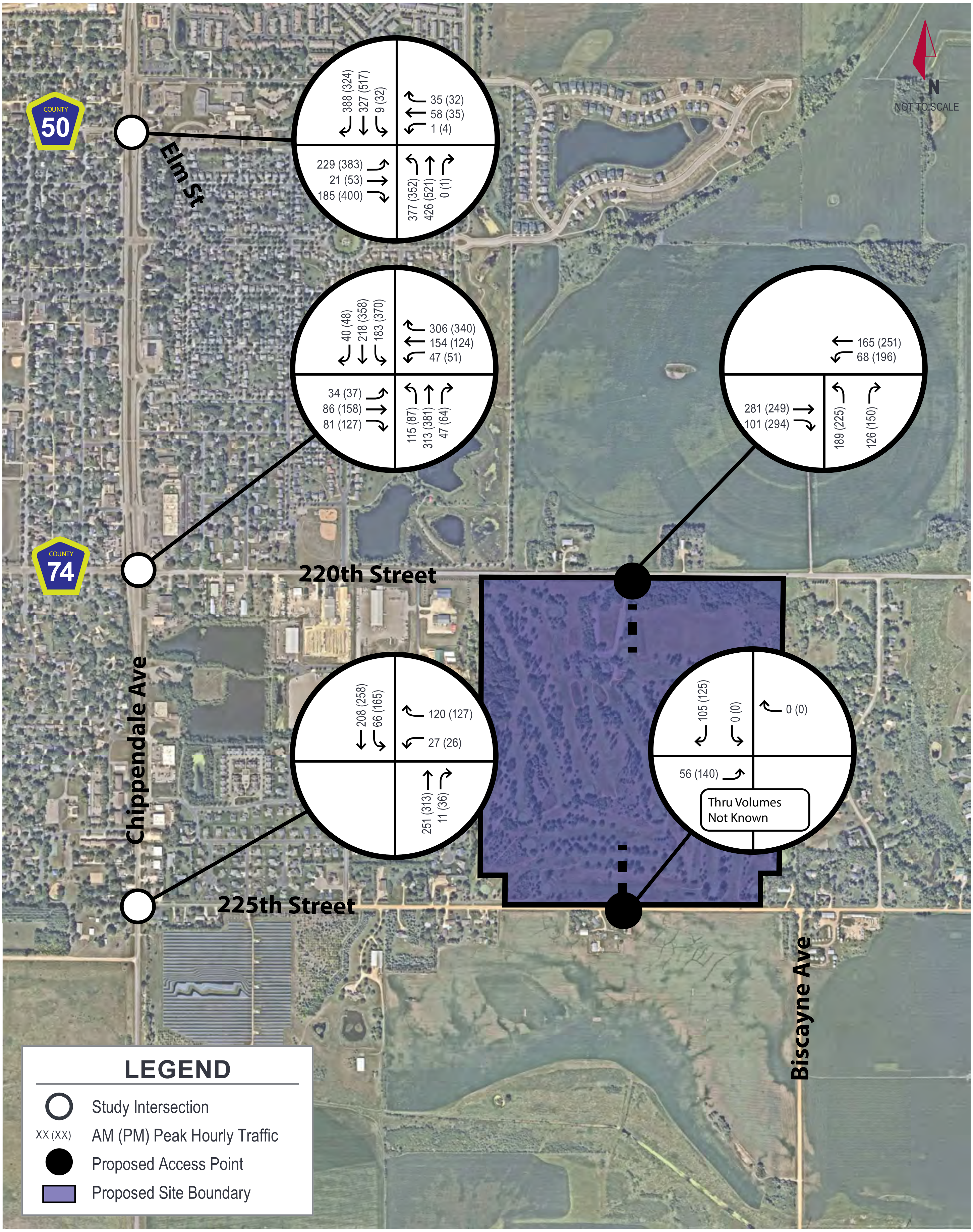

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EXHIBIT 15

DESIGN YEAR (2040) SCENARIO 2 BUILD TRAFFIC VOLUMES

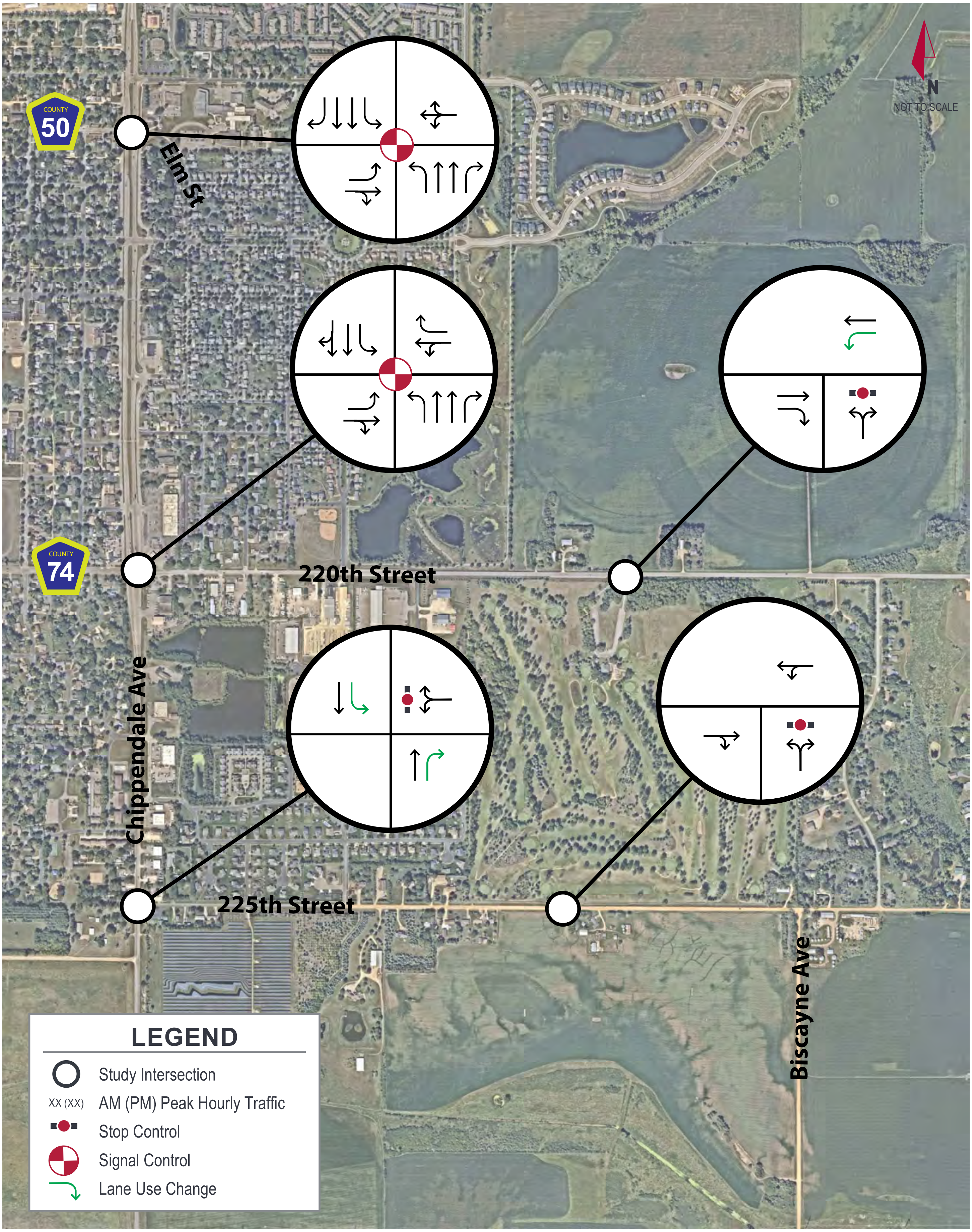

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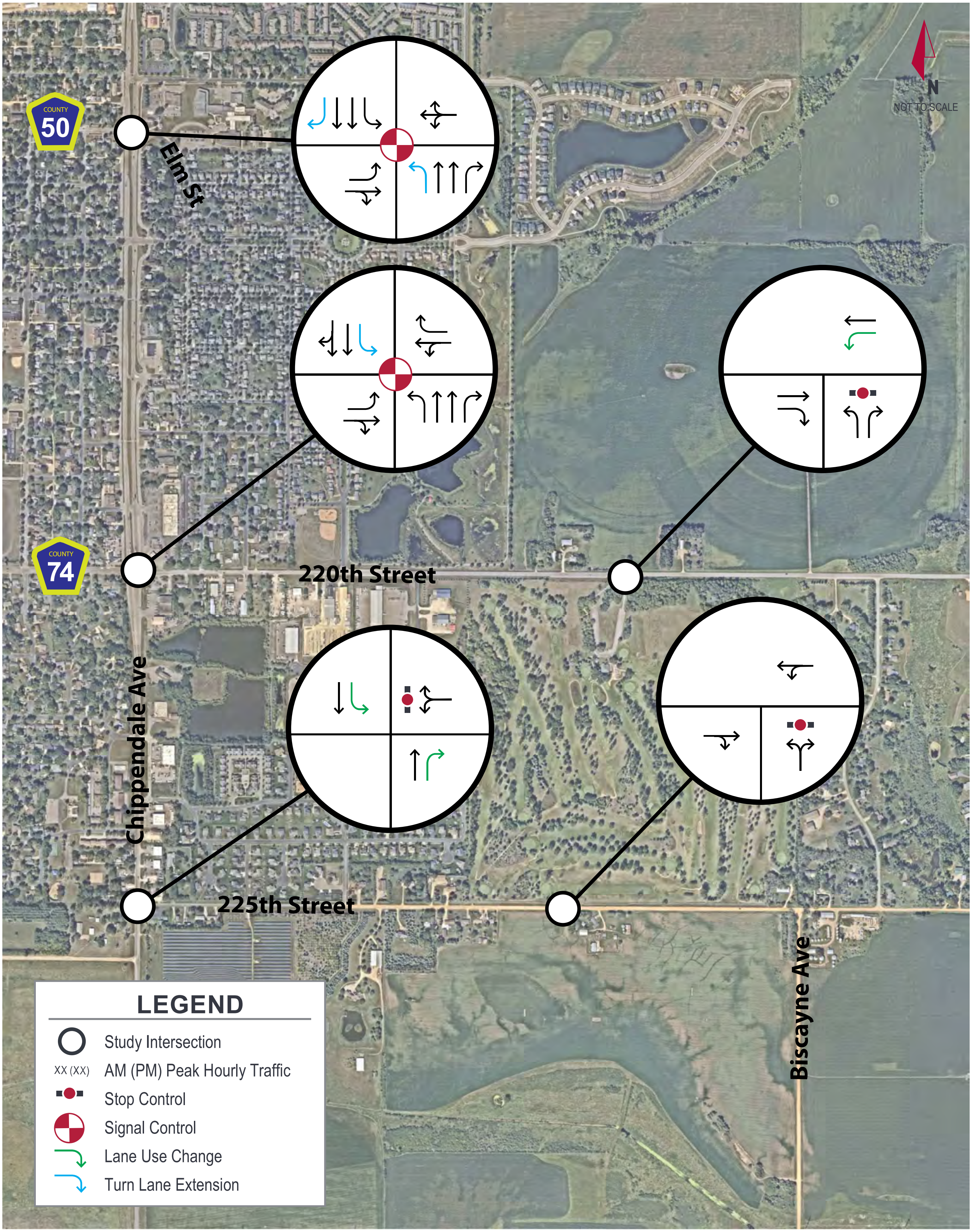
EXHIBIT 16

PROPOSED SCENARIO 1 GEOMETRY AND INTERSECTION CONTROL



LEGEND

- Study Intersection
- XX (XX) AM (PM) Peak Hourly Traffic
- Stop Control
- Signal Control
- Lane Use Change
- Turn Lane Extension

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EXHIBIT 17

PROPOSED SCENARIO 2 GEOMETRY AND INTERSECTION CONTROL

B. Turning Movement Counts

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & 225th Street
Site Code:
Start Date: 03/07/2024

Turning Movement Data

Start Time	225th Street Westbound			TH 3 Northbound			TH 3 Southbound			
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
7:00 AM	1	5	6	33	0	33	2	38	40	79
7:15 AM	2	4	6	55	0	55	2	34	36	97
7:30 AM	2	4	6	50	0	50	2	44	46	102
7:45 AM	0	16	16	47	0	47	5	34	39	102
Hourly Total	5	29	34	185	0	185	11	150	161	380
8:00 AM	1	4	5	34	0	34	7	33	40	79
8:15 AM	1	3	4	36	2	38	4	28	32	74
8:30 AM	0	6	6	29	0	29	2	31	33	68
8:45 AM	0	3	3	30	1	31	2	13	15	49
Hourly Total	2	16	18	129	3	132	15	105	120	270
*** BREAK ***	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	3	3	42	4	46	7	56	63	112
4:15 PM	0	2	2	47	0	47	6	65	71	120
4:30 PM	0	9	9	59	0	59	8	51	59	127
4:45 PM	0	4	4	47	2	49	7	41	48	101
Hourly Total	0	18	18	195	6	201	28	213	241	460
5:00 PM	1	3	4	53	0	53	3	48	51	108
5:15 PM	0	5	5	58	0	58	8	41	49	112
5:30 PM	0	4	4	39	0	39	5	25	30	73
5:45 PM	0	7	7	28	0	28	5	33	38	73
Hourly Total	1	19	20	178	0	178	21	147	168	366
Grand Total	8	82	90	687	9	696	75	615	690	1476
Approach %	8.9	91.1	-	98.7	1.3	-	10.9	89.1	-	-
Total %	0.5	5.6	6.1	46.5	0.6	47.2	5.1	41.7	46.7	-
Lights	7	80	87	661	8	669	70	588	658	1414
% Lights	87.5	97.6	96.7	96.2	88.9	96.1	93.3	95.6	95.4	95.8
Mediums	1	2	3	16	1	17	5	17	22	42
% Mediums	12.5	2.4	3.3	2.3	11.1	2.4	6.7	2.8	3.2	2.8
Articulated Trucks	0	0	0	10	0	10	0	10	10	20
% Articulated Trucks	0.0	0.0	0.0	1.5	0.0	1.4	0.0	1.6	1.4	1.4

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Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & 225th Street
Site Code:
Start Date: 03/07/2024
Page No: 2

TH 3 [SB]

Out	In	Total
741	658	1399
18	22	40
10	10	20
769	**690**	**1459**

T	L
588	70
17	5
10	0
615	**75**

Fake Approach [EB]

Out	In	Total
0	0	0
0	0	0
0	0	0
0	**0**	**0**

03/07/2024 7:00 AM
Ending At
03/07/2024 6:00 PM

Lights
Mediums
Articulated Trucks

225th Street [WB]

Out	In	Total
78	87	165
6	3	9
0	0	0
84	**90**	**174**

R	L
80	7
2	1
0	0
82	**8**

T	R
661	8
16	1
10	0
687	**9**

TH 3 [NB]

Out	In	Total
595	669	1264
18	17	35
10	10	20
623	**696**	**1319**

Turning Movement Data Plot

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & 225th Street
Site Code:
Start Date: 03/07/2024

Turning Movement Peak Hour Data (7:00 AM)

Start Time	225th Street Westbound Left	225th Street Westbound Right	225th Street Westbound App. Total	TH 3 Northbound Thru	TH 3 Northbound Right	TH 3 Northbound App. Total	TH 3 Southbound Left	TH 3 Southbound Thru	TH 3 Southbound App. Total	Int. Total
7:00 AM	1	5	6	33	0	33	2	38	40	79
7:15 AM	2	4	6	55	0	55	2	34	36	97
7:30 AM	2	4	6	50	0	50	2	44	46	102
7:45 AM	0	16	16	47	0	47	5	34	39	102
Total	5	29	34	185	0	185	11	150	161	380
Approach %	14.7	85.3	-	100.0	0.0	-	6.8	93.2	-	-
Total %	1.3	7.6	8.9	48.7	0.0	48.7	2.9	39.5	42.4	-
PHF	0.625	0.453	0.531	0.841	0.000	0.841	0.550	0.852	0.875	0.931
Lights	4	28	32	178	0	178	9	141	150	360
% Lights	80.0	96.6	94.1	96.2	-	96.2	81.8	94.0	93.2	94.7
Mediums	1	1	2	5	0	5	2	7	9	16
% Mediums	20.0	3.4	5.9	2.7	-	2.7	18.2	4.7	5.6	4.2
Articulated Trucks	0	0	0	2	0	2	0	2	2	4
% Articulated Trucks	0.0	0.0	0.0	1.1	-	1.1	0.0	1.3	1.2	1.1

Kimley»Horn

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & 225th Street
Site Code:
Start Date: 03/07/2024
Page No: 4

Peak Hour Data

03/07/2024 7:00 AM
Ending At
03/07/2024 8:00 AM

Lights
Mediums
Articulated Trucks

TH 3 [SB]

Out	In	Total
206	150	356
6	9	15
2	2	4
214	**161**	**375**

T	L
141	9
7	2
2	0
150	**11**

Fake Approach [EB]

Out	In	Total
0	0	0
0	0	0
0	0	0
0	**0**	**0**

225th Street [WB]

Out	In	Total
9	32	41
2	2	4
0	0	0
11	**34**	**45**

R	L
28	4
1	1
0	0
29	**5**

TH 3 [NB]

T	R
178	0
5	0
2	0
185	**0**

Out	In	Total
145	178	323
8	5	13
2	2	4
155	**185**	**340**

Turning Movement Peak Hour Data Plot (7:00 AM)

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Turning Movement Peak Hour Data (4:00 PM)

	225th Street			TH 3			TH 3			
	Westbound			Northbound			Southbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
4:00 PM	0	3	3	42	4	46	7	56	63	112
4:15 PM	0	2	2	47	0	47	6	65	71	120
4:30 PM	0	9	9	59	0	59	8	51	59	127
4:45 PM	0	4	4	47	2	49	7	41	48	101
Total	0	18	18	195	6	201	28	213	241	460
Approach %	0.0	100.0	-	97.0	3.0	-	11.6	88.4	-	-
Total %	0.0	3.9	3.9	42.4	1.3	43.7	6.1	46.3	52.4	-
PHF	0.000	0.500	0.500	0.826	0.375	0.852	0.875	0.819	0.849	0.906
Lights	0	17	17	189	6	195	28	206	234	446
% Lights	-	94.4	94.4	96.9	100.0	97.0	100.0	96.7	97.1	97.0
Mediums	0	1	1	4	0	4	0	4	4	9
% Mediums	-	5.6	5.6	2.1	0.0	2.0	0.0	1.9	1.7	2.0
Articulated Trucks	0	0	0	2	0	2	0	3	3	5
% Articulated Trucks	-	0.0	0.0	1.0	0.0	1.0	0.0	1.4	1.2	1.1

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

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Count Name: TH 3 & 225th Street
Site Code:
Start Date: 03/07/2024
Page No: 6

Peak Hour Data

03/07/2024 4:00 PM
Ending At
03/07/2024 5:00 PM

Lights
Mediums
Articulated Trucks

TH 3 [SB]

Out	In	Total
206	234	440
5	4	9
2	3	5
213	**241**	**454**

T	L
206	28
4	0
3	0
213	**28**

Fake Approach [EB]

Out	In	Total
0	0	0
0	0	0
0	0	0
0	**0**	**0**

225th Street [WB]

Out	In	Total
34	17	51
0	1	1
0	0	0
34	**18**	**52**

R	L
17	0
1	0
0	0
18	**0**

T	R
189	6
4	0
2	0
195	**6**

Out	In	Total
206	195	401
4	4	8
3	2	5
213	**201**	**414**

TH 3 [NB]

Turning Movement Peak Hour Data Plot (4:00 PM)

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & Elm Street
Site Code:
Start Date: 03/07/2024
Page No: 1

Turning Movement Data

	Elm St Eastbound					Elm St Westbound					TH 3 Northbound					TH 3 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	40	1	12	0	53	0	12	8	1	20	36	66	0	0	102	0	42	40	0	82	257
7:15 AM	32	2	20	1	54	0	9	7	0	16	60	75	0	0	135	1	50	70	0	121	326
7:30 AM	41	2	32	0	75	0	12	14	0	26	54	64	0	1	118	3	49	89	0	141	360
7:45 AM	53	7	22	0	82	0	16	1	0	17	56	52	0	0	108	0	58	81	0	139	346
Hourly Total	166	12	86	1	264	0	49	30	1	79	206	257	0	1	463	4	199	280	0	483	1289
8:00 AM	52	5	26	0	83	1	8	5	0	14	41	58	0	0	99	3	53	61	0	117	313
8:15 AM	45	6	27	0	78	0	8	5	0	13	49	62	1	1	112	1	51	71	0	123	326
8:30 AM	61	7	24	1	92	0	7	4	0	11	37	40	0	0	77	2	37	63	0	102	282
8:45 AM	50	6	25	0	81	0	5	3	0	8	32	41	0	0	73	2	36	39	0	77	239
Hourly Total	208	24	102	1	334	1	28	17	0	46	159	201	1	1	361	8	177	234	0	419	1160
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	72	2	49	0	123	0	14	3	0	17	22	84	1	0	107	4	63	56	1	123	370
4:15 PM	60	5	43	0	108	0	8	3	0	11	30	59	0	1	89	5	89	60	1	154	362
4:30 PM	84	5	55	0	144	0	2	6	0	8	50	82	1	0	133	3	63	64	0	130	415
4:45 PM	68	17	41	0	126	0	4	7	0	11	36	84	0	0	120	9	51	57	0	117	374
Hourly Total	284	29	188	0	501	0	28	19	0	47	138	309	2	1	449	21	266	237	2	524	1521
5:00 PM	68	8	37	0	113	3	10	4	0	17	40	66	0	0	106	9	88	67	1	164	400
5:15 PM	77	11	50	0	138	0	11	8	1	19	50	75	0	0	125	4	72	63	1	139	421
5:30 PM	50	17	47	0	114	0	4	2	0	6	49	64	0	0	113	6	59	48	0	113	346
5:45 PM	63	4	36	0	103	0	4	5	0	9	38	59	1	0	98	5	60	43	0	108	318
Hourly Total	258	40	170	0	468	3	29	19	1	51	177	264	1	0	442	24	279	221	2	524	1485
Grand Total	916	105	546	2	1567	4	134	85	2	223	680	1031	4	3	1715	57	921	972	4	1950	5455
Approach %	58.5	6.7	34.8	-	-	1.8	60.1	38.1	-	-	39.7	60.1	0.2	-	-	2.9	47.2	49.8	-	-	-
Total %	16.8	1.9	10.0	-	28.7	0.1	2.5	1.6	-	4.1	12.5	18.9	0.1	-	31.4	1.0	16.9	17.8	-	35.7	-
Lights	886	105	516	-	1507	3	133	82	-	218	645	1000	4	-	1649	57	876	923	-	1856	5230
% Lights	96.7	100.0	94.5	-	96.2	75.0	99.3	96.5	-	97.8	94.9	97.0	100.0	-	96.2	100.0	95.1	95.0	-	95.2	95.9
Mediums	27	0	15	-	42	1	1	3	-	5	12	22	0	-	34	0	29	33	-	62	143
% Mediums	2.9	0.0	2.7	-	2.7	25.0	0.7	3.5	-	2.2	1.8	2.1	0.0	-	2.0	0.0	3.1	3.4	-	3.2	2.6
Articulated Trucks	3	0	15	-	18	0	0	0	-	0	23	9	0	-	32	0	16	16	-	32	82
% Articulated Trucks	0.3	0.0	2.7	-	1.1	0.0	0.0	0.0	-	0.0	3.4	0.9	0.0	-	1.9	0.0	1.7	1.6	-	1.6	1.5
Pedestrians	-	-	-	2	-	-	-	-	2	-	-	-	-	3	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
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Count Name: TH 3 & Elm Street
Site Code:
Start Date: 03/07/2024
Page No: 2

03/07/2024 7:00 AM
Ending At
03/07/2024 6:00 PM

Lights
Mediums
Articulated Trucks
Pedestrians

TH 3 [SB]

Out	In	Total
1968	1856	3824
52	62	114
12	32	44
0	0	0
2032	**1950**	**3982**

R	T	L	P
923	876	57	0
33	29	0	0
16	16	0	0
0	0	0	4
972	**921**	**57**	**4**

Elm St [EB]

Out	In	Total
1701	1507	3208
46	42	88
39	18	57
0	0	0
1786	**1567**	**3353**

L	T	R	P
886	105	516	0
27	0	15	0
3	0	15	0
0	0	0	2
916	**105**	**546**	**2**

Elm St [WB]

Out	In	Total
166	218	384
0	5	5
0	0	0
0	0	0
166	**223**	**389**

R	T	L	P
82	133	3	0
3	1	1	0
0	0	0	0
0	0	0	2
85	**134**	**4**	**2**

TH 3 [NB]

L	T	R	P
645	1000	4	0
12	22	0	0
23	9	0	0
0	0	0	3
680	**1031**	**4**	**3**

Out	In	Total
1395	1649	3044
45	34	79
31	32	63
0	0	0
1471	**1715**	**3186**

Turning Movement Data Plot

Kimley»Horn

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Elm St Eastbound					Elm St Westbound					TH 3 Northbound					TH 3 Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	32	2	20	1	54	0	9	7	0	16	60	75	0	0	135	1	50	70	0	121	326
7:30 AM	41	2	32	0	75	0	12	14	0	26	54	64	0	1	118	3	49	89	0	141	360
7:45 AM	53	7	22	0	82	0	16	1	0	17	56	52	0	0	108	0	58	81	0	139	346
8:00 AM	52	5	26	0	83	1	8	5	0	14	41	58	0	0	99	3	53	61	0	117	313
Total	178	16	100	1	294	1	45	27	0	73	211	249	0	1	460	7	210	301	0	518	1345
Approach %	60.5	5.4	34.0	-	-	1.4	61.6	37.0	-	-	45.9	54.1	0.0	-	-	1.4	40.5	58.1	-	-	-
Total %	13.2	1.2	7.4	-	21.9	0.1	3.3	2.0	-	5.4	15.7	18.5	0.0	-	34.2	0.5	15.6	22.4	-	38.5	-
PHF	0.840	0.571	0.781	-	0.886	0.250	0.703	0.482	-	0.702	0.879	0.830	0.000	-	0.852	0.583	0.905	0.846	-	0.918	0.934
Lights	168	16	89	-	273	0	44	24	-	68	199	239	0	-	438	7	193	282	-	482	1261
% Lights	94.4	100.0	89.0	-	92.9	0.0	97.8	88.9	-	93.2	94.3	96.0	-	-	95.2	100.0	91.9	93.7	-	93.1	93.8
Mediums	8	0	6	-	14	1	1	3	-	5	3	7	0	-	10	0	13	15	-	28	57
% Mediums	4.5	0.0	6.0	-	4.8	100.0	2.2	11.1	-	6.8	1.4	2.8	-	-	2.2	0.0	6.2	5.0	-	5.4	4.2
Articulated Trucks	2	0	5	-	7	0	0	0	-	0	9	3	0	-	12	0	4	4	-	8	27
% Articulated Trucks	1.1	0.0	5.0	-	2.4	0.0	0.0	0.0	-	0.0	4.3	1.2	-	-	2.6	0.0	1.9	1.3	-	1.5	2.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Kimley-Horn and Associates, Inc.
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Count Name: TH 3 & Elm Street
Site Code:
Start Date: 03/07/2024
Page No: 4

Peak Hour Data

03/07/2024 7:15 AM
Ending At
03/07/2024 8:15 AM

Lights
Mediums
Articulated Trucks
Pedestrians

TH 3 [SB]

Out	In	Total
431	482	913
18	28	46
5	8	13
0	0	0
454	**518**	**972**

R	T	L	P
282	193	7	0
15	13	0	0
4	4	0	0
0	0	0	0
301	**210**	**7**	**0**

Elm St [EB]

Out	In	Total
525	273	798
19	14	33
13	7	20
0	0	0
557	**294**	**851**

L	T	R	P
168	16	89	0
8	0	6	0
2	0	5	0
0	0	0	1
178	**16**	**100**	**1**

Elm St [WB]

Out	In	Total
23	68	91
0	5	5
0	0	0
0	0	0
23	**73**	**96**

R	T	L	P
24	44	0	0
3	1	1	0
0	0	0	0
0	0	0	0
27	**45**	**1**	**0**

TH 3 [NB]

L	T	R	P
199	239	0	0
3	7	0	0
9	3	0	0
0	0	0	1
211	**249**	**0**	**1**

Out	In	Total
282	438	720
20	10	30
9	12	21
0	0	0
311	**460**	**771**

Turning Movement Peak Hour Data Plot (7:15 AM)

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & Elm Street
Site Code:
Start Date: 03/07/2024
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

	Elm St					Elm St					TH 3					TH 3					
	Eastbound					Westbound					Northbound					Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	84	5	55	0	144	0	2	6	0	8	50	82	1	0	133	3	63	64	0	130	415
4:45 PM	68	17	41	0	126	0	4	7	0	11	36	84	0	0	120	9	51	57	0	117	374
5:00 PM	68	8	37	0	113	3	10	4	0	17	40	66	0	0	106	9	88	67	1	164	400
5:15 PM	77	11	50	0	138	0	11	8	1	19	50	75	0	0	125	4	72	63	1	139	421
Total	297	41	183	0	521	3	27	25	1	55	176	307	1	0	484	25	274	251	2	550	1610
Approach %	57.0	7.9	35.1	-	-	5.5	49.1	45.5	-	-	36.4	63.4	0.2	-	-	4.5	49.8	45.6	-	-	-
Total %	18.4	2.5	11.4	-	32.4	0.2	1.7	1.6	-	3.4	10.9	19.1	0.1	-	30.1	1.6	17.0	15.6	-	34.2	-
PHF	0.884	0.603	0.832	-	0.905	0.250	0.614	0.781	-	0.724	0.880	0.914	0.250	-	0.910	0.694	0.778	0.937	-	0.838	0.956
Lights	295	41	181	-	517	3	27	25	-	55	171	302	1	-	474	25	267	239	-	531	1577
% Lights	99.3	100.0	98.9	-	99.2	100.0	100.0	100.0	-	100.0	97.2	98.4	100.0	-	97.9	100.0	97.4	95.2	-	96.5	98.0
Mediums	2	0	1	-	3	0	0	0	-	0	2	5	0	-	7	0	5	5	-	10	20
% Mediums	0.7	0.0	0.5	-	0.6	0.0	0.0	0.0	-	0.0	1.1	1.6	0.0	-	1.4	0.0	1.8	2.0	-	1.8	1.2
Articulated Trucks	0	0	1	-	1	0	0	0	-	0	3	0	0	-	3	0	2	7	-	9	13
% Articulated Trucks	0.0	0.0	0.5	-	0.2	0.0	0.0	0.0	-	0.0	1.7	0.0	0.0	-	0.6	0.0	0.7	2.8	-	1.6	0.8
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: TH 3 & Elm Street
Site Code:
Start Date: 03/07/2024

Peak Hour Data

03/07/2024 4:30 PM
Ending At
03/07/2024 5:30 PM

Lights
Mediums
Articulated Trucks
Pedestrians

TH 3 [SB]

Out	In	Total
622	531	1153
7	10	17
0	9	9
0	0	0
629	**550**	**1179**

R	T	L	P
239	267	25	0
5	5	0	0
7	2	0	0
0	0	0	2
251	**274**	**25**	**2**

Elm St [EB]

Out	In	Total
437	517	954
7	3	10
10	1	11
0	0	0
454	**521**	**975**

L	T	R	P
295	41	181	0
2	0	1	0
0	0	1	0
0	0	0	0
297	**41**	**183**	**0**

Elm St [WB]

Out	In	Total
67	55	122
0	0	0
0	0	0
0	0	0
67	**55**	**122**

R	T	L	P
25	27	3	0
0	0	0	0
0	0	0	0
0	0	0	1
25	**27**	**3**	**1**

L	T	R	P
171	302	1	0
2	5	0	0
3	0	0	0
0	0	0	0
176	**307**	**1**	**0**

Out	In	Total
451	474	925
6	7	13
3	3	6
0	0	0
460	**484**	**944**

TH 3 [NB]

Turning Movement Peak Hour Data Plot (4:30 PM)

Kimley»Horn

Kimley-Horn and Associates, Inc.
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024
Page No: 1

Turning Movement Data

Start Time	220th Street Eastbound					TH 50 Westbound					TH 3 Northbound					TH 3 Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	6	11	8	0	25	2	19	17	0	38	3	55	6	0	64	12	33	4	0	49	176
7:15 AM	9	7	8	0	24	5	18	36	0	59	11	57	11	0	79	24	32	3	1	59	221
7:30 AM	6	13	8	0	27	4	24	29	0	57	9	51	3	0	63	19	46	8	0	73	220
7:45 AM	6	21	17	0	44	8	37	30	0	75	42	44	12	0	98	22	32	14	0	68	285
Hourly Total	27	52	41	0	120	19	98	112	0	229	65	207	32	0	304	77	143	29	1	249	902
8:00 AM	5	17	21	0	43	3	24	28	0	55	11	42	2	0	55	16	33	6	0	55	208
8:15 AM	7	19	10	0	36	4	19	24	0	47	9	51	4	0	64	12	37	7	0	56	203
8:30 AM	3	15	14	0	32	7	16	15	0	38	8	44	8	0	60	20	25	11	0	56	186
8:45 AM	5	10	7	0	22	3	11	18	0	32	5	31	2	0	38	16	14	8	0	38	130
Hourly Total	20	61	52	0	133	17	70	85	0	172	33	168	16	0	217	64	109	32	0	205	727
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	11	24	17	0	52	10	14	25	0	49	9	51	10	0	70	31	50	6	0	87	258
4:15 PM	11	29	16	0	56	8	15	24	0	47	17	44	7	0	68	37	66	7	0	110	281
4:30 PM	6	34	23	0	63	4	24	35	0	63	16	62	8	0	86	34	51	5	0	90	302
4:45 PM	6	20	15	0	41	4	17	33	0	54	10	67	2	0	79	26	54	10	1	90	264
Hourly Total	34	107	71	0	212	26	70	117	0	213	52	224	27	0	303	128	221	28	1	377	1105
5:00 PM	7	17	16	0	40	4	17	27	0	48	10	47	7	0	64	22	57	11	0	90	242
5:15 PM	10	26	19	0	55	8	19	33	0	60	12	61	7	0	80	27	40	11	0	78	273
5:30 PM	17	19	13	0	49	4	20	33	0	57	16	34	6	0	56	26	34	8	0	68	230
5:45 PM	7	10	11	0	28	6	13	25	0	44	7	35	4	0	46	20	34	11	0	65	183
Hourly Total	41	72	59	0	172	22	69	118	0	209	45	177	24	0	246	95	165	41	0	301	928
Grand Total	122	292	223	0	637	84	307	432	0	823	195	776	99	0	1070	364	638	130	2	1132	3662
Approach %	19.2	45.8	35.0	-	-	10.2	37.3	52.5	-	-	18.2	72.5	9.3	-	-	32.2	56.4	11.5	-	-	-
Total %	3.3	8.0	6.1	-	17.4	2.3	8.4	11.8	-	22.5	5.3	21.2	2.7	-	29.2	9.9	17.4	3.5	-	30.9	-
Lights	115	279	218	-	612	79	294	395	-	768	189	754	95	-	1038	334	612	123	-	1069	3487
% Lights	94.3	95.5	97.8	-	96.1	94.0	95.8	91.4	-	93.3	96.9	97.2	96.0	-	97.0	91.8	95.9	94.6	-	94.4	95.2
Mediums	6	9	5	-	20	4	10	11	-	25	6	13	4	-	23	10	16	6	-	32	100
% Mediums	4.9	3.1	2.2	-	3.1	4.8	3.3	2.5	-	3.0	3.1	1.7	4.0	-	2.1	2.7	2.5	4.6	-	2.8	2.7
Articulated Trucks	1	4	0	-	5	1	3	26	-	30	0	9	0	-	9	20	10	1	-	31	75
% Articulated Trucks	0.8	1.4	0.0	-	0.8	1.2	1.0	6.0	-	3.6	0.0	1.2	0.0	-	0.8	5.5	1.6	0.8	-	2.7	2.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kimley»Horn

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Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024
Page No: 2

TH 3 [SB]

Out	In	Total
1264	1069	2333
30	32	62
36	31	67
0	0	0
1330	**1132**	**2462**

R	T	L	P
123	612	334	0
6	16	10	0
1	10	20	0
0	0	0	2
130	**638**	**364**	**2**

220th Street [EB]

Out	In	Total
606	612	1218
22	20	42
4	5	9
0	0	0
632	**637**	**1269**

L	T	R	P
115	279	218	0
6	9	5	0
1	4	0	0
0	0	0	0
122	**292**	**223**	**0**

03/07/2024 7:00 AM
Ending At
03/07/2024 6:00 PM

Lights
Mediums
Articulated Trucks
Pedestrians

TH 50 [WB]

Out	In	Total
708	768	1476
23	25	48
24	30	54
0	0	0
755	**823**	**1578**

R	T	L	P
395	294	79	0
11	10	4	0
26	3	1	0
0	0	0	0
432	**307**	**84**	**0**

L	T	R	P
189	754	95	0
6	13	4	0
0	9	0	0
0	0	0	0
195	**776**	**99**	**0**

Out	In	Total
909	1038	1947
25	23	48
11	9	20
0	0	0
945	**1070**	**2015**

TH 3 [NB]

Turning Movement Data Plot

Kimley»Horn

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Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024
Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	220th Street Eastbound					TH 50 Westbound					TH 3 Northbound					TH 3 Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	9	7	8	0	24	5	18	36	0	59	11	57	11	0	79	24	32	3	1	59	221
7:30 AM	6	13	8	0	27	4	24	29	0	57	9	51	3	0	63	19	46	8	0	73	220
7:45 AM	6	21	17	0	44	8	37	30	0	75	42	44	12	0	98	22	32	14	0	68	285
8:00 AM	5	17	21	0	43	3	24	28	0	55	11	42	2	0	55	16	33	6	0	55	208
Total	26	58	54	0	138	20	103	123	0	246	73	194	28	0	295	81	143	31	1	255	934
Approach %	18.8	42.0	39.1	-	-	8.1	41.9	50.0	-	-	24.7	65.8	9.5	-	-	31.8	56.1	12.2	-	-	-
Total %	2.8	6.2	5.8	-	14.8	2.1	11.0	13.2	-	26.3	7.8	20.8	3.0	-	31.6	8.7	15.3	3.3	-	27.3	-
PHF	0.722	0.690	0.643	-	0.784	0.625	0.696	0.854	-	0.820	0.435	0.851	0.583	-	0.753	0.844	0.777	0.554	-	0.873	0.819
Lights	23	56	53	-	132	18	99	111	-	228	69	187	26	-	282	70	131	30	-	231	873
% Lights	88.5	96.6	98.1	-	95.7	90.0	96.1	90.2	-	92.7	94.5	96.4	92.9	-	95.6	86.4	91.6	96.8	-	90.6	93.5
Mediums	3	1	1	-	5	2	3	2	-	7	4	4	2	-	10	4	9	1	-	14	36
% Mediums	11.5	1.7	1.9	-	3.6	10.0	2.9	1.6	-	2.8	5.5	2.1	7.1	-	3.4	4.9	6.3	3.2	-	5.5	3.9
Articulated Trucks	0	1	0	-	1	0	1	10	-	11	0	3	0	-	3	7	3	0	-	10	25
% Articulated Trucks	0.0	1.7	0.0	-	0.7	0.0	1.0	8.1	-	4.5	0.0	1.5	0.0	-	1.0	8.6	2.1	0.0	-	3.9	2.7
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024
Page No: 4

TH 3 [SB]		
Out	In	Total
321	231	552
9	14	23
13	10	23
0	0	0
343	**255**	**598**

30	131	70	0
1	9	4	0
0	3	7	0
0	0	0	1
31	**143**	**81**	**1**
R	T	L	P

220th Street [EB]		
Out	In	Total
198	132	330
8	5	13
1	1	2
0	0	0
207	**138**	**345**

23	56	53	0
3	1	1	0
0	1	0	0
0	0	0	0
26	**58**	**54**	**0**
L	T	R	P

Peak Hour Data

03/07/2024 7:15 AM
Ending At
03/07/2024 8:15 AM

Lights
Mediums
Articulated Trucks
Pedestrians

R	T	L	P
123	**103**	**20**	**0**
0	0	0	0
10	1	0	0
2	3	2	0
111	99	18	0

TH 50 [WB]		
Out	In	Total
152	228	380
7	7	14
8	11	19
0	0	0
167	**246**	**413**

L	T	R	P
69	187	26	0
4	4	2	0
0	3	0	0
0	0	0	0
73	**194**	**28**	**0**

202	282	484
12	10	22
3	3	6
0	0	0
217	**295**	**512**
Out	In	Total
TH 3 [NB]		

Turning Movement Peak Hour Data Plot (7:15 AM)

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Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024

Turning Movement Peak Hour Data (4:00 PM)

	220th Street Eastbound					TH 50 Westbound					TH 3 Northbound					TH 3 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	11	24	17	0	52	10	14	25	0	49	9	51	10	0	70	31	50	6	0	87	258
4:15 PM	11	29	16	0	56	8	15	24	0	47	17	44	7	0	68	37	66	7	0	110	281
4:30 PM	6	34	23	0	63	4	24	35	0	63	16	62	8	0	86	34	51	5	0	90	302
4:45 PM	6	20	15	0	41	4	17	33	0	54	10	67	2	0	79	26	54	10	1	90	264
Total	34	107	71	0	212	26	70	117	0	213	52	224	27	0	303	128	221	28	1	377	1105
Approach %	16.0	50.5	33.5	-	-	12.2	32.9	54.9	-	-	17.2	73.9	8.9	-	-	34.0	58.6	7.4	-	-	-
Total %	3.1	9.7	6.4	-	19.2	2.4	6.3	10.6	-	19.3	4.7	20.3	2.4	-	27.4	11.6	20.0	2.5	-	34.1	-
PHF	0.773	0.787	0.772	-	0.841	0.650	0.729	0.836	-	0.845	0.765	0.836	0.675	-	0.881	0.865	0.837	0.700	-	0.857	0.915
Lights	34	103	71	-	208	25	66	111	-	202	52	220	25	-	297	119	215	28	-	362	1069
% Lights	100.0	96.3	100.0	-	98.1	96.2	94.3	94.9	-	94.8	100.0	98.2	92.6	-	98.0	93.0	97.3	100.0	-	96.0	96.7
Mediums	0	2	0	-	2	1	3	4	-	8	0	2	2	-	4	1	3	0	-	4	18
% Mediums	0.0	1.9	0.0	-	0.9	3.8	4.3	3.4	-	3.8	0.0	0.9	7.4	-	1.3	0.8	1.4	0.0	-	1.1	1.6
Articulated Trucks	0	2	0	-	2	0	1	2	-	3	0	2	0	-	2	8	3	0	-	11	18
% Articulated Trucks	0.0	1.9	0.0	-	0.9	0.0	1.4	1.7	-	1.4	0.0	0.9	0.0	-	0.7	6.3	1.4	0.0	-	2.9	1.6
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kimley-Horn

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Count Name: TH 3 & TH 50
Site Code:
Start Date: 03/07/2024

Peak Hour Data

03/07/2024 4:00 PM
Ending At
03/07/2024 5:00 PM

Lights
Mediums
Articulated Trucks
Pedestrians

TH 3 [SB]

Out	In	Total
365	362	727
6	4	10
4	11	15
0	0	0
375	**377**	**752**

R	T	L	P
28	215	119	0
0	3	1	0
0	3	8	0
0	0	0	1
28	**221**	**128**	**1**

220th Street [EB]

	Out	In	Total
	146	208	354
	3	2	5
	1	2	3
	0	0	0
	150	**212**	**362**

L	T	R	P
34	103	71	0
0	2	0	0
0	2	0	0
0	0	0	0
34	**107**	**71**	**0**

TH 50 [WB]

R	T	L	P
111	66	25	0
4	3	1	0
2	1	0	0
0	0	0	0
117	**70**	**26**	**0**

Out	In	Total
247	202	449
5	8	13
10	3	13
0	0	0
262	**213**	**475**

TH 3 [NB]

L	T	R	P
52	220	25	0
0	2	2	0
0	2	0	0
0	0	0	0
52	**224**	**27**	**0**

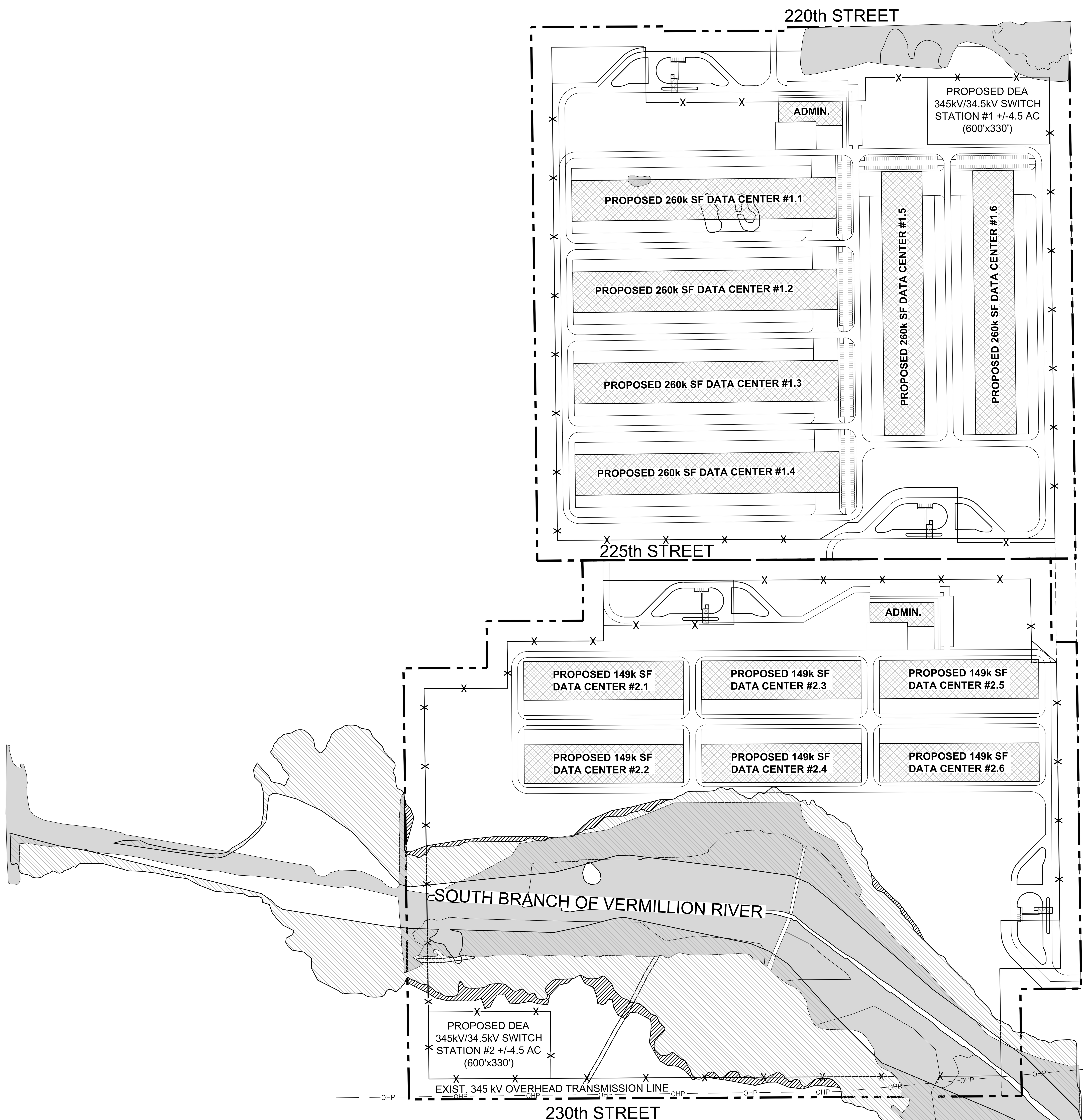
Out	In	Total
311	297	608
4	4	8
3	2	5
0	0	0
318	**303**	**621**

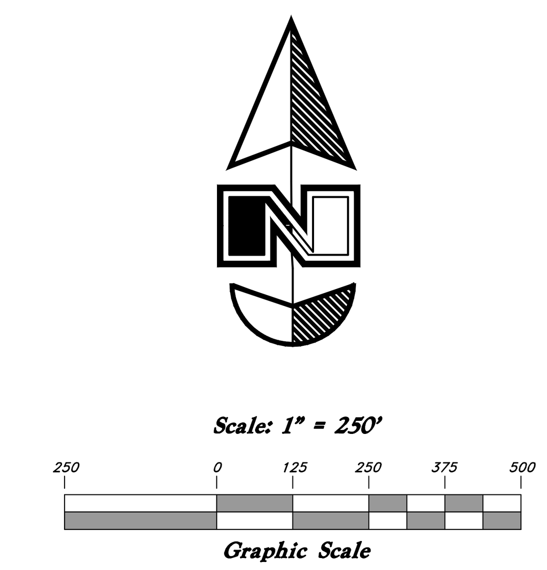
Turning Movement Peak Hour Data Plot (4:00 PM)

TH 50 & Golf Course Access

Direction	Westbound	Eastbound
7:00 AM	18	37
7:15 AM	26	55
7:30 AM	28	60
7:45 AM	42	55
8:00 AM	32	48
8:15 AM	28	38
8:30 AM	42	34
8:45 AM	20	25
4:00 PM	57	36
4:15 PM	58	32
4:30 PM	61	49
4:45 PM	54	53
5:00 PM	34	39
5:15 PM	46	52
5:30 PM	44	47
5:45 PM	30	38

C. Site Layout Exhibit





OLSON SITE DATA TABLE

PARCEL NUMBER	14-00500-01-012
GROSS PARCEL AREA =	6,936,310 SF (159.23 ACRES)
NET PARCEL AREA =	6,690,936 SF (153.60 ACRES)
TOTAL # DATA CENTERS =	6
TOTAL BUILDING SF SHOWN =	1,594,100 SF
FAR (NET) =	23.82 %
TOTAL POWER (GROSS) =	408 MW
POWER/LAND RATIO =	2.56 MW/AC (GROSS) 2.65 MW/AC (NET)

FARMINGTON PUBLIC SCHOOLS SITE DATA TABLE

PARCEL NUMBERS	07-00500-76-012 07-00500-76-011
GROSS PARCEL AREA =	8,212,682 SF (188.53 ACRES)
NET PARCEL AREA =	5,222,499 SF (119.89 ACRES)
TOTAL # DATA CENTERS =	6
TOTAL BUILDING SF SHOWN =	929,000 SF
FAR (NET) =	17.79 %
TOTAL POWER (GROSS) =	300 MW
POWER/LAND RATIO =	1.59 MW/AC (NET) 2.50 MW/AC (GROSS)

REV	DATE	DESCRIPTION

tract

CONCEPT SITE PLAN V3

OLSON/FARMINGTON PUBLIC SCHOOLS

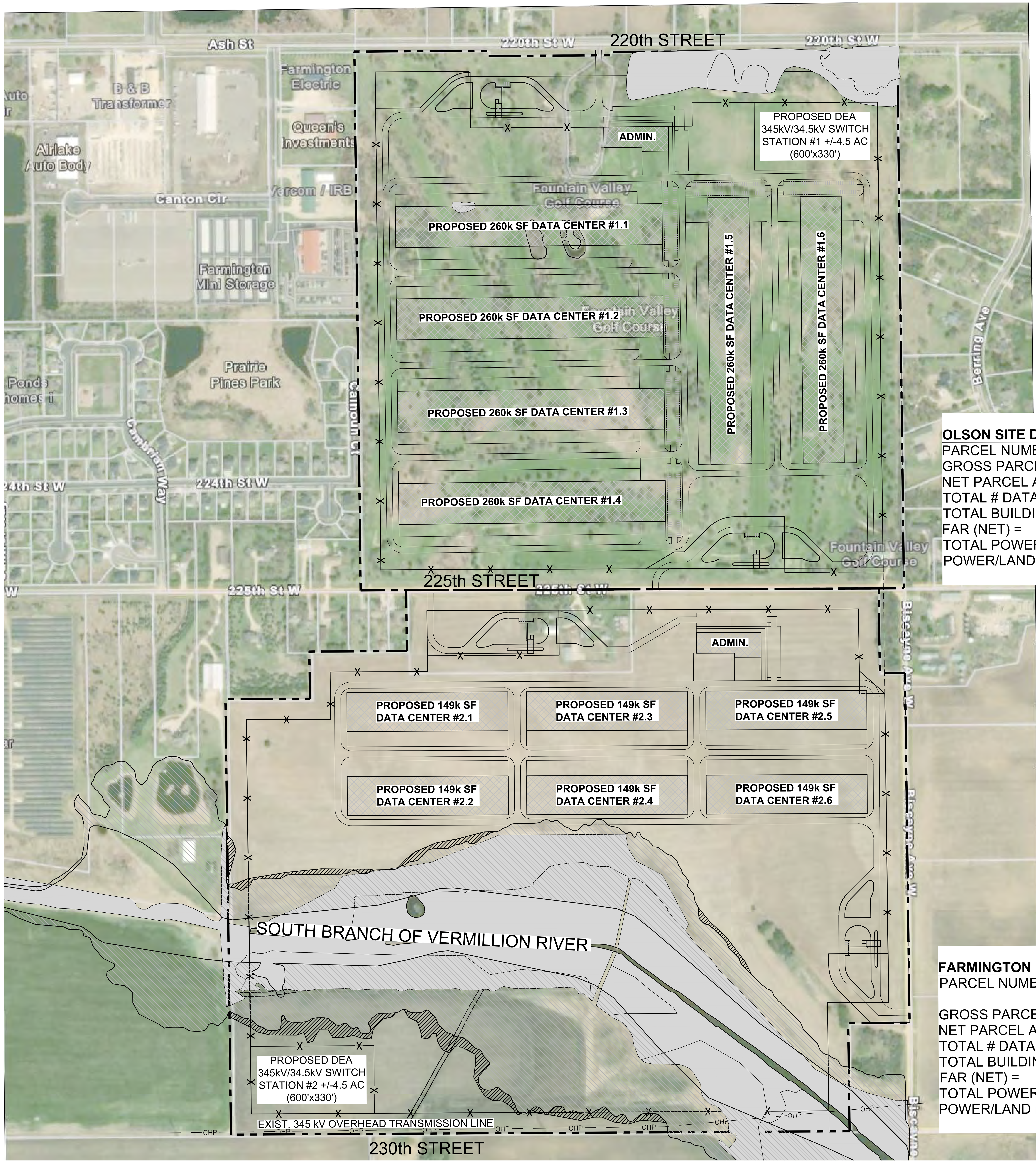
2830 220TH STREET
FARMINGTON, MN 55024

2.15.2024

SHEET NO.

C1

OLSON/FPS



Scale: 1" = 250'

250 0 125 250 375 500

Graphic Scale

OLSON SITE DATA TABLE

PARCEL NUMBER	14-00500-01-012
GROSS PARCEL AREA =	6,936,310 SF (159.23 ACRES)
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	2.65 MW/AC (NET)

FARMINGTON PUBLIC SCHOOLS SITE DATA TABLE

PARCEL NUMBERS	07-00500-76-012
	07-00500-76-011
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POWER/LAND RATIO =	1.59 MW/AC (NET)
	2.50 MW/AC (GROSS)

REV | DATE | DESCRIPTION

tract

CONCEPT SITE PLAN V3 w/ AERIAL

OLSON/FARMINGTON PUBLIC SCHOOLS

2830 220TH STREET
FARMINGTON, MN 55024

2.15.2024

SHEET NO.

C2

OLSON/FPS

D. SimTraffic Analysis Results

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.5	0.2	0.2	0.1	0.2	1.0	1.2	0.0	1.1	0.0	0.0	0.0
Total Del/Veh (s)	35.7	29.3	12.0	34.2	27.7	6.3	7.5	7.7	1.3	9.1	5.3	2.3

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	11.9

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	3.8	2.6	0.3	1.8	0.8	0.8

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.3	0.3	0.0	0.0	0.0	1.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	32.8	26.5	7.7	8.8	22.3	3.6	13.6	6.5	10.9	11.7	5.8	12.6

Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	197.7

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	68	143	160	89	76	95	65	87	87	41
Average Queue (ft)	21	59	75	43	26	37	19	29	26	8
95th Queue (ft)	56	116	135	76	59	80	56	68	69	30
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)			4	0						
Queuing Penalty (veh)			5	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	51	36
Average Queue (ft)	19	3
95th Queue (ft)	43	19
Link Distance (ft)	5214	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	216	94	76	41	131	112	74	28	85	65	119
Average Queue (ft)	102	35	25	9	70	39	13	4	45	22	53
95th Queue (ft)	178	70	61	28	116	85	45	19	82	59	96
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)			1				0				0
Queuing Penalty (veh)			0				0				0

Zone Summary

Zone wide Queuing Penalty: 5

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.6	0.2	0.2	0.0	0.0	0.3	0.8	0.0	1.1	0.1	0.0	0.0
Total Del/Veh (s)	36.5	32.0	17.6	36.2	33.4	7.5	7.5	8.9	1.4	8.3	3.7	1.5

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	12.1

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	10.5	6.0	0.4	0.3	4.8	0.9	1.0

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.4	0.0	0.0	0.0	0.7	0.1	0.4	0.0	0.0	0.0
Total Del/Veh (s)	32.2	26.8	11.2	24.3	21.5	3.1	17.5	10.5	2.9	12.0	17.3	5.6

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	16.4

Total Zone Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	167.3

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	90	202	171	123	62	104	85	83	91	46
Average Queue (ft)	24	92	66	45	18	41	24	27	28	8
95th Queue (ft)	65	164	134	80	49	86	64	60	68	29
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		1	5	0						
Queuing Penalty (veh)		0	7	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	41
Average Queue (ft)	15	6
95th Queue (ft)	40	28
Link Distance (ft)	5214	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	284	181	66	33	157	125	83	17	42	118	108	101
Average Queue (ft)	148	63	17	9	70	58	28	1	13	62	44	52
95th Queue (ft)	240	127	48	26	132	109	68	8	37	105	92	88
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	0	0	0				0					0
Queuing Penalty (veh)	0	0	0				0					0

Zone Summary

Zone wide Queuing Penalty: 8

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.2	0.2	0.2	0.1	0.9	1.1	0.0	1.1	0.0	0.0	0.0
Total Del/Veh (s)	33.1	27.8	11.1	32.7	28.8	6.5	8.7	9.6	1.4	10.6	7.2	2.3

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	12.6

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	5.2	2.2	0.3	1.8	0.8	0.8

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.2	0.3		0.0	0.0	1.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	33.0	24.9	8.5		24.9	3.7	15.7	6.8	10.9	13.7	6.6	13.6

Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	249.9

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	74	161	166	94	96	105	99	103	98	75
Average Queue (ft)	20	66	79	43	28	42	23	31	34	12
95th Queue (ft)	56	125	141	76	67	89	69	72	82	44
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		0	6	0						
Queuing Penalty (veh)		0	8	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	57	32
Average Queue (ft)	20	3
95th Queue (ft)	46	18
Link Distance (ft)		1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	196	117	84	50	190	123	86	37	105	91	134
Average Queue (ft)	98	41	25	9	84	39	12	4	46	29	58
95th Queue (ft)	169	87	61	31	157	86	47	21	88	75	112
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)			1		0		0				0
Queuing Penalty (veh)			0		0		0				0

Zone Summary

Zone wide Queuing Penalty: 8

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.6	0.2	0.2	0.0	0.0	0.2	1.0	0.0	1.2	0.1	0.0	0.0
Total Del/Veh (s)	35.8	29.8	17.0	36.3	33.1	7.5	8.5	10.9	1.4	11.3	4.6	1.9

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	13.0

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	7.8	6.4	0.3	0.4	4.7	1.1	1.2

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.5	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	31.9	24.3	12.9	17.0	19.4	3.8	17.9	11.1	1.1	13.6	17.7	5.8

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	16.6

Total Zone Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	194.6

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	65	214	154	86	58	119	97	107	96	57
Average Queue (ft)	22	96	67	42	20	48	34	43	30	11
95th Queue (ft)	56	178	125	76	50	95	79	86	76	43
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		1	4	0						
Queuing Penalty (veh)		0	5	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	54	54
Average Queue (ft)	18	7
95th Queue (ft)	47	32
Link Distance (ft)		1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	268	223	61	32	180	140	108	15	46	128	117	118
Average Queue (ft)	143	68	16	8	76	57	29	1	13	63	43	50
95th Queue (ft)	236	142	45	25	133	111	75	6	39	107	94	89
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	0	0	0				0			0	0	0
Queuing Penalty (veh)	0	0	0				0			0	0	0

Zone Summary

Zone wide Queuing Penalty: 6

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.2	0.2	0.2	0.2	1.0	1.1	0.0	1.2	0.0	0.0	0.0
Total Del/Veh (s)	32.8	24.5	11.0	28.5	27.2	6.8	9.8	12.1	1.4	13.8	12.1	3.6

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	14.1

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	7.0	2.6	0.4	1.6	1.0	0.9

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.3	0.3	0.0	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	33.2	22.4	8.7	26.7	22.3	3.8	18.9	8.4	9.0	16.7	7.5	15.3

Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	320.8

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	77	151	170	92	85	111	93	136	142	91
Average Queue (ft)	25	70	89	46	35	58	35	43	47	17
95th Queue (ft)	61	130	154	71	73	105	80	97	104	56
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)			7	0						
Queuing Penalty (veh)			12	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	54	32
Average Queue (ft)	22	4
95th Queue (ft)	46	19
Link Distance (ft)		1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	241	96	93	28	224	113	90	29	119	115	148
Average Queue (ft)	104	40	32	8	102	44	18	5	51	30	62
95th Queue (ft)	186	83	71	24	178	92	56	22	98	80	114
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)	0		1		0		0			0	0
Queuing Penalty (veh)	0		0		0		0			0	0

Zone Summary

Zone wide Queuing Penalty: 12

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.8	0.3	0.2	0.0	0.1	0.2	1.0	0.0	1.1	0.1	0.0	0.0
Total Del/Veh (s)	36.5	29.5	17.1	33.0	32.4	7.8	11.4	14.3	1.5	13.7	7.8	3.1

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	14.9

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	6.6	6.4	0.4	0.0	5.4	1.4	1.4

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.5	0.5	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	33.0	28.4	13.7	27.7	23.2	3.3	22.6	13.5	0.3	14.2	20.2	6.9

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	18.6

Total Zone Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	238.4

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	111	246	166	120	84	156	117	125	125	85
Average Queue (ft)	31	114	78	50	29	63	44	51	46	19
95th Queue (ft)	78	210	140	92	67	123	99	100	100	56
Link Distance (ft)		2122	3787			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		2	6	0						
Queuing Penalty (veh)		1	10	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	48	74
Average Queue (ft)	18	13
95th Queue (ft)	45	48
Link Distance (ft)		1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	297	244	84	50	245	136	104	51	133	117	138
Average Queue (ft)	151	93	20	9	99	63	39	16	68	53	58
95th Queue (ft)	255	184	51	33	181	119	84	42	116	104	103
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)	0	0	0	0	0		0				0
Queuing Penalty (veh)	1	0	0	0	0		0				0

Zone Summary

Zone wide Queuing Penalty: 13

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.5	0.2	0.2	0.1	0.2	0.9	0.9	0.0	0.9	0.0	0.0	0.0
Total Del/Veh (s)	32.5	22.7	9.5	28.8	28.5	7.5	9.5	13.1	1.5	14.4	9.4	3.6

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	13.7

2: TH 3 & 225th Street Performance by movement

Movement	WBL	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)	8.0	4.0	0.7	0.2	2.3	1.4	1.7

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.4	0.3		0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	32.0	31.9	10.2		21.6	3.7	18.8	8.4	8.3	15.8	7.4	14.9

4: North Access & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.4	0.2	0.2	0.2	0.1	0.2
Total Del/Veh (s)	4.5	3.7	3.3	0.9	7.3	3.5	3.6

5: South Access & 225th Street Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1	0.2	0.1	0.1
Total Del/Veh (s)	8.2	3.0	6.6	5.8	6.2	2.3	5.4

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	24.9

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	84	135	178	122	79	129	101	121	117	87
Average Queue (ft)	27	60	89	48	28	56	36	50	48	19
95th Queue (ft)	63	112	153	90	66	107	80	100	99	56
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)			8	0						
Queuing Penalty (veh)			14	1						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	74	57
Average Queue (ft)	34	10
95th Queue (ft)	62	36
Link Distance (ft)	3177	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	243	155	82	40	216	139	109	28	117	104	138
Average Queue (ft)	106	56	26	11	96	55	22	3	58	37	61
95th Queue (ft)	195	120	59	32	172	116	67	17	101	86	112
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)	0		0	0	0		0				0
Queuing Penalty (veh)	0		0	0	0		0				0

Intersection: 4: North Access & TH 50 (220th St)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	53	74
Average Queue (ft)	6	26
95th Queue (ft)	30	49
Link Distance (ft)	2088	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Access & 225th Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	75	51	61
Average Queue (ft)	27	11	21
95th Queue (ft)	60	37	52
Link Distance (ft)	3177	1980	701
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 15

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.3	0.2	0.0	0.1	0.2	0.7	0.0	0.9	0.1	0.0	0.0
Total Del/Veh (s)	35.3	30.7	14.9	32.8	35.3	8.5	9.4	11.8	1.5	12.7	5.8	2.1

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	13.2

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	10.9	1.0	8.7	0.4	0.4	5.1	1.5	2.2

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.4	0.0	0.0	0.0	0.6	0.1	0.8	0.0	0.0	0.0
Total Del/Veh (s)	32.9	29.0	13.6	37.5	22.7	3.6	22.3	11.2	2.0	13.5	18.5	6.7

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	17.8

4: North Access & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.2	0.1	0.1
Total Del/Veh (s)	5.2	4.9	5.3	1.0	8.9	7.0	4.3

5: South Access & 225th Street Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.1	0.1	0.1	0.1
Total Del/Veh (s)	7.4	5.0		5.3	6.3	3.7	6.1

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	28.5

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	64	201	183	98	68	167	114	126	100	63
Average Queue (ft)	22	95	82	51	21	56	35	45	39	16
95th Queue (ft)	53	172	147	84	52	122	88	100	86	48
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		0	8	0						
Queuing Penalty (veh)		0	16	0						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	74	74
Average Queue (ft)	36	14
95th Queue (ft)	62	48
Link Distance (ft)	3177	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	292	235	57	27	217	149	114	4	44	133	115	126
Average Queue (ft)	140	85	18	8	100	61	36	0	14	68	52	52
95th Queue (ft)	232	171	45	24	184	122	85	3	39	119	104	97
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	0		0		0		0				0	0
Queuing Penalty (veh)	1		0		0		0				0	0

Intersection: 4: North Access & TH 50 (220th St)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	44	72
Average Queue (ft)	4	30
95th Queue (ft)	23	54
Link Distance (ft)	2088	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Access & 225th Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	67	51	54
Average Queue (ft)	21	11	22
95th Queue (ft)	52	40	50
Link Distance (ft)	3177	1980	701
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 17

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.3	0.2	0.2	0.2	0.3	1.1	0.9	0.1	1.0	0.0	0.0	0.0
Total Del/Veh (s)	30.2	23.5	12.3	30.0	29.0	8.4	11.4	16.9	1.6	19.2	15.6	6.5

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	16.6

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	8.9	4.6	0.9	0.3	3.1	1.9	2.1

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.5	0.4	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	35.2	21.6	9.7	24.1	20.5	3.3	28.2	12.0	14.4	21.9	14.8	19.7

4: North Access & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.2	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	5.1	5.1	4.2	1.1	7.6	3.8	4.1

5: South Access & 225th Street Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	6.9	2.5	12.5	6.2	7.2	3.4	5.7

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	31.5

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	78	186	235	179	99	158	127	165	162	108
Average Queue (ft)	27	80	113	60	41	75	53	77	85	37
95th Queue (ft)	68	145	191	113	82	135	105	140	142	85
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		0	14	0						
Queuing Penalty (veh)		0	32	1						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	83	80
Average Queue (ft)	36	19
95th Queue (ft)	62	57
Link Distance (ft)	3178	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	266	166	116	43	283	200	131	46	131	293	232
Average Queue (ft)	138	60	36	11	154	80	37	7	84	76	116
95th Queue (ft)	227	132	82	30	252	148	92	29	126	187	203
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)	0	0	2		0	0	0			0	4
Queuing Penalty (veh)	0	0	1		0	0	0			0	8

Intersection: 4: North Access & TH 50 (220th St)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	69	66
Average Queue (ft)	9	27
95th Queue (ft)	36	49
Link Distance (ft)	2088	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Access & 225th Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	60	44	66
Average Queue (ft)	25	13	23
95th Queue (ft)	53	39	55
Link Distance (ft)	3178	1980	701
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 42

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.6	0.3	0.3	0.1	0.1	0.4	0.8	0.0	1.0	0.2	0.0	0.0
Total Del/Veh (s)	28.5	26.0	16.0	37.3	31.9	8.9	12.9	18.9	1.8	21.5	10.5	4.1

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	16.6

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.1
Total Del/Veh (s)	12.3	1.1	9.4	0.5	0.4	5.9	1.8	2.4

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.7	0.6	0.0	0.0	0.0	0.7	0.1	0.8	0.0	0.0	0.0
Total Del/Veh (s)	34.4	24.3	14.2	17.5	19.0	4.0	32.8	19.0	2.7	18.4	27.8	10.4

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	23.0

4: North Access & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	5.4	5.5	6.1	1.3	9.2	7.2	4.4

5: South Access & 225th Street Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.1	0.1	0.1	0.1
Total Del/Veh (s)	7.7	5.4		6.0	6.2	2.9	6.5

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	35.8

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	129	243	217	157	69	183	172	201	200	150
Average Queue (ft)	29	117	102	63	32	80	69	81	78	37
95th Queue (ft)	87	201	186	133	67	143	135	153	158	100
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		1	9	0						
Queuing Penalty (veh)		0	22	1						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	86	79
Average Queue (ft)	38	20
95th Queue (ft)	69	61
Link Distance (ft)	3178	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	383	320	82	51	262	217	168	16	56	194	178	187
Average Queue (ft)	193	99	19	11	143	109	70	1	18	106	90	84
95th Queue (ft)	303	200	55	34	236	194	144	7	46	163	153	140
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	2	0	0	0	0		3			1	0	1
Queuing Penalty (veh)	5	1	0	0	0		0			0	2	1

Intersection: 4: North Access & TH 50 (220th St)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	38	67
Average Queue (ft)	4	29
95th Queue (ft)	25	54
Link Distance (ft)	2088	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Access & 225th Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	63	53	61
Average Queue (ft)	24	12	19
95th Queue (ft)	55	40	51
Link Distance (ft)	3178	1980	701
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	9
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	1266
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 32

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.2	0.2	0.2	0.1	0.7	0.9	0.0	0.8	0.0	0.0	0.0
Total Del/Veh (s)	29.5	21.4	10.5	26.0	26.7	9.5	11.3	14.0	1.4	17.8	11.7	4.5

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	14.4

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	6.9	4.3	0.9	0.1	2.4	1.5	2.1

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.4	0.3		0.0	0.0	0.8	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	33.6	35.2	10.3		22.3	4.0	21.7	9.0	11.0	18.1	9.0	16.2

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.5	0.2	0.2	0.6	3.6	0.8
Total Del/Veh (s)	4.4	4.9	3.8	2.0	10.1	4.2	5.2

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	WBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	1.6	1.4	0.4	3.2	2.2

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.3

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	78	143	185	154	104	122	99	158	131	93
Average Queue (ft)	25	58	87	70	38	59	38	70	53	19
95th Queue (ft)	63	108	154	122	81	104	82	132	103	58
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)			5	1						
Queuing Penalty (veh)			13	3						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	77	66
Average Queue (ft)	39	13
95th Queue (ft)	64	43
Link Distance (ft)	3904	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	245	114	77	51	246	144	124	29	125	136	158
Average Queue (ft)	110	51	26	12	129	65	34	4	68	49	70
95th Queue (ft)	190	97	61	33	212	124	88	20	117	105	129
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)	0		1	0			0		0	0	1
Queuing Penalty (veh)	0		0	0			0		0	0	1

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	EB	WB	NB	NB
Directions Served	R	LT	L	R
Maximum Queue (ft)	15	67	119	68
Average Queue (ft)	1	19	50	28
95th Queue (ft)	7	55	85	49
Link Distance (ft)		2076	632	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300			200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access 2 & 225th Street

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	12	62
Average Queue (ft)	1	35
95th Queue (ft)	7	54
Link Distance (ft)	3904	797
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	5
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	1266
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 17

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.7	0.3	0.3	0.0	0.0	0.2	0.6	0.0	0.8	0.2	0.0	0.0
Total Del/Veh (s)	32.4	28.7	17.3	37.9	34.4	9.9	12.4	22.7	1.8	25.7	10.0	3.4

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	18.4

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	14.6	0.2	9.4	0.5	0.6	5.9	2.4	3.6

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.6	0.7	0.0	0.0	0.0	0.5	0.1	0.5	0.0	0.0	0.0
Total Del/Veh (s)	32.8	25.1	16.4	56.0	18.2	3.6	31.3	18.4	6.5	17.0	27.6	9.5

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	22.6

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.4	0.7	3.5	0.6
Total Del/Veh (s)	6.9	7.3	8.1	4.5	33.3	8.0	11.1

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	WBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	5.7	4.3	0.2	3.3	4.3

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	37.6

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	B6
Directions Served	L	TR	LT	R	L	T	T	L	T	TR	T
Maximum Queue (ft)	73	248	226	168	86	152	139	319	160	158	4
Average Queue (ft)	25	123	95	65	35	80	69	156	71	34	0
95th Queue (ft)	60	212	174	123	72	132	122	271	132	101	3
Link Distance (ft)		2122	3789			720	720		1476	1476	1892
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			100	325			275			
Storage Blk Time (%)		1	10	1				1			
Queuing Penalty (veh)		0	30	1				1			

Intersection: 2: TH 3 & 225th Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	102	4	105
Average Queue (ft)	49	0	34
95th Queue (ft)	80	3	81
Link Distance (ft)	3920	885	1815
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	295	248	70	42	277	205	154	18	54	185	180	154
Average Queue (ft)	158	117	16	10	150	105	68	1	18	117	98	68
95th Queue (ft)	260	216	51	36	253	177	133	9	46	174	158	122
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	0	0	1		0		2			1	1	0
Queuing Penalty (veh)	2	0	0		0		0			0	3	0

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	131	220	141
Average Queue (ft)	54	99	32
95th Queue (ft)	102	178	71
Link Distance (ft)	2076	632	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			200
Storage Blk Time (%)		1	
Queuing Penalty (veh)		2	

Intersection: 5: Access 2 & 225th Street

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	54	64
Average Queue (ft)	4	36
95th Queue (ft)	25	55
Link Distance (ft)	3920	957
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	0
Link Distance (ft)	1266
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 42

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.3	0.2	0.2	0.1	0.2	0.7	0.8	0.0	1.0	0.0	0.0	0.0
Total Del/Veh (s)	29.8	21.8	11.7	31.5	26.8	10.2	11.6	17.3	1.6	19.9	14.1	5.0

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	16.0

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.3	0.2	0.0	0.0	0.1
Total Del/Veh (s)	9.2	4.3	1.3	0.5	3.2	2.2	2.6

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.5	0.4		0.0	0.0	0.8	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	33.2	26.3	10.1		22.3	3.8	24.3	9.6	10.6	20.4	9.7	17.0

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.3	1.8	0.3	0.6	3.6	0.9
Total Del/Veh (s)	10.4	8.2	13.9	5.5	9.7	3.9	8.8

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	2.4	2.0	1.5	0.3	5.1	6.6	6.6	2.7	3.3

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	29.4

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	78	146	196	165	90	150	112	215	144	94
Average Queue (ft)	22	73	85	74	40	71	47	102	69	28
95th Queue (ft)	58	130	151	130	75	123	97	182	127	75
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)			6	2				0		
Queuing Penalty (veh)			18	3				0		

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	84	78
Average Queue (ft)	40	21
95th Queue (ft)	67	57
Link Distance (ft)	3904	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	214	140	80	54	259	176	128	33	144	153	153
Average Queue (ft)	108	55	25	12	147	72	34	5	83	68	76
95th Queue (ft)	182	108	60	35	239	140	89	23	132	129	128
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	300			175			150
Storage Blk Time (%)			1	0	0	0	0		0	0	0
Queuing Penalty (veh)			0	0	0	0	0		0	0	0

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	120	81	106	72	119	67
Average Queue (ft)	49	41	54	30	56	29
95th Queue (ft)	96	72	92	64	99	55
Link Distance (ft)	3770			2076	626	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		300	300			200
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: Access 2 & 225th Street

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	71	45
Average Queue (ft)	33	25
95th Queue (ft)	56	47
Link Distance (ft)	742	797
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 22

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.7	0.3	0.3	0.0	0.1	0.2	0.6	0.0	0.6	0.2	0.0	0.0
Total Del/Veh (s)	31.6	26.3	15.6	35.3	34.2	12.2	13.0	24.1	1.8	27.2	12.7	5.7

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	19.4

2: TH 3 & 225th Street Performance by movement

Movement	WBL	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)	17.8	11.5	0.5	0.5	6.2	2.3	4.4

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.6	0.6	0.0	0.0	0.0	0.5	0.1	0.4	0.0	0.0	0.0
Total Del/Veh (s)	32.9	32.2	18.0	19.9	21.7	3.7	35.3	18.4	2.5	15.0	27.9	10.1

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	23.8

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	1.7	0.5	0.8	3.4	0.9
Total Del/Veh (s)	12.1	11.7	16.5	7.1	10.4	5.2	10.6

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	5.3	3.6	3.6	0.2	5.8	6.7	7.2	3.1	4.4

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	38.9

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	103	229	212	181	101	166	139	277	173	137
Average Queue (ft)	26	117	106	81	36	89	75	146	82	41
95th Queue (ft)	71	203	177	144	70	142	128	248	147	101
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		1	12	3				1		
Queuing Penalty (veh)		0	44	5				1		

Intersection: 2: TH 3 & 225th Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	127	4	95
Average Queue (ft)	60	0	31
95th Queue (ft)	102	3	73
Link Distance (ft)	3920	885	1815
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	326	369	58	35	352	227	203	12	74	193	188	167
Average Queue (ft)	160	121	16	9	181	117	80	1	16	118	99	71
95th Queue (ft)	275	265	46	26	307	199	155	8	50	177	164	127
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	300			100	175			150
Storage Blk Time (%)	0	1	0		2		2			1	1	0
Queuing Penalty (veh)	1	4	0		4		0			0	2	1

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	117	110	140	112	162	82
Average Queue (ft)	49	49	67	48	77	32
95th Queue (ft)	93	82	112	94	133	59
Link Distance (ft)	3770			2076	626	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		300	300			200
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: Access 2 & 225th Street

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	76	59
Average Queue (ft)	1	39	31
95th Queue (ft)	8	61	52
Link Distance (ft)	3920	769	957
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 62

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.2	0.2	0.2	0.2	0.7	0.9	0.0	1.0	0.0	0.0	0.0
Total Del/Veh (s)	28.5	23.9	11.4	30.6	28.3	9.9	12.4	17.2	1.6	19.8	14.8	6.2

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	16.3

2: TH 3 & 225th Street Performance by movement

Movement	WBL	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)	8.4	4.9	1.0	0.1	2.9	1.8	2.4

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.3	0.4		0.0	0.0	0.8	0.1	0.0	0.0	0.0	0.3
Total Del/Veh (s)	35.1	21.2	9.9		22.4	3.9	29.0	10.9	11.9	21.8	11.7	19.0

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.4	1.7	0.3	0.6	3.6	0.8
Total Del/Veh (s)	5.1	5.0	5.0	1.2	12.5	4.8	5.8

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	WBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	1.8	1.1	0.3	3.2	2.1

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	30.0

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	95	181	210	192	96	146	129	210	152	116
Average Queue (ft)	22	78	103	73	41	75	51	90	69	33
95th Queue (ft)	67	150	173	132	84	127	105	162	132	82
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		0	11	1						
Queuing Penalty (veh)		0	32	3						

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	86	82
Average Queue (ft)	42	17
95th Queue (ft)	72	55
Link Distance (ft)	3904	1815
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	T	R
Maximum Queue (ft)	225	128	87	40	341	186	134	35	157	177	220
Average Queue (ft)	131	58	30	11	166	84	45	4	87	68	95
95th Queue (ft)	210	106	69	31	285	152	103	22	141	137	166
Link Distance (ft)		2886	602			1892	1892		1266	1266	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			75	400			175			150
Storage Blk Time (%)			1		0		1		0	0	1
Queuing Penalty (veh)			0		1		0		0	1	2

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	18	65	127	61
Average Queue (ft)	1	23	57	31
95th Queue (ft)	10	55	100	55
Link Distance (ft)			626	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	300		200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access 2 & 225th Street

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	33	71
Average Queue (ft)	2	36
95th Queue (ft)	14	56
Link Distance (ft)	3904	797
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 39

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.5	0.3	0.3	0.1	0.0	0.2	0.8	0.0	1.0	0.2	0.0	0.0
Total Del/Veh (s)	31.7	26.9	16.4	33.9	34.1	9.9	14.2	27.2	1.7	30.4	14.3	5.9

1: TH 3 & TH 50 (220th St) Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	20.7

2: TH 3 & 225th Street Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.1
Total Del/Veh (s)	15.1	0.5	10.2	0.6	0.5	6.7	2.8	3.9

3: TH 3 & CR 50 North Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.7	0.7	0.0	0.0	0.0	0.6	0.1	0.4	0.0	0.0	0.0
Total Del/Veh (s)	33.7	27.0	16.7	16.6	17.0	3.8	39.2	21.5	2.6	20.4	34.1	12.5

3: TH 3 & CR 50 North Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	26.0

4: Access 1 & TH 50 (220th St) Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	1.7	0.5	0.6	3.5	0.8
Total Del/Veh (s)	7.1	7.3	8.0	1.9	34.9	8.9	10.8

5: Access 2 & 225th Street Performance by movement

Movement	EBL	EBT	WBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	5.9	3.9	0.2	3.3	4.4

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	42.1

Intersection: 1: TH 3 & TH 50 (220th St)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	97	269	212	197	81	171	154	345	204	170
Average Queue (ft)	25	130	100	68	36	105	84	179	99	53
95th Queue (ft)	70	230	173	135	70	160	139	296	170	123
Link Distance (ft)		2122	3770			720	720		1476	1476
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200			100	325			275		
Storage Blk Time (%)		2	11	2				2	0	
Queuing Penalty (veh)		1	39	3				3	0	

Intersection: 2: TH 3 & 225th Street

Movement	WB	SB	B9
Directions Served	LR	LT	
Maximum Queue (ft)	114	112	4
Average Queue (ft)	51	44	0
95th Queue (ft)	85	90	3
Link Distance (ft)	3920	1815	720
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: TH 3 & CR 50 North

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	283	298	62	62	382	254	195	11	68	222	224	209
Average Queue (ft)	169	134	15	11	204	131	90	0	20	141	123	89
95th Queue (ft)	265	245	45	36	330	210	172	6	51	203	187	156
Link Distance (ft)		2886	602			1892	1892			1266	1266	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			75	400			100	175			150
Storage Blk Time (%)	0	0	0		0		5			2	3	1
Queuing Penalty (veh)	0	1	0		0		0			1	10	2

Intersection: 4: Access 1 & TH 50 (220th St)

Movement	EB	WB	NB	NB
Directions Served	T	L	L	R
Maximum Queue (ft)	4	99	285	183
Average Queue (ft)	0	40	104	36
95th Queue (ft)	3	76	218	93
Link Distance (ft)	3770		626	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		300		200
Storage Blk Time (%)			3	
Queuing Penalty (veh)			5	

Intersection: 5: Access 2 & 225th Street

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	67	74
Average Queue (ft)	8	36
95th Queue (ft)	37	58
Link Distance (ft)	3920	957
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	11
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	1266
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 65

Appendix C

Greenhouse Gas Quantification

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_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). 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.

Back to Intro | Back to Summary | Heat Content | Help

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 CO_2 emissions are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Stationary Source Fuel Combustion

Source ID	Source Description	Source Area (sq ft)	Fuel Combusted	Quantity Combusted	Units
BLR-012	*East Power Plant*	*12,517*	*Natural Gas*	*10,000*	*MMBtu*
Generator 1	Generator Testing	2,530,000	Distillate Fuel Oil No. 2	1,800	Gallons

GHG Emissions

Total Organization-Wide Stationary Source Combustion by Fuel Type

Fuel Type	Quantity Combusted	Units
Anthracite Coal	0	short tons
Bituminous Coal	0	short tons
Sub-bituminous Coal	0	short tons
Lignite Coal	0	short tons
Natural Gas	0	scf
Distillate Fuel Oil No. 2	1,800	gallons
Residual Fuel Oil No. 6	0	gallons
Kerosene	0	gallons
Liquefied Petroleum Gases (LPG)	0	gallons
Wood and Wood Residuals	0	short tons
Landfill Gas	0	scf

Total Organization-Wide CO_2, CH_4 and N_2O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO_2 (kg)	CH_4 (g)	N_2O (g)
Anthracite Coal	0.0	0.0	0.0
Bituminous Coal	0.0	0.0	0.0
Sub-bituminous Coal	0.0	0.0	0.0
Lignite Coal	0.0	0.0	0.0
Natural Gas	0.0	0.0	0.0
Distillate Fuel Oil No. 2	18,378.0	738.0	144.0
Residual Fuel Oil No. 6	0.0	0.0	0.0
Kerosene	0.0	0.0	0.0
Liquefied Petroleum Gases (LPG)	0.0	0.0	0.0
Total Fossil Fuel Emissions	**18,378.0**	**738.0**	**144.0**
Wood and Wood Residuals	0.0	0.0	0.0
Landfill Gas	0.0	0.0	0.0
Total Non-Fossil Fuel Emissions	**0.0**	**0.0**	**0.0**
Total Emissions for all Fuels	**18,378.0**	**738.0**	**144.0**

Total CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**18.4**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**0.0**

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U.S. Environmental Protection Agency

Scope 1 Emissions from Mobile Sources

Guidance

(A) Enter annual data for each vehicle or group of vehicles (grouped by vehicle type, vehicle year, and fuel type) in ORANGE cells in **Table 1**. Example entry is shown in first row (GREEN *Italics*). Only enter vehicles owned or leased by your organization on this sheet. All other vehicle use such as employee commuting or business travel is considered a scope 3 emissions source and should be reported in the corresponding scope 3 sheets.

- Select "On-Road" or "Non-Road" from drop down box to determine the Vehicle Types available.
- Select "Vehicle Type" from drop down box (closest type available).
- Enter "Fuel Usage" in appropriate units (units appear when vehicle type is selected).
  - If mileage or fuel usage is unknown, estimate using approximate fuel economy values (see **Reference Table** below).
  - Vehicle year and Miles traveled are not necessary for non-road equiment.

(B) When using biofuels, typically the biofuel (biodiesel or ethanol) is mixed with a petroleum fuel (diesel or gasoline) for use in vehicles. Enter the biodiesel and ethanol percentages of the fuel if known, or leave default values.

Biodiesel Percent:	20	%
Ethanol Percent:	80	%

(C) Biomass CO_2 emissions from biodiesel and ethanol are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Mobile Source Fuel Combustion and Miles Traveled

Source ID	Source Description	On-Road or Non-Road?	Vehicle Type	Vehicle Year	Fuel Usage	Units	Miles Traveled
Fleet-012	*HQ Fleet*	*NonRoad*	*Ships and Boats - Diesel*	*1990*	*500*	*gal*	*3,670*
Construction Equipment (non-road g	Construction Equipment	NonRoad	Construction/Mining Equipment - Gasoline (2 stroke)	2007	484,453	gal	0
Passenger Cars	Construction Equipment	OnRoad	Passenger Cars - Gasoline	2007	1,647	gal	4,368
Construction Equipment (non-road d	Construction Equipment	NonRoad	Construction/Mining Equipment - Diesel	2007	1,730,188	gal	0
Medium- and Heavy- Duty Trucks	Construction Equipment	OnRoad	Medium- and Heavy-Duty Vehicles - Diesel	2007	3,460	gal	1,560
Light Trucks	Construction Equipment	OnRoad	Light-Duty Trucks - Gasoline	2007	3,230	gal	1,560

Reference Table: Average Fuel Economy by Vehicle Type

Vehicle Type	Average Fuel Economy (mpg)
Passenger Cars	24.1
Motorcycles	44.0
Diesel Buses (Diesel Heavy-Duty Vehicles)	7.3
Other 2-axle, 4-Tire Vehicles	17.6
Single unit 2-Axle 6-Tire or More Trucks	7.5
Combination Trucks	6.1

GHG Emissions

Total Organization-Wide Mobile Source Fuel Usage and CO_2 Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO_2 (kg)	
Motor Gasoline	489,330	gallons	4,296,316.9	
Diesel Fuel	1,733,649	gallons	17,700,554.1	
Residual Fuel Oil	0	gallons	0.0	
Aviation Gasoline	0	gallons	0.0	
Kerosene-Type Jet Fuel	0	gallons	0.0	
Liquefied Petroleum Gas (LPG)	0	gallons	0.0	
Ethanol	0	gallons	0.0	*Note: emissions here are only for the gasoline portion of the fue*
Biodiesel	0	gallons	0.0	*Note: emissions here are only for the diesel portion of the fuel, b*
Liquefied Natural Gas (LNG)	0	gallons	0.0	
Compressed Natural Gas (CNG)	0	scf	0.0	

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Gasoline	1984-93	0	0.0	0.0
	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0

	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	4,368	31.4	22.7
	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	1987-93	0	0.0	0.0
(Vans, Pickup Trucks, SUVs)	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	1,560	16.1	9.5
	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	0.0
	1987	0	0.0	0.0
	1988-1989	0	0.0	0.0
	1990-1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	0	0.0	0.0
	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
Motorcycles - Gasoline	1960-1995	0	0.0	0.0
	1996-present	0	0.0	0.0

Total Organization-Wide On-Road Non-Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Light-Duty Trucks - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Medium- and Heavy-Duty Vehicles -	Diesel	1960-2006	0	0.0	0.0
		2007-2018	1,560	14.8	67.2
Light-Duty Cars	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Light-Duty Trucks	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Medium-Duty Trucks	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Heavy-Duty Trucks	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Buses	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0

Total Organization-Wide Non-Road Mobile Source Fuel Usage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH_4 (g)	N_2O (g)
Ships and Boats	Residual Fuel Oil	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Locomotives	Diesel	-	-	-
Aircraft	Jet Fuel	-	-	-
	Aviation Gasoline	-	-	-
Agricultural Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Agricultural Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Construction/Mining Equipment	Gasoline (2 stroke)	484,453	6,016,903	33,912
	Gasoline (4 stroke)	-	-	-
	Diesel	1,730,188	346,038	813,189
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Airport Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Industrial/Commercial Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Logging Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Railroad Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**22,408.4**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**0.0**

Notes:

1. Average mpg values from the U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2019 (Nov 2020), Table VM-1.

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Scope 1 Emissions from Refrigeration and Air Conditioning Equipment

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP U.S. Environmental Protection Agency

Guidance

(A) HFC, PFC, CO_2, and SF_6 refrigerants from facilities and vehicles are required to be included in the GHG inventory. Ozone depleting substances, such as CFCs and HCFCs, are regulated internationally and are typically excluded from a GHG inventory or reported as a memo item.

(B) Select ONE of the three options with which to estimate emissions. Options range from most preferred method (Option 1) to least preferred method (Option 3). If option 3, screening method, is used and emissions are determined to be significant when compared to other emission sources, then one of the other methods should be applied to calculate emissions more accurately.

(C) Enter annual data in ORANGE cells as appropriate for the selected option.

Option 1. Material Balance Method: Enter organization-wide total gases stored and transferred (by gas) in Table 1.
- Choose the appropriate gas from the Gas drop down menu.
- Inventory Change = difference of gas stored in inventory from beginning to end of reporting period. (Includes only gas stored on-site (i.e. cylinders) and not gas contained within equipment).
- Transferred Amount = gas purchased minus gas sold/disposed during reporting period.
  - -- Gas purchased includes: Purchases for inventory, as part of equipment servicing (not from inventory), within purchased equipment, and gas returned to the site after off-site recycling.
  - -- Gas sold/disposed includes: Returns to supplier, sales or disposals (including within equipment), and gas sent off-site for recycling, reclamation, or destruction.
- Capacity Change = capacity of all units at beginning minus capacity of all units at end of reporting period. (can be assumed to be capacity of new units minus capacity of retired units).

Table 1. Organization-Wide Refrigeration Gas CO_2 Equivalent Emissions - Material Balance

Gas	Gas GWP	Inventory Change (lb)	Transferred Amount (lb)	Capacity Change (lb)	CO_2 Equivalent Emissions (lb)

Option 2. Material Balance Method (Simplified): Enter organization-wide total gases in units (by gas) in Table 2.
- Choose the appropriate gas from the drop down menu.
- New units are those installed during reporting period (do not include any data for new units pre-charged by supplier), disposed units were disposed of during the reporting period, and existing units are all others.
- Charge/Recharge = gas added to units by organization or a contractor (do not include pre-charge by manufacturer).
- Capacity = sum of the full capacity for all units (do not include new units pre-charged by manufacturer).
- Amount recovered = total gas recovered from all retired units.

Table 2. Organization-Wide Refrigeration Gas CO_2 Equivalent Emissions - Simplified Material Balance

Gas	Gas GWP	New Units		Existing Units	Disposed Units		CO_2 Equivalent Emissions (lb)
		Charge (lb)	Capacity (lb)	Recharge (lb)	Capacity (lb)	Recovered (lb)	

Option 3. Screening Method: Enter refrigerant information for each unit or group of units (by refrigerant) in **Table 3.**

- Select the "Type of Equipment" (closest available) and "Gas" from the drop down box.
- Enter amount of refrigerant added to new units by the organization (not pre-charged amount from manufacturer).
- Enter refrigerant capacity (by equipment type and refrigerant) for all units operating and disposed during reporting period.
  - -- For each unit added or removed during reporting period, multiply its capacity by a usage factor (0.0 to 1.0).
    For example, if the equipment was installed in June, multiply by 0.5 or (6/12), if it was installed in
    September you would multiply by 0.33 (4/12).
  - -- If data entered for multiple units, sum the capacities or charge quantity for all like units.
  - -- If capacity of unit(s) is not known, use upper value of default capacity provided in the **Reference Table** below.
- See example entry in first row (*GREEN Italics*).

Table 3. Source Level Refrigeration Gas CO_2 Equivalent Emissions - Screening Method

Source ID	Type of Equipment	Gas	Gas GWP	New Units Charge (kg)	Capacity		CO_2 Equivalent Emissions (kg)
					Operating Units (kg)	Disposed Units (kg)	
Bldg-012	*Domestic Refrigeration*	*HFC-32*	675	*1000*	*0.5*	*0.25*	*6,792.2*

Reference Table: Type of Equipment and Default Capacity Ranges (Lower to Upper Range) for Table 3

Domestic Refrigeration	Domestic refrigeration units (capacity 0.05 to 0.5 kg)
Stand-Alone Commercial	Stand alone commercial applications (capacity 0.2 to 6 kg)
Medium/Large Commercial	Medium and large commercial refrigeration units (capacity 50 to 2,000 kg)
Transport Refrigeration	Transportation refrigeration units (capacity 3 to 8 kg)
Industrial Refrigeration	Industrial, food processing and cold storage units (capacity 10 to 10,000 kg)
Chillers	Commercial chillers (default capacity 10 to 2,000 kg)
Residential/Commercial A/C	Residential and commercial units, including heat pumps (capacity 0.5 to 100 kg)
Car A/C Units	Passenger car A/C units (capacity 0.5 kg)
Light-Duty Truck A/C Units	Light-duty truck A/C units (capacity 1.5 kg)

GHG Emissions

Total CO_2 Equivalent Emissions (metric tons) - Refrigeration and AC Equipment	**0.0**

Notes:

1. CO_2 emissions estimated using emission factors provided in Table 3 of the Center for Corporate Climate Leadership *Greenhouse Gas Inventory Guidance Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression and Industrial Gases. (Dec 2020).*
2. GWPs are from *Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007).*

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Scope 2 Emissions from Purchase of Electricity

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

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.
See the "Items to Note" section of the Help sheet for suggested estimation approaches.
(C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."
- Use map (Figure 1) at bottom of sheet to determine appropriate eGRID subregion. If subregion cannot be determined from the map, find the correct subregion by entering the location's zip code into EPA's Power Profiler:
https://www.epa.gov/egrid/power-profiler#/
(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>". If not, leave the yellow cells as is, and eGRID subregion factors will be used for market-based emissions.
Example entry is shown in first row (*GREEN Italics*) for a facility that purchases RECs for 100% of its consumption, and therefore has a market-based emission factor of 0.

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

					Market-Based *Use these cells to enter applicable market-based emission factors*					
					Emission Factors			**Emissions**		
Source ID	**Source Description**	**Source Area (sq ft)**	**eGRID Subregion** *where electricity is consumed*	**Electricity Purchased (kWh)**	**CO_2 Emissions (lb/MWh)**	**CH_4 Emissions (lb/MWh)**	**N_2O Emissions (lb/MWh)**	**CO_2 Emissions (lb)**	**CH_4 Emissions (lb)**	**N_2O Emissions (lb)**
Bldg-012	*East Power Plant*	*12,517*	*HIMS (HICC Miscellaneous)*	*200,000*	*0*	*0*	*0*	*0.0*	*0.0*	*0.0*
Data Cente	Electricity Use	2,530,000	MROW (MRO West)	51,106,000	<enter factor>	<enter factor>	<enter factor>	56,134,830.4	6,081.6	868.8
					<enter factor>	<enter factor>	<enter factor>			
					<enter factor>	<enter factor>	<enter factor>			
					<enter factor>	<enter factor>	<enter factor>			
					<enter factor>	<enter factor>	<enter factor>			
					<enter factor>	<enter factor>	<enter factor>			
					<enter factor>	<enter factor>	<enter factor>			
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					<enter factor>	<enter factor>	<enter factor>			
Total Emissions for All Sources				51,106,000				56,134,830.4	6,081.6	868.8

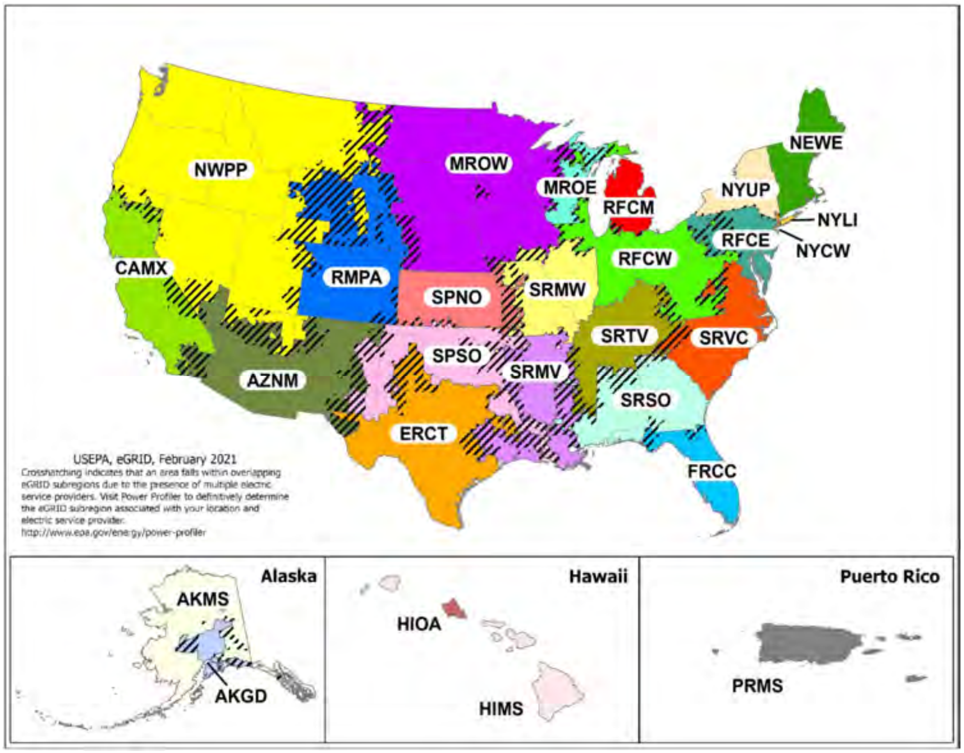
GHG Emissions

CO_2 Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	25,649.2
Market-Based Electricity Emissions	25,649.2

Notes:

1. CO_2, CH_4 and N_2O 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.



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EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

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 (CO_2, CH_4 and N_2O)

Source ID	Source Description	Waste Material	Disposal Method	Weight	Unit	CO_2e Emissions (kg)
Bldg-012	*East Power Plant Finished Goods*	*Steel Cans*	*Landfilled*	*1,000*	*metric ton*	*22,040*
Nonresidential Buildings	Nonresidential Waste	Mixed MSW municipal solid waste	Combusted	0	metric ton	*0*
Residential	Residential Waste	Mixed MSW municipal solid waste	Combusted	0	metric ton	*0*
Nonresidential Buildings	Nonresidential Recycling	Mixed Recyclables	Recycled	0	metric ton	*0*
Residential	Residential Recycling	Mixed Recyclables	Recycled	0	metric ton	*0*
Nonresidential Buildings	Data Center Waste	Mixed Recyclables	Recycled	234	metric ton	*23,208*
Nonresidential Buildings	Data Center Waste	Mixed MSW municipal solid waste	Landfilled	2,184	metric ton	*1,251,519*
Nonresidential Buildings	Data Center Waste	Mixed Electronics	Landfilled	9	metric ton	*198*

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO_2e (kg)
Recycled	23,208
Landfilled	1,251,718
Combusted	-
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

Total CO_2 Equivalent Emissions (metric tons) - Waste	**1,274.9**

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_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). 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.

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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 CO_2 emissions are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Stationary Source Fuel Combustion

Source ID	Source Description	Source Area (sq ft)	Fuel Combusted	Quantity Combusted	Units
BLR-012	*East Power Plant*	*12,517*	*Natural Gas*	*10,000*	*MMBtu*
Low Density	Natural Gas Use	189	Natural Gas	13,199	MMBtu
Low/Mediur	Natural Gas Use	348	Natural Gas	20,077	MMBtu
Medium De	Natural Gas Use	228	Natural Gas	7,638	MMBtu
Commercia	Natural Gas Use	100,000	Natural Gas	2,150	MMBtu

GHG Emissions

Total Organization-Wide Stationary Source Combustion by Fuel Type

Fuel Type	Quantity Combusted	Units
Anthracite Coal	0	short tons
Bituminous Coal	0	short tons
Sub-bituminous Coal	0	short tons
Lignite Coal	0	short tons
Natural Gas	41,972,485	scf
Distillate Fuel Oil No. 2	0	gallons
Residual Fuel Oil No. 6	0	gallons
Kerosene	0	gallons
Liquefied Petroleum Gases (LPG)	0	gallons
Wood and Wood Residuals	0	short tons
Landfill Gas	0	scf

Total Organization-Wide CO_2, CH_4 and N_2O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO_2 (kg)	CH_4 (g)	N_2O (g)
Anthracite Coal	0.0	0.0	0.0
Bituminous Coal	0.0	0.0	0.0
Sub-bituminous Coal	0.0	0.0	0.0
Lignite Coal	0.0	0.0	0.0
Natural Gas	2,284,982.1	43,231.7	4,197.2
Distillate Fuel Oil No. 2	0.0	0.0	0.0
Residual Fuel Oil No. 6	0.0	0.0	0.0
Kerosene	0.0	0.0	0.0
Liquefied Petroleum Gases (LPG)	0.0	0.0	0.0
Total Fossil Fuel Emissions	**2,284,982.1**	**43,231.7**	**4,197.2**
Wood and Wood Residuals	0.0	0.0	0.0
Landfill Gas	0.0	0.0	0.0
Total Non-Fossil Fuel Emissions	**0.0**	**0.0**	**0.0**
Total Emissions for all Fuels	**2,284,982.1**	**43,231.7**	**4,197.2**

Total CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**2,287.3**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**0.0**

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Scope 1 Emissions from Mobile Sources

Guidance

(A) Enter annual data for each vehicle or group of vehicles (grouped by vehicle type, vehicle year, and fuel type) in ORANGE cells in **Table 1**. Example entry is shown in first row (GREEN *Italics*). Only enter vehicles owned or leased by your organization on this sheet. All other vehicle use such as employee commuting or business travel is considered a scope 3 emissions source and should be reported in the corresponding scope 3 sheets.

- Select "On-Road" or "Non-Road" from drop down box to determine the Vehicle Types available.
- Select "Vehicle Type" from drop down box (closest type available).
- Enter "Fuel Usage" in appropriate units (units appear when vehicle type is selected).
    - If mileage or fuel usage is unknown, estimate using approximate fuel economy values (see **Reference Table** below).
    - Vehicle year and Miles traveled are not necessary for non-road equiment.

(B) When using biofuels, typically the biofuel (biodiesel or ethanol) is mixed with a petroleum fuel (diesel or gasoline) for use in vehicles. Enter the biodiesel and ethanol percentages of the fuel if known, or leave default values.

Biodiesel Percent: 20 %
Ethanol Percent: 80 %

(C) Biomass CO_2 emissions from biodiesel and ethanol are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Mobile Source Fuel Combustion and Miles Traveled

Source ID	Source Description	On-Road or Non-Road?	Vehicle Type	Vehicle Year	Fuel Usage	Units	Miles Traveled
Fleet-012	*HQ Fleet*	*NonRoad*	*Ships and Boats - Diesel*	*1990*	*500*	*gal*	*3,670*
Construction Equipment (non-road g	Construction Equipment	NonRoad	Construction/Mining Equipment - Gasoline (2 stroke)	2007	292,969	gal	0
Passenger Cars	Construction Equipment	OnRoad	Passenger Cars - Gasoline	2007	996	gal	4,368
Construction Equipment (non-road d	Construction Equipment	NonRoad	Construction/Mining Equipment - Diesel	2007	1,046,319	gal	0
Medium- and Heavy- Duty Trucks	Construction Equipment	OnRoad	Medium- and Heavy-Duty Vehicles - Diesel	2007	2,093	gal	1,560
Light Trucks	Construction Equipment	OnRoad	Light-Duty Trucks - Gasoline	2007	1,953	gal	1,560

Reference Table: Average Fuel Economy by Vehicle Type

Vehicle Type	Average Fuel Economy (mpg)
Passenger Cars	24.1
Motorcycles	44.0
Diesel Buses (Diesel Heavy-Duty Vehicles)	7.3
Other 2-axle, 4-Tire Vehicles	17.6
Single unit 2-Axle 6-Tire or More Trucks	7.5
Combination Trucks	6.1

GHG Emissions

Total Organization-Wide Mobile Source Fuel Usage and CO_2 Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO_2 (kg)	
Motor Gasoline	295,919	gallons	2,598,167.9	
Diesel Fuel	1,048,412	gallons	10,704,287.7	
Residual Fuel Oil	0	gallons	0.0	
Aviation Gasoline	0	gallons	0.0	
Kerosene-Type Jet Fuel	0	gallons	0.0	
Liquefied Petroleum Gas (LPG)	0	gallons	0.0	
Ethanol	0	gallons	0.0	*Note: emissions here are only for the gasoline portion of the fuel, biogenic CO2 emissions are reported below*
Biodiesel	0	gallons	0.0	*Note: emissions here are only for the diesel portion of the fuel, biogenic CO2 emissions are reported below*
Liquefied Natural Gas (LNG)	0	gallons	0.0	
Compressed Natural Gas (CNG)	0	scf	0.0	

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Gasoline	1984-93	0	0.0	0.0
	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	4,368	31.4	22.7
	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	0.0
	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	1,560	16.1	9.5
	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	0.0
	1987	0	0.0	0.0
	1988-1989	0	0.0	0.0
	1990-1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	0	0.0	0.0
	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
Motorcycles - Gasoline	1960-1995	0	0.0	0.0
	1996-present	0	0.0	0.0

Total Organization-Wide On-Road Non-Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Light-Duty Trucks - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Medium- and Heavy-Duty Vehicles -	Diesel	1960-2006	0	0.0	0.0
		2007-2018	1,560	14.8	67.2
Light-Duty Cars	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Light-Duty Trucks	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Medium-Duty Trucks	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Heavy-Duty Trucks	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Buses	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0

Total Organization-Wide Non-Road Mobile Source Fuel Usage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH_4 (g)	N_2O (g)
Ships and Boats	Residual Fuel Oil	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Locomotives	Diesel	-	-	-
Aircraft	Jet Fuel	-	-	-
	Aviation Gasoline	-	-	-
Agricultural Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Agricultural Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Construction/Mining Equipment	Gasoline (2 stroke)	292,969	3,638,681	20,508
	Gasoline (4 stroke)	-	-	-
	Diesel	1,046,319	209,264	491,770
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Airport Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Industrial/Commercial Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Logging Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Railroad Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**13,551.3**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**0.0**

Notes:

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Scope 1 Emissions from Refrigeration and Air Conditioning Equipment

Guidance

(A) HFC, PFC, CO_2, and SF_6 refrigerants from facilities and vehicles are required to be included in the GHG inventory. Ozone depleting substances, such as CFCs and HCFCs, are regulated internationally and are typically excluded from a GHG inventory or reported as a memo item.

(B) Select ONE of the three options with which to estimate emissions. Options range from most preferred method (Option 1) to least preferred method (Option 3). If option 3, screening method, is used and emissions are determined to be significant when compared to other emission sources, then one of the other methods should be applied to calculate emissions more accurately.

(C) Enter annual data in ORANGE cells as appropriate for the selected option.

Option 1. Material Balance Method: Enter organization-wide total gases stored and transferred (by gas) in Table 1.
- Choose the appropriate gas from the Gas drop down menu.
- Inventory Change = difference of gas stored in inventory from beginning to end of reporting period. (Includes only gas stored on-site (i.e. cylinders) and not gas contained within equipment).
- Transferred Amount = gas purchased minus gas sold/disposed during reporting period.
  -- Gas purchased includes: Purchases for inventory, as part of equipment servicing (not from inventory), within purchased equipment, and gas returned to the site after off-site recycling.
  -- Gas sold/disposed includes: Returns to supplier, sales or disposals (including within equipment), and gas sent off-site for recycling, reclamation, or destruction.
- Capacity Change = capacity of all units at beginning minus capacity of all units at end of reporting period. (can be assumed to be capacity of new units minus capacity of retired units).

Table 1. Organization-Wide Refrigeration Gas CO_2 Equivalent Emissions - Material Balance

Gas	Gas GWP	Inventory Change (lb)	Transferred Amount (lb)	Capacity Change (lb)	CO_2 Equivalent Emissions (lb)

Option 2. Material Balance Method (Simplified): Enter organization-wide total gases in units (by gas) in Table 2.
- Choose the appropriate gas from the drop down menu.
- New units are those installed during reporting period (do not include any data for new units pre-charged by supplier), disposed units were disposed of during the reporting period, and existing units are all others.
- Charge/Recharge = gas added to units by organization or a contractor (do not include pre-charge by manufacturer).
- Capacity = sum of the full capacity for all units (do not include new units pre-charged by manufacturer).
- Amount recovered = total gas recovered from all retired units.

Table 2. Organization-Wide Refrigeration Gas CO_2 Equivalent Emissions - Simplified Material Balance

Gas	Gas GWP	New Units		Existing Units	Disposed Units		CO_2 Equivalent Emissions (lb)
		Charge (lb)	Capacity (lb)	Recharge (lb)	Capacity (lb)	Recovered (lb)	

Option 3. Screening Method: Enter refrigerant information for each unit or group of units (by refrigerant) in **Table 3.**

- Select the "Type of Equipment" (closest available) and "Gas" from the drop down box.
- Enter amount of refrigerant added to new units by the organization (not pre-charged amount from manufacturer).
- Enter refrigerant capacity (by equipment type and refrigerant) for all units operating and disposed during reporting period.
  -- For each unit added or removed during reporting period, multiply its capacity by a usage factor (0.0 to 1.0).
  For example, if the equipment was installed in June, multiply by 0.5 or (6/12), if it was installed in September you would multiply by 0.33 (4/12).
  -- If data entered for multiple units, sum the capacities or charge quantity for all like units.
  -- If capacity of unit(s) is not known, use upper value of default capacity provided in the **Reference Table** below.
- See example entry in first row (*GREEN Italics*).

Table 3. Source Level Refrigeration Gas CO_2 Equivalent Emissions - Screening Method

Source ID	Type of Equipment	Gas	Gas GWP	New Units Charge (kg)	Capacity		CO_2 Equivalent Emissions (kg)
					Operating Units (kg)	Disposed Units (kg)	
Bldg-012	*Domestic Refrigeration*	*HFC-32*	675	*1000*	*0.5*	*0.25*	*6,792.2*

Reference Table: Type of Equipment and Default Capacity Ranges (Lower to Upper Range) for Table 3

Domestic Refrigeration	Domestic refrigeration units (capacity 0.05 to 0.5 kg)
Stand-Alone Commercial	Stand alone commercial applications (capacity 0.2 to 6 kg)
Medium/Large Commercial	Medium and large commercial refrigeration units (capacity 50 to 2,000 kg)
Transport Refrigeration	Transportation refrigeration units (capacity 3 to 8 kg)
Industrial Refrigeration	Industrial, food processing and cold storage units (capacity 10 to 10,000 kg)
Chillers	Commercial chillers (default capacity 10 to 2,000 kg)
Residential/Commercial A/C	Residential and commercial units, including heat pumps (capacity 0.5 to 100 kg)
Car A/C Units	Passenger car A/C units (capacity 0.5 kg)
Light-Duty Truck A/C Units	Light-duty truck A/C units (capacity 1.5 kg)

GHG Emissions

Total CO_2 Equivalent Emissions (metric tons) - Refrigeration and AC Equipment	**0.0**

Notes:

1. CO_2 emissions estimated using emission factors provided in Table 3 of the Center for Corporate Climate Leadership *Greenhouse Gas Inventory Guidance Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression and Industrial Gases. (Dec 2020).*
2. GWPs are from *Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007).*

Formula Selection for Type of Equipment

Domestic Refrigeration	Stand-Alone Commercial	Medium/Large Commercial	Transport Refrigeration	Industrial Refrigeration	Chillers	Residential/Commercial A/C	Car A/C Units	Light-Duty Truck A/C Units
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Back to Intro | Back to Summary | Help | Help - Market-Based Method

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.
See the "Items to Note" section of the Help sheet for suggested estimation approaches.
(C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."
- Use map (Figure 1) at bottom of sheet to determine appropriate eGRID subregion. If subregion cannot be determined from the map, find the correct subregion by entering the location's zip code into EPA's Power Profiler:
https://www.epa.gov/egrid/power-profiler#/
(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>". If not, leave the yellow cells as is, and eGRID subregion factors will be used for market-based emissions.
Example entry is shown in first row (*GREEN Italics*) for a facility that purchases RECs for 100% of its consumption, and therefore has a market-based emission factor of 0.

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

					Market-Based *Use these cells to enter applicable market-based emission factors*						Location-Based		
					Emission Factors			Emissions			Emissions		
Source ID	Source Description	Source Area (sq ft)	eGRID Subregion *where electricity is consumed*	Electricity Purchased (kWh)	CO_2 Emissions (lb/MWh)	CH_4 Emissions (lb/MWh)	N_2O Emissions (lb/MWh)	CO_2 Emissions (lb)	CH_4 Emissions (lb)	N_2O Emissions (lb)	CO_2 Emissions (lb)	CH_4 Emissions (lb)	N_2O Emissions (lb)
Bldg-012	*East Power Plant*	*12,517*	*HIMS (HICC Miscellaneous)*	*200,000*	*0*	*0*	*0*	*0.0*	*0.0*	*0.0*	*237,120.0*	*28.6*	*4.4*
Low Densit	Electricity Use	189	MROW (MRO West)	2,032,506	<enter factor>	<enter factor>	<enter factor>	2,232,504.6	241.9	34.6	2,232,504.6	241.9	34.6
Low/Mediur	Electricity Use	348	MROW (MRO West)	2,798,616	<enter factor>	<enter factor>	<enter factor>	3,073,999.8	333.0	47.6	3,073,999.8	333.0	47.6
Medium De	Electricity Use	228	MROW (MRO West)	1,400,604	<enter factor>	<enter factor>	<enter factor>	1,538,423.4	166.7	23.8	1,538,423.4	166.7	23.8
Commercia	Electricity Use	100,000	MROW (MRO West)	1,410,000	<enter factor>	<enter factor>	<enter factor>	1,548,744.0	167.8	24.0	1,548,744.0	167.8	24.0
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
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					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
Total Emissions for All Sources				7,641,726				8,393,671.8	909.4	129.9	8,393,671.8	909.4	129.9

GHG Emissions

CO_2 Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	3,835.2
Market-Based Electricity Emissions	3,835.2

Notes:

1. CO_2, CH_4 and N_2O 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.

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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 (CO_2, CH_4 and N_2O)

Source ID	Source Description	Waste Material	Disposal Method	Weight	Unit	CO_2e Emissions (kg)
Bldg-012	*East Power Plant Finished Goods*	*Steel Cans*	*Landfilled*	*1,000*	*metric ton*	*22,040*
Nonresidential Buildings	Nonresidential Waste	Mixed MSW municipal solid waste	Combusted	570	metric ton	*270,100*
Residential	Residential Waste	Mixed MSW municipal solid waste	Combusted	681	metric ton	*322,742*
Nonresidential Buildings	Nonresidential Recycling	Mixed Recyclables	Recycled	900	metric ton	*89,262*
Residential	Residential Recycling	Mixed Recyclables	Recycled	1,075	metric ton	*106,659*

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO_2e (kg)
Recycled	195,921
Landfilled	-
Combusted	592,842
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

Total CO_2 Equivalent Emissions (metric tons) - Waste	788.8

Appendix D

Additional Species Information

United States Department of the Interior

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

In Reply Refer To: 03/13/2024 18:42:25 UTC
Project Code: 2024-0062460
Project Name: Farmington Technology Park

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

To Whom It May Concern:

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

Threatened and Endangered Species

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

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

Consultation Technical Assistance

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

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

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

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

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

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

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

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

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

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

This species hibernates in caves or mines only during the winter. In Minnesota and Wisconsin, the hibernation season is considered to be November 1 to March 31. During the active season (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected.

Examples of unsuitable habitat include:

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

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

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

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No**

Effect determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

If any of the above activities are proposed, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the range-wide northern long-eared bat D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/ Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys helps to determine if prohibited take might occur and, if not, will generate an automated verification letter.

Please note: On November 30, 2022, the Service published a proposal final rule to reclassify the northern long-eared bat as endangered under the Endangered Species Act. On January 26, 2023, the Service published a 60-day extension for the final reclassification rule in the Federal Register, moving the effective listing date from January 30, 2023, to March 31, 2023. This extension will provide stakeholders and the public time to preview interim guidance and consultation tools before the rule becomes effective. When available, the tools will be available on the Service's northern long-eared bat website (https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis). Once the final rule goes into effect on March 31, 2023, the 4(d) D-key will no longer be available (4(d) rules are not available for federally endangered species) and will be replaced with a new Range-wide NLEB D-key (range-wide d-key). For projects not completed by March 31, 2023, that were previously reviewed under the 4(d) d-key, there may be a need for reinitiation of consultation. For these ongoing projects previously reviewed under the 4(d) d-key that may result in incidental take of the northern long-eared bat, we recommend you review your project using the new range-wide d-key once available. If your project does not comply with the range-wide d-key, it may be eligible for use of the Interim (formal) Consultation framework (framework). The framework is intended to facilitate the transition from the 4(d) rule to typical Section 7 consultation procedures for federally endangered species and will be available only until spring 2024. Again, when available, these tools (new range-wide d-key and framework) will be available on the Service's northern long-eared bat website.

Whooping Crane

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

Other Trust Resources and Activities

Bald and Golden Eagles **-** Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

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

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

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

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

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

Minnesota
Minnesota Department of Natural Resources - Endangered Resources Review Homepage
Email: Review.NHIS@state.mn.us

Wisconsin
Wisconsin Department of Natural Resources - Endangered Resources Review Homepage
Email: DNRERReview@wi.gov

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

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
(952) 858-0793

PROJECT SUMMARY

Project Code: 2024-0062460
Project Name: Farmington Technology Park
Project Type: Commercial Development
Project Description: This is a proposed data center with associated roads and utilities.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.62328565,-93.12136222055418,14z

Counties: Dakota County, Minnesota

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

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

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Rusty Patched Bumble Bee *Bombus affinis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9383 General project design guidelines: https://ipac.ecosphere.fws.gov/project/RQ73YH4FIFHLTAZPDA3ZX5OLXY/documents/generated/5967.pdf	Endangered

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

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

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence ()

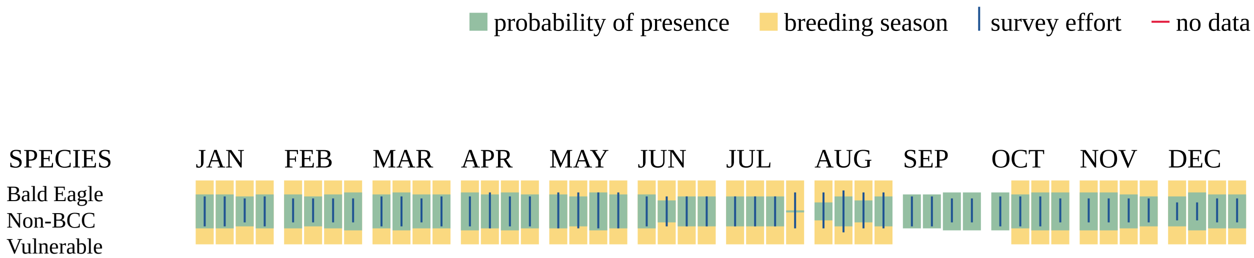
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season ()

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

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

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

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

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	Breeds elsewhere
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Hudsonian Godwit *Limosa haemastica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	Breeds elsewhere
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31

NAME	BREEDING SEASON
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Upland Sandpiper *Bartramia longicauda* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294	Breeds May 1 to Aug 31
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

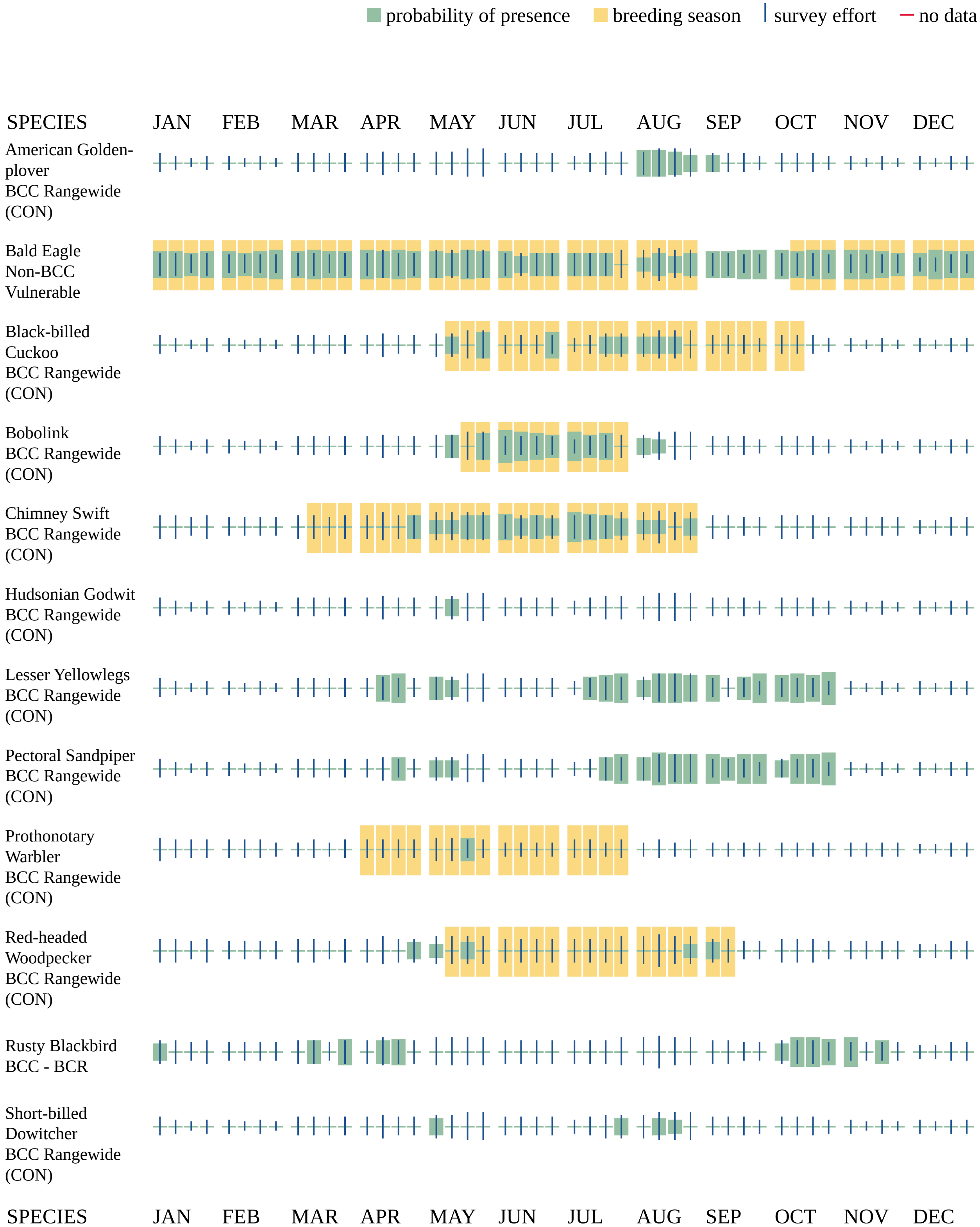
Probability of Presence (■)

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

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

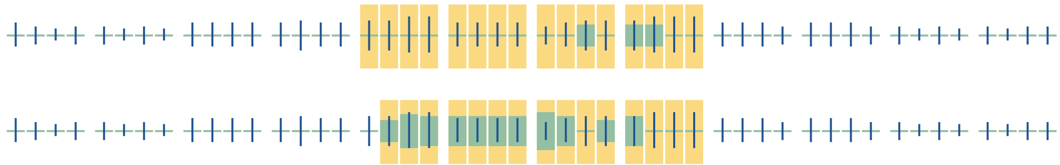
Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.


probability of presence
breeding season
survey effort
no data
SPECIES
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
American Golden-plover
BCC Rangewide (CON)
Bald Eagle
Non-BCC Vulnerable
Black-billed Cuckoo
BCC Rangewide (CON)
Bobolink
BCC Rangewide (CON)
Chimney Swift
BCC Rangewide (CON)
Hudsonian Godwit
BCC Rangewide (CON)
Lesser Yellowlegs
BCC Rangewide (CON)
Pectoral Sandpiper
BCC Rangewide (CON)
Prothonotary Warbler
BCC Rangewide (CON)
Red-headed Woodpecker
BCC Rangewide (CON)
Rusty Blackbird
BCC - BCR
Short-billed Dowitcher
BCC Rangewide (CON)
SPECIES
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Upland Sandpiper
BCC - BCR

Wood Thrush
BCC Rangewide
(CON)



Additional information can be found using the following links:

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

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1Af
- PEM1Cd
- PEM1C
- PEM1Ad

FRESHWATER POND

- PABHx
- PABH

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1/EM1A
- PFO1A
- PSS1A

RIVERINE

- R2UBFx
- R4SBC

IPAC USER CONTACT INFORMATION

Agency:	Kimley-Horn and Associates
Name:	Maxwell Forsman
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Address Line 2:	Suite 200
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Email	max.forsman@kimley-horn.com
Phone:	9529052910

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: Farmington Technology Park

Project Proposer: Tract Management

Project Type: Development, Commercial/Institutional/Industrial

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

TRS: T113 R19 S4, T113 R19 S5, T113 R19 S8

County(s): Dakota

DNR Admin Region(s): Central

Reason Requested: Other

Project Description: This project includes the development of a data center with associated utilities.

Existing Land Uses: Existing land use of the northern parcel is the Fountain Valley Golf Course. Existing land use on the south parcel includes both agricultural fields and ...

Landcover / Habitat Impacted: Impacts to agricultural fields and trees are anticipated.

Waterbodies Affected: Wetlands and waterways present within the study area. Potential temporary wetland impacts may occur due to the development of buildings and utilities.

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	Comments	Tree Removal - Recommendations
Ecologically Significant Area	No Comments	No Further Review Required
State-Listed Endangered or Threatened Species	Needs Further Review	State-protected Species in Vicinity
State-Listed Species of Special Concern	No Comments	No Further Review Required
Federally Listed Species	Comments	Visit IPaC for Federal Review RPBB High Potential Zone

DEPARTMENT OF NATURAL RESOURCES

February 21, 2024

Project Name: Farmington Technology Park
Project Proposer: Tract Management
Project Type: Development, Commercial/Institutional/Industrial
Project ID: MCE #2024-00199

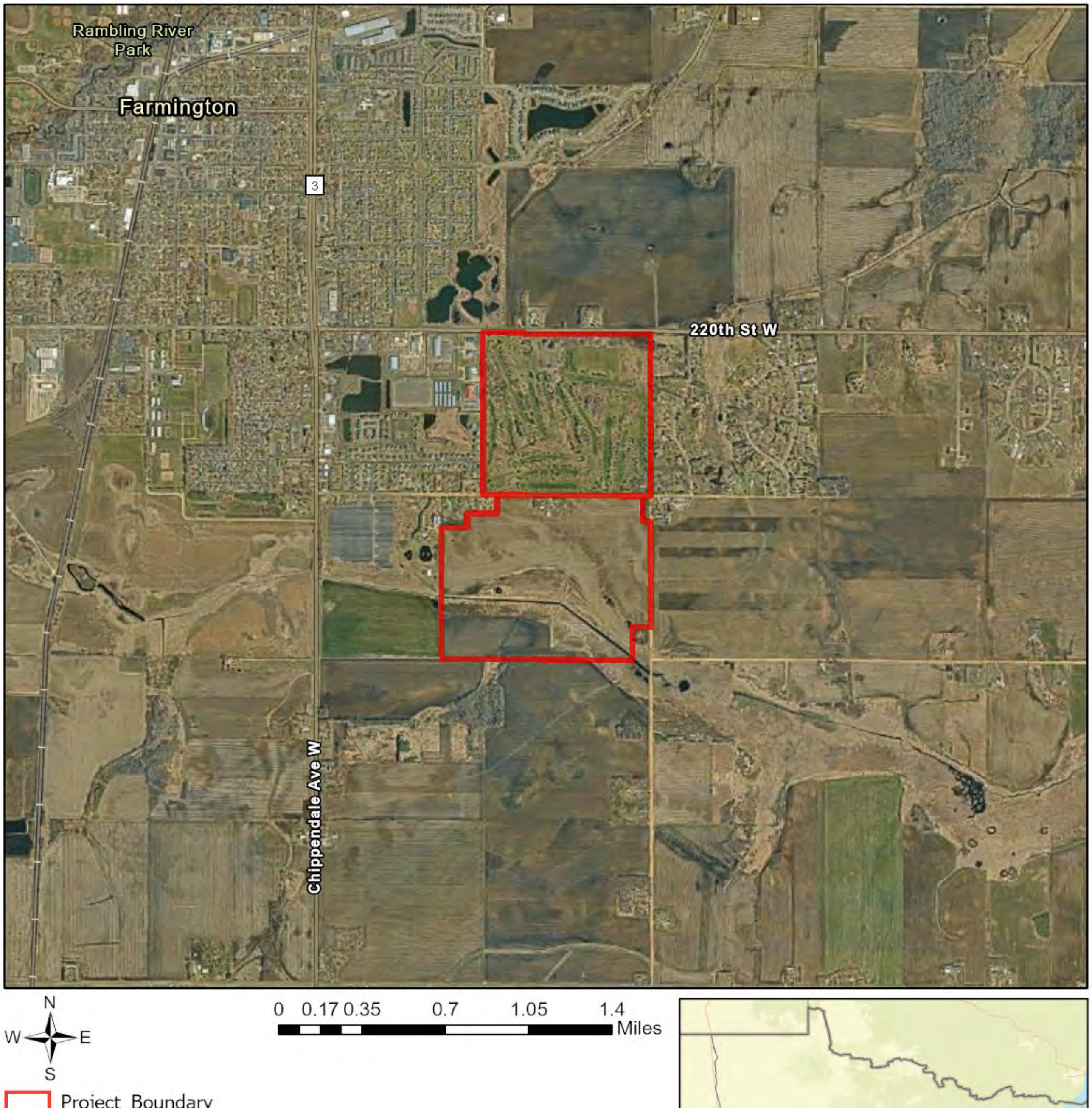
AUTOMATED RESULTS: FURTHER REVIEW IS NEEDED

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

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

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

Farmington Technology Park
Aerial Imagery With Locator Map



Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 347.36

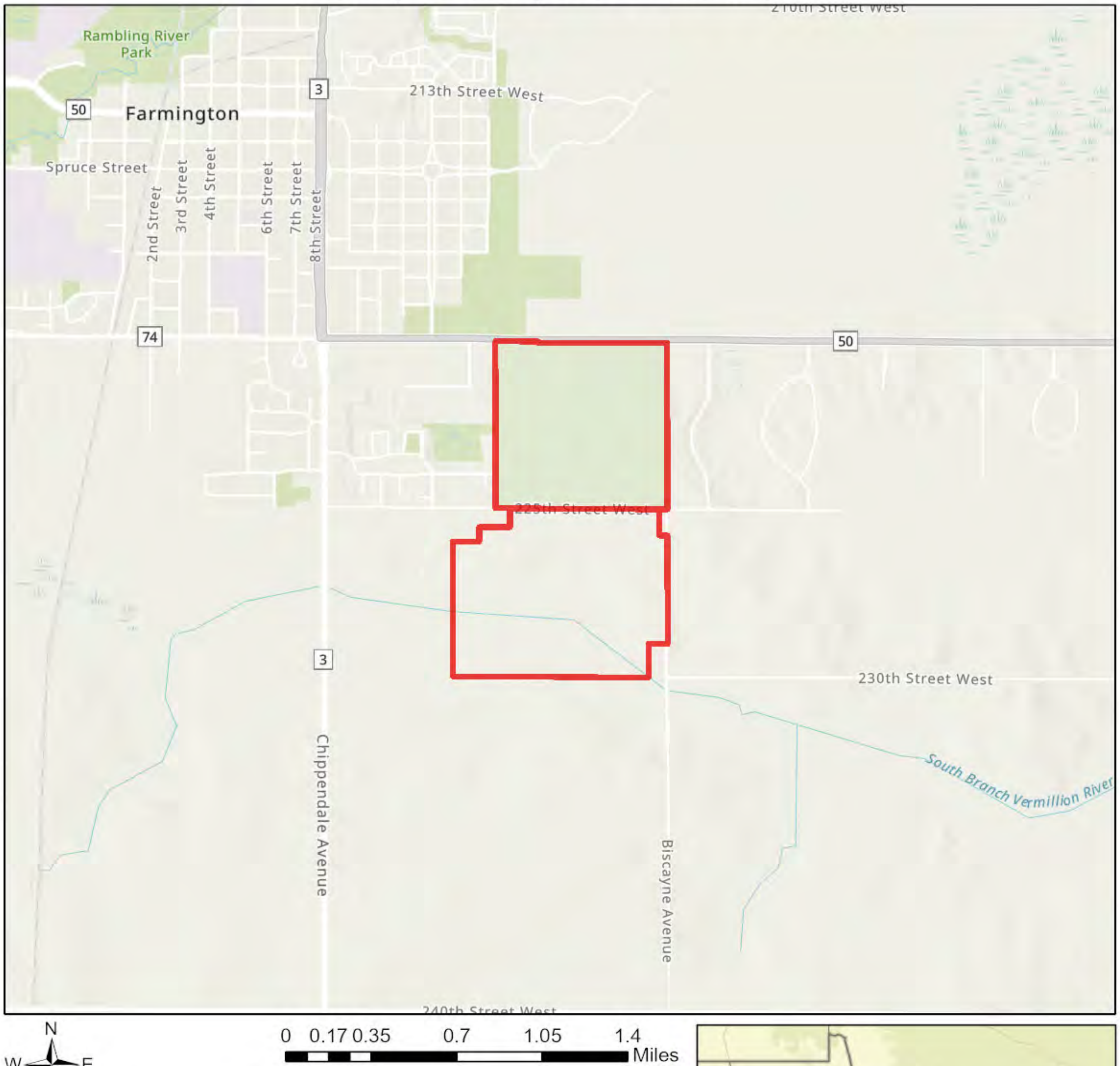
County(s): Dakota

TRS: T113 R19 S4, T113 R19 S5, T113 R19 S8

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
County of Dakota, Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,

Farmington Technology Park

USA Topo Basemap With Locator Map



Project_Boundary

Project Type: Development, Commercial/Institutional/Industrial

Project Size (acres): 347.36

County(s): Dakota

TRS: T113 R19 S4, T113 R19 S5, T113 R19 S8

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
County of Dakota, Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,

Appendix E

Comment Responses

Introduction

Pursuant to Minnesota Rules, part 4410.3610, subpart 5c, the Responsible Governmental Unit (RGU) shall revise the environmental analysis document based on comments received during the comment period. The RGU shall include in the document a section specifically responding to each timely, substantive comment received that indicates in what way the comment has been addressed.

The 30-day Alternative Urban Areawide Review (AUAR) comment period began August 27, 2024, and comments were accepted through September 26, 2024. Four (4) comment letters were received from government agencies and eight (8) comment letters were received from members of the public. Responses to those comments are included in the following sections, and copies of the comment letters are included in Appendix F.

1. Dakota County

Comment	Response
Environmental Resources	
Section 11.a.: due to the shallow depth to water (measured to be 6 to 8 feet in nearby shallow drivepoint wells before they were sealed), the site's location within the Hastings wellhead protection area and the DWSMA that is mapped as high vulnerability; chemicals used on the site can impact groundwater. Consider native plantings, adequate thickness of high quality top soil and drought tolerant grass like fescue that will reduce the need for irrigation, lawn care chemicals and fertilizers. Consider winter-smart design of parking lots to reduce deicing salt and its impacts to aquatic life and water quality. Keep angle of sun in mind to ensure it reaches and melts critical icy patches. Consider the direction of prevailing winter wind to prevent drifting snow, plant trees to create a living snow fence. Implement pavement alternatives such a permeable pavements. Minimized the flow of meltwater across roads and parking lots to mitigate refreezing across roads. Contact Environmental Resources at 952-891-7000 or environ@co.dakota.mn.us with questions or for additional information.	Comment noted. These identified measures will be evaluated and incorporated as feasible into the design of the proposed development in the AUAR Study Area.

2. Minnesota Department of Natural Resources

Comment	Response
Climate Considerations and Adaptations	
As energy needs and renewable energy goals put further pressure on agricultural lands, some communities have started to tap into industrial facilities to combine development with energy production through the use of rooftop solar. Installing solar panels on industrial facilities has the added benefit of producing energy right where it is needed without any additional facility footprint. We encourage the City as well as local energy providers to explore the feasibility of combining these land uses to help meet state climate goals as the City plans for the future.	Comment noted. The incorporation of rooftop solar will be evaluated and incorporated as feasible.
We appreciate that the development would consider installing water reuse systems to reduce water usage.	Comment noted.
Zoning	
It is unclear if any of the development is located within shoreland and subject to local shoreland ordinances.	The development is not located within shoreland and therefore is not subject to local shoreland ordinances. This has been noted in the Final AUAR.
Geology, Soils, and Topography	
The AUAR notes that there are karst conditions located approximately 5,000 feet from the study area. With the proximity of karst conditions, potential pollutants need to be handled with care in order to protect the drinking water of everyone in the area. Studies should determine that any structures on the site will be supported by underlying geologic materials.	This has been noted in the Final AUAR.
This section should discuss the suitability of soils for the infiltration of stormwater.	This has been added in the Final AUAR. Soil infiltration and stormwater management are discussed further in Section 12 of the Final AUAR.
Water Resources	
We appreciate that the project proposer will implement a chloride management plan for either development scenario.	Comment noted.

Comment	Response
A DNR Water Appropriation Permit is required if the water pumped exceeds 10,000 gallons in a day, or one million gallons in one year. The DNR General Permit for Temporary Appropriation, with its lower permit application fee and reduced time for review, may be used for the dewatering if the dewatering volume is less than 50 million gallons and the time of the appropriation is less than one year. The project area is within the Vermillion River Watershed and within the vicinity of designated trout streams, which are protected by the DNR. Additional regulation and review may be required when permitting within five miles of a designated trout stream.	Comment noted. Any dewatering for construction will be coordinated with the DNR if it exceeds the identified thresholds. A Water Appropriations Permit has been identified in the permits and approvals table.
The AUAR references a City of Farmington 2020 water demand of 2.14 MGD, and a Scenario 1 additional water demand of 2.35 MGD. This would more than double the volume the city currently uses (without accounting for potential demand from other proposed data centers. The AUAR Guidance in the instructions states that, “If the area requires new water supply wells, specific information about that appropriation and its potential impacts on groundwater levels should be given; if groundwater levels would be affected, any impacts resulting on other resources should be addressed.” There is no discussion of the reuse of wastewater in this AUAR other than a brief mention in Table 2. If any additional volume needed would be coming from pumped groundwater, it is likely that there would need to be additional water supply wells, and at a minimum a large increase in total pumping volume compared to what is currently permitted (2.74 MGD). Per instructions, please supply specific information on impacts to groundwater levels and resultant impacts on other resources, including the Vermillion River (both the potential for stream depletion to occur from high-capacity pumping of the Prairie du Chien/Jordan aquifer and its protected status as a trout stream), and interconnections among the Prairie du Chien/Jordan, Jordan, and quaternary aquifers. The siting of a new well would be very important to this analysis.	The City received an amended appropriation permit in 2021 with the permit for Well 9. It was anticipated during the issuance of the permit for Well 9 that future wells would be needed to accommodate growth in City. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. Wastewater reuse has been evaluated by Metropolitan Council Environmental Services for this region of Dakota County and water reuse may be evaluated during the site plan review process. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis. An application for a water appropriations permit would completed and submitted to the DNR for review.

Comment	Response
Evaluation of an amendment to DNR Water Appropriation Permit 1959-0725 must include consideration of the sustainability standard (MN statute 103G.287 Subd.5). As per instructions for completing 12.b.iii, please: a. 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. b. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. c. 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.	Comment noted. If a well appropriations permit is needed, the City will follow the required instructions.
Contaminants	
Because the southern portion of the AUAR study area is located within a wellhead protection area (Hastings) and a Drinking Water Supply Management Area (DWSMA) (Hastings, high vulnerability), potential pollutants need to be handled with care in order to protect the drinking water of the city.	Comment noted.
Rare Features	
Please note that if a rare feature is identified within one mile of the project area using a NHIS license agreement, then the project should be submitted to DNR for further coordination. Only DNR can determine if a project is likely to impact state-listed species. a. Section 14c: Loggerhead shrikes (Lanius ludovicianus) have been documented in the vicinity of the proposed project. Loggerhead shrikes use grasslands that contain short grass and scattered perching sites such as hedgerows, shrubs, or small trees. They can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. Tree and shrub clearing during nesting season, April 1-July 31, may result in the destruction of active nests before young can fly. b. Section 14d, Loggerhead shrike; Tree Removal: Given the potential for this species to be found in the vicinity of the project, tree and shrub removal must be avoided during the breeding season, April 1 through July 31.	It is anticipated that tree and shrub removal will occur during the winter months to avoid impacts to the loggerhead shrike. If tree and shrub removal will occur during the active nesting season for the loggerhead shrike, the project proposer will coordinate with the DNR.

Comment	Response
Cumulative Potential Effects	
It is unclear to what extent the development of two or more data centers in the area will increase water demand for the municipal water supply. It is important to evaluate if the cumulative increase in water use will be sustainable to the existing aquifer.	The City of Farmington is evaluating their municipal water supply and potential increases in water demands for what is currently being proposed in the comprehensive plan along with any known developments. The City will continue to coordinate with the regulatory agencies for water appropriations for the city.

3. Metropolitan Council

Comment	Response
Item 7 Climate Adaption and Resilience	
The discussion of anticipated climate trends is adequate; however, many models indicate that while average annual precipitation will increase there will also be an increased frequency and severity of drought events. Staff strongly urges committing to using native plants as they both assist with stormwater management and are more drought tolerant than traditional landscaping. Additionally, low salt design and a chloride management plan should be considered as a project design element to limit the negative impacts of increased freeze thaw cycles, and the potential impacts of the large amounts of impervious surface proposed for scenario 1.	The City will continue to encourage the use of native plants within landscaped areas of the site. A chloride management plan will be recommended for any future developments within the AUAR Study Area.
Land Use	
Depending on the scenario pursued and final project designs of platted land, the City may need to amend its adopted 2040 Plan. For Metropolitan Urban Service Area (MUSA) expansion south of 225th Street, the City will need amend the 2040 Plan to change existing land uses to allow the proposed industrial and residential land uses. The City will also need to amend the Plan for the staging from outside the MUSA to within the current 2030 MUSA.	Comment noted. It has been noted that the 2040 Comprehensive Plan will need to be updated based on MUSA and changes in land use.

Comment	Response
The Council's Transportation Analysis Zones database lists Zone #711 adding no households, no population, and +123 jobs during 2020-2040. Should either of the two AUAR scenarios be pursued, the TAZ allocation for employment will need to be revised higher. The City acknowledges in the Draft AUAR that "the City will coordinate with the Metropolitan Council to increase the TAZ allocations, if needed."	The City will coordinate with the Metropolitan Council to modify the TAZ allocations, if needed.
Water Resources	

Comment	Response
As stated in the Draft AUAR, the southern portion of the study area is outside of the current MUSA, so sewered development phasing will need to be updated through a comprehensive plan amendment. Scenario 1 includes the development of data centers in the geographic area of interest of the Draft AUAR. The forecasted peak wastewater flow from the future development is expected to be in a range of 0.9 – 2.35 MGD. The Draft AUAR does not identify a specific connection point to the Metropolitan Council's regional wastewater system. Portions of Interceptor 7103-1, which is the nearest regional sewer to the study area, may be limited in capacity to serve the full development peak wastewater generation rate. It may be necessary to serve the area through the planned interceptor along Biscayne Avenue. The City should reach out to the Wastewater Planning and Community Programs Dept. to plan for sewer service to the study area. Contact John Chlebeck at john.chlebeck@metc.state.mn.us or at 651-602-4527, for additional information. Proposed data center developers under Scenario 1 will be required to obtain an Industrial Discharge Permit, at which time specific wastewater quality and quantity will need to be evaluated for impacts to system capacity, wastewater treatment processes, and wastewater effluent permitting. Depending on actual peak flows and wastewater constituents, additional mitigation may be required, such as pre-treatment, attenuation through wastewater storage, or an alternative surface water or ground infiltration discharge. In addition, Metropolitan Council Waste Discharge Rules prohibit non-contact cooling water from being discharged to the sanitary sewer system, unless it is demonstrated that there is no effective and practical alternative. Developers are encouraged to contact Metropolitan Council's Industrial Waste and Pollution Prevention group to request a review of proposed cooling water discharges to better understand requirements of a specific project. Please contact Tina Nelson, P.E. at martina.nelson@metc.state.mn.us or at 651-602-4728, for additional information.	It is noted that a comprehensive plan update is needed to include the AUAR Study Area within the MUSA. The City will coordinate with Metropolitan Council to understand current capacity in the regional system and potential changes that may be necessary to provide adequate capacity for the anticipated flows. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway; a draft of the report has been provided to the Metropolitan Council for review. The City will continue to work with the project proposer and the Metropolitan Council to review additional mitigation measures that may be needed such as pre-treatment, attenuation through wastewater storage, or an alternative surface water or ground infiltration discharge. The project proposer and or developer will coordinate with Metropolitan Council's Industrial Waste and Pollution Prevention group to request a review of proposed cooling water discharges to better understand requirements of a specific project.
Greenhouse Gas Emissions	

Comment	Response
The discussion of anticipated Greenhouse Gas Emissions is adequate; however, given the different scale and nature of the two scenarios additional mitigation measures should be considered for scenario 1. Given the larger emissions profile of scenario 1, exceeding the City's minimum tree planting requirements would be appropriate and would have the additional benefit of mitigating the urban heat island effect created by the large amounts of impervious surfaces associated with that proposal. Scenario 1 should also consider the use of onsite renewable energy generation, i.e. solar panels, to help reduce the amount of off-site electricity needed.	Comment noted. The project proposer will work with the City to identify additional mitigation strategies that could be implemented to reduce greenhouse gas emissions or offset the carbon footprint of the proposed project. This has been noted in the Final AUAR.

4. Vermillion River Watershed Joint Powers Organization

Comment	Response
Page 9, Table 2: Under Project Design, please revise text to indicate that water efficient design will be incorporated as well (for landscape vegetation choices, landscape irrigation, appliances, equipment).	This has been added to the Final AUAR.
Page 10, Table 2: Under Water Resources, Adaptations, please revise text indicating that Developer: a) Shall use native plants and perennials for landscaping within water resource buffers. b) Consider using native plants and perennials adjacent to other landscaping areas.	This has been added to the Final AUAR.
Page 10, Table 2: Under Water Resources, Adaptations, please revise third bullet point to read: "Stormwater BMP's shall be designed to meet City of Farmington criteria for rate control and runoff volume reduction and criteria for MPCA water quality requirements"	This has been added to the Final AUAR.
Page 14, Table 4: Under Green Infrastructure, please revise text to read "vegetated swales" instead of "swales".	This has been updated in the Final AUAR.
Page 19, Vermillion River Watershed Joint Powers Organization narrative: Eliminate the last sentence beginning with the words "One stream,…" and replace with "A Water Quality Corridor extends through the southern portion of the AUAR study area. This type of waterway classification has specific vegetated buffer or setback requirements that could have an impact to development scenarios evaluated in the AUAR". Also please remove footnote 12 at bottom of the page.	This has been added to the Final AUAR.

Comment	Response
Page 20, Farmington Surface Water Management Plan narrative: While the narrative lists requirements associated with Farmington Wetland Ordinance 10-6-17, it does not include the amount of acreage of Protect, Manage 2, and Manage 3 wetlands present onsite in accordance with the Surface Water Management Plan Wetland Classifications Map. A wetland delineation has been completed for the site and included in Appendix A. We suggest updating the table on page 20 to include the acreage of Protect, Manage 2, and Manage 3 wetlands onsite from the completed delineation report.	This has been added to the Final AUAR, see Table 10.
Page 21: Please eliminate paragraphs for VRWJPO since the AUAR study area is within the City's jurisdiction.	This has been updated in the Final AUAR.
Page 30: The last sentence of paragraph 3 "Approvals related to the VRWJPO Standards will be handled by the City" should be modified to state, "the City has adopted ordinances in conformance with the minimums established by the VRWJPO Standards. As a result, VRWJPO approvals are not required as those requirements will be governed by the City."	This has been updated in the Final AUAR.
Page 39, Wastewater: Suggest adding text at the end of "The Empire Wastewater Treatment Plant" paragraph indicating that "During the development of the Phase 1 Scenario, the developer should consider incorporating water reuse within its operations to reduce this impact on wastewater capacity for the region".	This has been updated in the Final AUAR.
Page 42: During Construction: The first sentence, after aquatic ecosystems, should contain the text "per City of Farmington Design Standards". The remaining bullet points should be eliminated as they appear to be specific to a different project.	This has been updated in the Final AUAR
Page 43: Fifth sentence. Are there thresholds for the elements described (like cadmium and chromium) that are specific to post construction runoff criteria? Does this statement relate to wastewater discharge?	This has been updated in the Final AUAR.
Page 43: Language in second paragraph is very specific. Most of this could be eliminated by keeping only the first sentence and the sentence about City of Farmington Guidelines. Please eliminate reference to VRWJPO Guidelines.	This has been updated in the Final AUAR
Page 68: under Water Resources, please remove "and the Vermillion River Watershed Joint Powers Organization" in the first text table group. For the fourth text table, after the words "wetland banking credits" add "from the wetland bank within the Vermillion River Watershed".	This has been updated in the Final AUAR

5. Public Comments

<table>
<tr><th>Comment</th><th>Response</th></tr>
<tr><td colspan="2">Cathy Johnson</td></tr>
<tr><td>Regarding noise at the proposed Data Center site:

After reading adaptations which other communities have had to make, regarding data centers, I would like to see Farmington write into the AUAR, what cities like Manassas, Va. have written. In the case of Manassas, VA., it has become city ordinance:
Start and stop time for noisy unloading operations shall happen no earlier than 7:00 AM and no later than 10:00 PM.
Semi-truck deliveries shall not take place during these nighttime hours. This includes deliveries, and pick-up of equipment, trash, etc.
Cooling equipment and generators, or any other noise making equipment which are part of the technology park (data center) operation, are not exempt from noise limits.
At night, noise cannot exceed 50 decibels (10PM through 7AM), as per state law. Day time and night time noise levels, controlled by the MEPA, must be adhered to by all parties of the technology park.
Three sound meters shall be installed at residential lot lines, abutting the data center campus land. One shall be on the east side and one on the west side, of the northern section. One shall be on the northern edge of the southern section. These noise monitors shall be at points where noise is audible.
The noise meters shall be calibrated by the manufacturer and shall have calibration certified once per year.
Again, the city needs to be proactive because should this data center come to fruition, multiple end users will get into the blame game, when trying refute source of any noise violations.</td><td>Comment noted. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City’s review process to ensure that MPCA noise rules and City standards are followed.</td></tr>
<tr><td>Berms: a minimum of 20' berms should be in place prior to sale of parcels and construction of buildings, if proposed technology park becomes a reality. Residents need sound/light protection during the construction phase.

Light: light pollution is a complain at the Des moines tech. park and should be addressed. Nighttime hours (10:00 PM to 7:00AM) should be dimly lit.</td><td>The project will be required to follow all lighting ordinances and standards as identified in City code. Berms and noise and light mitigation measures will be addressed through the City entitlement process.</td></tr>
<tr><td colspan="2">Terri Pearson</td></tr>
</table>

Comment	Response
If Farmington insists on proceeding with the spot-zoning of the Fountain Hills Golf Course, there are a number of concerns that I would like addressed: 1. The electrical substation needs to be placed in the center of the development. No homeowner should have to look out his/her window at this or listen to the humming. 2. All noise emanating from buildings or traffic needs to be monitored and defined limits set. Who will do this monitoring? 3. This may be the second data center built in Farmington. Water usage must be defined and controlled to prevent the rest of the community from suffering water shortages in dry periods. Those of us who reside in Castle Rock rely on our own wells. Who will be responsible for drilling new wells if data center demands cause problems with ground water access? 4. Some of our homes are very close to the golf course property line. 250 feet is not enough of a setback. The minimum should be 500 feet. 5. All exterior lighting should be directed downward to prevent light pollution for surrounding residences. This is standard practice in Arizona, and should be possible here.	Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, and buffers will be addressed through the City's entitlement process. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis. The project will be required to follow all lighting ordinances and standards as identified in City code. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in AUAR Study Area.
Dan and Denise May	

We are submitting these comments concerning the Farmington Technology Park Alternative Urban Areawide Review. Our property abuts the golf course property which is currently zoned and platted for residential use by Farmington when it was annexed. Our house and private well are 150 feet from the shared property line. The following are our concerns. 1. **Rezoning** – we oppose rezoning of the studied property from its recent zoning and current status of residential to mixed use commercial/industrial – for ANY proposed industrial development. We visited the same data centers in Iowa that the Farmington Planning Commission and Council visited. Data centers or any type of industrial development do not belong in residential areas. The buildings of the newer data centers we visited were set back far from the roads that surround them and far more than the 250 feet that Tract is proposing and there are not any homes abutting those properties or even close by. There might be plans for homes in the future near those sites but those residents will choose to live near the data centers. We don't have that same choice. The buildings on these sites are huge, especially on the Waukee site and again the set back for those buildings are far more than what Tract is proposing. 2. **Noise** – Noise regulations require a noise level at residential property levels not to exceed 60-65 decibels daytime, 50-55 nighttime. Current noise levels in our residential area are typically less than 40 decibels so the regulation levels are significantly higher than we currently experience. Who will police the noise levels? What happens if the noise levels are exceeded? Will the residents have to bring legal action? Who will pay for that? The data centers we visited in Iowa are set so far back from the road that we could only hear heavy traffic noise, which hovered around 50-60 decibels, we were not able to get close enough to the buildings to hear if there were noise from the buildings or not. Our house is 150 feet from the property line. 3. **Water usage** – We are concerned about our private well. MN DNR stated previously to the City of Farmington that there is a question as to whether or not there is enough water capacity for all projects in the works. Also, the AUAR states that de-watering may be needed for construction which we are concerned will affect our private well. 4. **Lighting** – We understand that parking lots and buildings will be well lit because of security concerns. Being so close we are concerned about the illumination onto our property at night.	Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, buffers, landscaping, siting of facilities within the site, substations, and fencing will be addressed through the City's entitlement process. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. The project will be required to follow all lighting ordinances and standards as identified in City code. Berms and noise and light mitigation measures will be addressed through the City entitlement process. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in AUAR Study Area.

Comment	Response
5. **Power Substations** – Tracts plan has power substations located on the perimeter of the property which will create not only additional noise but also an eye sore for anyone living nearby. **6. Construction** – Because we live so close to what would be the construction site, we are concerned that there could be potential damage to the structure of our house, private well, or property during site prep. We are concerned about the disruption of our lives during the construction phase which will last as long as it takes to sell off the parcels to end users, which could be years before all the buildings are constructed. **7. Visual Impact** – Any industrial building will absolutely change the neighborhood. Buildings 50-80 feet in height will be huge and so out of place next to the residences on three sides of the currently zoned residential property. The 21' berms shown in the renderings by Tract to show us what the finished technology park would look like from our properties would not be tall enough to mask the tall buildings from view. Also, the landscaping/trees on top of the berms will not grow to the size shown in the renderings for 5-10 years. 8. **Land Usage** – If the property is rezoned there would be a huge departure of land usage between anything industrial on the currently residentially zoned and platted site and the existing homes that share the property line. The rezoning to industrial would be incompatible with the existing surrounding residential properties.	
Taylor Salonek	

Comment	Response
I am writing to you regarding the concerns my family has regarding the proposed technology park in place of the Fountain Valley golf course in Farmington. As you can see by my job title in my email signature I am a big fan of data and it plays a major role in my life. However, I do not believe putting an expansive technology park in the middle of existing neighborhoods is beneficial for the community. I realize you have heard this several times and the plans still seem to move forward, so I would like to know what is being done to hold Tract accountable for what they are promising. Also, what the city is doing to ensure whoever develops on this land does so in a way that is as minimally disruptive to the residents as possible. Here are a few items that come to mind: • Adequate setbacks, berm height and buffers to protect residents from sound and visual impacts • Ensure water consumption, water runoff and electrical use does not have **<u>any</u>** impact on surrounding residents • Ensure generators and outside lighting are in a location that has as little impact to residents as possible To continue to grow our family in Farmington, we kindly ask that you create binding contracts with tract and whoever develops the land to hold them to the highest standards and ensure they are reprimanded appropriately shall they try to cut corners during the development process. We know this will ultimately provide benefit to Farmington, we just wish it wasn't going to be our new view out of our living room window. Please take our concerns into consideration and provide a response on what will be done to address them.	Comments not relevant to the AUAR will not be addressed. Rezoning and setbacks will be addressed through the City's entitlement process. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. Berms and noise mitigation measures will be addressed through the City entitlement process. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in AUAR Study Area.
Eszter Varga	

I, Eszter Varga, submit the following concerns regarding rezoning request and Technology Park development plans at the following **NON-INDUSTRIAL** parcels: 1. Fountain Valley Golf Course, 2830 220th St W, Farmington, MN 55024, parcel ID: 140050001012 2. Independent School District 192, south of 225th St W. (annexed from Castle Rock to Farmington), parcel ID: 070050076011 3. Residential lot adjacent to School District 192, parcel ID: 070050076012 DNR expressed concerns about water usage in the area, with consideration of the There are many things to be concerned with and the way this will ultimately impact residents in the surrounding communities: • "***Item 12 Water Resources (Roger Janzig Roger.janzig@metc.state.mn.us) The proposed projects and increased wastewater flow generated by the proposed new uses represent an added level of wastewater flow that may exceed the capacity of the existing regional wastewater conveyance system. This situation creates a potential risk of system backups resulting in untreated sewage flowing into basements and spills into the environment. The final AUAR will need to include additional information on potential wastewater flow from the proposed development scenarios to assess impacts on the Regional Wastewater System***." • ***The reach of the South Branch of the Vermillion River located in the study area is not a designated trout stream, however the AUAR site is upstream of a designated trout stream and impact to this reach will affect the downstream sections. Changes in base flow, chemistry, and temperature can all significantly impact downstream trout habitat. These could be influenced by groundwater wells as well as discharge from future development. Measures to mitigate and monitor to prevent impacts should be taken and it is recommended that DNR Fisheries staff review development plans***. • Setbacks- the current 250' setbacks are not adequate to ensure quality of life for the residents. We request a minimum of 500 feet setbacks. Please consider enforcing a serious level of mitigation through setbacks, buffers, berms, and landscape when shoehorning Minnesota's largest technology park in between RESIDENTIAL neighborhoods. • **Berm height** needs to be expanded from the current rendering to minimum of 14' and up to 20' heights. Please do not allow ambiguous verbiage of "up to". •	Comments noted. Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, buffers, landscaping, siting of facilities within the site will be addressed through the City's entitlement process. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. Berms and noise and light mitigation measures will be addressed through the City entitlement process. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in AUAR Study Area.

Comment	Response
• **Mitigation** – landscape & berms to buffer should all be in place on exterior borders before any construction begins to help protect residents from noise and construction dust and ultimately reduce complaints to the city. • **Generators** What mitigation is offered for residents whose front yard, driveway is impacted by construction on 225th Street West? • & Heat exhaust locations: Requesting guarantee that exhaust fan and generator placements are installed or directed to the inner part of this development, NOT emitting all sound and heat directly at nearby homes. • Light Pollution: Ensure that local residents homes will not be permanently lit up by commercial industrial style lights from this new project.	
Dave Puchalla	

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Dear Member of the City Planning Committee,
I am writing to express my strong opposition to both the proposed construction of a data center at the Fountain Valley Golf Course/the Angus property and the associated request for rezoning of the area. It is absolutely unacceptable to rezone residential to mixed-use commercial industrial when it is surrounded by residential property. While I recognize the need for advanced technological infrastructure, the potential negative impacts of this project on our community and environment outweigh the perceived benefits.
Negative Impact on the Community: The proposed location for the data center is currently zoned for highway business, low density, low/medium density, and medium density residential. Rezoning this area to accommodate a data center would bring increased traffic, noise, and industrial activity, adversely affecting the quality of life for nearby residents who are located only 250 feet away from the proposed data site. Further evidence of the negative effect is documented by WUSA9 a news station in Washington DC. They took audio samples from 700 feet (450 feet further than proposed in farmington), which verified a perceivable increase in noise. According to their interview with Braxton Boren, assistant professor of audio technology at American University,
“You could build a wall, and those wavelengths would by a process called diffraction, they would sort of bend and go right over it.
You can't even block them in the normal way that you would with a lot of other sounds.”
Residents interviewed by WUSA9 news all complained about the data center noise. Lastly, The CDC warns a noise not loud enough to cause hearing damage can still cause stress, anxiety, and even heart disease when continuously exposed to it.
Negative Environmental Concerns: Data centers are notorious for their high energy consumption and significant carbon footprint. As our city strives to meet its sustainability goals and reduce greenhouse gas emissions, endorsing a project that could counteract these efforts seems misaligned with the City’s 2040 Comprehensive Plan section 8 “Sustainability”. The energy demands of a data center are often met by non-renewable sources, which could undermine our commitment to green energy. The City of Farmington owns and operates seven wells, which on average pumps about 835 million gallons from groundwater aquifers. According to the Alternative Urban Areawide Review, the proposed data center “water resources in the general project area may become warmer, more polluted, and change in volume due to increased temperatures and runoff.”
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Comments not relevant to the AUAR will not be addressed. Rezoning will be addressed through the City’s entitlement process.
The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis.
Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City’s review process to ensure that MPCA noise rules and City standards are followed.
Berms and noise and light mitigation measures will be addressed through the City entitlement process.
The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in the AUAR Study Area.
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Comment	Response
Negative Economic and Social Implications: Although data centers can create **temporary** construction jobs, long-term positions are typically specialized and may not provide meaningful employment opportunities for local residents. The rezoning and subsequent construction could also lead to decreased property values for the residential areas potentially resulting in gentrification and displacement of long-standing community members. Alternative Solutions: I urge the City Planning Committee to carefully **reconsider** the need for rezoning and the construction of this data center. Instead, the city should vigorously **explore & encourage building residential homes in the existing residential zones**; the housing market demands such consideration. The 3 million-square-foot 'Project Bengal' industrial project is enough. Additionally, It would be beneficial to **explore alternative locations** such as the parcels west of Country Road 3 and east of the old Union Pacific railroad (PID: 140180025020, 140070076010, 140180001013). This location is not in established neighborhoods and is near the Cemstone Gravel Pit which is already a source of noise. Industrial zones north of 212th St W between Flagstaff Ave and Pilot Knob Road should be considered. In conclusion, I **vehemently protest** & **strongly oppose** both the rezoning request and the construction of the data center. I believe that pursuing alternative approaches will better serve our city's long-term interests and uphold our commitment to sustainability and community well-being. Let's keep the farm in Farmington. Thank you for your time and consideration.	
David Sieburg	

Please ensure this reaches the RGU, Kimley Horn, and all relevant parties as public comment on the AUAR concerning the proposed industrial park or the new Farmington Technology Park project on the golf course and school properties. There are several significant concerns if this project proceeds without the consent of the surrounding neighbors. This development will greatly impact residents in the nearby communities. Rezoning: This area is not suitable for an industrial park or Minnesota's largest technology park. Please explain how this project fits into the surrounding area and provide guarantees on how it will not negatively impact residents' quality of life or property values. Noise: Implement a pre-designed plan or fine system to ensure noise levels remain within acceptable limits. The penalties should be stringent enough to compel Tract and/or the end users to use advanced technology to maintain livable sound levels and avoid persistent issues. Setbacks: The current 250-foot setbacks are insufficient to protect residents' quality of life. A minimum 500-foot setback would allow for additional mitigation if necessary. It is irresponsible and careless to place Minnesota's largest technology park within 300 feet of homes, families, and children. There are approximately 35 children west of the stop sign on Cambrian Way on 224th St W towards the golf course. Berm Height: The berm height needs to be expanded from the current rendering to have minimum heights, not an "up to" height. Set a requirement for heights between 14 and 20 feet to help shield residents from sound and visual impacts. Natural Buffer: Landscapes, berms, and buffers should be established on exterior borders before construction begins to protect residents from noise and construction dust, ultimately reducing complaints to the city. Trees: Many trees on the golf course are dead or dying as they are at the end of their expected lifespan. This needs to be addressed by the Tract, not the end users. If the Tract is not responsible for providing landscape, buffers, berms, trees, etc., the final result will not match the promises made by them Generators and Heat Exhaust Location: Provide new renderings that ensure exhaust fans and generators are placed or directed towards the inner part of the development, rather than emitting sound and heat towards nearby homes. Lighting: Ensure that local residents' homes will not be permanently illuminated by commercial industrial lights from this project.	Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, buffers, landscaping, siting of facilities within the site, substations, fencing, and communication towers will be addressed through the City's entitlement process. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of Farmington would complete a well siting study and analysis. The development scenarios discuss the need for stormwater best management practices and the proposed projects will incorporate stormwater management facilities. The project will be required to follow all local, state, and federal stormwater requirements as noted in the AUAR.

Comment	Response
Traffic: Limit nighttime truck travel and construction activities. Substation: Relocate the power substation away from residents and ensure it is concealed to avoid being an eyesore. Communication Towers: how many? Where? Proper placement is vital. Water Usage/Water Supply: According to the DNR the excess capacity in the City of Farmington municipal system is already planned to be used for the Farmington West Project Industrial Project (Project Bengal). It seems that the existing water infrastructure will NOT suffice for supplying the high water demands of a data center at this location. Furthermore, DNR technical review of the City of Farmington's water supply (see 11/12/2020 Groundwater Tech Memo in MPARS Permit #1959-0725) shows challenges with sitting new wells in the city, Proximity to the Vermillion River and its protected status as a trout stream, and interconnections among the Prairie du Chene/Jordan, Jordan and quaternary aquifers show that pumping in many areas of the city could be unsustainable. Additionally, there are many private domestic wells located around the city, and especially surrounding the proposed site. It may be difficult to obtain a large increase in water appropriation volume due to the sustainability standard (MN statute 103G.287 subd.5). Wastewater: Clarify where the drainage and runoff will go. It has been stated that the current stormwater system cannot handle this. With limited greenspace after the final build-out, how will you ensure local ponds are not overwhelmed with runoff and that residents won't experience flooding or damage the Vermillion River. Power Use: is this build out of substations and usage sustainable? Will this project cause residents' electric bills to increase? I would appreciate a response to each point. If this rezoning proceeds, I hope the City of Farmington will secure concessions and guarantees, not empty promises and assumptions, for the residents most impacted by this potential rezoning. Make sure Tract is held accountable for all of the end users following their "plan." Thank you for your time. Please feel free to reach out with any questions or for clarification.	
Jeff Schottler	

Please read through the following list of concerns and suggestions regarding the proposed industrial park or new FarmingtonTechnologypark project on the golf course and school properties. Please see that this gets to the RGU or whomever needs this to be added as public comment on the AUAR. There are many things to be concerned with and the way this will ultimately impact residents in the surrounding communities. - Setbacks- the current 250' setbacks are not adequate to ensure quality of life for the residents. A 500' setbacks would allow for additional mitigation if necessary down the road. To place Minnesotas largest technology park under 300' from homes, families, and choldren is irresponsible and wreckless. Please consider enforcing a serious level of mitigation through setbacks, buffers, birms, and landscape when shoehorning minnesots largest technology park in between neighborhoods. Some of theese homes will be under 300' away from 50' tall buildings, we need protection from this. If we are going to change zoning and allow this why are we not setting a new standard for resident protection. - Birm height- birm height needs to be expanded from the current rendering to minimum of 14' and up to 20' heights. This will help protect residents from sound and visual impacts. - mitigation- landscape, birms, buffers should all be in place on exterior borders before any construction begins to help protect residents from noise and construction dust and ultimately reduce complaints to the city. -generators and heat exhaust location- please provide new renderings which guarantee exhaust fan placement and generator placement to be installed or directed to the inner part of this development vs emitting all sound and heat directly at nearby homes. - lighting- provide and ensure that local residents homes will not be permanently lit up by commercial industrial style lights from this new project. - fencing- define exact plans and location of fencing. Many homes have enjoyed the use of 4'-8' of golfcourse property since it was built because of the golfcourse fence. Do not go into or past the current fence locations. This small area has been part of our yards and maintained by us residents. If tract or whomever comes 6' into my yard to the exact property border its an issue. The current golfcourse fence should be left or replaced in its exact location. We are all giving up a ton to deal with this in our backyards they can give up the continued use of theese areas. Theese areas will be in the buffer zone anyways and makes absolutely no sense to impose more destruction to residents.	Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, buffers, landscaping, siting of facilities within the site, substations, fencing, and communication towers will be addressed through the City's entitlement process. The project will be required to follow all lighting ordinances and standards as identified in City code. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in AUAR Study Area. Noise attenuation measures will be evaluated during project design and additional mitigation measures may be incorporated into project design during the City's review process to ensure that MPCA noise rules and City standards are followed. The development scenarios discuss the need for stormwater best management practices and the proposed projects will incorporate stormwater management facilities. The project will be required to follow all local, state, and federal stormwater requirements including run-off and temperature control to protect trout within adjacent watersheds. The City has undertaken the Farmington East Serviceability Analysis to address sanitary sewer and water needs to service the updated comprehensive land use for this portion of Farmington. The report will review the need for additional water and sanitary sewer infrastructure to accommodate the land use scenarios identified in the comprehensive plan update that is currently underway. If additional capacity is needed in this area of the City, the City of

-trees- many of the tress on the golfcourse are dead or will die as they are at the end of their expected life span. This needs to be addressed by tract and not the end users, if tract is permitted to provide none of the landscape, buffers, birms, trees, etc we will never end up with a reality that compares to their renderings. -traffic- limit nighttime truck travel and construction - cooling types- put a written list of approved cooling systems allowed near residential. Microsoft has some amazingly quiet tech parks. Implement and enforce only the newest, best, and quietest types. - substation- relocate power substation away from residents and hide it so that is not the big eyesore of the area. -noise- put some type of pre-designed plan or fine in place ahead of time to guarantee noise decibel levels are never broken. Make this serious enough of a fine or penalty that tract and the end users are forced to use good technology to maintain liveable sound levels and not cause unstoppable issues. -south fork branch Vermillion river- this river is the only river in a suburban area that naturally sustains trout. This is an important river and stream that holds more wildlife than most cities. This needs to be protected and monitored by the DNR. Please show proof that this specific issue has been mentioned to the DNR -rezoning- this area is not compatible for an industrial park or Minnesotas largest technology park. Please shed light on how you think this firs in with the surrounding area and what guarantee you will make to residents on how this will not impact their current quality of life or property values. -WATER- please provide exactly where the water will come from and what the maximum allowable limit for this new industrial park will be. -waste water- where will the drainage and runoff go to. It has been publicly stated that our current storm water system can not handel this. With little greenspace left after final build out how will you guarantee local ponds are not overwhelmed with water run off and that local residents won't flood out from this. -power use- will this cause resident electric bills to increase. Typically the entire community ends up with higher utilities to aid in infrastructure build out.	Farmington would complete a well siting study and analysis.

Comment	Response
--zoning deviations- no deviations in excess of MUCI zoning should be allowed. Please show how theese deviations provide any benefit to the community. Please show how the largest technology park in Minnesota is good to be less than 300' from a residence. I hope that this gets some serious consideration and I would love a response to each point on here. If we are allowing this rezoning to happen I hope the city of farmington will go to bat for its people and demand mitigation levels that are similar to what I have suggested. This can be done if everyone involved works together. So far it seems like the city and tract are the only ones with a say so we hope this helps guide what residents need to see enforced in order to live the goid life we are used to right here in the Great city of Farmington Minnesota. Thank you for your time and please feel free to reach out with questions or clarity on this if needed.	
Mark Pearson	
I don't believe that rezoning the golf course and the farm land south of it is compatible with the residences that surround it. I don't believe there are any measures that can be taken to mitigate the disruption in the lives of hundreds of Farmington and Castle Rock residents. There are no other buildings in Farmington that are as expansive or as tall as what is proposed here. If there are benefits to the larger community, besides possible tax revenue, they should be delineated in the AUAR document. There are so many questions about possible construction that have not been defined in this document. There needs to be limits placed on water and electrical consumption by the tenants of this development, as well as air, water, light and noise pollution. Design standards should be established as early as possible relating to all of these issues.	Comments not relevant to the AUAR will not be addressed. Rezoning, setbacks, berm height, buffers, landscaping, siting of facilities within the site, substations, fencing, and communication towers will be addressed through the City's entitlement process. The project will be required to adhere to the mitigation strategies identified in the AUAR. The City will continue to coordinate with project proposers to minimize and mitigate impacts from development in the AUAR Study Area.

Appendix F
Comment Letters Received

September 25, 2024

Tony Wippler
City of Farmington
430 Third Street
Farmington, MN 55024

Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) for the Farmington Technology Park. Physical Development staff has reviewed and add the following to the July 10, 2024 comment letter (attached).

Environmental Resources

Section 11.a.: due to the shallow depth to water (measured to be 6 to 8 feet in nearby shallow drivepoint wells before they were sealed), the site's location within the Hastings wellhead protection area and the DWSMA that is mapped as high vulnerability; chemicals used on the site can impact groundwater. Consider native plantings, adequate thickness of high quality top soil and drought tolerant grass like fescue that will reduce the need for irrigation, lawn care chemicals and fertilizers. Consider winter-smart design of parking lots to reduce deicing salt and its impacts to aquatic life and water quality. Keep angle of sun in mind to ensure it reaches and melts critical icy patches. Consider the direction of prevailing winter wind to prevent drifting snow, plant trees to create a living snow fence. Implement pavement alternatives such a permeable pavements. Minimized the flow of meltwater across roads and parking lots to mitigate refreezing across roads.

Contact Environmental Resources at 952-891-7000 or environ@co.dakota.mn.us with questions or for additional information.

If you have any questions relating to our comments, please contact me at 952-891-7007 or Georg.Fischer@co.dakota.mn.us

Sincerely,

Georg T Fischer, Director
Physical Development Division

cc: Commissioner Mike Slavik, District 1
Heidi Welsch, County Manager

Dakota COUNTY

July 10, 2024

Tony Wippler
City of Farmington
430 Third Street
Farmington, MN-55024

Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) for the Farmington Technology Park. Physical Development staff has reviewed this scoping document and have the following comments.

Environmental Resources

The Dakota County Environmental Resources conducted an Environmental Review of the subject area relating to the proposed Draft AUAR for the Farmington Technology Park.

The Minnesota Geological Survey recently published an updated Geological Atlas for Dakota County that can be used to answer any subsurface/geology questions that might come up during redevelopment; C-57, Geologic Atlas of Dakota County, Minnesota. Improvements to Section 11.a. Geology, Soil and Topography/Landforms could state that the first bedrock underlying the AUAR study area is the Shakopee Formation composed of dolomite, sandy dolostone, sandstone and shale. The Shakopee Formation is the upper unit of the Prairie du Chien Group and below that is the Oneota Dolomite. The last sentence "Bedrock is comprised of sandstone and chert.", does not belong. Section 11.a. states that there are no known sinkholes of unconfined/shallow aquifers located within the AUAR study area. Nearby sealing records, (H3294 and H161799), indicate that drivepoint wells, 1-1/4 inch in diameter, ranging between 14 to 16 feet deep into the quaternary aquifer are in the neighboring area with static water levels between 6 and 8 feet.

In the future Dakota County's GIS system (DCGIS) can be used to identify wells to complete section 12.a.ii. Groundwater. Directions for using DCGIS can be found at:
https://www.co.dakota.mn.us/Environment/WaterResources/WellsDrinkingWater/Pages/private-well-information.aspx

Environmental Resources staff reviewed any previous audits, historic plat maps, sanborns, historic aerial photography, well construction records, well sealing records and/or well disclosure statements that Dakota County has available for taxpins 140050001012, 070050076012 and 070050076011.

- Taxpin 140050001012 There are three available well records: W05838, 263614 and W05196. In addition, there is habitation first visible in a 1937 aerial photograph in the SE corner of the parcel. There are no well records located in this area, but the inhabitants would have required a water supply well.
  - W05838 is an irrigation well drilled in 1997. It was last listed as active in 2011.
  - 263614 is a Public Supply/Non-Community well that was last listed as active in 2014.
  - W05196 is a Public Supply/Non-Community well that was drilled 1977.

    - 263614 and W05196 are shown as being in the same location and having the same use. These two ID's may be referring the same well that was given different identifiers over time, or one well may have failed and a replacement well was drilled in the same location.

- Taxpin 070050076012 There is one available well record W05102 and one well disclosure record.
    - W05102 is a domestic well that was last listed as active in 1999. A well disclosure describes an in-use well that was last listed as active in 2004. The well disclosure may be referring to the same well.

- Taxpin 070050076011 There are two available well records W05103 and 270148.
    - W05103 is an irrigation well that was last listed as active in 1999.
    - 270148 is an irrigation well drilled in 1977. It was last listed as active in 2008.
    - W05103 and 270148 are shown as being in the same location and having the same use. These two ID's may be referring the same well that was given different identifiers over time, or one well may have failed and a replacement well was drilled in the same location.

If any of the above wells are no longer in use, they must be sealed by a licensed well contractor. Redevelopment crews should be notified of the presence of wells and any wells encountered should be protected from damage and contamination. If any wells are discovered during redevelopment, they should be examined by a licensed well contractor or a Dakota County well inspector to determine the status. A magnetometer is the best, sometimes only way to locate wells that are below grade. Dakota County can help locate and mark wells using a magnetometer by calling 952-891-7537. Magnetometers work best on a clear site free from large metal obstructions. A Dakota County well inspector must be present during any well searches to rule out the presence of a well. Information about property transfer requirements in Dakota County as they pertain to wells is on our webpage at https://www.co.dakota.mn.us/HomeProperty/SellingProperty/WellRequirements .

Section 13.a. Pre-project Site Conditions should be expanded to included an environmental investigation of legacy pesticides use on the golf course property. The MN Department of Agriculture has a factsheet at www.mda.state.mn.us/sites/default/files/inline-files/golfcoursecontamination_1.pdf that outlines the concerns for high levels of mercury and arsenic in the soil at golf courses from use of certain pesticides. The factsheet recommends, at a minimum, test soil for arsenic, barium, chromium, lead, mercury, selenium, silver and other pesticides applied to the greens and tee boxes as well as collecting water sample at adjacent surface water bodies which can include the wetlands mapped on Figure 9 and the shallow groundwater via temporary environmental borings. Due to the shallow depth to water and the AUAR study area intersecting the Vermillion River, the use of all chemicals including g pesticides and deicing salt should be minimized. Conservation of water is encouraged whether it is for industry, residential or irrigation use.

The Draft scoping document states "the AUAR will review the Minnesota Pollution Control Agency's (MPCA) What's In My Neighborhood database and Dakota County's site inventory to determine if any known contaminated properties or potential environmental hazards are located within and adjacent to the AUAR study area. A Phase I Environmental Site Assessment will be completed prior to development." Known or suspected sites of environmental concern were identified directly adjacent to the subject property. Dakota County Site Inventory identifies Site #9006 – Angus Dump, located adjacent to the southeast corner of the subject property. A limited investigation was conducted in 2004 identifying low level impacts in soil and groundwater at the dump site.

Buried debris is present under a thin layer of soil and vegetation. The MPCA WIMN database identifies VIC Site VP19850 at 2806 225th St West. The file indicates reports reviewed and site closed in 2004, refer to MPCA What's in my neighborhood (state.mn.us) website for more information. A Flint Hills Resources pipeline is present south of the subject property.

Contact Environmental Resources at 952-891-7000 or environ@co.dakota.mn.us with questions or for additional information.

Transportation
County Transportation staff has determined that the proposed AUAR will have little or no impact to the county road system.

If you have any questions relating to our comments, please contact me at 952-891-7007 or Georg.Fischer@co.dakota.mn.us

Sincerely,

Georg T Fischer, Director
Physical Development Division

cc: Commissioner Mike Slavik, District 1
Thomas V. Novak, Interim County Manager

METROPOLITAN
COUNCIL

September 26, 2024

Tony Wippler, Planning Manager
City of Farmington
430 Third Street
Farmington, MN 55024

RE: City of Farmington – Draft Alternative Urban Areawide Review (AUAR) – Farmington Technology Park
Metropolitan Council Review File No. 22985-2
Metropolitan Council District No. 16

Dear Tony Wippler:

Metropolitan Council staff completed its review of the Farmington Technology Park Draft AUAR to determine its accuracy and completeness in addressing regional concerns. The AUAR is approximately 343 acres located on the north and south sides of 255th Street West. The project proposes to redevelop the study area from existing agriculture and golf course uses to data center uses. Staff concludes that the AUAR is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies. However, staff offers the following comments for your consideration:

Item 7 Climate Adaption and Resilience *(MacKenzie Young-Walters 651-602-1373)*
The discussion of anticipated climate trends is adequate; however, many models indicate that while average annual precipitation will increase there will also be an increased frequency and severity of drought events. Staff strongly urges committing to using native plants as they both assist with stormwater management and are more drought tolerant than traditional landscaping. Additionally, low salt design and a chloride management plan should be considered as a project design element to limit the negative impacts of increased freeze thaw cycles, and the potential impacts of the large amounts of impervious surface proposed for scenario 1.

Item 10 a. ii. Land Use: Farmington Comprehensive Plan *(Patrick Boylan 651-602-1438)*
Depending on the scenario pursued and final project designs of platted land, the City may need to amend its adopted 2040 Plan. For Metropolitan Urban Service Area (MUSA) expansion south of 225th Street, the City will need amend the 2040 Plan to change existing land uses to allow the proposed industrial and residential land uses. The City will also need to amend the Plan for the staging from outside the MUSA to within the current 2030 MUSA.

Item 10 Land Use *(Todd Graham 651-602-1313)*
The Council's Transportation Analysis Zones database lists Zone #711 adding no households, no population, and +123 jobs during 2020-2040. Should either of the two AUAR scenarios be pursued, the TAZ allocation for employment will need to be revised higher.

The City acknowledges in the Draft AUAR that "the City will coordinate with the Metropolitan Council to increase the TAZ allocations, if needed."

Item 12 a.i. Surface Water *(Steve Christopher 651-602-1033)*
Council Staff encourages the developer to limit the removal of mature native trees located on the Fountain Valley Golf Course. Where removal cannot be avoided, staff recommend replacement with native tree stands and selecting and installing vegetation for landscaping that is native, draught-tolerant, chloride-tolerant or chloride-friendly. The southern portion of the study area includes the South Branch of the Vermillion River and is subject to the Minnesota Buffer Law (Minn. Stat. § 103F.48) and its requirements for protection.

The reach of the South Branch of the Vermillion River located in the study area is not a designated trout stream, however the Draft AUAR site is upstream of a designated trout stream and impact to this reach will affect the downstream sections. Changes in base flow, chemistry, and temperature can all significantly impact downstream trout habitat. These could be influenced by groundwater wells as well as discharge from future development. Measures to mitigate and monitor to prevent impacts should be taken and it is recommended that DNR Fisheries staff review development plans.

Item 12 Water Resources – Sanitary Sewers *(John Chlebeck, 651-602-4527)*
As stated in the Draft AUAR, the southern portion of the study area is outside of the current MUSA, so sewered development phasing will need to be updated through a comprehensive plan amendment.

Scenario 1 includes the development of data centers in the geographic area of interest of the Draft AUAR. The forecasted peak wastewater flow from the future development is expected to be in a range of 0.9 – 2.35 MGD. The Draft AUAR does not identify a specific connection point to the Metropolitan Council's regional wastewater system. Portions of Interceptor 7103-1, which is the nearest regional sewer to the study area, may be limited in capacity to serve the full development peak wastewater generation rate. It may be necessary to serve the area through the planned interceptor along Biscayne Avenue. The City should reach out to the Wastewater Planning and Community Programs Dept. to plan for sewer service to the study area. Contact John Chlebeck at john.chlebeck@metc.state.mn.us or at 651-602-4527, for additional information.

Proposed data center developers under Scenario 1 will be required to obtain an Industrial Discharge Permit, at which time specific wastewater quality and quantity will need to be evaluated for impacts to system capacity, wastewater treatment processes, and wastewater effluent permitting. Depending on actual peak flows and wastewater constituents, additional mitigation may be required, such as pre-treatment, attenuation through wastewater storage, or an alternative surface water or ground infiltration discharge. In addition, Metropolitan Council Waste Discharge Rules prohibit non-contact cooling water from being discharged to the sanitary sewer system, unless it is demonstrated that there is no effective and practical alternative. Developers are encouraged to contact Metropolitan Council's Industrial Waste and Pollution Prevention group to request a review of proposed cooling water discharges to better understand requirements of a specific project. Please contact Tina Nelson, P.E. at martina.nelson@metc.state.mn.us or at 651-602-4728, for additional information.

Item 18: Greenhouse Gas Emissions *(MacKenzie Young-Walters 651-602-1373)*
The discussion of anticipated Greenhouse Gas Emissions is adequate; however, given the different scale and nature of the two scenarios additional mitigation measures should be considered for scenario 1. Given the larger emissions profile of scenario 1, exceeding the City's minimum tree planting requirements would be appropriate and would have the additional benefit of mitigating the urban heat island effect created by the large amounts of impervious surfaces associated with that proposal. Scenario 1 should also consider the use of onsite renewable energy generation, i.e. solar panels, to help reduce the amount of off-site electricity needed.

The Council will not take formal action on the Draft AUAR. If you have any questions or need further information, please contact Patrick Boylan, Principal Reviewer, at 651-602-1438 or via email at Patrick.Boylan@metc.state.mn.us.

Sincerely,

Angela R. Torres

Angela R. Torres, AICP, Senior Manager
Local Planning Assistance

CC: Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Wendy Wulff, Metropolitan Council District No. 16
Judy Sventek, Water Resources Manager
Patrick Boylan, Sector Representative/ Principal Reviewer
Reviews Coordinator

N:\CommDev\LPA\Communities\Farmington\Letters\Farmington 2024 Farmington Technology Park Draft AUAR Ok 22985-2.docx

DEPARTMENT OF NATURAL RESOURCES

Division of Ecological and Water Resources
Region 3 Headquarters
1200 Warner Road
Saint Paul, MN 55106

Transmitted by Email

September 26, 2024

Tony Wippler
Planning Manager
City of Farmington
430 Third Street
Farmington, MN 55024

Dear Tony Wippler,

Thank you for the opportunity to review the Farmington Technology Park Draft Alternative Urban Areawide Review (AUAR) for the project area located in Dakota County. The DNR respectfully submits the following comments for your consideration:

1. Page 9, Table 2. Climate Considerations and Adaptations. As energy needs and renewable energy goals put further pressure on agricultural lands, some communities have started to tap into industrial facilities to combine development with energy production through the use of rooftop solar. Installing solar panels on industrial facilities has the added benefit of producing energy right where it is needed without any additional facility footprint. We encourage the City as well as local energy providers to explore the feasibility of combining these land uses to help meet state climate goals as the City plans for the future.

   We appreciate that the development would consider installing water reuse systems to reduce water usage.

2. Page 18, Zoning. It is unclear if any of the development is located within shoreland and subject to local shoreland ordinances.
3. Page 25, Geology. The AUAR notes that there are karst conditions located approximately 5,000 feet from the study area. With the proximity of karst conditions, potential pollutants need to be handled with care in order to protect the drinking water of everyone in the area. Studies should determine that any structures on the site will be supported by underlying geologic materials.
4. Page 26, Soils and Topography. This section should discuss the suitability of soils for the infiltration of stormwater.
5. Page 43, Stormwater. We appreciate that the project proposer will implement a chloride management plan for either development scenario.

6. Page 44, Water Appropriation. A DNR Water Appropriation Permit is required if the water pumped exceeds 10,000 gallons in a day, or one million gallons in one year. The DNR General Permit for Temporary Appropriation, with its lower permit application fee and reduced time for review, may be used for the dewatering if the dewatering volume is less than 50 million gallons and the time of the appropriation is less than one year. The project area is within the Vermillion River Watershed and within the vicinity of designated trout streams, which are protected by the DNR. Additional regulation and review may be required when permitting within five miles of a designated trout stream.
7. Page 44, Water Appropriation. The AUAR references a City of Farmington 2020 water demand of 2.14 MGD, and a Scenario 1 additional water demand of 2.35 MGD. This would more than double the volume the city currently uses (without accounting for potential demand from other proposed data centers).

   The AUAR Guidance in the instructions states that, "*If the area requires new water supply wells, specific information about that appropriation and its potential impacts on groundwater levels should be given; if groundwater levels would be affected, any impacts resulting on other resources should be addressed*." There is no discussion of the reuse of wastewater in this AUAR other than a brief mention in Table 2. If any additional volume needed would be coming from pumped groundwater, it is likely that there would need to be additional water supply wells, and at a minimum a large increase in total pumping volume compared to what is currently permitted (2.74 MGD). Per instructions, please supply specific information on impacts to groundwater levels and resultant impacts on other resources, including the Vermillion River (both the potential for stream depletion to occur from high-capacity pumping of the Prairie du Chien/Jordan aquifer and its protected status as a trout stream), and interconnections among the Prairie du Chien/Jordan, Jordan, and quaternary aquifers. The siting of a new well would be very important to this analysis.
8. Page 44, Water Appropriation. Evaluation of an amendment to DNR Water Appropriation Permit 1959-0725 must include consideration of the sustainability standard (MN statute 103G.287 Subd.5). As per instructions for completing 12.b.iii, please:
   a. 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.
   b. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.
   c. 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.
9. Page 47, Contaminants. Because the southern portion of the AUAR study area is located within a wellhead protection area (Hastings) and a Drinking Water Supply Management Area (DWSMA) (Hastings, high vulnerability), potential pollutants need to be handled with care in order to protect the drinking water of the city.

10. Page 48, Rare Features. Please note that if a rare feature is identified within one mile of the project area using a NHIS license agreement, then the project should be submitted to DNR for further coordination. Only DNR can determine if a project is likely to impact state-listed species.
    a. Section 14c: Loggerhead shrikes (*Lanius ludovicianus*) have been documented in the vicinity of the proposed project. Loggerhead shrikes use grasslands that contain short grass and scattered perching sites such as hedgerows, shrubs, or small trees. They can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. Tree and shrub clearing during nesting season, April 1-July 31, may result in the destruction of active nests before young can fly.
    b. Section 14d, Loggerhead shrike; Tree Removal: Given the potential for this species to be found in the vicinity of the project, **tree and shrub removal must be avoided during the breeding season, <u>April 1</u> through <u>July 31</u>.**
11. Page 66, Cumulative Potential Effects. It is unclear to what extent the development of two or more data centers in the area will increase water demand for the municipal water supply. It is important to evaluate if the cumulative increase in water use will be sustainable to the existing aquifer.

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

Sincerely,

Melissa Collins
Regional Environmental Assessment Ecologist | Ecological and Water Resources
Minnesota Department of Natural Resources
Phone: 651-259-5755
Email: melissa.collins@state.mn.us

CC:	Kristin Dean, Tract Management Company, LP

Equal Opportunity Employer

September 11, 2024

Mr. Tony Wippler
Planning Manager, City of Farmington
430 Third Street
Farmington, MN 55024

RE: Farmington Technology Park Draft Alternative Urban Areawide Review dated June 2024

The Vermillion River Watershed Joint Powers Organization (VRWJPO) appreciates the opportunity to review and comment on the Farmington Technology Draft Alternative Urban Areawide Review June 2024 (AUAR) by Kimley-Horn. Staff has reviewed this scoping document and have the following comments:

1) Page 9, Table 2: Under Project Design, please revise text to indicate that water efficient design will be incorporated as well (for landscape vegetation choices, landscape irrigation, appliances, equipment).

2) Page 10, Table 2: Under Water Resources, Adaptations, please revise text indicating that Developer:
   a) Shall use native plants and perennials for landscaping within water resource buffers.
   b) Consider using native plants and perennials adjacent to other landscaping areas.

3) Page 10, Table 2: Under Water Resources, Adaptations, please revise third bullet point to read: "Stormwater BMP's shall be designed to meet City of Farmington criteria for rate control and runoff volume reduction and criteria for MPCA water quality requirements"

4) Page 14, Table 4: Under Green Infrastructure, please revise text to read "vegetated swales" instead of "swales".

5) Page 19, Vermillion River Watershed Joint Powers Organization narrative: Eliminate the last sentence beginning with the words "One stream,…" and replace with "A Water Quality Corridor extends through the southern portion of the AUAR study area. This type of waterway classification has specific vegetated buffer or setback requirements that could have an impact to development scenarios evaluated in the AUAR". Also please remove footnote 12 at bottom of the page.

6) Page 20, Farmington Surface Water Management Plan narrative: While the narrative lists requirements associated with Farmington Wetland Ordinance 10-6-17, it does not include the amount of acreage of Protect, Manage 2, and Manage 3 wetlands present onsite in accordance with the Surface Water Management Plan Wetland Classifications Map. A wetland delineation has been completed for the site and included in Appendix A. We suggest updating the table on page 20 to include the acreage of Protect, Manage 2, and Manage 3 wetlands onsite from the completed delineation report.

7) Page 21: Please eliminate paragraphs for VRWJPO since the AUAR study area is within the City's jurisdiction.

8) Page 30: The last sentence of paragraph 3 "Approvals related to the VRWJPO Standards will be handled by the City" should be modified to state, "the City has adopted ordinances in conformance with the minimums established by the VRWJPO Standards. As a result, VRWJPO approvals are not required as those requirements will be governed by the City."

9) Page 39, Wastewater: Suggest adding text at the end of "The Empire Wastewater Treatment Plant" paragraph indicating that "During the development of the Phase 1 Scenario, the developer should consider incorporating water reuse within its operations to reduce this impact on wastewater capacity for the region".

10) Page 42: During Construction: The first sentence, after aquatic ecosystems, should contain the text "per City of Farmington Design Standards". The remaining bullet points should be eliminated as they appear to be specific to a different project.

11) Page 43: Fifth sentence. Are there thresholds for the elements described (like cadmium and chromium) that are specific to post construction runoff criteria? Does this statement relate to wastewater discharge?

12) Page 43: Language in second paragraph is very specific. Most of this could be eliminated by keeping only the first sentence and the sentence about City of Farmington Guidelines. Please eliminate reference to VRWJPO Guidelines.

13) Page 68: under Water Resources, please remove "and the Vermillion River Watershed Joint Powers Organization" in the first text table group. For the fourth text table, after the words "wetland banking credits" add "from the wetland bank within the Vermillion River Watershed".

Thank you for the opportunity to review and comment on this AUAR. Please feel free to contact us if you have any questions or comments.

Sincerely,

Jeff Dunn
VRWJPO Water Resources Engineer

Travis Thiel
VRWJPO Administrator

Kelly Perrine
VRWJPO Senior Watershed Specialist

September 18, 2024

To: Tony Wippler
From: Cathy Johnson
RE: AUAR recommendations

Regarding noise at the proposed Data Center site:

After reading adaptations which other communities have had to make, regarding data centers, I would like to see Farmington write into the AUAR, what cities like Manassas, Va. have written. In the case of Manassas, VA., it has become city ordinance:

- Start and stop time for noisy unloading operations shall happen no earlier than 7:00 AM and no later than 10:00 PM.
- Semi-truck deliveries shall not take place during these nighttime hours. This includes deliveries, and pick-up of equipment, trash, etc.
- Cooling equipment and generators, or any other noise making equipment which are part of the technology park (data center) operation, are not exempt from noise limits.
- At night, noise cannot exceed 50 decibels (10PM through 7AM), as per state law. Day time and night time noise levels, controlled by the MEPA, must be adhered to by all parties of the technology park.
- Three sound meters shall be installed at residential lot lines, abutting the data center campus land. One shall be on the east side and one on the west side, of the northern section. One shall be on the northern edge of the southern section. These noise monitors shall be at points where noise is audible.
- The noise meters shall be calibrated by the manufacturer and shall have calibration certified once per year.

Again, the city needs to be proactive because should this data center come to fruition, multiple end users will get into the blame game, when trying refute source of any noise violations.

Cathy Johnson

RECEIVED
SEP 18 2024
BY:

From: Cathy Johnson <cathyij50@gmail.com>
Sent: Tuesday, September 24, 2024 1:11 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]Public response to AUAzr

Berms: a minimum of 20' berms should be in place prior to sale of parcels and construction of buildings, if proposed technology park becomes a reality. Residents need sound/light protection during the construction phase.

Light: light pollution is a complain at the Des moines tech. park and should be addressed. Nighttime hours (10:00 PM to 7:00AM) should be dimly lit.
Thank you, Cathy

Outlook

FW: [EXTERNAL]Fwd: Comments on the Draft AUAR

From Tony Wippler <twippler@farmingtonmn.gov>
Date Wed 9/25/2024 8:34 AM
To Deanna Kuennen <dkuennen@farmingtonmn.gov>; Alison Harwood <aharwood@wsbeng.com>

EXTERNAL EMAIL

Additional citizen comments on the Farmington Technology Park AUAR. Please forward on as necessary.

Tony Wippler
Planning Manager

Main: 651-280-6800 | Direct: 651-280-6822
430 Third St. Farmington, MN 55024
CITY OF FARMINGTON

From: TERRIE PEARSON <terrielynnpearso@aol.com>
Sent: Tuesday, September 24, 2024 8:37 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]Fwd: Comments on the Draft AUAR

You don't often get email from terrielynnpearso@aol.com. Learn why this is important

Sent from my iPhone

Begin forwarded message:

From: TERRIE PEARSON <terrielynnpearso@aol.com>
Date: September 24, 2024 at 8:33:24 PM CDT
To: twippler@farmingtomn.gov
Subject: Comments on the Draft AUAR

If Farmington insists on proceeding with the spot-zoning of the Fountain Hills Golf Course, there are a number of concerns that I would like addressed:
1. The electrical substation needs to be placed in the center of the development. No homeowner should have to look out his/her window at this or listen to the humming.
2. All noise emanating from buildings or traffic needs to be monitored and definite limits set. Who will do this monitoring?
3. This may be the second data center built in Farmington. Water usage must be defined and controlled to prevent the rest of the community from suffering water shortages in dry periods. Those of us who reside in Castle Rock rely on our own wells. Who will be responsible for drilling new wells if data center demands cause problems with ground water access?
4. Some of our homes are very close to the golf course property line. 250 feet is not enough of a setback. The minimum should be 500 feet.
5. All exterior lighting should be directed downward to prevent light pollution for surrounding residences. This is standard practice in Arizona, and should be possible here.

Terrie Pearson

2475 225th St. W.

Farmington, MN 55024

From: Denise May <cdmay@aol.com>
Sent: Wednesday, September 25, 2024 11:22 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]AUAR

PLEASE CONFIRM THAT THIS EMAIL WAS RECEIVED. THANK YOU.

Mr. Wippler,

We are submitting these comments concerning the Farmington Technology Park Alternative Urban Areawide Review.

Our property abuts the golf course property which is currently zoned <u>and platted</u> for residential use by Farmington when it was annexed. Our house and private well are 150 feet from the shared property line. The following are our concerns.

1. **Rezoning** – we oppose rezoning of the studied property from its recent zoning and current status of <u>residential</u> to mixed use commercial/industrial – for <u>ANY</u> proposed industrial development. We visited the same data centers in Iowa that the Farmington Planning Commission and Council visited. Data centers or any type of industrial development do not belong in residential areas. The buildings of the newer data centers we visited were set back far from the roads that surround them and far more than the 250 feet that Tract is proposing and there are not <u>any</u> homes abutting those properties or even close by. There might be plans for homes in the future near those sites but those residents will choose to live near the data centers. We don't have that same choice. The buildings on these sites are huge, especially on the Waukee site and again the set back for those buildings are far more than what Tract is proposing.
2. **Noise** – Noise regulations require a noise level at residential property levels not to exceed 60-65 decibels daytime, 50-55 nighttime. Current noise levels in our residential area are typically less than 40 decibels so the regulation levels are significantly higher than we currently experience. Who will police the noise levels? What happens if the noise levels are exceeded? Will the residents have to bring legal action? Who will pay for that? The data centers we visited in Iowa are set so far back from the road that we could only hear heavy traffic noise,
   which hovered around 50-60 decibels, we were not able to get close enough to the buildings to hear if there were noise from the buildings or not. Our house is 150 feet from the property line.
3. **Water usage** – We are concerned about our private well. MN DNR stated previously to the City of Farmington that there is a question as to whether or not there is enough water capacity

for all projects in the works. Also, the AUAR states that de-watering may be needed for construction which we are concerned will affect our private well.

4. **Lighting** – We understand that parking lots and buildings will be well lit because of security concerns. Being so close we are concerned about the illumination onto our property at night.
5. **Power Substations** – Tracts plan has power substations located on the perimeter of the property which will create not only additional noise but also an eye sore for anyone living nearby.
6. **Construction** – Because we live so close to what would be the construction site, we are concerned that there could be potential damage to the structure of our house, private well, or property during site prep. We are concerned about the disruption of our lives during the construction phase which will last as long as it takes to sell off the parcels to end users, which could be years before all the buildings are constructed.
7. **Visual Impact** – Any industrial building will absolutely change the neighborhood. Buildings 50-80 feet in height will be huge and so out of place next to the residences on three sides of the currently zoned residential property. The 21' berms shown in the renderings by Tract to show us what the finished technology park would look like from our properties would not be tall enough to mask the tall buildings from view. Also, the landscaping/trees on top of the berms will not grow to the size shown in the renderings for 5-10 years.
8. **Land Usage** – If the property is rezoned there would be a huge departure of land usage between anything industrial on the currently residentially zoned and platted site and the existing homes that share the property line. The rezoning to industrial would be incompatible with the existing surrounding residential properties.

Dan and Denise May
22265 Berring Ave
Farmington, MN. 55024

From: Salonek, Taylor <Taylor.Salonek@ampf.com>
Sent: Thursday, September 26, 2024 3:42 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]AUAR Public Comments & Concerns

Good Afternoon Tony,

I am writing to you regarding the concerns my family has regarding the proposed technology park in place of the Fountain Valley golf course in Farmington.

As you can see by my job title in my email signature I am a big fan of data and it plays a major role in my life. However, I do not believe putting an expansive technology park in the middle of existing neighborhoods is beneficial for the community. I realize you have heard this several times and the plans still seem to move forward, so I would like to know what is being done to hold Tract accountable for what they are promising. Also, what the city is doing to ensure whoever develops on this land does so in a way that is as minimally disruptive to the residents as possible.
Here are a few items that come to mind:

- Adequate setbacks, berm height and buffers to protect residents from sound and visual impacts
- Ensure water consumption, water runoff and electrical use does not have any impact on surrounding residents
- Ensure generators and outside lighting are in a location that has as little impact to residents as possible

To continue to grow our family in Farmington, we kindly ask that you create binding contracts with tract and whoever develops the land to hold them to the highest standards and ensure they are reprimanded appropriately shall they try to cut corners during the development process. We know this will ultimately provide benefit to Farmington, we just wish it wasn't going to be our new view out of our living room window.

Please take our concerns into consideration and provide a response on what will be done to address them.

Kindly your Calico Ct Resident,

Taylor Salonek
Data Scientist Manager | Enterprise Data, Analytics and Insights
Pronouns: she/her

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Ameriprise Financial
10887 Ameriprise Financial Center
Minneapolis, Minnesota 55474

From: Eszter Varga <esztervarga@hotmail.com>
Sent: Thursday, September 26, 2024 5:17 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]AUAR Feedback and Concerns
Importance: High

I, Eszter Varga, submit the following concerns regarding rezoning request and Technology Park development plans at the following NON-INDUSTRIAL parcels:

1. Fountain Valley Golf Course, 2830 220th St W, Farmington, MN 55024, parcel ID: 140050001012
2. Independent School District 192, south of 225th St W. (annexed from Castle Rock to Farmington), parcel ID: 070050076011
3. Residential lot adjacent to School District 192, parcel ID: 070050076012

DNR expressed concerns about water usage in the area, with consideration of the
There are many things to be concerned with and the way this will ultimately impact residents in the surrounding communities:

- "*Item 12 Water Resources (Roger Janzig Roger.janzig@metc.state.mn.us) The proposed projects and increased wastewater flow generated by the proposed new uses represent an added level of wastewater flow that may exceed the capacity of the existing regional wastewater conveyance system. This situation creates a potential risk of system backups resulting in untreated sewage flowing into basements and spills into the environment. The final AUAR will need to include additional information on potential wastewater flow from the proposed development scenarios to assess impacts on the Regional Wastewater System*."

- *The reach of the South Branch of the Vermillion River located in the study area is not a designated trout stream, however the AUAR site is upstream of a designated trout stream and impact to this reach will affect the downstream sections. Changes in base flow, chemistry, and temperature can all significantly impact downstream trout habitat. These could be influenced by groundwater wells as well as discharge from future development. Measures to mitigate and monitor to prevent impacts should be taken and it is recommended that DNR Fisheries staff review development plans*.

  - Setbacks- the current 250' setbacks are not adequate to ensure quality of life for the residents. We request a minimum of 500 feet setbacks. Please consider enforcing a serious level of mitigation through setbacks, buffers, berms, and landscape when shoehorning Minnesota's largest technology park in between RESIDENTIAL neighborhoods.

  - Berm height needs to be expanded from the current rendering to minimum of 14' and up to 20' heights. Please do not allow ambiguous verbiage of "up to".

  - Mitigation – landscape & berms to buffer should all be in place on exterior borders before any construction begins to help protect residents from noise and construction dust and ultimately reduce complaints to the city.

- Generators What mitigation is offered for residents whose front yard, driveway is impacted by construction on 225th Street West?

- & Heat exhaust locations: Requesting guarantee that exhaust fan and generator placements are installed or directed to the inner part of this development, NOT emitting all sound and heat directly at nearby homes.

- Light Pollution: Ensure that local residents homes will not be permanently lit up by commercial industrial style lights from this new project.

From: David J Puchalla <soccerguy2009@gmail.com>
Sent: Thursday, September 26, 2024 11:03 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]Alternative Urban Areawide Review (AUAR)

David Puchalla

3263 224th St W

Farmington, MN 55024

soccerguy2209@gmail.com

719-393-5569

26 September 2024

City Planning Committee
430 Third Street
Farmington, MN 55024

Dear Member of the City Planning Committee,

I am writing to express my **strong opposition** to both the proposed construction of a data center at the Fountain Valley Golf Course/the Angus property and the associated request for rezoning of the area. It is **absolutely unacceptable** to rezone residential to mixed-use commercial industrial when it is surrounded by residential property. While I recognize the need for advanced technological infrastructure, the potential negative impacts of this project on our community and environment outweigh the perceived benefits.

Negative Impact on the Community: The proposed location for the data center is currently zoned for highway business, low density, low/medium density, and medium density residential. Rezoning this area to accommodate a data center would bring increased traffic, noise, and industrial activity, adversely affecting the quality of life for nearby residents who are located only 250 feet away from the proposed data site. Further **evidence of the negative effect** is documented by WUSA9 a news station in Washington DC. They took audio samples from 700 feet (450 feet further than proposed in farmington), which verified a **perceivable increase** in noise. According to their interview with Braxton Boren, assistant professor of audio technology at American University,

"You could build a wall, and those wavelengths would by a process called diffraction, they would sort of

bend and go right over it.

You can't even block them in the normal way that you would with a lot of other sounds."

Residents interviewed by WUSA9 news **all complained about the data center noise**. Lastly, The CDC warns a noise not loud enough to cause hearing damage can still cause stress, anxiety, and even heart disease when continuously exposed to it.

Negative Environmental Concerns: Data centers are notorious for their high energy consumption and significant carbon footprint. As our city strives to meet its sustainability goals and reduce greenhouse gas emissions, endorsing a project that could counteract these efforts seems **misaligned with the City's 2040 Comprehensive Plan section 8 "Sustainability"**. The energy demands of a data center are often met by non-renewable sources, which could undermine our commitment to green energy. The City of Farmington owns and operates seven wells, which on average pumps about 835 million gallons from groundwater aquifers. According to the Alternative Urban Areawide Review, the proposed data center "*water resources in the general project area may become warmer, **more polluted**, and change in volume due to increased temperatures and runoff.*"

Negative Economic and Social Implications: Although data centers can create **temporary** construction jobs, long-term positions are typically specialized and may not provide meaningful employment opportunities for local residents. The rezoning and subsequent construction could also lead to decreased property values for the residential areas potentially resulting in gentrification and displacement of long-standing community members.

Alternative Solutions: I urge the City Planning Committee to carefully **reconsider** the need for rezoning and the construction of this data center. Instead, the city should vigorously **explore & encourage building residential homes in the existing residential zones**; the housing market demands such consideration. The 3 million-square-foot 'Project Bengal' industrial project is enough. Additionally, It would be beneficial to **explore alternative locations** such as the parcels west of Country Road 3 and east of the old Union Pacific railroad (PID: 140180025020, 140070076010, 140180001013). This location is not in established neighborhoods and is near the Cemstone Gravel Pit which is already a source of noise. Industrial zones north of 212th St W between Flagstaff Ave and Pilot Knob Road should be considered.

In conclusion, I **vehemently protest** & **strongly oppose** both the rezoning request and the construction of the data center. I believe that pursuing alternative approaches will better serve our city's long-term interests and uphold our commitment to sustainability and community well-being. Let's keep the farm in Farmington.

Thank you for your time and consideration.

Sincerely,

David Puchalla

Veteran, Major, US Air Force

From: David <davidsieburg@hotmail.com>
Sent: Thursday, September 26, 2024 2:24 PM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]AUAR comment

Tony,
Please ensure this reaches the RGU, Kimley Horn, and all relevant parties as public comment on the AUAR concerning the proposed industrial park or the new Farmington Technology Park project on the golf course and school properties.

There are several significant concerns if this project proceeds without the consent of the surrounding neighbors. This development will greatly impact residents in the nearby communities.

Rezoning: This area is not suitable for an industrial park or Minnesota's largest technology park. Please explain how this project fits into the surrounding area and provide guarantees on how it will not negatively impact residents' quality of life or property values.

Noise: Implement a pre-designed plan or fine system to ensure noise levels remain within acceptable limits. The penalties should be stringent enough to compel Tract and/or the end users to use advanced technology to maintain livable sound levels and avoid persistent issues.

Setbacks: The current 250-foot setbacks are insufficient to protect residents' quality of life. A minimum 500-foot setback would allow for additional mitigation if necessary. It is irresponsible and careless to place Minnesota's largest technology park within 300 feet of homes, families, and children. There are approximately 35 children west of the stop sign on Cambrian Way on 224th St W towards the golf course.

Berm Height: The berm height needs to be expanded from the current rendering to have minimum heights, not an "up to" height. Set a requirement for heights between 14 and 20 feet to help shield residents from sound and visual impacts.

Natural Buffer: Landscapes, berms, and buffers should be established on exterior borders before construction begins to protect residents from noise and construction dust, ultimately reducing complaints to the city.

Trees: Many trees on the golf course are dead or dying as they are at the end of their expected lifespan. This needs to be addressed by the Tract, not the end users. If the Tract is not responsible for providing landscape, buffers, berms, trees, etc., the final result will not match the promises made by them

Generators and Heat Exhaust Location: Provide new renderings that ensure exhaust fans and generators are placed or directed towards the inner part of the development, rather than emitting sound and heat towards nearby homes.

Lighting: Ensure that local residents' homes will not be permanently illuminated by commercial industrial lights from this project.

Traffic: Limit nighttime truck travel and construction activities.

Substation: Relocate the power substation away from residents and ensure it is concealed to avoid being an eyesore.

Communication Towers: how many? Where? Proper placement is vital.

Water Usage/Water Supply: According to the DNR the excess capacity in the City of Farmington municipal system is already planned to be used for the Farmington West Project Industrial Project (Project Bengal). It seems that the existing water infrastructure will NOT suffice for supplying the high water demands of a data center at this location. Furthermore, DNR technical review of the City of Farmington's water supply (see 11/12/2020 Groundwater Tech Memo in MPARS Permit #1959-0725) shows challenges with sitting new wells in the city, Proximity to the Vermillion River and its protected status as a trout stream, and interconnections among the Prairie du Chene/Jordan, Jordan and quaternary aquifers show that pumping in many areas of the city could be unsustainable. Additionally, there are many private domestic wells located around the city, and especially surrounding the proposed site. It may be difficult to obtain a large increase in water appropriation volume due to the sustainability standard (MN statute 103G.287 subd.5).

Wastewater: Clarify where the drainage and runoff will go. It has been stated that the current stormwater system cannot handle this. With limited greenspace after the final build-out, how will you ensure local ponds are not overwhelmed with runoff and that residents won't experience flooding or damage the Vermillion River.

Power Use: is this build out of substations and usage sustainable? Will this project cause residents' electric bills to increase?

I would appreciate a response to each point. If this rezoning proceeds, I hope the City of Farmington will secure concessions and guarantees, not empty promises and assumptions, for the residents most impacted by this potential rezoning. Make sure Tract is held accountable for all of the end users following their "plan."

Thank you for your time. Please feel free to reach out with any questions or for clarification.

Sincerely,

David Sieburg
224th St W
Farmington, MN 55024

From: Jeff Schottler <schottler2@gmail.com>
Sent: Thursday, September 26, 2024 11:00 AM
To: Tony Wippler <twippler@farmingtonmn.gov>
Cc: Joshua Hoyt <JHoyt@farmingtonmn.gov>; Steve Wilson <swilson@farmingtonmn.gov>; Lynn Gorski <lgorski@farmingtonmn.gov>; Holly Bernatz <hbernatz@farmingtonmn.gov>; Nick Lien <nlien@farmingtonmn.gov>; Katie Bernhjelm <kbernhjelm@farmingtonmn.gov>; Jared Johnson <jjohnson@farmingtonmn.gov>
Subject: [EXTERNAL]AUAR Review public comment

Hi Tony,

Please read through the following list of concerns and suggestions regarding the proposed industrial park or new FarmingtonTechnologypark project on the golf course and school properties.

Please see that this gets to the RGU or whomever needs this to be added as public comment on the AUAR.

There are many things to be concerned with and the way this will ultimately impact residents in the surrounding communities.

- Setbacks- the current 250' setbacks are not adequate to ensure quality of life for the residents. A 500' setbacks would allow for additional mitigation if necessary down the road. To place Minnesotas largest technology park under 300' from homes, families, and choldren is irresponsible and wreckless. Please consider enforcing a serious level of mitigation through setbacks, buffers, birms, and landscape when shoehorning minnesots largest technology park in between neighborhoods. Some of theese homes will be under 300' away from 50' tall buildings, we need protection from this. If we are going to change zoning and allow this why are we not setting a new standard for resident protection.

- Birm height- birm height needs to be expanded from the current rendering to minimum of 14' and up to 20' heights. This will help protect residents from sound and visual impacts.

- mitigation- landscape, birms, buffers should all be in place on exterior borders before any construction begins to help protect residents from noise and construction dust and ultimately reduce complaints to the city.

-generators and heat exhaust location- please provide new renderings which guarantee exhaust fan placement and generator placement to be installed or directed to the inner part of this development vs emitting all sound and heat directly at nearby homes.

- lighting- provide and ensure that local residents homes will not be permanently lit up by commercial industrial style lights from this new project.

- fencing- define exact plans and location of fencing. Many homes have enjoyed the use of 4'-8' of golfcourse property since it was built because of the golfcourse fence. Do not go into or past the current fence locations. This small area has been part of our yards and maintained by us residents. If tract or whomever comes 6' into my yard to the exact property border its an issue. The current golfcourse fence should be left or replaced in its exact location. We are all giving up a ton to deal with this in our backyards they can give up the continued use of theese areas. Theese areas will be in the buffer zone anyways and makes absolutely no sense to impose more destruction to residents.

-trees- many of the tress on the golfcourse are dead or will die as they are at the end of their expected life span. This needs to be addressed by tract and not the end users, if tract is permitted to provide none of the landscape, buffers, birms, trees, etc we will never end up with a reality that compares to their renderings.

-traffic- limit nighttime truck travel and construction

- cooling types- put a written list of approved cooling systems allowed near residential. Microsoft has some amazingly quiet tech parks. Implement and enforce only the newest, best, and quietest types.

- substation- relocate power substation away from residents and hide it so that is not the big eyesore of the area.

-noise- put some type of pre-designed plan or fine in place ahead of time to guarantee noise decibel levels are never broken. Make this serious enough of a fine or penalty that tract and the end users are forced to use good technology to maintain liveable sound levels and not cause unstoppable issues.

-south fork branch Vermillion river- this river is the only river in a suburban area that naturally sustains trout. This is an important river and stream that holds more wildlife than most cities. This needs to be protected and monitored by the DNR. Please show proof that this specific issue has been mentioned to the DNR

-rezoning- this area is not compatible for an industrial park or Minnesotas largest technology park. Please shed light on how you think this firs in with the surrounding area and what guarantee you will make to residents on how this will not impact their current quality of life or property values.

-WATER- please provide exactly where the water will come from and what the maximum allowable limit for this new industrial park will be.

-waste water- where will the drainage and runoff go to. It has been publicly stated that our current storm water system can not handel this. With little greenspace left after final build out how will you guarantee local ponds are not overwhelmed with water run off and that local residents won't flood out from this.

-power use- will this cause resident electric bills to increase. Typically the entire community ends up with higher utilities to aid in infrastructure build out.

--zoning deviations- no deviations in excess of MUCI zoning should be allowed. Please show how theese deviations provide any benefit to the community. Please show how the largest technology park in Minnesota is good to be less than 300' from a residence.

I hope that this gets some serious consideration and I would love a response to each point on here. If we are allowing this rezoning to happen I hope the city of farmington will go to bat for its people and demand mitigation levels that are similar to what I have suggested.

This can be done if everyone involved works together. So far it seems like the city and tract are the only ones with a say so we hope this helps guide what residents need to see enforced in order to live the goid life we are used to right here in the Great city of Farmington Minnesota.

Thank you for your time and please feel free to reach out with questions or clarity on this if needed.

Jeff Schottler
Schottler2@gmail.com
651-248-0329

Outlook

FW: [EXTERNAL]Comments on Fountain Valley Golf Course Rezoning

From Tony Wippler <twippler@farmingtonmn.gov>
Date Wed 9/25/2024 10:31 AM
To Deanna Kuennen <dkuennen@farmingtonmn.gov>; Alison Harwood <aharwood@wsbeng.com>

EXTERNAL EMAIL

Additional citizen comments regarding Tech Park AUAR. Please forward as necessary.

Tony Wippler
Planning Manager
Main: 651-280-6800 | Direct: 651-280-6822
430 Third St. Farmington, MN 55024
City of Farmington
-----Original Message-----
From: mark pearson <markrpearson1@gmail.com>
Sent: Wednesday, September 25, 2024 10:29 AM
To: Tony Wippler <twippler@farmingtonmn.gov>
Subject: [EXTERNAL]Comments on Fountain Valley Golf Course Rezoning

[You don't often get email from markrpearson1@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification
]

I don't believe that rezoning the golf course and the farm land south of it is compatible with the residences that surround it.
I don't believe there are any measures that can be taken to mitigate the disruption in the lives of hundreds of Farmington and Castle Rock residents. There are no other buildings in Farmington that are as expansive or as tall as what is proposed here.

If there are benefits to the larger community, besides possible tax revenue, they should be delineated in the AUAR document. There are so

many questions about possible construction that have not been defined in this document. There need to be limits placed on water and electrical consumption by the tenants of this development, as well as air, water, light and noise pollution.
Design standards should be established as early as possible relating to all of these issues.

Mark Pearson
2475 225th St. W.
Farmington, Mn 55024