

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE

2. APPROVAL OF AGENDA

3. PRESENTATIONS, PROCLAMATIONS AND ACKNOWLEDGMENTS

- a. Youth Commission Report

4. RESPONSE TO PUBLIC COMMENT

5. PUBLIC COMMENT

Individuals will be allowed to address the Council on subjects that are not a part of the meeting agenda. Typically, replies to the concerns expressed will be made via letter or phone call within a week or at the following council meeting.

6. CONSENT AGENDA

- a. Bill Listings
- b. Minutes of the June 3, 2025 Regular Meeting Minutes
- c. Minutes of the June 3, 2025 Work Session Proceedings
- d. Declaration of Suplus Property
- e. Professional Services Contract for Fire Service Evaluation for Fire Department
- f. Fire Relief Fund Benefit Proposal
- g. Amending City Code Cannabis and Hemp Business Regulations
- h. Leprechaun Days - Service Agreement
- i. Rosemount Woods Acceptance
- j. Dakota East AUAR
- k. Request by Flint Hills Resources for an Interim Use Permit to construct a warehouse tent

7. PUBLIC HEARINGS

8. UNFINISHED BUSINESS

9. NEW BUSINESS

10. ANNOUNCEMENTS

- a. City Staff Updates

- b. Upcoming Community Calendar

11. ADJOURNMENT

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Youth Commission Report	AGENDA SECTION: PRESENTATIONS, PROCLAMATIONS AND ACKNOWLEDGMENTS
PREPARED BY: Sarah Saunders, Deputy City Clerk	AGENDA NO. 3.a.
ATTACHMENTS:	APPROVED BY: LM
RECOMMENDED ACTION: Receive Youth Commission Annual Report	

BACKGROUND

Last term's Youth Commission Chairperson, Molly Pitzen, was Chair for the past 2024-2025 year and is completing her duties as Chair by presenting the annual report.

RECOMMENDATION

Staff recommends the Council receive the Youth Commission's annual report.

Council Check Register by GL
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5/30/2025 -- 6/12/2025

Check #	Date	Amount	Supplier / Explanation	PO #	Doc No	Inv No	Account No	Subledger	Account Description	Business Unit
10046	6/6/2025		103061 ICMA RETIREMENT CORP							
	5/29/2025	3,051.74			5891	0529251138377	7020.2134.01		DEFERRED COMPENSATION - MISSIO	PAYROLL FUND
		3,051.74								
162464	6/5/2025		102886 AT&T MOBILITY							
	6/5/2025	539.78	FIRE DEPT DATA LINES		6044	287329761371X06 032025	1220.6321		TELEPHONE	FIRE
	6/5/2025	539.78	FIRE DEPT DATA LINES		6045	287329761371X05 032025	1220.6321		TELEPHONE	FIRE
	6/5/2025	539.78	FIRE DEPT DATA LINES		6046	287329761371X04 032025	1220.6321		TELEPHONE	FIRE
	6/5/2025	538.58	FIRE DEPT DATA LINES		6047	287329761371X03 032025	1220.6321		TELEPHONE	FIRE
	6/5/2025	3,007.71	MAY PHONE BILL		6048	287328492583X06 032025	1210.6321		TELEPHONE	POLICE
	6/5/2025	2,970.40	APRIL PHONE BILL		6049	287328492583X05 032025	1210.6321		TELEPHONE	POLICE
	6/5/2025	2,970.40	MARACH PHONE BILL		6050	287328492583X04 032025	1210.6321		TELEPHONE	POLICE
	6/5/2025	2,970.40	FEBRUARY PHONE BILL		6051	287328492583X03 032025	1210.6321		TELEPHONE	POLICE
	6/5/2025	186.26	SCADA DIALER		6052	287310280659X06 032025A	6100.6321		TELEPHONE	WATER UTILITY
	6/5/2025	186.26	SCADA DIALER		6053	287310280659X06 032025B	6200.6321		TELEPHONE	SEWER UTILITY
	6/5/2025	186.26	SCADA DIALER		6054	287310280659X06 032025C	6300.6321		TELEPHONE	STORM WATER UTILITY
	6/5/2025	186.26	SCADA DIALER		6055	287310280659X05 032025A	6100.6321		TELEPHONE	WATER UTILITY
	6/5/2025	186.26	SCADA DIALER		6056	287310280659X05 032025B	6200.6321		TELEPHONE	SEWER UTILITY
	6/5/2025	186.26	SCADA DIALER		6057	287310280659X05 032025C	6300.6321		TELEPHONE	STORM WATER UTILITY
	6/5/2025	179.06	SCADA DIALER		6058	287310280659X04 032025A	6100.6321		TELEPHONE	WATER UTILITY
	6/5/2025	179.07	SCADA DIALER		6059	287310280659X04 032025B	6200.6321		TELEPHONE	SEWER UTILITY
	6/5/2025	179.07	SCADA DIALER		6060	287310280659X04 032025C	6300.6321		TELEPHONE	STORM WATER UTILITY
	6/5/2025	174.85	SCADA DIALER		6061	287310280659X03 032025A	6100.6321		TELEPHONE	WATER UTILITY

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162464	6/5/2025		102886 AT&T MOBILITY						Continued...	
	6/5/2025	174.85	SCADA DIALER		6062	287310280659X03 032025B	6200.6321		TELEPHONE	SEWER UTILITY
	6/5/2025	174.86	SCADA DIALER		6063	287310280659X03 032025C	6300.6321		TELEPHONE	STORM WATER UTILITY
		<u>16,256.15</u>								
162465	6/12/2025		106005 ABM							
	6/12/2025	9,613.66	JUNE CLEANING		6085	10000303377	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		<u>9,613.66</u>								
162466	6/12/2025		100109 ADVANTAGE EMBLEM & SCREEN PRINTING							
	6/12/2025	1,026.85	ROSEMOUNT PD/PW CAMPUS PATCH		6086	0691507-IN	4316.6460		MEETING EXPENSE	2023-08 - PD & PW BUILDING (20
		<u>1,026.85</u>								
162467	6/12/2025		100413 AMERICAN FLAGPOLE & FLAG CO							
	6/12/2025	1,789.35	FLAGS		6087	200000	1340.6233		BUILDING REPAIRS SUPPLIES	GOVERNMENT BUILDINGS
		<u>1,789.35</u>								
162468	6/12/2025		103380 AMPION PBC							
	6/12/2025	261.70	SOLAR SUBSCRIPTIONS		6088	202506000189795 3A	1340.6371		ELECTRIC	GOVERNMENT BUILDINGS
	6/12/2025	1,031.42	SOLAR SUBSCRIPTIONS		6089	202506000189795 3B	6100.6371	W107	ELECTRIC	WATER UTILITY
	6/12/2025	977.77	SOLAR SUBSCRIPTIONS		6090	202506000189795 3C	6100.6371	W110	ELECTRIC	WATER UTILITY
		<u>2,270.89</u>								
162469	6/12/2025		103336 ANDERSON, TODD							
	6/12/2025	350.00	RAS LUNCHEON ENTERTAINMENT		6301	3190	1510.6310	00040603	PROFESSIONAL SERVICES	PARK & RECREATION
		<u>350.00</u>								
162470	6/12/2025		101175 BERRY COFFEE COMPANY							
	6/12/2025	102.49	COFFEE SUPPLIES FOR SC		6091	1061965	1510.6226	00016100	OTHER OPERATING SUPPLIES	PARK & RECREATION
		<u>102.49</u>								
162471	6/12/2025		101296 BOLTON & MENK INC							
	6/12/2025	9,625.50	SANITARY LIFT STATION NO. 13		6092	0364061	4321.6313		ENGINEERING SERVICES	2024-22 - SANITARY LIFT STATIO
	6/12/2025	18,069.50	SE TRUNK SEWER EXT		6093	0363381	4679.6313		ENGINEERING SERVICES	2024-31 - TRACT
		<u>27,695.00</u>								

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162472	6/12/2025		106307 BOOTH, KATIE						Continued...	
	6/12/2025	300.00	SC DAMAGE DEPOSIT REFUND		6205	88324208	1000.2204	00016100	P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
		300.00								
162473	6/12/2025		103530 BRAUN INTERTEC CORP							
	6/12/2025	1,951.00	UMORE PARK BUILDING		6094	B429625	4100.6313	PUMORB	ENGINEERING SERVICES	PARK IMPROVEMENT
		1,951.00								
162474	6/12/2025		101412 BUNKER BEACH WATER PARK							
	6/12/2025	1,697.56	WATERPARK CAMP 1		6095	1058370	1510.6226	00040202	OTHER OPERATING SUPPLIES	PARK & RECREATION
		1,697.56								
162475	6/12/2025		101385 BUSINESS ESSENTIALS							
	6/12/2025	82.96	OFFICE SUPPLIES		6096	WO-1345246-1	1510.6210		OFFICE SUPPLIES	PARK & RECREATION
		82.96								
162476	6/12/2025		106153 C-AIRE SERVICES, LLC							
	6/12/2025	866.81	PM FIRE 1 COMP		6097	001901	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	647.52	PM FIRE 2 AIR COMP		6098	001902	1330.6384		MACHINERY & EQUIPMENT REPAIRS	FLEET MAINTENANCE
		1,514.33								
162477	6/12/2025		103489 CALLTOWER							
	6/12/2025	2,217.36	APR'25 CTADMIN TEAMS		6099	202587731	1120.6321		TELEPHONE	GENERAL GOVERNMENT
		2,217.36								
162478	6/12/2025		101446 CCP NI MASTER TENANT 4, LLC							
	6/12/2025	3,573.04	APR'25 SOLAR SUBSCRIPTION		6101	APR 2025A	1340.6371		ELECTRIC	GOVERNMENT BUILDINGS
	6/12/2025	211.56	APR'25 SOLAR SUBSCRIPTION		6102	APR 2025B	6100.6371	W114	ELECTRIC	WATER UTILITY
	6/12/2025	1,945.28	APR'25 SOLAR SUBSCRIPTION		6103	APR 2025C	6100.6371	W107	ELECTRIC	WATER UTILITY
		5,729.88								
162479	6/12/2025		100162 CEMSTONE PRODUCTS CO							
	6/12/2025	1,045.00	CONCRETE FOR SIDEWALK		6104	7770828	1320.6530		IMPROVEMENTS OTHER THAN BUILDI	STREET MAINTENANCE
		1,045.00								
162480	6/12/2025		100101 CERTIFIED RECYCLING LLC							
	6/12/2025	120.00	MATTRESSES FROM ROAD		6105	87410	1320.6310		PROFESSIONAL SERVICES	STREET MAINTENANCE
	6/12/2025	250.00	RECYCLING		6106	84280	1320.6317		OTHER PROFESSIONAL SERVICES	STREET MAINTENANCE
		370.00								
162481	6/12/2025		102772 CHARTER COMMUNICATIONS							

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162481	6/12/2025		102772 CHARTER COMMUNICATIONS						Continued...	
	6/12/2025	153.75	MONTHLY DUES 05/25		6107	113140301051425	1220.6322		INTERNET	FIRE
	6/12/2025	9,323.25	CHARTER CABLE INSTALL		6108	248270801050125	4316.6570		OFFICE EQUIP, FURNISHINGS, IT	2023-08 - PD & PW BUILDING (20
		9,477.00								
162482	6/12/2025		106166 CINTAS CORPORATION							
	6/12/2025	105.87	MATS		6109	20412537	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	36.69	MATS		6110	20412525	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	137.42	MATS		6111	20412534	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	32.57	MATS		6112	20412538	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	274.87	MATS		6113	20412536	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		587.42								
162483	6/12/2025		103555 COLLINS ELECTRICAL							
	6/12/2025	361.18	RED STOP LIGHT REPLACEMENT		6114	244574.01	1320.6383		IMPROVEMENT REPAIRS AND MAINTENANCE	STREET MAINTENANCE
		361.18								
162484	6/12/2025		103559 COMPUTER INTEGRATION TECH							
	6/12/2025	4,198.00	CITY HALL ACCESS CONTRL PROJCT		6115	404880	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		4,198.00								
162485	6/12/2025		101554 CORE & MAIN LP							
	6/12/2025	88.48	RED PAINT FOR LOCATES		6116	X105504	6400.6237		UTILITY SYSTEM MAINTENANCE SUP	STREET LIGHT UTILITY
	6/12/2025	100.83	BLUE MARKING FLAGS		6117	X083423	6100.6237		UTILITY SYSTEM MAINTENANCE SUP	WATER UTILITY
	6/12/2025	156.00	PAINT & CB REPAIR LIDS		6118	X058713A	6200.6237		UTILITY SYSTEM MAINTENANCE SUP	SEWER UTILITY
	6/12/2025	471.72	PAINT & CB REPAIR LIDS		6119	X058713B	6100.6237		UTILITY SYSTEM MAINTENANCE SUP	WATER UTILITY
	6/12/2025	478.12	FLUORIDE REAGENTS		6120	INV0017276	6100.6225		CHEMICAL SUPPLIES	WATER UTILITY
		1,295.15								
162486	6/12/2025		103560 CORPORATE MECHANICAL INC							
	6/12/2025	3,267.50	VICTAULIC FITTING REPLACEMENT:		6121	W84409A	1510.6384		MACHINERY & EQUIPMENT REPAIRS	PARK & RECREATION
	6/12/2025	3,267.50	VICTAULIC FITTING REPLACEMENT:		6122	W84409B	6500.6384		MACHINERY & EQUIPMENT REPAIRS	ICE ARENA
	6/12/2025	153.00	MAY BOILER SHUT DOWN		6123	W84377	1510.6384	00016100	MACHINERY & EQUIPMENT REPAIRS	PARK & RECREATION
		6,688.00								
162487	6/12/2025		103565 CROWN RENTAL							
	6/12/2025	40.70	PROPANE		6124	427295-2	1330.6222		FUELS	FLEET MAINTENANCE
	6/12/2025	1,025.45	SUPPLIES FOR OPEN HOUSE		6125	426773-1	4316.6460		MEETING EXPENSE	2023-08 - PD & PW BUILDING (20
		1,066.15								
162488	6/12/2025		101709 CUSTOM CAP & TIRE							

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162488	6/12/2025		101709 CUSTOM CAP & TIRE						Continued...	
	6/12/2025	1,084.92	TIRES		6126	270076327	1330.6232		TIRES	FLEET MAINTENANCE
	6/12/2025	970.12	TIRES		6127	270076384	1330.6232		TIRES	FLEET MAINTENANCE
	6/12/2025	1,036.64	TIRES		6128	270076614	1330.6232		TIRES	FLEET MAINTENANCE
		3,091.68								
162489	6/12/2025		103568 DAKOTA AWARDS & ENGRAVING							
	6/12/2025	15.00	RACHEL STREIFF NAME PLATE		6129	29472	1120.6210		OFFICE SUPPLIES	GENERAL GOVERNMENT
	6/12/2025	108.00	NAME TAGS YOUTH COMMISSIONERS		6130	29473	1120.6210		OFFICE SUPPLIES	GENERAL GOVERNMENT
	6/12/2025	30.00	ISAAC LOCKER/CUBICAL PLATE		6131	29364	1210.6242		MINOR EQUIPMENT	POLICE
		153.00								
162490	6/12/2025		103587 DAKOTA ELECTRIC ASSOCIATION							
	6/12/2025	19.11	WELCOME SIGN - NORTH		6132	200010050261 05/25	6400.6371		ELECTRIC	STREET LIGHT UTILITY
	6/12/2025	4,041.80	WELL# 16		6133	200010007317 05/25	6100.6371	W116	ELECTRIC	WATER UTILITY
	6/12/2025	36.66	STORM DRAIN LIFT STATION #7		6134	200005601588 05/25	6300.6371	SWLS307	ELECTRIC	STORM WATER UTILITY
	6/12/2025	27.96	SIREN# 13		6135	200003776226 05/25	1320.6371		ELECTRIC	STREET MAINTENANCE
	6/12/2025	19.99	WENSMANN POND MONITORING ST'N		6136	200003157294 05/25	6300.6371		ELECTRIC	STORM WATER UTILITY
	6/12/2025	12.91	JAYCEE PARK CONTROL BLDG		6137	200002005379 05/25	1520.6371		ELECTRIC	PARKS MAINTENANCE
		4,158.43								
162491	6/12/2025		101673 DUNDAS SOLAR HOLDINGS LLC							
	6/12/2025	12,699.13	APR'25 SOLAR SUBSCRIPTION		6138	2505-6951A	6500.6371		ELECTRIC	ICE ARENA
		12,699.13								
162492	6/12/2025		103603 EARL F ANDERSEN INC							
	6/12/2025	268.80	LOWER 150TH STREET BLADES		6139	0139734-IN	1320.6236		SIGN REPAIR SUPPLIES	STREET MAINTENANCE
	6/12/2025	90.00	ADOPT A PARK SIGNS		6140	0139735-IN	1510.6234	00040699	STREET MAINTENANCE SUPPLIES	PARK & RECREATION
		358.80								
162493	6/12/2025		103605 ECM PUBLISHERS INC							
	6/12/2025	3,000.00	CITY WIDE GARAGE SALE		6141	1047142	1510.6342	00040702	OTHER ADVERTISING	PARK & RECREATION
		3,000.00								
162494	6/12/2025		103607 ECOLAB PEST							

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162494	6/12/2025		103607 ECOLAB PEST						Continued...	
	6/12/2025	750.00	PEST CONTROL		6142	8151230	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	49.39	PEST CONTROL		6143	8385664	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	61.50	RCC PEST CONTROL		6144	2053669A	1510.6384		MACHINERY & EQUIPMENT REPAIRS	PARK & RECREATION
	6/12/2025	61.50	RCC PEST CONTROL		6145	2053669B	6500.6384		MACHINERY & EQUIPMENT REPAIRS	ICE ARENA
		922.39								
162495	6/12/2025		103620 FIRE RELIEF ASSOCIATION							
	6/12/2025	1,000.00	FF SUPPL REIMB- T. BIGALK RET.		6146	2025-1 SBR	1220.6456		OTHER MISCELLANEOUS CHARGES	FIRE
		1,000.00				REIMB				
162496	6/12/2025		106293 FRATTALONE COMPANIES							
	6/12/2025	2,000.00	REFUND HYDRANT METER DEPOSIT		6147	06.2025 REFUND	6100.2201		DEPOSITS PAYABLE	WATER UTILITY
		2,000.00				PAYMENT				
162497	6/12/2025		103630 FRONTIER							
	6/12/2025	1,883.31	PHONE,INTERNET,& CITY WIFI SRV		6148	651-188-0017	1120.6321		TELEPHONE	GENERAL GOVERNMENT
						05/25A				
	6/12/2025	106.40	PHONE,INTERNET,& CITY WIFI SRV		6149	651-188-0017	1120.6321		TELEPHONE	GENERAL GOVERNMENT
						05/25B				
	6/12/2025	83.33	PHONE,INTERNET,& CITY WIFI SRV		6150	651-188-0017	6100.6321		TELEPHONE	WATER UTILITY
						05/25C				
	6/12/2025	31.87	PHONE,INTERNET,& CITY WIFI SRV		6151	651-188-0017	6100.6321	WH102	TELEPHONE	WATER UTILITY
						05/25D				
	6/12/2025	31.86	PHONE,INTERNET,& CITY WIFI SRV		6152	651-188-0017	6100.6321	WH103	TELEPHONE	WATER UTILITY
						05/25E				
	6/12/2025	7.23	PHONE,INTERNET,& CITY WIFI SRV		6153	651-188-0017	6100.6321		TELEPHONE	WATER UTILITY
						05/25F				
	6/12/2025	7.23	PHONE,INTERNET,& CITY WIFI SRV		6154	651-188-0017	6200.6321		TELEPHONE	SEWER UTILITY
						05/25G				
	6/12/2025	7.23	PHONE,INTERNET,& CITY WIFI SRV		6155	651-188-0017	6300.6321		TELEPHONE	STORM WATER UTILITY
						05/25H				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6156	651-188-0017	6100.6321		TELEPHONE	WATER UTILITY
						05/25I				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6157	651-188-0017	6200.6321		TELEPHONE	SEWER UTILITY
						05/25J				
	6/12/2025	20.55	PHONE,INTERNET,& CITY WIFI SRV		6158	651-188-0017	6300.6321		TELEPHONE	STORM WATER UTILITY
						05/25K				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6159	651-188-0017	6100.6321		TELEPHONE	WATER UTILITY

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162497	6/12/2025		103630 FRONTIER						Continued...	
						05/25L				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6160	651-188-0017	6200.6321		TELEPHONE	SEWER UTILITY
						05/25M				
	6/12/2025	20.55	PHONE,INTERNET,& CITY WIFI SRV		6161	651-188-0017	6300.6321		TELEPHONE	STORM WATER UTILITY
						05/25N				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6162	651-188-0017	6100.6321		TELEPHONE	WATER UTILITY
						05/25O				
	6/12/2025	20.54	PHONE,INTERNET,& CITY WIFI SRV		6163	651-188-0017	6200.6321		TELEPHONE	SEWER UTILITY
						05/25P				
	6/12/2025	20.55	PHONE,INTERNET,& CITY WIFI SRV		6164	651-188-0017	6300.6321		TELEPHONE	STORM WATER UTILITY
						05/25Q				
	6/12/2025	17.57	PHONE,INTERNET,& CITY WIFI SRV		6165	651-188-0017	6100.6321	W107	TELEPHONE	WATER UTILITY
						05/25R				
	6/12/2025	17.57	PHONE,INTERNET,& CITY WIFI SRV		6166	651-188-0017	1120.6321		TELEPHONE	GENERAL GOVERNMENT
						05/25S				
	6/12/2025	1,750.00	PHONE,INTERNET,& CITY WIFI SRV		6167	651-188-0017	1120.6322		INTERNET	GENERAL GOVERNMENT
						05/25T				
		<u>4,128.49</u>								
162498	6/12/2025		100156 GERTEN GREENHOUSES INC-446133							
	6/12/2025	622.50	FIELD DRY RAAA		6168	241033/12	1510.6226		OTHER OPERATING SUPPLIES	PARK & RECREATION
	6/12/2025	79.55	FERTILIZER AND WEED CONTROL		6169	240293/12	1330.6225		CHEMICAL SUPPLIES	FLEET MAINTENANCE
	6/12/2025	1,793.40	SEED FOR FLINT RENO		6170	K35307/12	1520.6226	PFLINT	OTHER OPERATING SUPPLIES	PARKS MAINTENANCE
	6/12/2025	1,721.90	CHEMICAL		6171	240709/12	1520.6225		CHEMICAL SUPPLIES	PARKS MAINTENANCE
	6/12/2025	<u>462.00</u>	POTTING SOIL		6172	135389/30	1520.6220		OPERATING SUPPLIES	PARKS MAINTENANCE
		4,679.35								
162499	6/12/2025		100734 GOLDEN OAK TREE SERVICE INC							
	6/12/2025	4,000.00	TREE REMOVAL		6173	06.2025	1110.6235		LANDSCAPING SUPPLIES	LEGISLATIVE CONTROL
						PAYMENT2				
	6/12/2025	4,000.00	TREE REMOVAL		6174	06.2025	1110.6235		LANDSCAPING SUPPLIES	LEGISLATIVE CONTROL
						PAYMENT3				
	6/12/2025	3,400.00	INNISFREE TREE REMOVAL		6175	06.2025	1110.6235		LANDSCAPING SUPPLIES	LEGISLATIVE CONTROL
						PAYMENT1				
		<u>11,400.00</u>								
162500	6/12/2025		103635 GOPHER STATE ONE-CALL							
	6/12/2025	508.95	LOCATES		6176	5050727A	6100.6310		PROFESSIONAL SERVICES	WATER UTILITY
	6/12/2025	508.95	LOCATES		6177	5050727B	6200.6310		PROFESSIONAL SERVICES	SEWER UTILITY
	6/12/2025	508.95	LOCATES		6178	5050727C	6300.6310		PROFESSIONAL SERVICES	STORM WATER UTILITY

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162500	6/12/2025		103635 GOPHER STATE ONE-CALL						Continued...	
		1,526.85								
162501	6/12/2025		103639 GRAINGER							
	6/12/2025	32.15	12V BATTERY PANIC BUTTONS		6179	9520644411	1210.6242		MINOR EQUIPMENT	POLICE
		32.15								
162502	6/12/2025		105746 GRANEY, MAGGIE							
	6/12/2025	7.50	REFUND TUESDAY YOGA		6216	06.2025 REFUND	1000.2204		P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
						PAYMENT				
		7.50								
162503	6/12/2025		100387 GRAPHIC DESIGN INC							
	6/12/2025	1,490.00	PRINTING COSTS		6180	QB59379	4316.6350		PRINTING COSTS	2023-08 - PD & PW BUILDING (20
	6/12/2025	644.00	PRINTING		6181	QB59378	4316.6350		PRINTING COSTS	2023-08 - PD & PW BUILDING (20
	6/12/2025	2,320.14	NEWSLETTER		6182	QB59321A	1140.6323		POSTAGE	COMMUNICATIONS
	6/12/2025	3,457.00	NEWSLETTER		6183	QB59321B	1140.6350		PRINTING COSTS	COMMUNICATIONS
		7,911.14								
162504	6/12/2025		105731 HAWKINS POND HOA							
	6/12/2025	270.97	CITY COST SHARE - HAWKINS POND		6184	06.2025	6300.6385		OTHER REPAIRS AND MAINTENANCE	STORM WATER UTILITY
						MAINTENANCE PMT				
		270.97								
162505	6/12/2025		103650 HIGHLAND SANITATION & RECYCLING							
	6/12/2025	320.97	MAY TRASH SERVICE		6185	0001404805A	1510.6374		TRASH	PARK & RECREATION
	6/12/2025	303.81	MAY TRASH SERVICE		6186	0001404805B	6500.6374		TRASH	ICE ARENA
	6/12/2025	94.50	MAY TRASH SERVICE		6187	0001404805C	1510.6374	00040704	TRASH	PARK & RECREATION
	6/12/2025	64.74	MAY TRASH SERVICE		6188	0001404805D	1510.6374	00016100	TRASH	PARK & RECREATION
	6/12/2025	4,851.78	MAY TRASH SERVICE		6189	0001404805E	1340.6374		TRASH	GOVERNMENT BUILDINGS
		5,635.80								
162506	6/12/2025		100672 HOSE/CONVEYORS INC							
	6/12/2025	199.61	HOSE PARTS		6190	00114087	1520.6231		EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
		199.61								
162507	6/12/2025		105562 HOTSYS MINNESOTA							
	6/12/2025	572.01	DETERGENT		6191	25464	1330.6221		CLEANING SUPPLIES	FLEET MAINTENANCE
	6/12/2025	630.99	SOAP SOLUTION FOR WASH		6192	25242	4316.6221		CLEANING SUPPLIES	2023-08 - PD & PW BUILDING (20
		1,203.00								

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162508	6/12/2025		106306 HUSS, CARA						Continued...	
	6/12/2025	150.00	DD REFUND		6100	87718033	1000.2204	PJAYCE	P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
		150.00								
162509	6/12/2025		100651 I STATE TRUCK CENTER							
	6/12/2025	106.31	PARTS		6193	C242928225:01	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
		106.31								
162510	6/12/2025		100340 IN CONTROL INC							
	6/12/2025	5,636.00	LIFT 7 REPLACEMENT		6194	S-INV02711	6200.6310		PROFESSIONAL SERVICES	SEWER UTILITY
	6/12/2025	5,636.00	LIFT 8 REPLACEMENT		6195	S-INV02719	6200.6310		PROFESSIONAL SERVICES	SEWER UTILITY
		11,272.00								
162511	6/12/2025		103655 INDEPENDENT BLACK DIRT							
	6/12/2025	300.00	BLACK DIRT		6196	37928	1320.6235		LANDSCAPING SUPPLIES	STREET MAINTENANCE
	6/12/2025	84.00	BLACK DIRT		6197	37918	1320.6235		LANDSCAPING SUPPLIES	STREET MAINTENANCE
	6/12/2025	66.00	GARDEN SOIL		6198	37823	1520.6220		OPERATING SUPPLIES	PARKS MAINTENANCE
		450.00								
162512	6/12/2025		100547 INNOVATIVE OFFICE SOLUTIONS							
	6/12/2025	2,600.00	FURNITURE STORAGE		6199	CIN128834	1510.6391		BUILDING RENTALS	PARK & RECREATION
		2,600.00								
162513	6/12/2025		100538 INTERSTATE BATTERY SYSTEM OF MINNEAPOLIS							
	6/12/2025	124.95	PARTS		6200	220077313	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
		124.95								
162514	6/12/2025		100163 IRISH SPORTS DOME LLC							
	6/12/2025	7,200.00	DOME RENTAL SUMMER		6201	345424	1510.6391	00040299	BUILDING RENTALS	PARK & RECREATION
		7,200.00								
162515	6/12/2025		100986 JANI-KING OF MINNESOTA							
	6/12/2025	1,050.00	RCC EVENT CLEANING		6202	MIN05250268	1510.6317		OTHER PROFESSIONAL SERVICES	PARK & RECREATION
	6/12/2025	960.00	SC EVENT CLEANING		6203	MIN05250269	1510.6317	00016100	OTHER PROFESSIONAL SERVICES	PARK & RECREATION
		2,010.00								
162516	6/12/2025		106189 JLG ARCHITECTS							
	6/12/2025	4,750.00	INDOOR ICE RINK DESIGN		6204	250045-2	4100.6312		ARCHITECT SERVICES	PARK IMPROVEMENT
		4,750.00								
162517	6/12/2025		100311 KATO ROOFING INC							

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162517	6/12/2025		100311 KATO ROOFING INC						Continued...	
	6/12/2025	3,599.75	ROOF REPAIRS FS1		6206	SV2083921-S	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		3,599.75								
162518	6/12/2025		102013 KIMLEY-HORN & ASSOCIATES INC							
	6/12/2025	6,499.21	CONNEMARA / AKRON RAB		6207	32007532	4320.6313		ENGINEERING SERVICES	2024-20 - CONNEMARA & AKRON RO
		6,499.21								
162519	6/12/2025		106294 KULLY SUPPLY							
	6/12/2025	341.14	WATER FILTERS		6208	675526	1340.6233		BUILDING REPAIRS SUPPLIES	GOVERNMENT BUILDINGS
		341.14								
162520	6/12/2025		106093 LB CARLSON LLP							
	6/12/2025	11,630.00	AUDIT SVCS THRU 5/31/25		6209	249497	1120.6311		ACCOUNTING SERVICES	GENERAL GOVERNMENT
		11,630.00								
162521	6/12/2025		100072 LEAGUE-MN CITIES INS TRUST							
	6/12/2025	1,776.46	CLAIM CA 406283 DEDUCTIBLE		6210	9697	2375.6385		OTHER REPAIRS AND MAINTENANCE	INSURANCE
		1,776.46								
162522	6/12/2025		103683 LEAGUE-MN CITIES INS TRUST -WC TREATMENT							
	6/12/2025	1,981.86	WORKERS COMP		6211	24589	2375.6362		WORKERS COMPENSATION INSURANCE	INSURANCE
		1,981.86								
162523	6/12/2025		106296 LIBERTA, SAMSON							
	6/12/2025	525.00	BANQUET HALL REV REFUND		6286	75478463	1000.2204		P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
		525.00								
162524	6/12/2025		106099 LIFE TIME, INC.							
	6/12/2025	413.54	LIFETIME SCHOLARSHIP		6212	CINV-184189	1120.6456		OTHER MISCELLANEOUS CHARGES	GENERAL GOVERNMENT
		413.54								
162525	6/12/2025		101580 MACQUEEN							
	6/12/2025	426.62	PARTS		6213	P12676	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
	6/12/2025	171.75	PARTS		6214	P64906	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
	6/12/2025	18,278.75	CIP- HOSE AND NOZZLES		6215	P48088	4050.6220		OPERATING SUPPLIES	EQUIPMENT IMPROVEMENT
		18,877.12								
162526	6/12/2025		100510 MARCO TECHNOLOGIES LLC							
	6/12/2025	642.29	USAGE & CONTRACT COPIERS		6217	INV13926682A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	589.99	USAGE & CONTRACT COPIERS		6218	INV13926682B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT

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162526	6/12/2025		100510 MARCO TECHNOLOGIES LLC						Continued...	
		1,232.28								
162527	6/12/2025		102680 MARIE RIDGEWAY LICSW, LLC							
	6/12/2025	840.00	MAY RETAINER & THERAPY SESSION		6219	3237	1210.6310		PROFESSIONAL SERVICES	POLICE
		840.00								
162528	6/12/2025		103690 MASTER ELECTRIC CO INC							
	6/12/2025	1,904.45	REPLACED AVATION LIGHT		6220	SD56592	6100.6384	WT103	MACHINERY & EQUIPMENT REPAIRS	WATER UTILITY
	6/12/2025	1,956.21	NEW CABINET INSTALL LIFT 7		6221	SD56594	6200.6384	SSLS207	MACHINERY & EQUIPMENT REPAIRS	SEWER UTILITY
	6/12/2025	2,186.40	INSTALL NEW		6222	SD56593	6100.6383	SSLS207	IMPROVEMENT REPAIRS AND MAINTENANCE	WATER UTILITY
		6,047.06								
162529	6/12/2025		100887 MCMULLEN INSPECTIONS INC							
	6/12/2025	28,862.40	ELECTRICAL INVOICE JUNE 2025		6223	JUNE 2025 PAYMENT	1000.2281		ELECTRICAL INSPECTOR PAYABLE	GENERAL FUND BALANCE SHEET
		28,862.40								
162530	6/12/2025		100368 MEDICINE LAKE TOURS							
	6/12/2025	1,233.00	SENIOR BUS TRIP		6224	06.04.2025 PAYMENT	1510.6310	00040601	PROFESSIONAL SERVICES	PARK & RECREATION
		1,233.00								
162531	6/12/2025		103718 MEI TOTAL ELEVATOR SOLUTIONS							
	6/12/2025	203.21	MONTHLY PM		6225	1131743	1340.6381		BUILDING REPAIRS AND MAINTENANCE	GOVERNMENT BUILDINGS
		203.21								
162532	6/12/2025		103697 MENARDS-APPLE VALLEY							
	6/12/2025	45.08	4 CYCLE CAN GAS		6226	93467	1220.6222		FUELS	FIRE
	6/12/2025	37.97	SHELTER SUPPLIES		6227	93728	1520.6233		BUILDING REPAIRS SUPPLIES	PARKS MAINTENANCE
	6/12/2025	171.91	SHELTER SUPPLIES		6228	93680	1520.6233		BUILDING REPAIRS SUPPLIES	PARKS MAINTENANCE
	6/12/2025	59.64	GALVANIZED FITTINGS		6229	93710	1520.6231		EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
	6/12/2025	21.98	EXPANSION FOR CONCRETE		6230	93604	1320.6234		STREET MAINTENANCE SUPPLIES	STREET MAINTENANCE
	6/12/2025	226.93	6X6 POST		6231	93599	1320.6226		OTHER OPERATING SUPPLIES	STREET MAINTENANCE
	6/12/2025	49.93	MAILBOX		6232	93602	1320.6226		OTHER OPERATING SUPPLIES	STREET MAINTENANCE
	6/12/2025	38.42	BUILDING SUPPLIES		6233	93414	1340.6226		OTHER OPERATING SUPPLIES	GOVERNMENT BUILDINGS
	6/12/2025	64.60	PARTS		6234	93537	1520.6231		EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
	6/12/2025	90.16	4-CYCLE FUEL		6235	93495	1220.6222		FUELS	FIRE
		806.62								
162533	6/12/2025		103699 METRO COUNCIL ENV SERV							

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162533	6/12/2025		103699 METRO COUNCIL ENV SERV						Continued...	
	6/12/2025	157,862.15	JUL'25 WASTEWATER SERVICE		6238	0001188571	6200.6375		SEWER	SEWER UTILITY
		157,862.15								
162534	6/12/2025		103700 METRO COUNCIL ENV SERV							
	6/12/2025	77,035.00	MAY 2025 METRO SAC PMT		6236	MAY'25 PAYMENT1	1000.2063		METRO SAC PAYABLE	GENERAL FUND BALANCE SHEET
	6/12/2025	770.35-	MAY 2025 METRO SAC PMT		6237	MAY'25 PAYMENT2	1120.4351		METRO SAC CHARGES	GENERAL GOVERNMENT
		76,264.65								
162535	6/12/2025		101363 METRO SALES INC							
	6/12/2025	109.00	CITY HALL COPIER - ADMIN SERV		6239	INV2807982A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	359.39	CITY HALL COPIER - ADMIN SERV		6240	INV2807982B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
	6/12/2025	73.44	POLICE OFFICER RM COPIER		6241	INV2805970A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	18.73	POLICE OFFICER RM COPIER		6242	INV2805970B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
	6/12/2025	73.44	COPIER - PW ADMIN AREA		6243	INV2805971A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	22.38	COPIER - PW ADMIN AREA		6244	INV2805971B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
	6/12/2025	133.09	PW RESOURCE RM COPIER		6245	INV2805972A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	69.12	PW RESOURCE RM COPIER		6246	INV2805972B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
	6/12/2025	73.44	COPIER PW CAMPUS - PATROL		6247	INV2805973A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	33.24	COPIER PW CAMPUS - PATROL		6248	INV2805973B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
	6/12/2025	95.00	COPIER CITY HALL		6249	INV2803746A	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	.70	COPIER CITY HALL		6250	INV2803746B	1120.6350		PRINTING COSTS	GENERAL GOVERNMENT
		1,060.97								
162536	6/12/2025		105284 MILLER MENDEL INC							
	6/12/2025	584.66	ESOPH ENTRIES (10)		6251	9874	1210.6315		PRE-EMPLOYMENT SCREENING SERV	POLICE
		584.66								
162537	6/12/2025		102009 MINDFUL HEALTH							
	2/13/2025	708.00	SENIOR YOGA CLASSES		2791	2025-01 PAYMENT	1510.6310		PROFESSIONAL SERVICES	PARK & RECREATION
		708.00								
162538	6/12/2025		100473 MINNESOTA COACHES INC							
	6/12/2025	843.32	BUS FOR RAS MYSTERY TRIP		6252	117256	1510.6310	00040601	PROFESSIONAL SERVICES	PARK & RECREATION
		843.32								
162539	6/12/2025		101168 MN OCC HEALTH - LOCKBOX 135054							
	6/12/2025	2,785.00	MOH SCREENING SERVICES		6253	492921	1180.6315		PRE-EMPLOYMENT SCREENING SERV	HUMAN RESOURCES
		2,785.00								
162540	6/12/2025		103732 MN VALLEY TESTING LABS							

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162540	6/12/2025		103732 MN VALLEY TESTING LABS						Continued...	
	6/12/2025	87.00	BAC-T SAMPLES		6254	1308434	6100.6310		PROFESSIONAL SERVICES	WATER UTILITY
	6/12/2025	96.20	BAC-T SAMPLES		6255	1308145	6100.6310		PROFESSIONAL SERVICES	WATER UTILITY
	6/12/2025	328.60	BAC-T SAMPLES		6256	1307394	6100.6310		PROFESSIONAL SERVICES	WATER UTILITY
		511.80								
162541	6/12/2025		103358 MOHRLAND, RICHARD							
	6/12/2025	7.50	REFUND TUESDAY YOGA		6278	06.2025 REFUND	1000.2204		P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
		7.50				PAYMENT				
162542	6/12/2025		102574 NINE EAGLES PROMOTIONS							
	6/12/2025	125.00	EVENT SIGNS		6257	11802	4316.6350		PRINTING COSTS	2023-08 - PD & PW BUILDING (20
	6/12/2025	1,360.00	EVENT GIVEAWAYS		6258	11795	4316.6342		OTHER ADVERTISING	2023-08 - PD & PW BUILDING (20
		1,485.00								
162543	6/12/2025		103139 NORTH COUNTRY CHEVROLET							
	6/12/2025	52,927.50	CHIEF VEHICLE REPLACEMENT		6259	ROSEMOUNT25-1014050.6550.22			MOTOR VEHICLES-FIRE	EQUIPMENT IMPROVEMENT
		52,927.50								
162544	6/12/2025		103747 NORTHERN SAFETY TECH							
	6/12/2025	172.05	TOOLS FOR NEW MECHANIC		6260	59521	1330.6241		SMALL TOOLS	FLEET MAINTENANCE
		172.05								
162545	6/12/2025		102006 PELLICCI ACE ROSEMOUNT							
	6/12/2025	31.58	BUILDING REPAIR		6262	13937/R	1340.6233		BUILDING REPAIRS SUPPLIES	GOVERNMENT BUILDINGS
	6/12/2025	39.99	CHEM PUMP		6263	13876/R	1520.6241		SMALL TOOLS	PARKS MAINTENANCE
	6/12/2025	10.97	FITTINGS		6264	13877/R	1520.6231		EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
	6/12/2025	21.99	CLEANING SOLUTION FOR MAT ROOM		6265	13913/R	1210.6221		CLEANING SUPPLIES	POLICE
	6/12/2025	39.99	PREEN		6266	13895/R	1520.6235		LANDSCAPING SUPPLIES	PARKS MAINTENANCE
	6/12/2025	24.98	WOOD FILLER/SPACKLING		6267	13906/R	1510.6242	00016100	MINOR EQUIPMENT	PARK & RECREATION
	6/12/2025	54.92	BUILDING SUPPLIES		6268	13907/R	1340.6220		OPERATING SUPPLIES	GOVERNMENT BUILDINGS
	6/12/2025	4.98	HOSE		6269	13894/R	1340.6233		BUILDING REPAIRS SUPPLIES	GOVERNMENT BUILDINGS
	6/12/2025	19.99	5 GALLON BUCKET		6270	13837/R	1210.6242		MINOR EQUIPMENT	POLICE
		249.39								
162546	6/12/2025		100158 PLAYPOWER LT FARMINGTON							
	6/12/2025	875.00	BROCKWAY PLAYGROUND REPAIRS		6271	1400294228A	1520.6384	PBROCK	MACHINERY & EQUIPMENT REPAIRS	PARKS MAINTENANCE
	6/12/2025	5,695.00	BROCKWAY PLAYGROUND REPAIRS		6272	1400294228B	1520.6231	PBROCK	EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
	6/12/2025	10,094.97	MEADOWS PLAYGROUND REPAIRS		6273	1400294230A	1520.6231		EQUIPMENT REPAIR SUPPLIES	PARKS MAINTENANCE
	6/12/2025	1,275.00	MEADOWS PLAYGROUND REPAIRS		6274	1400294230B	1520.6384		MACHINERY & EQUIPMENT REPAIRS	PARKS MAINTENANCE

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162546	6/12/2025		100158 PLAYPOWER LT FARMINGTON						Continued...	
		17,939.97								
162547	6/12/2025		103764 R & R SPECIALTIES OF WI							
	6/12/2025	40.00	BLADE SHARPENING		6275	0085497-IN	6500.6242		MINOR EQUIPMENT	ICE ARENA
		40.00								
162548	6/12/2025		100196 RDO EQUIPMENT CO							
	6/12/2025	739.99	PARTS		6276	P3217570	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
		739.99								
162549	6/12/2025		101275 REFLECTIONS WINDOW WASHING LLC							
	6/12/2025	2,400.00	FS1,2 AND CITY HALL WINDOWS		6277	9317	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		2,400.00								
162550	6/12/2025		101716 RIECHMANN PEDERSON DESIGN INC							
	6/12/2025	1,300.00	GRAPHIC DESIGN		6279	52593-1	1140.6310		PROFESSIONAL SERVICES	COMMUNICATIONS
		1,300.00								
162551	6/12/2025		100054 RJ SAYERS DISTRIBUTING							
	6/12/2025	494.90	PRESSURE WASHER SERVICE		6280	00028485	1330.6384		MACHINERY & EQUIPMENT REPAIRS	FLEET MAINTENANCE
		494.90								
162552	6/12/2025		102449 ROCK HARD LANDSCAPE SUPPLY							
	6/12/2025	240.00	LANDSCAPE MULCH		6281	3225983	1520.6235		LANDSCAPING SUPPLIES	PARKS MAINTENANCE
		240.00								
162553	6/12/2025		102208 ROSEMOUNT ARMORY FUND							
	12/26/2024	3,360.00	2024 PRORATED LEASE PAYMENT		3313	1001	1510.6391		BUILDING RENTALS	PARK & RECREATION
		3,360.00								
162554	6/12/2025		103777 SAM'S CLUB							
	6/12/2025	374.75	PICNIC WELLNESS FOOD/DRINK		6282	000998	1180.6465		RECOGNITION/WEELLNESS	HUMAN RESOURCES
	6/12/2025	47.96	EMPLOYEE PICNIC 2025		6283	000666	1180.6465		RECOGNITION/WEELLNESS	HUMAN RESOURCES
	6/12/2025	70.92	VENDING/SUPPLIES		6284	000726A	1340.6251		FOOD FOR RESALE	GOVERNMENT BUILDINGS
	6/12/2025	37.52	VENDING/SUPPLIES		6285	000726B	1340.6221		CLEANING SUPPLIES	GOVERNMENT BUILDINGS
		531.15								
162555	6/12/2025		100194 SHI INTERNATIONAL CORP							
	6/12/2025	69.12	DISPLAY PORT CABLES RESTOCK*6		6287	B19839849	1120.6220		OPERATING SUPPLIES	GENERAL GOVERNMENT
	6/12/2025	162.00	WARRANTY FOR 2 LAPTOPS		6288	B19838361	1510.6226		OTHER OPERATING SUPPLIES	PARK & RECREATION

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162555	6/12/2025		100194 SHI INTERNATIONAL CORP						Continued...	
	6/12/2025	73.13	LOGITECH MK710 KEYBOARDMOUSE		6289	B19841712	1120.6220		OPERATING SUPPLIES	GENERAL GOVERNMENT
	6/12/2025	88.74	15/20 FT CAT 6 CABLES		6290	B19844915	1120.6220		OPERATING SUPPLIES	GENERAL GOVERNMENT
	6/12/2025	1,536.00	2 LENOVO X1 CARBON		6291	B19791523A	1510.6226		OTHER OPERATING SUPPLIES	PARK & RECREATION
	6/12/2025	1,536.00	2 LENOVO X1 CARBON		6292	B19791523B	1510.6226	00040603	OTHER OPERATING SUPPLIES	PARK & RECREATION
	6/12/2025	1,536.00	LENOVO THINKPAD X1		6293	B19814731	1510.6226	00040299	OTHER OPERATING SUPPLIES	PARK & RECREATION
	6/12/2025	224.00	DELL DOCK CRISIS EMP OFFICE		6294	B19584202	1210.6570		OFFICE EQUIP, FURNISHINGS, IT	POLICE
		5,224.99								
162556	6/12/2025		100591 SHRED RIGHT							
	6/12/2025	18.85	PURGE 3 LARGE BOXES CITY HALL		6295	0049218	1120.6310		PROFESSIONAL SERVICES	GENERAL GOVERNMENT
		18.85								
162557	6/12/2025		100298 SRF CONSULTING GROUP INC							
	6/12/2025	707.14	ASPEN AVE EXTENSION		6296	16955.00-16	4318.6313		ENGINEERING SERVICES	2024-02 - ASPEN AVENUE EXTENSI
	6/12/2025	11,798.83	PEDESTRIAN CROSSING STUDY		6297	17740.00-10	1320.6313		ENGINEERING SERVICES	STREET MAINTENANCE
		12,505.97								
162558	6/12/2025		103013 STANTEC CONSULTING SERVS INC							
	6/12/2025	3,961.00	VISIONING UPDATE		6298	2364621	2100.6310		PROFESSIONAL SERVICES	PORT AUTHORITY
		3,961.00								
162559	6/12/2025		102259 STERICYCLE INC							
	6/12/2025	155.84	MONTHLY SHRED IT SERVICE		6299	8010996897	1210.6310		PROFESSIONAL SERVICES	POLICE
		155.84								
162560	6/12/2025		101856 TACTICAL ADVANTAGE LLC							
	6/12/2025	310.50	GLOCK 47 TRADE IN-3522		6300	2025-0037	1210.6220		OPERATING SUPPLIES	POLICE
		310.50								
162561	6/12/2025		103805 TOTAL SOURCE INC							
	6/12/2025	551.10	ENVELOPES		6302	21719A	1310.6210		OFFICE SUPPLIES	ENGINEERING
	6/12/2025	271.46	ENVELOPES		6303	21719B	1210.6210		OFFICE SUPPLIES	POLICE
	6/12/2025	276.46	CITY HALL ENVELOPES		6304	21718	1130.6350		PRINTING COSTS	ADMINISTRATIVE SERVICES
		1,099.02								
162562	6/12/2025		100252 TRI-COUNTY LAW ENFORCEMENT							
	6/12/2025	90.00	ANNUAL DUES		6305	05.2025 ANNUAL	1210.6451		DUES AND SUBSCRIPTIONS	POLICE
						DUE PMT				
		90.00								

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162563	6/12/2025		103293 TWIN CITY HARDWARE						Continued...	
	6/12/2025	739.80	FOB SYSTEM REPAIR CH		6306	PSI2334657	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
		739.80								
162564	6/12/2025		100628 US BANK EQUIPMENT FINANCE							
	6/12/2025	393.80	JUNE 2025		6307	556855237	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	393.80	MAY 2025		6308	554672550	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	190.30	JUNE 2025		6309	557170784	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
	6/12/2025	190.30	MAY 2025		6310	554874305	1120.6392		OFFICE EQUIPMENT RENTALS	GENERAL GOVERNMENT
		1,168.20								
162565	6/12/2025		100191 VALLEY-RICH CO INC							
	6/12/2025	4,950.00	REPAIR MANHOLE STRUCTURE		6311	34519	6200.6382		STRUCTURE REPAIRS AND MAINTENA	SEWER UTILITY
	6/12/2025	4,688.17	PAVING AND TRAFFIC CONTROL		6312	34518	6200.6383		IMPROVEMENT REPAIRS AND MAINTEN	SEWER UTILITY
		9,638.17								
162566	6/12/2025		103824 VERIZON WIRELESS							
	6/12/2025	13.73	BACK UP DIALER		6313	6114262878A	6100.6321		TELEPHONE	WATER UTILITY
	6/12/2025	13.73	BACK UP DIALER		6314	6114262878B	6200.6321		TELEPHONE	SEWER UTILITY
	6/12/2025	13.73	BACK UP DIALER		6315	6114262878C	6300.6321		TELEPHONE	STORM WATER UTILITY
	6/12/2025	264.45	CELLULAR SERVICE 05/23/2025		6316	6114262877A	1240.6321		TELEPHONE	BUILDING INSPECTIONS
	6/12/2025	62.29	CELLULAR SERVICE 05/23/2025		6317	6114262877B	1340.6321		TELEPHONE	GOVERNMENT BUILDINGS
	6/12/2025	30.23	CELLULAR SERVICE 05/23/2025		6318	6114262877C	1310.6321		TELEPHONE	ENGINEERING
	6/12/2025	28.15	CELLULAR SERVICE 05/23/2025		6319	6114262877D	1320.6321		TELEPHONE	STREET MAINTENANCE
	6/12/2025	192.23	CELLULAR SERVICE 05/23/2025		6320	6114262877E	1510.6321		TELEPHONE	PARK & RECREATION
	6/12/2025	201.76	CELLULAR SERVICE 05/23/2025		6321	6114262877F	1520.6321		TELEPHONE	PARKS MAINTENANCE
	6/12/2025	127.26	CELLULAR SERVICE 05/23/2025		6322	6114262877G	6100.6321		TELEPHONE	WATER UTILITY
	6/12/2025	127.26	CELLULAR SERVICE 05/23/2025		6323	6114262877H	6200.6321		TELEPHONE	SEWER UTILITY
	6/12/2025	193.24	CELLULAR SERVICE 05/23/2025		6324	6114262877I	6300.6321		TELEPHONE	STORM WATER UTILITY
	6/12/2025	31.48	CELLULAR SERVICE 05/23/2025		6325	6114262877J	1330.6321		TELEPHONE	FLEET MAINTENANCE
		1,299.54								
162567	6/12/2025		106295 VUE, PA HOUA							
	6/12/2025	300.00	SC DAMAGE DEPOSIT REFUND		6261	88324623	1000.2204	00016100	P&R - REFUND CLEARING	GENERAL FUND BALANCE SHEET
		300.00								
162568	6/12/2025		102490 WARSAW SOLAR, LLC							
	6/12/2025	6,255.98	APR'25 SOLAR SUBSCRIPTION		6326	2505-6994F1	1340.6371		ELECTRIC	GOVERNMENT BUILDINGS
	6/12/2025	569.21	APR'25 SOLAR SUBSCRIPTION		6327	2505-6994F2	6100.6371	W107	ELECTRIC	WATER UTILITY
	6/12/2025	641.03	APR'25 SOLAR SUBSCRIPTION		6328	2505-6994F3	6100.6371	W110	ELECTRIC	WATER UTILITY
	6/12/2025	2,935.32	APR'25 SOLAR SUBSCRIPTION		6329	2505-6994F4	6100.6371	W112	ELECTRIC	WATER UTILITY

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162568	6/12/2025		102490 WARSAW SOLAR, LLC						Continued...	
	6/12/2025	9,531.32	APR'25 SOLAR SUBSCRIPTION		6330	2505-6994F5	6500.6371		ELECTRIC	ICE ARENA
		19,932.86								
162569	6/12/2025		100498 WESTWOOD PROFESSIONAL SERVICES							
	6/12/2025	1,070.00	PLATTING AT LIFE TIME		6331	1250502365	4312.6313		ENGINEERING SERVICES	2022-23 - LIFETIME CLUB
		1,070.00								
162570	6/12/2025		103375 WRIGHT-HENNEPIN COOP ELECTRIC							
	6/12/2025	27.95	FIRE PANEL MONITORING - JUNE		6332	35032200644	1510.6384	00016100	MACHINERY & EQUIPMENT REPAIRS	PARK & RECREATION
		27.95								
162571	6/12/2025		103832 WSB AND ASSOCIATES INC							
	6/12/2025	1,027.75	TRACT / DAKOTA EAST DATA CTR		6333	R-028674-000-1	4679.6313		ENGINEERING SERVICES	2024-31 - TRACT
	6/12/2025	4,503.25	ISD 196 HIGH SCHOOL ADDITION		6334	R-028387-000-2	4675.6313		ENGINEERING SERVICES	2025-03 - ROSEMOUNT HIGH SCHOO
	6/12/2025	9,248.00	AMBER FIELDS 14TH ADDITION		6335	R-024359-000-12	4660.6313		ENGINEERING SERVICES	2024-04 - AMBER FIELDS 14TH (O
	6/12/2025	51.75	PROJECT CHANNEL AUAR		6336	R-022322-000-15	1190.6313		ENGINEERING SERVICES	PLANNING & ZONING
	6/12/2025	180.00	PW / PD CAMPUS		6337	R-023065-000-17	4316.6313		ENGINEERING SERVICES	2023-08 - PD & PW BUILDING (20
	6/12/2025	10,045.50	UMORE PARK PLANNING UPDATE		6338	R-028593-000-2	4100.6312	PUMORB	ARCHITECT SERVICES	PARK IMPROVEMENT
	6/12/2025	3,089.00	FLINT HILLS PARK TRAIL IMPROVE		6339	R-023450-000-20	4100.6312	PGREEN	ARCHITECT SERVICES	PARK IMPROVEMENT
	6/12/2025	14,963.25	BLOOMFIELD PARK COURT IMPROVEM		6340	R-027966-000-4	4100.6312	PBLOOM	ARCHITECT SERVICES	PARK IMPROVEMENT
	6/12/2025	1,692.00	DAKOTA EAST AUAR		6341	R-027532-000-6	1190.6313		ENGINEERING SERVICES	PLANNING & ZONING
	6/12/2025	15,000.00	2025 MANAGED GIS SERVICES		6342	R-028435-000-1	2325.6313		ENGINEERING SERVICES	GIS
		59,800.50								
162572	6/12/2025		103833 XCEL ENERGY							
	6/12/2025	11,067.84	NON METERED STREET LIGHTS		6343	51-6870492-3	6400.6371		ELECTRIC	STREET LIGHT UTILITY
						05/25				
	6/12/2025	116.34	PRV STATION		6344	51-0015012796-4	6100.6371		ELECTRIC	WATER UTILITY
						05/25				
	6/12/2025	54.66	AKRON AVE PEDESTRIAN UNDERPASS		6345	51-0014938599-6	6400.6371		ELECTRIC	STREET LIGHT UTILITY
						05/25				
	6/12/2025	5,700.16	POLICE & PUBLIC WORKS BLDG		6346	51-0014435615-1	4316.6371		ELECTRIC	2023-08 - PD & PW BUILDING (20
						05/25				
	6/12/2025	1,359.60	RSMT SC-ACTIVITY CENTER		6347	51-0011108910-3	1510.6371	00016100	ELECTRIC	PARK & RECREATION
						05/25				
	6/12/2025	427.64	ERICKSON PARK TENNIS COURTS		6348	51-0010575696-0	1520.6371		ELECTRIC	PARKS MAINTENANCE
						05/25				
	6/12/2025	134.47	ERICKSON PARK TENNIS COURTS		6349	51-0010575696-0	1520.6371		ELECTRIC	PARKS MAINTENANCE
						04/25				
	6/12/2025	10.21	WELCOME SIGN - SOUTH		6350	51-0013089608-6	6400.6371		ELECTRIC	STREET LIGHT UTILITY

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162572	6/12/2025		103833 XCEL ENERGY						Continued...	
					05/25					
	6/12/2025	.40-	WELCOME SIGN - SOUTH		6351	51-0013089608-6	6400.6321		TELEPHONE	STREET LIGHT UTILITY
					04/25					
	6/12/2025	2,220.79	WELL# 15		6352	51-8807010-0	6100.6371	W115	ELECTRIC	WATER UTILITY
					04/25					
	6/12/2025	2,400.15	WELL# 15		6353	51-8807010-0	6100.6371	W115	ELECTRIC	WATER UTILITY
					05/25					
	6/12/2025	104.25	SIGNAL & STREET LIGHTS		6354	51-8053588-8	6400.6371		ELECTRIC	STREET LIGHT UTILITY
					05/25					
	6/12/2025	2,264.10	UMORE LIGHTS & IRRIGATION		6355	51-0519839-2	1520.6371		ELECTRIC	PARKS MAINTENANCE
					05/25					
	6/12/2025	.12-	WELCOME SIGN - SOUTH		6356	51-0013089608-6	6400.6371		ELECTRIC	STREET LIGHT UTILITY
					03/25					
		<u>25,859.69</u>								
162573	6/12/2025		100775 YALE MECHANICAL LLC							
	6/12/2025	216.73	QUARTERLY PM		6357	269481	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	587.12	QUARTERLY PM		6358	269017	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	158.05	QUARTERLY PM		6359	268987	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	1,289.90	QUARTERLY PM		6360	268986	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	594.69	QUARTERLY PM		6361	268955	1340.6381		BUILDING REPAIRS AND MAINTENAN	GOVERNMENT BUILDINGS
	6/12/2025	514.50	HVAC SPRING MAINTENANCE		6362	270284	6100.6310	W112	PROFESSIONAL SERVICES	WATER UTILITY
	6/12/2025	352.00	HVAC SPRING MAINTENANCE		6363	270281	6100.6310	W115	PROFESSIONAL SERVICES	WATER UTILITY
	6/12/2025	<u>352.00</u>	HVAC SPRING MAINTENANCE		6364	270282	6100.6310	W114	PROFESSIONAL SERVICES	WATER UTILITY
		4,064.99								
162574	6/12/2025		103180 YANKEE HILL MACHINE CO., INC							
	6/12/2025	<u>2,606.61</u>	RIFLE SUPPRESSORS		6365	108429	1210.6220		OPERATING SUPPLIES	POLICE
		2,606.61								
162575	6/12/2025		103836 ZARNOTH BRUSH WORKS INC							
	6/12/2025	<u>3,490.00</u>	PARTS		6366	101168	1330.6231		EQUIPMENT REPAIR SUPPLIES	FLEET MAINTENANCE
		3,490.00								
25053000	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	18.89	RSMT SC-ASSEMBLY HALL		5913	0504741418-01	1510.6373	00016100	GAS	PARK & RECREATION
					04/25					
		<u>18.89</u>								
25053001	5/30/2025		100272 MN ENERGY RESOURCES CORP							

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25053001	5/30/2025		100272 MN ENERGY RESOURCES CORP						Continued...	
	5/29/2025	20.82	WELL# 8		5910	0505173085-01 04/25	6100.6373	W108	GAS	WATER UTILITY
		20.82								
25053002	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	51.98	WELL# 9		5915	0502574702-01 04/25	6100.6373	W109	GAS	WATER UTILITY
		51.98								
25053003	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	57.39	CENTRAL PARK BUILDING		5914	0504510160-01 04/25	1520.6373		GAS	PARKS MAINTENANCE
		57.39								
25053004	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	65.00	JAYCEE PARK SHELTER		5911	0505316075-01 04/25	1520.6373		GAS	PARKS MAINTENANCE
		65.00								
25053005	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	74.54	RSMT SC-ACTIVITY CENTER		5906	0507933425-01 04/25	1510.6373	00016100	GAS	PARK & RECREATION
		74.54								
25053006	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	164.17	PW BUILDINGS 1ST METER		5909	0502350036-01 04/25	1340.6373		GAS	GOVERNMENT BUILDINGS
		164.17								
25053007	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	298.69	FIRE STATION #1		5907	0502798212-01 04/25	1340.6373		GAS	GOVERNMENT BUILDINGS
		298.69								
25053008	5/30/2025		100272 MN ENERGY RESOURCES CORP							
	5/29/2025	402.44	PW BUILDINGS 2ND METER		5908	0502440191-01 04/25	1340.6373		GAS	GOVERNMENT BUILDINGS
		402.44								
25053009	5/30/2025		100272 MN ENERGY RESOURCES CORP							

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25053009	5/30/2025		100272 MN ENERGY RESOURCES CORP						Continued...	
	5/29/2025	1,517.40	CH CARPENTER SHOP GENERATOR		5912	0506007839-01 04/25	1340.6373	GAS		GOVERNMENT BUILDINGS
		<u>1,517.40</u>								
25060301	6/3/2025		103031 BPAS-BENEFIT PLANS ADMIN SRVS							
	5/29/2025	45.00			5889	0529251138375	7020.2133.06	VEBA CONTRIBUTIONS		PAYROLL FUND
		<u>45.00</u>								
25060302	6/3/2025		103710 MN CHILD SUPPORT							
	5/29/2025	132.90			5892	0529251138378	7020.2136.01	CHILD SUPPORT		PAYROLL FUND
		<u>132.90</u>								
25060303	6/3/2025		103741 NATIONWIDE RETIREMENT SOL							
	5/29/2025	6,219.50			5893	0529251138379	7020.2134.03	DEFERRED COMPENSATION - NATION		PAYROLL FUND
		<u>6,219.50</u>								
25060304	6/3/2025		100447 MN STATE RETIREMENT SYSTEM							
	5/29/2025	15,246.15			5888	0529251138374	7020.2134.02	DEFERRED COMPENSATION - MSRS		PAYROLL FUND
		<u>15,246.15</u>								
25060305	6/3/2025		103741 NATIONWIDE RETIREMENT SOL							
	5/29/2025	6,219.50			5893	0529251138379	7020.2134.03	DEFERRED COMPENSATION - NATION		PAYROLL FUND
		<u>6,219.50</u>								
25060306	6/3/2025		100447 MN STATE RETIREMENT SYSTEM							
	5/29/2025	15,246.15			5888	0529251138374	7020.2134.02	DEFERRED COMPENSATION - MSRS		PAYROLL FUND
		<u>15,246.15</u>								
25060307	6/3/2025		100002 MN DEPT OF REVENUE							
	5/29/2025	21,311.36			5887	0529251138373	7020.2131.03	STATE WITHHOLDING		PAYROLL FUND
		<u>21,311.36</u>								
25060308	6/3/2025		103759 PUBLIC EMPLOYEE							
	5/29/2025	92,419.67			5883	05292511383710	7020.2132.01	PERA WITHHOLDING		PAYROLL FUND
		<u>92,419.67</u>								
25060309	6/3/2025		100001 INTERNAL REVENUE SERVICE							
	5/29/2025	47,175.95			5882	0529251138371	7020.2131.01	FEDERAL WITHHOLDING		PAYROLL FUND
	5/29/2025	49,318.58			5886	0529251138372	7020.2131.02	FICA/MEDICARE WITHHOLDING		PAYROLL FUND
		<u>96,494.53</u>								

Council Check Register by GL
Check Register w GL Date & Summary

5/30/2025 -- 6/12/2025

<u>Check #</u>	<u>Date</u>	<u>Amount</u>	<u>Supplier / Explanation</u>	<u>PO #</u>	<u>Doc No</u>	<u>Inv No</u>	<u>Account No</u>	<u>Subledger</u>	<u>Account Description</u>	<u>Business Unit</u>
25060309	6/3/2025		100001 INTERNAL REVENUE SERVICE						Continued...	
25060501	6/5/2025		103032 WEX HEALTH INC							
	5/29/2025	4,012.18			5890	0529251138376	7020.2133.05		HSA CONTRIBUTIONS	PAYROLL FUND
		4,012.18								
		<u>1,014,538.06</u>	Grand Total							

Payment Instrument Totals

Checks	751,468.06
EFT Payments	260,018.26
A/P ACH Payment	<u>3,051.74</u>
Total Payments	1,014,538.06



06/12/2025

**ROSEMOUNT CITY COUNCIL
REGULAR MEETING PROCEEDINGS
JUNE 3, 2025**

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Pursuant to due call and notice thereof, a regular meeting of the Rosemount City Council was held on Tuesday, June 3, 2025, at 7:00 PM. in Rosemount Council Chambers, 2875 145th Street West.

Mayor Weisensel called the meeting to order with Councilmembers Freske, Essler, Theisen and Klimpel.

APPROVAL OF AGENDA

Motion by Weisensel Second by Klimpel

Motion to approve the agenda.

Ayes: 5.

Nays: None. Motion Carried.

City Council publicly recognized Chief of Police Dahlstrom, Public Works Director Egger and City Administrator Martin on their successful Public Works and Police Department Open House this past Sunday.

PRESENTATIONS, PROCLAMATIONS AND ACKNOWLEDGMENTS

a. Oath of Office - Police Sergeant Promotion

Chief of Police Dahlstrom highlighted the Police and Public Works Campus event this past Sunday. Following, Chief Dahlstrom highlighted Sergeant Tapper's career and emphasized the impact Tapper has made on this department.

City Clerk Fasbender administered the oath of office.

b. 4H Presentation

Dylan Tate was present to share the details regarding his honor as a recipient of the 4-H Key Award designation and highlighted his 4H journey.

c. Small Cities Month Proclamation

City Administrator Martin highlighted the City is a member of the National League of Cities and as such we have been encouraged to join other communities under 50,000 population in declaring June 2025 as Small Cities month.

City Council read the proclamation.

Motion by Weisensel Second by Freske

Motion to proclaim June 2025 as Small Cities Month in the City of Rosemount

Ayes: 5.

Nays: None. Motion Carried.

RESPONSE TO PUBLIC COMMENT

None.

PUBLIC COMMENT

None.

CONSENT AGENDA

Motion by Theisen Second by Klimpel

Motion to approve the consent agenda.

Ayes: 5.

Nays: None. Motion Carried.

- a. Bill Listings
- b. Minutes of the May 20, 2025 Regular Meeting Minutes
- c. Performance Measure Program
- d. Cost Share Agreement with Dakota County - Voting Equipment
- e. Liquor License Renewals
- f. Interfund Loan for the Purchase of 14515 Dodd Blvd
- g. Accept Donation of Equipment for Fire Department

PUBLIC HEARINGS

None.

UNFINISHED BUSINESS

None.

NEW BUSINESS

- a. Playground Proposals - Dallara Park

Parks and Recreation Director Schultz discussed the long-term Parks Maintenance Capital Improvement Plan, which includes funding for the replacement of the playground equipment at Dallara Park. The existing play equipment at Dallara Park was installed in 2001, which is the expected lifespan of this equipment.

The neighborhood residents were invited to an open house and also provided an opportunity to weigh in online via the Parks and Recreation Department web page. Based on the review by the City Commissioners (Parks & Rec and Youth Commissioners) and the input received online from the neighborhood, staff is recommending City Council approve the purchase of playground equipment for Dallara Park from Northland Recreation - Likke Tykes. Should this project move forward, staff tentatively plans to have the existing equipment removed in early September and the new equipment installed in October.

Motion by Freske **Second by** Essler

Motion to purchase playground equipment for the Dallara Park from Northland Recreation - Little Tykes.

Ayes: 5.

Nays: None. Motion Carried.

ANNOUNCEMENTS

a. City Staff Updates

City Administrator Martin highlighted the Firefighter donation tonight and the approval of the interfund loan has the city one step closer to being the owner of the former Speedway. The plan is for the building to be demolished in time for Leprechaun Days.

Parks and Recreation Director Schultz highlighted the following upcoming events; June 10th Patriots in the Park at Central Park and June 12th open house to review the concept plans for the future plans of Central Park.

b. Upcoming Community Calendar

Mayor Weisensel reviewed the calendar of events and upcoming meetings.

Councilmember Theisen recapped the graduation walk-thru that took place at the Middle School this past week, and noted they will continue with this tradition even with the new middle school being built on the east side.

ADJOURNMENT

Motion by Weisensel **Second by** Klimpel

Motion to reconvene to the work session meeting.

Ayes: 5.

Nays: None. Motion Carried.

Respectfully submitted,

Erin Fasbender
City Clerk

**ROSEMOUNT CITY COUNCIL
WORK SESSION PROCEEDINGS
JUNE 3, 2025**

CALL TO ORDER

Pursuant to due call and notice thereof, a work session meeting of the Rosemount City Council was held on Tuesday, June 3, 2025, at 5:00 PM. in Rosemount Council Chambers, 2875 145th Street West.

Mayor Weisensel called the meeting to order with Councilmembers Freske, Essler, Theisen and Klimpel.

Motion by Weisensel

Motion to approve the agenda.

Ayes: 5.

Nays: None. Motion Carried.

a. FOLLOWING THE CITY COUNCIL REGULAR MEETING:

The Council may choose to reconvene the work session after the adjournment of the regular meeting if the business of the work session is unable to be completed in the allotted time.

DISCUSSION

a. Dakota East Technology Park Tract development

Mayor Weisensel announced no public comment will be received at this meeting. The first item is a presentation only and no action will be taken.

Community Development Kienberger introduced the Tract team; Kristin D., Brad S., Trent M., Brian M. The Tract team highlighted where they are at in the process (comprehensive plan amendment) with their interest in the eastern side of Rosemount for a future technology campus. The proposed site was chosen for several factors; power infrastructure present, set back and burm opportunity, strong workforce, etc.

The Tract Team noted they have had community meetings and discussions with nearby residents and discussed the comprehensive plan amendment, full review of their preliminary plan and the opportunity of the investment to the community. The Tract team did note they would like to hold an additional meeting as residents had concerns regarding sound, lighting and flooding. The neighborhood meeting at Omni Winery was with approximately 20 residents and was a brief meeting due to the location and activity taking place at Omni Winery. Councilmembers suggested additional broader neighborhood meetings take place that the entire City is included in, as this decision will be important to the entire community.

Mayor Weisensel questioned whether the power supplier Greater Resource Energy (GRE) is comfortable providing the needs of the project and Tract confirmed discussions have been held with GRE and which

GRE noted they have long-term sustainability goals and are comfortable providing the needs.

Councilmember Klimpel voiced her concerns regarding the comprehensive plan updates and is not comfortable making any decisions any time soon as she doesn't want to give up the opportunity for additional commercial use in that area.

Councilmember Essler noted everytime the City Council considers a rezone there is concern for the community. In this proposal, Tract is proposing to take a very large commercial property off the market and Essler feels that will be challenging to consider.

Councilmember Theisen questioned the status of their Farmington proposal. Tract noted they made a number of adjustments to their proposal based on feedback from the staff and public.

Community Development Director Kienberger provided a recap from the planning commission memo which noted the breakdown of the acreage. Tract suggested the possibility of downsizing the technology campus to dedicate to additional commercial. This would still allow a technology campus and still aid in bringing in infrastructure for commercial use.

Mayor Weisensel questioned the concerns regarding data centers specifically in Virginia. Tract noted the data centers in Virginia are an older generation and Tract is working towards better models that are designed more thoughtfully as technology as evolved since then.

Councilmember Essler appreciates the investment that Tract has done so far and understands the need for Tract to have direction on how they should proceed. Councilmember Essler is concerned regarding the current location and the land use perspective noting this is a different land situation than Meta was.

Councilmember Freske stated this is not her vision for the east side of Rosemount and noted there are benefits of bringing infrastructure to the area, but doesn't believe that will outweigh the cons.

Councilmembers agreed Tract needs to have active engagement with the community, noting residents have the right to hear all the information as some of the information could change people's mind, i.e. infrastructure brought to the area.

Mr. Kienberger discussed the timeline for the City Council to make a decision based on state statute. The City Council can extend the current amendment application if necessary. Staff will work with Tract to determine the next steps.

b. RAAA Storage Needs

City Administrator Martin introduced members of Rosemount Area Athletic Association (RAAA) to discuss opportunities to assist with storage needs. Parks and Recreation Director Schultz noted the board would like to centralize their storage to one location that will be a good long term fit for them. They currently have equipment storage in several locations including old UMore building sites and people's homes. RAAA Football is having challenges with access to their equipment and also having to store their equipment in the old basement locker rooms at Rosemount Middle School. RAAA anticipates they need approximately an area that is approximately 5,000 square feet.

RAAA noted they have been utilizing the same shed for at least 35 years, but have grown 25% as far as registration counts. The board have asked for assistance from the City of Rosemount to participate in

the construction and ownership of the building as RAAA is not in the business of owning a facility. Staff anticipate the cost to be between 425k-525k for a storage facility only.

Councilmember Freske expressed concern with Rosemount tax payers paying for a RAAA facility and questioned if there is a way to have a facility charge added? Councilmember Klimpel suggested a user fee or a possible fundraising project to assist with the cost of the facility. Staff will meet with RAAA and evaluate the sites as RAAA will soon lose space for football storage at the middle school.

Councilmembers are in support of assisting. However, additional review and decisions need to be thought through regarding the location and funding. Staff will review the Park Masterplan to determine if a RAAA future storage could fit into the plan and bring it back to City Council at a later date.

UPDATES

a. Staff Reports

Parks and Recreation Updates:

Parks and Recreation Director Schultz provided the latest high-level numbers (22 million for one sheet) regarding the City getting an ice rink. Staff will continue to analyze the numbers and explore financial options to bring back to the City Council at a later date. Schultz noted the City of Farmington and City of Eagan are not interested in building a facility, but are interested in contracting hours.

A second update, Mr. Schultz provided is regarding the National Guard remodel project noting the current fire alarm system is not operational at the facility. Staff will obtain further information from the National Guard and explore options and update the City Council at a future date.

Mayor Weisensel adjourned the meeting at 6:50 p.m. and will reconvene following the regular meeting.

City Council reconvened after their regular meeting at 7:42 p.m.

Fire Department Updates:

Chief Springer shared proposals for a Fire Department staffing study. Chief Springer will have further discussions with Citygate Associates on the proposed cost and bring it back to City Council for final approval. City Council is supportive of considering Citygate to complete a Fire staffing study.

Public Works Updates:

Public Works Director Egger communicated with City Council the discussion staff has been having regarding irrigation enforcement, i.e. communication overload to the public over the next month and then start ticketing with an initial warning.

Administrative Department Updates:

City Clerk Fasbender provided the latest cannabis updates from the state and suggested including Dakota County Technical College (DCTC) as a school which would prohibit retail sales 1,000 feet within DCTC. City Council is supportive of including DCTC as many high school students attend DCTC. Staff will amend the ordinance at a future City Council meeting.

City Clerk Fasbender also highlighted upcoming calendar events; i.e. employee picnic, police banquet, Patriots in the Park.

ADJOURNMENT

There being no further business to come before the City Council at the work session meeting and upon a motion by Weisensel the meeting was adjourned at 8:34 p.m.

Respectfully submitted,

Erin Fasbender
City Clerk

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Declaration of Suplus Property	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Dan Schultz, Parks & Recreation Director	AGENDA NO. 6.d.
ATTACHMENTS:	APPROVED BY: LJM
RECOMMENDED ACTION: Motion to declare the items listed in the executive summary as surplus property and for staff to appropriately recycle, sell or dispose of the items.	

BACKGROUND

The Parks and Recreation Department is asking that the City Council declare the equipment listed in the executive summary as surplus property. By declaring these items as surplus property, it will authorize staff to appropriately recycle, sell or dispose of the equipment.

The items listed below will no longer used within the City's operations.

Dallara Park Playground Equipment (2001)

Fixed Asset Tag # 200100009

Rosemount Community Center - Office Furniture (1994)
000782, 000774, 000836, 000776, 000779, 000780

Fixed Asset Tag # 000778, 000781, 000775,

Former Police Depart. Office Furniture and Equip. (2015)
002236, Furniture 2015037

Fixed Asset Tag # Range 001452, Coffee

RECOMMENDATION

The staff are recommending the City Council declare the items listed in the executive summary as surplus property and for staff to appropriately recycle, sell or dispose of the items.

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Professional Services Contract for Fire Service Evaluation for Fire Department	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Kip Springer, Fire Chief	AGENDA NO. 6.e.
ATTACHMENTS: Proposal	APPROVED BY: TRM
RECOMMENDED ACTION: Motion to recommend the City Council approve entering into a professional services agreement with Citygate Associates, LLC to provide a Fire Service Evaluation for the Rosemount Fire Department to build a framework and roadmap for future staffing needs at an amount not to exceed \$70,000.	

BACKGROUND

The Rosemount Fire Department plays a critical role in providing for the safety and well-being of our residents, visitors and businesses through emergency response, EMS, fire prevention and community outreach. Over time, the City has experienced an increase in population, development patterns, call volume and service expectations, which place increasing demands on Fire Department resources. A Fire Department service evaluation will help align resources with the communities' evolving needs and will provide the council with sustainable, data-driven recommendations for fire service staffing into the future.

Staff received multiple quotes for a fire service evaluation to be conducted and presented the information to the City Council at the last work session. Staff was able to work with Citygate Associates, LLC to reduce the quote from initial quote that was received. The updated quote is included in the packet.

RECOMMENDATION

Staff is recommending City Council approve entering into a professional services agreement with Citygate Associates, LLC to provide a fire service evaluation for the Fire Department.



600 COOLIDGE DRIVE, SUITE 150 ▪ FOLSOM, CA 95630 ▪ PH (916) 458-5100 ▪ FX (916) 983-2090

June 11, 2025

Chief Kip Springer, Fire Chief
City of Rosemount
2875 145th Street West
Rosemount, MN
kip.springer@rosemountmn.gov

RE: REVISED SCOPE AND COST REGARDING CITYGATE'S PROPOSAL TO CONDUCT A FIRE DEPARTMENT SERVICE EVALUATION FOR THE CITY OF ROSEMOUNT, MN

Dear Chief Springer:

Citygate Associates, LLC (Citygate) is pleased to present its revised scope of work and cost regarding its Proposal to Conduct a Fire Department Service Evaluation—dated May 22, 2025—submitted to the City of Rosemount, MN (City) in response to the City's Request for Proposal (RFP) distributed April 2, 2025.

SCOPE OF WORK REVISIONS

Citygate proposes the following revisions to its previous proposal.

1. Component D – Analysis and summary of community risk

- Citygate's proposal included an in-depth accreditation-compliant analysis of community risk. As the Department is not pursuing accreditation in the near term, Citygate will now describe the risks to be protected citywide using ESRI community demographic data.

2. Volunteer Effectiveness Data Analysis

- Citygate's proposal included an in-depth analysis of paid on-call / volunteer staff effectiveness using raw data. In light of the Department's excellent part-time staffing data, this research effort is now reduced.

3. Additional On-Site Presence for the Final Report Presentation

- Citygate's proposal included a videoconference presentation of the Final Report. Chief Stewart Gary will now present the Final Report on site based on the City's request.

REVISED PROJECT COST

Our charges are based on *actual time* spent by our consultants at their established billing rates, plus reimbursable expenses incurred in conjunction with travel, printing, clerical, and support services related to the engagement. We will undertake this study for a **“not-to-exceed” total cost** based on our Work Plan and scope of work, outlined below.

Core Project Cost

Activity	Project Team Consulting Fees (Hours)	Administration (7.5% of Hourly Fees)	Reimbursable Expenses	Data Cost	Total Citygate Project Amount
1. Initiate and Manage Project	\$9,625	\$722	\$967	\$0	\$11,314
2. CRA/SOC Study	\$27,440	\$2,058	\$0	\$2,500	\$31,998
3. Mid-Project Review	\$5,075	\$381	\$0	\$0	\$5,456
4. Prepare and Review Draft Report	\$11,145	\$836	\$0	\$0	\$11,981
5. Prepare and Present Final Report	\$7,075	\$531	\$1,557	\$0	\$9,163
Total	\$60,360	\$4,528	\$2,524	\$2,500	\$69,912

This cost proposal reflects Citygate's best effort to be responsive to the City's/Department's needs for this study at a reasonable cost. If our proposed scope of work and/or costs are not in alignment with City/Department needs or expectations, we are open to discussing modification of our proposed scope of work and associated costs.

Hourly Rates

Classification	Rate	Project Hours	Consultant
Citygate President	\$260 per hour	16	Chad Jackson
Public Safety Principal, Project Director	\$265 per hour	28	Stewart Gary
Fire and EMS Services Specialist	\$195 per hour	56	Thomas Breyer
Fire and EMS Services Specialist, Project Manager	\$205 per hour	60	Landon Stallings
Fire and EMS Services Specialist	\$195 per hour	17	Mathew Rush
Statistical Specialist	\$195 per hour	0	Eric Lind
Statistical Specialist	\$195 per hour	30	Michael Fay
Geo-Mapping Specialist	\$225 per hour	35	Ben Silver
Risk and Incident Data Specialist	\$175 per hour	4	Various
Report Project Administrator	\$140 per hour	33	Various
Administrative Support	\$100 per hour	32	Various

Pricing Terms

This price quote is effective for two months and includes one (1) Draft Report review cycle as described in our project Work Plan to be completed by Citygate and the City within 30 calendar days of delivery of the Draft Report. Additional draft cycles or processing delays requested by the City would be billed in addition to the contracted amount at our time and materials rates. The Draft Report will be considered final if there are no suggested changes within thirty (30) days of the delivery of the Draft Report.

Billing Schedule

Citygate offers **two payment schedule options** to meet the City's needs.

- ◆ One method is a monthly fee of \$11,652 across the six-month project schedule, for a total cost of \$69,912 which creates clarity and predictability for the City. The first monthly invoice would be issued upon contract execution.
- ◆ The other approach is a time-and-materials monthly billing schedule up to the not-to-exceed cost, including a 10 percent (10%) project advance that would be credited to our last invoice. Either billing method includes the first invoice being sent upon execution of the contract.

Our invoices are payable within thirty (30) days. Citygate's billing terms are net thirty (30) days plus two percent (2%) for day thirty-one (31) and two percent (2%) per month thereafter. Our practice is to send both our monthly status report and invoice electronically. If we are selected for this project, we will request the email for the appropriate recipients of the electronic documents.

Hard copies of these documents will be provided only upon request. We prefer to receive payment through ACH Transfer, if available.

* * *

If this proposal is acceptable, you can sign acceptance on the following page, or forward a standard consultant contract for us to complete.

As President of the firm, I am authorized to execute a binding contract on behalf of Citygate. For questions concerning this proposal, please contact Stewart Gary, Citygate's Public Safety Principal, at (916) 458-5100, extension 305 or via email at sgary@citygateassociates.com. Please also send emails to admin@citygateassociates.com to ensure a prompt response.

Sincerely,



Chad Jackson, MBA
President

cc: Project Team

Acceptance of Citygate's proposal and terms:

Name

Signature

Title

Date

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Fire Relief Fund Benefit Proposal	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Logan Martin, City Administrator Teah Malecha, Administrative Services Director	AGENDA NO. 6.f.
ATTACHMENTS: 2023 Tier Increase Proposal	APPROVED BY: TRM
RECOMMENDED ACTION: Staff recommends the City Council approve a motion authorizing an \$800 increase up to \$11,000 for the Rosemount Fire Relief Association's annual retirement benefit, effective June 30, 2025.	

BACKGROUND

The Fire Relief Association, which manages the pension funds for our firefighters, has recommended an \$800 increase in the retirement benefit from \$10,200 to \$11,000 per year of service. The Relief Association recently completed their 2024 audit. This reflects that the Relief Fund was 184.05% funded at the end of 2024.

Representatives from the Relief Association provided staff with updated financial projections reflecting this proposal, which indicate that the Relief Fund will be 164.70% percent funded after accounting for the proposed increase. This funding ratio is reflective of the positive results of the Relief Association's investments. As of April 2025, the Fund was 178.28% funded based on market performance with one pension payout in 2024.

As the Council will recall, the Relief Association worked with the Council in the fall of 2019 to establish a procedure for adjusting the annual benefit based on the status of their financial investments. This was updated in 2023 to include two additional tiers to the benefit increases, based on market performance.

Funding Ratio	Increase
Less than 122%	\$0
<122% - 128%	\$150
<128% - 136%	\$275
136% - 146%	\$400
146% - 158%	\$600
158% or greater	\$800

The tiers reflect an opportunity for the Relief Association to more directly apply the earnings from its

market performance back to its membership. This is also a key component of the Fire Department's ability to recruit and retain our paid-per-call team of firefighters. The plan still contains the same control measures in place to respond to poor market performance and / or reduced fund balance ratios (as discussed on the attached plan).

RECOMMENDATION

Staff recommends the City Council approve a motion authorizing modifications to the Relief Tier System and authorizing a \$800 increase to \$11,000 for the Rosemount Fire Relief Association's annual retirement benefit, effective June 30, 2025.



Rosemount Firefighter's Relief Association

2875 145th Street West | Rosemount MN 55068

Yearly Benefit Increase Process

Section 1.

Annually, the process to determine a pension benefit increase shall involve the following steps:

1. The RFDRA Board will calculate the Plan Funding Ratio (PFR), defined as the ratio of investment portfolio assets divided by pension fund liabilities, effective December 31st of the previous year utilizing the updated year end information from the 4106_SC Schedule.
2. Any pension benefit increase request from above shall be contingent upon majority approval by the RFDRA membership in February. This demonstrates the RFDRA Board's commitment to the new pension benefit level.
3. The recommended effective date of the new pension benefit level once all contingencies are met would be July 1st of the current year to ensure the completion of any discussions with the city, obtain the necessary approvals from the RFDRA Board and membership, the City Council, and the updating of the bylaws.
4. The recommended PFR and corresponding per year of service pension benefit percentage increases are as follows:

Plan Funding Ratio	Increase
less than 122%	\$0.00
122% or greater but less than 128%	\$150.00
128% or greater but less than 136%	\$275.00
136% or greater but less than 146%	\$400.00
146% or greater but less than 158%	\$600.00
158% or greater	\$800.00

5. As a protection and control, there shall be no increases in the pension benefit for any year that there is mandatory City contribution, and one year after the last mandatory City contribution.
6. This is designed to provide a buffer and additional safeguard for the volatility when large market corrections occur.
7. All spreadsheets and financial models created by RFDRA Board members should be regularly updated with current information and provided to the city for review in April as part of the increase process.
8. A year end recap should also be provided to the city in April containing the following:
 - a. Investment returns
 - b. State Aid received
 - c. # firefighters added
 - d. # firefighters declined
 - e. Plan Funding Ratio (Accrued Liabilities and Assets from Year End Schedule submitted to state)
 - f. Proposed benefit increase based on above tiers
 - g. Change in plan funding ratio after proposed increase

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Amending City Code Cannabis and Hemp Business Regulations	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Erin Fasbender, City Clerk	AGENDA NO. 6.g.
ATTACHMENTS: Map, Proposed Ordinance	APPROVED BY: TRM
RECOMMENDED ACTION: Staff recommends the Council adopt an amendment to ordinance title 3-11-9, establishing cannabis and hemp business regulations.	

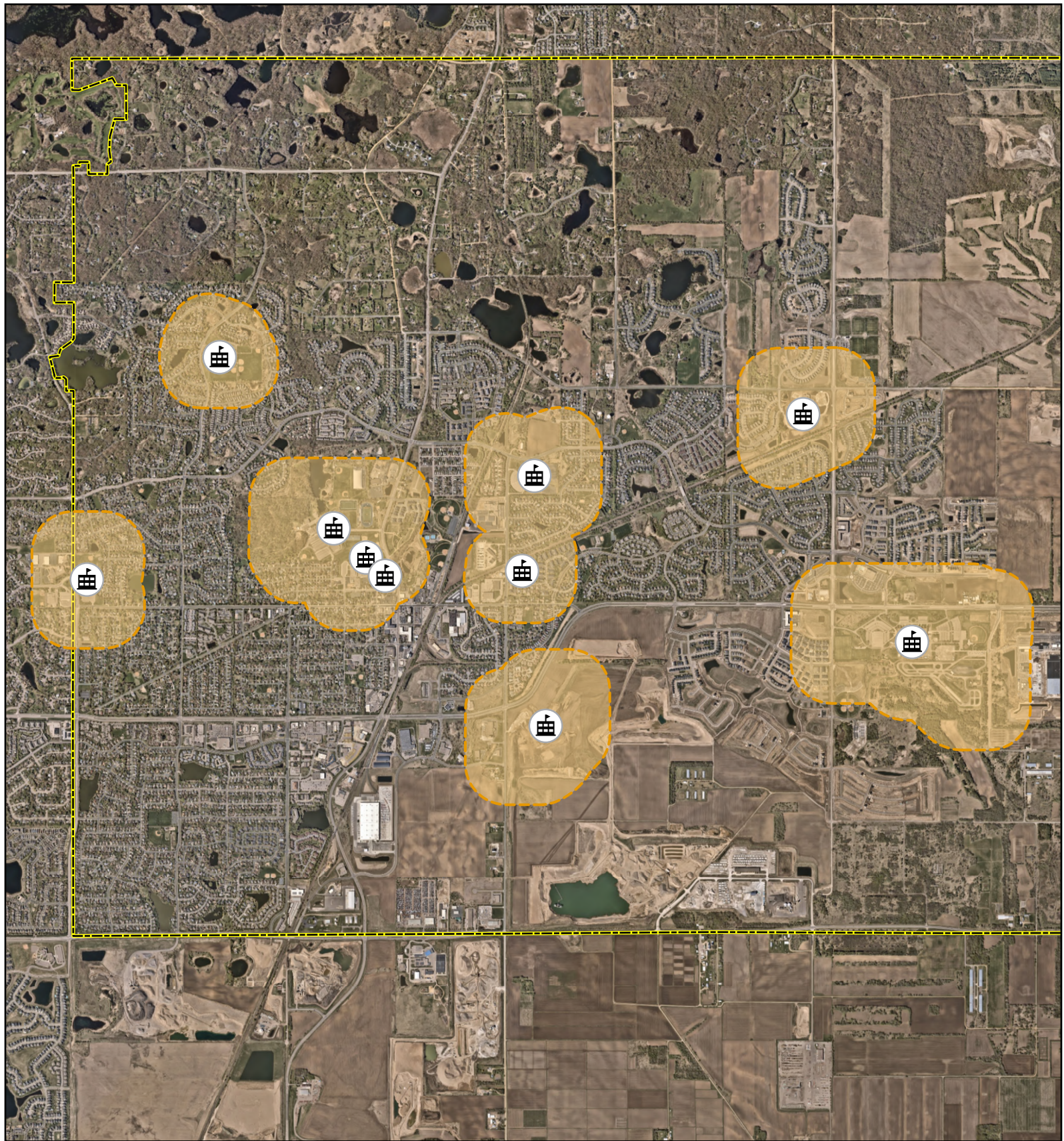
BACKGROUND

On January 7, 2025, City Council adopted an ordinance establishing cannabis and hemp business regulations. Following further review and a more comprehensive understanding of the state law, staff are now proposing amendments to the City Code to better align with legal requirements and community needs.

The proposed ordinance includes a buffer of 1,000 feet from post-secondary schools. Per our City Code, Post-Secondary is defined as a building or area of land used for the purpose of public or private post-secondary education, including but not limited to colleges, universities, and trade or business schools. Staff finds that Dakota County Technical College, due to its enrollment of high school students, should be considered as fitting within the definition of a school for regulatory purposes.

RECOMMENDATION

Staff recommends the Council adopt an amendment to ordinance title 3-11-9, establishing cannabis and hemp business regulations.



 Cannabis 1000 ft Buffer

 City Boundary

 Schools

Cannabis Buffer Zones



**CITY OF ROSEMOUNT
COUNTY OF DAKOTA
STATE OF MINNESOTA**

ORDINANCE NO. 2025-XX

**AN ORDINANCE AMENDING TITLE 3, CHAPTER 11 OF THE CITY CODE
ESTABLISHING CANNABIS AND HEMP BUSINESS REGULATIONS, BASIS
FOR DENIAL**

THE CITY COUNCIL OF THE CITY OF ROSEMOUNT, MINNESOTA, ORDAINS AS
FOLLOWS:

Section 1. Title 3 of the Rosemount City Code is amended by amending the
following:

3-11-9: BASIS FOR DENIAL:

A. The City shall deny a registration or renewal for any Cannabis Retailer or Lower-Potency Hemp Retailer if any of the following conditions are true:

1. The applicant has not submitted a complete application.
2. The applicant does not comply with the requirements of this chapter.
3. The applicant does not comply with applicable zoning and land use regulations.
4. If applicable, the maximum number of registrations, pursuant to § 3-11-5 , have been issued by the City.
5. The applicant does not have a valid license or preliminary license approval from the OCM.
6. The applicant is not current on all property taxes and assessments at the location where the retail establishment is located.
7. The property for which the registration is sought is located within one thousand feet (1,000 ft.) of an elementary, secondary school (K-12 grades), or post-secondary school. (Ord. 2025-01, 1-7-2025)

Section 2. Effective Date. This ordinance is effective following publication.

Adopted this 17th day of June, 2025, by the City Council of the City of Rosemount.

Jeffery D. Weisensel, Mayor

ATTEST:

Erin Fasbender, City Clerk

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Leprechaun Days - Service Agreement	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Dan Schultz, Parks & Recreation Director	AGENDA NO. 6.h.
ATTACHMENTS: Service Agreement	APPROVED BY: LJM
RECOMMENDED ACTION: Motion to approve the 2025 Service Agreement with the Rosemount Leprechaun Days Committee.	

BACKGROUND

For the past several years, the City Council has approved a service agreement between the City and the organizers of the Leprechaun Days celebration. Staff has discussed the 2025 Service Agreement with representatives of the Leprechaun Days Committee and both parties feel the agreement is ready for the Council to consider approving. This year the celebration will take place from July 19 – 26, 2025. As with past service agreements, the 2025 agreement includes the City making a payment to the Leprechaun Days Committee to assist with the cost of the fireworks display.

RECOMMENDATION

Staff is recommending the City Council approve the 2025 Service Agreement with the Rosemount Leprechaun Days Committee.

**SERVICE AGREEMENT
BETWEEN THE CITY OF ROSEMOUNT
AND ROSEMOUNT LEPRECHAUN DAYS COMMITTEE**

THIS AGREEMENT is made the _____ day of _____, 2025 by and between the City of Rosemount, a Minnesota municipal corporation (hereinafter referred to as “City”) and the Rosemount Leprechaun Days Committee, a Minnesota association (hereinafter referred to as “RLDC”);

WITNESSETH:

WHEREAS, for a number of years RLDC has conducted an annual civic community festival known as Rosemount Leprechaun Days (hereinafter referred to as “Leprechaun Days”); and

WHEREAS, the city council of the City has determined that it is in the best interest of the City and its citizens to promote the City and its businesses and to provide recreational opportunities for its residents by entering into a contract with RLDC to conduct Leprechaun Days in 2025;

NOW, THEREFORE, on the basis of the premises and the mutual covenants and agreements hereinafter set forth, it is agreed as follows:

1. RLDC will organize and conduct, in cooperation with the city staff, the Leprechaun Days for 2025, which shall run for multiple days which shall be agreed upon by the RLDC and the city council, in accordance with practices and standards of such festivals conducted in past years. Services shall include the recruitment, selection, training, and managing of such employees and volunteers as are necessary to conduct Leprechaun Days, and shall include but not be limited to:
 - a. advertising and promotions including the design, production and distribution of buttons, flyers and posters, and the development and installation of signs and banners;
 - b. securing all necessary governmental permits and seeking approval of street closings and other required City action;
 - c. soliciting financial support from individuals, businesses and organizations including sponsorships of certain events; and
 - d. conducting the following events or arranging for them to be conducted by other cooperating organizations, provided that events may be added by the RLDC with the approval of the city council:

- | | |
|--|--|
| 1) 500 Tournament | 31) Penny Scramble |
| 2) Amusement Rides | 32) Petting Zoo |
| 3) Martial Arts Demonstration | 33) Pickleball Event |
| 4) BBQ Chicken and Corn Feed at the Legion | 34) Public Ice Skate |
| 5) Bean Bag Tourney | 35) Puppets in the Park |
| 6) Legion Bingo | 36) Purse Bingo |
| 7) Blarney Stone Hunt | 37) RAHA Hockey Tourney |
| 8) Basecamp Fitness in the Park | 38) RHS Boys Alumni Lacrosse Game |
| 9) Car Wash | 39) RHS Girls Hockey Alumni Game |
| 10) Community Appreciation Lunch | 40) RHS Marching Band Brat Sale |
| 11) Dunk Tank | 41) Robert Trail Library Events |
| 12) Button Sales and Prize Drawing | 42) Rockin' at the Legion |
| 13) Car Show | 43) Root Beer Floats at Legion–Velvet Tones |
| 14) Community Band Performance | 44) Run for the Gold |
| 15) Cub in the Park | 45) Sidewalk Chalk Contest |
| 16) Euchre Tournament | 46) Shop Hop |
| 17) Fireworks Display | 47) Skate Board Contest |
| 18) Fishing Derby | 48) Steak Fry at the Legion |
| 19) Free Root Beer Floats at the Rosemount | 49) The Warehouse – Various exercise classes |
| 20) Grand Day Parade | 50) Trike, Bike and Scooter Races |
| 21) Hockey Events | 51) Waffle & Sausage Breakfast – Fire Dept |
| 22) FSRB Dogs for a Cause | 52) Women Empowered Seminar |
| 23) Irishettes Dance Team Performance | 53) Wet N'Wild Day |
| 24) Jazzercise | 54) Yoga in the Park |
| 25) Kiddie Parade | 55) Grill Your Ace Off |
| 26) Kids Dance at Legion | 56) Pint 2k Irish Run |
| 27) Leprechaun Days Entertainment-amphitheater | 57) Celts Bar Bingo |
| 28) Medallion Hunt | 58) Family Bingo |
| 29) Mid-Summer Faire | 59) Meat Raffle |
| 30) Music in the Park | 60) Family Fun Zone |

2. RLDC will undertake the work of this agreement as an independent contractor, and RLDC officers, employees, volunteers, and agents shall not be deemed agents or employees of the City for any purposes including, but not limited to, income tax withholding, workers' compensation and unemployment compensation.
3. As consideration for the services provided by RLDC, the City will pay to RLDC by August 30, 2025, the sum of \$12,000 to be used for a fireworks display. The City will make the payment with the understanding that RLDC will hold the fireworks event in 2025, if the fireworks event does not happen, the payment will not be made.

4. RLDC will maintain liability insurance providing the following coverages: Commercial general liability with personal injury limits of not less than \$1,000,000 per occurrence and a general aggregate limitation of not less than \$2,000,000. The City of Rosemount will be named as additional insured on all such policies and proof of insurance will be provided to the City.
5. All services and activities conducted by RLDC shall be on a nondiscriminatory basis and in full compliance with all state and federal civil and human rights laws, regulations and rulings.
6. The Leprechaun Days Committee President or Vice President will be issued three sets of keys for Central Park no later than July 15, 2025. The President or Vice President will then issue keys to the Committee members as needed.
7. Those possessing current peddlers’/solicitors’ licenses cannot be part of Leprechaun Days or Mid-Summer Faire events unless they have registered with the RLDC and have been approved by the committee.
8. The Leprechaun Days Committee will work with the Rosemount Police Department to develop event rules, operational guidelines, security measures and emergency plans to make sure the Leprechaun Days events are carried out in a safe and orderly manner.

CITY OF ROSEMOUNT

By: _____
Jeffery D. Weisensel, Mayor

By: _____
Erin Fasbender, City Clerk

LEPRECHAUN DAYS

By: _____
RLDC Treasurer

By: _____
RLDC President

City Council Regular Meeting: June 17, 2025

AGENDA ITEM: Rosemount Woods Addition, Final Acceptance	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Brian Erickson, City Engineer	AGENDA NO. 6.i.
ATTACHMENTS: Resolution, Map	APPROVED BY: TRM
RECOMMENDED ACTION: Adopt a resolution accepting Rosemount Woods Addition, City Project 2020-12	

BACKGROUND

Rosemount Woods Expansion, City Project 2020-12, is a manufactured home neighborhood east of Minnesota Highway 3 and south of Connemara Trail. As part of the expansion, approximately 800' of Brazil Avenue was improved from gravel to an urban pavement section. The expansion also provided 39 additional new sites, expanded the existing private water, sewer and stormwater lines.

Construction began in 2020 and the owner has completed construction. The developer has provided as-built record plans, final invoices, lien waivers and consent of surety as required.

RECOMMENDATION

Staff recommends that City Council adopt the resolution accepting the improvements to Brazil Avenue for perpetual maintenance.

**CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA**

RESOLUTION 2025-XX

**A RESOLUTION ACCEPTING PUBLIC IMPROVEMENT
FOR ROSEMOUNT WOODS
CITY PROJECT 2020-12**

WHEREAS, the developer has requested the City accept the public improvements, and;

WHEREAS, the developer has provided the as-built record drawings, lien waivers, consent of surety and all administrative requirements.

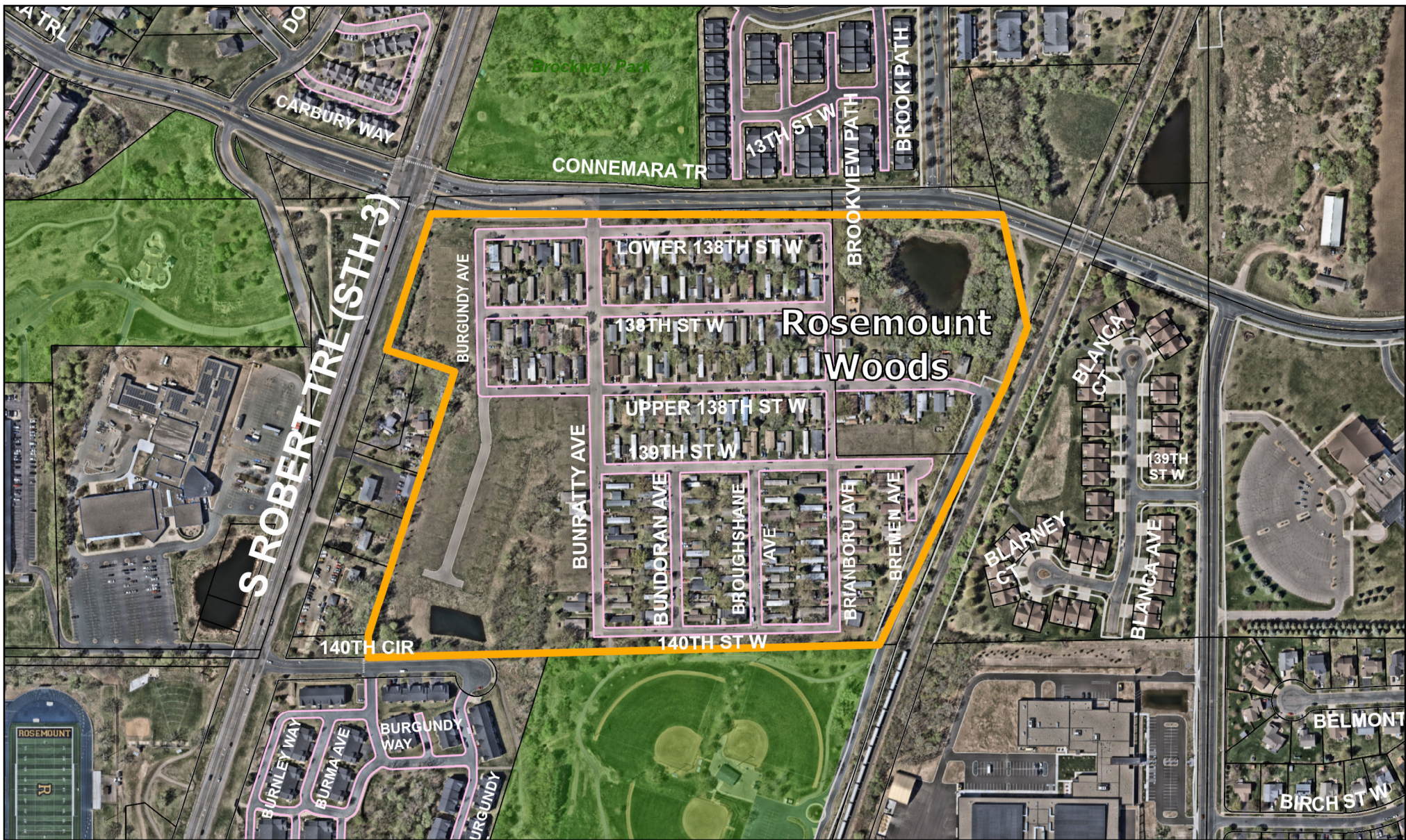
BE IT RESOLVED, by the City Council of the City of Rosemount, Minnesota. The public work completed under said agreement is hereby accepted for perpetual maintenance and ownership.

ADOPTED this 17th day of June 2025.

Jeffery D. Weisensel, Mayor

ATTEST:

Erin Fasbender, City Clerk



City Council Regular Meeting: June 17, 2025

AGENDA ITEM:	Adoption of the Rosemount Dakota East Area Final Alternative Urban Areawide Review (AUAR).	AGENDA SECTION:	CONSENT AGENDA
PREPARED BY:	Anthony Nemcek , Senior Planner	AGENDA NO.	6.j.
ATTACHMENTS:	Resolution, Final AUAR	APPROVED BY:	TRM
RECOMMENDED ACTION: Motion to adopt a resolution authorizing the adoption of the Rosemount Dakota East Area Final Alternative Urban Areawide Review.			

BACKGROUND

The City Council is being asked to adopt a resolution adopting the Final Alternative Urban Areawide Review (AUAR) for the potential development of approximately 420 acres of land situated between Emery and Fisher Avenues and south of County Road 42/Minnesota Highway 55. The AUAR has been submitted by Kimley-Horn on behalf of MNLCO Dakota County, LLC. The development scenarios anticipated by the AUAR, in addition to one scenario that is consistent with the City's land use plan, are for 2.5 million square feet of mixed business campus (light industrial) development and 2.3 million square feet of mixed business campus (technology park/data center) development. Based on the scale of the anticipated scenarios, the development would meet the criteria for a mandatory Environmental Assessment Worksheet (EAW). Given the size and scope of planned future development on the site, MNLCO Dakota County, LLC. has chosen instead to study the entire site through the AUAR process rather than completing multiple EAW's (or an EIS) over the project area. The intent of the AUAR is to recognize worst-case potential impacts and identify mitigation measures that may be taken to compensate for those impacts.

The AUAR was ordered by the City on February 4, 2025. As stated, three development scenarios were reviewed within the AUAR. Two of the scenarios consider mixed business campus developments of light industrial or technology park (data center). All AUARs must include an anticipated development scenario that is consistent with the City's comprehensive land use plan. Within the AUAR area, the City's future land use map designates land for a mix of residential densities that would support 1,450 units and commercially guided land that would support 500,000 square feet of commercial development. The rest remains designated for agricultural use through 2040.

The state's environmental rules (MR4410) specify that the City of Rosemount is the Responsible Government Unit for the AUAR. MNLCO Dakota County, LLC. hired Kimley-Horn to prepare the document, and the City contracted with WSB to review and process the AUAR on behalf of the City. The AUAR was prepared and reviewed. It was submitted for the required 30-day comment period on March 18, 2025, to the review agencies and made available to the public. Comments were due on April 17, 2025. Comments were received from Dakota County, the Minnesota Pollution Control Agency (MPCA), the Metropolitan Council, the Vermillion River Watershed JPO, and the Minnesota

Department of Health. Responses to comments were addressed and the AUAR was revised based on the comments. The Final AUAR was then submitted on May 13 for the required 10-day comment period. With no objections from any of the review agencies, the City can move to the final step of adopting the AUAR.

With the completion of the two comment periods, the review of comments from the review agencies, and receiving no objections from the agencies, the next step is for the City to consider adopting the AUAR. By adopting the AUAR, the AUAR becomes the official environmental review document for any development that occurs in the study area and meets the requirements of Minnesota Rule 4410. This means that any project that is proposed in the study area that may trigger environmental review, such as an EAW, is covered under the AUAR provided the project meets the mitigation measures in the AUAR and falls within the development scenarios analyzed in the AUAR. Once adopted, the AUAR is valid for five years and can then be updated.

Before any construction can occur on the site, proposed development of the site must go through all required approvals including, but not limited to, Comprehensive Guide Plan Amendment, Rezoning, Platting, and Final Site and Building Plan review. The learnings from this AUAR will be applied to any future development applications.

RECOMMENDATION

Staff finds the AUAR to be complete and accurate and to meet the requirements of the state's environmental rules (MR4410). Therefore, staff is recommending the City Council adopt the Dakota East Area AUAR.

**CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. _____

**A RESOLUTION AUTHORIZING THE ADOPTION OF THE
ROSEMOUNT DAKOTA EAST AREA
FINAL ALTERNATIVE URBAN AREA WIDE REVIEW (AUAR) 2025**

WHEREAS, an AUAR has been completed for the project pursuant to Minnesota Rules 4410 which identifies and assesses the environmental impacts and mitigation measures associated with the Dakota East Area Study Area; and

WHEREAS, the Dakota East Area property is located on approximately 447 acres on 8 parcels south of Courthouse Boulevard, between Emery Avenue East and Fischer Avenue; and

WHEREAS, the AUAR was completed pursuant to Minnesota Rule 4410.3610; and

WHEREAS, the AUAR was distributed for the required 30-day comment, revised based on comments, and redistributed for the required 10-day objection period; and

WHEREAS, comments received on the AUAR have generated information adequate to determine mitigation measures associated with the potential development in this area; and

WHEREAS, the comments received and the City's responses to these comments are included in the public record for the AUAR; and

WHEREAS, development of the Dakota East Area Study Area is expected to comply with all Rosemount and review agency standards as well as the mitigation measures outlined in the AUAR;

NOW THEREFORE BE IT RESOLVED, by the City Council of Rosemount, MN that the City of Rosemount adopts the Dakota East Area AUAR dated May 2025.

ADOPTED this 17th day of June 2025, by the City Council of the City of Rosemount.

Jeff Weisensel, Mayor

ATTEST:

Erin Fasbender, City Clerk

Dakota East Area

Final Alternative Urban Areawide Review

May 2025

Prepared for:



Prepared by:

Kimley»Horn

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Appendix A: Wetland Delineation Report
Appendix B: Traffic Impact Analysis
Appendix C: Greenhouse Gas Quantification
Appendix D: Additional Species Information
Appendix E: Responses to Comments
Appendix F: Comment letters

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

Dakota East Area

2. Proposer

Proposer: MNLCO Dakota County, LLC

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 Rosemount

Contact Person: Anthony Nemcek

Title: Senior Planner

Address: 2875 145th St. W

City, State, ZIP: Rosemount, MN 55068

Phone: 651-322-2090

Email: anthony.nemcek@rosemountmn.gov

4. Reason for EAW Preparation

AUAR Guidance: Not applicable to an AUAR.

5. Project Location

County: Dakota

City/Township: Rosemount

PLS Location (1/4, 1/4, Section, Township, Range): Section 28 of Township 115, Range 18.

Watershed (81 major watershed scale): Mississippi River & Lake Pepin

GPS Coordinates:

Tax Parcel Numbers: 340280036011, 340280015010, 340280010010, 340280050010, 340280050010, 340280085010

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**)
- **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 types map as required for Item 8** (see **Figure 7**)
- **Land use and planning and zoning maps as required in conjunction with Item 10** (see **Figure 8** And **Figure 9**)

Figure 1. USGS Map

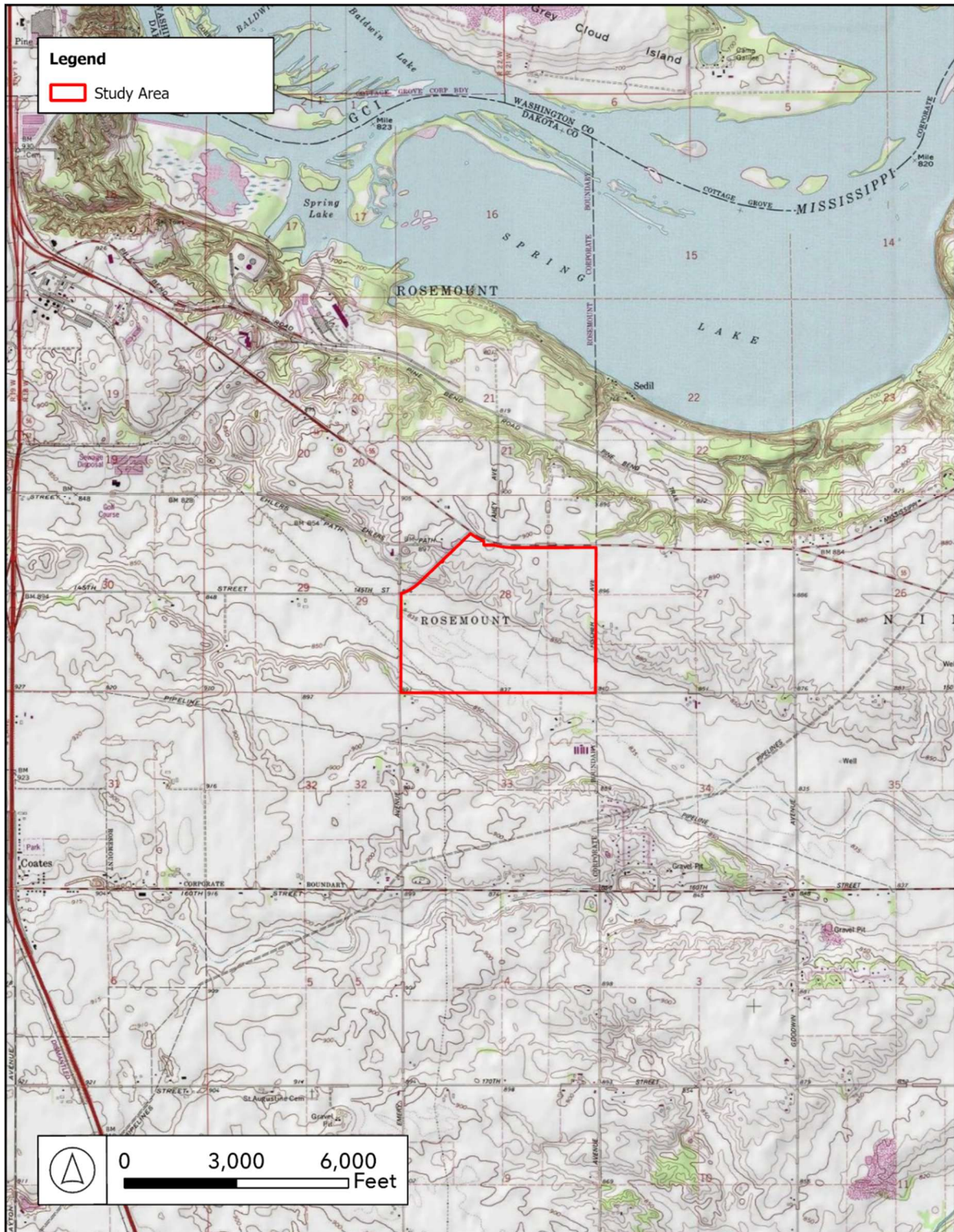
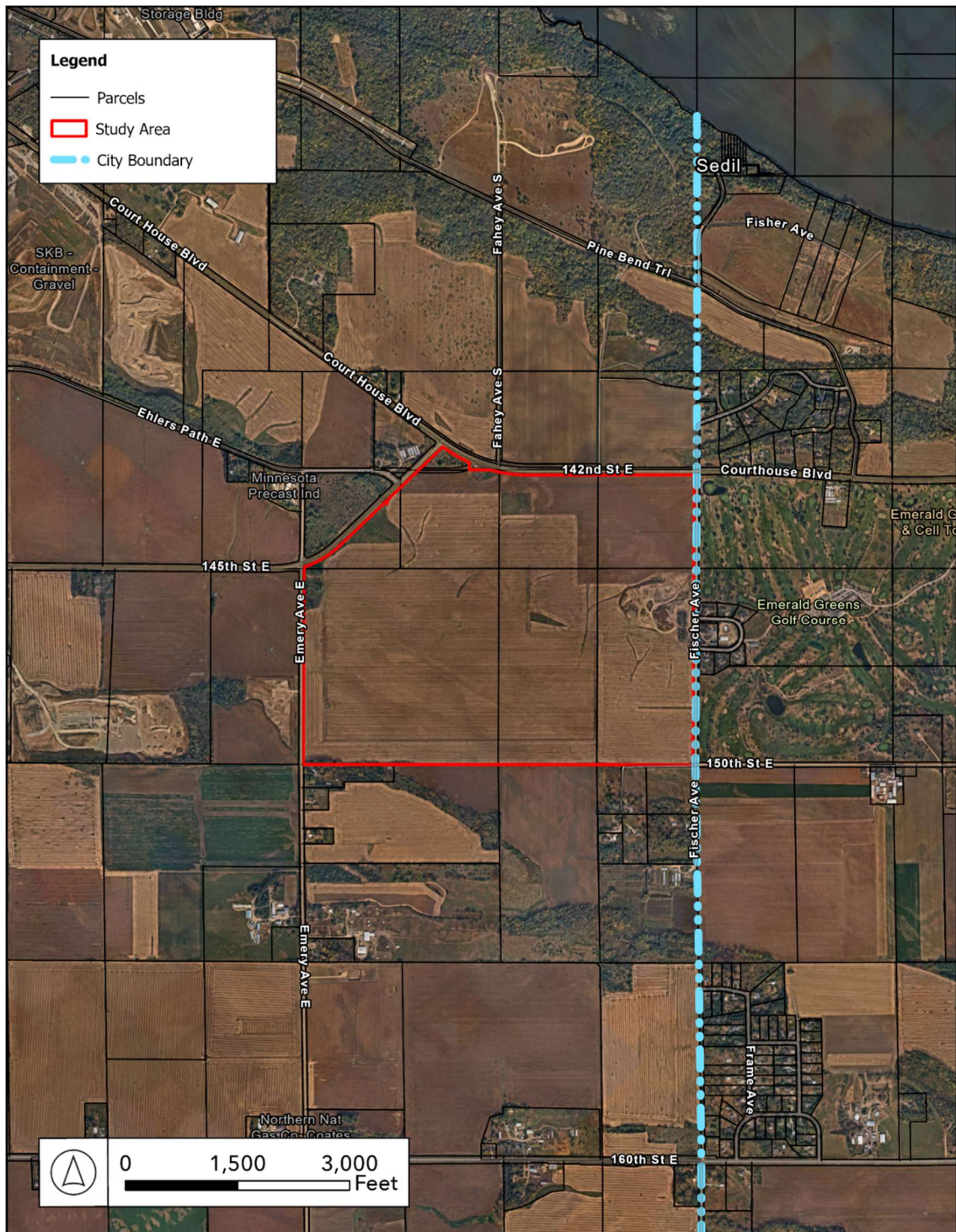


Figure 2. AUAR Study Area



6. Project Description

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

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

The Dakota East AUAR Study Area encompasses an area totaling approximately 447 acres on 8 parcels in the city of Rosemount, Dakota County, Minnesota (Shown on Figure 2). MNLCO Dakota County, LLC is proposing to redevelop the study area from existing agriculture and extraction use to one of the following proposed scenarios.

Development Scenarios

Three scenarios for evaluation are included in the AUAR as outlined in **Error! Reference source not found..** Scenario 1 proposes uses that are consistent with the Rosemount Comprehensive Plan, which includes 1,450 residential units and commercial buildings for a total of 500,000 square feet (see Error! Reference source not found.). It is anticipated that some of the 229 acres will remain in agricultural land as part of Scenario 1. Scenario 2 includes multiple buildings for a total of 2,300,000 square feet for mixed business campus uses (see Figure 4). Scenario 3 includes multiple buildings for a total of 2,500,000 square feet for mixed-business campus, involving light industrial uses (see Figure 5). The proposed development within the AUAR study area is anticipated to begin construction in 2026.

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 residential, commercial development, and agricultural uses. Construction is anticipated to begin in 2026 (see Figure 3).

Scenario 2

Scenario 2 represents proposed mixed business (technology park) development. Construction is anticipated to begin in 2026 (see Figure 4).

Scenario 3

Scenario 3 represents proposed mixed business (light industrial) development. Construction is anticipated to begin in 2026 (see Figure 5).

Table 1: Development Scenarios

Land Use	Scenario 1	Scenario 2	Scenario 3
Residential Units	1,450 Units	-	-
Commercial	500,000 SF	-	-
Mixed Business Campus (Light Industrial)	-	-	2,500,000 SF
Mixed Business Campus (Technology Park)	-	2,300,000 SF	-
Total Project Area	447 acres	447 acres	447 acres

Figure 3. Development Scenario 1

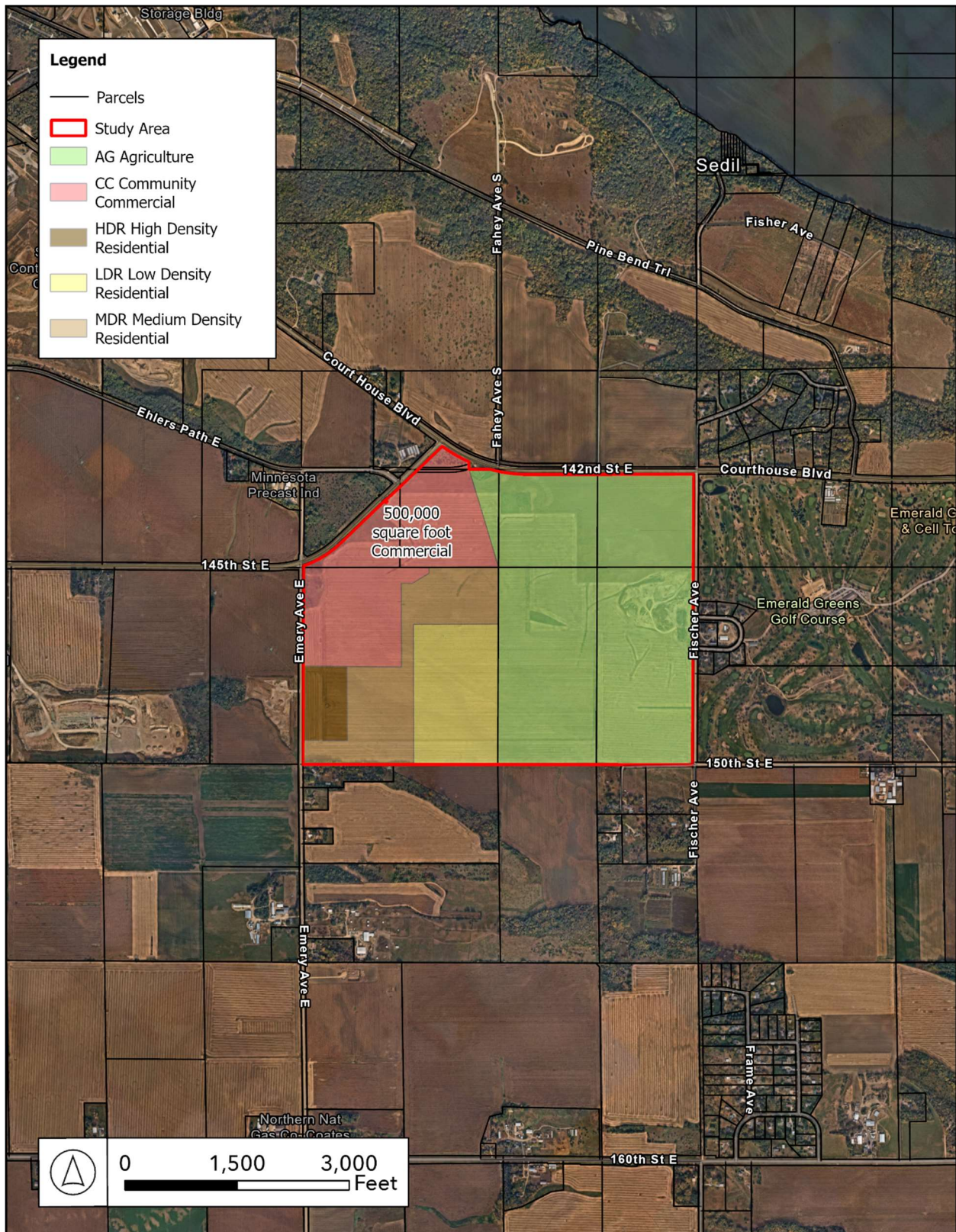


Figure 4. Development Scenario 2

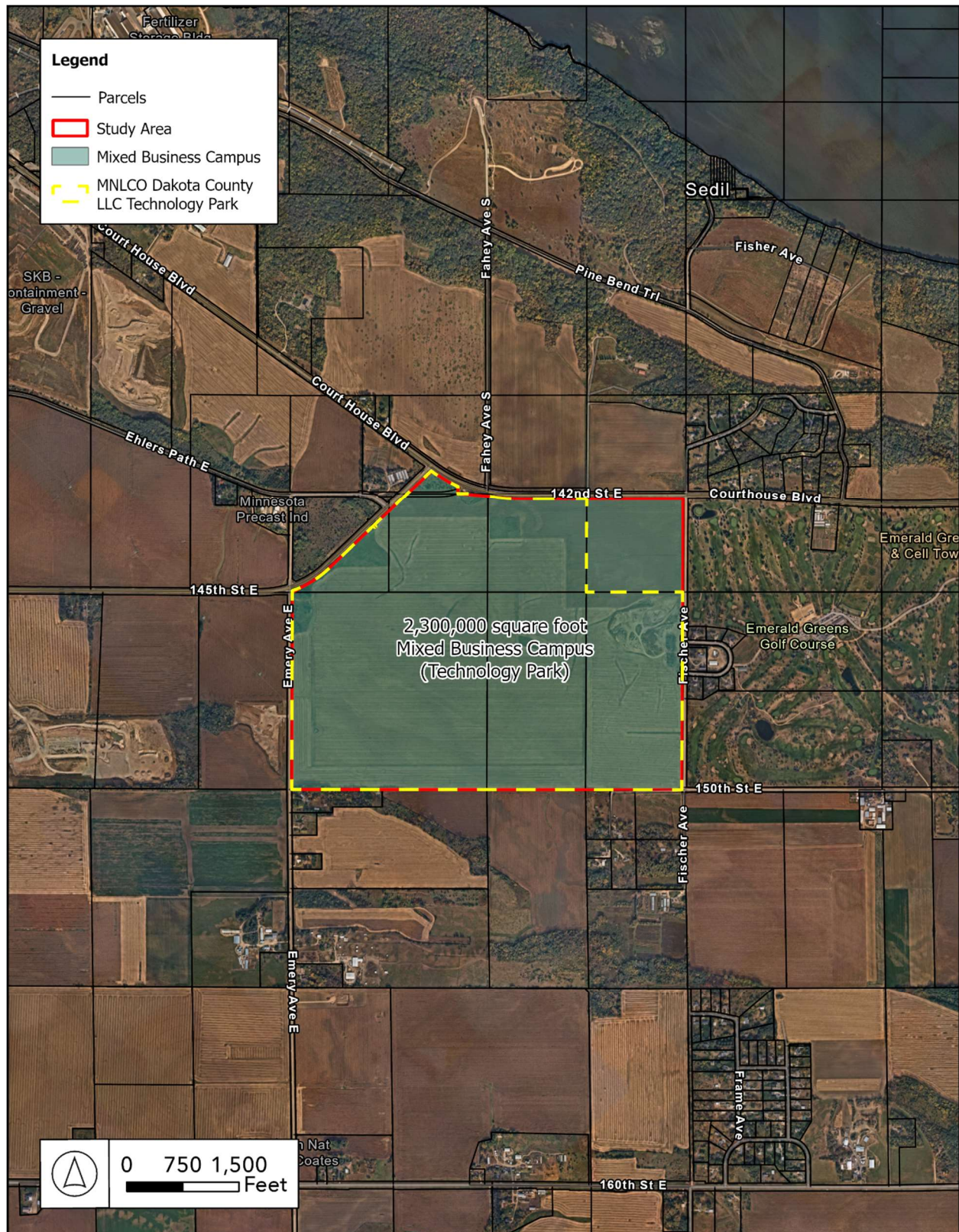
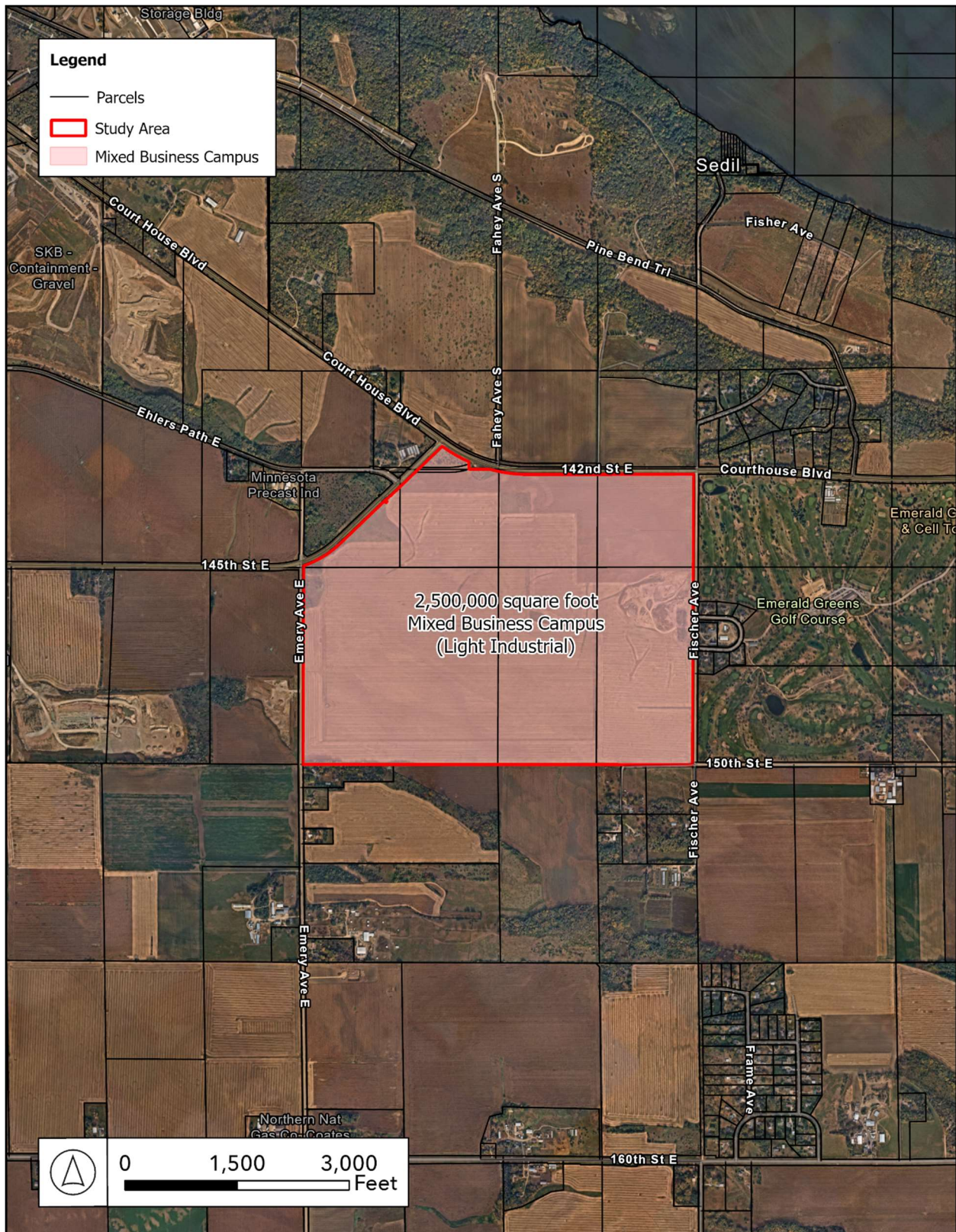


Figure 5. Development Scenario 3



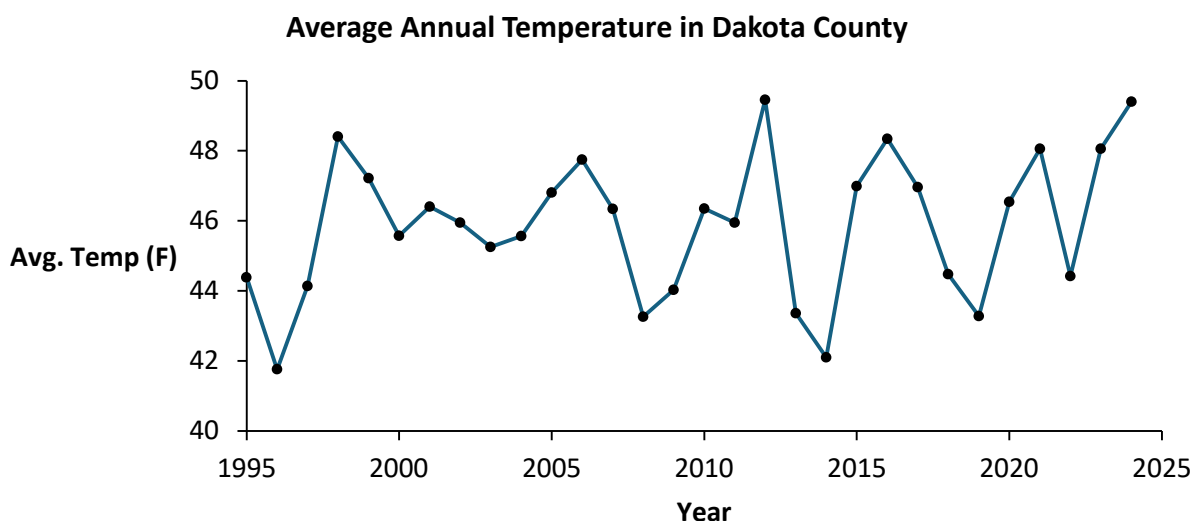
7. Climate Adaption and Resilience

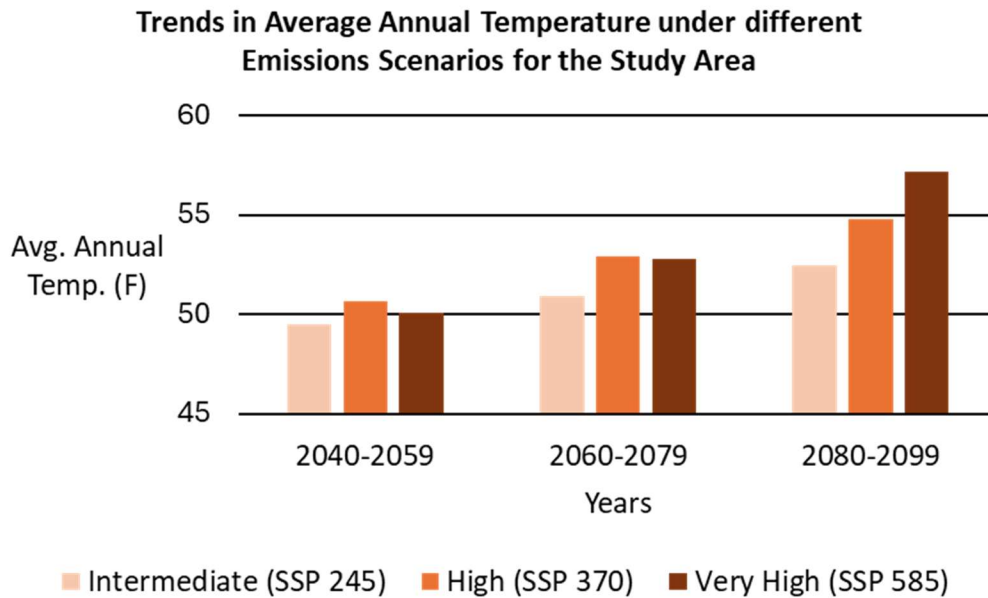
- a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

Trends in temperature, precipitation, flood risk, and cooling degree days are described below for the general project location. Some of the climate projections summarized below use shared socioeconomic pathways (SSPs) or representative concentrations 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 45.6°F. The annual daily average temperature in the study area is projected to increase to 49.3°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 52.3°F and 54.6°F under an intermediate (SSP 245) and high emissions pathway (SSP 370), respectively.





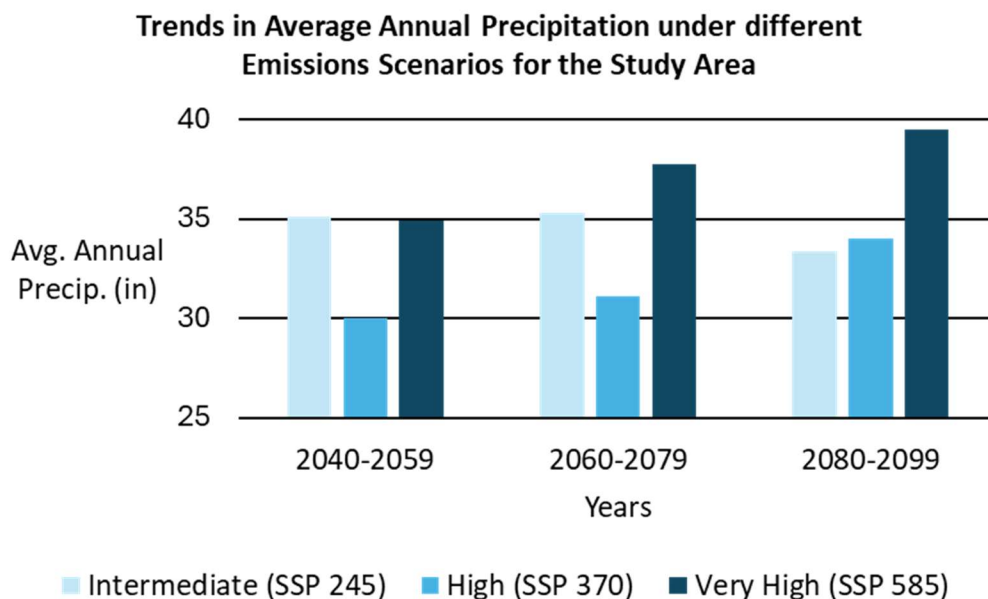
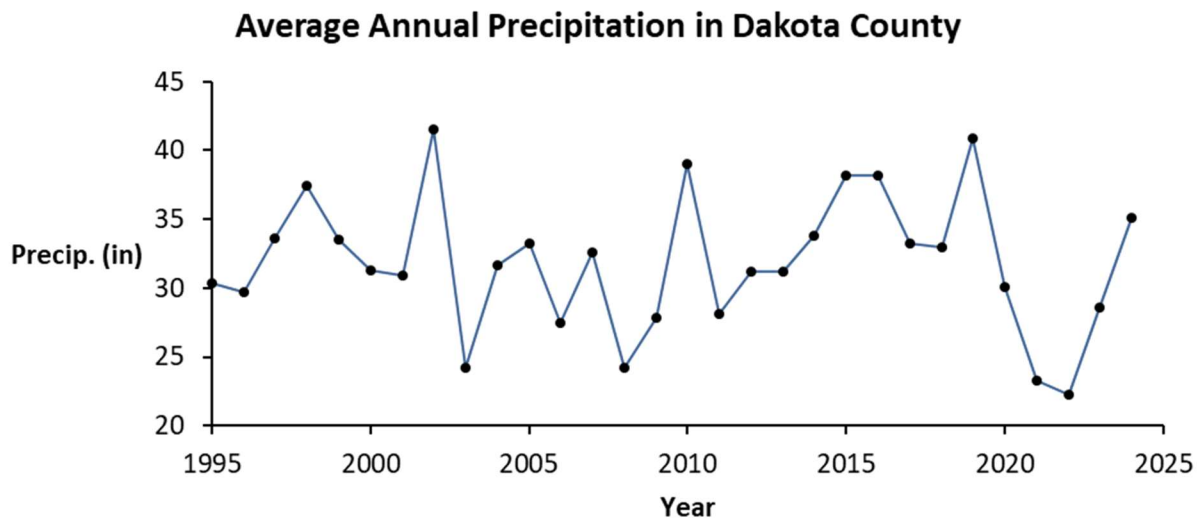
Urban Heat Island

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 34.6 inches. Average annual precipitation in the study area from 2040-2059 is projected to be 35.4 inches under SSP 245. From 2080-2099, average annual precipitation is projected to be 33.7 inches under SSP 245 and 34.3 inches under SSP 370.

According to the EPA Climate Resilience Evaluation and Awareness Tool (CREAT) Climate Change Projection Map, there is a projected 2.8% to 13.4% increase in 100-year storm intensity by 2035 and a projected 5.4% to 26.1% increase in 100-year storm intensity by 2060.



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 6. 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.

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.

- 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.**

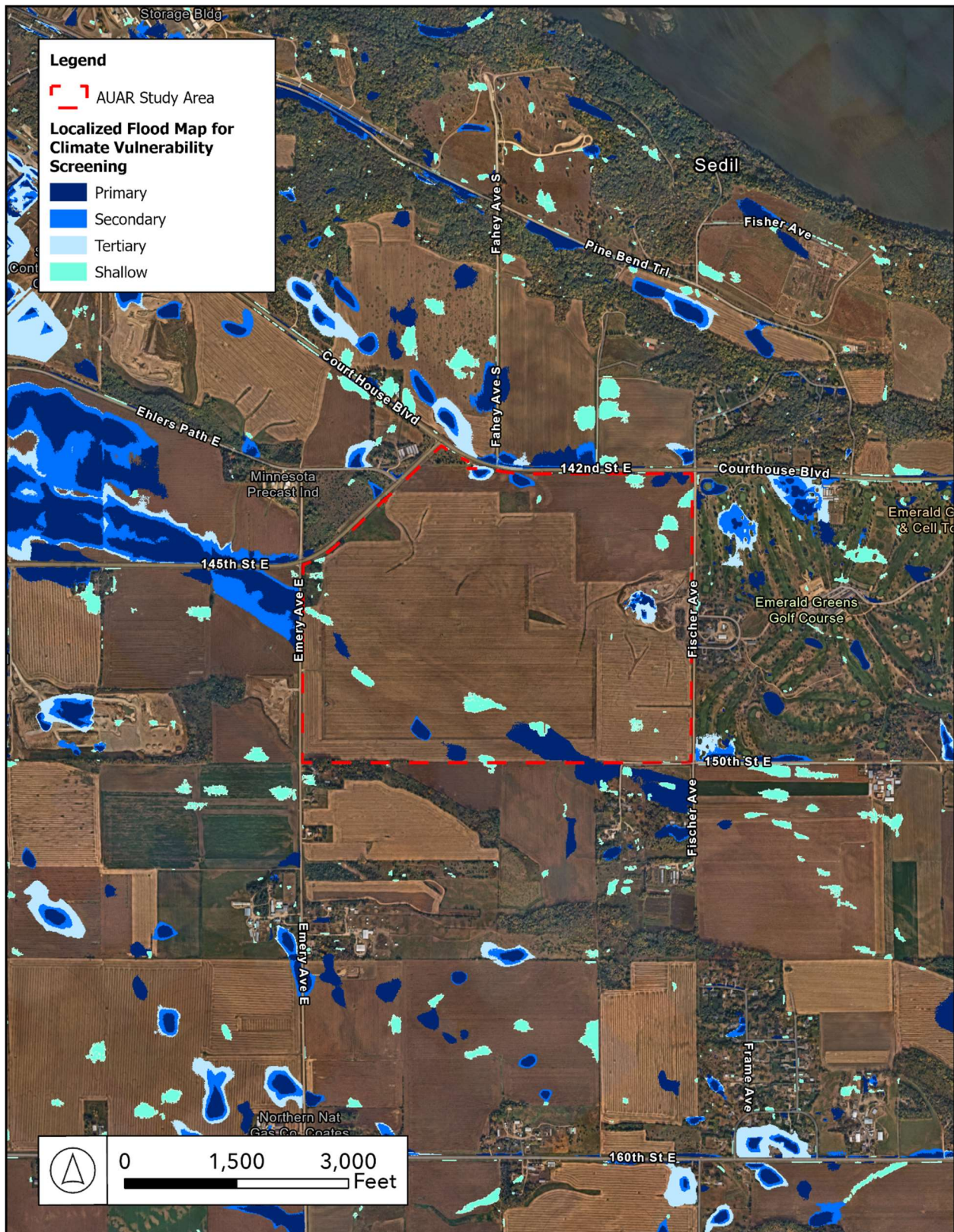
Table 2. Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations
Project Design	For example, aspects of the building architecture/materials choices and site design that may negatively affect urban heat island conditions in the area considering 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 and irrigation

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations
Land Use	For example, any 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) that 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	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. Scenario 1 adaptations may consist of clustering development
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 BMPs shall be designed to meet City of Rosemount and VRWJPO 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
Contamination/ Hazardous Materials/ Wastes	For example, how 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. Scenario 1 adaptations may consist of environmentally responsible farming practices

Figure 6. Flood Impact Zones



8. Cover Types

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

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 447 acres of agriculture, grasslands, wetland, woodlands, and some disturbed surfaces which include the exiting sand mining area. Refer to Table 3 for complete acreage of each cover type within the AUAR study area. There are few existing buildings and structures within the study area. These cover types were determined by reviewing recent aerial photography and the Minnesota National Wetland Finder.

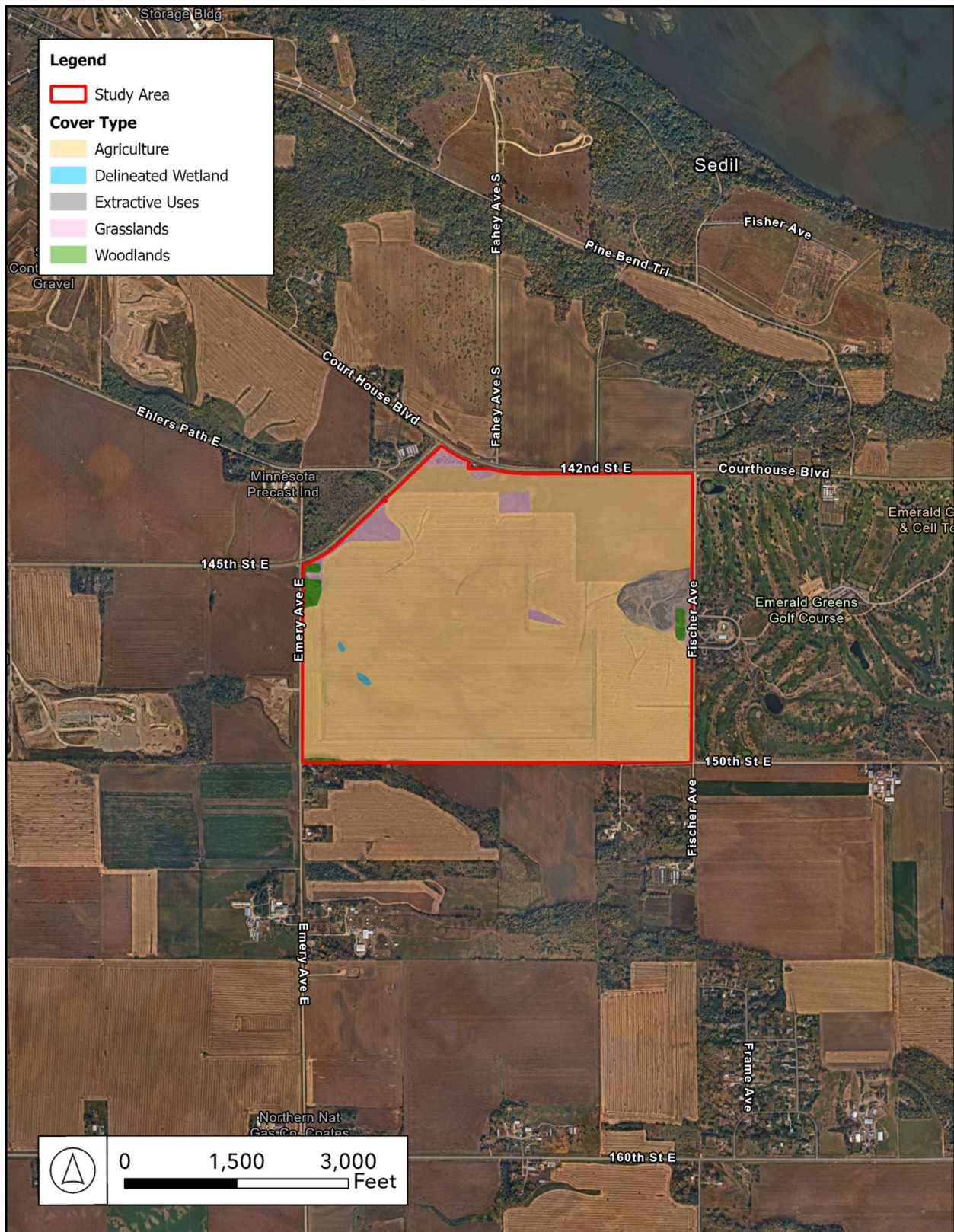
Table 3. Cover Types

Cover Type	Existing (Acres)	Scenario 1 (Acres)	Scenario 2 (Acres)	Scenario 3 (Acres)
Wetlands and Shallow Lakes (less than 2 meters deep)	0.64	TBD	TBD	TBD
Rivers/Streams	-	-	-	-
Wooded/Forest	5.30	4.0	4.0	4.0
Brush/Grassland	15.46	-	-	-
Cropland	394.31	208.00	40	40
Extractive Uses	16.90	-	-	-
Lawn/Landscaping	-	61.12	133.00	143.00
Green Infrastructure (total from Table 4. Anticipated Green Infrastructure)	-	20.00	30.00	20.00
Impervious Surface	-	143.88	230.00	230.00
Stormwater Pond (wet sedimentation basin)	-	10.00	10.00	10.00
Total	447	447	447	447

Table 4. Anticipated Green Infrastructure

Green Infrastructure	Existing (Acres)	Scenario 1 (Acres)	Scenario 2 (Acres)	Scenario 3 (Acres)
Constructed Infiltration Systems (infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, swales with impermeable check dams)	-	20	30	20
Total	-	20	30	20

Figure 7. 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: Permits and Approvals Required

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 Discharge Permit	To be applied for, if applicable
	Significant Industrial User Permit	To be applied for, if applicable
	Environmental Assessment Worksheet ¹	To be applied for, if applicable
	NPDES Permit for Rapid Infiltration Basins	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

¹ 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
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
	Industrial Waste Discharge Permit	To be applied for, if applicable
	Comprehensive Plan Amendment	To be applied for, if needed
County		
Dakota County	Building Permit	To be applied for, if applicable
	Right-of-Way Permit	To be applied for, if applicable
	Well Closure Permit	To be applied for, if applicable
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 Rosemount	Sign Permit	To be applied for, if applicable
	Rezoning and Zoning Map Amendment	To be applied for, if applicable
	Preliminary/Final Plat	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
	Demolition Permit	To be applied for, if applicable
	AUAR Approval	In process
	Comprehensive Plan Amendment	To be applied for, if applicable

10. Land Use

a. Describe:

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

The AUAR study area is located in a semirural area approximately 20 miles southeast of Minneapolis, in Dakota County, Minnesota. The study area consists of eight existing parcels. According to the Existing Land Use Map (2016), the study consists of agricultural, undeveloped, and extractive land uses.² The study area is generally bounded by Courthouse Boulevard and 145th St to the north, Emery Avenue E to the west, mostly undeveloped land to the south, and Fischer Avenue to the east. Land uses adjacent to the study area include the Emerald Greens Golf Course to the east and primary vacant, undeveloped land to the north, south, and west.

There are no existing parks within the study area or immediate vicinity. The Spring Lake Park Reserve is located approximately 3,567 ft (0.68 miles) to the north of the study area boundary. Additionally, a portion of the Pine Bend Trail is located along the Spring Lake Park Reserve.

According to the Natural Resources Conservation Service (NRCS), 53.4 percent of the study area is considered prime farmland, 21.8 percent of the study area is considered farmland of statewide importance, and the remainder of the study area is considered not prime farmland. Impacts to farmland will occur as a result of Scenario 1, Scenario 2, and Scenario 3. However, the AUAR Study Area is within the city limits; therefore, no further evaluation or mitigation is required.

i. **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.**

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.

Rosemount 2040 Comprehensive Plan

The City of Rosemount adopted the *Rosemount 2040 Comprehensive Plan* (2040 Comprehensive Plan) in 2020.³ The 2040 Comprehensive Plan aims to guide the City's growth with respect to land use, housing, community facilities, transportation, and parks and trails. Additionally, the 2040 Comprehensive Plan discusses the City's plan

² City of Rosemount. 2020. *Rosemount 2040 Comprehensive Plan Chapter 3: Land Use*, page 3-15. Available at: <https://www.rosemountmn.gov/DocumentCenter/View/4097/Chapter-3---Land-Use---FINAL-3-18-20>.

³ City of Rosemount. 2020. *Comprehensive Plan*. Available at: <https://www.rosemountmn.gov/185/Comprehensive-Plan>.

for economic competitiveness and resilience. As shown in Figure 9, the future land uses within the study area include Community Commercial, High Density Residential, Medium Density Residential, Low Density Residential, and Agriculture. If development under Scenarios 2 or 3 occurs, a Comprehensive Plan amendment would be required.

Table 6. Rosemount 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 low density residential housing is typically single-family housing or townhouses with few units per building. Low density residential provides housing suitable for families with children, and as such, should be located close to schools, churches, public parks, and neighborhood commercial.
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.
High Density Residential	Land guided for high density residential is designed to accommodate many of the life cycle housing options not addressed within the Low Density or Medium Density Residential land uses. Senior and assisted living development for an aging population, along with affordable rental or ownership units for new graduates or young families, often require greater densities than are allowed within the low or medium density neighborhoods.
Community Commercial	Land guided for commercial businesses, such as retail sales of goods, services, food and beverage, entertainment, and offices.

Dakota County 2040 Comprehensive Plan

The Dakota County 2040 Comprehensive Plan⁴ is used to guide the County's housing, transportation, county facilities, parks, and land use planning over the next 20 years.

⁴ Dakota County. 2040 Comprehensive Plan. Available at: <https://www.co.dakota.mn.us/Government/Planning/CompPlan/Pages/default.aspx>

Rosemount 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 Rosemount.

Dakota County has a regional trail as part of their long-range plan, the Rosemount Greenway. The trail is anticipated to follow CSAH 42 along the northern boundary of the site area. Additional coordination with Dakota County will be needed to determine the desired path of the trail.

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

Existing Zoning

The City of Rosemount Zoning Code was recently updated in 2024 to align with the 2040 Comprehensive Plan and included an updated Zoning Map. According to the adopted 2024 Zoning District Map, the entirety of the study area is zoned A-2 Agricultural District.⁵ If development under Scenarios 2 or 3 occurs, a Comprehensive Plan amendment and Zoning District Map amendment would be required.

FEMA National Flood Hazard

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (panel number 27037C0251E, dated 12/2/2011, not printed, the AUAR study area is not located in a special flood hazard area.⁶

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 30-foot Water Quality Corridor extends through the central 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.

Rosemount Comprehensive Wetland Management Plan

The Rosemount Comprehensive Wetland Management Plan Wetland Inventory Map does not identify any wetlands within the study area.

⁵ City of Rosemount. 2024. *2024 Adopted Zoning Map*. Available at: <https://www.rosemountmn.gov/DocumentCenter/View/6983/2024-Proposed-Zoning-Map-PDF?bidId=>.

⁶ FEMA. 2024. *FEMA Flood Map 27037C0251E*. Available at: <https://map1.msc.fema.gov/firm?id=27037CIND2B>.

Table 7. City of Rosemount Wetland Buffer Strips and Setbacks

Wetland Classification	Permanent Buffer Strip Average Width (Feet)	Additional Structure Setback from Buffer (Feet)	Minimum Permanent Buffer Zone Width (Feet)
Preserve	75	30	30
Manage 1	50	30	30
Manage 2	30	30	15
Manage 3	15	30	15

Shoreland

The development is not located within shoreland zone.

- iii. **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 this project.

- b. **Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 10a 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, 10, 12, 20, and others, it must be addressed here; a brief synopsis should be presented here if the material has been presented in detail under other items. Necessary amendments to comprehensive plan elements to allow for any of the development scenarios should be noted. If there are any management plans of any other local, state, or federal agencies applicable to the AUAR area, the document must discuss the compatibility of the plan with the various development scenarios studied, with emphasis on any incompatible elements.

Existing Land Use

The majority of the existing land use for the AUAR study area is agricultural land. A small portion of the AUAR study area is currently being used for extraction uses.

Existing Zoning

The Study Area is currently zoning agricultural use. Rezoning of the study area is needed for all proposed development scenarios.

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 residential, commercial, and agriculture use which is consistent with the 2040 Comprehensive Plan. Rezoning would be required for Scenario 1.

Scenario 2

Scenario 2, which includes technology park use, will require a comprehensive plan amendment. The parcels are currently zoned for agricultural use. The comprehensive plan update will amend the land use for that portion of the study area to "Business Park" to allow for a mixed business campus.

Scenario 3

Scenario 3 involves the use of an industrial park, which will require an amendment to the comprehensive plan. The comprehensive plan update would change the land use to "Business Park" to allow for a mixed business campus that includes an industrial park use.

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

Scenario 1, Scenario 2, and Scenario 3 would all require a rezoning. Scenario 1 would require rezoning to be consistent with the 2040 Comprehensive Plan. Scenarios 2 and 3 would require rezoning to "B-2 Employment District" with a Planned Unit Development (PUD) overlay.

Scenarios 2 and 3 would require a comprehensive plan amendment or update to amend the comprehensive plan to a "Business Park" designation.

Figure 8. Existing Land Use



Figure 9. Future Land Use

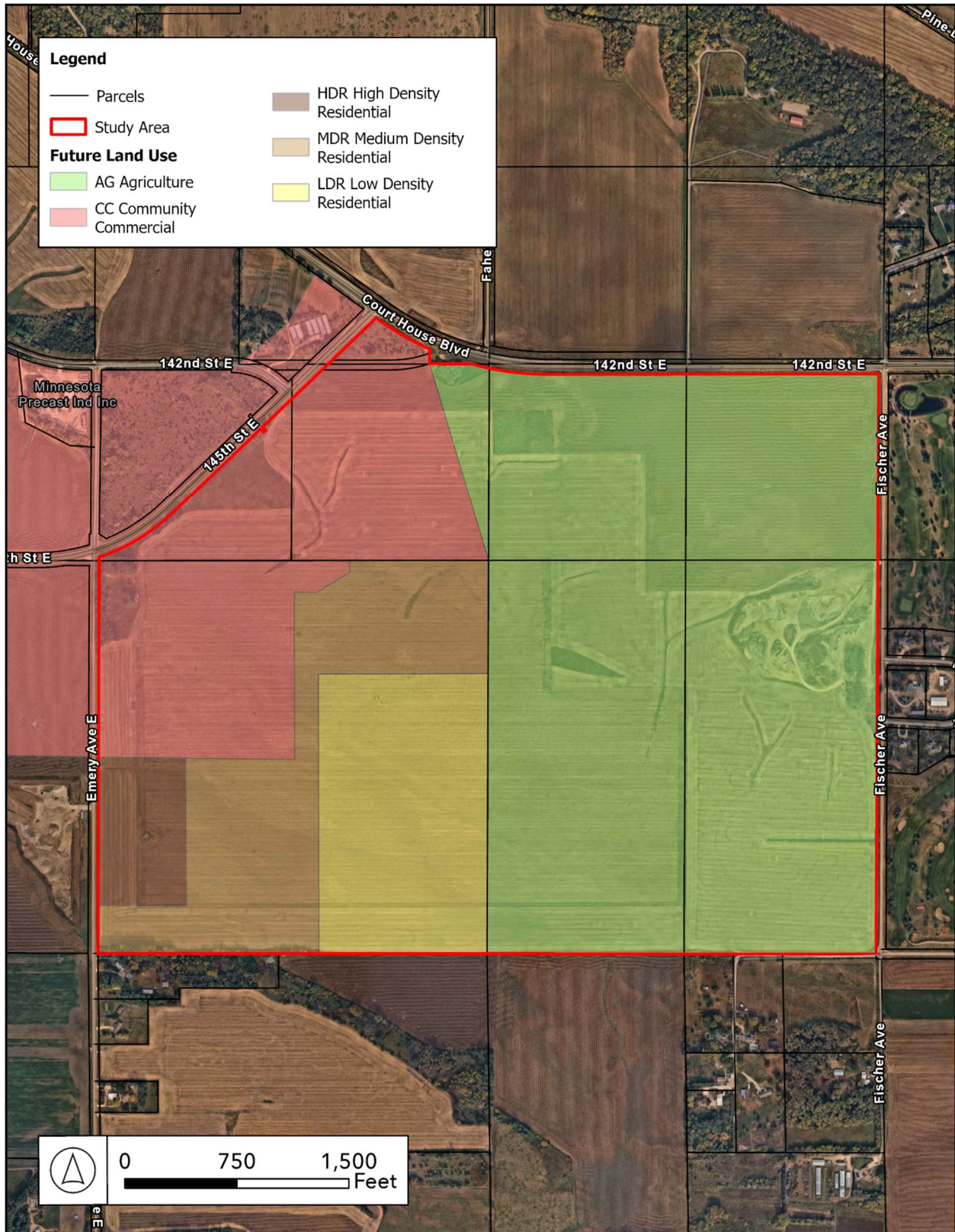
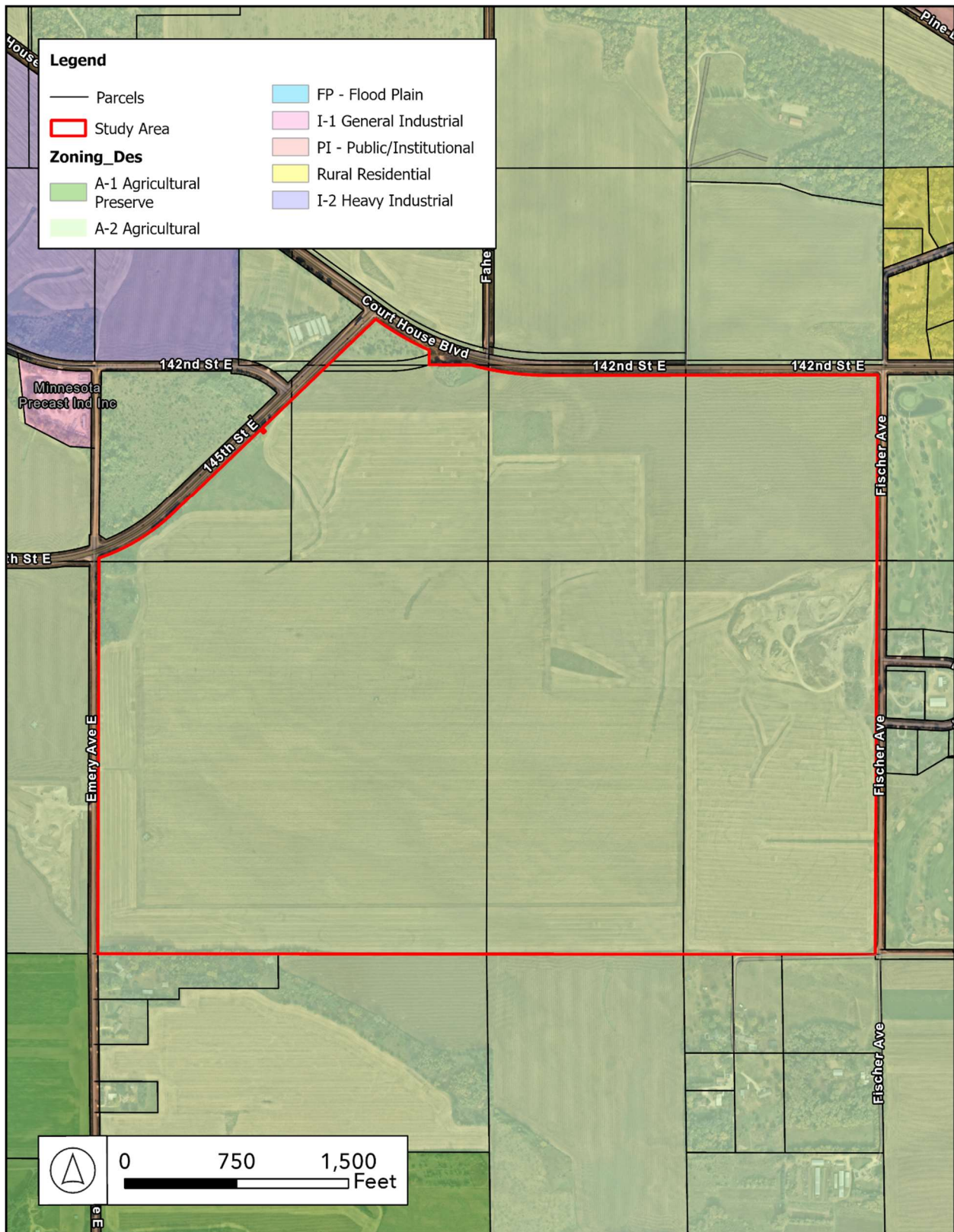


Figure 10. Existing Zoning Map



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 majority of the AUAR study area is underlain by Paleozoic bedrocks. The two types of Paleozoic rocks are characterized by relatively thick widespread layers of sandstone, shale, and carbonate deposited in shallow seas during the Cambrian and Ordovician Periods. The St. Peter Sandstone, from the Middle to Lower Ordovician, is mostly a white to tan, fine- to medium-grained, friable quartzose sandstone and referred to as the Tonti Member and is present in a small area in the northeastern corner of the study area. The majority of the study area is dominated by the *Shakopee Formation*, a heterolithic unit composed of tan- to orangish-brown dolostone, sand dolostone, sandstone, and shale, which sits beneath the St. Peter Sandstone.⁷

There are no known sinkholes or unconfined/shallow aquifers located within the AUAR study area. Additionally, there are no karst conditions located within or near the study area. According to the 2023 publication of the Dakota County Geologic Atlas, there is a potential bedrock fault line or fissure located northeast of the AUAR Study Area and extends to the Mississippi River.

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 Rosemount and MPCA design guidelines. Karst landscapes provide conditions in which 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.

⁷ University of Minnesota. 2023. *Bedrock Geology*. Available at: <https://conservancy.umn.edu/server/api/core/bitstreams/699a0e2d-0666-491d-89d9-ffda1c6b2ed0/content>.

- b. Soils and Topography – Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability, or other soil limitations, such as steep slopes or highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections, or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.**

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 10 different soil types. Soil information is included in

Table 8 and Figure 11. 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, 3.7% 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 96.3% 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 A and B and are well-suited for infiltration, and more specifically biofiltration. Soil infiltration and stormwater management are discussed further in Section 12.

A portion of the AUAR study area is currently being used for extraction uses or a gravel and sand mining area.

Scenario 1, 2, and 3

Scenario 1, Scenario 2, and Scenario 3 are generally balanced over the site area. 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, Scenario 2, and Scenario 3 will require compliance with the VRWJPO and the City of Rosemount’s erosion and sediment control standards.

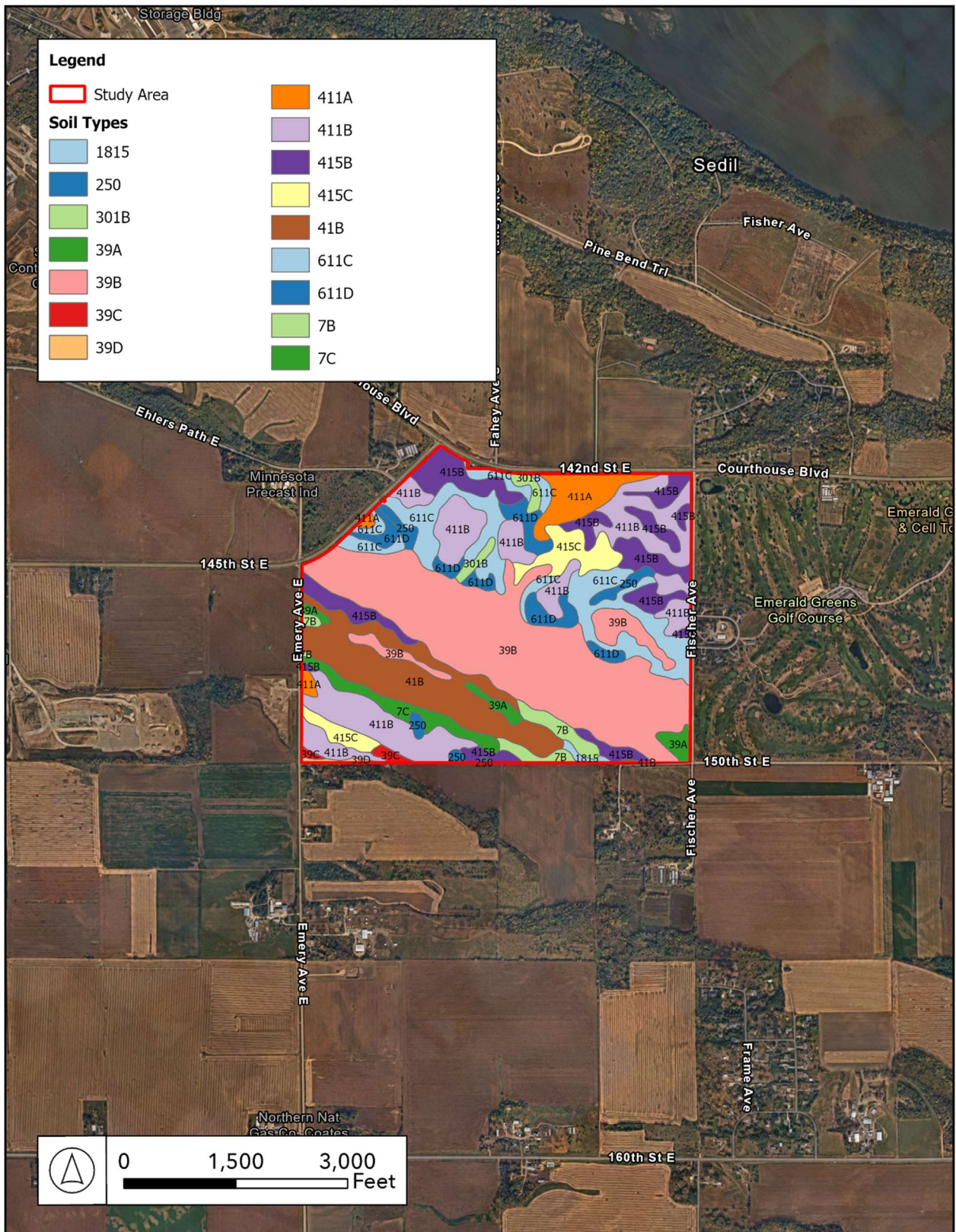
A National Pollutant Discharge Elimination System (NPDES) and Stormwater Pollution Prevention Program Construction Stormwater Permit (SWPPP) will be obtained prior to any earthwork or grading activities within the AUAR study area.

Table 8. Soil Types

Map unit symbol	Map unit name	Acres in AOI	Percent of AOI	Farmland Rating	Hydric Rating	Erosion Hazard Rating	Hydrologic Soil Group
7B	Hubbard loamy sand, 1 to 6 percent slopes	9.4	2.2%	Not prime farmland	0	Slight	A
7C	Hubbard loamy sand, 6 to 12 percent slopes	10.5	2.3%	Not prime farmland	0	Slight	A
39A	Wadena loam, 0 to 2 percent slopes	6.8	1.5%	All areas are prime farmland	1	Slight	B
39B	Waden loam, 6 to 12 percent slopes	136.9	30.4%	All areas are prime farmland	0	Slight	B
39C	Wadena loam, 2 to 6 percent slopes	2.0	0.5%	Farmland of statewide importance	0	Moderate	B
39D	Wadena loam 12 to 18 percent slopes	0.5	0.2%	Not prime farmland	0	Moderate	B
41B	Estherville sandy loam, 2 to 6 percent slopes	48.7	10.9%	Farmland of statewide importance	1	Slight	A
250	Kennebec slit loam	6.7	1.5%	All areas are prime farmland	0	Slight	C

Map unit symbol	Map unit name	Acres in AOI	Percent of AOI	Farmland Rating	Hydric Rating	Erosion Hazard Rating	Hydrologic Soil Group
301B	Lindstrom slit loam, till plain, 2 to 6 percent slopes	4.3	1.0%	All areas are prime farmland	5	Moderate	B
411A	Waukegan slit loam, till plain, 2 to 6 percent slopes	17.8	3.9%	All areas are prime farmland	0	Slight	B
411B	Waukegan slit loam, till plain, 0 to 1 percent slopes	73.2	16.3%	All areas are prime farmland	0	Slight	B
415B	Kanaranzi loam, 2 to 6 percent slopes	45.6	10.3%	Farmland of statewide importance	0	Slight	B
415C	Kanaranzi loam, 6 to 12 percent slopes	16.5	3.7%	Not prime farmland	0	Moderate	B
611C	Hawick gravelly sandy loam, 6 to 12 percent slopes	51.4	11.4%	Not prime farmland	0	Slight	A
611D	Hawick gravelly sandy loam, 12 to 20 percent slopes	16.7	3.7%	Not prime farmland	0	Slight	A
1815	Zumbro loamy fine sand	1.2	0.3%	Not prime farmland	0	Slight	A
Source: United States Department of Agriculture. 2024. <i>Web Soil Survey</i> . https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx .							

Figure 11. 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, shoreland classification and floodplain/floodway, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

Kimley-Horn completed a wetland delineation on October 8, 2024, and identified two wetlands within the study area, described in Table 9. A formal wetland approval process will be initiated with the City of Rosemount to review the delineated wetland boundaries and types during the 2025 growing season.

According to the National Hydrography Dataset (NHD), there is one flowline feature within the eastern portion of the study area; however, this feature was not identified during the field delineation. 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 the 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.

There are no wildlife lakes, migratory waterfowl feeding/resting lakes, or outstanding resource value waters present within or in the vicinity of the project area.

There are no identified special or impaired waters within 1 mile of the project area. There are no known shoreland classifications, floodplain or floodways within or near the site boundary. The site ultimately discharges to Vermillion River, a trout stream approximately 4 miles to the southeast of the subject site.

Runoff from the study area generally drains offsite southeast, see Figure 12.

Legend

- Study Area
- 1-Mile Project Site Buffer
- NHD Flowline
- Impaired Streams
- DNR Public Watercourse
- DNR Public Water Basins
- Delineated Wetland
- 100-Year Floodplain**
- Flood Zone AE

The map displays the Sedil area, including the Mississippi River, Spring Lake, and various industrial and residential sites. Key locations labeled include DPC Industries, Walbon And Company, CF Industries, Pine Bend Warehouse, Fertilizer Storage Bldg, Endress Processing, SKB - Containment - Gravel, Minnesota Precast Ind, Danner Gravel Pit, Equuleus Solar Garden, Rosemount Community Solar Gardens, Northern Nat Gas Co., Coates, Ristau Property Maintenance, Pine Bend Paving Inc, Emerald Greens & Cell Tower, Emerald Greens Golf Course, Minnegasco, Northern Natural Gas Co., and Spring Lake Park Reserve. Streets shown include 140th St E, 142nd St E, 145th St E, 150th St E, 160th St E, 170th St E, Fahey Ave S, Pine Bend Trl, Emery Ave E, Fischer Ave, and Goodwin Ave. A scale bar indicates 0, 3,000, and 6,000 feet.

Figure 13. Wetland Delineation Summary

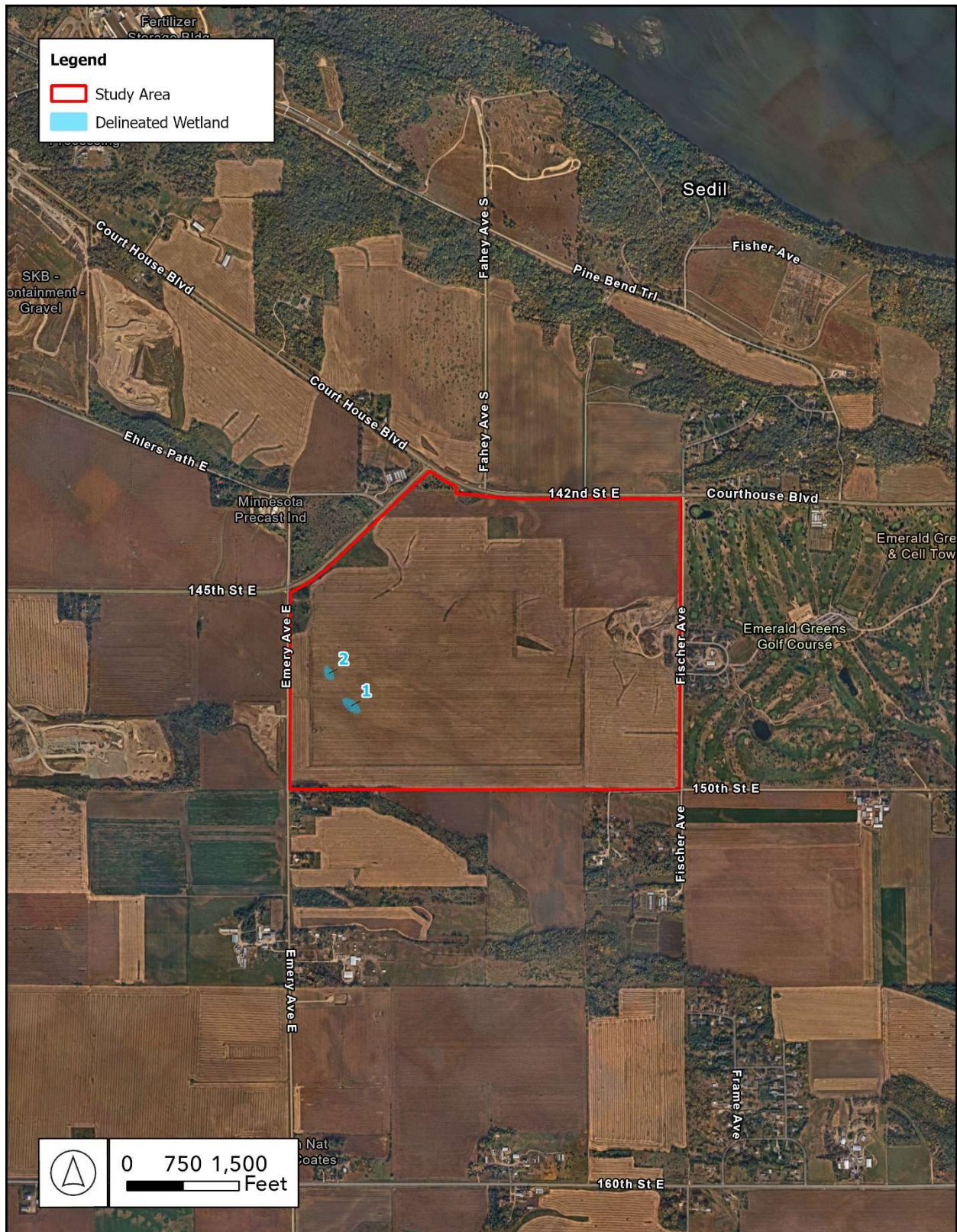


Table 9. Delineation Summary

Resource ID	Wetland Plant Community	C-39 Type	Notes	Wetland Classification ⁸
Wetland 1	Seasonally Flooded Basin	Type 1	Wetland located in depression in the western central section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis. The resource appears surficially isolated from other aquatic resources.	Manage 3
Wetland 2	Seasonally Flooded Basin	Type 1	Wetland located in depression in the western central section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis. The resource appears surficially isolate from other aquatic resources.	Manage 3

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

According to the Geologic Atlas of Dakota County (Minnesota Geological Survey, 1990), groundwater is present at greater than 20 feet for the entire study area.

⁸ Wetlands within the study area are classified in the Rosemount Local Surface Water Management Plan. Available at: [Comprehensive Surface Water Management Plan | Rosemount, MN - Official Website](#)

Based on Dakota County’s well records, there is one well located within the AUAR study area, see Table 10. Numerous wells are located within one-mile of the AUAR Study Area. The well on the property will be sealed by a licensed well contractor, if the well is determined to not be utilized to fulfill the water demands for Scenario 2. The current onsite well has a water appropriations permit for 73.4 million gallons per year (MGY). Under Scenario 2, for a cooling water system the water demand on the aquifer would be approximately 62 MGY. This is less demand on the local aquifer than is currently permitted for the current well that is onsite. As noted in the water appropriation section, Scenario 1, 2, and 3 would be significantly less than the 73.4 MGY demand that is currently allowed to withdraw from the aquifer.

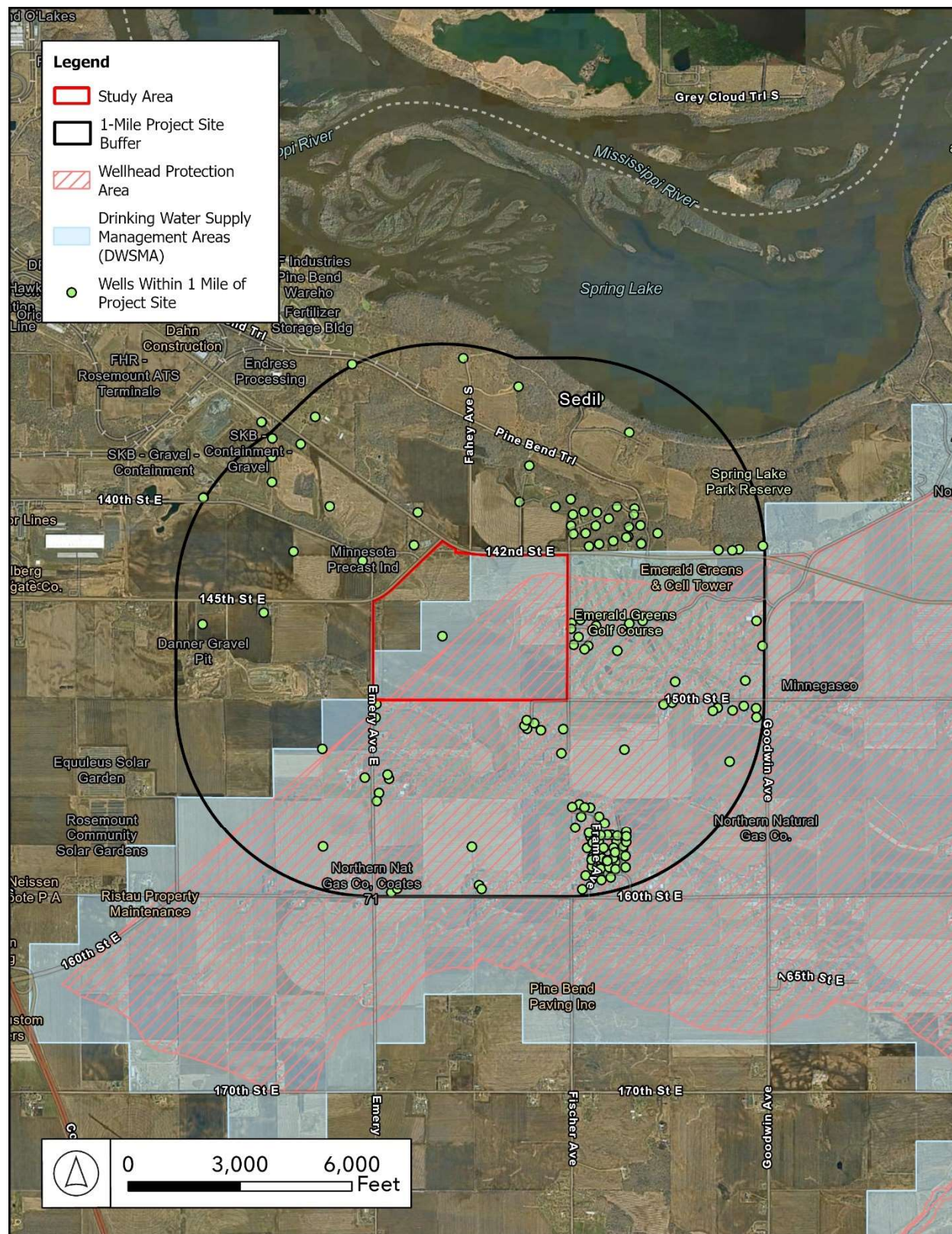
If unidentified wells are found, Dakota County Environmental Department will be contacted and a well closure permit will be obtained from the County. The well will need to be sealed by a licensed well-contractor according to Minnesota Rules Chapter 4725.

The southeastern 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 of Hastings would be required to verify suitability of stormwater infiltration on site due to the DWSMA requirements. The site is not located within an Emergency Response Area (ERA)

Table 10. Wells within the AUAR Study Area

Well ID Number	Index Status	Well Use	Well Depth (feet)	Permitted Water Appropriations
214196	Active	Irrigation	278	73.4 million gallons per year
Source: Minnesota Department of Health. <i>Minnesota Well Index</i> . Available at: https://mnwellindex.web.health.state.mn.us/ ; https://mnwellindex.web.health.state.mn.us/mwi/index.xhtml?wellId=0000214196 .				

Figure 14. 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 western half of the AUAR study area is located within the 2040 Metropolitan Urban Service Area (MUSA) and the eastern half is in the future 2040+ area. Before the approval of a sanitary sewer extension, a Comprehensive Plan Amendment would be submitted to re-guide the staging from outside of the Current 2040 MUSA to within the Current 2030 MUSA. The site is located entirely within the City of Rosemount, it is assumed that sanitary sewer service for the AUAR study area will be provided by new City sanitary sewer extensions along county road 42 (145TH St) from Driver Ave to the west.

For Scenario 1, the anticipated wastewater flow was estimated using the City's 2040 Comprehensive Sanitary Sewer Plan. The 2040 plan completed in 2019, planned for

community commercial uses to contribute 1,000 gallons per acre per day (gpd), High-Density Residential uses to contribute 2,700 gpd, Medium-Density Residential uses to contribute 1,575 gpd, Low-Density Residential uses to contribute 740 gpd, and Agricultural uses to contribute 45 gpd. It is anticipated that an average daily flow of up to 251,000 GPD of wastewater would be generated from the study area under Scenario 1.

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 2, it is anticipated that a water-cooled system will be utilized. It is anticipated that Scenario 2 will generate a peak day wastewater discharge of a range between 50,000 to 4,500,000 gallons per day (GPD) during a peak day demand. The peak day demand may happen only a couple of times over an approximately 6-month period. Of the total daily flow rate, approximately 50,000 gpd would be domestic strength waste and the remaining flow would be non-contact cooling water waste. This does not include a peaking factor; should a peaking factor be applied; peak day wastewater flows could be up to 3 or 4 times the demand listed in Table 11 below. Domestic wastewater and effluent from the industrial water treatment process is anticipated to be directed to the Empire Treatment Plant. Alternative methods of non-contact cooling water disposal such as rapid infiltration basins are being studied for the discharge of the non-contact cooling water onsite and will require a separate MPCA discharge permit. A portion of the property is located within the Hastings high-vulnerability DWSMA; therefore, any onsite rapid infiltration basins for non-contact cooling water will be located in accordance with the DWSMA requirements. The domestic strength wastewater will have typical water quality characteristics of traditional domestic strength wastewater. The cooling water typically has little to no biological oxygen demand (BOD) or total suspend solids (TSS) but will have a higher concentration of the naturally occurring minerals found in the water supply.

For Scenario 3, the anticipated GPD for wastewater was estimated using the City’s 2040 Comprehensive Sanitary Sewer Plan, completed in 2019, which planned for industrial uses to contribute 1,500 gallons per acre per day. It is anticipated that up to 632,600 GPD of wastewater would be generated for this study area.

Table 11. Daily Average Wastewater Discharges

Scenario 1	251,000 GPD
Scenario 2	50,000*
Scenario 3	632,600 GPD
*Domestic discharge only	

Wastewater from Scenarios 1 and 3 and the domestic strength wastewater from Scenario 2 would be collected by an on-site conveyance system that will connect to a City of

Rosemount sanitary sewer trunk main extension west of the site. Due to the existing topography and elevation of existing infrastructure being connected to, a lift station(s) appears to be required downstream from the site; an infrastructure study is being completed by the city to determine the need for additional offsite public sewer infrastructure. The wastewater flows to MCES L74 and L75. The lift stations may need improvements, and capacity increases as the region develops. Wastewater from the property will flow to the Metropolitan Council Environmental Services (MCES) Empire Wastewater Treatment Plant (WWTP) in Empire Township, Dakota County. The entire wastewater flows from Scenario 2 could be routed to the Empire WWTP through the City of Rosemount collection system and the MCES trunk system if all other alternative discharge methods are unable to be permitted by the MPCA. Under this scenario, rate attenuation tanks will likely need to be implemented onsite to provide peak day flow shaving prior to entering the public wastewater system.

The Empire Wastewater Treatment Plant WWTP is an advanced secondary treatment plant with ultraviolet disinfection. Currently, the plant has a maximum capacity of 28.61 million gallons per day. The plant currently experiences average flows of 10.73 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.

- 2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion.**

No subsurface sewage treatment systems (SSTS) are anticipated within the AUAR study area for the proposed development scenario.

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

No wastewater discharge to surface waters is anticipated for the AUAR Scenarios. For scenario 2, If needed, the project proposer will evaluate surface discharge or rapid infiltration basins for treated non-contact cooling water with the MPCA and DNR as a potential partial relief to wastewater treatment plant discharge. A portion of the property is located within the Hastings high-vulnerability DWSMA; therefore, any onsite rapid infiltration basins for non-contact cooling water will be located in accordance with the DWSMA requirements.

- 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.*

The site is located within the City of Rosemount and is subject to the City's stormwater management guidelines and Comprehensive Stormwater Management Plan (CSMP). The CSMP outlines the use of regional detention basins to retain and infiltrate water on site. There is one full regional basin and a partial regional basin within the subject site boundary which will be incorporated as part of the site development. The regional basin(s) will be designed in accordance with the City's CSMP, providing onsite detention for the direct tributary area, including offsite area, for the 100-year storm event and limiting discharge rates to 0.05 cfs per acre of direct tributary area for longer duration storm events. The site also must be designed to convey the greater of either the existing 100-year, 24-hour flow rate or the planned future regional basin discharge rate for offsite areas shown to drain through the site based on the City's CSMP.

The City prefers the use of infiltration for regional basins; Hydrologic Soil Group A and B soils onsite provide favorable conditions for infiltration. The City of Rosemount requires regional basins onsite to be sized to retain the 100-year, 24-hour storm event and limiting discharge to 0.05 cfs/acre of drainage area for longer duration storm events. The site lies within the Hastings DWSMA, which is a high-vulnerability area. If infiltration is proposed on site for stormwater, additional geotechnical investigation will be needed to ensure compliance with DWSMA requirements.

In addition to regional basins for site stormwater retention and flow attenuation, the site will provide pretreatment of stormwater for the equivalent volume of 2.5" from the entire contributing drainage area to the basin.

The site is located at the eastern side of the City of Rosemount municipal boundary, adjacent to Nininger Township. The Vermillion River Watershed Joint Powers Organization (VRWJPO) is a non-regulating governing body for the protection of wetlands and other environmental features, as well as managing stormwater discharge for the greater area. The site lies completely within the City of Rosemount municipal boundary and is subject to City guidelines; however, the site must also demonstrate the post-development flow remains less than or equal to the pre-development flow rate of the 100-year, 4-day storm event for the intercommunity evaluation point at the municipal boundary as to not have adverse impacts downstream.

There is currently minimal impervious surface area within the study area. The total amount of impervious surface under the development scenarios will be described in the AUAR.

The AUAR will address stormwater rates, water quality, and volumes for the AUAR study area, and any temporary and permanent stormwater run-off controls will be identified. An existing and proposed conditions analysis will be completed showing the locations of the temporary and permanent stormwater run-off controls.

The National Pollution Discharge Elimination System (NPDES) permit requirements will be adhered to. Special or impaired waters on or near the site will be identified.

Based on the results of the climate trends analysis and flooding risk assessment, any additional volume and rate control needed for stormwater management will be discussed in the AUAR. Stormwater management strategies including any proposed green infrastructure will be documented in the AUAR.

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

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

The water supply for the study area is anticipated to be obtained from the City of Rosemount in all the scenarios; however, for Scenario 2, the non-contact cooling water may be supplied from the existing onsite irrigation well. Groundwater resources are the main sources of water supply for the city via nine municipal wells and four elevated water storage tanks.⁹ The groundwater wells range in depth from 400 to 507 feet deep and draw water from the Jordan aquifer. The City of Rosemount Comprehensive Plan indicated the firm pumping capacity of the City system as 7,900 gallons per minute as of 2019.

For Scenario 1, the anticipated annual daily average GPD of water was calculated based on the Metropolitan Council Water Use Projection tool. Based on the number of units of residential development at 100 gallons per capita per day plus the proposed commercial use, the anticipated water demand for the area is 282,000 gallons per day. It is anticipated that the agricultural irrigation well would still be in use under Scenario 1.

The city is nearing their current water appropriation of 1.1-billion gallons per year; however, the city is currently in the process of applying for an additional well and appropriations. The city also has planned a 2.5-million-gallon storage tank in the project vicinity to serve this portion of the city. The City's planned future wells and storage may be accelerated with Scenario 2 due to the water needs prior to 2040 as noted in the comprehensive plan. The existing water infrastructure is planned to be extended and upsized based on the City

⁹ City of Rosemount. 2020. *2040 Comprehensive Plan – Appendix A: Water Supply*, page 3-4. Available at: <https://www.rosemountmn.gov/DocumentCenter/View/4108/Appendix-A---Water-Supply-3-18-20>.

comprehensive plans and will be sufficient for the project needs pending additional City modeling efforts. The proposed AUAR area contains an onsite irrigation well with water appropriations through the Minnesota Department of Natural Resources for 73.4 million gallons per year drawing water from the Prairie du Chien – Jordan aquifer. Under Scenario 2, the onsite well in conjunction with an onsite storage tank for peak day demands could be utilized for industrial process water, reducing the demand from the development on the city water supply system. In each of the scenarios, no more water would be drawn from the aquifer than is currently allowed under the current appropriation permit for the proposed AUAR area.

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 assumed that Scenario 2 is a water-cooled system and could have a peak water demand of 62 million gallons per year with a peak day of 6.0 million gallons per day during extreme temperatures; annual average daily water demands are anticipated to be approximately 170,000 GPD for the development, including both domestic and cooling water. Discussions are ongoing with the city for the potential of the city to supply only domestic water to the site with the onsite well appropriations being reallocated from irrigation to supplying nonpotable cooling water. The existing water appropriations will be transferred to the new owner of the well and could be utilized for nonpotable cooling water. Alternatively, the onsite well could be capped removing the 73.4 million gallons per year of appropriations from the Jordan aquifer potentially allowing the city to obtain additional water appropriations to supply the proposed development with domestic and industrial water. These alternatives would result in no net increase of water appropriations for the Jordan aquifer.

In Scenario 3, the onsite well would be capped with the water appropriations permit being terminated. The anticipated GPD of water for Scenario 3 was calculated based on the City of Rosemount Comprehensive Plan. It is anticipated that the average annual daily water demand for Scenario 3 is up to 632,600 GPD, which does not include a peaking factor. Should a peaking factor be applied, peak day water demands could be up to 3 or 4 times the demand listed in Table 12 below. Water demands for the AUAR Scenarios are shown in Table 12.

Table 12. Annual Daily Average Water Demand

Scenario 1 Demand	282,000 GPD
Scenario 2 Demand	9,000* GPD
Scenario 3 Demand	632,600 GPD
*Domestic demand only	

A Water Use

Appropriations Permit would be obtained if temporary dewatering is determined to be necessary for design of development in Scenario 2 and 3. A Water Use Appropriation permit is required for temporary water appropriations and limits withdraw to 50 million gallons per year.

Watermain service for the study area will be from a future 16-inch watermain that would be extended along County Road 42 and a future watermain increase being determined by the city along 142nd Street.

Based on the City of Rosemount Comprehensive Plan, the pumping capacity of the existing water system plan is shown in Table 13. The City's recent water use, as identified in the annual report to the DNR, is described in Table 14.

Table 13. City Production Wells and Pumping Capacity

Well Name	Well No.	Depth (feet)	Rate (gpm)	Capacity (MGD)	Aquifer	Status
RR #1	457167	400	500	0.72	Jordan	Active
RR #2	474335	400	500	0.72	Jordan	Active
Well No 7	112212	490	1000	1.44	Jordan	Active
Well No 8	509060	498	1100	1.58	Jordan	Active
Well No 9	554248	481	1200	1.73	Jordan	Active
Well No 12	706804	475	1500	2.16	Jordan	Active
Well No 14	722623	485	1300	1.87	Jordan	Active
Well No 15	753663	487	1300	1.87	Jordan	Active
Well No 16	805374	507	2000	2.88	Jordan	Active

Table 14. City of Rosemount Water Use

Year	Water Use (million gallons)
2023	1217
2022	1090
2021	1117
2020	944

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 Scenario 1, Scenario 2, and Scenario 3 may impact the wetlands in the AUAR study area (approximately 0.64 acres). Because the wetlands onsite are depressional and isolated, it is anticipated that impacts to the

watershed would be minimal. The project proposer would be required to comply with all federal, state, and local wetland requirements including avoidance, minimization, and wetland mitigation requirements through the purchase of wetland banking credits.

- 1) 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.

Wetlands are present within the AUAR study area, as shown in Figure 13. Wetland Delineation Summary Surface water alterations are not anticipated in any of the scenarios.

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 November 2024. Regulatory database information pertaining to the study area and surrounding area was obtained. There are also discarded plastics, metal, and batteries, several 55-gallon drums, one aboveground storage tank, 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. A Phase II Environmental Site Assessment will be completed for portions of the AUAR Study Area prior to construction.

- a. **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 requires by Minnesota Statutes, section 473.811.

Construction Generated Solid Waste

Construction of Scenarios 1, 2, and 3 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, Scenario 2, and Scenario 3 would generate new demands on solid waste management and sanitation services provided in the project area as summarized in

Table 15.

Table 15. Estimated Solid Waste Generation ¹⁰

	Existing Conditions	Scenario 1	Scenario 2	Scenario 3
Residential Units	0	1450	0	0
Residential Waste (tons per year) ¹¹	0	3,397	0	0
Non-Residential Area (square feet)	19,500,000	500,000	2,300,000	2,500,000
Non-Residential Waste (tons per year)	0	7,500	1800	37,500
Total Waste (tons per year)	0	10,897	1,800	37,500

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

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 proposes both commercial and residential development. And is not anticipated to store any hazardous materials onsite.

Scenario 2 could include diesel-powered backup generators for emergency use. Each of these generators may have individual diesel belly tanks or utilize larger consolidated storage tanks serving multiple generators that will be installed and maintained in compliance with applicable state regulations for above-ground storage tanks, including:

- New Tanks and piping that would be designed to applicable industry standards and guidance.
- Tank upgrades and repairs would follow industry standards.
- Tank Owners would clearly label all tanks and piping.
- Spill prevention and cleanup plan.

¹⁰ 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 solid waste generation for the proposed development.

¹¹ 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.

Scenario 3 proposes a light industrial development. Diesel fuel storage and generators are possible, but dependent on the end user. If hazardous materials are needed onsite, all state regulations related to storage will be followed.

- b. 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.

No critical habitats are located within the study area under the jurisdiction of the United States Fish and Wildlife Service (USFWS).¹²

Habitats that can be found within the study area include grassland, woodlands and wetlands. Wildlife that can be found within the study area include birds, small mammals, clams and insects. There are two areas of biodiversity significance within one mile of the study area, adjacent to the southern boundary of Spring Lake, see Figure 15. Sites of Biodiversity Significance and Regionally Significant Ecological Areas. Additionally, there are three ecologically significant areas within one mile of the study area, see Figure 15.

¹² U.S. Fish and Wildlife Service. ND. Critical Habitat for Threatened & Endangered Species (USFWS). <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>

Figure 15. Sites of Biodiversity Significance and Regionally Significant Ecological Areas



- b. **Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-1074) and/or correspondence number (MCE #2024-00412) from which the data were obtained and attach the Natural Heritage Review 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.

Protected Natural Areas

A review of the Minnesota DNR's Natural Heritage Information System (NHIS) was conducted per license agreement LA-1074 for the project study area under MCE # 2024-00412, as well as the land within one mile of the study area. The database includes known occurrences of listed state natural areas. Two Minnesota Biological Survey (MBS) Sites of Biodiversity Significance are located within one mile of the study area, within the Spring Lake Park Reserve. Sedil East is classified with a high biodiversity significance rating, which means the site contains quality occurrences of the rarest species, quality examples of rare Minnesota Native Plant Communities (NPC), or important functional landscapes. Sedil West is classified with a Moderate biodiversity significance rating, which means the site contains the presence of rare species, moderately disturbed NPCs, or landscapes with a strong potential to be recovered to an NPC classification and natural ecological processes. Three Regionally Significant Ecological Areas (RSEA) are located within one mile of the study area. Two RSEAs are located to the north of the study area and generally align with identified Sites of Biodiversity Significance. One RSEA is located approximately one mile to the northwest of the study area, within the SKB Gravel Containment.

State-Listed Species

Kimley-Horn conducted a review of the DNR Natural Heritage Information System (NHIS) in January 2025 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 federally listed rusty patched bumble bee (*Bombus affinis*) and the state-endangered loggerhead shrike (*Lanius ludovicianus*) within the vicinity of the study area. Additionally, the review identified six species of special concern within the vicinity of the study area: the American ginseng (*Panax quinquefolius*), lark sparrow (*Chondestes grammacus*), bell's vireo (*Vireo bellii*), common gallinule (*Gallinula galeata*), leadplant flower moth (*Schinia lucens*) and peregrine falcon (*Falco peregrinus*).

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, loggerheads shrikes rarely occur in this area. Nests are well hidden in trees or brush and are usually less than 2 meters above the ground. Because the study area is largely active agricultural land, the potential for the loggerhead shrike to occur within 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 with the potential to occur within the vicinity of the AUAR Study Area. This review identified two federally listed endangered species, Higgins Eye (*Lampsilis higginsii*) and Rusty Patched Bumble Bee (*Bombus affinis*). This review also identified, two federally listed proposed threatened species, monarch butterfly (*Danaus Plexippus*) and western regal fritillary (*Argynnis idalia occidentalis*); two proposed endangered species, tricolored bat (*Perimyotis subflavus*) and Salamander mussel (*Simpsonaias ambigua*); and one experimental population, whooping crane (*Grus americana*). The IPaC Species List is included in Appendix D.

Tricolored Bat

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. Tricolored bats face extinction primarily due to white-nose syndrome, which is a deadly disease affecting cave-dwelling bats.¹³ Tricolored bat is currently proposed endangered and is not yet listed; consultation with USFWS is not required for proposed endangered species.

Whooping Crane

The Whooping Crane is designated as an experimental population, non-essential species by the USFWS. Non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land (require consultation under 7(a)(2) of the ESA) and as a proposed species on private land (no section 7(a)(2) requirements, but Federal agencies must not jeopardize their existence (section 7(a)(4))). The preferred habitats for the species include shallow marshes and adjacent, open grasslands.¹⁴ The project will not occur on federal land; therefore, consultation with USFWS is not required for the species.

Higgins Eye Pearly Mussel

Higgins eye is a freshwater mussel of larger rivers where it is found in areas with deep water and moderate currents. Higgins eye mussels will bury themselves in the sand and gravel of river bottoms and use the river's currents to siphon microorganisms for food.¹⁵ Considering the study is not within a river nor do any of the scenarios propose direct impacts to a river, potential impacts to Higgins eye would be indirect.

Salamander Mussel

Salamander mussels inhabit rivers, streams, and some lakes. Appropriate flow and temperature are critical to delivering necessary oxygen and nutrients for the mussels'

¹³ USFWS. Tricolored Bat. Available at: <https://ecos.fws.gov/ecp/species/10515>.

¹⁴ USFWS. Whooping Crane. Available at: <https://ecos.fws.gov/ecp/species/758>

¹⁵ USFWS. Higgins Eye. Available at: <https://ecos.fws.gov/ecp/species/5428>.

survival. Salamander mussels are found in habitats that include rocks, where they settle in the crevices that are dark and provide close contact with other solid surfaces and protection from swift currents.¹⁶ The salamander mussel is proposed endangered and is not yet listed; consultation with USFWS is not required for this species.

Monarch Butterfly

The Monarch Butterfly is designated as a proposed threatened species by the USFWS. The preferred habitat for this species is prairie 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.¹⁷

Rusty Patched Bumble Bee

Rusty patched bumble bees live in colonies that include a single queen and female workers. The colony produces males and new queens in late summer. Rusty patched bumble bees mostly occupy grasslands and tall grass prairies.¹⁸ The Rusty patched bumble bee is federally listed as endangered.

Western Regal Fritillary

The western regal fritillary is designated as a proposed threatened species by the USFWS¹⁹. The western regal fritillary is most often found in native prairie habitat regions, specifically in prairies that contain violets (*Viola sp.*). Larval development may occur in upland prairie, and larvae feed exclusively on violets. The adult western regal fritillary feeds on a variety of floral nectar. The western regal fritillary is proposed threatened and is not yet listed; consultation with USFWS is not required for this species.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) prohibits the take of protected migratory bird species without prior authorization by the Department of the Interior U.S. Fish and Wildlife Service (USFWS). Incidental take includes the injury or death of birds resulting from an activity. 17 migratory birds were identified in the USFWS IPaC review. Suitable habitat for migratory birds may be present in wooded areas along the east and west boundaries of the project study area.

- c. Discuss how the identified fish, wildlife, plant communities, rare features, and ecosystems may be affected by the project, including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.**

¹⁶ USFWS. Salamander Mussel. Available at: <https://ecos.fws.gov/ecp/species/6208>.

¹⁷ USFWS. Monarch Butterfly. Available at: <https://www.fws.gov/species/monarch-danaus-plexippus>

¹⁸ USFWS. Rusty Patched Bumble Bee. Available at: <https://ecos.fws.gov/ecp/species/9383>.

¹⁹ USFWS. Western Regal Fritillary, Available at: <https://www.fws.gov/species/regal-fritillary-speyeria-idalia>

Federally Listed Species

Tricolored Bat

Scenario 1, Scenario 2, and Scenario 3 may require tree clearing. Tree removal can negatively impact tricolored bats. According to the USFWS, the tricolored bat uses forested areas for roosting and foraging during the spring, summer, and fall. If tree removal is anticipated for the project, the necessary approvals from the USFWS will be acquired to minimize species impact. Additionally, 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.

Whooping Crane

The AUAR Study Area is outside of a National Wildlife Refuge or a 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.

Higgins Eye Pearly Mussel

No waterways are present within the study area, therefore, impacts to Higgins eye Pearly Mussel Habitat are not anticipated in any of the development scenarios.

Salamander Mussel

No waterways are present within the study area, therefore, impacts to Salamander Mussel Habitat are not anticipated in any of the development scenarios.

Monarch Butterfly

Monarch butterflies and/or suitable monarch habitat may be present within the AUAR Study Area; 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.

Rusty Patched Bumble Bee

The study area is located within an RPBB High Potential Zone (RPBB). Suitable habitat for RPBB may be present within the AUAR Study Area. Coordination with the USFWS shall be conducted if necessary. The study area contains approximately 5.3 acres of woodland and 15.5 acres of unmanicured grassland. Impacts to unmanicured grassland and wooded areas should be minimized or avoided if possible. In addition, proposed native seed mix establishment will provide additional suitable habitat and benefit the species.

Western Regal Fritillary

The western regal fritillary and/or suitable western regal fritillary habitat may be present within the AUAR Study Area; 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. Preexisting grassland areas should be avoided, if possible. In addition, proposed native seed mix establishment will provide additional suitable habitat and benefit the species.

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. Strategies for stormwater management and treatment of stormwater run-off within the study area are discussed in Section **Error! Reference source not found.** of the AUAR.

Tree Removal

The AUAR study area contains approximately 5.3 acres of woodland area. 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.

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

Federally Listed Species

Tricolored Bat

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

Whooping Crane

No mitigation measures are anticipated to be required. Experimental population, non-essential status does not provide species protection under the Endangered Species Act listing process outside of federal lands. The project site is located outside of federal National Wildlife Refuges and National Parks.

Higgins Eye Pearly Mussel

No mitigation measures are anticipated to be required as there is no suitable habitat within the study area.

Salamander Mussel

No mitigation measures are anticipated to be required as there is no suitable habitat within the study area.

Monarch Butterfly

The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area. Pollinator-friendly landscape management methods may be used to reduce the use of herbicides and pesticides within project site landscapes.

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. Pollinator-friendly landscape management methods may be used to reduce the use of herbicides and pesticides within project site landscapes.

Western Regal Fritillary

The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area. Pollinator-friendly landscape management methods may be used to reduce the use of herbicides and pesticides within project site landscapes.

Migratory Birds

To prevent impacts to migratory bird species, tree trimming or removal should occur during the winter months outside of the active migratory season.

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.

Stormwater

Scenario 1, Scenario 2 and Scenario 3 include stormwater management and treatment of all stormwater run-off within the AUAR study area.

Tree Removal

Although tree removal will be required for development, some existing trees may be preserved in areas around the perimeter of the property. Prior to construction, a tree preservation plan will be submitted and reviewed by City staff. Tree removal and replacement

will adhere to the City's tree preservation requirements. The City of Rosemount 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. The developer will coordinate with USFWS to determine tree removal commitments with regard to the tri-colored bat and the rusty patched bumble bee.

15. Historic Properties

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

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; however, a Phase IA literature review will be completed prior to construction within the AUAR Study Area. If a federal nexus is identified during preparation of project permits, or if the literature review recommends, (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. Additionally, the project will be submitted to State Historic Preservation Office (SHPO) and the Minnesota Indian Affairs Council (MIAC) for review and feedback during design. Lastly, the project will be designed to adhere to the Private Cemeteries Act.

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 and criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health, or applicable regulatory criteria. Include a discussion of any methods used to assess the project’s effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.**

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 20 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 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

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, Scenario 2, and Scenario 3 may generate temporary fugitive dust emissions during construction. The City of Rosemount 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 (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃); 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.

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 (CO₂)
- Nitrous oxide (N₂O)
- Methane (CH₄)

The projected GHG emissions are provided on an average annual basis using the CO₂ 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) and are summarized in Table 16 and Table 17 by project phase (i.e., construction and operations) and source type (e.g., combustion from mobile equipment, off-site electricity). The calculations can be viewed in Appendix C. Construction emissions for the two proposed scenarios are based on length of construction and are from mobile equipment including passenger cars, light-duty trucks, medium and heavy-duty trucks, and construction equipment (both gasoline and diesel).

Table 16. Construction Emissions

Scope	Emission Type	Emission Sub-Type	Emission	Existing CO _{2e} Emissions (total)	Scenario 1 Project-Related CO _{2e} Emissions (total)	Scenario 2 Project-Related CO _{2e} Emissions (total)	Scenario 3 Project-Related CO _{2e} Emissions (total)
Scope 1	Combustion	Mobile equipment	CO ₂ , N ₂ O, CH ₄	n/a	27,371	20,371	22,143
Total				n/a	27,371	20,371	22,143

Table 17. Annual Operational Emissions

Scope	Emission Type	Emission Sub-Type	Emission	Existing CO _{2e} Emissions (tons/year)	Scenario 1 Proposed CO _{2e} Emissions (tons/year)	Scenario 2 Proposed CO _{2e} Emissions (tons/year)	Scenario 3 Proposed CO _{2e} Emissions (tons/year)
Scope 1	Combustion	Stationary equipment	CO ₂ , N ₂ O, CH ₄	100	1919	6,988	2,576
Scope 2	Off-site electricity	Grid-based	CO ₂ , N ₂ O, CH ₄	160	7,567	23,317	8,281
Scope 3	Off-site waste management	Area	CO ₂ , CH ₄	20	2,611	4,675	8,984
Total				280	12,097	34,980	19,841

b. GHG Assessment

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

Scenario 1, Scenario 2, and Scenario 3

Unless otherwise noted differently, the following are potential design strategies and sustainability measures that are under consideration for Scenario 1, Scenario 2 and Scenario 3 to reduce emissions for each scenario:

- Use energy efficient appliances, equipment, and lighting
- Energy efficient building shells
- Implement waste best management practices and recycle and compost appropriate materials 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

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.

- Each scenario 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.
- Each scenario 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, agriculture, forestry, and land use.

The current AUAR study area currently generates 280 CO₂e metric tons per year. Under Scenario 1, this amount will increase to 12,097 CO₂e metric tons per year, Under Scenario 2, this amount will increase to 34,980 CO₂e metric tons per year, Under Scenario 3, this amount will increase to 19,841 CO₂e metric tons per year.

The expected lifespan of the project is 50 years, this equates to a total estimated 604,850 CO₂e metric tons over the lifetime of the development under Scenario 1,

1,749,000 CO₂e metric tons over the lifetime of the development under Scenario 2 and 992,050 CO₂e metric tons over the lifetime of the development under Scenario 3.

(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 20.

Existing Noise

The AUAR study area is currently agricultural land surrounded by a golf course and county roads and state highways. 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 source of noise will be the additional traffic associated with the residential units and commercial space.

For Scenario 2 the main sources of noise include ventilation systems, industrial traffic 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, and businesses. Further noise evaluation will be completed as design progresses and best practices to reduce noise 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.

For Scenario 3, the main sources of noise include mechanical equipment and truck traffic. Further noise evaluation will be completed as design progresses and best practices to reduce noise will be implemented.

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.**

Minimum off-street parking requirements listed in 11-7-3 of the City of Rosemount's Code of Ordinances will be adhered to.

Existing Conditions

The existing roadway network within the study area includes CSAH 42, US Highway 52, State Highway 55, Emery Avenue, 142nd Street, and Fischer Avenue. The following provides a description of the roadways within the study area:

- CSAH 42 (145th Street) is an east-west roadway that runs along the northern boundary of the development site. West of Conley Avenue, CSAH 42 is a four-lane, divided roadway with turn lanes provided at most intersections. East of Conley Avenue, CSAH 42 tapers to a two-lane, undivided roadway with turn lanes provided for some movements. The 2021 Annual Average Daily Traffic (AADT) was 5,740 vehicles per day (VPD) east of US 52 and 15,900 VPD west of US 52 (2019). The speed limit on CSAH 42 is 55 miles per hour (MPH).
- US Highway 52 is a north-south roadway that is located west of the development site. US Highway 52 is a four-lane divided roadway with interchanges provided at major intersecting roadways. The 2023 AADT is 29,700 VPD north of CSAH 42 and 30,500 VPD south of CSAH 42. The speed limit on US Highway 52 is 65 MPH.
- MN Highway 55 is a primarily east-west roadway that forms the northern boundary of the development site. MN Highway 55 is a two-lane undivided roadway (except west of Pine Bend Trail where it is a four-lane divided roadway) with right and left turn lanes provided at major intersections and right-turn lanes provided at most smaller intersections. East of CSAH 42 (145th Street), the 2023 AADT is 13,000 VPD and west of CSAH 42 (145th Street) the 2015 AADT is 12,800 VPD. The speed limit on MN Highway 55 is 55 MPH. Note that despite running primarily east-west, the roadway is considered to

be the northbound/ southbound approaches of the intersection with CSAH 42 in order to maintain consistency with the orientation of other intersections along CSAH 42.

- Emery Avenue is an undivided two-lane roadway that runs in the north-south direction. The road is unpaved, has no AADT data available and has no posted speed limit.
- 140th Street/142nd Street is an east-west roadway that runs north of the development site. 140th Street/142nd Street is a two-lane undivided roadway. The 2023 AADT is 104 VPD near the site.
- Fischer Avenue is a north-south roadway that forms the eastern boundary of the study area. The roadway is an unpaved local road and has no posted speed limit. AADT data is not available for Fischer Avenue.

Table 18. Traffic Generation

Scenario	AM Peak Hour			PM Peak Hour			Daily
	Total	In	Out	Total	In	Out	
Scenario 1	1,360	738	622	1,423	663	757	15,004
Scenario 2	253	139	114	207	62	145	2,277
Scenario 3	850	689	161	850	187	663	8,425

Note that Internal capture rates were reviewed for Scenario 1, and it was determined that internal site trips are not expected to represent a significant portion of the total site trips. Therefore, all trips were modeled as new site trips.

Transit

There are no public transit services near the project site.

- 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 17 and 19.

A Traffic Impact Analysis (TIA) was completed in March 2025 for the Dakota East site. Based on the findings of the Dakota East Technology Park TIA, the area's transportation network is expected to support the development within the AUAR study area with mitigation. The TIA identified improvements that could be constructed to mitigate possible future traffic impacts associated with development within the AUAR study area. Metrics for traffic analysis include intersection delay as measured by Level of Service (LOS) and queue lengths.

Based on the results, the US 52 Ramps at CSAH 42 experience poor operations under the existing conditions and are expected to require signalization in the short-term.

Under the No-Build conditions, all intersections operate generally acceptably through the studied design year of 2040.

Under Scenario 1 conditions, extensive delay and queueing issues are expected at Emery Avenue and it is expected that a signal will need to be installed at the intersection of CSAH 42 & Emery Avenue. In the long-term, high levels of traffic along MN 55 are likely to require upgrading MN 55 to a four-lane road. Note that the intersection of MN 55 & Fischer Avenue sees minimal side street traffic (less than 20 vehicles per hour for all side street movements in total) under Scenario 1 conditions and therefore despite long delays, mitigation is not expected to be necessary.

Under Scenario 2 conditions, minimal mitigations are expected to be necessary outside of a few turn lane installations in the short-term. In the long-term, significant side street delays at MN 55 & Fischer Avenue may require the installation of a signal at this intersection.

Under Scenario 3 conditions, installation of a signal is required in order for the delays at MN 55 & Fischer Avenue to be at an acceptable level, even in the short-term, due to the presence of relatively heavy site traffic along this road. Minor improvements

The table below shows the overall LOS at each intersection (or LOS of the worst movement at side street stop-controlled intersections) for each scenario. Note that all future scenarios included some background mitigation beyond the existing conditions. Furthermore, each build scenario for the Design Year (2040) included the mitigations from the Opening Year (2029) of that scenario.

Table 19. Existing and Projected Intersection LOS²⁰

Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS		Scenario 3 LOS	
	2024	2029	2040	2029	2040	2029	2040	2029	2040
AM Peak Hour									
CSAH 42 & US 52 SB Ramps	B	B	C	C	C	B	C	C	C
CSAH 42 & US 52 NB Ramps	F	C	C	B	C	B	C	B	B
CSAH 42 & Emery Avenue	A	A	A	F / B	B	A	A	C	B
CSAH 42 & 142nd Street	A	A	A	A	A	A	A	A	A
MN 55 & CSAH 42	A	A	B	B	C	B	B	B	C

²⁰ Grades denoted as X/X represent pre and post improvements LOS

Intersection	Existing LOS	No-Build LOS		Scenario 1 LOS		Scenario 2 LOS		Scenario 3 LOS	
	2024	2029	2040	2029	2040	2029	2040	2029	2040
MN 55 & Fischer Avenue	D	C	C	F	F	E	F / A	F / B	C
Emery Avenue & Southwest Access	-	-	-	F / A	B	A	A	B	B
Fischer Avenue & East Access	-	-	-	-	-	A	A	A	A
Emery Avenue & Northwest Access	-	-	-	F / B	A	-	-	-	-
PM Peak Hour									
CSAH 42 & US 52 SB Ramps	C	C	C	C	D	C	C	C	D
CSAH 42 & US 52 NB Ramps	F	C	C	C	C	C	C	C	C
CSAH 42 & Emery Avenue	A	C	B	F / C	C	C	B	D	E
CSAH 42 & 142 nd Street	A	A	A	A	B	A	A	A	A
MN 55 & CSAH 42	B	B	C	C	E	B	C	C	D
MN 55 & Fischer Avenue	D	D	E	F	F	F	F / B	F / C	D
Emery Avenue & Southwest Access	-	-	-	F / B	A	A	A	A	A
Fischer Avenue & East Access	-	-	-	-	-	A	A	F / A	A
Emery Avenue & Northwest Access	-	-	-	F / C	C	-	-	-	-

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

Based on the results of the capacity analysis and turn lane warrant analysis, the following mitigation measures are recommended for the proposed scenarios:

Existing (2024) Conditions

- No recommended mitigation

Opening Year (2029) No-Build Conditions

- Install permanent signal at CSAH 42 & MN 55 (if CSAH 42 & Hwy 55 realignment is not completed)
- Install signals at CSAH 42 & US Highway 52 Northbound and Southbound Ramps.

Opening Year (2029) Scenario 1 Conditions

- All Opening Year (2029) No-Build mitigations
- Install a signal at CSAH 42 & Emery Avenue
- Install dedicated westbound left, eastbound left, and northbound left turn lanes at CSAH 42 & Emery Avenue.
- Install side street stop control at the site access points
- Install left and right turn lanes along Emery Avenue at each access point

Opening Year (2029) Scenario 2 Conditions

- All Opening Year (2029) No-Build Mitigations
- Install side street stop control at the site access points.
- Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue
- Install dedicated westbound left turn lane at MN 55 & Fischer Avenue. Eastbound left turn lane should likely be installed to offset this turn lane improvement.

Opening Year (2029) Scenario 3 Conditions

- All Opening Year (2029) No-Build Mitigations
- Install side street stop control at the site access points.
- Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue
- Install a traffic signal at MN 55 & Fischer Avenue
- Install dedicated northbound, eastbound, and westbound left turn lanes at MN 55 & Fischer Avenue
- Install left and right turn lanes along Emery Avenue and Fischer Avenue at each access point.

Design Year (2040) No-Build Conditions

- All Opening Year (2029) No-Build Mitigations

Design Year (2040) Scenario 1 Conditions

- All Opening Year (2029) Scenario 1 Conditions
- Install an additional through lane for each direction along the MN 55 corridor (convert from a two-lane road to a four-lane road)

Design Year (2040) Scenario 2 Conditions

- All Opening Year (2029) Scenario 2 Mitigations
- Install a signal at MN 55 & Fischer Avenue. Reevaluate this when interchange plans for the corridor become more clear

Design Year (2040) Scenario 3 Conditions

- All Opening Year (2029) Scenario 3 Mitigations

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.” 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.

There is one reasonably foreseeable future project that may interact with the environmental effects of the proposed project:

- MnDOT: Highway 52 and County Road 42 interchange expansion. This project intends to support the rerouting of Highway 55. This project will be required to complete a separate environmental review process
- Rich Valley East Area
 - An AUAR was completed for a study area located to the southwest of this AUAR Study Area.

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

If the project may cause any additional environmental effects not addressed by Items 1 to 21, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

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

23. Draft Mitigation Plan

This Mitigation Plan is submitted as part of the Draft 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 Draft Mitigation Plan will be revised and updated based on comments received during the Draft AUAR comment period.

This 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 20. 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 20. Final Mitigation Plan

Resource Area	Mitigation
Land Use	Scenario 1, 2 and 3: Any zoning inconsistencies will be addressed through a re-zoning.
	Scenario 1, 2, and 3: The city will coordinate with the Metropolitan Council to modify the TAZ allocations, if needed. The city will continue to work with Metropolitan Council on housing and residential unit areas within the city.
Geology, Soils, and Topography	Scenario 1, 2, and 3: Erosion prevention and sediment control practices will be implemented on-site per the NPDES General Stormwater Permit requirements.
	Scenario 1, 2, and 3: Site specific subsurface investigations should be completed prior to work commencement. If karst conditions are found to be present, follow the VRWJPO, City of Rosemount, and the MPCA design guidelines.

Resource Area	Mitigation
Water Resources	Scenarios 1, 2 and 3: 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, detention and infiltration of the 100-year stormwater volume for the delineated regional basin, as outlined in the City's CSMP, will be provided onsite, such that there is zero discharge in the 100-year storm event. Additionally, the basin will attenuate discharge from the regional basins to 0.05 cfs/acre of the basin's tributary drainage area. The development will also demonstrate the discharge rate at the municipal boundary with Nininger Township is not increased in post-development conditions for the 100-year, 4-day storm event.
	Scenarios 1, 2, and 3: Maintenance and monitoring of the stormwater management areas will be performed to ensure long term effectiveness of the facilities.
	Scenarios 1, 2, and 3: Obtain a permit from the Metropolitan Council and MPCA for a sewer extension and permit to connect.
	Scenarios 1, 2, and 3: Watermain extension along County Road 42 to extend services to the AUAR Study Area sufficient to serve the proposed development scenarios.
	Scenario 1, 2, and 3: Water Appropriations Permit amendment.
	Scenarios 1, 2, and 3: If needed, 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.
	Scenario 1, 2, and 3: Obtain a permit from MDH for a watermain installation
	Scenarios 1, 2 and 3: A chloride management plan will be implemented, which will meet state and local requirements.
	Scenarios 1, 2 and 3: Best management practices pertaining to stormwater management will be adhered to during construction.
	Scenarios 1, 2 and 3: If feasible, the project will adhere to avoidance and minimization requirements to limit 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. Additionally, the project proposer will apply for permits from the City of Rosemount and the USACE.

Resource Area	Mitigation
Contamination/ Hazardous Waste	Scenarios 1, 2, and 3: 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, 2, and 3: 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, 2, and 3: Coordinate with the MPCA regarding the required plans, material handling, and disposal.
Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources	Scenarios 1, 2, and 3: Wildlife friendly erosion control methods will be utilized within the study area to minimize impacts to wildlife using the site during construction. • The use of native plant species in seed mixes may be used to promote pollinator friendly habitat within the study area. • Pollinator-friendly landscape management methods may be used to reduce the use of herbicides and pesticides within project site landscapes.
	Scenarios 1, 2, and 3: 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.
	Scenarios 1, 2, and 3: 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.

Resource Area	Mitigation
Visual	Scenarios 1, 2, and 3: 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.
Historic Properties	Scenarios 1, 2, and 3: A Phase 1A Literature review will be completed prior to development within the AUAR Study Area. An unanticipated discoveries plan will be prepared prior to construction within the AUAR Study Area.
Air	Scenarios 1, 2, and 3: 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 Rosemount regulates dust in accordance with the standards set by the MPCA.
GHG Emissions/ Carbon Footprint	Scenarios 1, 2, and 3: Unless otherwise noted differently, the following are potential design strategies and sustainability measures that are under consideration for Scenario 1, Scenario 2 and Scenario 3 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	Scenarios 1, 2, and 3: 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. Scenarios 1, 2, and 3: Further noise evaluation will be completed as design progresses and best practices to reduce noise will be implemented. Scenarios 1, 2, and 3: Noise attenuation measures will be incorporated into project design to ensure that MPCA noise rules and City noise ordinances are followed.
Transportation	Short-Term (2029) Scenario 1 Conditions • Install a signal at CSAH 42 & Emery Avenue • Install dedicated westbound left, eastbound left, and northbound left turn lanes at CSAH 42 & Emery Avenue. • Install side street stop control at the site access points • Install left and right turn lanes along Emery Avenue at each access point

Resource Area	Mitigation
	Short-Term (2029) Scenario 2 Conditions • Install side street stop control at the site access points. • Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue • Install dedicated westbound left turn lane at MN 55 & Fischer Avenue. • Install dedicated westbound left turn lane at MN 55 & Fischer Avenue. Eastbound left turn lane should likely be installed to offset this turn lane improvement.
	Short-Term (2029) Scenario 3 Conditions • Install side street stop control at the site access points. • Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue • Install a traffic signal at MN 55 & Fischer Avenue • Install dedicated northbound, eastbound, and westbound left turn lanes at MN 55 & Fischer Avenue • Install left and right turn lanes along Emery Avenue and Fischer Avenue at each access point.
	Long-Term (2040) Scenario 1 Conditions • Install an additional through lane for each direction along the MN 55 corridor (convert from a two-lane road to a four-lane road)
	Long-Term (2040) Scenario 2 Conditions • Install a signal at MN 55 & Fischer Avenue. Reevaluate this when interchange plans for the corridor become clearer
	Long-Term (2040) Scenario 3 Conditions • Install side street stop control at the site access points. • Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue • Install a traffic signal at MN 55 & Fischer Avenue • Install dedicated northbound, eastbound, and westbound left turn lanes at MN 55 & Fischer Avenue • Install left and right turn lanes along Emery Avenue and Fischer Avenue at each access point.

Appendix A



Wetland Delineation Report

Dakota East Project

City of Rosemount

Dakota County, Minnesota

Prepared for:

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

Prepared by:

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November 2024



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Executive Summary

Wetland scientists, Mason Kunkel and Cat Maroney with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Tract Management Company, LP and the Dakota East Project in Rosemount, Dakota County, Minnesota. In total 2 wetlands were delineated and are described in **Table 2**. The wetland investigation and delineation included seven parcels which are listed in **Table 1** (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 October 8 and 16, 2024.

Table 1: Parcel IDs

Parcel IDs within Study Area
037-340280015010
037-340280025030
037-340280050010
037-340280085010
037-340280030030
037-340280036011
037-340280075010

1 Introduction

Wetland scientists, Mason Kunkel and Cat Maroney with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Tract Management Company, LP and the Dakota East Project in Rosemount, Dakota County, Minnesota. The wetland investigation and delineation included portions of seven parcels which are listed in **Table 1** (the “study area”). The study area is shown in **Figure 1**. The study area consists of undeveloped agricultural, forested land, and an active mine in northeastern portion of parcel: 037-340280085010. Cover types within the study area include cropland, woodland, and an active mine.

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 October 8 and 16, 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/reconstruct the parcel.

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.

Keller Leet-Otley earned a Bachelor of Arts Degree in Environmental Science from Colby College. He is an environmental scientist who specializes in wetland delineation and permitting, geographic information systems mapping, and threatened and endangered species due diligence. He has led 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. Keller has prepared environmental permit applications and documentation for public and private sector clients. He is a certified delineator in the state of Minnesota and his focus is environmental work in the upper Midwest.

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 in completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. He is a certified Minnesota Wetland Professional in Training and has extensive experience working in Minnesota, Iowa, Illinois, Missouri, and Michigan.

Cat Maroney earned both a Bachelor of Science and a Master of Science in Environmental Science from the University of Arizona. She is an environmental scientist who has experience in biological, hazmat, and permit report writing and geographic information systems mapping. She has assisted with wetland delineations in Arizona, Kansas, and Minnesota.

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
- Minnesota Department of Natural Resources (DNR)
 - Public Waters Work Permit Program
- Local Governmental Units (LGUs)
 - Wetland Conservation Act (WCA)

The LGU for this project is Rosemount. 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, aerial photography (2024), and antecedent precipitation for the study area. The selected resources are described below:

5.1 Topographic Map

The Vermillion, MN 7.5-minute United States Geological Survey (USGS) topographic map 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 undeveloped land with an ephemeral stream along the central eastern portion of the site. A structure is depicted in the northwestern corner of the study area. The LiDAR map depicts a slight valley in the southwestern to southeastern central portion of the study area with water draining south and north towards this central valley. The study area ranges from 832 feet (above mean sea level) to 904 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, there is one wetland feature mapped along the central eastern portion of the study area (R4SBC), see Appendix A.

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 is not field verified. One NHD flowline feature is depicted along the central eastern portion of the study area, it approximately aligns with mapped NWI features, see Appendix A. .

5.4 DNR Public Waters Inventory

The Department of Natural Resources (DNR) Public Waters Inventory (PWI) depicts DNR Public Waterways and Waterbodies. No PWI features are depicted within a mile of the study area.

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 16 soil mapping units within the study area which are mainly complexes and loam with some loamy sand, silt, gravelly sandy loam, and fine sand. Approximately 14% of the study area was mapped with a predominantly non-hydric soil rating from 1-5. The rest of the study area was mapped with soils with non-hydric soil rating of 0%. Maps and information obtained from the NRCS online web soil survey are included in Appendix C.

5.6 Precipitation

Precipitation data for the study area was obtained from the U.S. Army Corps of Engineers Antecedent Precipitation Tool. Antecedent Precipitation Tool data was 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. In the 90 days leading up to the field delineation, precipitation conditions were normal. This information is included in Appendix D.

5.7 Aerial Photography Review

Aerial photography, acquired from Google Earth, was reviewed to identify the potential for wetlands across the site. Nine 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.

Six Areas of Investigation (AOIs) were identified in the study area. AOIs 1 and 3 had wetland signatures in at least 30% of the historic aerials with normal precipitation conditions, met hydrology indicators during the field delineation, and were delineated as Wetlands 1 and 2, respectively. AOIs 2 and 6 lacked wetland signatures in 30% of historic aerials with normal precipitation conditions and hydric soils or hydrology indicators during field review, thus were not delineated as wetlands. AOIs 4 and 5 lacked either hydric soil or hydrology indicators during the field delineation and thus were not delineated as wetland even if 30% of historic aerials showed wetland signatures during normal precipitation conditions. 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 October 8 and 16, 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. The sample point locations, wetland boundaries, and aquatic features were surveyed with a Geode GPS for all wetlands, see **Figure 3**.

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
 - o Perennial: contains water at all times of the year except during extreme drought
 - o Intermittent: contains water occasionally or seasonally
 - o 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
 - o Undercut: banks that overhang the stream channel
 - o Steep: bank slope of approximately greater than 30 degrees
 - o 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 2: Delineation Summary

Resource ID	Wetland Plant Community	HGM	Cowardin Classification ¹	Size (acres/linear feet) ²	NWI?	Hydric Soils? ³	Photo ID	Associated Sample Points	NOTES	Regulatory Status ⁴
Wetlands										
Wetland 1	Seasonally Flooded Basin	Depression	PEM1Af	0.21	-	No	5	SP-1 (Wet), SP-4 (Up)	Wetland located in depression in the western central section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis. The resource appears surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). WCA Jurisdictional
Wetland 2	Seasonally Flooded Basin	Depression	PEM1Af	0.43	-	No	2	SP-3 (Wet), SP-4 (Up)	Wetland located in depression in the western central section of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography and offsite aerial analysis. The resource appears surficially isolated from other aquatic resources.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Jurisdictional

¹ The Cowardin Classification System codes are found here: <https://www.fws.gov/wetlands/documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf>

² Size of wetland features and additional areas investigated provided in acres and size of non-wetland, linear features provided in linear feet.

³ Areas identified as hydric contain partially hydric soils (equal to or greater than 33% of soil component) mapped within the resource area.

⁴ Regulatory Status is based on best professional judgment and has not been verified with agency staff.

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 October 8 and 16, 2024.

9 Conclusion

The field delineation identified two wetlands within the study area. Each of the delineated resources is described in Table 2. None of the wetlands are anticipated to be USACE-jurisdictional; however, Wetlands 1 and 2 are anticipated to be WCA 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.

References

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- U.S. Geological Survey. *National Hydrography Dataset*. Shapefiles available at <https://nhd.usgs.gov/>, accessed November 2024.
- U.S. Geological Survey. *Topographical Map*. Accessed via ESRI at <http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f> and via Topo View at <https://ngmdb.usgs.gov/topoview/viewer/#4/40.01/-100.06>, accessed November 2024.

Figures



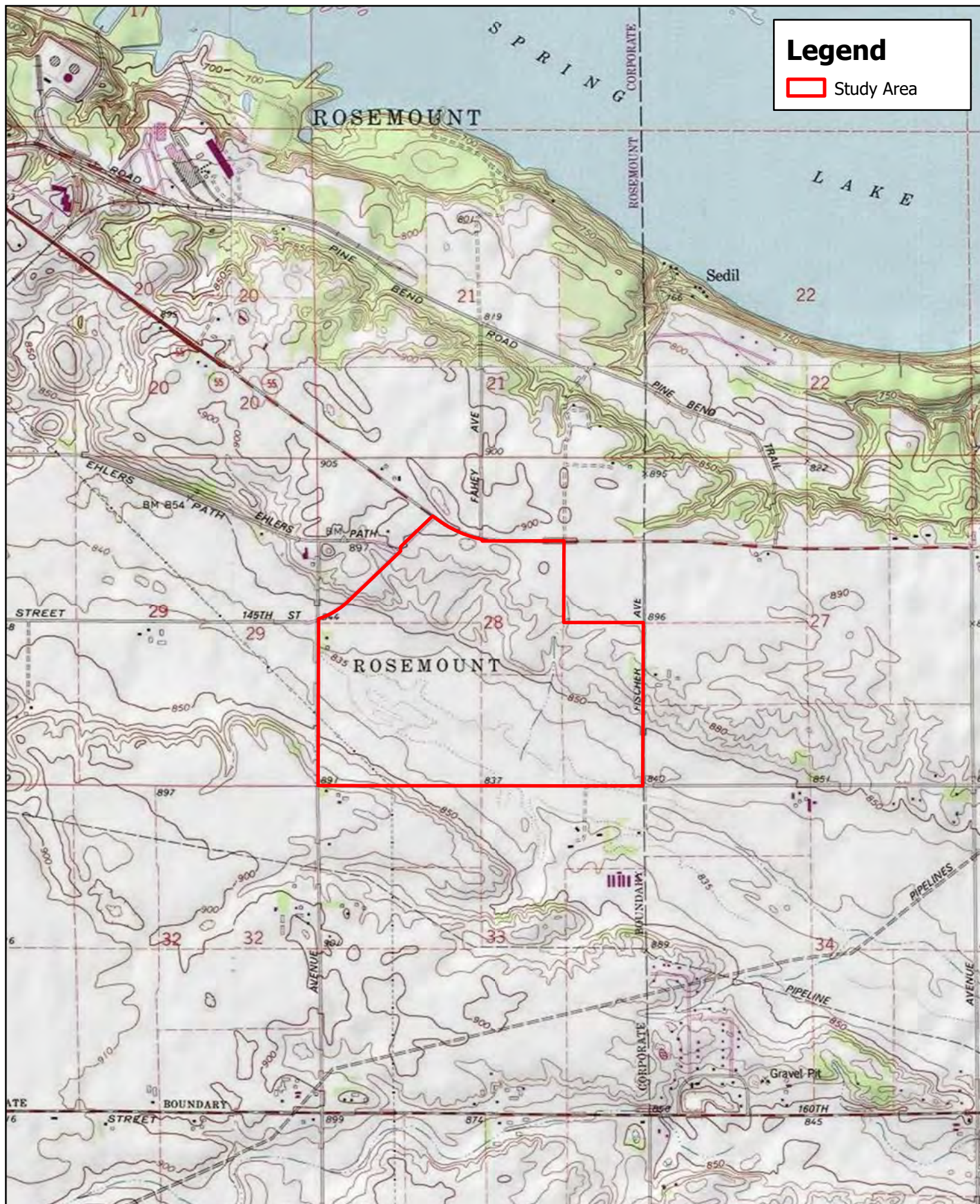
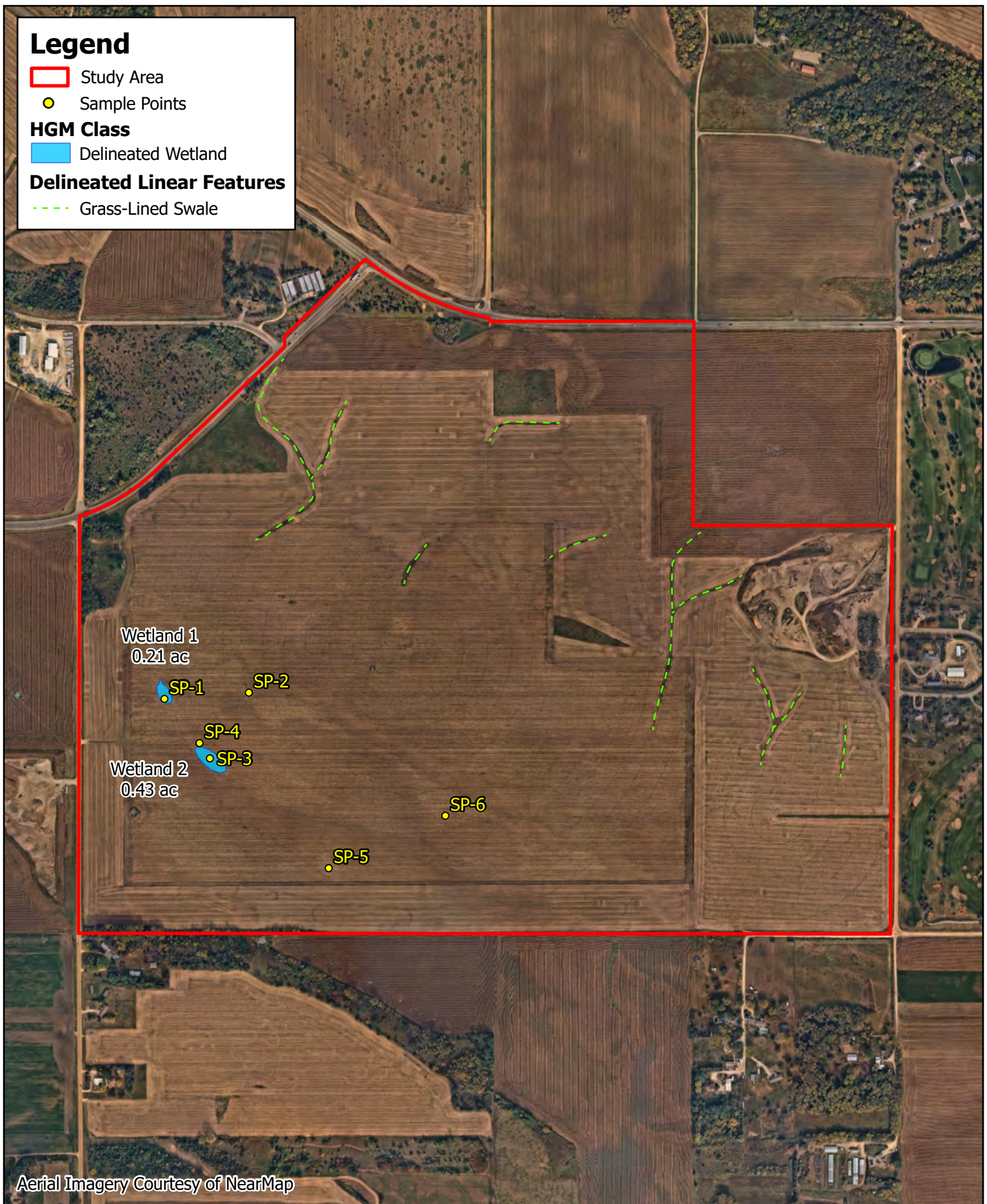
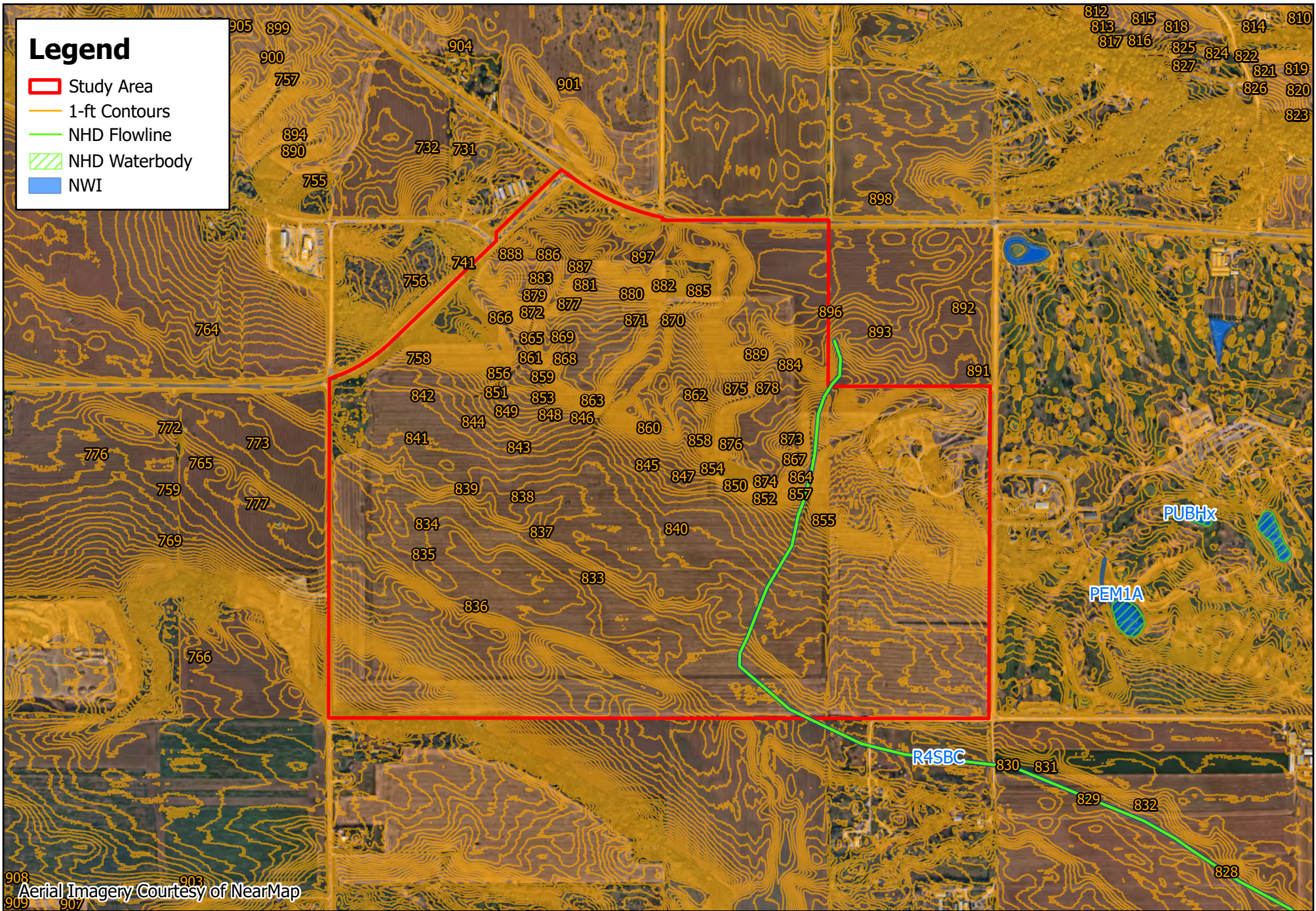


Figure 2. USGS Topographic Map
 Tract Management Company, LP
 Rosemount, MN



Appendix A: National Wetlands Inventory/DNR Public Waters Inventory/National Hydrography Dataset/1-ft Contours



Appendix B: Historic Aerial Review

Appendix B. Historic Aerial Review*

		Image Interpretation** (Area of Investigation)					
Date Image Taken	Climate Condition***	1	2	3	4	5	6
4/16/1991	Normal	SS	NSS	SS	SS	SS	NSS
3/31/2004	Normal	NV	NV	NV	NV	NV	NV
10/11/2014	Normal	NSS	NSS	NSS	NSS	NSS	NSS
8/11/2015	Wetter than Normal	NV	NV	NV	NV	NV	NV
4/5/2017	Normal	NSS	NSS	SS	SS	SS	NSS
6/2/2020	Normal	CS	CS	CS	CS	CS	NV
6/16/2022	Normal	CS	NV	NV	CS	NV	NV
5/25/2023	Normal	NSS	NSS	NSS	NSS	NSS	NSS
4/12/2024	Drier than Normal	SS	SS	SS	SS	SS	SS
Number of normal years		7	7	7	7	7	7
Number of normal years with wet signatures		3	1	3	4	3	0
Percent of normal years with wet signatures		43%	14%	43%	57%	43%	0%
Hydric Soils present		No	No	No	No	No	No
Identified on NWI		No	No	No	No	No	No
Hydrology indicators observed during field review?		Yes	No	Yes	No	No	No
Has wetland signature in 30% or more in normal years?		Yes	No	Yes	Yes	Yes	No
Wetland Present?		Yes	No	Yes	No	No	No
Wetland Number		1	-	2	-	-	-

*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.

Legend

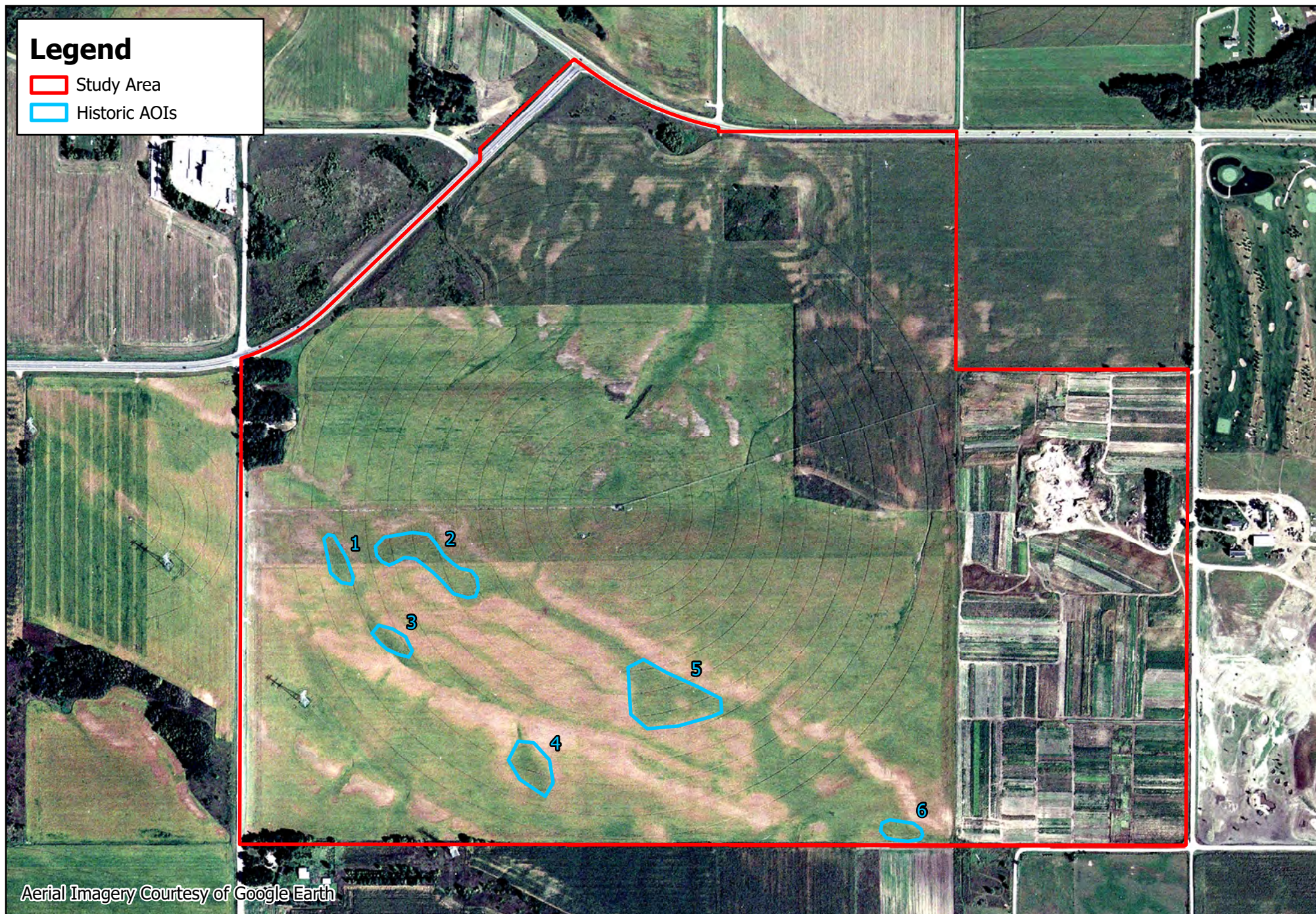
-  Study Area
-  Historic AOIs



Aerial Imagery Courtesy of Google Earth

Legend

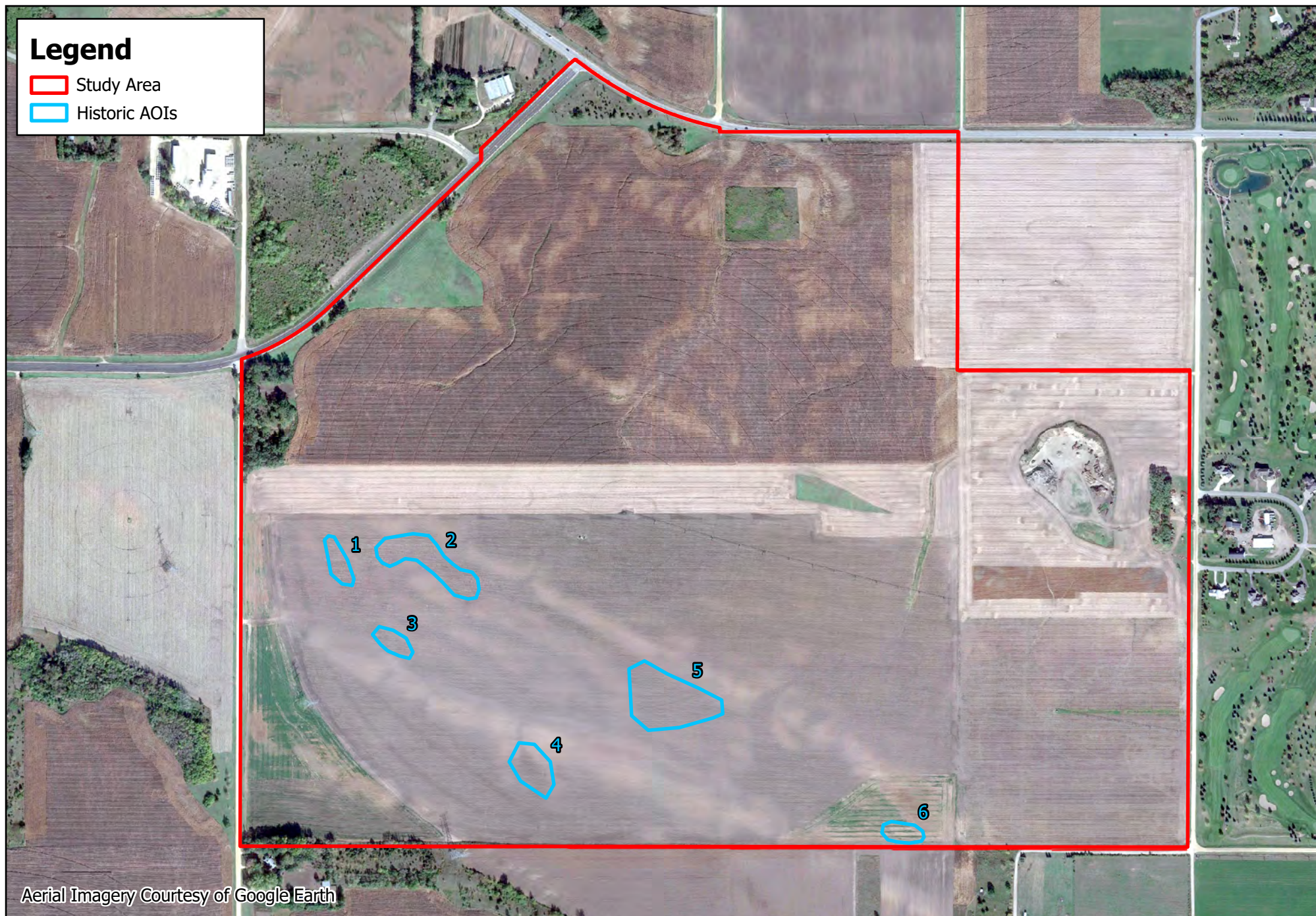
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- ▭ Historic AOIs



Aerial Imagery Courtesy of Google Earth

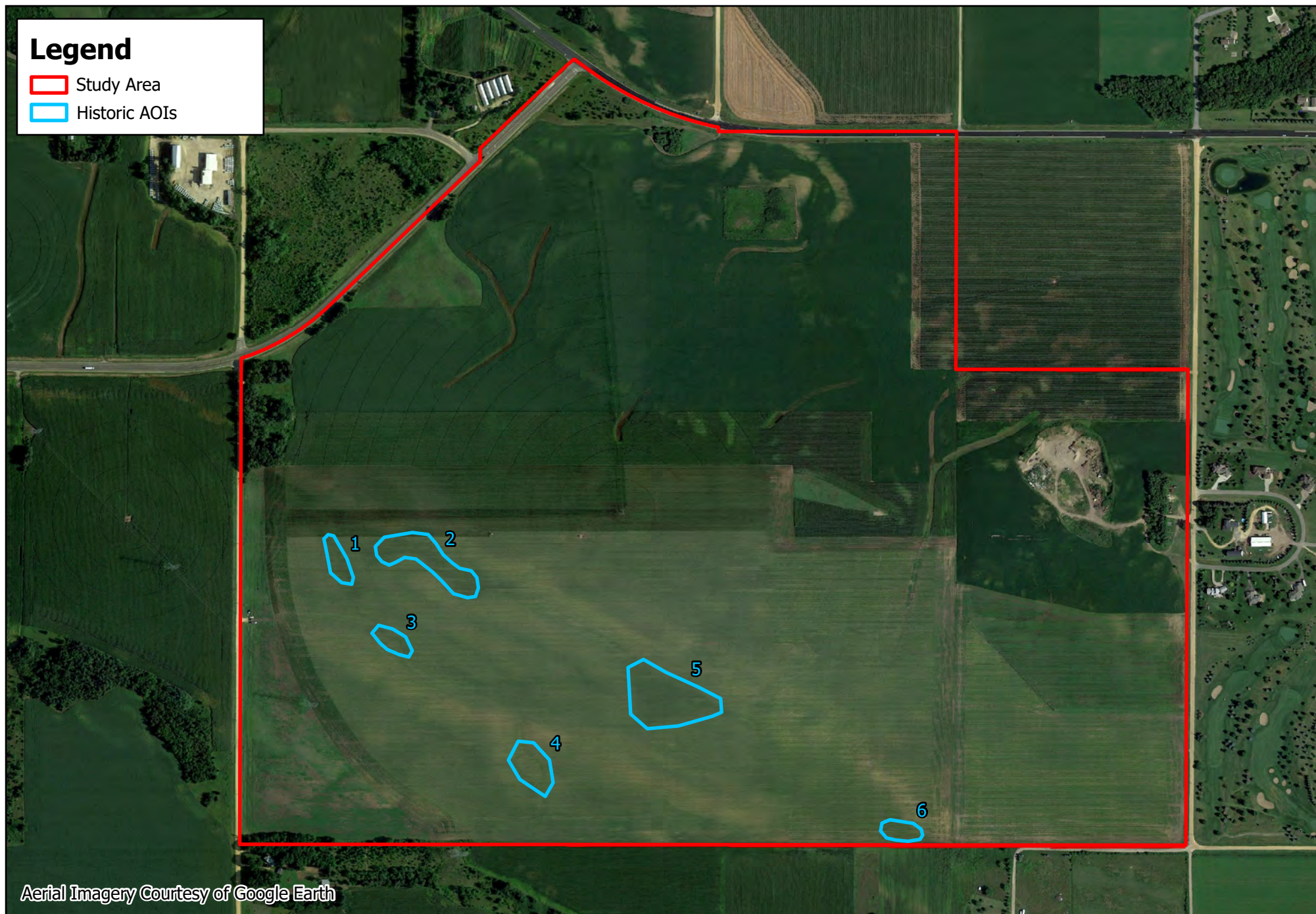
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-  Study Area
-  Historic AOIs



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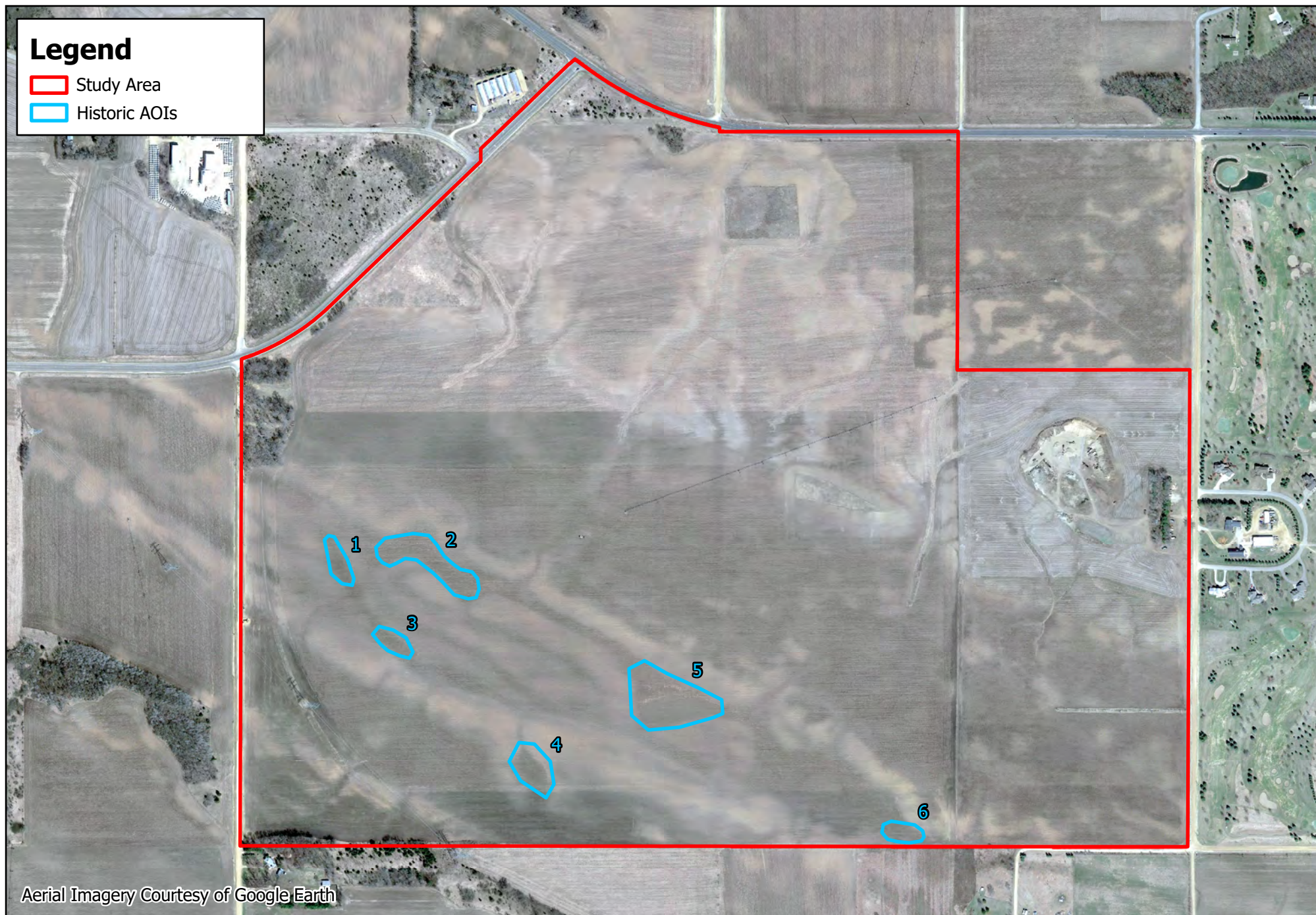
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-  Historic AOIs



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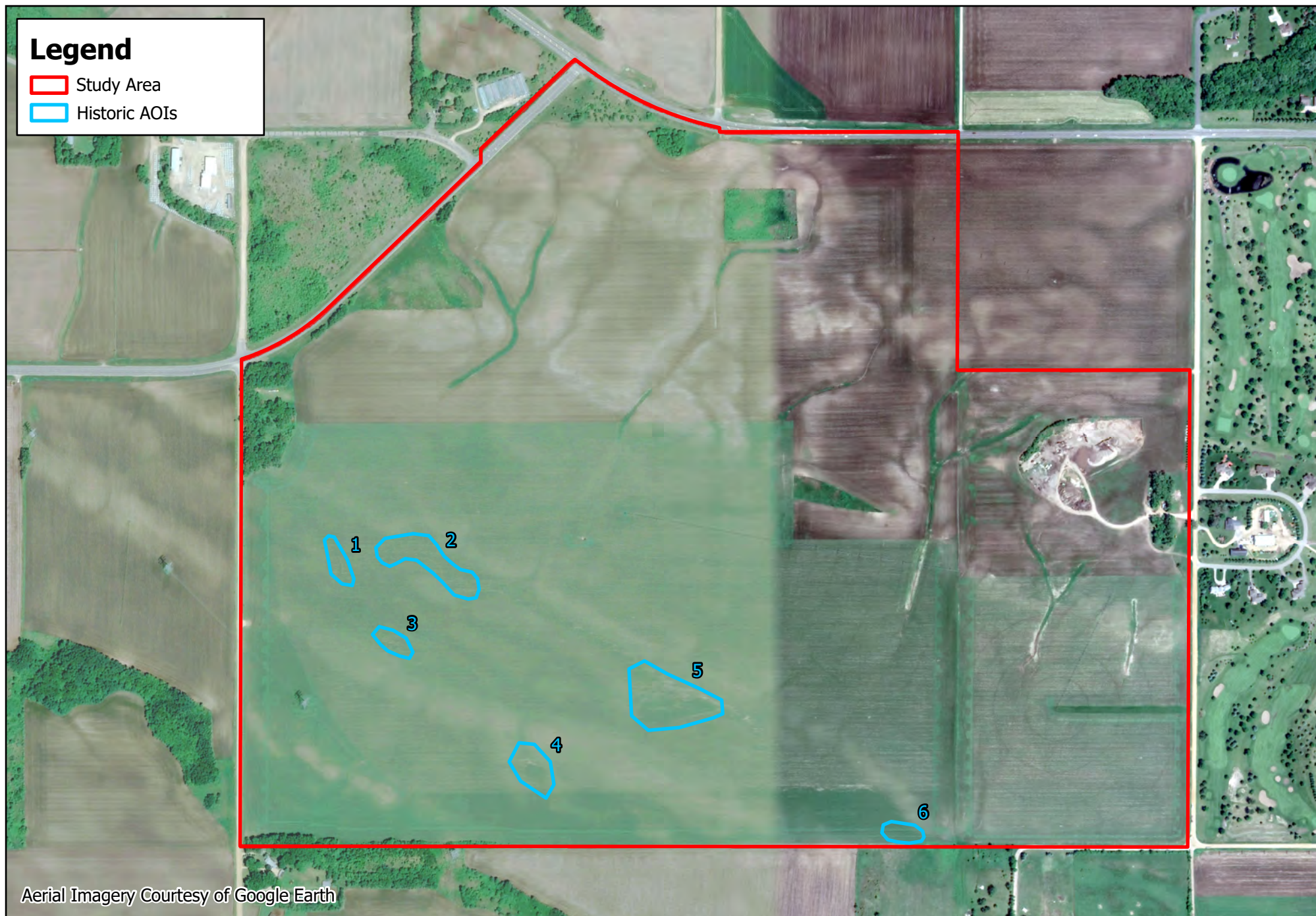
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Aerial Imagery Courtesy of Google Earth

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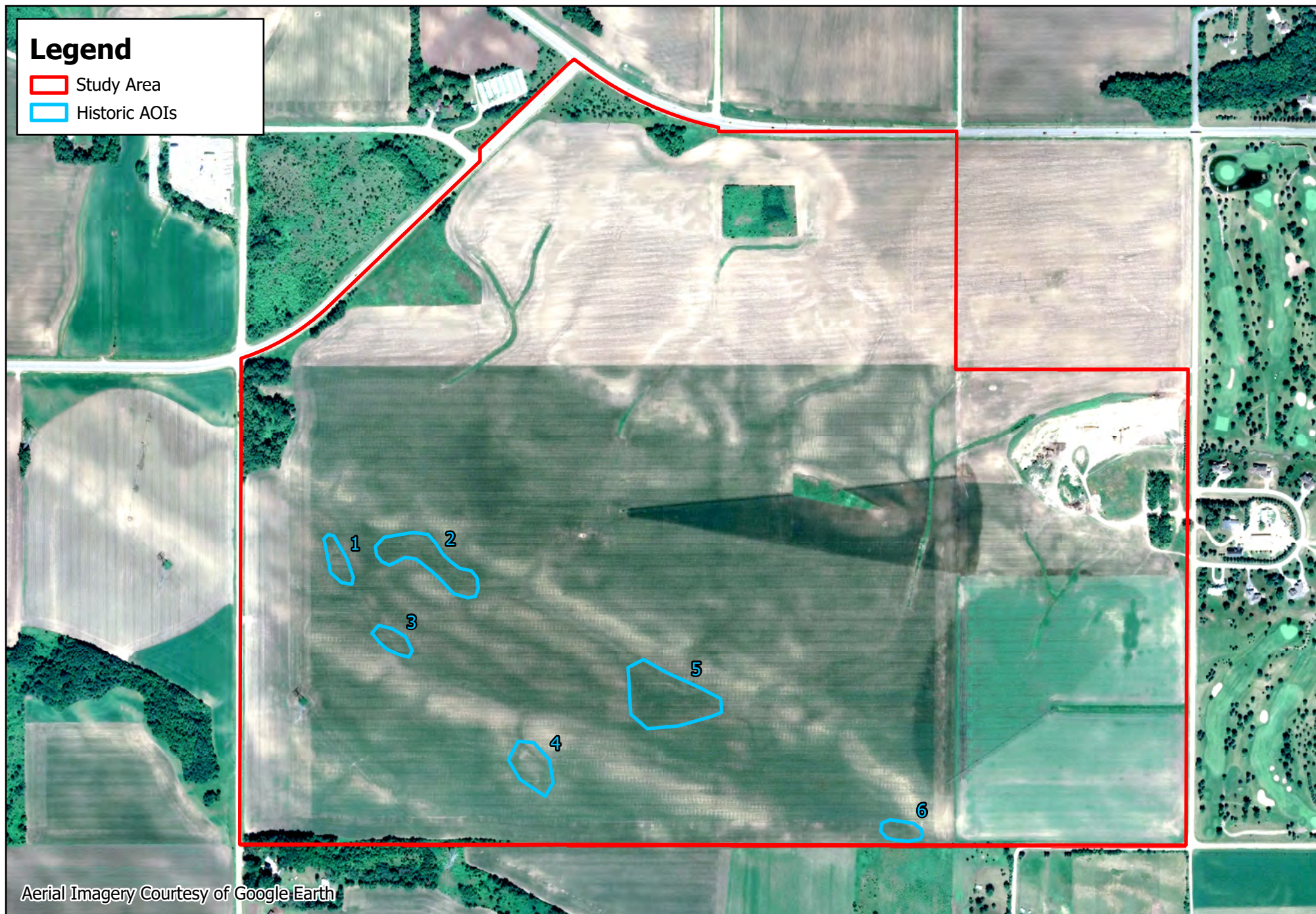
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Aerial Imagery Courtesy of Google Earth

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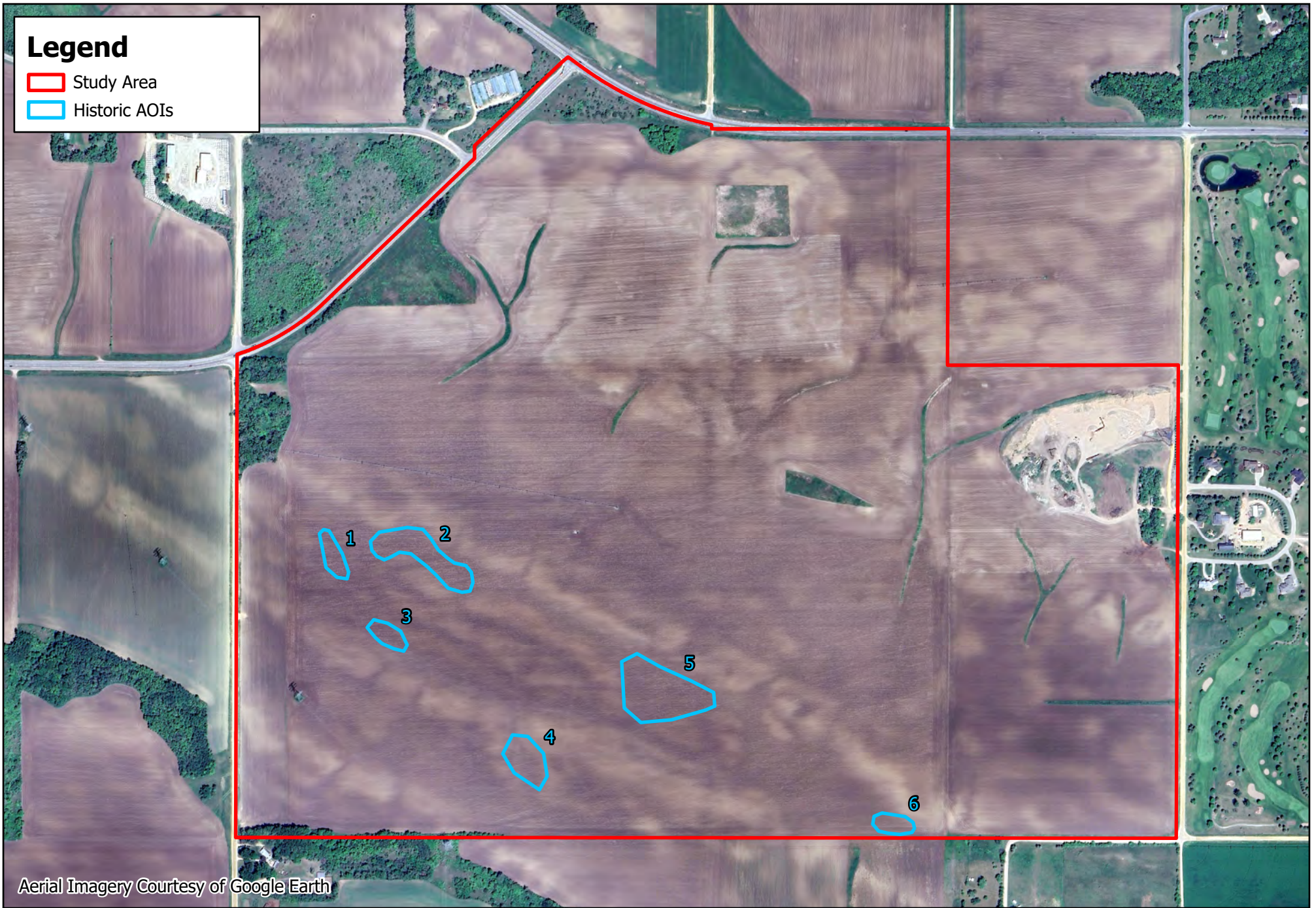
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- ▬ Historic AOIs



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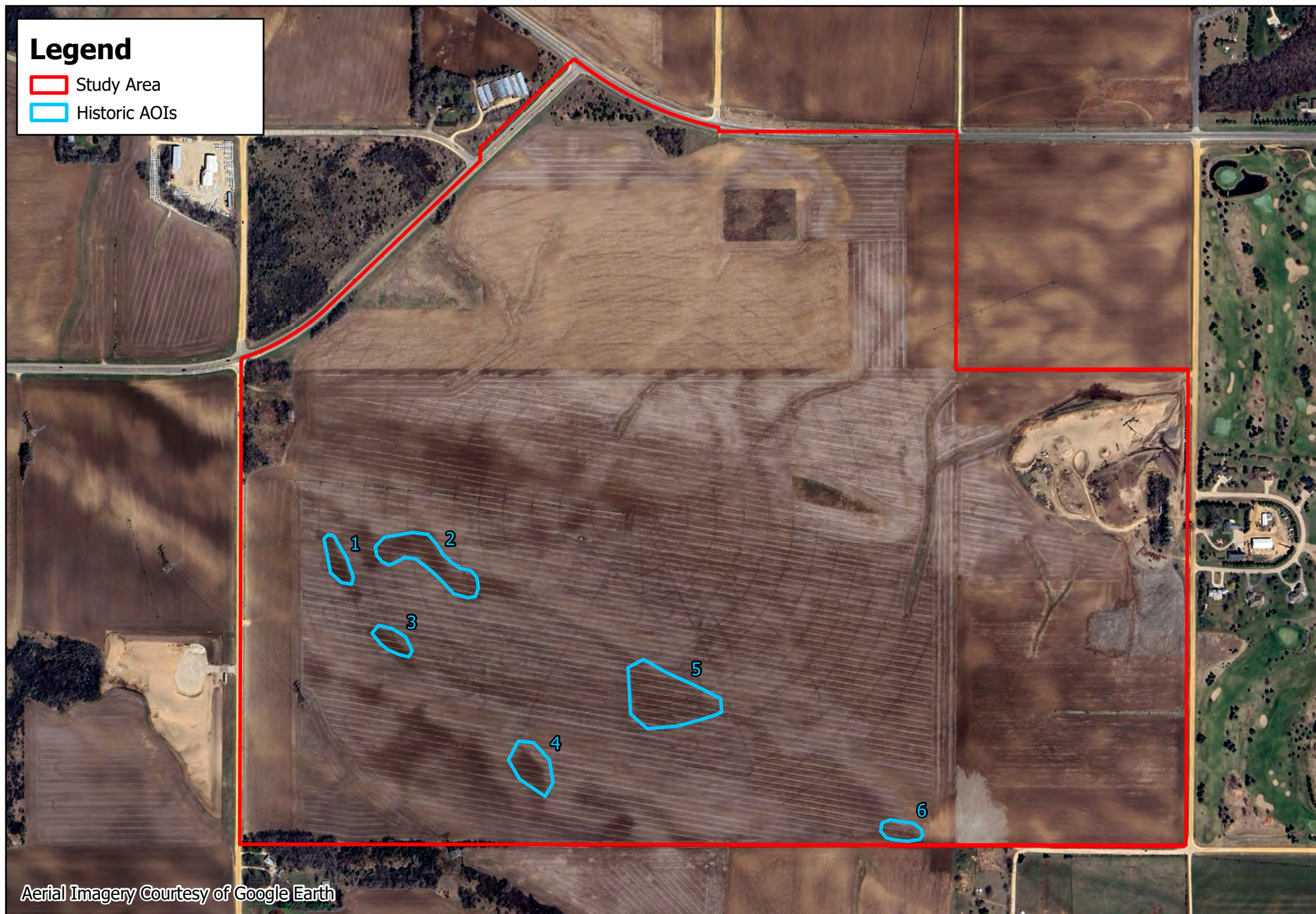
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- ▮ Historic AOIs



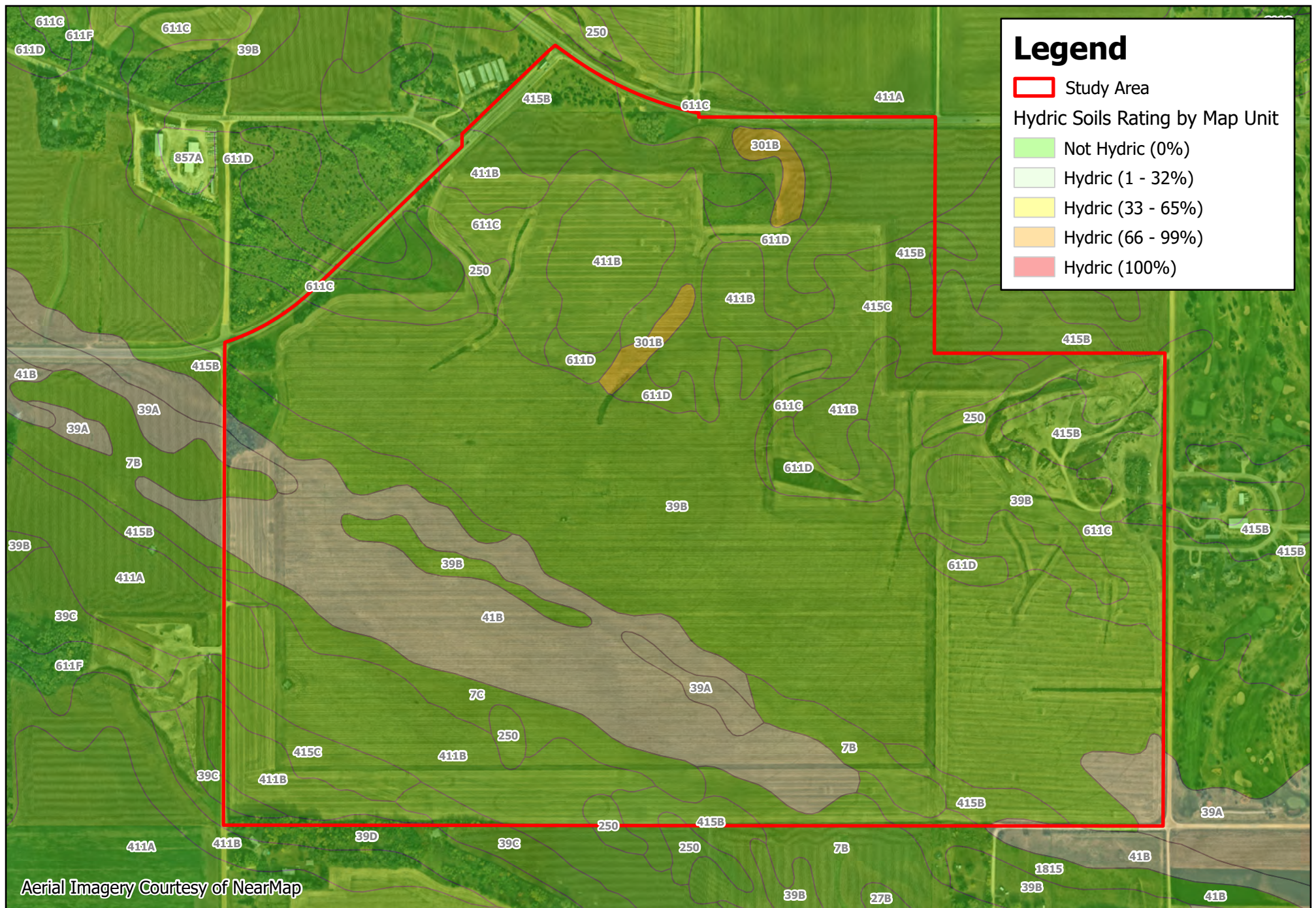
Legend

-  Study Area
-  Historic AOIs



Aerial Imagery Courtesy of Google Earth

Appendix C: Hydric Soils Information



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 20, Sep 7, 2024

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.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
7B	Hubbard loamy sand, 1 to 6 percent slopes	0	10.1	2.4%
7C	Hubbard loamy sand, 6 to 12 percent slopes	0	10.6	2.5%
39A	Wadena loam, 0 to 2 percent slopes	1	6.9	1.6%
39B	Wadena loam, 2 to 6 percent slopes	0	137.2	32.7%
39C	Wadena loam, 6 to 12 percent slopes	0	2.3	0.5%
39D	Wadena loam, 12 to 18 percent slopes	0	1.2	0.3%
41B	Estherville sandy loam, 2 to 6 percent slopes	1	49.2	11.7%
250	Kennebec silt loam	0	6.9	1.7%
301B	Lindstrom silt loam, till plain, 2 to 6 percent slopes	5	4.3	1.0%
411A	Waukegan silt loam, 0 to 1 percent slopes	0	14.4	3.4%
411B	Waukegan silt loam, 1 to 6 percent slopes	0	56.5	13.5%
415B	Kanaranzi loam, 2 to 6 percent slopes	0	35.0	8.4%
415C	Kanaranzi loam, 6 to 12 percent slopes	0	14.0	3.3%
611C	Hawick gravelly sandy loam, 6 to 12 percent slopes	0	52.2	12.5%
611D	Hawick gravelly sandy loam, 12 to 20 percent slopes	0	16.8	4.0%
1815	Zumbro loamy fine sand	0	1.4	0.3%
Totals for Area of Interest			419.0	100.0%

Rating Options—Hydric Rating by Map Unit*Aggregation Method: Percent Present*

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute

value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Percent Present" returns the cumulative percent composition of all components of a map unit for which a certain condition is true. For example, attribute "Hydric Rating by Map Unit" returns the cumulative percent composition of all components of a map unit where the corresponding hydric rating is "Yes". Conditions may be simple or complex. At runtime, the user may be able to specify all, some or none of the conditions in question.

Component Percent Cutoff: None Specified

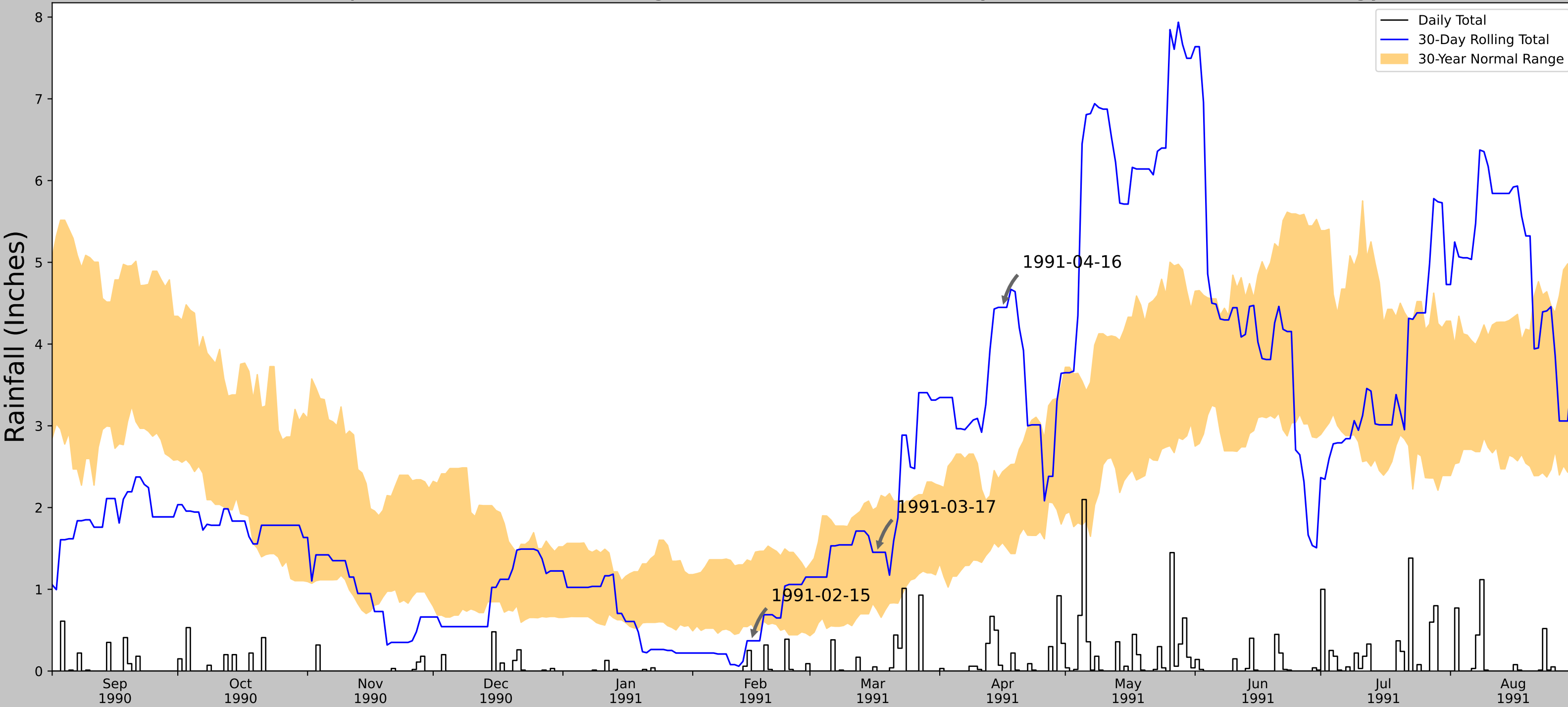
Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Appendix D: Precipitation Data

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	1991-04-16
Elevation (ft)	841.726
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
1991-04-16	1.571654	2.436614	4.448819	Wet	3	3	9
1991-03-17	0.751181	2.001575	1.452756	Normal	2	2	4
1991-02-15	0.575197	1.339764	0.370079	Dry	1	1	1
Result							Normal Conditions - 14

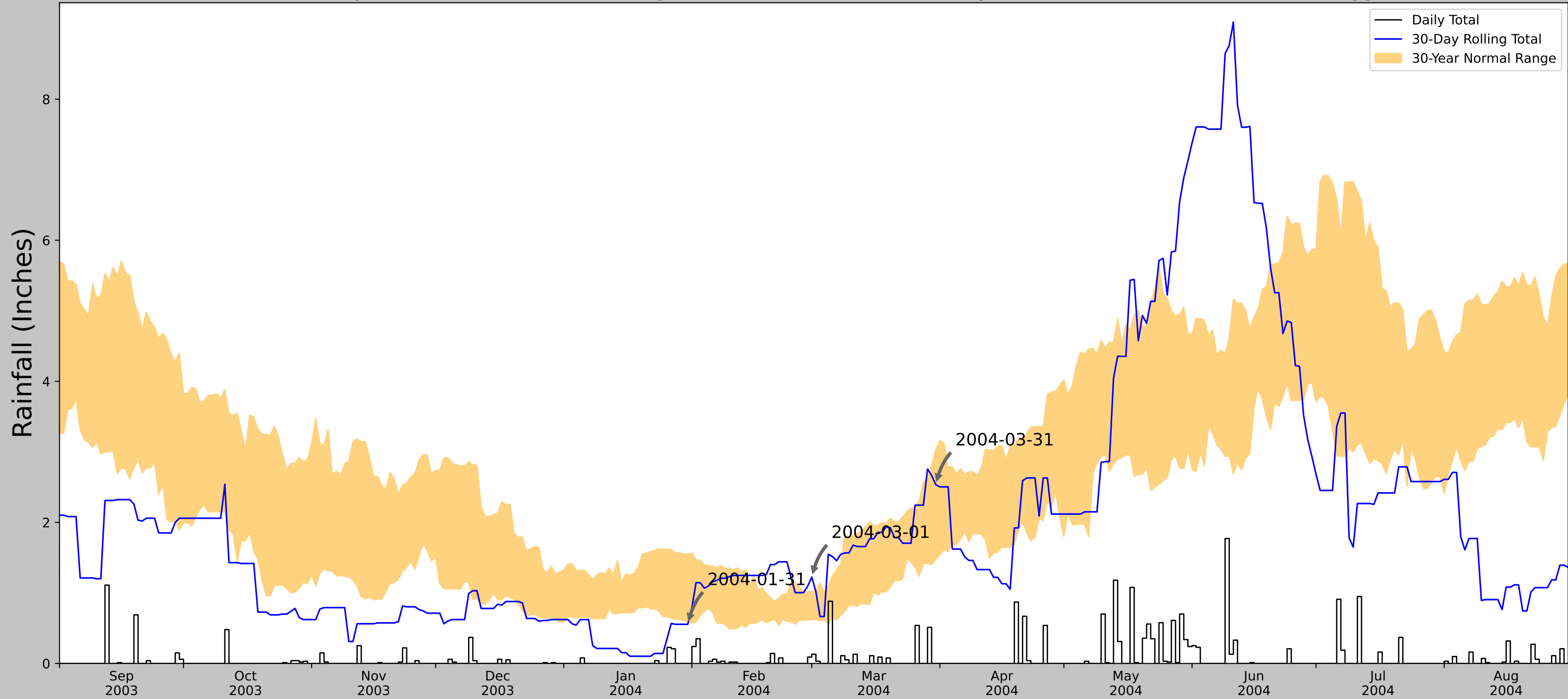


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	5.715	103.156	3.161	11180	90
FARMINGTON 3NW	44.6661, -93.1756	959.974	5.169	15.092	2.404	173	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2004-03-31
Elevation (ft)	841.726
Drought Index (PDSI)	Moderate drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2004-03-31	1.474409	3.033465	2.535433	Normal	2	3	6
2004-03-01	0.621654	1.019291	1.224409	Wet	3	2	6
2004-01-31	0.591339	1.550787	0.555118	Dry	1	1	1
Result							Normal Conditions - 13

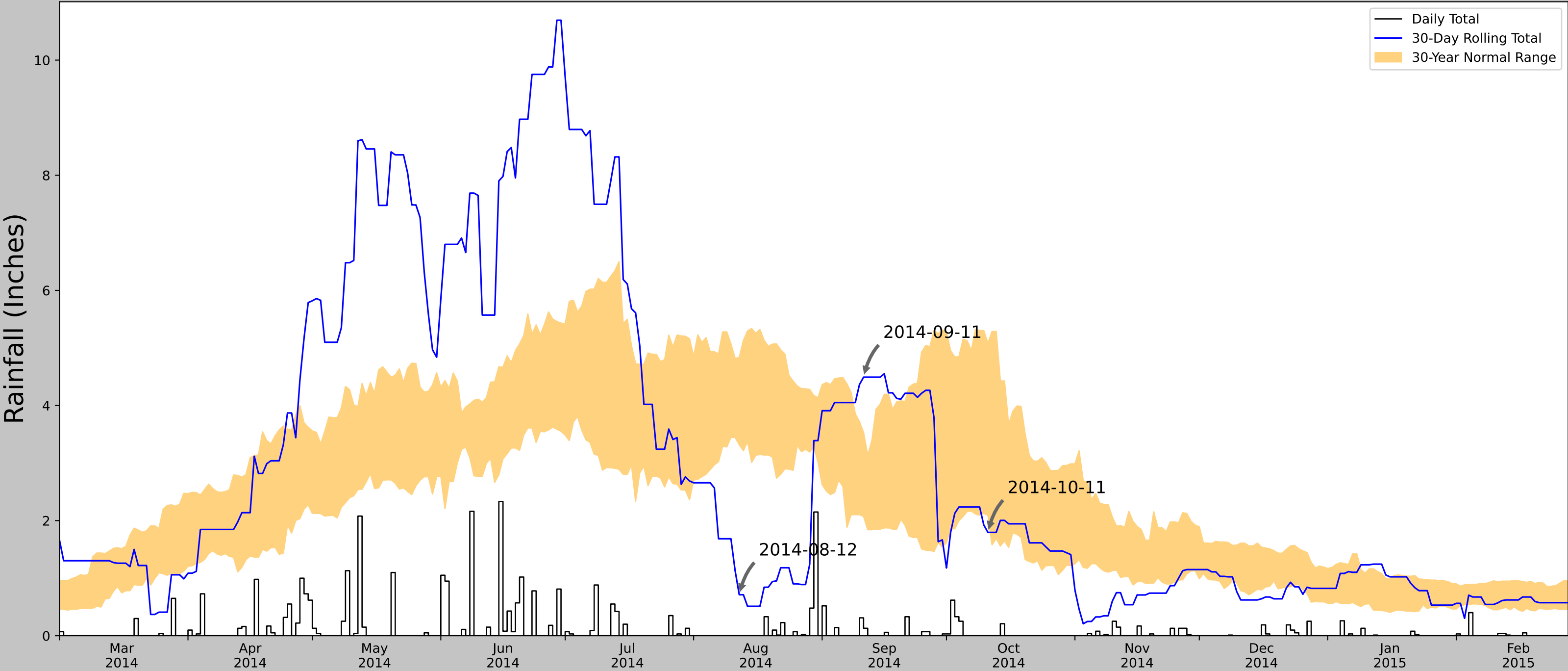


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	5.715	103.156	3.161	11151	61
FARMINGTON 3NW	44.6661, -93.1756	959.974	5.169	15.092	2.404	201	0
MINNEAPOLIS-ST PAUL INTL AP	44.8853, -93.2314	834.974	13.357	109.908	7.479	0	29

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2014-10-11
Elevation (ft)	841.726
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2014-10-11	2.093307	5.08189	1.795276	Dry	1	3	3
2014-09-11	2.073622	3.529921	4.492126	Wet	3	2	6
2014-08-12	3.319685	4.83189	0.712598	Dry	1	1	1
Result							Normal Conditions - 10

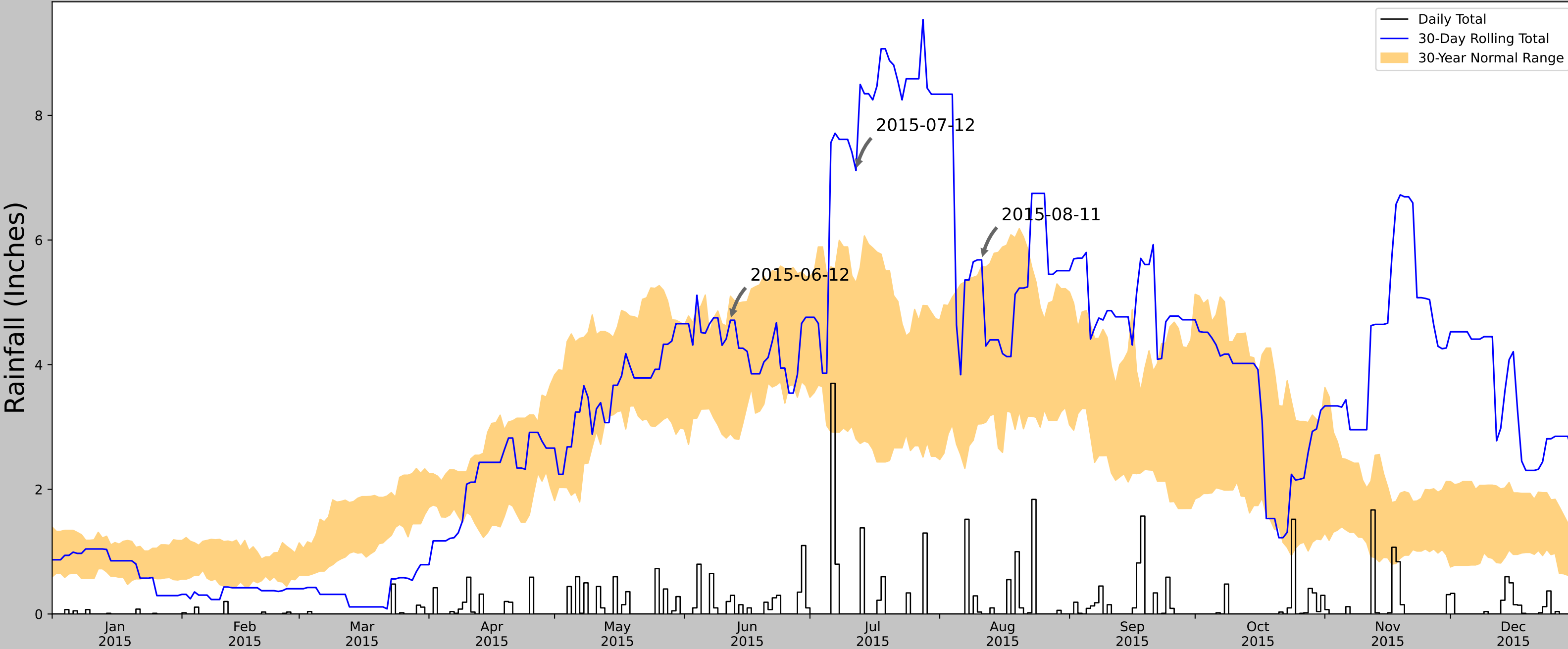


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11099	90
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	4	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	69	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2015-08-11
Elevation (ft)	841.726
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2015-08-11	3.051181	5.574803	5.681103	Wet	3	3	9
2015-07-12	2.809449	5.314173	7.114173	Wet	3	2	6
2015-06-12	2.891339	5.098819	4.712599	Normal	2	1	2
Result							Wetter than Normal - 17

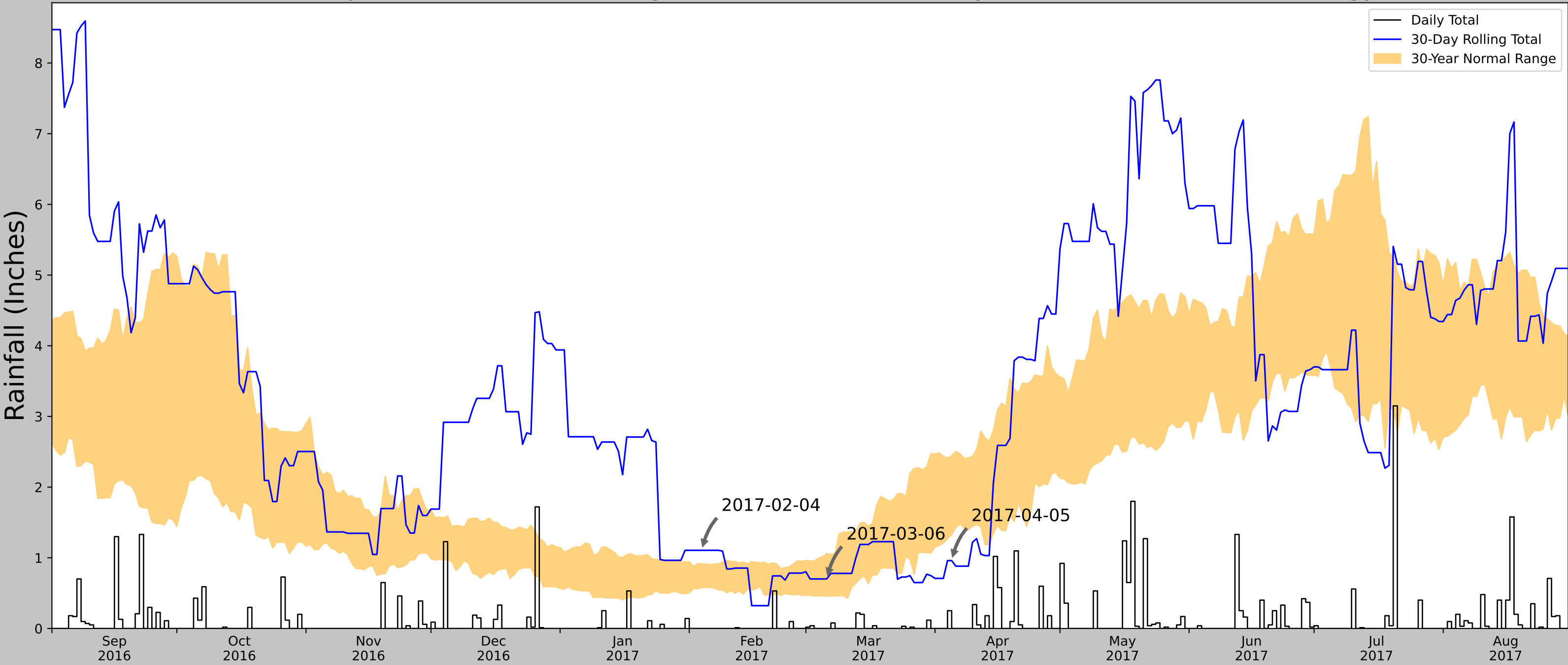
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	5.715	103.156	3.161	9762	55
ROSEMOUNT 3.3 SW	44.7182, -93.121	951.116	1.129	6.234	0.515	216	17
ROSEMOUNT 3.7 WSW	44.73, -93.1373	959.974	2.133	15.092	0.992	0	6
ROSEMOUNT 4.5 WSW	44.7208, -93.1497	940.945	2.549	3.937	1.157	74	9
ROSEMOUNT 4.1 W	44.7504, -93.1502	941.929	3.458	2.953	1.566	0	3
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	3.426	35.105	1.662	310	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	5.169	15.092	2.404	727	0
BURNSVILLE 3.0 NE	44.7914, -93.2304	950.131	8.293	5.249	3.775	2	0
EAGAN 1.7 W	44.815, -93.1981	875.0	8.378	69.882	4.356	4	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	10.735	134.843	6.278	2	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	12.737	103.018	7.044	1	0
ST PAUL 3SW	44.9311, -93.1539	924.869	15.064	20.013	7.08	38	0
MINNEAPOLIS-ST PAUL INTL AP	44.8853, -93.2314	834.974	13.357	109.908	7.479	217	0



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Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2017-04-05
Elevation (ft)	841.726
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2017-04-05	1.325591	2.444882	0.96063	Dry	1	3	3
2017-03-06	0.459055	1.059449	0.700787	Normal	2	2	4
2017-02-04	0.577953	0.915354	1.106299	Wet	3	1	3
Result							Normal Conditions - 10

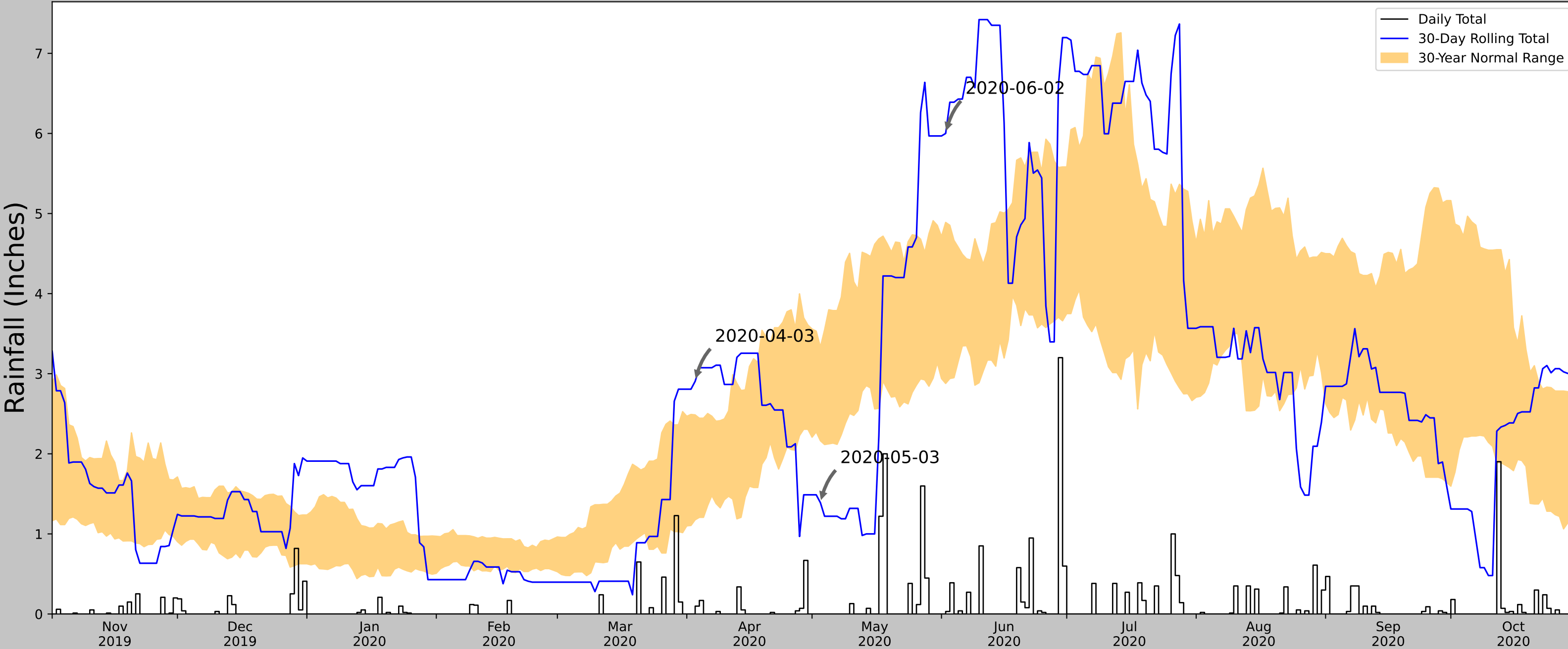


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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11096	90
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	69	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2020-06-02
Elevation (ft)	841.726
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-06-02	2.878347	4.88937	6.0	Wet	3	3	9
2020-05-03	2.162992	3.333465	1.389764	Dry	1	2	2
2020-04-03	1.175984	2.486221	2.905512	Wet	3	1	3
Result							Normal Conditions - 14

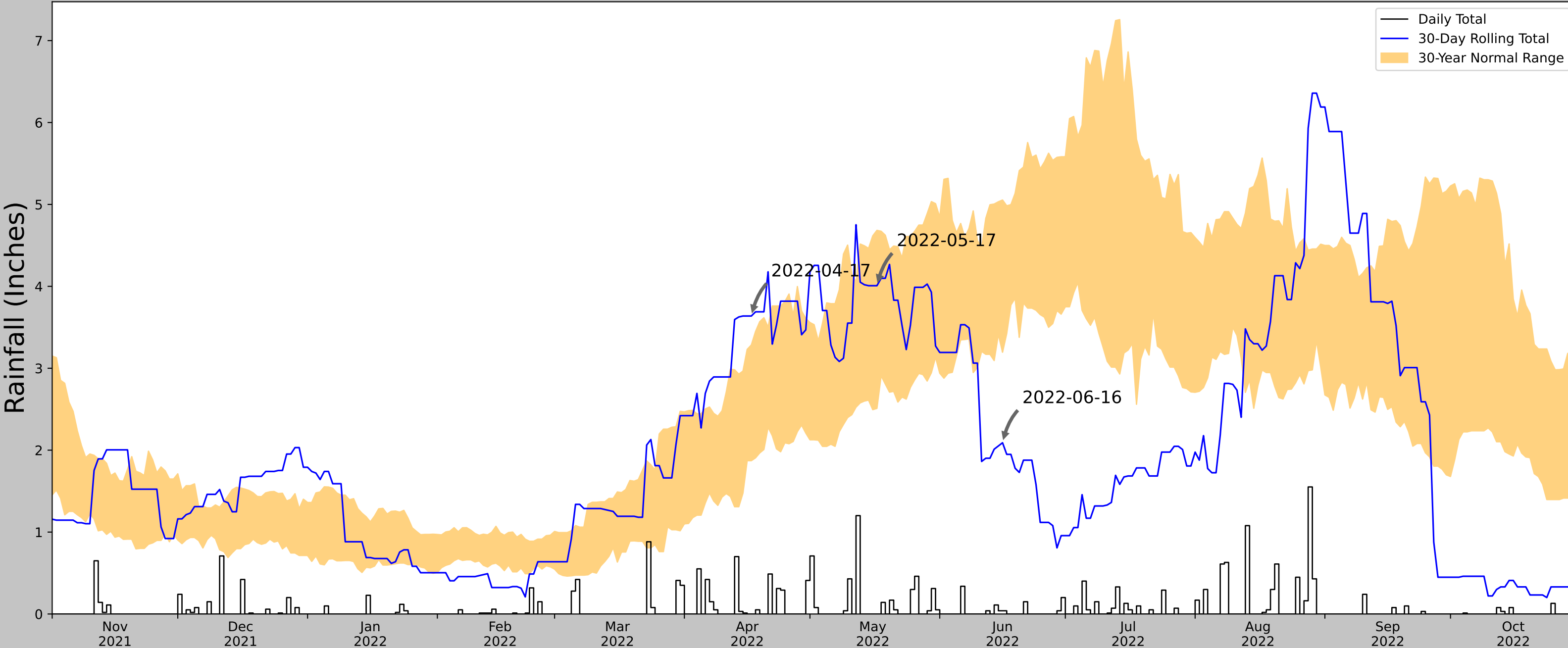
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11097	90
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	2	0
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	63	0



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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2022-06-16
Elevation (ft)	841.726
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-16	3.195276	5.053937	2.090551	Dry	1	3	3
2022-05-17	2.509843	4.683465	4.007874	Normal	2	2	4
2022-04-17	1.871654	3.284252	3.637795	Wet	3	1	3
Result							Normal Conditions - 10

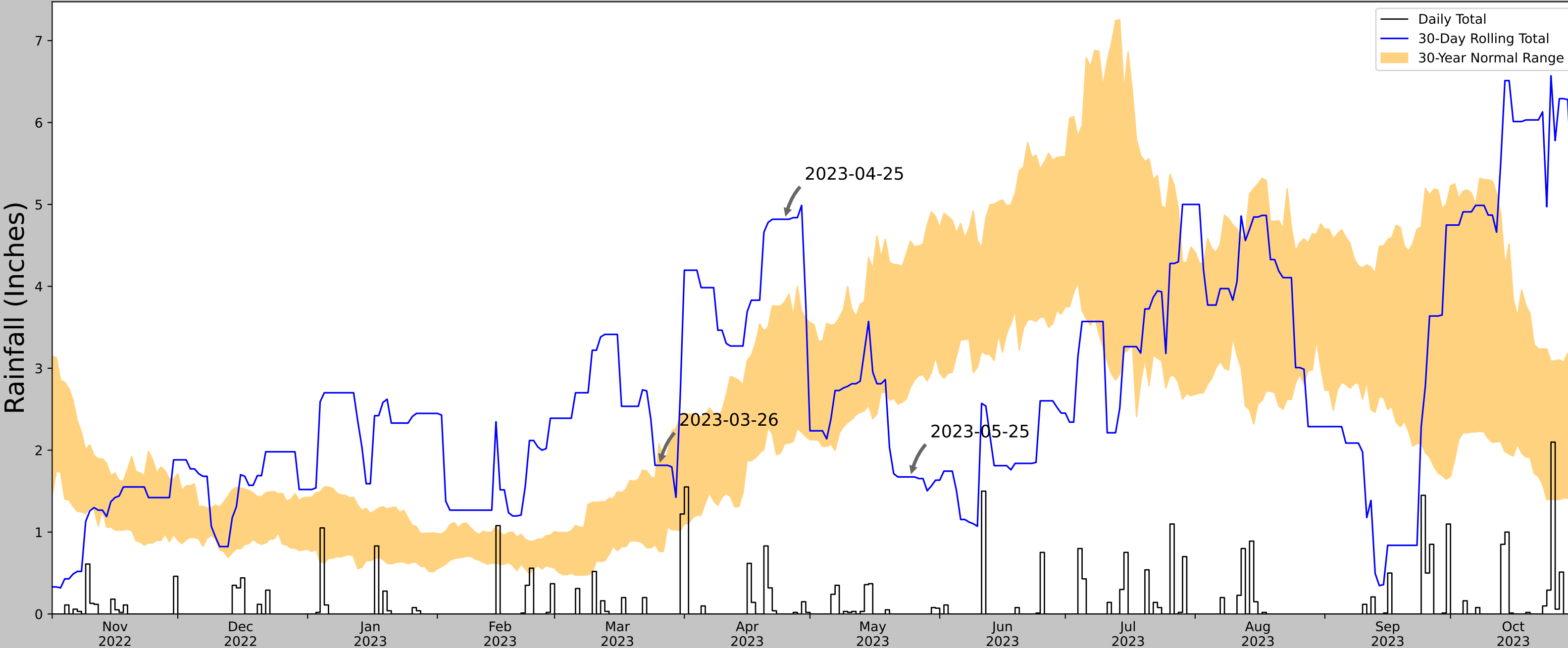


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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11128	90
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	4	0
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	31	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2023-05-25
Elevation (ft)	841.726
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-05-25	2.766536	4.549606	1.673228	Dry	1	3	3
2023-04-25	2.080709	3.812205	4.818898	Wet	3	2	6
2023-03-26	0.761417	2.077165	1.814961	Normal	2	1	2
Result							Normal Conditions - 11

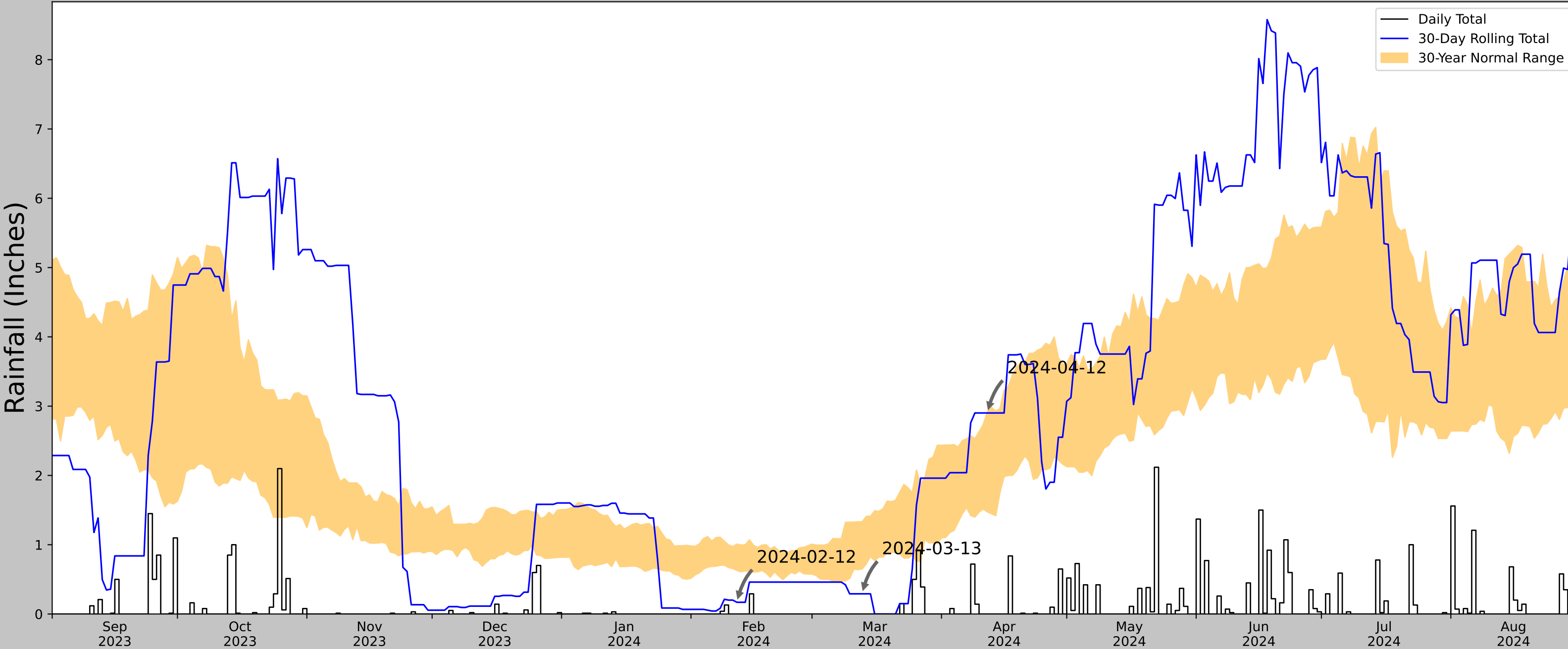


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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11120	90
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	13	0
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2024-04-12
Elevation (ft)	841.726
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-04-12	1.472835	2.919685	2.901575	Normal	2	3	6
2024-03-13	0.65	1.331496	0.291339	Dry	1	2	2
2024-02-12	0.629528	1.009449	0.169291	Dry	1	1	1
Result							Drier than Normal - 9

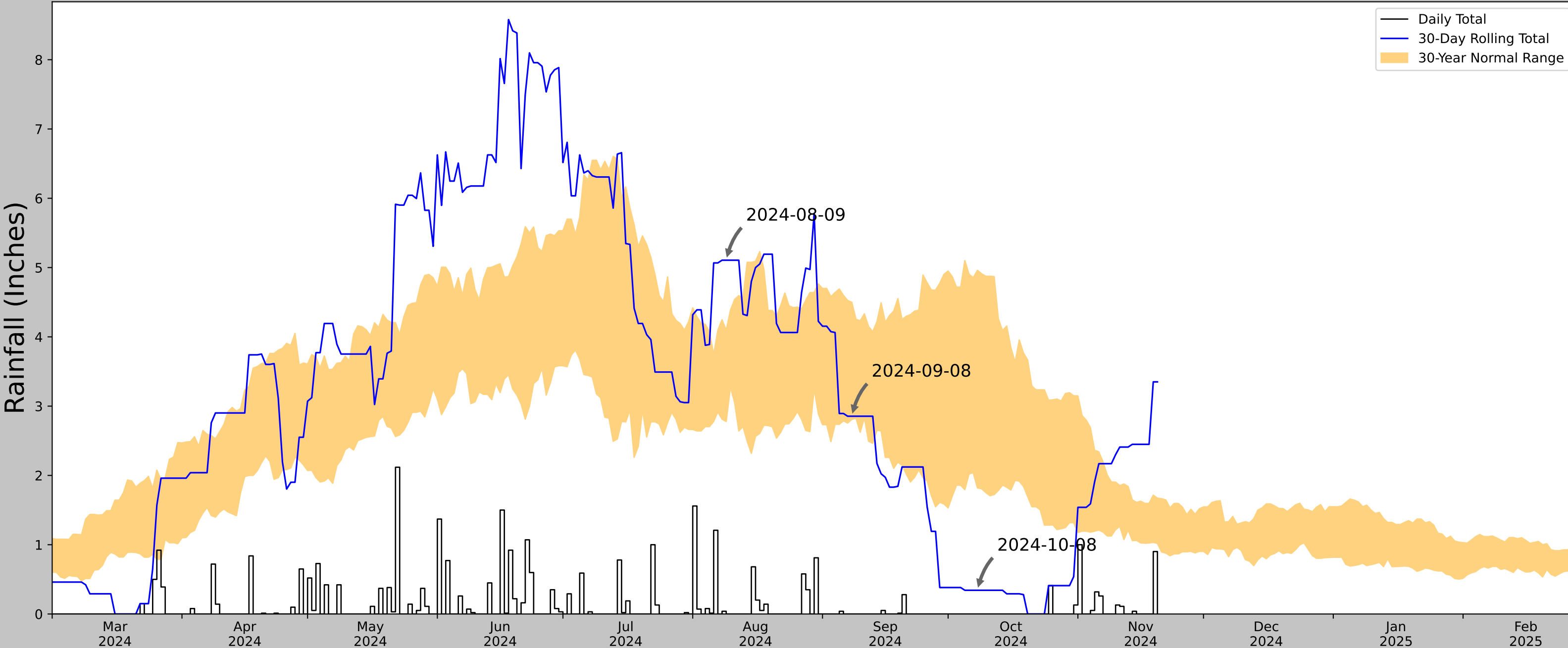
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11115	90
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	17	0
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
ST PAUL DWTN AP	44.9322, -93.0558	700.131	15.029	20.013	7.064	161	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	30	0



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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.73633504, -92.98501483
Observation Date	2024-10-08
Elevation (ft)	841.726
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-10-08	1.819291	4.96063	0.34252	Dry	1	3	3
2024-09-08	2.809055	4.499213	2.854331	Normal	2	2	4
2024-08-09	2.778347	4.096457	5.106299	Wet	3	1	3
Result							Normal Conditions - 10



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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	5.922	161.608	3.622	11116	90
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	17	0
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	160	0
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	11.635	264.764	8.316	31	0

Appendix E: Field Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-1
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1%
Subregion (LRR or MLRA): M 104 Lat: 44.7355905 Long: -92.9927222 Datum: WGS 84
Soil Map Unit Name: 41B - Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in agricultural depression in harvested corn field.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes ☒ No _____
Surface Water Present? Yes _____ No ☒ Depth (inches): _____		
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP-1

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>60</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u> (A)	<u>60</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>20</u> (A)	<u>60</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Amaranthus palmeri</u>	<u>10</u>	<u>✓</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☒ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Panicum dichotomiflorum</u>	<u>10</u>	<u>✓</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Hydrophytic Vegetation Present? Yes <u>✓</u> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.) Corn stubble present.																		

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 36	10YR 2/1	100					Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Polyvalue Below Surface (S8) (LRR K, L) |
| ☐ Thin Dark Surface (S9) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) |
| ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☒ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

A12 assumed due to presence of hydrology.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-2
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): M 104 Lat: 44.7356956 Long: -92.9906226 Datum: WGS 84
Soil Map Unit Name: 39B - Wadena loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in agricultural depression.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes _____ No ☒
Surface Water Present? Yes _____ No ☒ Depth (inches): _____		
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>50</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.50</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u> (A)	<u>50</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>20</u> (A)	<u>50</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No ☒														
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Panicum dichotomiflorum</u>	<u>15</u>	☒	<u>FACW</u>															
2. <u>Amaranthus palmeri</u>	<u>5</u>	☒	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		

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

Corn stubble present.

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 24	10YR 3/2	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Polyvalue Below Surface (S8) (LRR K, L) |
| ☐ Thin Dark Surface (S9) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) |
| ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-3
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): _____
Subregion (LRR or MLRA): M 104 Lat: 44.73455208 Long: -92.99159114 Datum: WGS 84
Soil Map Unit Name: 41B - Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in agricultural depression.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	☒ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes ☒ No _____
Surface Water Present? Yes _____ No ☒ Depth (inches): _____		
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.33</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>25</u> (A)</td> <td><u>70</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.80</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>25</u> (A)	<u>70</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>25</u> (A)	<u>70</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Panicum dichotomiflorum</u>	<u>15</u>	☒	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☒ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Amaranthus palmeri</u>	<u>5</u>	☒	<u>FACU</u>															
3. <u>Helianthus annuus</u>	<u>5</u>	☒	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>25</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																		
Hydrophytic Vegetation Present? Yes ☒ No _____																		
Remarks: (Include photo numbers here or on a separate sheet.) In agricultural field and corn stubble is present.																		

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 36	10YR 2/1	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☒ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

A12 assumed due to hydrology

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-4
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): _____
Subregion (LRR or MLRA): M 104 Lat: 44.7348048 Long: -92.9918538 Datum: WGS 84
Soil Map Unit Name: 41B - Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes _____ No ☒	

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

Sample point located on hill-slope approximately 6 inches upslope of wetland.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No ☒ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No ☒	
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: SP-4

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>50</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.50</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u> (A)	<u>50</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>20</u> (A)	<u>50</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>														
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) 																		

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 14	10YR 3/2	100					Loam	
14 - 18	10YR 4/3	100					Sandy Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
☐ Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) ☐ Depleted Matrix (F3)
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surface (F6)
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (**LRR R, MLRA 149B**)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**Type: RockDepth (inches): 18Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-5
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): M 104 Lat: 44.7325788 Long: -92.9886565 Datum: WGS 84
Soil Map Unit Name: 250 - Kennebec silt loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in agricultural depression.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	☒ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		☒ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes ☒ No _____
Surface Water Present? Yes _____ No ☒ Depth (inches): _____		
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP-5

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>15</u> (A)</td> <td><u>30</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>15</u> (A)	<u>30</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>15</u> (A)	<u>30</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Panicum dichotomiflorum</u>	<u>15</u>	<u>✓</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Hydrophytic Vegetation Present? Yes <u>✓</u> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.) Corn stubble present.																		

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 8	10YR 2/2	100					Loam	
8 - 24	10YR 3/2	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dakota East Tech Park City/County: Dakota County Sampling Date: 2024-10-08
Applicant/Owner: Tract Management Company, LP State: Minnesota Sampling Point: SP-6
Investigator(s): Mason Kunkel, Cat Maroney Section, Township, Range: S28 T115N R18W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): M 104 Lat: 44.7334998 Long: -92.9857515 Datum: WGS 84
Soil Map Unit Name: 41B - Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ☒
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in agricultural depression.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	☒ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes ☒ No _____
Surface Water Present? Yes _____ No ☒ Depth (inches): _____		
Water Table Present? Yes _____ No ☒ Depth (inches): _____		
Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP-6

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>80</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u> (A)	<u>80</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>20</u> (A)	<u>80</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Amaranthus palmeri</u>	<u>10</u>	<u>✓</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Helianthus annuus</u>	<u>10</u>	<u>✓</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 22	10YR 2/1	100					Loam	Agricultural field (corn)
22 - 28	10YR 2/2	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Polyvalue Below Surface (S8) (LRR K, L) |
| ☐ Thin Dark Surface (S9) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) |
| ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

Appendix F: Photos

Legend

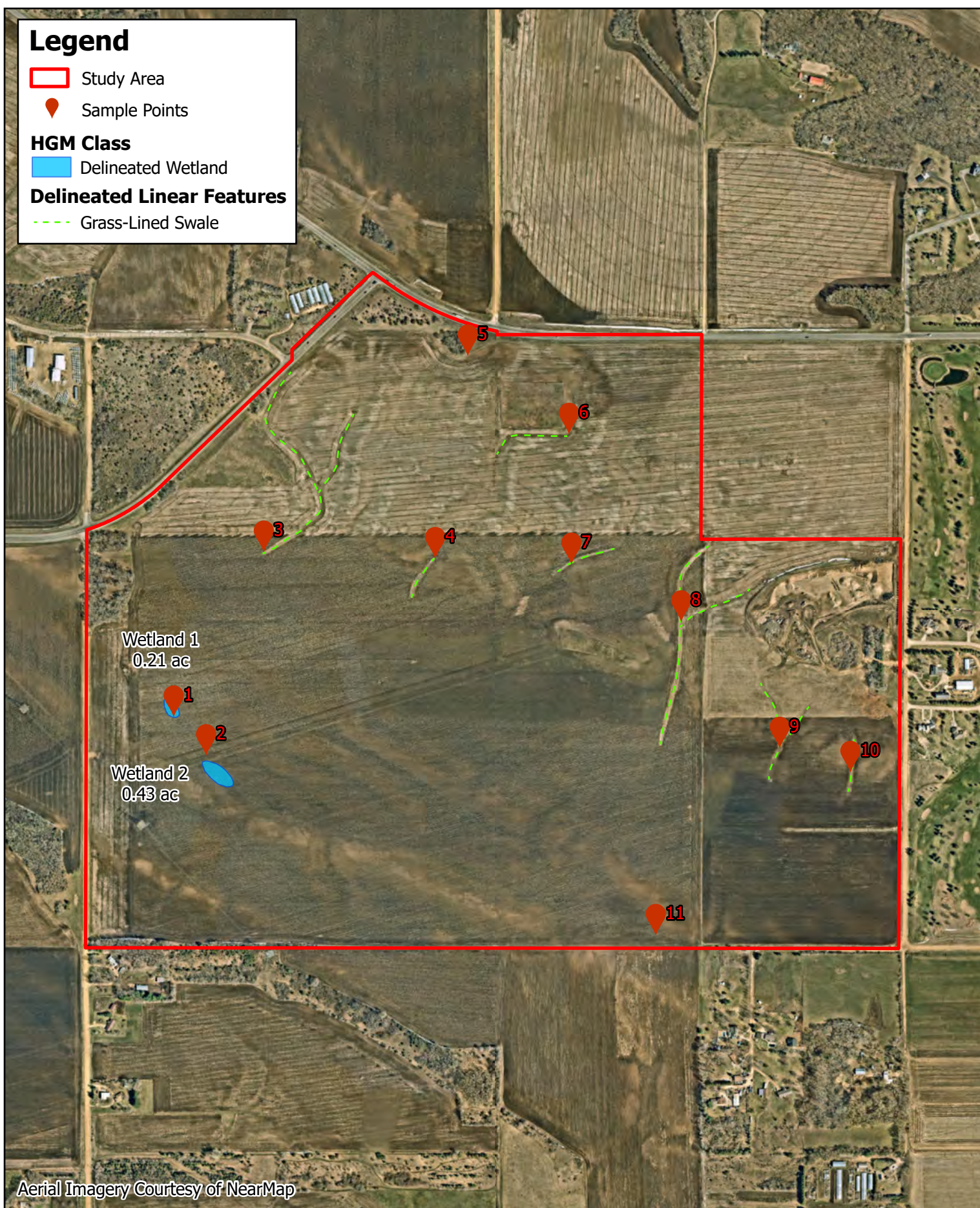
-  Study Area
-  Sample Points

HGM Class

-  Delineated Wetland

Delineated Linear Features

-  Grass-Lined Swale



Aerial Imagery Courtesy of NearMap



Photo 1: Wetland 1, near SP-1, facing north.



Photo 2: SP-4, facing south towards Wetland 2.



Photo 3: Grass-lined swale, facing north.



Photo 4: Grass-lined swale, facing south.



Photo 5: Within field AOI, facing west. Note: upland vegetation.



Photo 6: Grass-lined swale, facing west.



Photo 7: Grass-lined swale, facing northeast.



Photo 8: Grass-lined swale, facing south.



Photo 9: Grass-lined swale, facing northeast.



Photo 10: Grass-lined swale, facing south.



Photo 11: Within AOI 6, facing north.

Appendix B

TRAFFIC IMPACT ANALYSIS

DAKOTA EAST

ROSEMOUNT, 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.

A handwritten signature in black ink, appearing to read 'Jl Rojer', is written over a horizontal line.

Jacob Rojer, P.E., PTOE

License No. 56767

3/5/2025

Date

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APPENDIX

- A. EXHIBITS
- B. TURNING MOVEMENT COUNTS
- C. SIMTRAFFIC ANALYSIS RESULTS

1. INTRODUCTION

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained to prepare a traffic impact study for the Dakota East site in Rosemount, Minnesota, as the site undergoes the Alternative Urban Areawide Review (AUAR) process. The site is located south of the Country Road 42 & MN 55 intersection and is currently used for agriculture. The AUAR includes three (3) development scenarios. Scenario 1 consists of a mixture of residential and commercial land uses, with some land remaining agricultural land in this scenario. Scenarios 2 and 3 consist of a Technology Park and Industrial Park, respectively, both which would occupy the full AUAR site. An aerial view of the study location and surrounding roadway network is presented in **Exhibit 1**. Exhibits can be found in **Appendix A**.

As part of this study, the existing roadway network was analyzed to determine the current operations at the study intersections. In order to assess the potential impact of the development scenarios on the area roadway network, site-generated trips were established and added to the background traffic volumes. Background traffic volumes included the other major development projects in the vicinity. Future traffic conditions were evaluated for the approximate Opening Year of the proposed development (2029) and a long term “Design Year” (2040). The same analysis years were utilized for all three scenarios. Background conditions were analyzed for each study year, along with the “build” conditions of the three development scenarios. Additionally, an Existing (2024) conditions traffic analysis was conducted.

This report presents and documents data collection, summarizes the evaluation of existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential impact of site-generated traffic on the adjacent roadway network.

1.1. REPORT PURPOSE AND OBJECTIVES

The purpose of this study is to address traffic and transportation impacts of the proposed development on surrounding streets and intersections. This traffic impact study was prepared based on criteria set forth by the AUAR guidelines. The following specific information, per AUAR recommended content, should be provided:

- *A description and map of the existing and proposed roadway system, including state, regional, and local roads to be affected by the development of the AUAR area. This information should include existing and proposed roadway capacities and existing and projected background (i.e. without the AUAR development) traffic volumes;*
- *Trip generation data – trip generation rates and trip totals – for each major development scenario broken down by land use zones and/or other relevant subdivisions of the area. The projected distributions onto the roadway system must be included;*
- *Analysis of impacts of the traffic generated by the AUAR area on the roadway system, including: comparison of peak period total flows to capacities and analysis of Level of Service and delay times at critical points (if any);*
- *A discussion of structural and non-structural improvements and traffic management measures that are proposed to mitigate problems.*

Note: in the above analyses the geographical scope must extend outward as far as the traffic to be generated would have a significant effect on the roadway system and traffic measurements and projections

should include peak days and peak hours, or other appropriate measures related to identifying congestion problems, as well as ADTs (average daily traffic).

1.2. ANALYSIS METHODOLOGIES

Synchro/SimTraffic 12th edition capacity analysis software was used to evaluate existing operational conditions at the study intersections. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions).

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 1-1**.

Table 1-1: Level of Service Grading Descriptions

Level of Service	Description ¹
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

¹Highway Capacity Manual, 7th Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 1-2**.

Table 1-2: Level of Service Grading Criteria

Level of Service ¹	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F ²	> 50	> 80

¹Highway Capacity Manual, 7th Edition

²All movements with a Volume to Capacity (v/c) ratio greater than 1 receive a rating of LOS F.

At side-street stop-controlled intersections, overall delay is not reported, and the worst side street delay is reported in its place. The overall delay at side-street stop-controlled intersections can misrepresent the actual level of delay drivers experience since most vehicles on the main road experience zero delay.

2. ANALYSIS OF EXISTING CONDITIONS

Kimley-Horn conducted a review of the study area including existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on the existing conditions. An aerial view of the existing conditions and lane movements are shown in **Exhibit 2**.

2.1. AREA LAND USES

The land uses of the site and the surrounding area are primarily agricultural, with some arterial commercial located north of the site on a frontage road east of US Highway 52.

2.2. EXISTING ROADWAY CHARACTERISTICS

The following provides a description of the roadways near the study area:

CSAH 42 (145th Street) is an east-west roadway that runs along the northern boundary of the development site. West of Conley Avenue, CSAH 42 is a four-lane, divided roadway with turn lanes provided at most intersections. East of Conley Avenue, CSAH 42 tapers to a two-lane, undivided roadway with turn lanes provided for some movements. The 2021 Annual Average Daily Traffic (AADT) was 5,740 vehicles per day (VPD) east of US 52 and 15,900 VPD west of US 52 (2019). The speed limit on CSAH 42 is 55 miles per hour (MPH).

US Highway 52 is a north-south roadway that is located west of the development site. US Highway 52 is a four-lane divided roadway with interchanges provided at major intersecting roadways. The 2023 AADT is 29,700 VPD north of CSAH 42 and 30,500 VPD south of CSAH 42. The speed limit on US Highway 52 is 65 MPH.

Minnesota State Highway 55 (MN 55) is a primarily east-west roadway that forms the northern boundary of the development site. MN 55 is a two-lane undivided roadway (except west of Pine Bend Trail where it is a four-lane divided roadway) with right and left turn lanes provided at major intersections and right-turn lanes provided at most smaller intersections. East of CSAH 42 (145th Street), the 2023 AADT is 13,000 VPD and west of CSAH 42 (145th Street) the 2015 AADT is 12,800 VPD. The speed limit on MN Highway 55 is 55 MPH. Note that despite running primarily east-west, the roadway is considered to be the northbound/ southbound approaches of the intersection with CSAH 42 in order to maintain consistency with the orientation of other intersections along CSAH 42.

Emery Avenue is an undivided two-lane roadway that runs in the north-south direction. The road is unpaved, has no AADT data available and has no posted speed limit. For the purposes of analysis, the speed limit was considered to be 30 mph.

140th Street/142nd Street is an east-west roadway that runs north of the development site. 140th Street/142nd Street is a two-lane undivided roadway. The 2023 AADT is 104 VPD near the site.

Fischer Avenue is a north-south roadway that forms the eastern boundary of the study area. The roadway is an unpaved local road and has no posted speed limit. AADT data is not available for Fischer Avenue. For modeling purposes, the speed limit is assumed to be 30 mph.

The existing geometry and intersection control for the intersections in the study area that will be included in this analysis are shown in **Exhibit 2**.

2.3. PEDESTRIAN AND BICYCLE INFRASTRUCTURE

Based on review of the Dakota County 2040 Transportation Plan, a greenway is planned north of CSAH 42 which would cross MN 55 at the intersection with CSAH 42. There is no existing or planned pedestrian or bicycle infrastructure at the proposed development site.

2.4. TRAFFIC COUNT DATA

Turning Movement Counts (TMCs) were collected at the study intersections on various dates. The study intersections are as follows:

- CSAH 42 & US Highway 52 Southbound Ramps¹
- CSAH 42 & US Highway 52 Northbound Ramps¹
- CSAH 42 & Emery Avenue (*Not Counted*)
- CSAH 42 & 142nd Street²
- MN 55 & CSAH 42²
- MN 55 & Fischer Avenue³

¹Intersections were counted on Thursday, June 2, 2022.

²Intersections were counted on Wednesday, March 31, 2021.

³Intersections were counted on Wednesday, November 6, 2024.

Turning Movement counts were not collected at Emery Avenue, as this is a minor, unpaved road which sees minimal traffic. Small amounts of traffic (up to five (5) vehicles per hour per movement) were assigned to the turning movements associated with the roadway for the existing and future conditions to account for some level of turning traffic at the intersection. A COVID-19 Adjustment factor was applied to the turning movement counts collected in 2021 since this time saw a significant reduction in travel. A 30% increase in these traffic counts was applied, as determined previously in the *Rich Valley Golf Course (RVGC) AUAR*.

The traffic count data indicates that peak hour traffic volumes occur within the study area from 7:00 to 8:00 AM and 4:00 to 5:00 PM on a typical weekday. Traffic volumes were then normalized to the Existing year (2024) by applying the selected growth rates for each respective roadway (see Section 3.2). Volumes between intersections were then balanced, where applicable. Existing (2024) peak hour traffic volumes are shown on **Exhibit 3**.

2.5. EXISTING (2024) CONDITIONS CAPACITY ANALYSIS

Existing (2024) conditions capacity analysis was conducted to develop an understanding of the baseline operating conditions currently present at the study area. Existing geometry and intersection control are shown in **Exhibit 2**, while the existing traffic volumes are shown in **Exhibit 3**. The results of Existing (2024) conditions capacity analysis are summarized in **Table 2-1**. Note that a temporary signal in place at the intersection of CSAH 52 & MN 55 was included in the Existing (2024) conditions analysis.

Based on the analysis results, all movements at the study intersections are estimated to operate at LOS D or better under Existing (2024) conditions with the exception of the northbound left turn at CSAH 42 & US 52 Northbound Ramps which operates at LOS F with about 50s of delay during both the AM and PM peak hours. Based on mitigation recommendations for other traffic studies completed in the area, it is

anticipated that both ramps will be signalized by the Opening Year (2029) which will help mitigate the existing side street delays.

The SimTraffic Queueing results were reviewed, and all 95th percentile queues remain within their respective storage bays. SimTraffic analysis reports are provided in the appendix.

Table 2-1: Existing Year (2024) Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Side Street Stop	EB	-	A (1.8)	A (0.5)	B (14.5)	-	A (1.5)	A (0.7)	C (17.9)
		WB	A (5.2)	A (1.2)	-		A (4.5)	A (1.3)	-	
		NB	-	-	-		-	-	-	
		SB	B (11.6)	B (14.5)	A (5.3)		B (13.9)	C (17.9)	A (7.0)	
CSAH 42 & US 52 Northbound Ramps	Side Street Stop	EB	A (5.4)	A (0.5)	-	F (50.2)	A (4.5)	A (0.6)	-	F (50.3)
		WB	-	A (1.8)	A (0.5)		-	A (1.7)	A (0.5)	
		NB	F (50.2)	-	A (3.9)		F (50.3)	D (31.7)	A (3.6)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (1.3)	A (1.6)	A (1.0)	A (8.8)	A (3.0)	A (2.3)	A (2.0)	A (9.2)
		WB	A (0.7)	A (0.4)	A (0.0)		A (1.0)	A (0.5)	A (0.0)	
		NB	A (3.9)	A (7.2)	A (1.1)		A (4.9)	A (9.2)	A (2.4)	
		SB	A (3.3)	A (8.8)	A (1.3)		A (4.0)	A (7.7)	A (1.1)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.6)	-	A (3.5)	-	A (0.9)	-	A (4.2)
		WB	-	A (0.8)	A (0.8)		-	A (1.1)	A (0.9)	
		NB	-	-	-		-	-	-	
		SB	A (3.5)	-	A (1.7)		A (4.2)	-	A (0.9)	
MN 55 & CSAH 42	Signal	EB	B (12.8)	A (0.3)	A (5.5)	A (8.3)	C (21.9)	A (1.0)	B (18.1)	B (14.1)
		WB	-	-	-		-	-	-	
		NB	B (10.1)	A (8.2)	-		C (21.5)	A (7.1)	-	
		SB	-	A (8.7)	A (2.0)		-	B (17.0)	A (4.9)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (10.3)	A (4.8)	A (5.7)	D (31.1)	A (9.7)	A (8.2)	A (6.5)	D (26.2)
		WB	A (3.6)	A (2.4)	-		A (7.3)	A (1.8)	A (1.5)	
		NB	D (25.1)	-	A (3.9)		D (26.2)	-	A (5.7)	
		SB	D (31.1)	-	A (7.8)		C (23.0)	-	A (6.3)	

Note: The Overall LOS at side street stop-controlled intersections is reported as the worst movement.

3. ANALYSIS OF FUTURE BACKGROUND CONDITIONS

Analysis of the future background conditions was carried out to determine the baseline operating conditions for the Opening Year (2029) and Design Year (2040) of the proposed development. A review of future traffic growth and planned geometric changes for the study roadways was conducted for the analysis.

3.1. FUTURE GEOMETRY

Review of the *Dakota County 2040 Transportation Plan* and other Traffic Impact Studies conducted in the project vicinity indicated that the following changes are expected to occur under future conditions, regardless of the proposed development:

- Highway 52/42/55 Interchange realignment: A study will be conducted focusing on Highway 55 traffic traveling to/from Hastings. Options are being explored regarding the realignment of the interchanges between these highways. For the purposes of this analysis, it is assumed that the existing roadway layouts are maintained, and the intersections are instead improved with smaller geometric and control changes.
 - It is assumed that a permanent signal will be installed at MN 55 & CSAH 42 by Opening Year (2029). No geometric changes were assumed.
 - Based on traffic studies conducted for parcels which are currently under development, it is anticipated that both US Highway 52 Ramp intersections along CSAH 42 will be signalized by Opening Year (2029). No geometric changes were assumed at either intersection.

Note that the traffic study conducted for the *Project Bigfoot* data center indicated that both ramps would meet 8-hour signal warrants under 2027 build conditions and the intersections would operate unacceptably with a side street stop control in place. Construction of that data center is currently underway, and it is therefore expected that both US Highway 52 ramps will meet signal warrants under Opening Year (2029) conditions.

The mitigations listed above are included in all future analysis conditions (No-Build and Build). Further analysis along the CSAH 42 and MN 55 corridor will be conducted when determining the final alignment of the highways.

3.2. FUTURE BACKGROUND GROWTH

The growth factor was calculated by comparing existing AADTs to 2040 projected AADTs from the Dakota County 2040 Transportation Plan within the study area. provides the Historical AADTs, Projected AADTs and average growth rate at each location. With a range of growth rates between differing roadways, individual growth rates were used for each study roadway. AADT History of the major roadways in the area is shown below in **Table 3-1**.

Table 3-1: Roadway AADT Projections and Growth Rates

Roadway Segment		Projected 2040 Traffic Volume	Existing AADT		Growth Rate
		AADT	Year	AADT	
CSAH 42	West of US 52	17,100	2019	15,900	0.3%
	East of US 52	12,200	2021	9,840*	1.1%
MN Highway 55	West of CSAH 42	15,900	2015	12,800	0.9%
	East of CSAH 42	16,200	2019	14,400	0.6%
US Highway 52	North of CSAH 42	46,100	2022	35,450	1.5%
	South of CSAH 42	37,200	2022	29,180	1.4%

Based on review of historical AADT trends in the area and consideration the future developments anticipated to occur, the following growth rates were applied to the TMCs:

- A 1.0% growth rate was applied to the US Highway 52 ramp volumes, per the Rosemount Industrial AUAR.
- A 1.5% growth rate was applied to CSAH 42 west of US Highway 52 in order to account for other possible developments in the area (per Rosemount Industrial AUAR).
- A 1.1% growth rate was applied to CSAH 42 east of US Highway 52.
- A 0.8% growth rate was applied to Minnesota 55, per RVGC AUAR.
- A growth rate was not applied to 142nd Street, Emery Avenue, or Fischer Avenue since these roadways will almost exclusively be used to access nearby developments. Growth along these roadways is represented via background traffic of the nearby developments.

The Opening Year (2029) No-Build traffic volumes were calculated by growing the Existing (2024) traffic volumes (**Exhibit 3**) by the selected annual growth rates for 5 years. The resultant Opening Year (2029) No-Build traffic volumes are shown in **Exhibit 4**.

The Design Year (2040) No-Build traffic volumes were calculated by growing the Existing (2024) traffic volumes (**Exhibit 3**) by the selected annual growth rates for 16 years. The resultant Design Year (2040) No-Build traffic volumes are shown in **Exhibit 5**.

3.3. OPENING YEAR (2029) NO-BUILD CAPACITY ANALYSIS

An Opening Year (2029) No-Build Condition analysis was completed to develop an understanding of the baseline operating conditions for the study area in the opening year without the addition of the development traffic. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. The Opening Year (2029) No-Build traffic volumes are shown in **Exhibit 4**. Results of the Opening Year (2029) No-Build conditions capacity analysis are provided in **Table 3-2**.

All movements at the study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours, with the exception of the westbound left and southbound through movements at CSAH 42 & US Highway 52 Northbound ramps. The southbound through movement operates at LOS E during the PM peak hour but sees very low traffic (less than 5 vehicles) during this period. The westbound left turn movement operates at LOS F during the AM and PM peak hours with relatively low traffic levels (less than 30 vehicles) during each peak hour. Delays at this level, while not ideal, are common when the signal timing

is long to provide optimal operations to through movements on the main road (CSAH 42). Despite poor operations for the westbound left turn movement, the overall intersection operations are acceptable.

Short-term background growth is anticipated to have minimal impact on the traffic with only minor increases to delays and queues expected under Opening Year (2029) No-Build conditions.

A review of the queueing results indicated that all 95th percentile queues are anticipated to remain within their respective storage bay. The SimTraffic analysis reports are provided in the appendix.

Table 3-2: Opening Year (2029) No-Build Level of Service – AM Peak Hour

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (26.1)	A (4.1)	B (18.6)	-	C (32.1)	A (4.3)	C (21.2)
		WB	F (89.6)	A (5.7)	-		F (83.3)	A (7.1)	-	
		NB	-	-	-		-	-	-	
		SB	C (26.2)	C (27.2)	B (10.1)		C (29.9)	E (65.8)	B (15.0)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	C (20.3)	A (4.9)	-	C (20.4)	C (30.7)	A (5.4)	-	C (27.2)
		WB	-	D (45.2)	B (13.6)		-	D (41.9)	B (19.0)	
		NB	D (46.0)	-	A (5.2)		D (47.2)	A (0.0)	A (5.3)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (1.5)	A (2.0)	A (2.4)	A (9.3)	A (3.9)	A (2.7)	A (2.5)	C (15.9)
		WB	A (0.4)	A (0.4)	A (0.0)		A (1.8)	A (0.5)	A (0.5)	
		NB	A (3.6)	A (9.3)	A (2.0)		A (4.4)	C (15.9)	A (2.1)	
		SB	A (4.0)	A (7.7)	A (1.4)		A (3.9)	A (8.3)	A (1.8)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (6.9)	-	A (0.9)	-	A (3.9)
		WB	-	A (0.8)	A (0.5)		-	A (1.1)	A (1.2)	
		NB	-	-	-		-	-	-	
		SB	A (6.9)	-	A (1.1)		A (3.9)	-	A (1.9)	
MN 55 & CSAH 42	Signal	EB	B (17.6)	A (0.5)	A (6.4)	A (9.2)	C (24.3)	A (1.3)	C (21.7)	B (15.8)
		WB	-	-	-		-	-	-	
		NB	B (11.4)	A (8.7)	-		C (23.9)	A (7.8)	-	
		SB	-	B (10.1)	A (3.1)		-	B (19.0)	A (4.2)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (11.0)	A (5.2)	A (5.3)	C (21.0)	B (10.5)	A (8.8)	A (6.8)	D (33.0)
		WB	A (5.3)	A (2.8)	-		C (15.6)	A (2.2)	A (1.1)	
		NB	C (21.0)	-	A (2.7)		D (33.0)	-	B (11.0)	
		SB	C (20.7)	-	B (10.9)		D (29.2)	-	A (8.0)	

Note: The Overall LOS at side street stop-controlled intersections is reported as the worst movement.

3.4. DESIGN YEAR (2040) NO-BUILD CAPACITY ANALYSIS

The Design Year (2040) No-Build Condition analysis was completed to develop an understanding of the baseline operating conditions for the study area in the long-term without the addition of the development traffic. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. The Design Year (2040) No-Build Traffic Volumes are shown in **Exhibit 5**. Results of the Design Year (2040) No-Build capacity analysis is included below in **Table 3-3**.

All movements at the study intersections are anticipated to operate at LOS D or better except for the westbound left at CSAH 42 & US 52 Southbound Ramps in the AM and PM peak hour, and the northbound and southbound left turn movements at MN 55 & Fischer Avenue during the PM peak hour. As mentioned previously the longer delays for westbound left movements at CSAH 42 & US 52 Southbound Ramps are not expected to pose an issue and require no mitigation. The side street left turns at MN 55 & Fischer Avenue see high levels of delay during the PM peak due to the lack of gaps in traffic along MN 55, but the volumes are minimal, and mitigation is not expected to be necessary under no-build conditions with LOS E operations at the side street.

Table 3-3: Design Year (2040) No-Build Level of Service – AM Peak Hour

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (30.1)	A (4.2)	C (20.7)	-	D (45.8)	A (5.3)	C (29.1)
		WB	F (91.6)	A (6.1)	-		F (84.4)	A (7.2)	-	
		NB	-	-	-		-	-	-	
		SB	C (27.3)	D (40.9)	B (12.4)		C (34.6)	D (39.2)	C (21.9)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (18.8)	A (4.9)	-	C (21.6)	C (32.9)	A (5.6)	-	C (28.6)
		WB	-	D (48.7)	B (19.7)		-	D (41.9)	C (23.4)	
		NB	D (47.5)	-	A (5.7)		D (49.8)	D (35.4)	A (5.2)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (4.5)	A (2.3)	A (1.5)	A (8.7)	A (3.2)	A (3.0)	A (3.0)	B (14.3)
		WB	A (0.5)	A (0.5)	A (0.0)		A (1.6)	A (0.6)	A (0.1)	
		NB	A (4.9)	A (8.7)	A (1.8)		A (5.5)	A (7.7)	A (2.1)	
		SB	A (3.5)	A (6.9)	A (2.1)		A (4.9)	B (14.3)	A (2.5)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (4.9)	-	A (1.0)	-	A (5.0)
		WB	-	A (1.0)	A (0.7)		-	A (1.2)	A (0.4)	
		NB	-	-	-		-	-	-	
		SB	A (4.9)	-	A (1.1)		A (5.0)	-	A (2.5)	
MN 55 & CSAH 42	Signal	EB	B (16.1)	A (0.5)	A (8.2)	B (10.9)	C (27.9)	A (1.2)	C (26.6)	C (20.1)
		WB	-	-	-		-	-	-	
		NB	B (14.2)	B (10.3)	-		C (29.5)	A (9.1)	-	
		SB	-	B (11.4)	A (3.1)		-	C (25.1)	A (6.8)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (13.1)	A (6.0)	A (6.6)	C (15.8)	C (18.6)	B (10.2)	A (7.9)	E (49.4)
		WB	A (5.1)	A (3.2)	-		C (16.2)	A (2.5)	A (2.0)	
		NB	C (15.8)	-	A (2.5)		E (49.4)	-	B (11.5)	
		SB	B (14.9)	-	A (8.3)		E (36.3)	-	A (9.8)	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

4. ANALYSIS OF SCENARIO 1 CONDITIONS

This section of the report outlines the proposed development Scenario 1, summarizes site-specific traffic characteristics, and develops future traffic projections for the Scenario 1 Build condition of the AUAR site.

4.1. DEVELOPMENT CHARACTERISTICS AND SITE ACCESS

The proposed development is anticipated to include up to 1,450 residential units, along with 500,000 square feet of community commercial space. Since the eastern portion of the site would remain agricultural land, it is assumed for this scenario that there would be two access points along Emery Avenue serving all development traffic.

4.2. TRIP GENERATION

Proposed development traffic was determined based on data from the Institute of Transportation Engineers' (ITE) *Trip Generation*, 11th Edition. The manual provides peak hour trips rates/equations, inbound-outbound percentages that can be attributed to the proposed site. Based on a review of land uses provided in the manual and the anticipated characteristics of Scenario 1, It is estimated that about 1,000 of the 1,450 residential units will be multifamily units; the trip generation of these units was calculated using ITE Land Use Code (LUC) 221 – Multifamily Housing Mid-Rise. The trip generation of the remaining residential units was calculated using LUC 210 – Single Family Residential. The commercial area was estimated using LUC 770 – Business Park. The Business Park Land Use Code was selected as this represents a generic “commercial” area which could develop into retail, office, light industrial, or some combination thereof.

A summary of trip generation for the proposed development is provided in **Table 4-1**. Based on the trip generation calculation, the proposed development is anticipated to generate 15,004 daily trips, including 1,360 total trips during the AM Peak Hour (738 entering and 622 exiting), and 1,423 total trips during the PM Peak Hour (663 entering, 757 exiting).

Table 4-1: Proposed Development Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
LUC 210 - Single Family Detached Residential	450 Units	4,244	79	236	315	266	154	423
LUC 221 - Multifamily Housing (Mid-Rise)	1,000 Units	4,540	85	285	370	238	152	390
LUC 770 - Business Park	500 kSF	6,220	574	101	675	159	451	610
Scenario 1 Total		15,004	738	622	1,360	663	757	1,423

Internal capture rates were reviewed based on the methodology from the NCHRP's Report 684. It was found that internal capture trips are expected to represent a negligible portion of the total site trips. Therefore, no internal capture reduction was applied to the totals shown in **Table 4-1**.

4.3. DIRECTIONAL DISTRIBUTION

The estimated distribution of site-generated traffic on the surrounding roadway network was developed based on a review of the roadway network, area development pattern, and access to the proposed development. The anticipated directional distribution of passenger vehicle site traffic for the proposed development is listed below.

- 25% to/from the west on MN 55
- 20% to/from the north on US Highway 52
- 20% to/from the west on CSAH 42
- 10% to/from the south on US Highway 52
- 5% to/from the south on Emery Avenue
- 20% to/from the east on MN 55

The full site trip distribution is shown in **Exhibit 6**. In general, most vehicles are anticipated to access the development from Highway 52 or utilize MN 55 from the west as an alternative route to access the site from Highway 52 north of the site. CSAH 42 from the west and MN 55 from the east are also expected to be major travel routes.

The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections, is a function of the estimated trip generation (**Table 4-1**) and the directional distribution listed above. The site trip assignment for Scenario 1 is shown in **Exhibit 7**.

The Opening Year (2029) Scenario 1 traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 7**) to the Opening Year (2029) No-Build traffic volumes (**Exhibit 4**). The Opening Year (2029) Scenario 1 traffic volumes are shown in **Exhibit 8**.

The Design Year (2040) Build traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 7**) to the Design Year (2040) No-Build traffic volumes (**Exhibit 5**). The Design Year (2040) Build traffic volumes are shown in **Exhibit 9**.

4.4. OPENING YEAR (2029) SCENARIO 1 CAPACITY ANALYSIS

The Opening Year (2029) Scenario 1 analysis was conducted to determine the impacts of the proposed residential/commercial development on the short-term operations of the adjacent roadway network. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. Opening Year (2029) Scenario 1 traffic volumes are shown in **Exhibit 8**. The results of the Opening Year (2029) Scenario 1 analysis is shown below in **Table 4-2**.

Based on the results of the Opening Year (2029) Scenario 1 conditions analysis, the intersection of CSAH 42 & Emery Avenue is expected to experience severe delays during the AM peak hour with queues expected reach both access points along Emery Avenue and cause further delays. Mitigation will be necessary for the network to operate acceptably. The rest of the roadway network operates generally acceptably with the addition of site generated traffic. SimTraffic reports are included in the appendix.

Table 4-2: Opening Year (2029) Scenario 1 Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (32.4)	A (4.9)	C (25.4)	-	D (37.0)	A (5.5)	C (26.0)
		WB	F (91.1)	A (5.9)	-		F (83.4)	A (6.4)	-	
		NB	-	-	-		-	-	-	
		SB	C (34.5)	D (39.0)	B (11.7)		C (33.2)	D (42.7)	B (14.7)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (19.2)	A (5.9)	-	B (17.6)	C (20.8)	A (5.8)	-	C (20.3)
		WB	-	D (41.1)	B (18.9)		-	D (37.3)	C (22.8)	
		NB	D (46.6)	-	A (6.9)		E (57.3)	E (61.7)	A (6.8)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (8.5)	A (4.3)	A (6.4)	F (100+)	A (5.8)	A (6.7)	A (6.6)	F (100+)
		WB	D (26.0)	D (26.7)	C (21.4)		C (23.0)	C (22.2)	C (16.3)	
		NB	F (100+)	F (100+)	F (100+)		F (100+)	A (0.0)	F (100+)	
		SB	F (61.8)	E (40.9)	B (10.0)		F (97.1)	F (90.8)	C (21.5)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (6.1)	-	A (0.6)	-	A (8.1)
		WB	-	A (1.2)	A (0.8)		-	A (1.2)	A (1.1)	
		NB	-	-	-		-	-	-	
		SB	A (6.1)	-	A (0.7)		A (8.1)	-	A (2.7)	
MN 55 & CSAH 42	Signal	EB	C (21.8)	A (0.7)	A (7.8)	B (14.6)	C (29.2)	A (1.2)	C (21.4)	C (26.9)
		WB	-	-	-		-	-	-	
		NB	C (24.8)	B (12.4)	-		E (66.3)	B (13.0)	-	
		SB	-	B (15.5)	A (5.9)		-	C (27.3)	A (8.8)	
MN 55 & Fischer Avenue	Side Street Stop	EB	D (27.3)	A (7.0)	A (6.4)	F (51.4)	C (16.6)	A (9.6)	A (7.8)	F (58.8)
		WB	A (4.0)	A (3.6)	-		B (10.5)	A (2.8)	A (2.6)	
		NB	D (32.0)	-	A (3.7)		D (31.9)	-	A (8.8)	
		SB	F (51.4)	-	B (13.9)		F (58.8)	-	A (7.5)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	F (100+)	-	-	-	F (100+)
		WB	F (100+)	-	F (100+)		F (100+)	-	F (100+)	
		NB	-	F (100+)	F (100+)		-	F (100+)	F (100+)	
		SB	A (3.9)	A (4.5)	-		A (3.6)	A (5.0)	-	
Emery Avenue & Northwest Access	Side Street Stop	EB	-	-	-	F (100+)	-	-	-	F (100+)
		WB	-	-	-		-	-	F (100+)	
		NB	-	F (100+)	-		-	F (100+)	-	
		SB	-	A (5.6)	-		A (4.3)	A (5.2)	-	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

Based on the anticipated traffic operations, the recommended Opening Year (2029) Scenario 1 mitigation measures are:

- Install a traffic signal at CSAH 42 & Emery Avenue.
- Install westbound left and northbound left turn lanes at CSAH 42 & Emery Avenue

4.5. OPENING YEAR (2029) SCENARIO 1 MITIGATED CAPACITY ANALYSIS

An Opening Year (2029) Scenario 1 Mitigated capacity analysis was conducted in order to test the effectiveness of the proposed mitigations on the roadway network. The Opening Year (2029) Scenario 1 traffic volumes are shown in **Exhibit 8**. Along with the background mitigations discussed in Section 3.2, the mitigations listed in the section above were included in the analysis. Capacity analysis results for the Opening Year (2029) Scenario 1 Mitigated conditions are included below in **Table 4-3**.

Based on the capacity analysis results, the intersections are expected to generally operate acceptably (LOS D or better) with the only exception being MN 55 & Fischer Avenue which operates at LOS E in the AM peak hour and LOS F in the PM peak hour. Because this road is a local road only in this scenario, traffic approaching from the side streets at this intersection is very low and this level of operations is not a significant concern.

Table 4-3: Opening Year (2029) Scenario 1 Mitigated Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (32.6)	A (4.9)	C (25.5)	-	D (45.4)	A (6.7)	C (30.1)
		WB	F (96.3)	A (6.4)	-		F (82.6)	A (7.1)	-	
		NB	-	-	-		-	-	-	
		SB	C (33.6)	E (57.4)	B (13.3)		C (33.9)	E (76.9)	B (19.1)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (15.5)	A (6.1)	-	C (20.7)	C (26.3)	A (6.4)	-	C (25.8)
		WB	-	D (48.8)	C (23.7)		-	D (42.7)	C (29.6)	
		NB	D (45.9)	-	A (6.5)		E (60.6)	D (45.6)	A (6.8)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Signal	EB	C (21.6)	B (14.3)	B (17.2)	B (19.5)	C (21.3)	D (36.0)	B (18.2)	C (23.8)
		WB	C (26.2)	B (14.1)	B (12.4)		C (26.6)	B (16.3)	A (9.8)	
		NB	D (35.5)	A (3.5)	A (8.3)		C (32.9)	C (20.6)	A (9.7)	
		SB	C (31.6)	C (22.2)	A (2.8)		C (32.8)	D (36.4)	A (2.6)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.9)	-	B (13.8)	-	A (1.9)	-	C (15.0)
		WB	-	A (1.7)	A (1.0)		-	A (1.3)	A (1.1)	
		NB	-	-	-		-	-	-	
		SB	B (13.8)	-	A (3.1)		C (15.0)	-	A (5.7)	
MN 55 & CSAH 42	Signal	EB	C (29.3)	A (1.8)	B (11.3)	C (20.1)	D (49.5)	A (5.1)	D (47.9)	C (33.4)
		WB	-	-	-		-	-	-	
		NB	C (33.9)	B (14.4)	-		D (51.0)	B (10.3)	-	
		SB	-	C (27.7)	B (10.0)		-	D (39.2)	B (12.9)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (13.1)	A (6.9)	A (8.5)	E (38.5)	B (13.7)	A (9.9)	A (9.7)	F (77.9)
		WB	A (4.4)	A (3.2)	-		A (8.9)	A (2.5)	A (1.4)	
		NB	D (28.6)	-	A (4.5)		E (45.0)	-	C (16.3)	
		SB	E (38.5)	-	B (11.0)		F (77.9)	-	A (4.9)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	A (9.2)	-	-	-	B (10.9)
		WB	A (9.2)	-	A (4.9)		B (10.9)	-	A (5.9)	
		NB	-	A (1.7)	A (0.3)		-	A (1.7)	A (0.2)	
		SB	A (4.9)	A (5.8)	-		A (2.9)	A (1.0)	-	
Emery Avenue & Northwest Access	Side Street Stop	EB	-	-	-	B (10.4)	-	-	-	C (20.5)
		WB	-	-	-		-	-	C (20.5)	
		NB	-	A (2.4)	-		-	A (2.9)	-	
		SB	-	B (10.4)	-		A (8.7)	A (2.5)	-	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

4.6. DESIGN YEAR (2040) SCENARIO 1 CAPACITY ANALYSIS

Capacity analysis was conducted for the Design Year (2040) Scenario 1 conditions to determine the long-term effects of the proposed development. The background changes to intersection control discussed in

Section 3.2 were included along with the Opening Year (2029) Scenario 1 mitigation changes listed in Section 4.4. The Design Year (2040) build traffic volumes are shown in **Exhibit 9**. Capacity analysis results for the Design Year (2040) build conditions are provided in **Table 5-34**.

Results of the Design Year (2040) Scenario 1 conditions analysis shows that with the addition of the proposed development site traffic and long-term background growth, the intersection of MN 55 & CSAH 42 is expected to operate at LOS E during the PM peak hour, with the southbound through movement operating at LOS F. The delays along MN 55 are a result of the MN 55 corridor approaching the capacity of a two-lane highway at a corridor level in the Design Year 2040 Scenario 1, with the intersection at MN 55 and CSAH 42 reflecting the larger capacity issues along the corridor. Consequently, it is anticipated that MN 55 will need to be upgraded to a four-lane road to accommodate the expected traffic levels with the build out of Scenario 1.

The intersection of MN 55 & Fischer Avenue is anticipated to see poor side street operations, with many movements exceeding the threshold for LOS F. Because none of the side street movements are expected to carry significant traffic at this intersection, the volumes would not warrant mitigation. A review of queueing results indicated that all 95th percentile queue lengths are maintained within their existing storage length.

Table 4-4: Design Year (2040) Scenario 1 Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	D (40.2)	A (7.1)	C (29.3)	-	E (57.3)	A (8.3)	D (36.5)
		WB	F (100+)	A (7.0)	-		F (84.8)	A (7.6)	-	
		NB	-	-	-		-	-	-	
		SB	C (32.7)	D (44.7)	B (16.2)		D (35.5)	D (41.0)	C (27.1)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (19.0)	A (6.2)	-	C (22.4)	C (22.5)	A (5.9)	-	C (25.9)
		WB	-	D (51.4)	C (27.3)		-	D (46.3)	C (32.4)	
		NB	D (46.2)	-	A (7.3)		E (59.1)	F (100+)	A (7.5)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Signal	EB	B (17.8)	B (14.0)	B (18.1)	B (18.9)	C (22.2)	C (33.2)	B (17.7)	C (22.9)
		WB	C (26.3)	B (12.6)	A (7.2)		C (26.6)	B (16.9)	A (8.7)	
		NB	C (34.4)	A (4.4)	A (8.1)		C (30.3)	C (22.1)	B (10.1)	
		SB	C (23.3)	C (20.8)	A (3.1)		C (33.4)	C (25.1)	A (6.6)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (1.0)	-	A (6.9)	-	A (2.5)	-	B (13.1)
		WB	-	A (1.8)	A (1.1)		-	A (1.3)	A (1.4)	
		NB	-	-	-		-	-	-	
		SB	A (6.9)	-	A (4.9)		B (13.1)	-	A (2.2)	
MN 55 & CSAH 42	Signal	EB	C (30.0)	A (1.8)	B (12.6)	C (22.1)	D (53.5)	B (10.6)	E (70.1)	E (59.2)
		WB	-	-	-		-	-	-	
		NB	D (37.4)	B (16.6)	-		E (79.6)	B (13.5)	-	
		SB	-	C (29.7)	B (11.3)		-	F (89.3)	D (53.9)	
MN 55 & Fischer Avenue	Side Street Stop	EB	C (20.6)	A (7.6)	A (8.3)	F (83.3)	C (18.2)	B (10.8)	B (10.8)	F (82.4)
		WB	A (9.9)	A (4.2)	-		A (0.0)	A (3.0)	A (1.5)	
		NB	F (83.3)	-	A (6.2)		F (82.4)	-	C (16.8)	
		SB	F (65.8)	-	C (16.1)		E (36.3)	-	A (8.4)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	B (10.0)	-	-	-	A (9.3)
		WB	B (10.0)	-	A (5.0)		A (9.3)	-	A (5.4)	
		NB	-	A (1.3)	A (0.3)		-	A (1.5)	A (0.3)	
		SB	A (5.0)	A (5.9)	-		A (2.7)	A (1.0)	-	
Emery Avenue & Northwest Access	Side Street Stop	EB	-	-	-	A (9.8)	-	-	-	C (16.5)
		WB	-	-	-		-	-	C (16.5)	
		NB	-	A (2.4)	-		-	A (2.8)	-	
		SB	-	A (9.8)	-		A (8.6)	A (2.4)	-	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

4.7. DESIGN YEAR (2040) SCENARIO 1 MITIGATED CAPACITY ANALYSIS

A Design Year (2040) Scenario 1 Mitigated capacity analysis was conducted in order to test the impacts of expanding MN 55 to a 4-lane roadway along with the background mitigation in Section 3.2. The Design Year (2040) Scenario 1 traffic volumes are shown in **Exhibit 9**.

Results of the Design Year (2040) Scenario 1 Mitigated capacity analysis are included below in **Table 4-5**. The intersection of MN 55 & CSAH 42 see improvements during both the AM and PM peak hour, operating at an overall LOS B during each with all movements operating at LOS C or better. The side street approaches at MN 55 & Fischer Avenue also see significant improvement, with only one movement operating at LOS E during the PM peak hour.

Table 4-5: Design Year (2040) Build Mitigated Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
MN 55 & CSAH 42	Signal	EB	C (23.4)	A (1.7)	A (7.6)	B (14.0)	C (30.0)	A (2.1)	B (18.8)	B (17.3)
		WB	-	-	-		-	-	-	
		NB	C (27.2)	A (7.8)	-		C (26.1)	A (6.3)	-	
		SB	-	B (19.5)	B (10.0)		-	C (21.3)	A (7.6)	
MN 55 & Fischer Avenue	Side Street Stop	EB	A (7.2)	A (5.2)	A (4.6)	D (31.2)	B (10.3)	A (6.5)	A (7.5)	E (36.4)
		WB	A (7.0)	A (1.7)	-		B (14.3)	A (1.4)	A (0.3)	
		NB	D (31.2)	-	A (3.7)		E (36.4)	-	B (12.3)	
		SB	C (21.7)	-	A (6.1)		D (28.2)	-	A (5.2)	

5. ANALYSIS OF SCENARIO 2 CONDITIONS

This section of the report outlines the proposed development Scenario 2, summarizes site-specific traffic characteristics, and develops future traffic projections for the Scenario 2 build condition of the AUAR site.

5.1. DEVELOPMENT CHARACTERISTICS AND SITE ACCESS

The proposed development Scenario 2 is anticipated to include up to 2,300,000 square feet of Technology Park space. Two access points are anticipated, one each off of Emery Avenue and Fischer Avenue on the east and west end of the proposed site.

Access spacing standards from Dakota County were reviewed to ensure the proposed development conforms to countywide standards for access management. If both roadways (Emery Avenue and Fischer Avenue) are paved highways with a speed limit of 45 mph or greater in the future, both could require spacing of up to ¼ mile between full-movement intersections if the future traffic levels exceed 1,500 vehicles per day. Based on the anticipated site traffic distribution and existing traffic levels along Emery Avenue and Fischer Avenue, neither is expected to exceed this threshold under Scenario 2 conditions and therefore a closer access based on engineering judgement may be acceptable.

5.2. TRIP GENERATION

Proposed development traffic was determined based on data from the Institute of Transportation Engineers' (ITE) *Trip Generation*, 11th Edition. The manual provides peak hour trips rates/equations, inbound-outbound percentages that can be attributed to the proposed site. Based on a review of land uses provided in the manual, LUC 160 (Data Center) was determined to be the most appropriate fit to represent the trip generation of the proposed Scenario 2. The average rate of LUC 160 was selected rather than the fitted curve due to the low amount of data available for this land use code.

Table 5-1 provides a summary of trip generation for Scenario 2. Based on the trip generation calculation, the proposed development is anticipated to generate 2,277 daily trips, including 253 total trips during the AM Peak Hour (139 entering and 114 exiting), and 207 total trips during the PM Peak Hour (62 entering, 145 exiting).

Table 5-1: Scenario 2 Development Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
LUC 160 (Data Center)	2,300 kSF	2,277	139	114	253	62	145	207

5.3. DIRECTIONAL DISTRIBUTION

The estimated distribution of site-generated traffic on the surrounding roadway network was developed based on a review of the roadway network, area development pattern, and access to the proposed development. The anticipated directional distribution of passenger vehicle site traffic to the Scenario 2 development is listed below.

- 35% to/from the north on MN 55
- 25% to/from the north on US Highway 52
- 20% to/from the west on CSAH 42

- 10% to/from the south on US Highway 52
- 5% to/from the south on Emery Avenue
- 5% to/from the east on MN 55

The full site trip distribution is shown in **Exhibit 10**. In general, most vehicles are anticipated to access the development from Highway 52 or utilize MN 55 as a quicker route to access the site from the north. CSAH 42 from the west is also expected to see significant site traffic, with all other routes expected to see only minor amounts of site traffic.

The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections, is a function of the estimated trip generation (**Table 5-1**) and the directional distribution listed above. The site trip assignment is shown in **Exhibit 11**.

The Opening Year (2029) Build traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 11**) to the Opening Year (2029) No-Build traffic volumes (**Exhibit 4**). The Opening Year (2029) Build traffic volumes are shown in **Exhibit 12**.

The Design Year (2040) Build traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 11**) to the Design Year (2040) No-Build traffic volumes (**Exhibit 5**). The Design Year (2040) Build traffic volumes are shown in **Exhibit 13**.

5.4. OPENING YEAR (2029) SCENARIO 2 CAPACITY ANALYSIS

The Opening Year (2029) Scenario 2 conditions analysis was conducted to determine the impacts of the proposed development on the short-term operations of the adjacent roadway network. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. The Opening Year (2029) Scenario 2 traffic volumes are shown in **Exhibit 12**. The results of the Opening Year (2029) Scenario 2 conditions analysis is shown in **Table 5-2**.

Based on the results of the Opening Year (2029) Scenario 2 conditions analysis, the westbound left turn movement at the MN 50 & US 52 Southbound Ramps intersection is anticipated to operate at LOS F during the AM and PM peak hour, while the northbound left and through movements at MN 50 & US 52 Northbound Ramps operate at LOS E during the PM peak hour. None of these movements see delays beyond what is anticipated for busy corridor such as CSAH 42 and with the overall delay at the intersection being acceptable, this level of operations does not necessitate mitigation.

The intersection of MN 55 & Fischer Avenue sees poor side street operations during the PM peak hour, with delays of about 100s anticipated for northbound left turning vehicles. It is expected that based on the number of through vehicles along MN 55, a traffic signal may eventually be necessary unless changes are made to the MN 55 corridor. In the short-term, however, this level of side street delay does not justify installation of a signal because this would result in an overall increased level of delay at the intersection. It is recommended that this intersection should be monitored as the development and roadway realignment changes occur. If traffic patterns develop as shown here, a traffic signal will be required at MN 55 & Fischer Avenue in the long-term of build conditions.

Alternatively, access restrictions such as a three-quarter access prohibiting northbound left turns could be considered. It is unknown if there will be full connectivity within the site between the two access points and access restrictions could be perceived negatively by local residential traffic. However, a three-quarter access is expected to be acceptably operationally based on the minimal northbound right-turn volumes.

The SimTraffic queueing results were reviewed, and all 95th percentile queues are maintained within their provided storage bays. SimTraffic reports are included in the appendix.

Table 5-2: Opening Year (2029) Scenario 2 Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (26.0)	A (4.2)	B (19.9)	-	C (33.4)	A (4.5)	C (22.6)
		WB	F (92.2)	A (5.8)	-		F (83.8)	A (7.4)	-	
		NB	-	-	-		-	-	-	
		SB	C (30.4)	D (41.0)	B (11.2)		C (33.0)	D (36.3)	B (15.7)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (17.2)	A (5.0)	-	B (19.0)	C (33.1)	A (5.3)	-	C (27.5)
		WB	-	D (44.5)	B (16.3)		-	D (36.0)	C (20.1)	
		NB	D (44.0)	-	A (5.5)		E (59.1)	E (73.5)	A (5.6)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (4.0)	A (2.5)	A (2.7)	A (7.7)	A (3.2)	A (3.2)	A (2.3)	C (15.7)
		WB	A (1.5)	A (1.0)	A (0.0)		A (1.8)	A (0.9)	A (0.0)	
		NB	A (5.4)	A (2.9)	A (2.4)		A (6.4)	C (15.7)	A (3.3)	
		SB	A (3.5)	A (7.7)	A (1.9)		A (3.8)	A (8.2)	A (2.7)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (2.4)	-	A (1.0)	-	A (4.0)
		WB	-	A (0.9)	A (0.6)		-	A (1.2)	A (0.5)	
		NB	-	-	-		-	-	-	
		SB	A (2.4)	-	A (0.0)		A (4.0)	-	A (2.3)	
MN 55 & CSAH 42	Signal	EB	B (17.4)	A (0.5)	A (6.9)	B (10.9)	C (22.9)	A (1.2)	C (22.0)	B (17.0)
		WB	-	-	-		-	-	-	
		NB	B (13.7)	B (10.6)	-		C (27.0)	A (9.1)	-	
		SB	-	B (11.7)	A (3.5)		-	C (20.2)	A (4.9)	
MN 55 & Fischer Avenue	Side Street Stop	EB	C (18.5)	A (5.9)	A (5.5)	E (47.7)	C (15.1)	A (9.8)	A (8.1)	F (100+)
		WB	A (4.5)	A (3.7)	-		B (14.1)	A (3.5)	A (1.5)	
		NB	E (43.3)	-	C (18.3)		F (100+)	-	F (64.9)	
		SB	E (47.7)	-	B (12.3)		D (30.1)	-	A (8.2)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	A (4.9)	-	-	-	A (4.7)
		WB	A (4.9)	-	A (3.0)		A (4.7)	-	A (3.1)	
		NB	-	A (0.4)	A (0.0)		-	A (0.3)	A (0.0)	
		SB	A (1.1)	A (0.8)	-		A (1.0)	A (0.4)	-	
Fischer Avenue & East Access	Side Street Stop	EB	A (4.5)	-	-	A (4.5)	A (4.6)	-	-	A (4.6)
		WB	-	-	-		-	-	-	
		NB	-	A (0.0)	-		-	A (0.0)	-	
		SB	-	A (0.5)	A (0.3)		-	A (0.1)	A (0.2)	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

5.5. DESIGN YEAR (2040) SCENARIO 2 CAPACITY ANALYSIS

Capacity analysis was conducted for the Design Year (2040) Scenario 2 conditions to determine the long-term effects of the proposed development. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. The Design Year (2040) Scenario 2 traffic volumes are shown in **Exhibit 13**. Capacity analysis results for the Design Year (2040) build conditions are provided in **Table 5-3**.

Results of the Design Year (2040) Scenario 2 conditions analysis shows that with the addition of the proposed development site traffic and long-term background growth, the northbound left turn movement at MN 50 & US 52 Northbound Ramps is anticipated to worsen to LOS E in the PM peak hour. The westbound left turn movement at MN 50 & US 52 Southbound Ramps is anticipated to operate at LOS F during the AM and PM peak hours, as discussed previously with no significant increase to delays due to background growth and site traffic. Neither of these intersections is expected to require further mitigation under Design Year (2040) Build conditions.

The intersection of MN 55 & Fischer Avenue is anticipated to see unacceptable side street operations, with many movements far exceeding 100s of delay during the PM peak hour. If traffic patterns develop as projected here and significant changes are not made to the MN 55 corridor, a traffic signal will be required at this intersection.

A review of queueing results indicated that all 95th percentile queue lengths are maintained within their existing storage length. SimTraffic reports are provided in the appendix.

Table 5-3: Design Year (2040) Scenario 2 Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (30.1)	A (4.9)	C (21.7)	-	D (48.5)	A (6.1)	C (30.5)
		WB	F (93.0)	A (6.2)	-		F (87.7)	A (7.1)	-	
		NB	-	-	-		-	-	-	
		SB	C (29.4)	C (23.4)	B (12.8)		D (35.7)	C (27.7)	C (21.8)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (18.7)	A (5.2)	-	C (20.5)	C (33.3)	A (5.4)	-	C (28.5)
		WB	-	D (45.1)	C (21.1)		-	D (37.5)	C (24.7)	
		NB	D (45.0)	-	A (5.7)		E (62.1)	D (52.2)	A (5.9)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (4.5)	A (2.7)	A (2.9)	A (8.9)	A (3.8)	A (3.3)	A (2.6)	B (10.5)
		WB	A (1.5)	A (1.0)	A (0.0)		A (1.3)	A (0.9)	A (0.0)	
		NB	A (6.1)	A (6.0)	A (3.1)		A (6.2)	A (9.0)	A (4.3)	
		SB	A (6.2)	A (8.9)	A (2.0)		A (4.1)	B (10.5)	A (2.8)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (3.1)	-	A (1.0)	-	A (3.7)
		WB	-	A (0.9)	A (0.7)		-	A (1.2)	A (0.9)	
		NB	-	-	-		-	-	-	
		SB	A (3.1)	-	A (1.1)		A (3.7)	-	A (2.1)	
MN 55 & CSAH 42	Signal	EB	C (21.5)	A (1.0)	A (8.5)	B (12.1)	C (25.6)	A (1.3)	C (27.5)	C (23.1)
		WB	-	-	-		-	-	-	
		NB	B (15.8)	B (12.0)	-		D (36.3)	B (13.1)	-	
		SB	-	B (11.8)	A (3.2)		-	C (27.5)	A (7.0)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (12.0)	A (6.2)	A (5.0)	F (71.6)	E (48.9)	C (18.8)	C (17.4)	F (100+)
		WB	A (6.4)	A (4.6)	-		F (55.7)	C (17.3)	A (5.3)	
		NB	F (71.6)	-	F (65.9)		F (100+)	-	F (100+)	
		SB	F (56.7)	-	C (17.6)		F (100+)	-	F (100+)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	A (4.9)	-	-	-	A (5.2)
		WB	A (4.9)	-	A (3.0)		A (5.2)	-	A (3.0)	
		NB	-	A (0.3)	A (0.1)		-	A (0.4)	A (0.0)	
		SB	A (1.2)	A (0.7)	-		A (0.9)	A (0.6)	-	
Fischer Avenue & East Access	Side Street Stop	EB	A (4.4)	-	-	A (4.4)	A (7.5)	-	-	A (4.4)
		WB	-	-	-		-	-	-	
		NB	-	A (0.1)	-		-	A (0.1)	-	
		SB	-	A (0.5)	A (0.3)		-	A (0.3)	A (0.2)	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

5.6. DESIGN YEAR (2040) SCENARIO 2 MITIGATED CAPACITY ANALYSIS

A Design Year (2040) Scenario 2 Mitigated capacity analysis was conducted in order to test the effects of the proposed mitigations on the roadway network. The Design Year (2040) Scenario 2 traffic volumes are shown in **Exhibit 13**. Along with the background mitigations discussed in Section 3.2, the following mitigations were included in the analysis:

- Install a signal at MN 55 & Fischer Avenue
- Install eastbound and westbound left turn lanes at MN 55 & Fischer Avenue

Results of the Design Year (2040) Scenario 2 Mitigated capacity analysis are included below in **Table 5-4**. The intersection of MN 55 & Fischer Avenue operates at an overall LOS of B or better and all movements operate at LOS D or better during the AM and PM peak hours with the mitigations in place. No queueing issues are anticipated at the intersection.

Table 5-4: Design Year (2040) Scenario 2 Mitigated Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
Minnesota 55 & Fischer Avenue	Signal	EB	D (36.6)	B (10.7)	A (6.9)	A (9.8)	D (54.7)	B (15.8)	B (12.2)	B (13.0)
		WB	C (28.5)	A (8.4)	-		C (34.3)	A (7.1)	A (3.0)	
		NB	C (31.3)	-	B (10.9)		C (34.0)	-	C (30.4)	
		SB	B (15.1)	-	C (22.5)		C (34.5)	-	B (14.4)	

6. ANALYSIS OF SCENARIO 3 CONDITIONS

This section of the report outlines the proposed development Scenario 3, summarizes site-specific traffic characteristics, and develops future traffic projections for the Scenario 3 build condition of the AUAR site.

6.1. DEVELOPMENT CHARACTERISTICS AND SITE ACCESS

The proposed development is anticipated to include up to 2,500,000 square feet of Industrial Park space. The same access assumptions for Scenario 2 are assumed for Scenario 3—two access points are anticipated, one each off of Emery Avenue and Fischer Avenue on the east and west end of the proposed site. The access spacing of the proposed access points is expected to conform to the Dakota County standard.

6.2. TRIP GENERATION

Proposed development traffic was determined based on data from the Institute of Transportation Engineers' (ITE) *Trip Generation*, 11th Edition. The manual provides peak hour trips rates/equations, inbound-outbound percentages that can be attributed to the proposed site. Based on a review of land uses provided in the manual, LUC 130 (Data Center) was determined to be the most appropriate fit to represent the trip generation of the proposed development.

Table 6-1 provides a summary of trip generation for the proposed development. Based on the trip generation calculation, the proposed development is anticipated to generate 8,425 daily trips, including 850 total trips during the AM Peak Hour (689 entering and 161 exiting), and 850 total trips during the PM Peak Hour (187 entering, 663 exiting).

Table 6-1: Proposed Development Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
LUC 130 - Industrial Park	2,500 kSF	8,425	689	161	850	187	663	850

6.3. DIRECTIONAL DISTRIBUTION

The estimated distribution of site-generated traffic on the surrounding roadway network was developed based on a review of the roadway network, area development pattern, and access to the proposed development. The anticipated directional distribution of passenger vehicle site traffic for Scenario 3 is expected to be generally the same as Scenario 2. The anticipated global distribution is as follows:

- 35% to/from the north on MN 55
- 25% to/from the north on US Highway 52
- 20% to/from the west on CSAH 42
- 10% to/from the south on US Highway 52
- 5% to/from the south on Emery Avenue
- 5% to/from the east on MN 55

The full site trip distribution is shown in **Exhibit 10**. The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections, is a function of the estimated trip

generation (**Table 5-1**) and the directional distribution listed above. The site trip assignment is shown in **Exhibit 14**.

The Opening Year (2029) Build traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 14**) to the Opening Year (2029) No-Build traffic volumes (**Exhibit 4**). The Opening Year (2029) Build traffic volumes are shown in **Exhibit 15**.

The Design Year (2040) Build traffic volumes were calculated by adding the total Development Site Trips (**Exhibit 14**) to the Design Year (2040) No-Build traffic volumes (**Exhibit 5**). The Design Year (2040) Build traffic volumes are shown in **Exhibit 16**.

6.4. OPENING YEAR (2029) SCENARIO 3 CAPACITY ANALYSIS

The Opening Year (2029) Build conditions analysis was conducted to determine the impacts of the proposed development on the short-term operations of the adjacent roadway network. Existing (2024) geometry and intersection control was assumed for the analysis, along with the background changes to intersection control discussed in Section 3.2. The Opening Year (2029) Scenario 3 traffic volumes are shown in **Exhibit 15**. The results of the Opening Year (2029) Build scenario analysis is shown in **Table 6-2**.

Based on the results of the Opening Year (2029) Build conditions analysis, the northbound approach at MN 55 & Fischer Avenue is expected to see excessive side street delays during the AM and PM peak hours. Queueing from this intersection extends to the west access point along Fischer Avenue causing delays at the access. Alternative traffic control is expected to be required at MN 55 & Fischer Avenue.

The SimTraffic queueing results were reviewed and all 95th percentile queues are expected to be maintained within their provided storage bays, although the intersection of MN 55 & Fischer Avenue will see excessive extensive queueing and backups at the northbound approach during the PM peak hour.

Note that long queues up to 400' are also expected at the northbound approach of CSAH 42 & Emery Avenue during the PM peak hour, with the movements of this approach operating at LOS D during this time. A dedicated northbound left or right turn lane should be considered to reduce the delays, but no further mitigations are expected to be necessary. SimTraffic analysis reports are included in the appendix.

Table 6-2: Opening Year (2029) Scenario 3 Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (28.2)	A (4.7)	C (22.7)	-	D (38.9)	A (5.7)	C (26.0)
		WB	F (94.0)	A (5.8)	-		E (77.6)	A (7.3)	-	
		NB	-	-	-		-	-	-	
		SB	C (34.3)	D (49.5)	B (10.9)		C (29.6)	D (44.7)	B (18.1)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (18.4)	A (6.2)	-	B (18.3)	C (30.8)	A (5.0)	-	C (27.3)
		WB	-	D (45.5)	B (18.0)		-	D (37.6)	C (27.4)	
		NB	D (44.6)	-	A (6.6)		E (59.7)	F (91.8)	A (6.4)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (3.7)	A (4.3)	A (5.2)	C (22.9)	A (3.7)	A (4.5)	A (3.6)	D (34.3)
		WB	A (6.6)	A (4.4)	A (2.1)		A (2.1)	A (2.4)	A (0.3)	
		NB	C (16.1)	C (22.9)	A (6.5)		D (34.3)	D (32.0)	D (28.9)	
		SB	A (9.0)	C (17.4)	A (3.6)		A (7.0)	B (10.1)	A (3.2)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (2.7)	-	A (0.9)	-	A (4.7)
		WB	-	A (1.0)	A (0.7)		-	A (1.1)	A (0.9)	
		NB	-	-	-		-	-	-	
		SB	A (2.7)	-	A (1.7)		A (4.7)	-	A (0.6)	
MN 55 & CSAH 42	Signal	EB	B (19.2)	-	B (12.9)	B (14.1)	C (28.2)	-	C (23.3)	C (21.4)
		WB	-	-	-		-	-	-	
		NB	C (22.3)	B (12.7)	-		C (31.4)	B (10.2)	-	
		SB	-	B (14.7)	A (4.2)		-	C (27.6)	A (6.8)	
MN 55 & Fischer Avenue	Side Street Stop	EB	B (11.5)	A (8.2)	A (7.6)	F (100+)	C (18.6)	B (11.6)	B (10.4)	F (100+)
		WB	A (8.7)	A (7.2)	-		B (12.9)	A (4.3)	A (2.3)	
		NB	F (100+)	-	F (100+)		F (100+)	-	F (100+)	
		SB	E (49.4)	-	C (18.2)		E (44.4)	-	B (12.3)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	B (13.5)	-	-	-	A (8.2)
		WB	B (13.5)	-	A (3.3)		A (8.2)	-	A (6.3)	
		NB	-	A (1.0)	A (0.3)		-	A (2.1)	A (0.0)	
		SB	A (3.8)	A (3.5)	-		A (1.5)	A (1.4)	-	
Fischer Avenue & East Access	Side Street Stop	EB	A (4.7)	-	-	A (4.7)	F (100+)	-	-	F (100+)
		WB	-	-	-		-	-	-	
		NB	-	A (0.1)	-		-	F (55.9)	-	
		SB	-	A (1.8)	A (1.2)		-	A (0.4)	A (0.3)	

Note: The Overall LOS at side street stop-controlled intersections is reported as the worst movement.

Review of the SimTraffic queueing results indicated that all 95th percentile queues are maintained within their respective storage bays. Besides the previously mentioned issues at Fischer Avenue, no other queueing issues are expected to be present.

Based on the results of the Opening Year (2029) Scenario 3 capacity analysis, the following mitigation measures are recommended:

- Install a traffic signal at MN 55 & Fischer Avenue
- Install dedicated eastbound left, westbound left, and northbound left turn lanes at MN 55 & Fischer Avenue.
- Install westbound left turn lane at CSAH 42 & Emery Avenue

6.5. OPENING YEAR (2029) SCENARIO 3 MITIGATED CAPACITY ANALYSIS

An Opening Year (2029) Scenario 3 Mitigated capacity analysis was conducted in order to test the effects of the proposed mitigations on the roadway network. The Opening Year (2029) Scenario 3 traffic volumes are shown in **Exhibit 15**. Along with the background mitigations discussed in Section 3.2, all mitigations listed in the previous section were included in the analysis. The traffic signal at MN 55 & Fischer Avenue was modeled to have protected and permissive phases for the eastbound and westbound left turn movements. The side street movements were modeled with permissive phases only.

Results of the Opening Year (2029) Scenario 3 Mitigated capacity analysis are included below in **Table 6-3**. Based on the analysis results, all intersections are expected to operate at an overall LOS D or better. The MN 55 corridor is expected to see significant delays among turning movements both on MN 55 and on the side streets. At MN 55 & Fischer Avenue, the eastbound, westbound, and northbound left turn movements all operate at LOS F during the PM peak hour. It is anticipated that with the buildout of Scenario 3, MN 55 will be nearing capacity for a two-lane roadway and expanding the roadway to four-lanes could be considered depending on the operations along the rest of the corridor. However, the overall operations of the network are acceptable with the proposed mitigation.

Review of SimTraffic 95th percentile queues indicated that the northbound left turn movement at MN 55 & Fischer Avenue will see long queue lengths during the PM peak hour, the northbound left turn lane could be extended to 500 feet to accommodate the anticipated queues. Furthermore, the northbound left turn lane along MN 55 at CSAH 42 is nearing its storage capacity with 350' queues anticipated in the PM peak hour. SimTraffic reports are included in the appendix.

Table 6-3: Opening Year (2029) Scenario 3 Mitigated Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (28.3)	A (4.5)	C (22.5)	-	D (41.0)	A (5.4)	C (27.2)
		WB	F (89.9)	A (5.8)	-		F (81.4)	A (7.3)	-	
		NB	-	-	-		-	-	-	
		SB	C (34.0)	D (37.5)	B (11.3)		C (29.8)	B (18.0)	B (19.2)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (18.9)	A (5.9)	-	B (18.1)	C (28.6)	A (5.6)	-	C (27.4)
		WB	-	D (44.3)	B (16.9)		-	D (38.7)	C (28.7)	
		NB	D (46.4)	-	A (6.3)		E (60.2)	E (63.4)	A (5.6)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (4.4)	A (4.2)	A (4.9)	C (22.7)	A (5.3)	A (4.2)	A (3.1)	D (34.1)
		WB	A (6.1)	A (1.3)	A (0.1)		A (3.6)	A (2.0)	A (0.2)	
		NB	B (11.2)	C (17.3)	A (6.2)		D (34.1)	C (15.2)	D (31.3)	
		SB	A (9.5)	C (22.7)	A (2.1)		A (8.6)	C (15.6)	A (4.9)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.6)	-	A (9.0)	-	A (1.0)	-	A (8.9)
		WB	-	A (1.4)	A (0.8)		-	A (2.1)	A (1.5)	
		NB	-	-	-		-	-	-	
		SB	A (9.0)	-	A (2.3)		A (8.9)	-	A (3.6)	
MN 55 & CSAH 42	Signal	EB	D (36.7)	A (0.7)	B (15.8)	B (18.2)	E (71.1)	A (1.6)	D (45.3)	C (31.6)
		WB	-	-	-		-	-	-	
		NB	D (46.7)	B (13.6)	-		E (78.3)	B (15.0)	-	
		SB	-	B (17.2)	A (4.8)		-	C (27.5)	A (8.8)	
MN 55 & Fischer Avenue	Signal	EB	D (52.3)	B (14.2)	A (9.8)	B (14.5)	F (90.6)	C (29.7)	B (19.2)	C (31.2)
		WB	E (63.2)	B (12.1)	-		F (100+)	B (12.8)	A (3.5)	
		NB	D (48.8)	-	A (7.6)		F (90.3)	-	E (56.5)	
		SB	D (48.3)	-	B (15.6)		D (44.9)	-	B (14.1)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	A (8.8)	-	-	-	A (8.5)
		WB	A (8.8)	-	A (3.3)		A (8.5)	-	A (6.3)	
		NB	-	A (0.7)	A (0.5)		-	A (1.5)	A (0.1)	
		SB	A (3.7)	A (3.7)	-		A (1.6)	A (1.3)	-	
Fischer Avenue & East Access	Side Street Stop	EB	A (4.6)	-	-	A (4.6)	A (6.3)	-	-	A (6.3)
		WB	-	-	-		-	-	-	
		NB	-	A (0.1)	-		-	A (0.1)	-	
		SB	-	A (2.9)	A (1.6)		-	A (0.9)	A (0.7)	

Note: The Overall LOS at side street stop-controlled intersections is reported as the worst movement.

6.6. DESIGN YEAR (2040) SCENARIO 3 CAPACITY ANALYSIS

Capacity analysis was conducted for the Design Year (2040) Scenario 3 conditions to determine the long-term effects of the proposed development. All background changes and Opening Year (2029) Scenario 3 mitigations were assumed to be in place for this analysis. The Design Year (2040) Scenario 3 traffic volumes are shown in **Exhibit 16**. Capacity analysis results for the Design Year (2040) build conditions are provided in **Table 6-4**.

Results of the Design Year (2040) Scenario 3 conditions analysis shows that, with the proposed Opening Year (2029) Scenario 3 mitigations in place, all intersections are expected to continue operating at LOS D or better with the exception of CSAH 42 & Emery Avenue, where the northbound left turn movement is expected to operate at LOS E during the PM peak hour. A dedicated northbound right turn lane should be considered to reduce delays here, but no further mitigations are expected to be necessary. However, this intersection should be carefully monitored for control changes, with the northbound approach expected to be nearing its capacity.

As previously noted, MN 55 is expected to be nearing the capacity of a two-lane road. Many left turn movements operate at LOS E or F along this corridor during the AM and PM peak hours. There may be the need to convert MN 55 to a four-lane road in the long-term under Scenario 3 conditions.

A review of queueing results indicated that the 95th percentile queue length of the left turn from MN 55 north/westbound toward CSAH 42 is 440 feet about 50 feet more than the amount of provided storage. This turn lane may require extension under Scenario 3 conditions but the presence of a turn lane directly behind this one may make that difficult. Long queues are also present along Fischer Avenue northbound but besides this, all other 95th percentile queues are maintained within their provided storage bays.

Table 6-4: Design Year (2040) Build Level of Service

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
CSAH 42 & US 52 Southbound Ramps	Signal	EB	-	C (34.1)	A (5.2)	C (25.5)	-	E (57.2)	A (6.8)	D (35.1)
		WB	F (90.3)	A (6.4)	-		F (85.8)	A (7.9)	-	
		NB	-	-	-		-	-	-	
		SB	D (35.4)	E (68.4)	B (13.0)		C (34.0)	C (20.8)	C (25.8)	
CSAH 42 & US 52 Northbound Ramps	Signal	EB	B (19.7)	A (6.7)	-	B (19.0)	D (36.3)	A (5.6)	-	C (30.7)
		WB	-	D (42.9)	C (21.7)		-	D (40.2)	C (31.3)	
		NB	D (46.7)	-	A (6.9)		E (59.7)	E (73.2)	A (6.2)	
		SB	-	-	-		-	-	-	
CSAH 42 & Emery Avenue	Side Street Stop	EB	A (7.7)	A (4.2)	A (5.5)	B (11.8)	A (6.3)	A (4.5)	A (3.5)	E (48.8)
		WB	A (6.4)	A (1.2)	A (0.1)		A (3.2)	A (2.0)	A (0.1)	
		NB	B (11.8)	B (12.5)	A (5.3)		E (38.5)	E (48.8)	D (34.5)	
		SB	A (7.1)	D (25.1)	A (3.2)		B (13.2)	C (16.9)	A (8.0)	
CSAH 42 & 142nd Street	Side Street Stop	EB	-	A (0.5)	-	A (2.9)	-	A (1.1)	-	A (5.3)
		WB	-	A (1.3)	A (1.0)		-	A (2.4)	A (2.1)	
		NB	-	-	-		-	-	-	
		SB	A (0.0)	-	A (2.9)		A (4.2)	-	A (5.3)	
MN 55 & CSAH 42	Signal	EB	D (42.3)	A (0.4)	B (19.4)	C (22.8)	E (66.6)	A (2.2)	D (54.9)	D (37.8)
		WB	-	-	-		-	-	-	
		NB	D (53.9)	B (19.4)	-		F (88.9)	C (20.0)	-	
		SB	-	B (19.3)	A (5.9)		-	C (33.9)	B (11.6)	
MN 55 & Fischer Avenue	Signal	EB	F (92.5)	C (22.5)	B (11.9)	C (32.5)	F (100+)	D (42.4)	C (30.4)	D (37.3)
		WB	E (74.0)	D (40.5)	-		F (85.3)	B (14.6)	A (5.4)	
		NB	D (42.6)	-	B (10.5)		F (85.7)	-	D (47.2)	
		SB	D (39.4)	-	C (30.1)		E (77.9)	-	B (16.3)	
Emery Avenue & West Access	Side Street Stop	EB	-	-	-	B (10.9)	-	-	-	A (8.1)
		WB	B (10.9)	-	A (3.5)		A (8.1)	-	A (6.4)	
		NB	-	A (1.5)	A (0.3)		-	A (1.8)	A (0.1)	
		SB	A (3.8)	A (4.3)	-		A (1.5)	A (0.7)	-	
Fischer Avenue & East Access	Side Street Stop	EB	A (4.7)	-	-	A (4.7)	A (6.1)	-	-	A (6.1)
		WB	-	-	-		-	-	-	
		NB	-	A (0.0)	-		-	A (0.6)	-	
		SB	-	A (3.0)	A (1.6)		-	A (0.8)	A (0.6)	

Note: The Overall LOS in side street stop-controlled intersections is reported as the worst movement.

7. TURN LANE WARRANT ANALYSIS

MnDOT provides guidance on the need for turn lanes on highways with a speed limit of 45 mph or greater based on the Average Daily Traffic (ADT) of the highway and the cross street. The figures below show the volume-based left- and right-turn lane warrants given in Chapter 3 of the *MnDOT Access Management Manual*. Neither Emery Avenue nor Fischer Avenue currently have AADT data available, and both are currently minor, unpaved roads which see negligible turning movement volume during the peak hours.

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*

MN 55 is currently a two-lane highway with an AADT exceeding 6,500 vehicles per day. Based on the anticipated distribution, the AADT of Fischer Avenue is expected to exceed 400 vehicles per day from development traffic alone in all build scenarios and therefore a westbound left turn lane is warranted in Scenarios 2, and 3. With the addition of a westbound left turn lane here, it is recommended that an eastbound left turn lane be installed for geometric purposes.

CSAH 42 (near Emery Avenue) is currently a two-lane highway with an Existing (2024) AADT of 5,700 vehicles per day. With the addition of site traffic from the lowest trip-generating scenario (Scenario 2), along with background growth and development, this is anticipated to exceed 6,500 vehicles per day by the Opening Year (2029). Because the cross-street (Emery Avenue) AADT is anticipated to exceed 400 vehicles per day, installation of a westbound left turn lane is recommended at the intersection of CSAH 42 & Emery Avenue under the Opening Year (2029) conditions for all three scenarios.

Along Emery Avenue, the access points in Scenario 1 are expected to carry 15,000 daily trips. Even if there are more than two access points, it is anticipated that left and right turn lanes will be required at the access points.

Under Scenario 2 conditions, there is much less traffic (2,277 daily trips) split between two roadways which hold negligible traffic. It is not expected that turn lanes will be required along Emery Avenue or Fischer Avenue for this scenario.

Under Scenario 3 conditions, 8,425 daily trips are split between access points on Fischer Avenue and Emery Avenue. Therefore, both are expected to exceed the AADT thresholds and left and right turn lanes should be installed at both access points under Scenario 3.

8. CONCLUSION AND RECOMMENDATIONS

A traffic analysis was performed to quantify the impacts of the proposed development on the adjacent roadway network and study intersections. The proposed site is located south of the Country Road 42 & Minnesota State Highway 55 in Rosemount, MN. No-Build, and Build conditions were analyzed in the Opening Year (2029) and the Design Year (2040). An Existing Year (2024) analysis was also conducted.

8.1. PROJECT CHARACTERISTICS

The proposed development site is located south of the Country Road 42 & Minnesota State Highway 55 intersection and is currently used for agriculture. The development would include as much as 2,300,000 square feet of Technology Park space, with access points to the west along Emery Avenue and to the east along Fischer Avenue. The study area intersections include the following:

- CSAH 42 & US Highway 52 Southbound Ramps
- CSAH 42 & US Highway 52 Northbound Ramps
- CSAH 42 & Emery Avenue
- CSAH 42 & 142nd Street
- MN 55 & CSAH 42
- MN 55 & Fischer Avenue

In addition, proposed access points along Emery Avenue and Fischer Avenue were analyzed in applicable scenarios. Scenario 1 included two access points along Emery Avenue, with Scenario 2 and Scenario 3 both including one along each road. The analysis was conducted for the following scenarios:

- Existing Year (2024)
- Opening Year (2029) No-Build
- Opening Year (2029) Scenario 1
- Opening Year (2029) Scenario 2
- Opening Year (2029) Scenario 3
- Design Year (2040) No-Build
- Design Year (2040) Scenario 1
- Design Year (2040) Scenario 2
- Design Year (2040) Scenario 3

It should also be noted that there is current planning effort with MnDOT and Dakota County that would realign MN 55 and CSAH 42. For the purposes of this study, it was assumed that the current roadway geometry would remain in place.

8.2. BACKGROUND CONDITIONS CAPACITY ANALYSIS SUMMARY

A capacity analysis was conducted for Existing Year (2024) traffic conditions at the study intersections to determine baseline existing conditions. Based on the analysis, all intersections are anticipated to operate at acceptable LOS except for CSAH 42 & US Highway 52 Northbound Ramps which is expected to be signalized by the Opening Year (2029). There are no queuing issues at the study intersections.

A capacity analysis was conducted for the Opening Year (2029) No-Build traffic conditions at the study intersections to determine baseline conditions for the 2029 analysis year. Traffic signals were assumed at

the US Highway 52 Ramps for the analysis. Based on the analysis, all intersections are expected to operate at a generally acceptable LOS and no queuing issues are anticipated at the study intersections.

A capacity analysis was conducted for the Design Year (2040) No-Build traffic conditions at the study intersections to determine baseline conditions for the 2040 analysis year. Based on the analysis, the side street approaches of MN 55 & Fischer Avenue are anticipated to see increased side street delays and queues, though this issue is not severe enough to require mitigation. All other intersection/movements are expected to operate acceptably.

8.3. SCENARIO 1 CONDITIONS CAPACITY ANALYSIS SUMMARY

A capacity analysis was conducted for the Opening Year (2029) Scenario 1 traffic conditions at the study intersection. It was found that severe delays and queueing would occur along Emery Avenue due to traffic at the side-street stop-controlled intersection of CSAH 42 & Emery Avenue. A traffic signal would be required at CSAH 42 & Emery Avenue under Scenario 1 conditions. With the addition of a traffic signal and the addition of turn lanes for key movements, the network is expected to operate acceptably.

Under Design Year (2040) Scenario 1 traffic conditions, the MN 55 corridor is expected to see poor operations due to the capacity constraints of the existing two-lane highway. It is expected that the MN 55 roadway will need to be expanded to a four-lane roadway in the Design Year (2040) of Scenario 1 conditions in order to operate acceptably. With MN 55 expanded to four-lanes, all intersections are expected to operate acceptably.

8.4. SCENARIO 2 CONDITIONS CAPACITY ANALYSIS SUMMARY

A capacity analysis was conducted for the Opening Year (2029) Scenario 2 traffic conditions at the study intersections. Based on the analysis, all intersections are expected to operate at a generally acceptable LOS, except for MN 55 & Fischer Avenue which is expected to see less than desirable side street delays. This intersection should be monitored for future signalization in the long-term, but no mitigation is proposed for the level of delay shown in this scenario. No queuing issues are anticipated at the study intersections.

Under Design Year (2040) Scenario 2 traffic conditions, all intersections are expected to operate at a generally acceptable LOS, except for MN 55 & Fischer Avenue which is expected to see severe side street delays. This intersection will likely need to be signalized under the Design Year (2040) Build conditions if the traffic volumes meet the projected level. No queueing issues anticipated at the study intersections.

A capacity analysis was conducted for the Design Year (2040) Scenario 2 Mitigated traffic conditions at the study intersections to ensure the proposed mitigation is sufficient to fix the operational issues anticipated at the MN 55 & Fischer Avenue intersection. Based on the analysis, the intersection operates at acceptable LOS with no queueing issues with the addition of a signal, and eastbound and westbound left turn lanes.

8.5. SCENARIO 3 CONDITIONS CAPACITY ANALYSIS SUMMARY

A capacity analysis was conducted for the Opening Year (2029) Scenario 3 traffic conditions at the study intersections. Based on the analysis, the intersection of MN 55 & Fischer Avenue is expected to see excessive side street delays and queues that affect the operations at the access point along Fischer Avenue. It is expected that a signal will need to be installed at MN 55 & Fischer Avenue, along with turn lane improvements.

Under Design Year (2040) Scenario 3 traffic conditions, only minor turn lane mitigations will be required beyond the Opening Year (2029) Scenario 3 mitigations and the network will operate acceptably. However, similar to the other analysis scenarios, the MN 55 corridor should be monitored as the two lane roadway is approaching capacity in the Design Year (2040).

8.6. MITIGATION PLAN

The following provides a summary of mitigation improvements that were identified as part of the traffic analysis for the proposed development.

Existing (2024) Conditions

- No recommended mitigation

Opening Year (2029) No-Build Conditions

- Install permanent signal at CSAH 42 & MN 55 (if CSAH 42 & Hwy 55 realignment is not completed)
- Install signals at CSAH 42 & US Highway 52 Northbound and Southbound Ramps.

Opening Year (2029) Scenario 1 Conditions

- All Opening Year (2029) No-Build mitigations
- Install a signal at CSAH 42 & Emery Avenue
- Install dedicated westbound left, eastbound left, and northbound left turn lanes CSAH 42 & Emery Avenue
- Install side street stop control at the site access points
- Install left and right turn lanes along Emery Avenue at each access point

Opening Year (2029) Scenario 2 Conditions

- All Opening Year (2029) No-Build Mitigations
- Install side street stop control at the site access points.
- Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue
- Install dedicated westbound left turn lane at MN 55 & Fischer Avenue
 - An eastbound left turn lane should be considered here based on the anticipated through traffic volumes. Though not affected by the proposed development, this should likely be installed if a westbound left turn lane is installed.

Opening Year (2029) Scenario 3 Conditions

- All Opening Year (2029) No-Build Mitigations
- Install side street stop control at the site access points.
- Install dedicated westbound left turn lane at CSAH 42 & Emery Avenue
- Install a traffic signal at MN 55 & Fischer Avenue
- Install dedicated northbound, eastbound, and westbound left turn lanes at MN 55 & Fischer Avenue
- Install left and right turn lanes along Emery Avenue and Fischer Avenue at each access point.

Design Year (2040) No-Build Conditions

- All Opening Year (2029) No-Build Mitigations

Design Year (2040) Scenario 1 Conditions

- All Opening Year (2029) Scenario 1 Conditions
- Install an additional through lane for each direction along the MN 55 corridor (convert from a two-lane road to a four-lane road)

Design Year (2040) Scenario 2 Conditions

- All Opening Year (2029) Scenario 2 Mitigations
- Install a signal at MN 55 & Fischer Avenue.
 - This should be reevaluated in the future when roadway/interchange plans have been determined and as the nearby parcels continue to develop.

Design Year (2040) Scenario 3 Conditions

- All Opening Year (2029) Scenario 3 Mitigations

9. APPENDIX

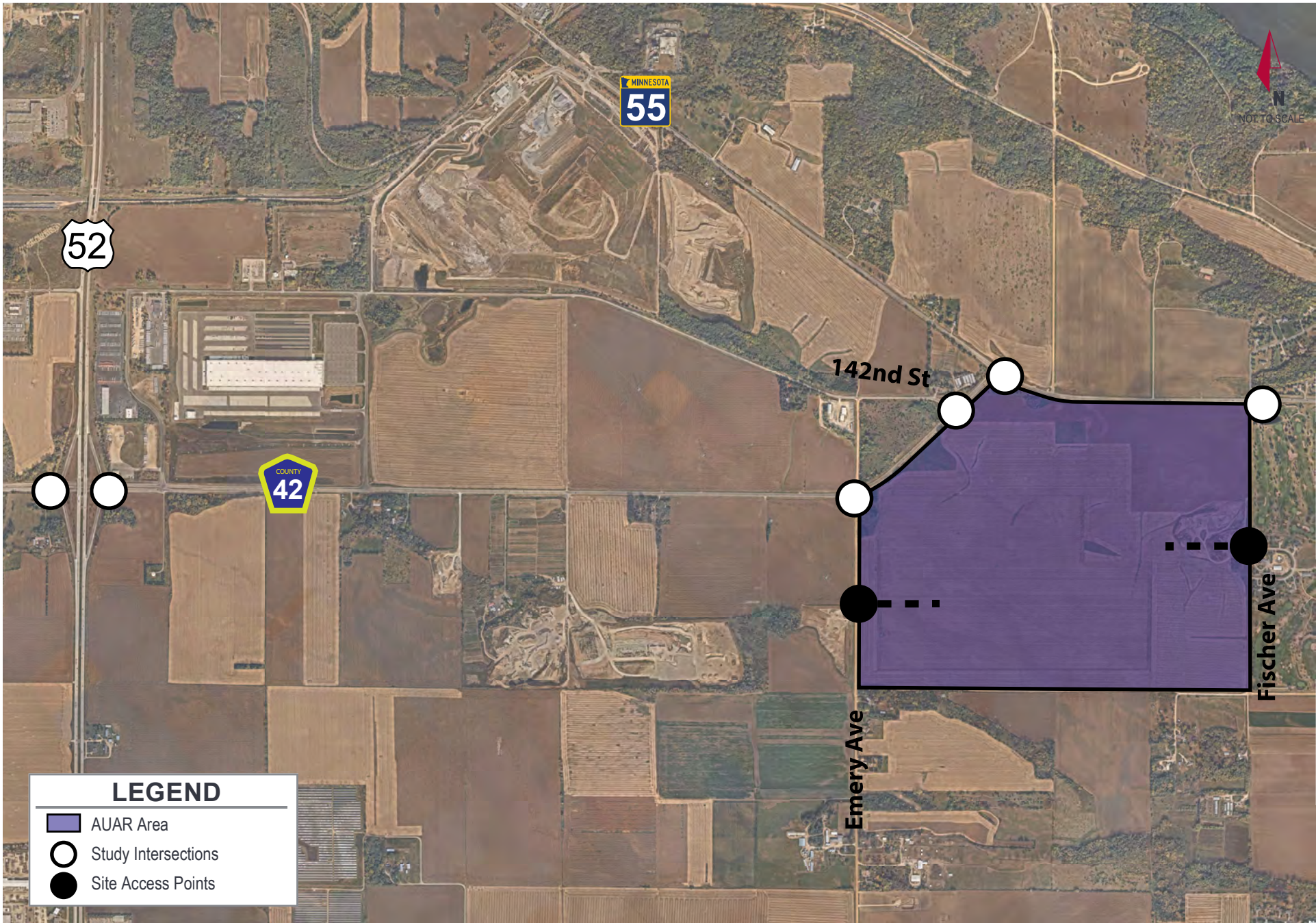
Appendix A: Exhibits

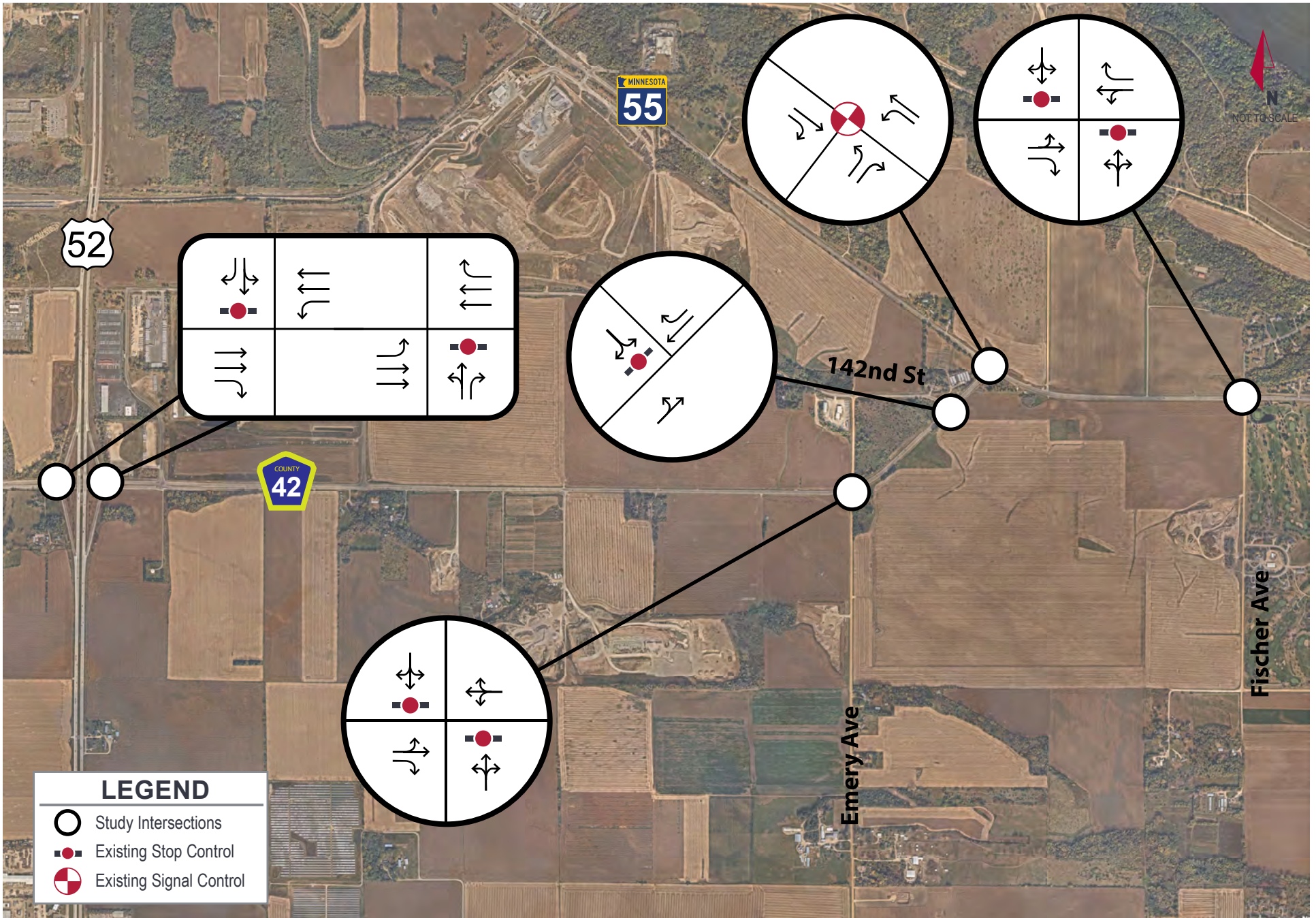
Appendix B: Turning Movement Counts

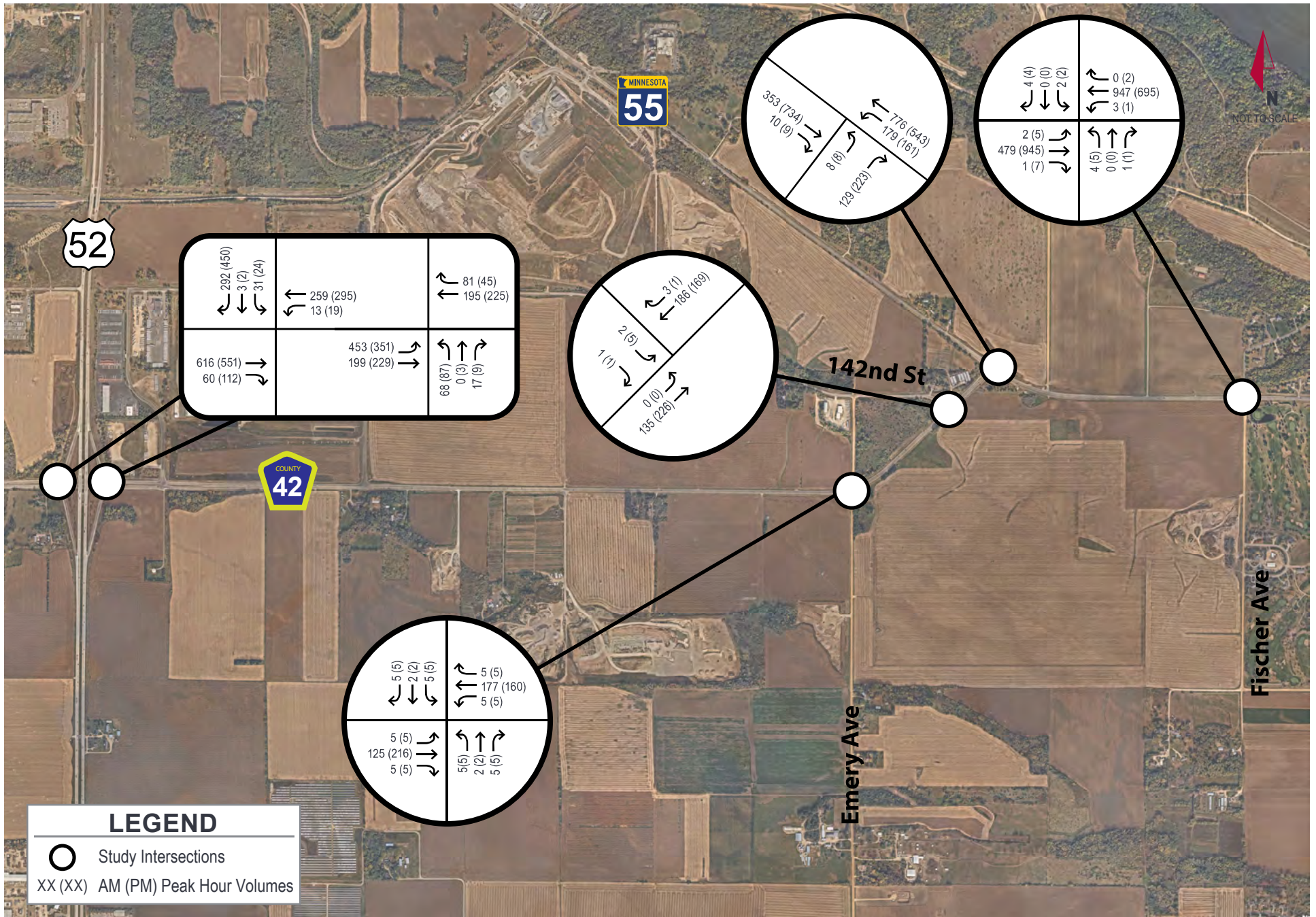
Appendix C: SimTraffic Reports

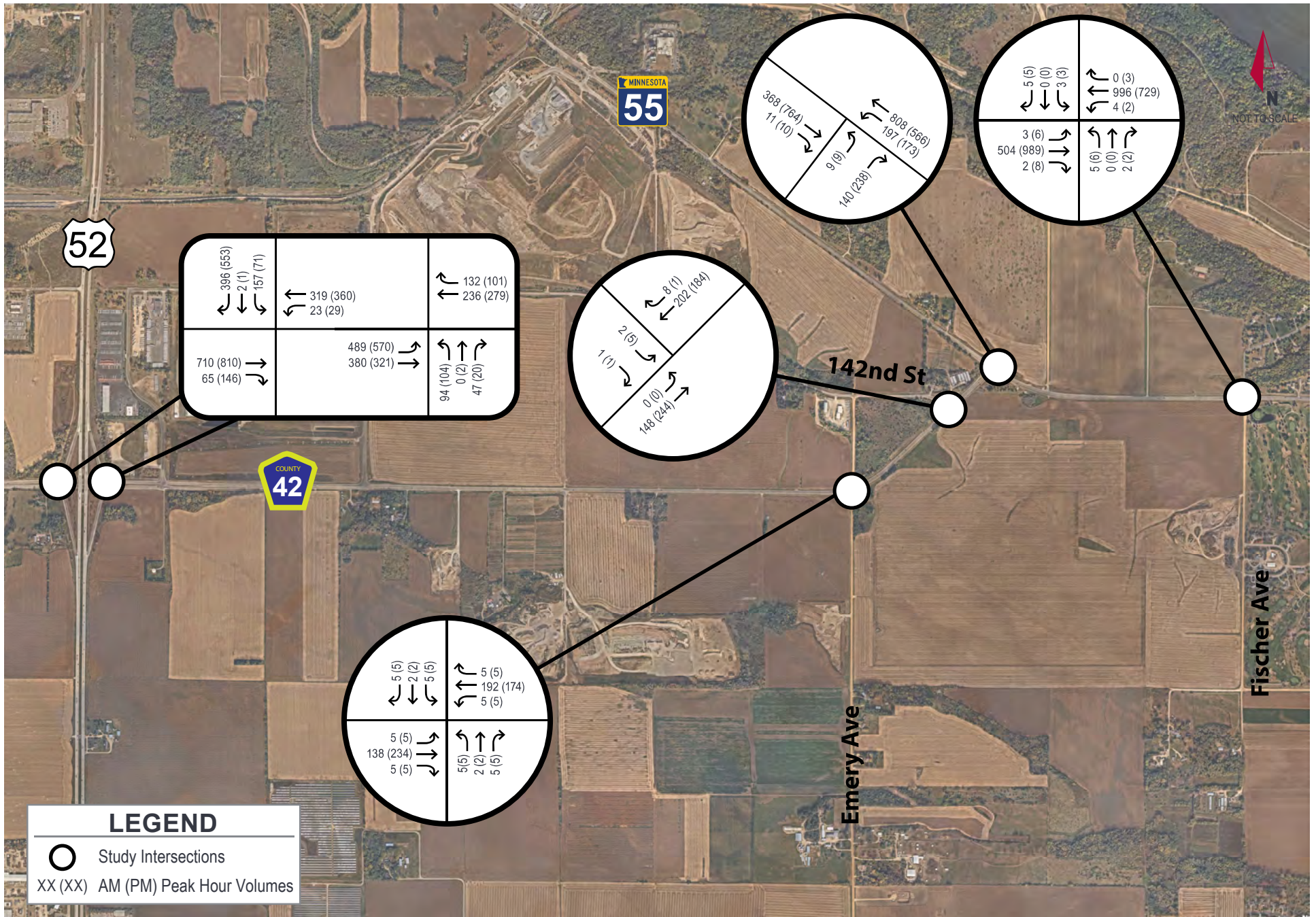
Appendix A:

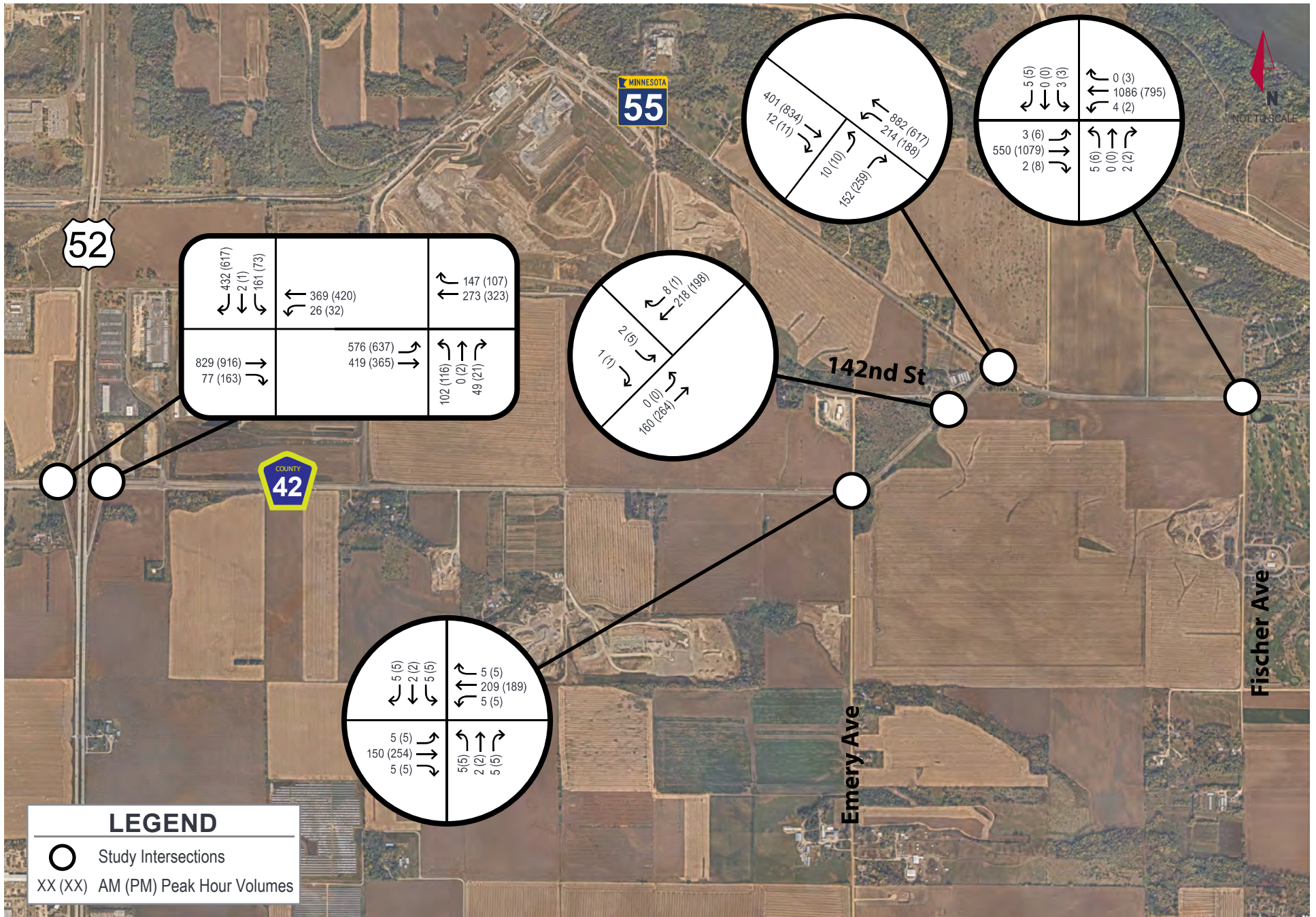
Exhibits

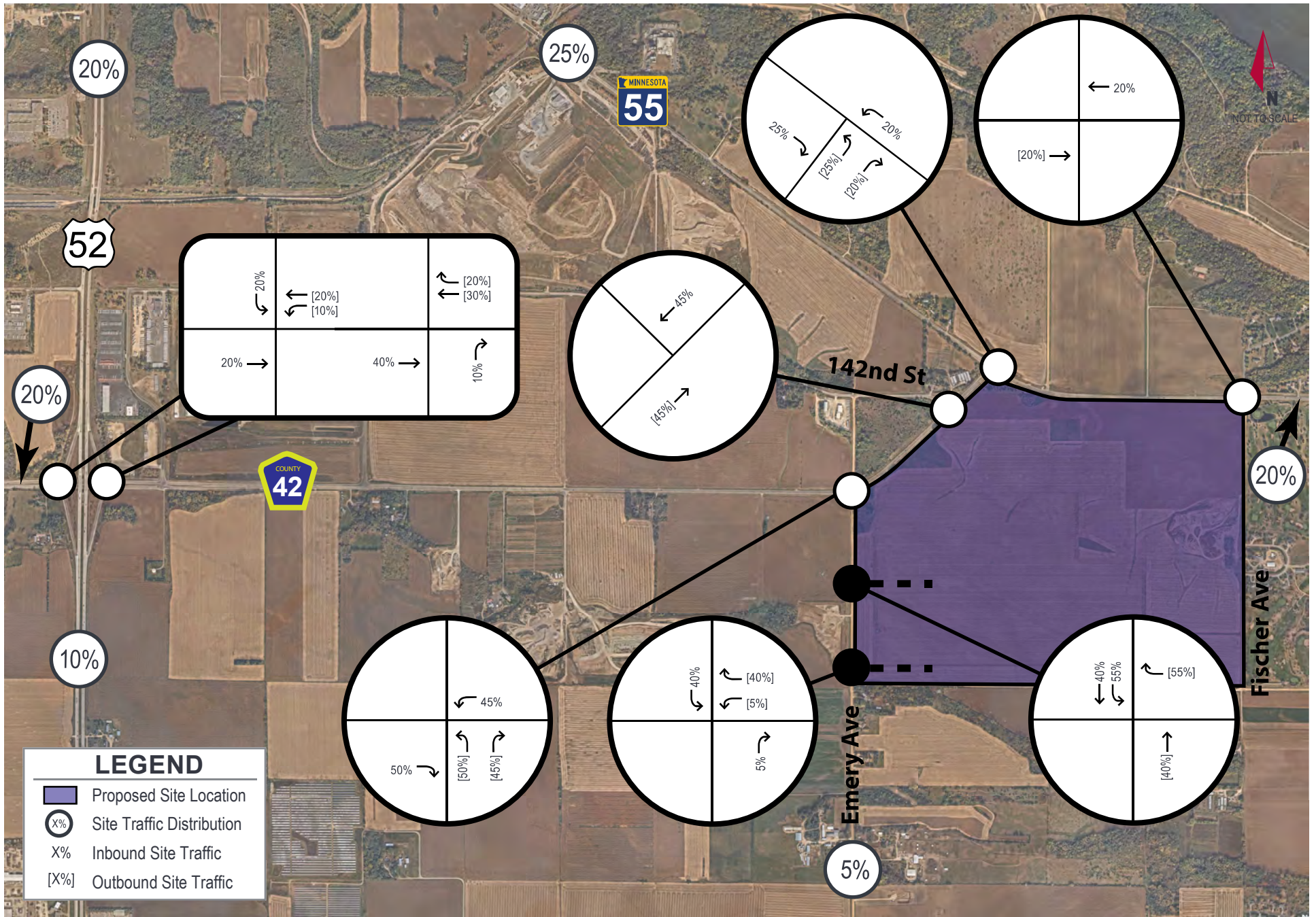


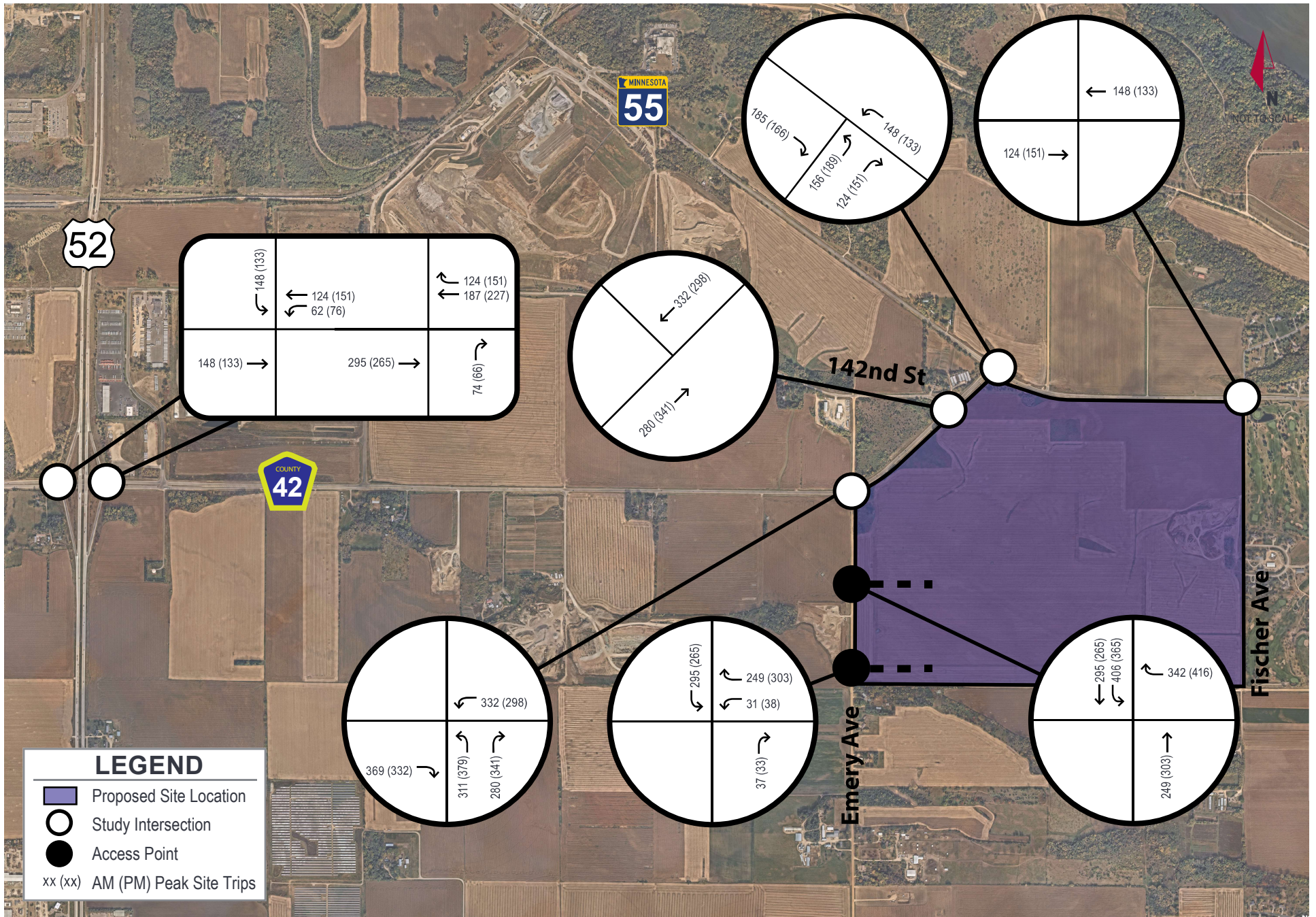


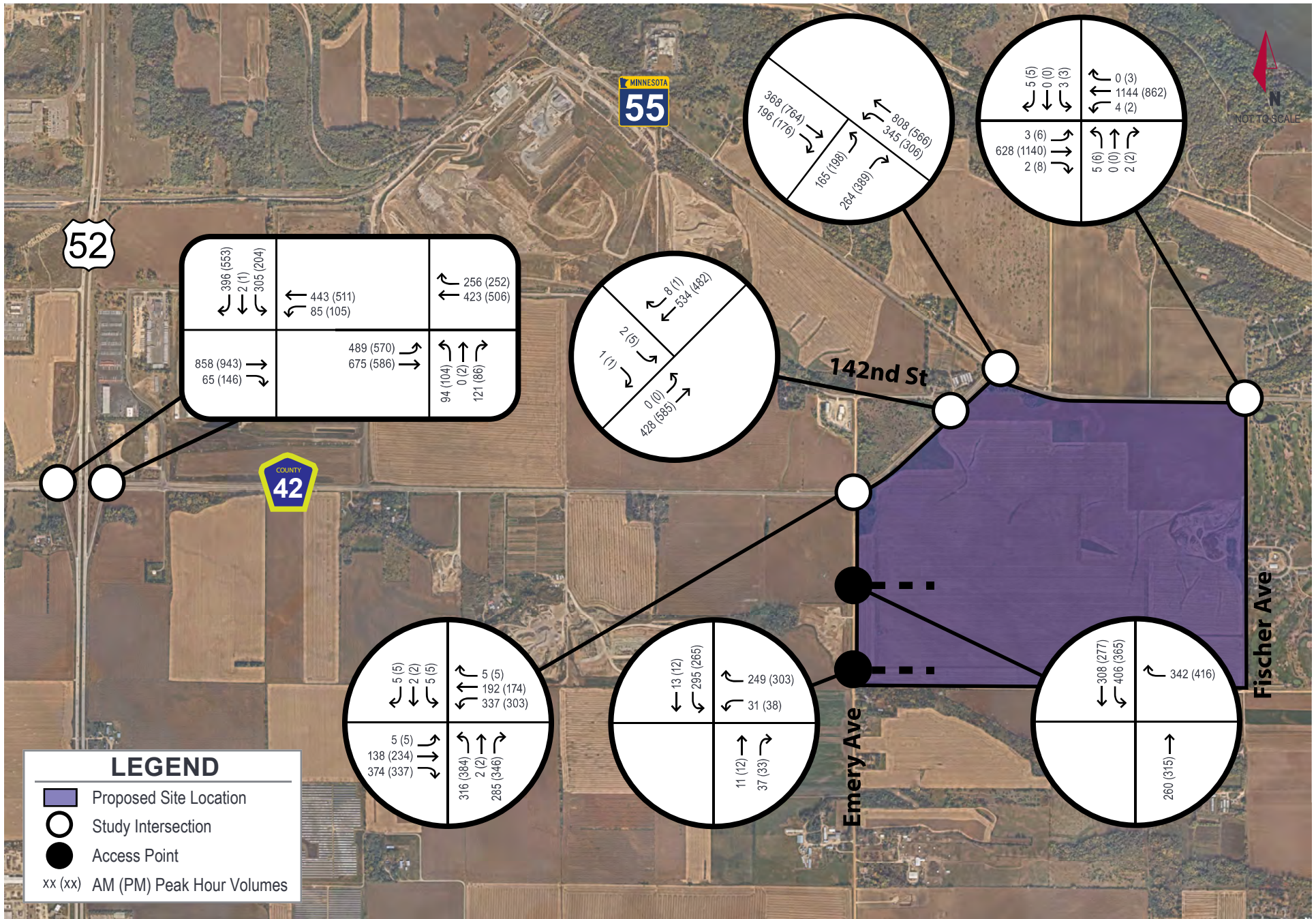


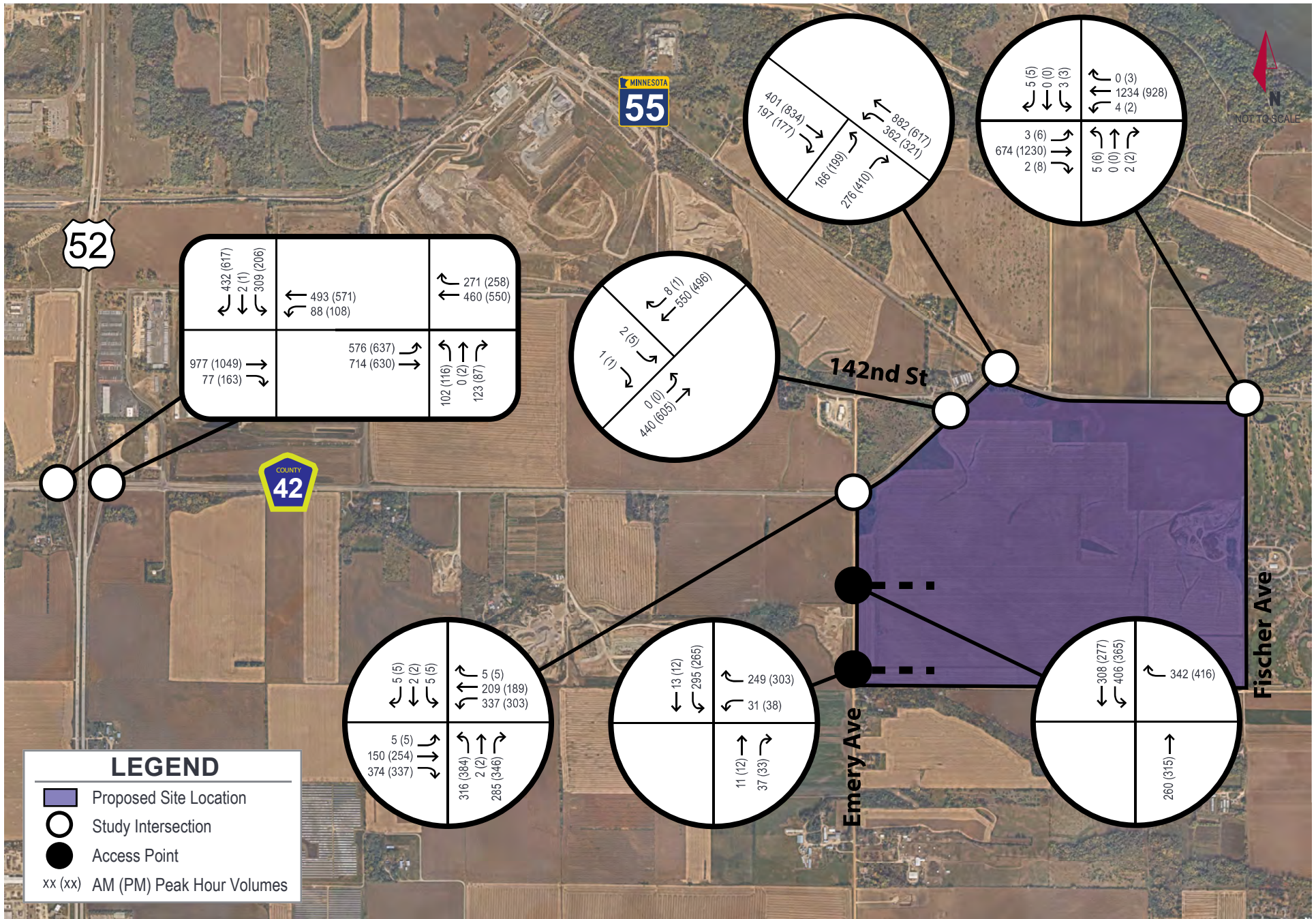


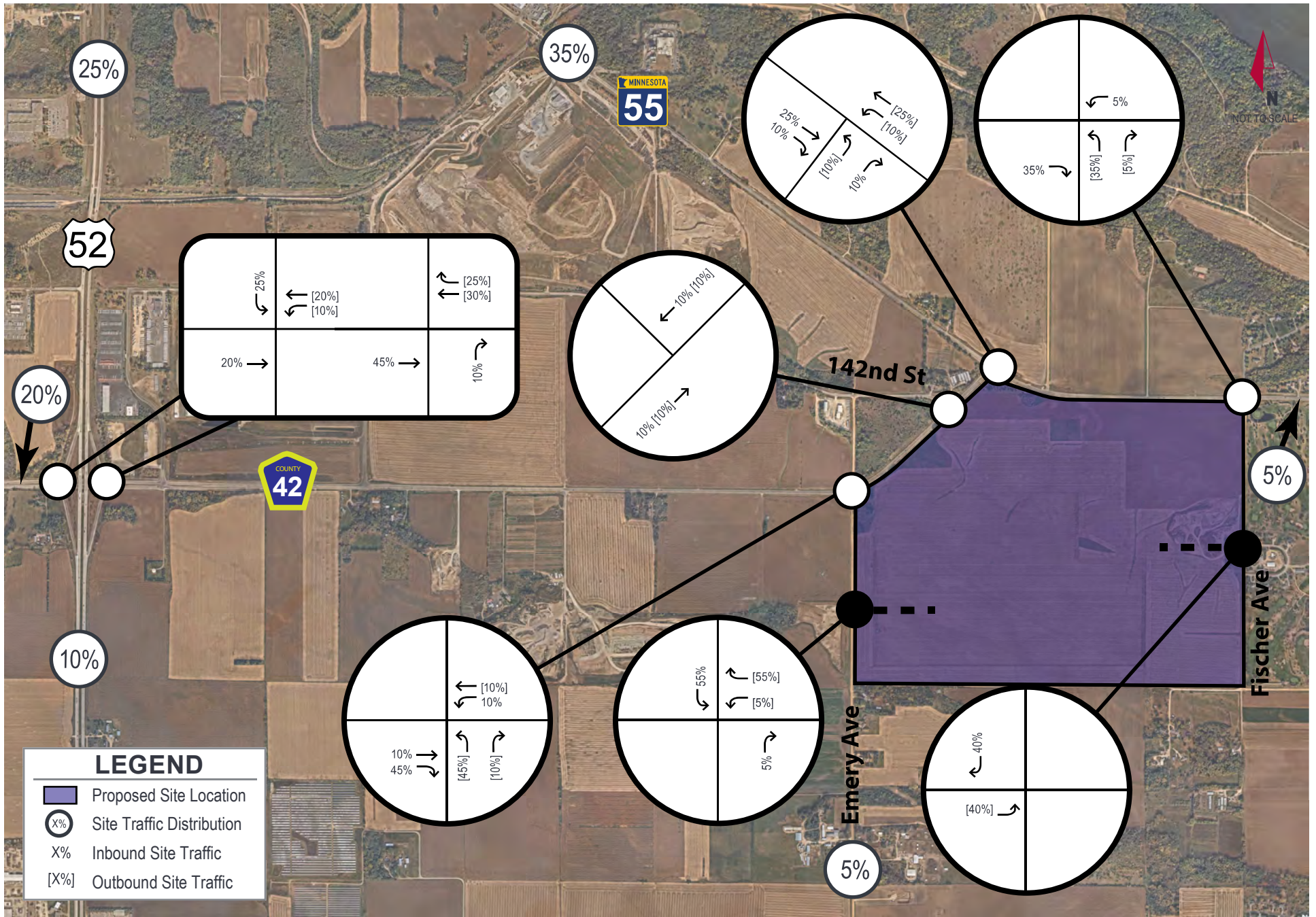


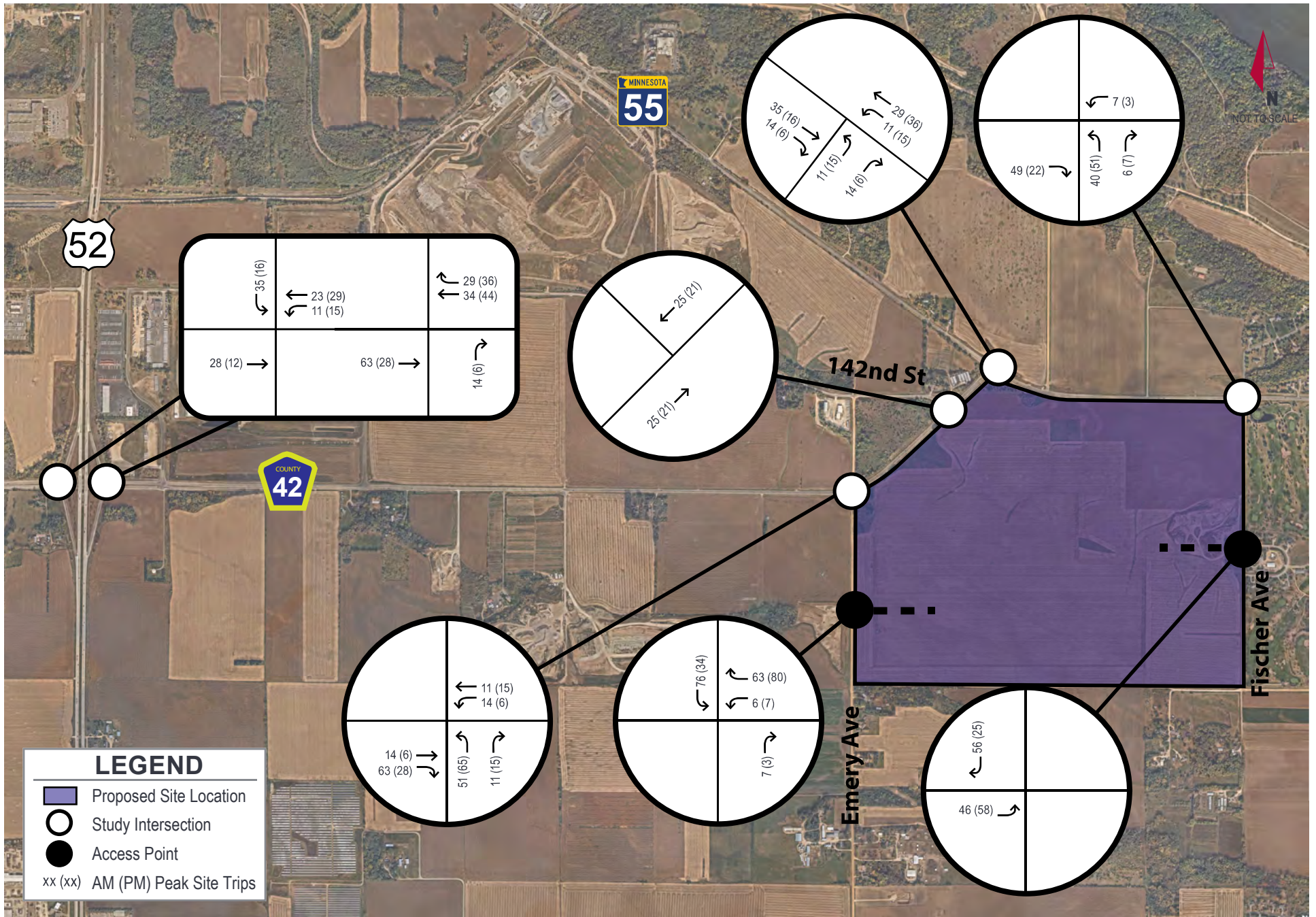


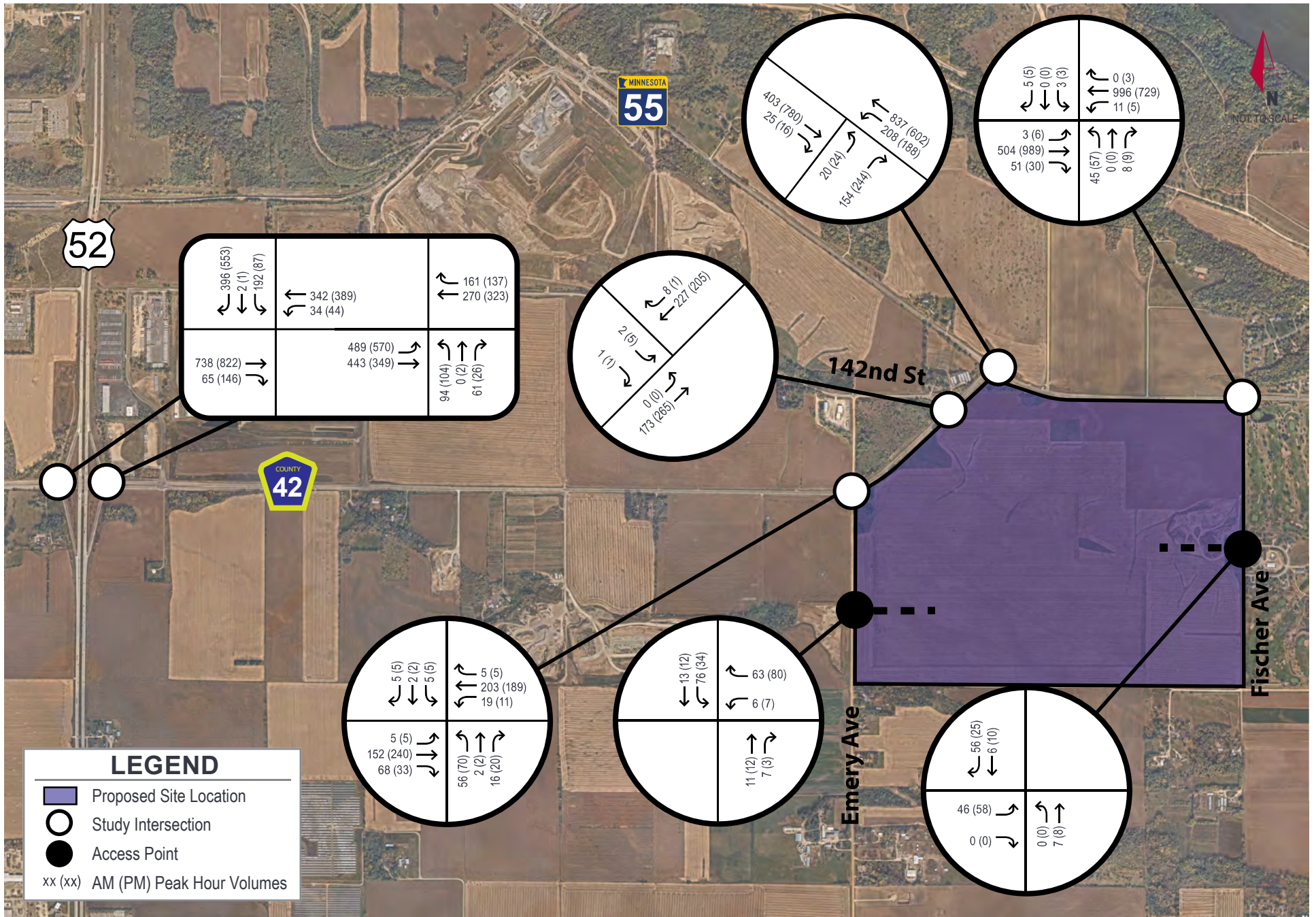


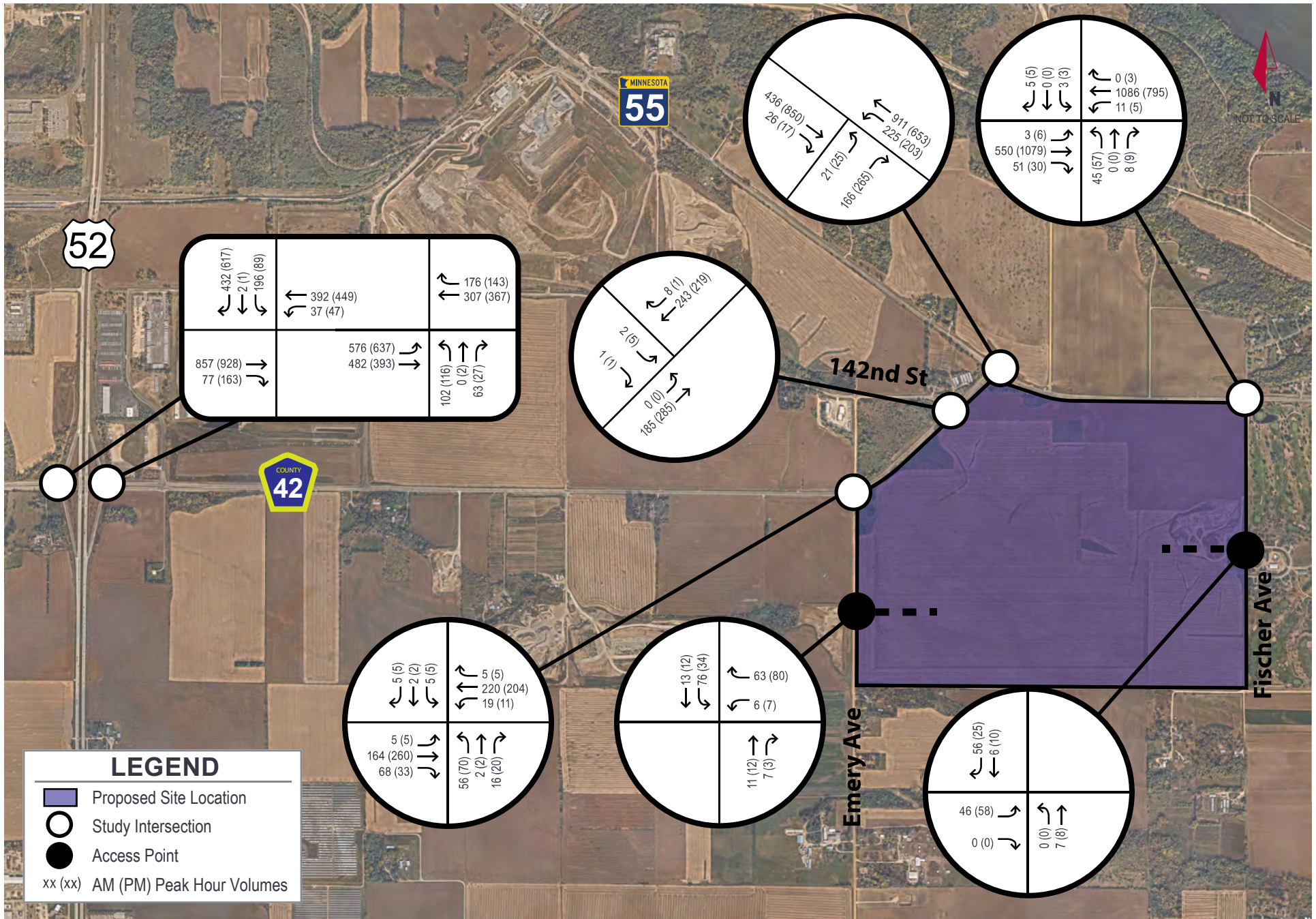


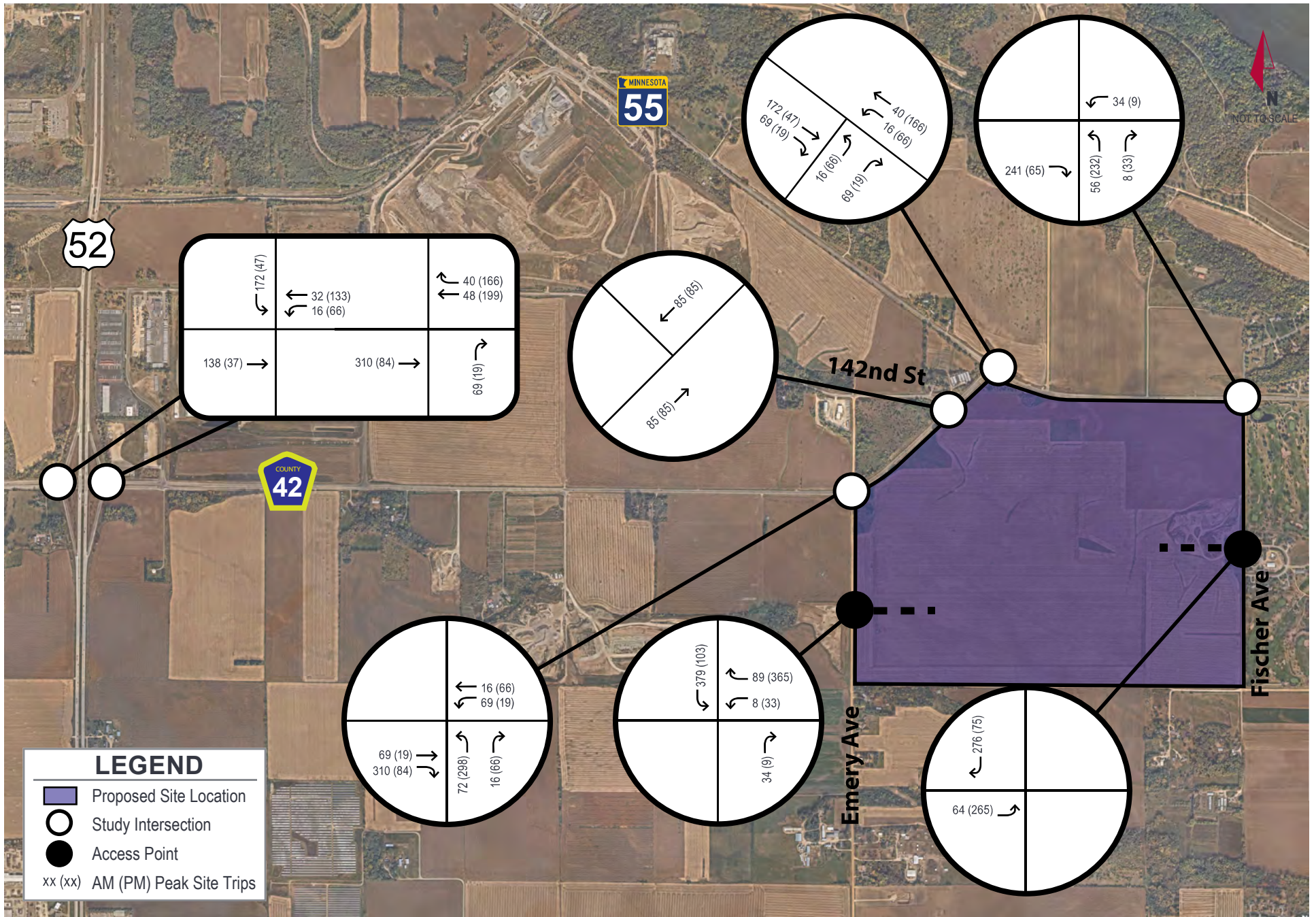


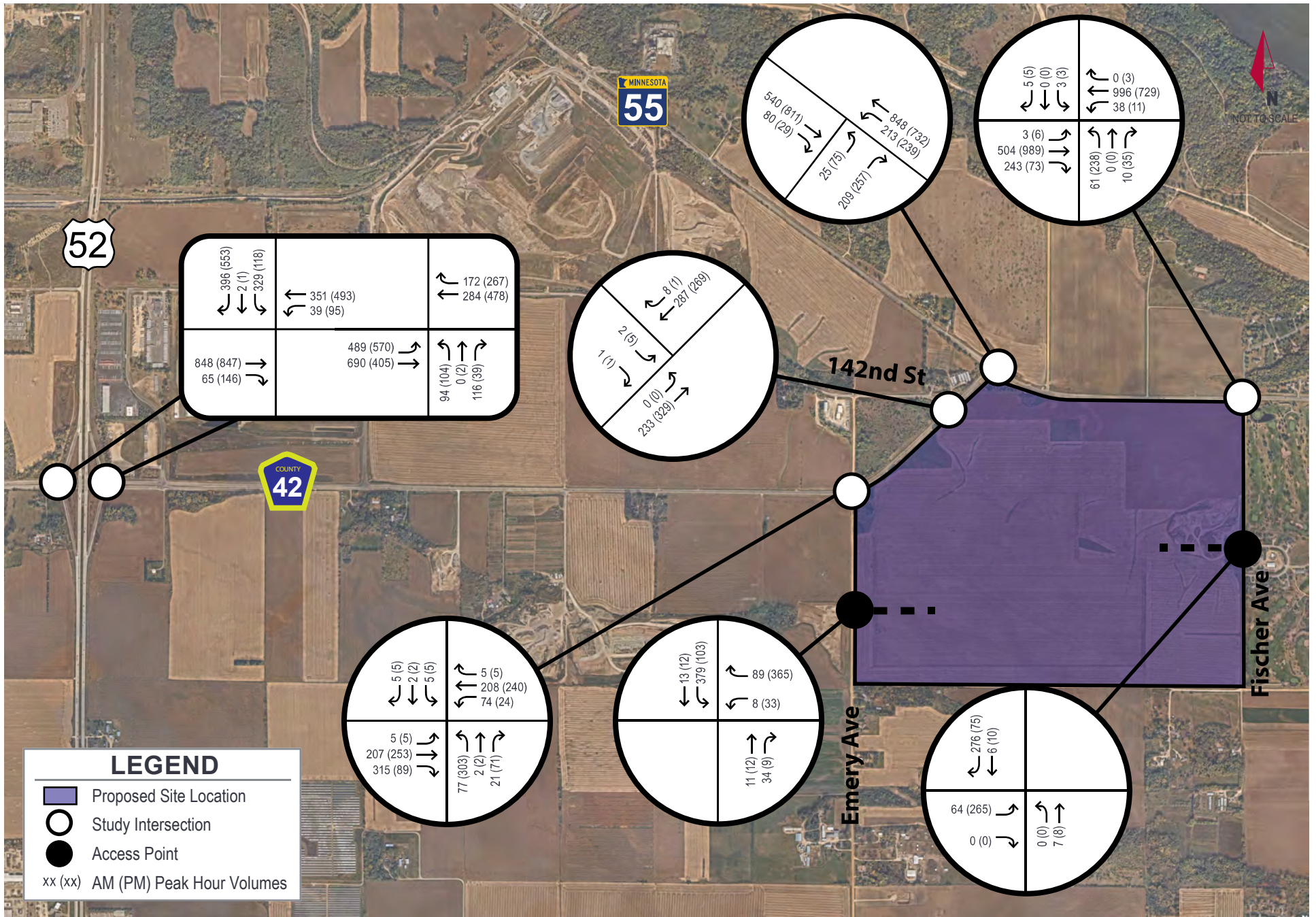


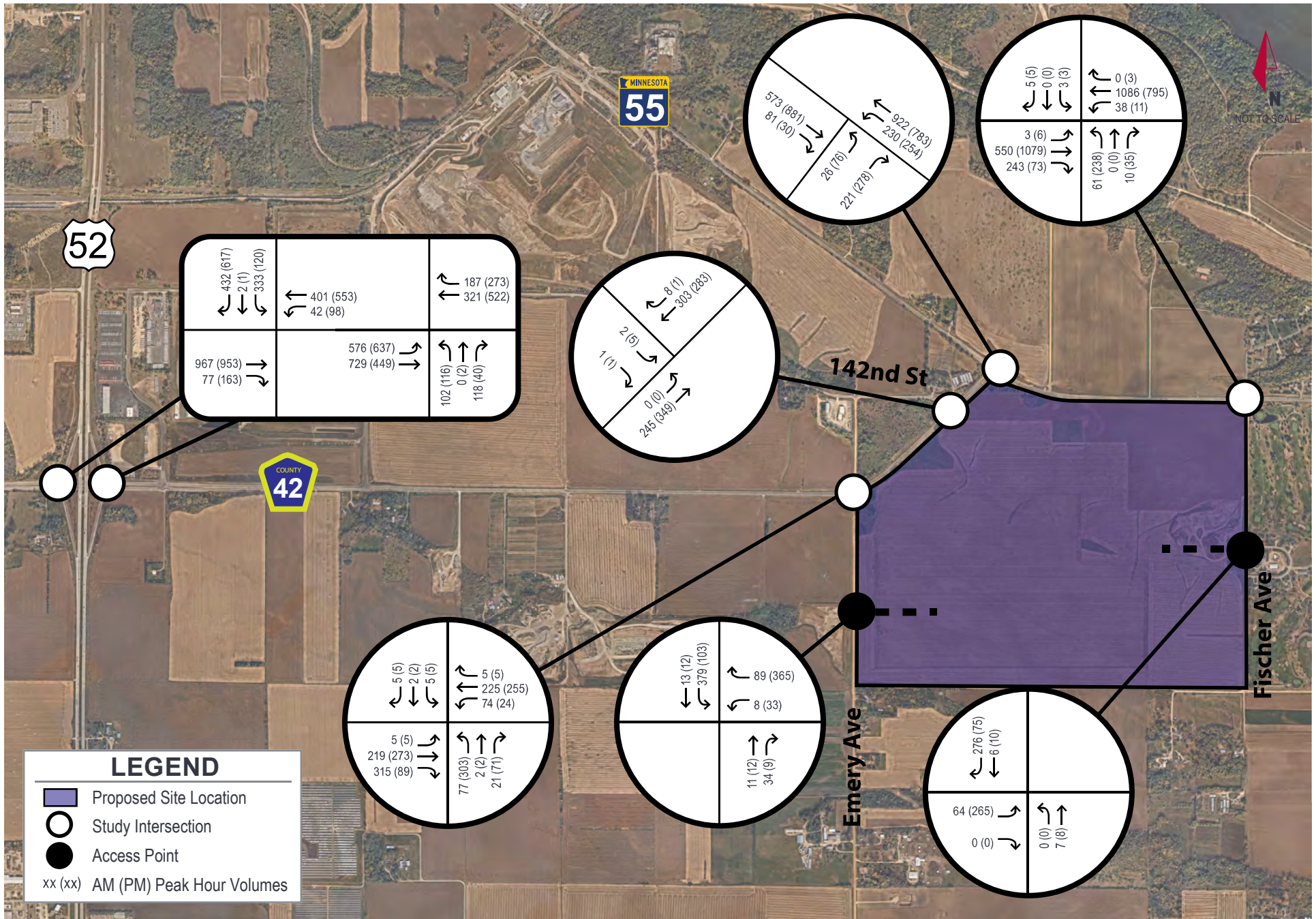












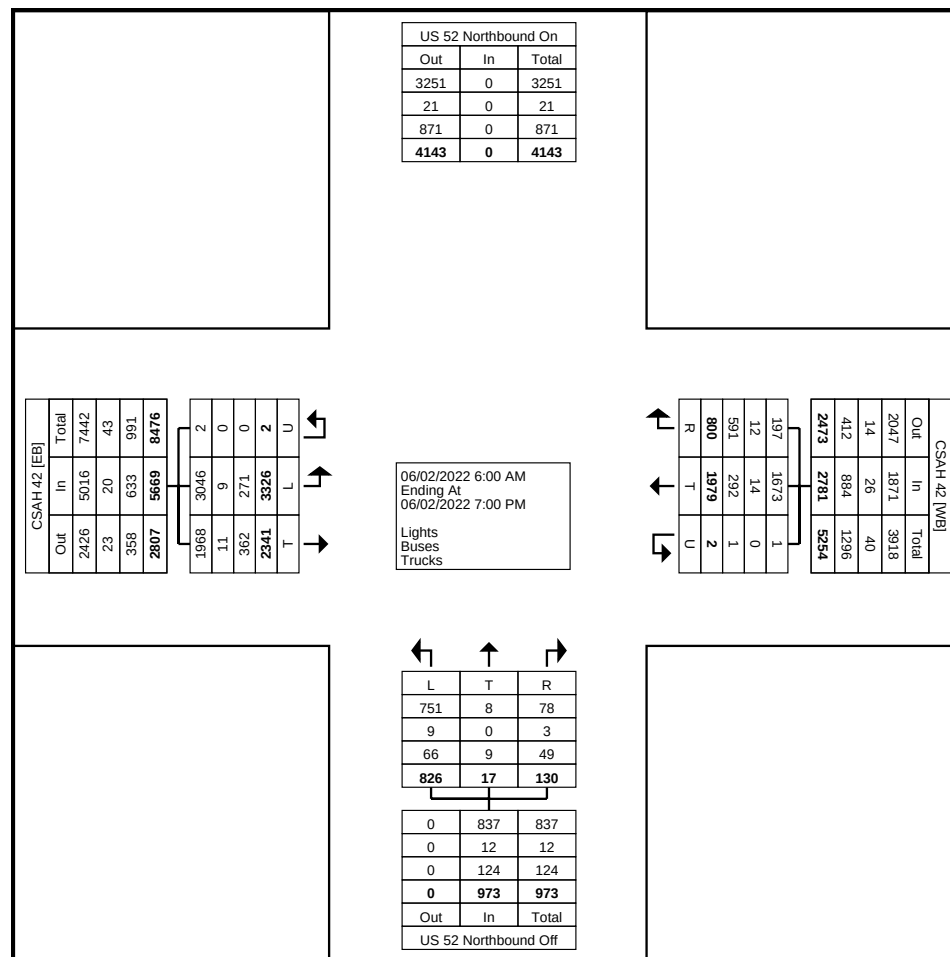
Appendix B:

Turning Movement Counts

Turning Movement Data

Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Northbound Off Ramp Northbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	
6:00 AM	100	19	0	119	14	5	0	19	14	0	2	16	154
6:15 AM	90	27	0	117	34	3	0	37	18	0	2	20	174
6:30 AM	79	46	0	125	42	11	0	53	20	0	8	28	206
6:45 AM	86	40	0	126	33	12	0	45	21	0	3	24	195
Hourly Total	355	132	0	487	123	31	0	154	73	0	15	88	729
7:00 AM	102	49	0	151	39	20	0	59	16	0	4	20	230
7:15 AM	126	39	0	165	59	18	0	77	12	0	2	14	256
7:30 AM	111	49	0	160	47	19	0	66	22	0	4	26	252
7:45 AM	100	57	0	157	45	21	1	67	16	0	6	22	246
Hourly Total	439	194	0	633	190	78	1	269	66	0	16	82	984
8:00 AM	92	48	0	140	38	14	0	52	19	0	5	24	216
8:15 AM	77	47	0	124	34	25	0	59	9	0	3	12	195
8:30 AM	71	42	0	113	36	22	0	58	17	0	1	18	189
8:45 AM	49	38	0	87	38	13	0	51	18	0	3	21	159
Hourly Total	289	175	0	464	146	74	0	220	63	0	12	75	759
9:00 AM	55	34	0	89	26	14	0	40	12	1	0	13	142
9:15 AM	59	31	0	90	27	20	0	47	11	0	2	13	150
9:30 AM	54	39	0	93	39	29	0	68	11	0	5	16	177
9:45 AM	58	44	0	102	31	21	0	52	10	0	2	12	166
Hourly Total	226	148	0	374	123	84	0	207	44	1	9	54	635
10:00 AM	38	26	0	64	31	20	0	51	12	0	1	13	128
10:15 AM	39	30	0	69	23	8	0	31	15	2	3	20	120
10:30 AM	48	41	0	89	35	17	0	52	10	1	1	12	153
10:45 AM	43	35	0	78	36	23	0	59	9	1	1	11	148
Hourly Total	168	132	0	300	125	68	0	193	46	4	6	56	549
11:00 AM	39	40	0	79	31	24	0	55	17	1	3	21	155
11:15 AM	46	28	0	74	53	23	0	76	8	0	2	10	160
11:30 AM	37	28	0	65	53	27	0	80	10	0	2	12	157
11:45 AM	39	30	0	69	30	16	0	46	11	0	3	14	129
Hourly Total	161	126	0	287	167	90	0	257	46	1	10	57	601
12:00 PM	66	49	0	115	28	22	0	50	9	0	1	10	175
12:15 PM	42	54	0	96	31	18	0	49	10	0	3	13	158
12:30 PM	51	42	0	93	32	23	0	55	12	0	7	19	167
12:45 PM	40	45	0	85	44	16	0	60	19	0	2	21	166
Hourly Total	199	190	0	389	135	79	0	214	50	0	13	63	666
1:00 PM	43	38	0	81	38	17	0	55	13	2	3	18	154
1:15 PM	43	49	0	92	31	14	0	45	9	0	3	12	149
1:30 PM	52	48	0	100	35	13	0	48	9	0	2	11	159
1:45 PM	39	38	0	77	36	23	0	59	24	0	3	27	163

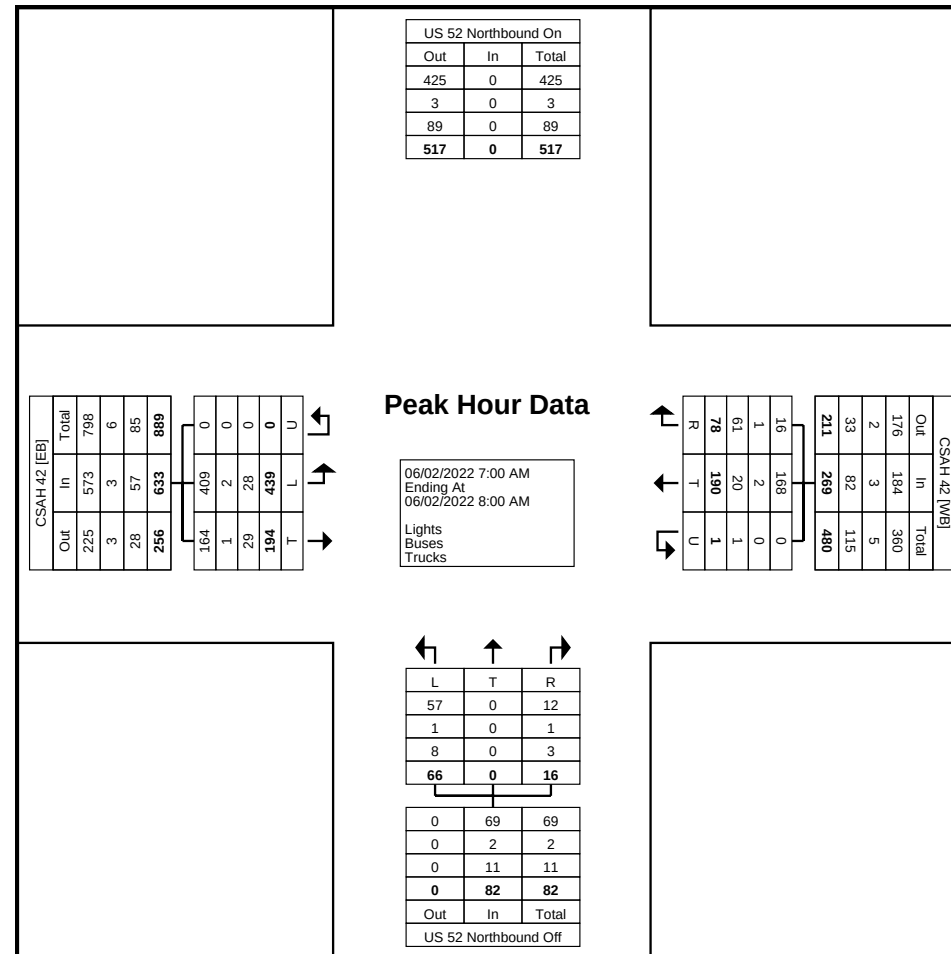
Hourly Total	177	173	0	350	140	67	0	207	55	2	11	68	625
2:00 PM	47	45	0	92	39	20	0	59	12	0	1	13	164
2:15 PM	84	55	0	139	47	29	0	76	16	0	0	16	231
2:30 PM	63	61	0	124	34	20	0	54	15	0	1	16	194
2:45 PM	55	60	0	115	49	20	0	69	19	1	2	22	206
Hourly Total	249	221	0	470	169	89	0	258	62	1	4	67	795
3:00 PM	58	59	0	117	35	11	0	46	21	3	1	25	188
3:15 PM	63	69	0	132	31	8	1	40	16	1	1	18	190
3:30 PM	53	61	1	115	57	22	0	79	17	0	0	17	211
3:45 PM	58	44	0	102	40	17	0	57	24	0	6	30	189
Hourly Total	232	233	1	466	163	58	1	222	78	4	8	90	778
4:00 PM	74	70	0	144	52	16	0	68	23	0	5	28	240
4:15 PM	97	49	0	146	39	16	0	55	20	0	1	21	222
4:30 PM	83	63	0	146	68	3	0	71	28	1	2	31	248
4:45 PM	86	42	0	128	61	8	0	69	13	1	0	14	211
Hourly Total	340	224	0	564	220	43	0	263	84	2	8	94	921
5:00 PM	98	65	0	163	40	11	0	51	24	0	2	26	240
5:15 PM	71	52	0	123	51	6	0	57	32	0	1	33	213
5:30 PM	56	50	0	106	51	7	0	58	20	0	3	23	187
5:45 PM	63	68	0	131	39	3	0	42	21	0	0	21	194
Hourly Total	288	235	0	523	181	27	0	208	97	0	6	103	834
6:00 PM	78	38	1	117	36	6	0	42	16	1	1	18	177
6:15 PM	55	47	0	102	25	5	0	30	20	0	3	23	155
6:30 PM	32	41	0	73	17	1	0	18	14	0	5	19	110
6:45 PM	38	32	0	70	19	0	0	19	12	1	3	16	105
Hourly Total	203	158	1	362	97	12	0	109	62	2	12	76	547
Grand Total	3326	2341	2	5669	1979	800	2	2781	826	17	130	973	9423
Approach %	58.7	41.3	0.0	-	71.2	28.8	0.1	-	84.9	1.7	13.4	-	-
Total %	35.3	24.8	0.0	60.2	21.0	8.5	0.0	29.5	8.8	0.2	1.4	10.3	-
Lights	3046	1968	2	5016	1673	197	1	1871	751	8	78	837	7724
% Lights	91.6	84.1	100.0	88.5	84.5	24.6	50.0	67.3	90.9	47.1	60.0	86.0	82.0
Buses	9	11	0	20	14	12	0	26	9	0	3	12	58
% Buses	0.3	0.5	0.0	0.4	0.7	1.5	0.0	0.9	1.1	0.0	2.3	1.2	0.6
Trucks	271	362	0	633	292	591	1	884	66	9	49	124	1641
% Trucks	8.1	15.5	0.0	11.2	14.8	73.9	50.0	31.8	8.0	52.9	37.7	12.7	17.4



Turning Movement Data Plot

Turning Movement Peak Hour Data (7:00 AM)

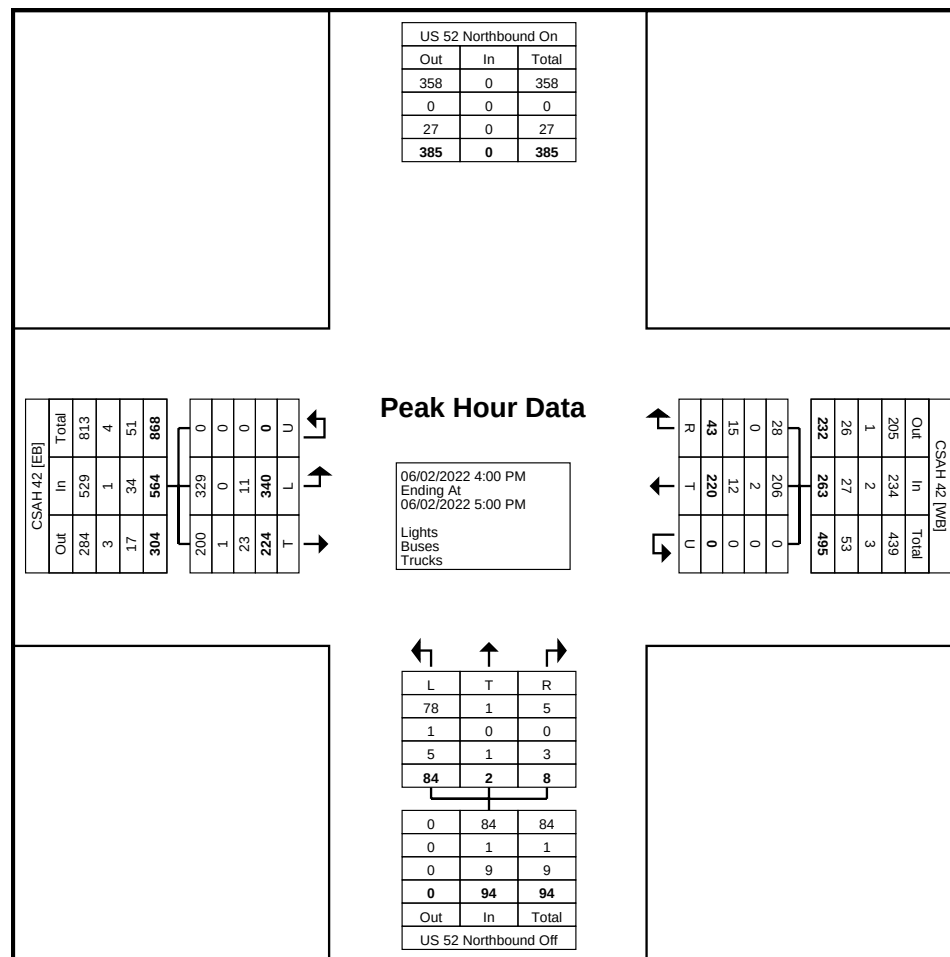
Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Northbound Off Ramp Northbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	
7:00 AM	102	49	0	151	39	20	0	59	16	0	4	20	230
7:15 AM	126	39	0	165	59	18	0	77	12	0	2	14	256
7:30 AM	111	49	0	160	47	19	0	66	22	0	4	26	252
7:45 AM	100	57	0	157	45	21	1	67	16	0	6	22	246
Total	439	194	0	633	190	78	1	269	66	0	16	82	984
Approach %	69.4	30.6	0.0	-	70.6	29.0	0.4	-	80.5	0.0	19.5	-	-
Total %	44.6	19.7	0.0	64.3	19.3	7.9	0.1	27.3	6.7	0.0	1.6	8.3	-
PHF	0.871	0.851	0.000	0.959	0.805	0.929	0.250	0.873	0.750	0.000	0.667	0.788	0.961
Lights	409	164	0	573	168	16	0	184	57	0	12	69	826
% Lights	93.2	84.5	-	90.5	88.4	20.5	0.0	68.4	86.4	-	75.0	84.1	83.9
Buses	2	1	0	3	2	1	0	3	1	0	1	2	8
% Buses	0.5	0.5	-	0.5	1.1	1.3	0.0	1.1	1.5	-	6.3	2.4	0.8
Trucks	28	29	0	57	20	61	1	82	8	0	3	11	150
% Trucks	6.4	14.9	-	9.0	10.5	78.2	100.0	30.5	12.1	-	18.8	13.4	15.2



Turning Movement Peak Hour Data Plot (7:00 AM)

Turning Movement Peak Hour Data (4:00 PM)

Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Northbound Off Ramp Northbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	
4:00 PM	74	70	0	144	52	16	0	68	23	0	5	28	240
4:15 PM	97	49	0	146	39	16	0	55	20	0	1	21	222
4:30 PM	83	63	0	146	68	3	0	71	28	1	2	31	248
4:45 PM	86	42	0	128	61	8	0	69	13	1	0	14	211
Total	340	224	0	564	220	43	0	263	84	2	8	94	921
Approach %	60.3	39.7	0.0	-	83.7	16.3	0.0	-	89.4	2.1	8.5	-	-
Total %	36.9	24.3	0.0	61.2	23.9	4.7	0.0	28.6	9.1	0.2	0.9	10.2	-
PHF	0.876	0.800	0.000	0.966	0.809	0.672	0.000	0.926	0.750	0.500	0.400	0.758	0.928
Lights	329	200	0	529	206	28	0	234	78	1	5	84	847
% Lights	96.8	89.3	-	93.8	93.6	65.1	-	89.0	92.9	50.0	62.5	89.4	92.0
Buses	0	1	0	1	2	0	0	2	1	0	0	1	4
% Buses	0.0	0.4	-	0.2	0.9	0.0	-	0.8	1.2	0.0	0.0	1.1	0.4
Trucks	11	23	0	34	12	15	0	27	5	1	3	9	70
% Trucks	3.2	10.3	-	6.0	5.5	34.9	-	10.3	6.0	50.0	37.5	9.6	7.6

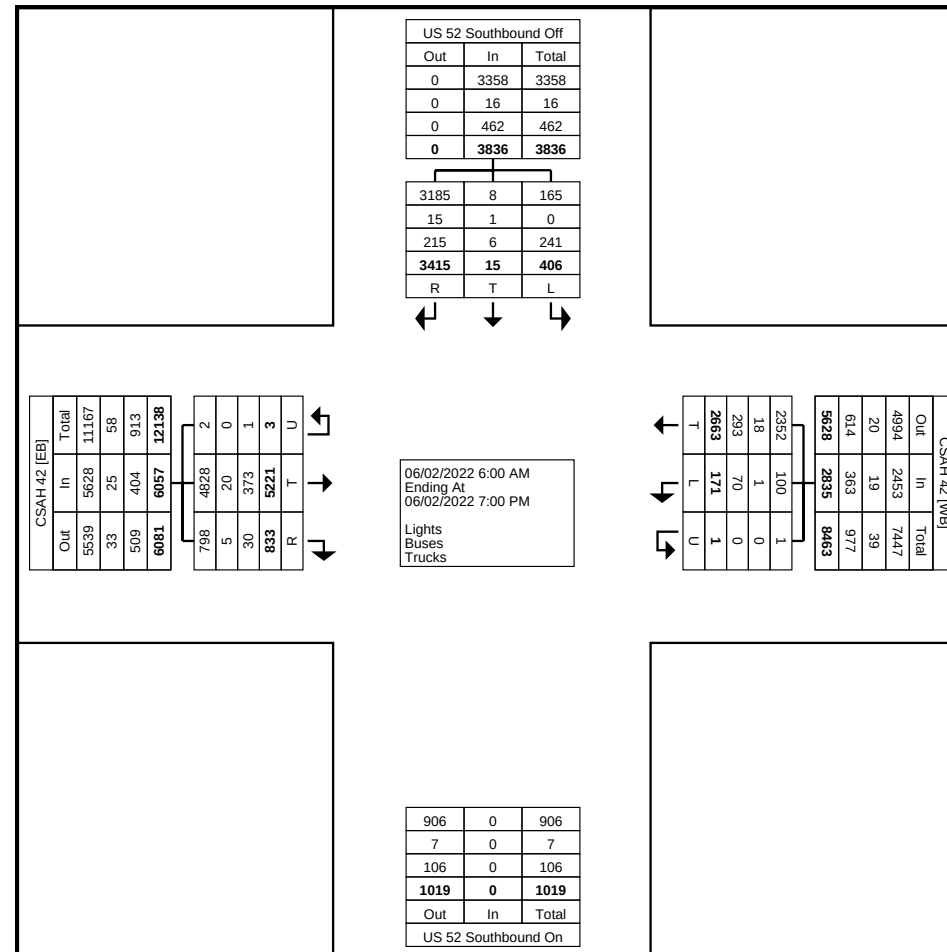


Turning Movement Peak Hour Data Plot (4:00 PM)

Turning Movement Data

Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Southbound Off Ramp Southbound				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Left	Thru	Right	App. Total	
6:00 AM	106	10	0	116	0	30	0	30	4	0	39	43	189
6:15 AM	107	10	0	117	2	45	0	47	6	0	43	49	213
6:30 AM	115	16	0	131	2	58	0	60	10	0	64	74	265
6:45 AM	115	13	0	128	2	55	0	57	9	1	81	91	276
Hourly Total	443	49	0	492	6	188	0	194	29	1	227	257	943
7:00 AM	148	21	0	169	2	53	0	55	4	2	48	54	278
7:15 AM	154	20	0	174	2	71	0	73	4	0	62	66	313
7:30 AM	156	10	0	166	3	67	0	70	10	0	95	105	341
7:45 AM	144	7	0	151	5	62	0	67	12	0	78	90	308
Hourly Total	602	58	0	660	12	253	0	265	30	2	283	315	1240
8:00 AM	128	11	0	139	1	50	0	51	8	0	35	43	233
8:15 AM	112	12	0	124	6	40	0	46	9	1	50	60	230
8:30 AM	106	19	0	125	2	51	0	53	9	0	39	48	226
8:45 AM	79	13	1	93	1	58	0	59	11	0	39	50	202
Hourly Total	425	55	1	481	10	199	0	209	37	1	163	201	891
9:00 AM	79	12	0	91	2	35	1	38	7	0	44	51	180
9:15 AM	80	15	0	95	2	36	0	38	7	0	48	55	188
9:30 AM	80	16	0	96	5	48	0	53	11	0	44	55	204
9:45 AM	93	13	0	106	9	32	0	41	6	0	33	39	186
Hourly Total	332	56	0	388	18	151	1	170	31	0	169	200	758
10:00 AM	61	10	1	72	3	38	0	41	4	0	39	43	156
10:15 AM	65	11	0	76	3	39	0	42	6	0	44	50	168
10:30 AM	80	8	0	88	3	42	0	45	8	1	40	49	182
10:45 AM	65	14	0	79	1	43	0	44	10	0	40	50	173
Hourly Total	271	43	1	315	10	162	0	172	28	1	163	192	679
11:00 AM	69	16	0	85	3	47	0	50	14	0	40	54	189
11:15 AM	62	17	0	79	6	57	0	63	13	1	51	65	207
11:30 AM	58	9	0	67	5	53	0	58	2	0	60	62	187
11:45 AM	68	8	0	76	1	40	0	41	5	1	44	50	167
Hourly Total	257	50	0	307	15	197	0	212	34	2	195	231	750
12:00 PM	106	16	0	122	1	39	0	40	8	1	58	67	229
12:15 PM	74	17	0	91	2	40	0	42	13	0	45	58	191
12:30 PM	88	11	0	99	2	37	0	39	14	1	29	44	182
12:45 PM	75	11	0	86	3	62	0	65	11	0	41	52	203
Hourly Total	343	55	0	398	8	178	0	186	46	2	173	221	805
1:00 PM	72	17	1	90	6	46	0	52	8	0	38	46	188
1:15 PM	67	16	0	83	7	36	0	43	23	0	53	76	202
1:30 PM	89	14	0	103	1	43	0	44	13	1	55	69	216
1:45 PM	65	16	0	81	3	54	0	57	12	2	61	75	213

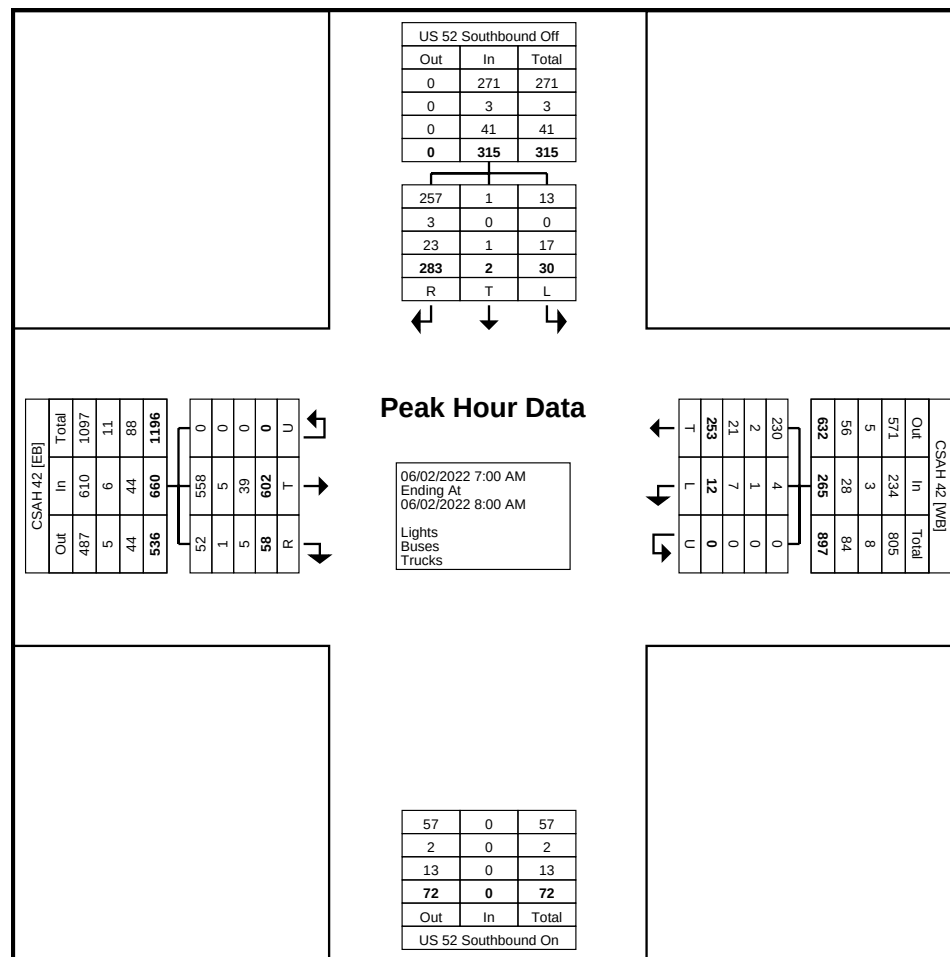
Hourly Total	293	63	1	357	17	179	0	196	56	3	207	266	819
2:00 PM	79	18	0	97	7	47	0	54	9	0	59	68	219
2:15 PM	133	21	0	154	6	57	0	63	8	0	74	82	299
2:30 PM	124	18	0	142	4	44	0	48	4	0	58	62	252
2:45 PM	110	22	0	132	4	66	0	70	3	0	77	80	282
Hourly Total	446	79	0	525	21	214	0	235	24	0	268	292	1052
3:00 PM	102	19	0	121	0	56	0	56	3	0	71	74	251
3:15 PM	121	21	0	142	5	43	0	48	11	0	91	102	292
3:30 PM	110	29	0	139	9	67	0	76	11	1	102	114	329
3:45 PM	94	27	0	121	3	64	0	67	6	0	104	110	298
Hourly Total	427	96	0	523	17	230	0	247	31	1	368	400	1170
4:00 PM	134	26	0	160	6	68	0	74	10	0	84	94	328
4:15 PM	138	23	0	161	3	59	0	62	6	1	124	131	354
4:30 PM	147	31	0	178	5	83	0	88	1	0	102	103	369
4:45 PM	120	28	0	148	4	78	0	82	6	0	126	132	362
Hourly Total	539	108	0	647	18	288	0	306	23	1	436	460	1413
5:00 PM	148	17	0	165	2	61	0	63	4	0	123	127	355
5:15 PM	121	11	0	132	2	84	0	86	4	1	165	170	388
5:30 PM	102	20	0	122	1	67	0	68	8	0	129	137	327
5:45 PM	120	18	0	138	2	60	0	62	8	0	85	93	293
Hourly Total	491	66	0	557	7	272	0	279	24	1	502	527	1363
6:00 PM	116	18	0	134	3	52	0	55	3	0	93	96	285
6:15 PM	100	11	0	111	4	40	0	44	3	0	53	56	211
6:30 PM	63	20	0	83	1	29	0	30	6	0	63	69	182
6:45 PM	73	6	0	79	4	31	0	35	1	0	52	53	167
Hourly Total	352	55	0	407	12	152	0	164	13	0	261	274	845
Grand Total	5221	833	3	6057	171	2663	1	2835	406	15	3415	3836	12728
Approach %	86.2	13.8	0.0	-	6.0	93.9	0.0	-	10.6	0.4	89.0	-	-
Total %	41.0	6.5	0.0	47.6	1.3	20.9	0.0	22.3	3.2	0.1	26.8	30.1	-
Lights	4828	798	2	5628	100	2352	1	2453	165	8	3185	3358	11439
% Lights	92.5	95.8	66.7	92.9	58.5	88.3	100.0	86.5	40.6	53.3	93.3	87.5	89.9
Buses	20	5	0	25	1	18	0	19	0	1	15	16	60
% Buses	0.4	0.6	0.0	0.4	0.6	0.7	0.0	0.7	0.0	6.7	0.4	0.4	0.5
Trucks	373	30	1	404	70	293	0	363	241	6	215	462	1229
% Trucks	7.1	3.6	33.3	6.7	40.9	11.0	0.0	12.8	59.4	40.0	6.3	12.0	9.7



Turning Movement Data Plot

Turning Movement Peak Hour Data (7:00 AM)

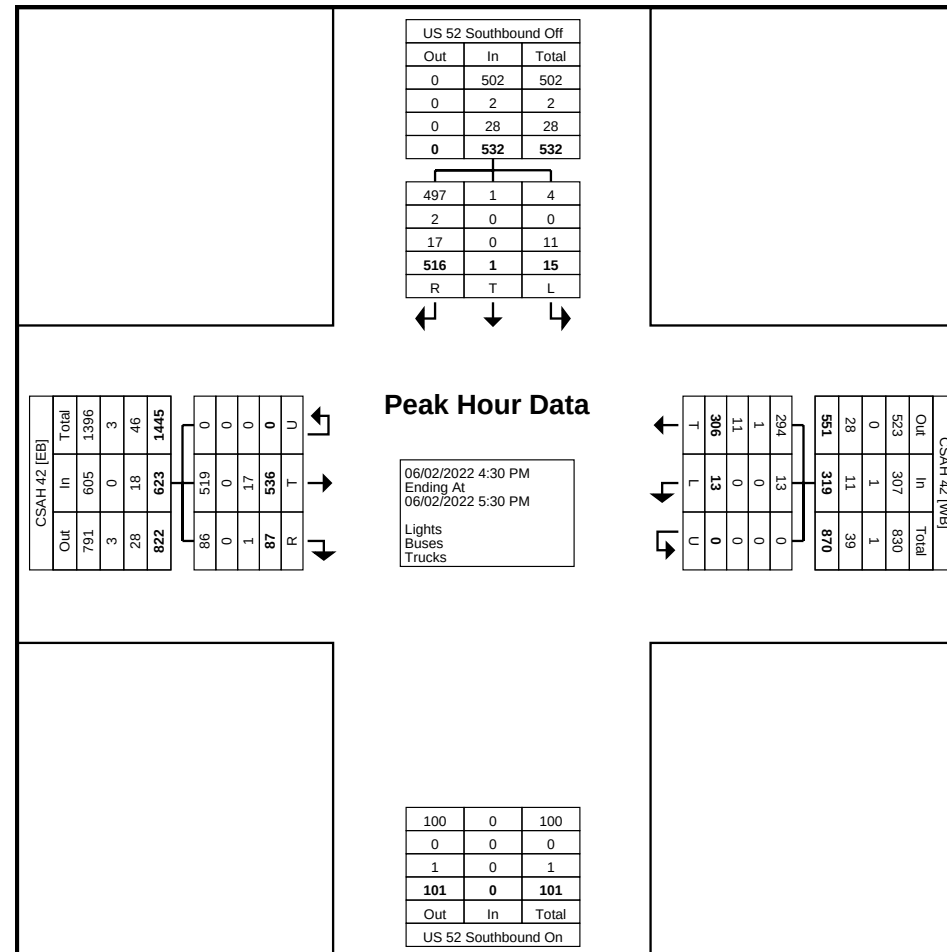
Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Southbound Off Ramp Southbound				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Left	Thru	Right	App. Total	
7:00 AM	148	21	0	169	2	53	0	55	4	2	48	54	278
7:15 AM	154	20	0	174	2	71	0	73	4	0	62	66	313
7:30 AM	156	10	0	166	3	67	0	70	10	0	95	105	341
7:45 AM	144	7	0	151	5	62	0	67	12	0	78	90	308
Total	602	58	0	660	12	253	0	265	30	2	283	315	1240
Approach %	91.2	8.8	0.0	-	4.5	95.5	0.0	-	9.5	0.6	89.8	-	-
Total %	48.5	4.7	0.0	53.2	1.0	20.4	0.0	21.4	2.4	0.2	22.8	25.4	-
PHF	0.965	0.690	0.000	0.948	0.600	0.891	0.000	0.908	0.625	0.250	0.745	0.750	0.909
Lights	558	52	0	610	4	230	0	234	13	1	257	271	1115
% Lights	92.7	89.7	-	92.4	33.3	90.9	-	88.3	43.3	50.0	90.8	86.0	89.9
Buses	5	1	0	6	1	2	0	3	0	0	3	3	12
% Buses	0.8	1.7	-	0.9	8.3	0.8	-	1.1	0.0	0.0	1.1	1.0	1.0
Trucks	39	5	0	44	7	21	0	28	17	1	23	41	113
% Trucks	6.5	8.6	-	6.7	58.3	8.3	-	10.6	56.7	50.0	8.1	13.0	9.1



Turning Movement Peak Hour Data Plot (7:00 AM)

Turning Movement Peak Hour Data (4:30 PM)

Start Time	CSAH 42 Eastbound				CSAH 42 Westbound				US 52 Southbound Off Ramp Southbound				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Left	Thru	Right	App. Total	
4:30 PM	147	31	0	178	5	83	0	88	1	0	102	103	369
4:45 PM	120	28	0	148	4	78	0	82	6	0	126	132	362
5:00 PM	148	17	0	165	2	61	0	63	4	0	123	127	355
5:15 PM	121	11	0	132	2	84	0	86	4	1	165	170	388
Total	536	87	0	623	13	306	0	319	15	1	516	532	1474
Approach %	86.0	14.0	0.0	-	4.1	95.9	0.0	-	2.8	0.2	97.0	-	-
Total %	36.4	5.9	0.0	42.3	0.9	20.8	0.0	21.6	1.0	0.1	35.0	36.1	-
PHF	0.905	0.702	0.000	0.875	0.650	0.911	0.000	0.906	0.625	0.250	0.782	0.782	0.950
Lights	519	86	0	605	13	294	0	307	4	1	497	502	1414
% Lights	96.8	98.9	-	97.1	100.0	96.1	-	96.2	26.7	100.0	96.3	94.4	95.9
Buses	0	0	0	0	0	1	0	1	0	0	2	2	3
% Buses	0.0	0.0	-	0.0	0.0	0.3	-	0.3	0.0	0.0	0.4	0.4	0.2
Trucks	17	1	0	18	0	11	0	11	11	0	17	28	57
% Trucks	3.2	1.1	-	2.9	0.0	3.6	-	3.4	73.3	0.0	3.3	5.3	3.9



Turning Movement Peak Hour Data Plot (4:30 PM)

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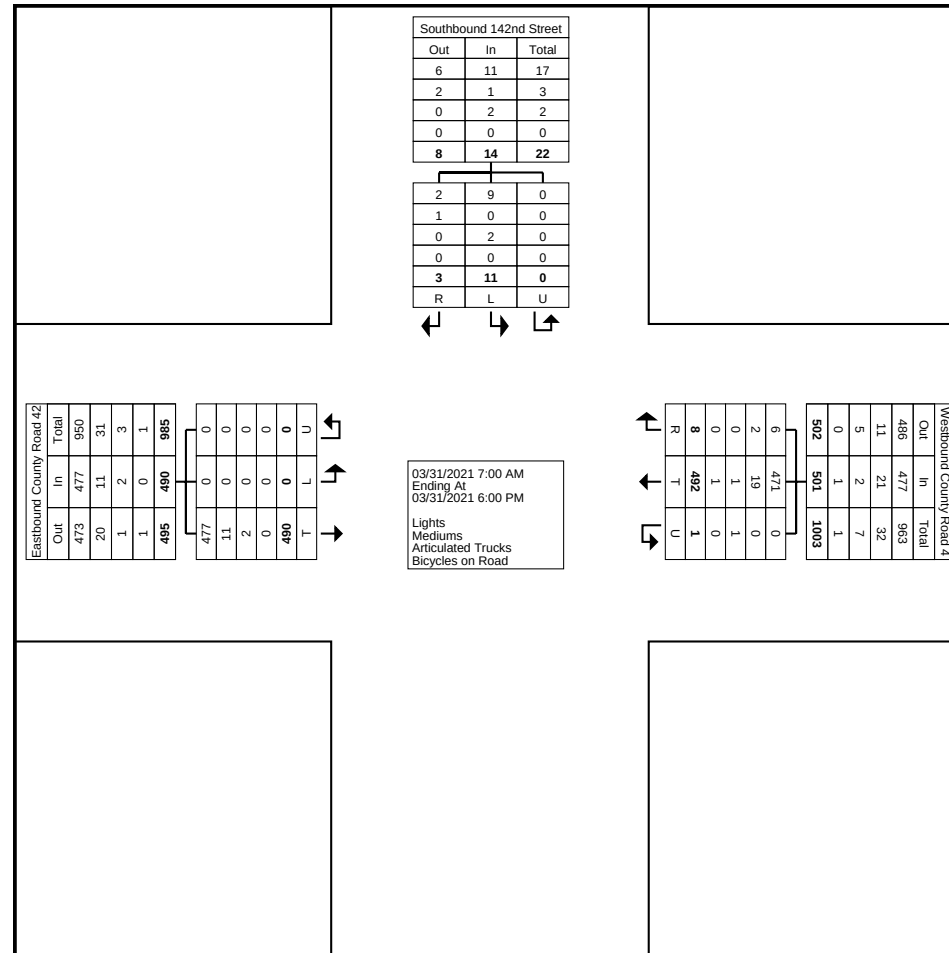
Count Name: County Road 42 & 142nd Street
East
Site Code:
Start Date: 03/31/2021
Page No: 1

Turning Movement Data

Start Time	Eastbound County Road 42 Eastbound				Westbound County Road 42 Westbound				Southbound 142nd Street East Southbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	
7:00 AM	0	18	0	18	24	1	0	25	0	0	0	0	43
7:15 AM	0	24	0	24	46	0	0	46	0	0	0	0	70
7:30 AM	0	26	0	26	32	1	0	33	0	1	0	1	60
7:45 AM	0	32	0	32	35	1	0	36	2	0	0	2	70
Hourly Total	0	100	0	100	137	3	0	140	2	1	0	3	243
8:00 AM	0	18	0	18	29	0	1	30	0	1	0	1	49
8:15 AM	0	20	0	20	21	0	0	21	0	0	0	0	41
8:30 AM	0	13	0	13	21	0	0	21	0	0	0	0	34
8:45 AM	0	18	0	18	27	2	0	29	0	0	0	0	47
Hourly Total	0	69	0	69	98	2	1	101	0	1	0	1	171
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	45	0	45	28	0	0	28	2	0	0	2	75
4:15 PM	0	46	0	46	39	0	0	39	0	0	0	0	85
4:30 PM	0	35	0	35	21	1	0	22	1	0	0	1	58
4:45 PM	0	43	0	43	36	0	0	36	2	1	0	3	82
Hourly Total	0	169	0	169	124	1	0	125	5	1	0	6	300
5:00 PM	0	43	0	43	25	0	0	25	0	0	0	0	68
5:15 PM	0	29	0	29	41	0	0	41	2	0	0	2	72
5:30 PM	0	46	0	46	29	1	0	30	0	0	0	0	76
5:45 PM	0	34	0	34	38	1	0	39	2	0	0	2	75
Hourly Total	0	152	0	152	133	2	0	135	4	0	0	4	291
Grand Total	0	490	0	490	492	8	1	501	11	3	0	14	1005
Approach %	0.0	100.0	0.0	-	98.2	1.6	0.2	-	78.6	21.4	0.0	-	-
Total %	0.0	48.8	0.0	48.8	49.0	0.8	0.1	49.9	1.1	0.3	0.0	1.4	-
Lights	0	477	0	477	471	6	0	477	9	2	0	11	965
% Lights	-	97.3	-	97.3	95.7	75.0	0.0	95.2	81.8	66.7	-	78.6	96.0
Mediums	0	11	0	11	19	2	0	21	0	1	0	1	33
% Mediums	-	2.2	-	2.2	3.9	25.0	0.0	4.2	0.0	33.3	-	7.1	3.3
Articulated Trucks	0	2	0	2	1	0	1	2	2	0	0	2	6
% Articulated Trucks	-	0.4	-	0.4	0.2	0.0	100.0	0.4	18.2	0.0	-	14.3	0.6
Bicycles on Road	0	0	0	0	1	0	0	1	0	0	0	0	1
% Bicycles on Road	-	0.0	-	0.0	0.2	0.0	0.0	0.2	0.0	0.0	-	0.0	0.1

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Count Name: County Road 42 & 142nd Street
 East
 Site Code:
 Start Date: 03/31/2021
 Page No: 2



Turning Movement Data Plot

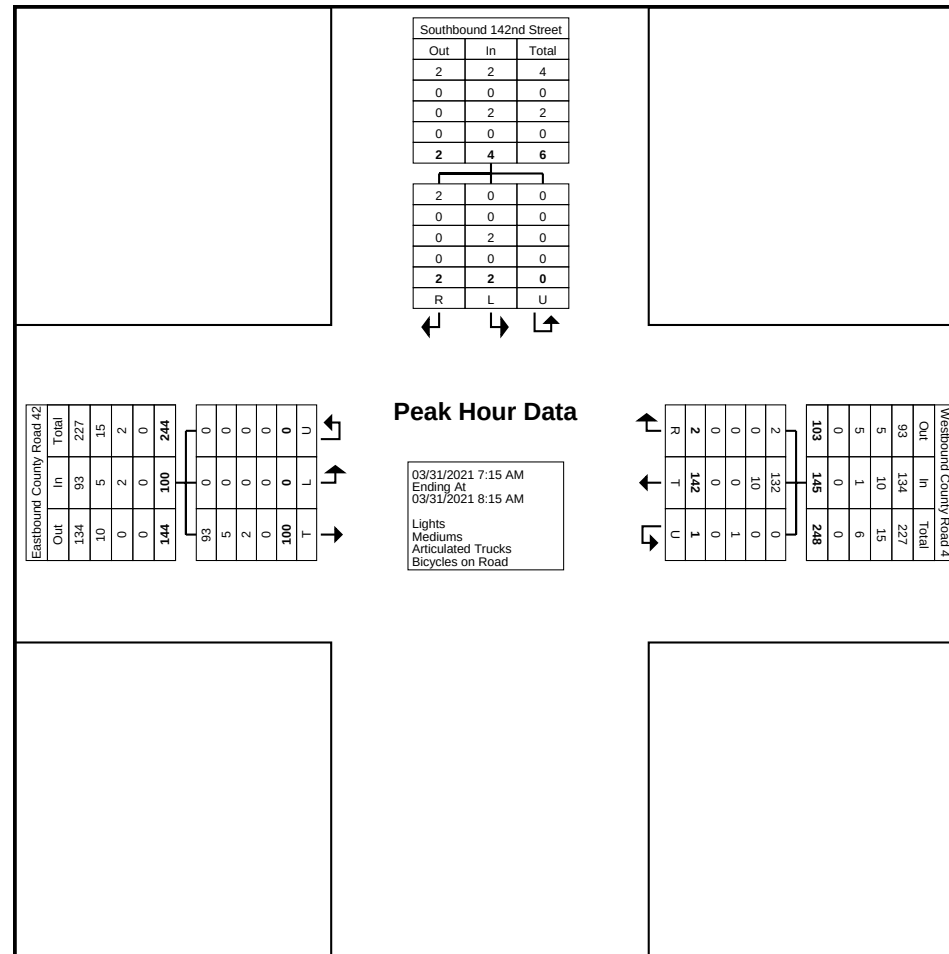
Kimley-Horn : Lisle (IL)
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Count Name: County Road 42 & 142nd Street
 East
 Site Code:
 Start Date: 03/31/2021
 Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Eastbound County Road 42 Eastbound				Westbound County Road 42 Westbound				Southbound 142nd Street East Southbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	
7:15 AM	0	24	0	24	46	0	0	46	0	0	0	0	70
7:30 AM	0	26	0	26	32	1	0	33	0	1	0	1	60
7:45 AM	0	32	0	32	35	1	0	36	2	0	0	2	70
8:00 AM	0	18	0	18	29	0	1	30	0	1	0	1	49
Total	0	100	0	100	142	2	1	145	2	2	0	4	249
Approach %	0.0	100.0	0.0	-	97.9	1.4	0.7	-	50.0	50.0	0.0	-	-
Total %	0.0	40.2	0.0	40.2	57.0	0.8	0.4	58.2	0.8	0.8	0.0	1.6	-
PHF	0.000	0.781	0.000	0.781	0.772	0.500	0.250	0.788	0.250	0.500	0.000	0.500	0.889
Lights	0	93	0	93	132	2	0	134	0	2	0	2	229
% Lights	-	93.0	-	93.0	93.0	100.0	0.0	92.4	0.0	100.0	-	50.0	92.0
Mediums	0	5	0	5	10	0	0	10	0	0	0	0	15
% Mediums	-	5.0	-	5.0	7.0	0.0	0.0	6.9	0.0	0.0	-	0.0	6.0
Articulated Trucks	0	2	0	2	0	0	1	1	2	0	0	2	5
% Articulated Trucks	-	2.0	-	2.0	0.0	0.0	100.0	0.7	100.0	0.0	-	50.0	2.0
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

Count Name: County Road 42 & 142nd Street
East
Site Code:
Start Date: 03/31/2021
Page No: 4

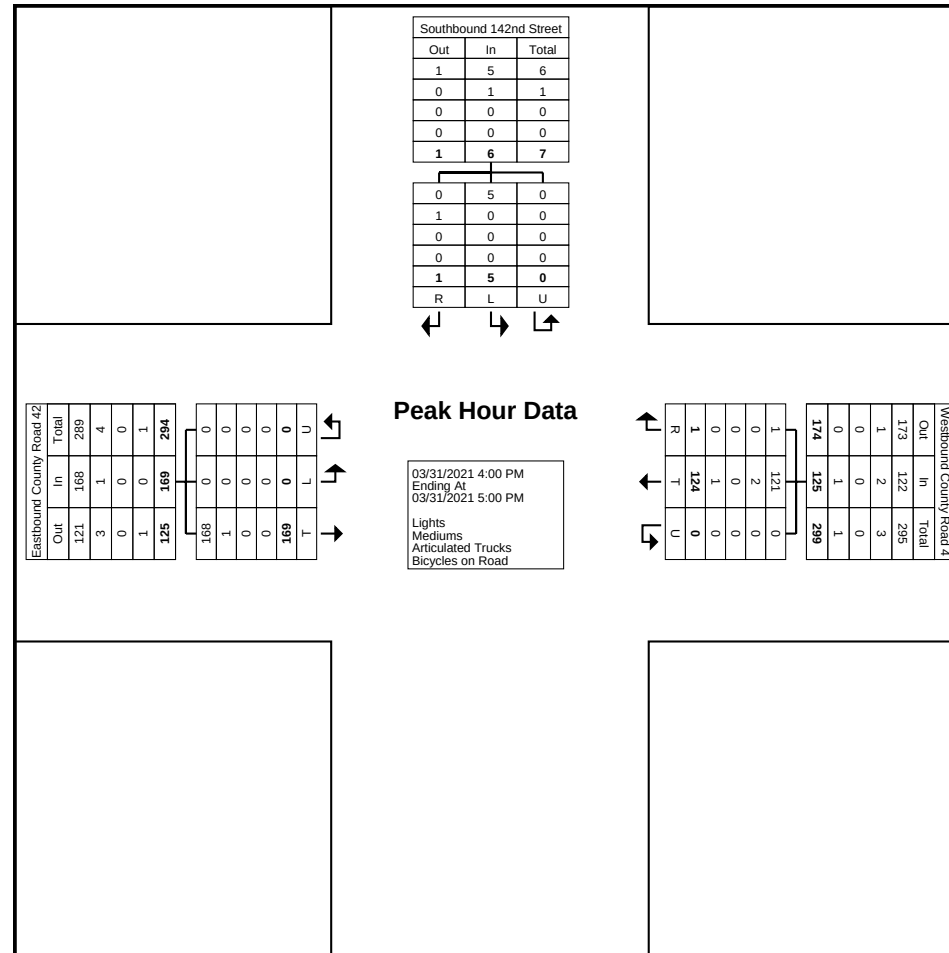


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Count Name: County Road 42 & 142nd Street
 East
 Site Code:
 Start Date: 03/31/2021
 Page No: 5

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Eastbound County Road 42 Eastbound				Westbound County Road 42 Westbound				Southbound 142nd Street East Southbound				Int. Total
	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	
4:00 PM	0	45	0	45	28	0	0	28	2	0	0	2	75
4:15 PM	0	46	0	46	39	0	0	39	0	0	0	0	85
4:30 PM	0	35	0	35	21	1	0	22	1	0	0	1	58
4:45 PM	0	43	0	43	36	0	0	36	2	1	0	3	82
Total	0	169	0	169	124	1	0	125	5	1	0	6	300
Approach %	0.0	100.0	0.0	-	99.2	0.8	0.0	-	83.3	16.7	0.0	-	-
Total %	0.0	56.3	0.0	56.3	41.3	0.3	0.0	41.7	1.7	0.3	0.0	2.0	-
PHF	0.000	0.918	0.000	0.918	0.795	0.250	0.000	0.801	0.625	0.250	0.000	0.500	0.882
Lights	0	168	0	168	121	1	0	122	5	0	0	5	295
% Lights	-	99.4	-	99.4	97.6	100.0	-	97.6	100.0	0.0	-	83.3	98.3
Mediums	0	1	0	1	2	0	0	2	0	1	0	1	4
% Mediums	-	0.6	-	0.6	1.6	0.0	-	1.6	0.0	100.0	-	16.7	1.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	1	0	0	1	0	0	0	0	1
% Bicycles on Road	-	0.0	-	0.0	0.8	0.0	-	0.8	0.0	0.0	-	0.0	0.3



Turning Movement Peak Hour Data Plot (4:00 PM)

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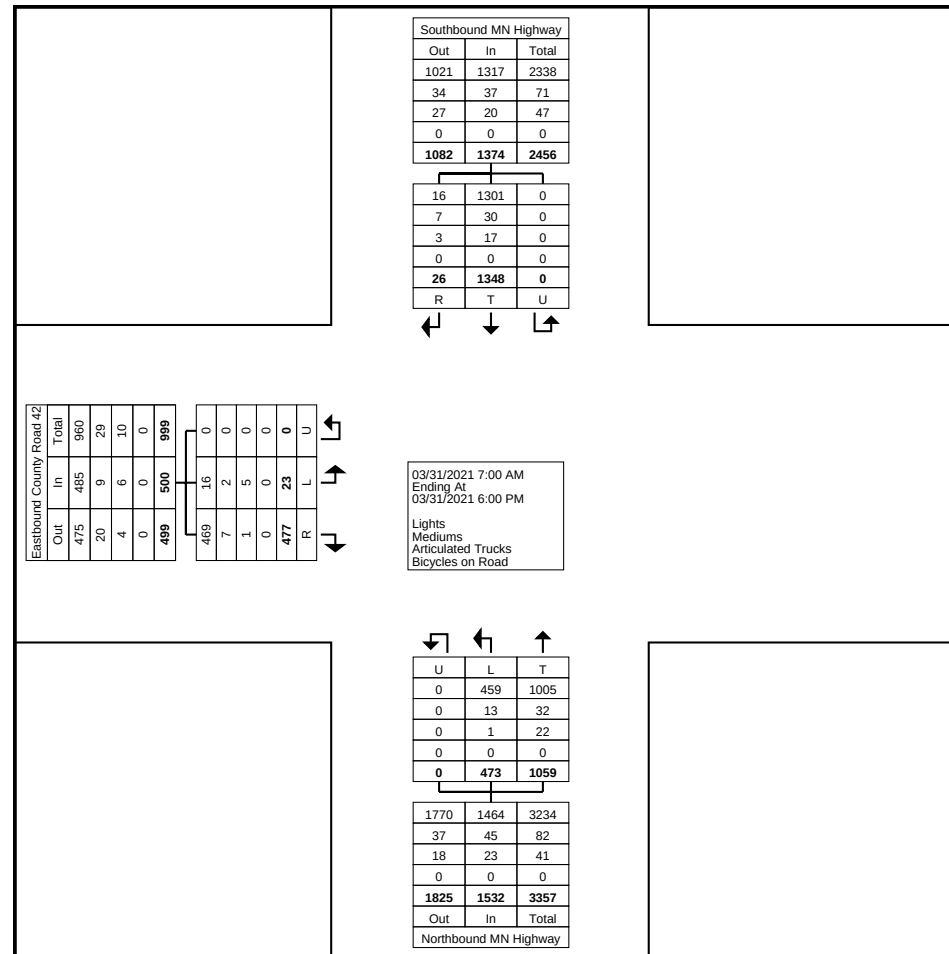
Count Name: County Road 42 & State Highway 55
Site Code:
Start Date: 03/31/2021
Page No: 1

Turning Movement Data

Start Time	Eastbound County Road 42 Eastbound				Northbound MN Highway 55 Northbound				Southbound MN Highway 55 Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
7:00 AM	1	18	0	19	24	85	0	109	28	2	0	30	158
7:15 AM	0	24	0	24	42	105	0	147	33	2	0	35	206
7:30 AM	1	25	0	26	35	85	0	120	54	1	0	55	201
7:45 AM	3	29	0	32	33	76	0	109	41	2	0	43	184
Hourly Total	5	96	0	101	134	351	0	485	156	7	0	163	749
8:00 AM	4	15	0	19	28	71	0	99	36	1	0	37	155
8:15 AM	0	20	0	20	19	63	0	82	40	2	0	42	144
8:30 AM	0	13	0	13	21	59	0	80	49	1	0	50	143
8:45 AM	3	17	0	20	22	57	0	79	33	4	0	37	136
Hourly Total	7	65	0	72	90	250	0	340	158	8	0	166	578
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	3	41	0	44	25	66	0	91	115	3	0	118	253
4:15 PM	2	48	0	50	38	56	0	94	149	1	0	150	294
4:30 PM	0	35	0	35	23	61	0	84	125	0	0	125	244
4:45 PM	0	43	0	43	35	55	0	90	136	2	0	138	271
Hourly Total	5	167	0	172	121	238	0	359	525	6	0	531	1062
5:00 PM	1	38	0	39	21	74	0	95	162	2	0	164	298
5:15 PM	2	30	0	32	40	62	0	102	159	1	0	160	294
5:30 PM	1	45	0	46	29	45	0	74	107	1	0	108	228
5:45 PM	2	36	0	38	38	39	0	77	81	1	0	82	197
Hourly Total	6	149	0	155	128	220	0	348	509	5	0	514	1017
Grand Total	23	477	0	500	473	1059	0	1532	1348	26	0	1374	3406
Approach %	4.6	95.4	0.0	-	30.9	69.1	0.0	-	98.1	1.9	0.0	-	-
Total %	0.7	14.0	0.0	14.7	13.9	31.1	0.0	45.0	39.6	0.8	0.0	40.3	-
Lights	16	469	0	485	459	1005	0	1464	1301	16	0	1317	3266
% Lights	69.6	98.3	-	97.0	97.0	94.9	-	95.6	96.5	61.5	-	95.9	95.9
Mediums	2	7	0	9	13	32	0	45	30	7	0	37	91
% Mediums	8.7	1.5	-	1.8	2.7	3.0	-	2.9	2.2	26.9	-	2.7	2.7
Articulated Trucks	5	1	0	6	1	22	0	23	17	3	0	20	49
% Articulated Trucks	21.7	0.2	-	1.2	0.2	2.1	-	1.5	1.3	11.5	-	1.5	1.4
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0

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Count Name: County Road 42 & State Highway
 55
 Site Code:
 Start Date: 03/31/2021
 Page No: 2



Turning Movement Data Plot

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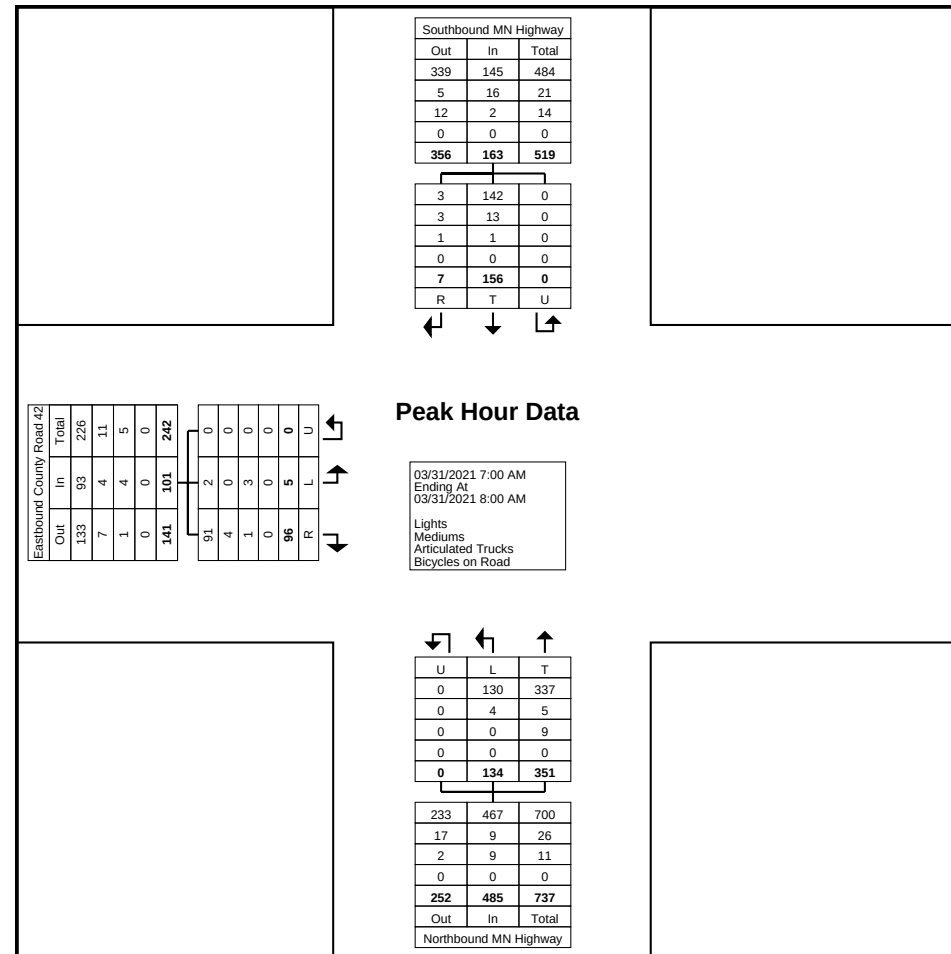
Count Name: County Road 42 & State Highway
 55
 Site Code:
 Start Date: 03/31/2021
 Page No: 3

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Eastbound County Road 42 Eastbound				Northbound MN Highway 55 Northbound				Southbound MN Highway 55 Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
7:00 AM	1	18	0	19	24	85	0	109	28	2	0	30	158
7:15 AM	0	24	0	24	42	105	0	147	33	2	0	35	206
7:30 AM	1	25	0	26	35	85	0	120	54	1	0	55	201
7:45 AM	3	29	0	32	33	76	0	109	41	2	0	43	184
Total	5	96	0	101	134	351	0	485	156	7	0	163	749
Approach %	5.0	95.0	0.0	-	27.6	72.4	0.0	-	95.7	4.3	0.0	-	-
Total %	0.7	12.8	0.0	13.5	17.9	46.9	0.0	64.8	20.8	0.9	0.0	21.8	-
PHF	0.417	0.828	0.000	0.789	0.798	0.836	0.000	0.825	0.722	0.875	0.000	0.741	0.909
Lights	2	91	0	93	130	337	0	467	142	3	0	145	705
% Lights	40.0	94.8	-	92.1	97.0	96.0	-	96.3	91.0	42.9	-	89.0	94.1
Mediums	0	4	0	4	4	5	0	9	13	3	0	16	29
% Mediums	0.0	4.2	-	4.0	3.0	1.4	-	1.9	8.3	42.9	-	9.8	3.9
Articulated Trucks	3	1	0	4	0	9	0	9	1	1	0	2	15
% Articulated Trucks	60.0	1.0	-	4.0	0.0	2.6	-	1.9	0.6	14.3	-	1.2	2.0
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0

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Count Name: County Road 42 & State Highway
 55
 Site Code:
 Start Date: 03/31/2021
 Page No: 4



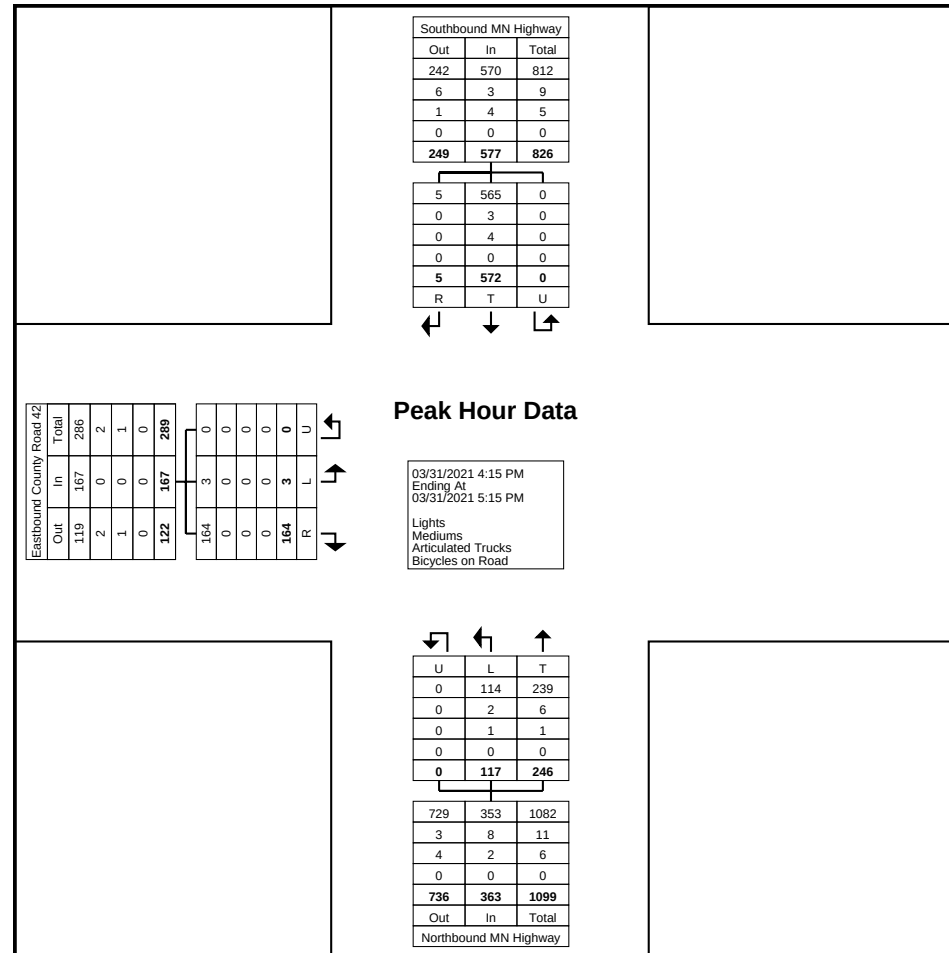
Turning Movement Peak Hour Data Plot (7:00 AM)

Kimley-Horn : Lisle (IL)
 1001 Warrenville Road, Suite 350
 Lisle, Illinois, United States 60532
 331.481.7332 riley.mitts@kimley-horn.com

Count Name: County Road 42 & State Highway
 55
 Site Code:
 Start Date: 03/31/2021
 Page No: 5

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Eastbound County Road 42 Eastbound				Northbound MN Highway 55 Northbound				Southbound MN Highway 55 Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
4:15 PM	2	48	0	50	38	56	0	94	149	1	0	150	294
4:30 PM	0	35	0	35	23	61	0	84	125	0	0	125	244
4:45 PM	0	43	0	43	35	55	0	90	136	2	0	138	271
5:00 PM	1	38	0	39	21	74	0	95	162	2	0	164	298
Total	3	164	0	167	117	246	0	363	572	5	0	577	1107
Approach %	1.8	98.2	0.0	-	32.2	67.8	0.0	-	99.1	0.9	0.0	-	-
Total %	0.3	14.8	0.0	15.1	10.6	22.2	0.0	32.8	51.7	0.5	0.0	52.1	-
PHF	0.375	0.854	0.000	0.835	0.770	0.831	0.000	0.955	0.883	0.625	0.000	0.880	0.929
Lights	3	164	0	167	114	239	0	353	565	5	0	570	1090
% Lights	100.0	100.0	-	100.0	97.4	97.2	-	97.2	98.8	100.0	-	98.8	98.5
Mediums	0	0	0	0	2	6	0	8	3	0	0	3	11
% Mediums	0.0	0.0	-	0.0	1.7	2.4	-	2.2	0.5	0.0	-	0.5	1.0
Articulated Trucks	0	0	0	0	1	1	0	2	4	0	0	4	6
% Articulated Trucks	0.0	0.0	-	0.0	0.9	0.4	-	0.6	0.7	0.0	-	0.7	0.5
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (4:15 PM)

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg Direction	Hwy 55 Eastbound					Hwy 55 Westbound					Fischer Ave Northbound					Fischer Ave Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2024-11-06 6:00AM	1	25	0	0	26	4	184	0	0	188	1	0	0	0	1	2	0	0	0	2	217
6:15AM	0	40	0	0	40	0	231	0	0	231	1	0	0	0	1	0	0	0	0	0	272
6:30AM	0	77	0	0	77	0	248	0	0	248	1	0	0	0	1	0	0	1	0	1	327
6:45AM	0	88	0	0	88	0	217	0	0	217	1	0	0	0	1	0	1	1	0	2	308
Hourly Total	1	230	0	0	231	4	880	0	0	884	4	0	0	0	4	2	1	2	0	5	1124
7:00AM	1	97	0	0	98	0	219	0	0	219	1	0	0	0	1	0	0	2	0	2	320
7:15AM	1	119	1	0	121	1	254	0	0	255	0	0	0	0	0	2	0	1	0	3	379
7:30AM	0	111	0	0	111	1	273	0	0	274	1	0	0	0	1	0	0	1	0	1	387
7:45AM	0	152	0	0	152	1	201	0	0	202	2	0	1	0	3	0	0	0	0	0	357
Hourly Total	2	479	1	0	482	3	947	0	0	950	4	0	1	0	5	2	0	4	0	6	1443
8:00AM	0	132	1	0	133	0	135	0	0	135	0	0	0	0	0	2	0	1	0	3	271
8:15AM	0	128	0	0	128	2	127	1	0	130	1	0	0	2	3	0	0	0	0	0	261
8:30AM	0	117	0	0	117	0	140	0	0	140	1	0	0	0	1	0	0	0	0	0	258
8:45AM	0	122	2	0	124	0	100	0	0	100	0	0	1	1	2	0	0	2	0	2	228
Hourly Total	0	499	3	0	502	2	502	1	0	505	2	0	1	3	6	2	0	3	0	5	1018
9:00AM	1	83	2	0	86	1	96	0	0	97	1	0	0	0	1	1	0	0	0	1	185
9:15AM	0	78	0	0	78	1	88	0	0	89	0	0	0	0	0	1	0	0	0	1	168
9:30AM	0	105	0	0	105	1	105	0	0	106	3	0	0	0	3	0	0	0	0	0	214
9:45AM	0	111	1	0	112	1	95	1	0	97	0	0	1	0	1	0	0	0	0	0	210
Hourly Total	1	377	3	0	381	4	384	1	0	389	4	0	1	0	5	2	0	0	0	2	777
10:00AM	1	68	2	0	71	1	94	0	0	95	1	1	1	0	3	1	0	0	0	1	170
10:15AM	0	93	2	0	95	0	77	0	0	77	0	0	1	0	1	0	0	0	0	0	173
10:30AM	0	99	3	0	102	0	104	0	0	104	1	0	0	0	1	0	0	0	0	0	207
10:45AM	0	116	1	0	117	0	107	0	0	107	0	0	0	0	0	0	0	0	0	0	224
Hourly Total	1	376	8	0	385	1	382	0	0	383	2	1	2	0	5	1	0	0	0	1	774
11:00AM	0	107	2	0	109	0	123	1	0	124	0	0	0	0	0	0	0	0	0	0	233
11:15AM	1	89	1	0	91	0	123	0	0	123	0	0	2	0	2	1	0	0	0	1	217
11:30AM	0	129	5	0	134	0	97	0	0	97	0	0	1	0	1	1	1	0	0	2	234
11:45AM	1	97	0	0	98	3	91	0	0	94	1	0	2	0	3	0	0	0	0	0	195
Hourly Total	2	422	8	0	432	3	434	1	0	438	1	0	5	0	6	2	1	0	0	3	879
12:00PM	1	98	1	0	100	0	92	0	0	92	1	0	1	0	2	0	0	0	0	0	194
12:15PM	0	114	4	0	118	1	85	1	0	87	1	0	1	0	2	1	0	0	0	1	208
12:30PM	1	124	0	0	125	0	123	0	0	123	1	0	0	0	1	2	0	0	0	2	251
12:45PM	0	122	0	0	122	0	111	0	0	111	1	0	1	0	2	1	0	0	0	1	236
Hourly Total	2	458	5	0	465	1	411	1	0	413	4	0	3	0	7	4	0	0	0	4	889
1:00PM	0	104	0	1	105	0	94	0	0	94	1	0	0	0	1	0	0	0	0	0	200
1:15PM	0	114	1	0	115	0	89	1	0	90	1	0	0	0	1	0	0	2	0	2	208
1:30PM	0	119	2	0	121	0	113	0	0	113	0	0	3	0	3	1	0	0	0	1	238
1:45PM	0	126	1	0	127	0	93	2	0	95	2	0	1	0	3	0	0	1	0	1	226
Hourly Total	0	463	4	1	468	0	389	3	0	392	4	0	4	0	8	1	0	3	0	4	872
2:00PM	1	135	2	0	138	0	143	0	0	143	2	0	1	0	3	0	0	0	0	0	284
2:15PM	0	163	2	0	165	0	116	0	0	116	0	0	0	0	0	1	0	0	0	1	282
2:30PM	0	188	0	0	188	2	118	2	0	122	2	0	0	0	2	0	0	0	0	0	312
2:45PM	0	158	0	0	158	0	109	1	0	110	0	0	0	0	0	0	0	0	0	0	268
Hourly Total	1	644	4	0	649	2	486	3	0	491	4	0	1	0	5	1	0	0	0	1	1146
3:00PM	1	226	3	0	230	0	143	0	0	143	1	0	0	0	1	0	1	1	0	2	376
3:15PM	0	208	1	0	209	0	144	2	0	146	2	1	0	0	3	0	0	1	0	1	359
3:30PM	0	237	3	0	240	0	172	0	0	172	1	0	0	0	1	0	0	0	0	0	413
3:45PM	2	222	3	0	227	1	123	0	0	124	2	0	2	0	4	1	0	1	0	2	357
Hourly Total	3	893	10	0	906	1	582	2	0	585	6	1	2	0	9	1	1	3	0	5	1505
4:00PM	2	234	1	0	237	0	176	0	0	176	1	0	0	0	1	1	0	1	0	2	416
4:15PM	2	270	2	0	274	0	189	0	0	189	1	0	0	0	1	0	0	0	0	0	464
4:30PM	1	203	2	0	206	1	192	1	0	194	1	0	1	0	2	1	0	2	0	3	405
4:45PM	0	238	2	0	240	0	138	1	0	139	2	0	0	0	2	0	0	1	0	1	382

Leg Direction	Hwy 55 Eastbound					Hwy 55 Westbound					Fischer Ave Northbound					Fischer Ave Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
Hourly Total	5	945	7	0	957	1	695	2	0	698	5	0	1	0	6	2	0	4	0	6	1667
5:00PM	0	201	2	0	203	0	137	1	0	138	1	0	2	0	3	1	0	0	0	1	345
5:15PM	2	274	3	0	279	0	114	2	0	116	1	0	0	0	1	0	0	0	0	0	396
5:30PM	0	256	1	0	257	1	87	1	0	89	1	0	1	0	2	3	1	1	0	5	353
5:45PM	3	113	0	0	116	0	58	0	0	58	1	1	0	0	2	1	0	2	0	3	179
Hourly Total	5	844	6	0	855	1	396	4	0	401	4	1	3	0	8	5	1	3	0	9	1273
6:00PM	0	120	3	0	123	5	65	1	0	71	1	0	1	0	2	2	1	0	0	3	199
6:15PM	5	66	0	0	71	0	70	2	0	72	3	0	0	0	3	0	0	0	0	0	146
6:30PM	1	60	0	0	61	5	56	0	0	61	1	1	1	0	3	1	1	0	0	2	127
6:45PM	0	50	0	0	50	1	47	1	0	49	0	1	0	0	1	0	0	0	0	0	100
Hourly Total	6	296	3	0	305	11	238	4	0	253	5	2	2	0	9	3	2	0	0	5	572
Total	29	6926	62	1	7018	34	6726	22	0	6782	49	5	26	3	83	28	6	22	0	56	13939
% Approach	0.4%	98.7%	0.9%	0%	-	0.5%	99.2%	0.3%	0%	-	59.0%	6.0%	31.3%	3.6%	-	50.0%	10.7%	39.3%	0%	-	-
% Total	0.2%	49.7%	0.4%	0%	50.3%	0.2%	48.3%	0.2%	0%	48.7%	0.4%	0%	0.2%	0%	0.6%	0.2%	0%	0.2%	0%	0.4%	-
Lights	28	6570	55	1	6654	31	6311	20	0	6362	44	3	26	0	73	23	4	20	0	47	13136
% Lights	96.6%	94.9%	88.7%	100%	94.8%	91.2%	93.8%	90.9%	0%	93.8%	89.8%	60.0%	100%	0%	88.0%	82.1%	66.7%	90.9%	0%	83.9%	94.2%
Articulated Trucks and Single-Unit Trucks	1	340	6	0	347	1	397	2	0	400	4	2	0	3	9	2	0	2	0	4	760
% Articulated Trucks and Single-Unit Trucks	3.4%	4.9%	9.7%	0%	4.9%	2.9%	5.9%	9.1%	0%	5.9%	8.2%	40.0%	0%	100%	10.8%	7.1%	0%	9.1%	0%	7.1%	5.5%
Buses	0	16	1	0	17	2	18	0	0	20	1	0	0	0	1	3	2	0	0	5	43
% Buses	0%	0.2%	1.6%	0%	0.2%	5.9%	0.3%	0%	0%	0.3%	2.0%	0%	0%	0%	1.2%	10.7%	33.3%	0%	0%	8.9%	0.3%

* L: Left, R: Right, T: Thru, U: U-Turn

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

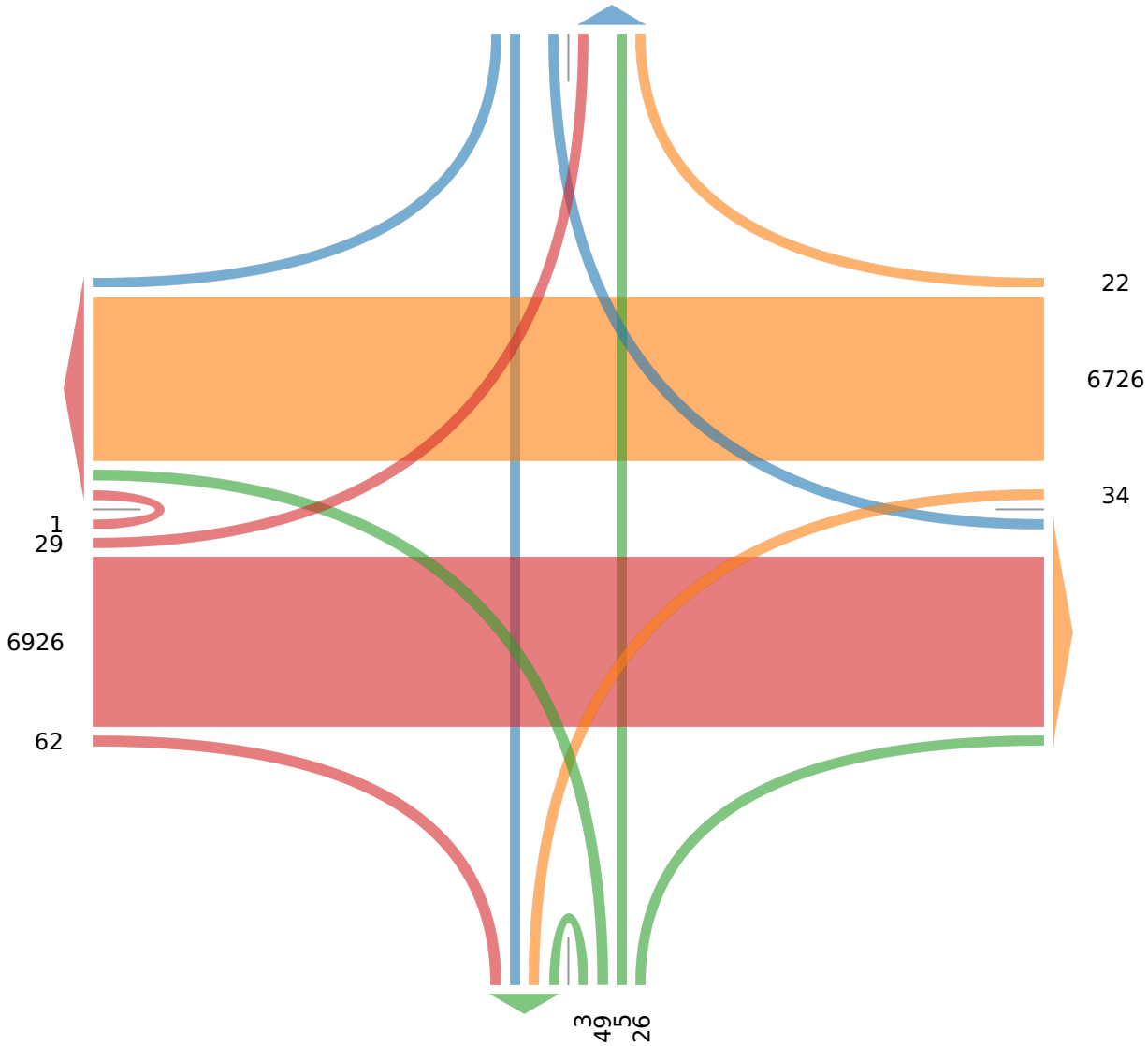
[N] Fischer Ave

Total: 112

In: 56 Out: 56

22 28

[W] Hwy 55
Total: 13816
In: 7018 Out: 6798



Out: 105 In: 83

Total: 188

[S] Fischer Ave

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg Direction	Hwy 55 Eastbound					Hwy 55 Westbound					Fischer Ave Northbound					Fischer Ave Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2024-11-06 7:00AM	1	97	0	0	98	0	219	0	0	219	1	0	0	0	1	0	0	2	0	2	320
7:15AM	1	119	1	0	121	1	254	0	0	255	0	0	0	0	0	2	0	1	0	3	379
7:30AM	0	111	0	0	111	1	273	0	0	274	1	0	0	0	1	0	0	1	0	1	387
7:45AM	0	152	0	0	152	1	201	0	0	202	2	0	1	0	3	0	0	0	0	0	357
Total	2	479	1	0	482	3	947	0	0	950	4	0	1	0	5	2	0	4	0	6	1443
% Approach	0.4%	99.4%	0.2%	0%	-	0.3%	99.7%	0%	0%	-	80.0%	0%	20.0%	0%	-	33.3%	0%	66.7%	0%	-	-
% Total	0.1%	33.2%	0.1%	0%	33.4%	0.2%	65.6%	0%	0%	65.8%	0.3%	0%	0.1%	0%	0.3%	0.1%	0%	0.3%	0%	0.4%	-
PHF	0.500	0.788	0.250	-	0.793	0.750	0.867	-	-	0.867	0.500	-	0.250	-	0.417	0.250	-	0.500	-	0.500	0.932
Lights	2	457	1	0	460	2	898	0	0	900	4	0	1	0	5	2	0	4	0	6	1371
% Lights	100%	95.4%	100%	0%	95.4%	66.7%	94.8%	0%	0%	94.7%	100%	0%	100%	0%	100%	100%	0%	100%	0%	100%	95.0%
Articulated Trucks and Single-Unit Trucks	0	21	0	0	21	0	47	0	0	47	0	0	0	0	0	0	0	0	0	0	68
% Articulated Trucks and Single-Unit Trucks	0%	4.4%	0%	0%	4.4%	0%	5.0%	0%	0%	4.9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.7%
Buses	0	1	0	0	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	4
% Buses	0%	0.2%	0%	0%	0.2%	33.3%	0.2%	0%	0%	0.3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.3%

* L: Left, R: Right, T: Thru, U: U-Turn

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

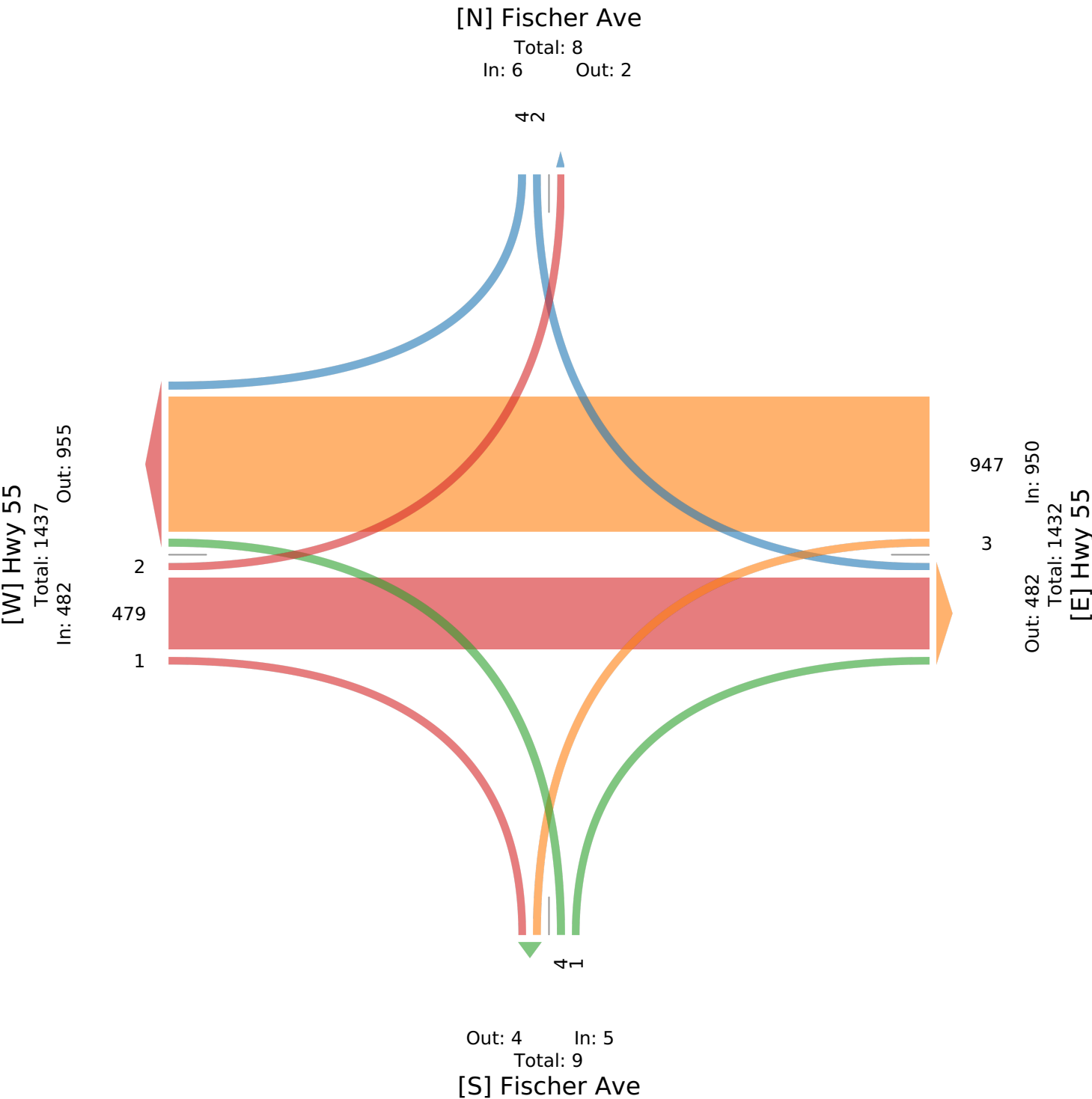
AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

Midday Peak (12:15 PM - 1:15 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg Direction	Hwy 55 Eastbound					Hwy 55 Westbound					Fischer Ave Northbound					Fischer Ave Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2024-11-06 12:15PM	0	114	4	0	118	1	85	1	0	87	1	0	1	0	2	1	0	0	0	1	208
12:30PM	1	124	0	0	125	0	123	0	0	123	1	0	0	0	1	2	0	0	0	2	251
12:45PM	0	122	0	0	122	0	111	0	0	111	1	0	1	0	2	1	0	0	0	1	236
1:00PM	0	104	0	1	105	0	94	0	0	94	1	0	0	0	1	0	0	0	0	0	200
Total	1	464	4	1	470	1	413	1	0	415	4	0	2	0	6	4	0	0	0	4	895
% Approach	0.2%	98.7%	0.9%	0.2%	-	0.2%	99.5%	0.2%	0%	-	66.7%	0%	33.3%	0%	-	100%	0%	0%	0%	-	-
% Total	0.1%	51.8%	0.4%	0.1%	52.5%	0.1%	46.1%	0.1%	0%	46.4%	0.4%	0%	0.2%	0%	0.7%	0.4%	0%	0%	0%	0.4%	-
PHF	0.250	0.935	0.250	0.250	0.940	0.250	0.839	0.250	-	0.843	1.000	-	0.500	-	0.750	0.500	-	-	-	0.500	0.891
Lights	1	422	3	1	427	1	372	1	0	374	3	0	2	0	5	4	0	0	0	4	810
% Lights	100%	90.9%	75.0%	100%	90.9%	100%	90.1%	100%	0%	90.1%	75.0%	0%	100%	0%	83.3%	100%	0%	0%	0%	100%	90.5%
Articulated Trucks and Single-Unit Trucks	0	41	1	0	42	0	40	0	0	40	1	0	0	0	1	0	0	0	0	0	83
% Articulated Trucks and Single-Unit Trucks	0%	8.8%	25.0%	0%	8.9%	0%	9.7%	0%	0%	9.6%	25.0%	0%	0%	0%	16.7%	0%	0%	0%	0%	0%	9.3%
Buses	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% Buses	0%	0.2%	0%	0%	0.2%	0%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.2%

* L: Left, R: Right, T: Thru, U: U-Turn

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

Midday Peak (12:15 PM - 1:15 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

[N] Fischer Ave

Total: 6

In: 4 Out: 2

4



Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

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

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg Direction	Hwy 55 Eastbound					Hwy 55 Westbound					Fischer Ave Northbound					Fischer Ave Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2024-11-06 4:00PM	2	234	1	0	237	0	176	0	0	176	1	0	0	0	1	1	0	1	0	2	416
4:15PM	2	270	2	0	274	0	189	0	0	189	1	0	0	0	1	0	0	0	0	0	464
4:30PM	1	203	2	0	206	1	192	1	0	194	1	0	1	0	2	1	0	2	0	3	405
4:45PM	0	238	2	0	240	0	138	1	0	139	2	0	0	0	2	0	0	1	0	1	382
Total	5	945	7	0	957	1	695	2	0	698	5	0	1	0	6	2	0	4	0	6	1667
% Approach	0.5%	98.7%	0.7%	0%	-	0.1%	99.6%	0.3%	0%	-	83.3%	0%	16.7%	0%	-	33.3%	0%	66.7%	0%	-	-
% Total	0.3%	56.7%	0.4%	0%	57.4%	0.1%	41.7%	0.1%	0%	41.9%	0.3%	0%	0.1%	0%	0.4%	0.1%	0%	0.2%	0%	0.4%	-
PHF	0.625	0.875	0.875	-	0.873	0.250	0.905	0.500	-	0.899	0.625	-	0.250	-	0.750	0.500	-	0.500	-	0.500	0.898
Lights	5	924	7	0	936	1	669	2	0	672	5	0	1	0	6	1	0	3	0	4	1618
% Lights	100%	97.8%	100%	0%	97.8%	100%	96.3%	100%	0%	96.3%	100%	0%	100%	0%	100%	50.0%	0%	75.0%	0%	66.7%	97.1%
Articulated Trucks and Single-Unit Trucks	0	21	0	0	21	0	24	0	0	24	0	0	0	0	0	0	0	1	0	1	46
% Articulated Trucks and Single-Unit Trucks	0%	2.2%	0%	0%	2.2%	0%	3.5%	0%	0%	3.4%	0%	0%	0%	0%	0%	0%	0%	25.0%	0%	16.7%	2.8%
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
% Buses	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0.3%	0%	0%	0%	0%	0%	50.0%	0%	0%	0%	16.7%	0.2%

*L: Left, R: Right, T: Thru, U: U-Turn

Hwy 55 & Fischer Ave - TMC

Wed Nov 6, 2024

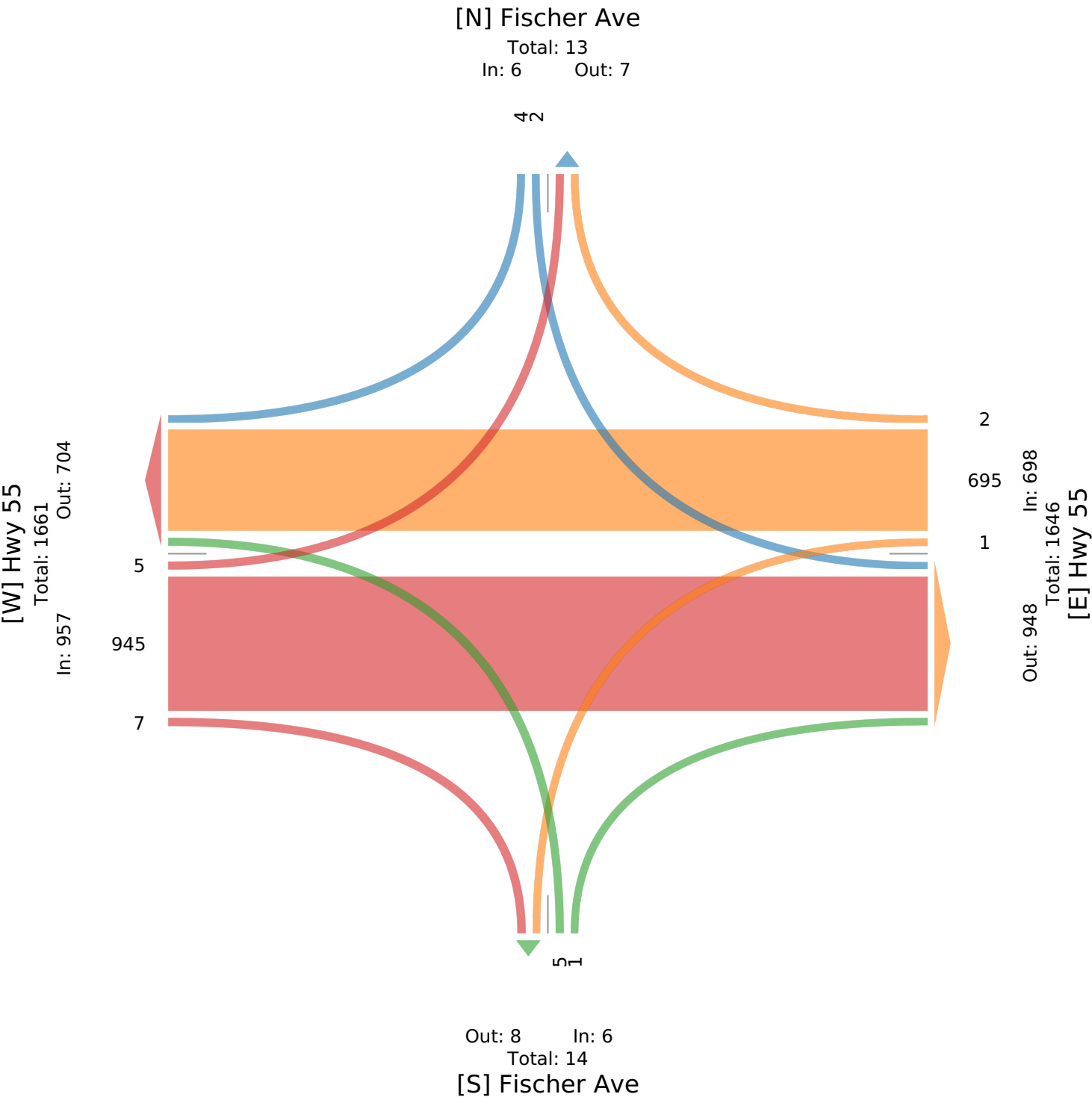
PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)

All Movements

ID: 1243538, Location: 44.742182, -92.974454

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



Appendix C:

SimTraffic Reports

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	1.7	0.0	0.0	0.8	1.2	3.6	1.1
Total Del/Veh (s)	1.8	0.5	5.2	1.2	11.6	14.5	5.3	2.7

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.8	0.2	4.0	0.2
Total Del/Veh (s)	5.4	0.5	1.8	0.5	50.2	3.9	6.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.3	1.6	1.0	0.7	0.4	0.0	3.9	7.2	1.1	3.3	8.8	1.3

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.1

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.6	0.8	0.8	3.5	1.7	0.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.4	3.2	0.2
Total Del/Veh (s)	12.8	0.3	5.5	10.1	8.2	8.7	2.0	8.3

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	1.0	0.1	0.1	0.1	0.1	0.7
Total Del/Veh (s)	10.3	4.8	5.7	3.6	2.4	25.1	3.9	31.1	7.8	3.3

Total Network Performance

Movement	All
Denied Del/Veh (s)	1.1
Total Del/Veh (s)	12.7

Queuing and Blocking Report
Existing (2024) - AM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	WB	SB	SB
Directions Served	R	L	LT	R
Maximum Queue (ft)	13	44	70	92
Average Queue (ft)	1	7	23	52
95th Queue (ft)	9	29	51	86
Link Distance (ft)			696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250	485		430
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	WB	WB	NB	NB
Directions Served	L	T	R	LT	R
Maximum Queue (ft)	178	10	26	164	59
Average Queue (ft)	71	0	1	63	16
95th Queue (ft)	132	6	13	138	46
Link Distance (ft)		1750		703	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	485		300		275
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	6	23	19	20
Average Queue (ft)	0	1	5	6
95th Queue (ft)	5	11	17	19
Link Distance (ft)	3462	530	573	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Existing (2024) - AM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	10
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	41	102	101	135	195	42
Average Queue (ft)	5	39	48	51	64	4
95th Queue (ft)	25	76	79	109	129	20
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	27	26	31	23
Average Queue (ft)	1	1	4	3
95th Queue (ft)	7	13	19	15
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	1.8	0.0	0.0	0.9	1.4	3.5	1.3
Total Del/Veh (s)	1.5	0.7	4.5	1.3	13.9	17.9	7.0	3.3

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.9	0.2	0.2	3.9	0.2
Total Del/Veh (s)	4.5	0.6	1.7	0.5	50.3	31.7	3.6	7.0

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	3.0	2.3	2.0	1.0	0.5	0.0	4.9	9.2	2.4	4.0	7.7	1.1

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.7

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.9	1.1	0.9	4.2	0.9	1.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.7	3.0	0.4
Total Del/Veh (s)	21.9	1.0	18.1	21.5	7.1	17.0	4.9	14.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.2	0.7	1.5	0.1	0.1	0.1	0.1	0.4
Total Del/Veh (s)	9.7	8.2	6.5	7.3	1.8	1.5	26.2	5.7	23.0	6.3	5.7

Total Network Performance

Movement	All
Denied Del/Veh (s)	1.1
Total Del/Veh (s)	18.1

Queuing and Blocking Report
Existing (2024) - PM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	WB	SB	SB
Directions Served	R	L	LT	R
Maximum Queue (ft)	2	34	61	128
Average Queue (ft)	0	9	18	62
95th Queue (ft)	2	29	48	104
Link Distance (ft)			696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250	485		430
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	WB	NB	NB
Directions Served	L	R	LT	R
Maximum Queue (ft)	133	9	195	46
Average Queue (ft)	56	0	67	7
95th Queue (ft)	107	4	151	27
Link Distance (ft)			703	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	485	300		275
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	6	18	32	20
Average Queue (ft)	0	1	7	6
95th Queue (ft)	3	10	23	19
Link Distance (ft)	3462	530	573	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Existing (2024) - PM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	4
95th Queue (ft)	17
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	28	192	142	163	408	29
Average Queue (ft)	6	84	68	54	161	4
95th Queue (ft)	22	153	122	120	300	19
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)					1	
Queuing Penalty (veh)					0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	53	35	27	23
Average Queue (ft)	4	1	5	3
95th Queue (ft)	28	15	21	15
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	2.1	0.0	0.0	1.4	2.0	3.5	1.2
Total Del/Veh (s)	26.1	4.1	89.6	5.7	26.2	27.2	10.1	18.6

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	2.0	0.3	3.8	0.4
Total Del/Veh (s)	20.3	4.9	45.2	13.6	46.0	5.2	20.4

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.5	2.0	2.4	0.4	0.4	0.0	3.6	9.3	2.0	4.0	7.7	1.4

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.6

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.1	0.1	0.0
Total Del/Veh (s)	0.5	0.8	0.5	6.9	1.1	0.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.4	3.5	0.2
Total Del/Veh (s)	17.6	0.5	6.4	11.4	8.7	10.1	3.1	9.2

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.8	1.0	0.1	0.1	0.1	0.1	0.6
Total Del/Veh (s)	11.0	5.2	5.3	5.3	2.8	21.0	2.7	20.7	10.9	3.7

Total Network Performance

Movement	All
Denied Del/Veh (s)	1.2
Total Del/Veh (s)	28.5

Queuing and Blocking Report
Opening Year (2029) No-Build - AM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	375	327	50	90	63	26	234	233
Average Queue (ft)	221	146	15	32	12	1	98	94
95th Queue (ft)	329	269	38	75	42	12	183	179
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	479	472	37	204	167	181	166	63
Average Queue (ft)	241	43	3	90	70	56	74	21
95th Queue (ft)	417	229	20	160	136	124	143	50
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1						
Queuing Penalty (veh)		3						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	1							
Queuing Penalty (veh)	2							

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	12	13	24	21
Average Queue (ft)	0	0	6	7
95th Queue (ft)	5	5	21	20
Link Distance (ft)	3462	530	573	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Opening Year (2029) No-Build - AM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	10
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	40	98	124	157	172	39
Average Queue (ft)	5	45	52	54	78	4
95th Queue (ft)	23	86	92	118	141	23
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	61	50	26	27
Average Queue (ft)	4	3	5	5
95th Queue (ft)	30	22	20	21
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 6

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.0	0.0	0.0	1.7	1.6	3.4	1.4
Total Del/Veh (s)	32.1	4.3	83.3	7.1	29.9	65.8	15.0	21.2

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.3	0.1	0.1	2.2	0.3		3.9	0.4
Total Del/Veh (s)	30.7	5.4	41.9	19.0	47.2		5.3	27.2

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1
Total Del/Veh (s)	3.9	2.7	2.5	1.8	0.5	0.5	4.4	15.9	2.1	3.9	8.3	1.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.1

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.9	1.1	1.2	3.9	1.9	1.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.9	3.7	0.4
Total Del/Veh (s)	24.3	1.3	21.7	23.9	7.8	19.0	4.2	15.8

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.0	2.0	0.7	2.3	0.1	0.1	0.1	0.1	0.4
Total Del/Veh (s)	10.5	8.8	6.8	15.6	2.2	1.1	33.0	11.0	29.2	8.0	6.2

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	36.1

Queuing and Blocking Report
Opening Year (2029) No-Build - PM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	544	474	65	90	83	69	141	323
Average Queue (ft)	278	178	22	31	26	9	50	145
95th Queue (ft)	468	381	46	74	65	45	114	257
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						0
Queuing Penalty (veh)		0						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	594	225	196	186	123	195	43
Average Queue (ft)	232	132	16	98	79	42	85	10
95th Queue (ft)	524	510	126	176	157	97	157	34
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		4						
Queuing Penalty (veh)		17						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	5	0						
Queuing Penalty (veh)	9	0						

Intersection: 3: Emery Ave & CSAH 42

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	32	23	25
Average Queue (ft)	2	6	7
95th Queue (ft)	15	19	21
Link Distance (ft)	530	573	561
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Opening Year (2029) No-Build - PM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	4
95th Queue (ft)	16
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	29	221	162	163	429	27
Average Queue (ft)	5	104	73	67	196	3
95th Queue (ft)	21	186	132	136	334	16
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)					1	
Queuing Penalty (veh)					0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	64	77	26	27
Average Queue (ft)	6	3	7	6
95th Queue (ft)	34	45	23	22
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Network Summary

Network wide Queuing Penalty: 27

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.0	0.0	0.0	1.5	2.3	3.4	1.2
Total Del/Veh (s)	30.1	4.2	91.6	6.1	27.3	40.9	12.4	20.7

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	2.0	0.4	3.8	0.4
Total Del/Veh (s)	18.8	4.9	48.7	19.7	47.5	5.7	21.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	4.5	2.3	1.5	0.5	0.5	0.0	4.9	8.7	1.8	3.5	6.9	2.1

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.7

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1	0.1	0.0
Total Del/Veh (s)	0.5	1.0	0.7	4.9	1.1	0.8

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.4	3.5	0.2
Total Del/Veh (s)	16.1	0.5	8.2	14.2	10.3	11.4	3.1	10.9

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	2.0	1.4	0.1	0.1	0.1	0.1	0.9
Total Del/Veh (s)	13.1	6.0	6.6	5.1	3.2	15.8	2.5	14.9	8.3	4.3

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	31.8

Queuing and Blocking Report
Design Year (2040) No-Build - AM Peak Hour

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	446	420	141	90	65	11	263	246
Average Queue (ft)	273	179	20	32	18	0	114	114
95th Queue (ft)	424	340	87	72	53	8	210	203
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	492	381	63	217	181	199	216	56
Average Queue (ft)	257	33	2	110	91	77	87	21
95th Queue (ft)	419	170	19	188	159	157	169	46
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		1						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0						0	
Queuing Penalty (veh)	1						0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	10	18	19	22
Average Queue (ft)	1	1	5	6
95th Queue (ft)	7	9	16	20
Link Distance (ft)	3462	530	573	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Design Year (2040) No-Build - AM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	10
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	45	118	123	162	212	42
Average Queue (ft)	7	46	61	63	88	4
95th Queue (ft)	26	89	109	133	170	24
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	54	49	22	27
Average Queue (ft)	4	2	3	5
95th Queue (ft)	34	21	16	20
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 2

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.9	0.0	0.0	1.7	0.7	3.5	1.4
Total Del/Veh (s)	45.8	5.3	84.4	7.2	34.6	39.2	21.9	29.1

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.6	0.1	0.1	2.1	0.3	0.4	3.9	0.5
Total Del/Veh (s)	32.9	5.6	41.9	23.4	49.8	35.4	5.2	28.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	3.2	3.0	3.0	1.6	0.6	0.1	5.5	7.7	2.1	4.9	14.3	2.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.2	0.4	5.0	2.5	1.2

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.9	3.0	0.4
Total Del/Veh (s)	27.9	1.2	26.6	29.5	9.1	25.1	6.8	20.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.0	1.1	0.9	2.3	0.1	0.1	0.1	0.2	0.5
Total Del/Veh (s)	18.6	10.2	7.9	16.2	2.5	2.0	49.4	11.5	36.3	9.8	7.2

Total Network Performance

Movement	All
Denied Del/Veh (s)	1.4
Total Del/Veh (s)	44.2

Queuing and Blocking Report
Deisgn Year (2040) No-Build - PM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	788	702	60	98	107	85	293	406
Average Queue (ft)	387	263	25	36	28	10	72	203
95th Queue (ft)	665	538	48	79	72	50	214	369
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)							0	
Queuing Penalty (veh)							0	
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1						1
Queuing Penalty (veh)		1						1

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	591	185	200	170	189	184	55
Average Queue (ft)	257	174	13	112	91	56	91	12
95th Queue (ft)	569	579	132	196	173	133	160	39
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		7	0					
Queuing Penalty (veh)		38	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	11	0						
Queuing Penalty (veh)	21	2						

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	10	23	28	25
Average Queue (ft)	1	1	7	6
95th Queue (ft)	6	11	21	20
Link Distance (ft)	3462	530	573	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Deisgn Year (2040) No-Build - PM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	4
95th Queue (ft)	17
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	81	280	180	171	500	29
Average Queue (ft)	8	131	89	72	246	5
95th Queue (ft)	43	230	150	144	454	22
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)		1			6	
Queuing Penalty (veh)		0			1	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	164	115	22	36
Average Queue (ft)	12	6	4	6
95th Queue (ft)	80	53	18	23
Link Distance (ft)	3384	2213	3884	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 63

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	1.9	0.0	0.0	1.4	2.2	3.4	1.1
Total Del/Veh (s)	26.0	4.2	92.2	5.8	30.4	41.0	11.2	19.9

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	1.6	0.4	3.9	0.4
Total Del/Veh (s)	17.2	5.0	44.5	16.3	44.0	5.5	19.0

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	4.0	2.5	2.7	1.5	1.0	0.0	5.4	2.9	2.4	3.5	7.7	1.9

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1		0.0
Total Del/Veh (s)	0.5	0.9	0.6	2.4		0.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.4	3.4	0.2
Total Del/Veh (s)	17.4	0.5	6.9	13.7	10.6	11.7	3.5	10.9

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.0	0.1	0.1	0.7
Total Del/Veh (s)	18.5	5.9	5.5	4.5	3.7	43.3	0.5	18.3	47.7	12.3	5.7

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.9	3.0	0.4	0.0	1.1	0.8	1.9

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.1
Total Del/Veh (s)	4.5	0.0	0.5	0.3	1.8

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	31.2

Queuing and Blocking Report
Opening Year (2029) Scenario 2 - AM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	LT	R
Maximum Queue (ft)	411	350	60	99	52	261	249
Average Queue (ft)	235	160	16	40	15	135	101
95th Queue (ft)	352	300	41	83	44	228	193
Link Distance (ft)	2405	2405			533	696	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			250	485			430
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	405	115	86	194	175	175	174	64
Average Queue (ft)	217	29	5	102	82	63	77	28
95th Queue (ft)	363	81	36	167	151	132	148	56
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	7	54	62	25
Average Queue (ft)	0	4	24	7
95th Queue (ft)	4	26	46	21
Link Distance (ft)	3464	530	1372	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Opening Year (2029) Scenario 2 - AM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	72	104	111	152	204	48
Average Queue (ft)	16	45	55	75	88	9
95th Queue (ft)	47	85	96	136	166	33
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	62	76	99	27
Average Queue (ft)	4	6	36	6
95th Queue (ft)	31	39	80	22
Link Distance (ft)	3384	2213	1356	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Opening Year (2029) Scenario 2 - AM Peak Hour

11/25/2024

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	58	16
Average Queue (ft)	30	1
95th Queue (ft)	49	8
Link Distance (ft)	1121	1372
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	58
Average Queue (ft)	26
95th Queue (ft)	51
Link Distance (ft)	1334
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.9	0.0	0.0	1.5	1.6	3.5	1.3
Total Del/Veh (s)	33.4	4.5	83.8	7.4	33.0	36.3	15.7	22.6

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.5	0.1	0.1	1.8	0.3	0.4	3.9	0.5
Total Del/Veh (s)	33.1	5.3	36.0	20.1	59.1	73.5	5.6	27.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.2	3.2	2.3	1.8	0.9	0.0	6.4	15.7	3.3	3.8	8.2	2.7

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.9

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.8	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.2	0.5	4.0	2.3	1.1

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.8	2.8	0.4
Total Del/Veh (s)	22.9	1.2	22.0	27.0	9.1	20.2	4.9	17.0

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.1	1.1	0.8	3.6	0.0	0.0	0.1	0.1	0.4
Total Del/Veh (s)	15.1	9.8	8.1	14.1	3.5	1.5	103.1	64.9	30.1	8.2	10.3

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.7	3.1	0.3	0.0	1.0	0.4	2.2

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.6	0.0	0.1	0.2	2.5

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	40.3

Queuing and Blocking Report
Opening Year (2029) Scenario 2 - PM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	518	470	148	102	85	73	182	360
Average Queue (ft)	292	190	26	42	27	14	62	140
95th Queue (ft)	467	384	93	84	69	53	141	265
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						0
Queuing Penalty (veh)		0						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	589	312	201	177	180	186	52
Average Queue (ft)	235	137	17	100	82	60	96	14
95th Queue (ft)	541	519	149	179	156	140	170	39
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		5	0					
Queuing Penalty (veh)		23	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	8	1						
Queuing Penalty (veh)	14	4						

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	7	48	74	26
Average Queue (ft)	0	3	25	8
95th Queue (ft)	4	21	50	23
Link Distance (ft)	3464	530	1382	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Opening Year (2029) Scenario 2 - PM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	3
95th Queue (ft)	15
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	56	212	185	160	405	112
Average Queue (ft)	16	110	85	68	207	7
95th Queue (ft)	41	190	151	138	341	71
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)		0			2	
Queuing Penalty (veh)		0			0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	217	219	174	27
Average Queue (ft)	12	14	66	6
95th Queue (ft)	95	106	147	22
Link Distance (ft)	3384	2213	1345	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	69	5
Average Queue (ft)	33	0
95th Queue (ft)	53	4
Link Distance (ft)	1168	1382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	27
95th Queue (ft)	51
Link Distance (ft)	861
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 42

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.8	0.0	0.0	1.4	0.8	3.4	1.1
Total Del/Veh (s)	30.1	4.9	93.0	6.2	29.4	23.4	12.8	21.7

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	1.6	0.4	4.0	0.4
Total Del/Veh (s)	18.7	5.2	45.1	21.1	45.0	5.7	20.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	4.5	2.7	2.9	1.5	1.0	0.0	6.1	6.0	3.1	6.2	8.9	2.0

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.5

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1	0.1	0.0
Total Del/Veh (s)	0.5	0.9	0.7	3.1	1.1	0.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.6	3.2	0.2
Total Del/Veh (s)	21.5	1.0	8.5	15.8	12.0	11.8	3.2	12.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	1.5	1.4	0.0	0.0	0.0	0.1	0.1	0.9
Total Del/Veh (s)	12.0	6.2	5.0	6.4	4.6	71.6	0.5	65.9	56.7	17.6	7.1

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.9	3.0	0.3	0.1	1.2	0.7	1.7

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.4	0.1	0.5	0.3	1.8

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	34.4

Queuing and Blocking Report
Design Year (2040) Scenario 2 - AM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	490	409	75	118	58	37	254	278
Average Queue (ft)	282	202	19	45	14	2	127	116
95th Queue (ft)	421	348	48	99	44	18	213	216
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	462	205	59	214	188	194	187	83
Average Queue (ft)	248	33	3	115	99	81	80	27
95th Queue (ft)	427	151	28	191	172	160	153	61
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		1						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0							
Queuing Penalty (veh)	1							

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	B19	WB	NB	SB
Directions Served	LT	R	T	LTR	LTR	LTR
Maximum Queue (ft)	11	4	14	51	75	20
Average Queue (ft)	0	0	0	5	25	5
95th Queue (ft)	5	3	10	27	52	18
Link Distance (ft)	3464		1750	530	1372	561
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
Design Year (2040) Scenario 2 - AM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	62	115	132	192	288	49
Average Queue (ft)	15	51	63	78	95	10
95th Queue (ft)	46	93	107	153	194	37
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	28	118	141	31
Average Queue (ft)	2	11	44	5
95th Queue (ft)	16	55	108	21
Link Distance (ft)	3384	2213	1356	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	63	27
Average Queue (ft)	30	2
95th Queue (ft)	49	15
Link Distance (ft)	1121	1372
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	54
Average Queue (ft)	26
95th Queue (ft)	49
Link Distance (ft)	1334
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.8	0.0	0.0	1.8	0.4	3.4	1.3
Total Del/Veh (s)	48.5	6.1	87.7	7.1	35.7	27.7	21.8	30.5

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.5	0.1	0.1	1.8	0.3	0.3	3.9	0.5
Total Del/Veh (s)	33.3	5.4	37.5	24.7	62.1	52.2	5.9	28.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.8	3.3	2.6	1.3	0.9	0.0	6.2	9.0	4.3	4.1	10.5	2.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.9

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.2	0.9	3.7	2.1	1.2

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	1.0	2.8	0.5
Total Del/Veh (s)	25.6	1.3	27.5	36.3	13.1	27.5	7.0	23.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.5	0.1	0.7	2.9	2.2	0.9	0.0	0.1	0.1	1.5
Total Del/Veh (s)	48.9	18.8	17.4	55.7	17.3	5.3	442.0	413.3	238.8	200.6	32.6

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.2	3.0	0.4	0.0	0.9	0.6	2.1

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	7.5	0.1	0.3	0.2	4.2

Total Network Performance

Denied Del/Veh (s)	1.9
Total Del/Veh (s)	59.0

Queuing and Blocking Report
Design Year (2040) Scenario 2 - PM Peak Hour

11/25/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	789	716	232	121	99	96	302	442
Average Queue (ft)	414	310	30	51	24	10	71	189
95th Queue (ft)	724	636	120	99	66	47	189	362
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)							0	
Queuing Penalty (veh)							0	
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		2						1
Queuing Penalty (veh)		3						1

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	584	356	229	234	182	206	55
Average Queue (ft)	244	124	24	115	101	68	103	17
95th Queue (ft)	540	490	173	202	187	151	179	41
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		6	0					
Queuing Penalty (veh)		30	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	8	0						
Queuing Penalty (veh)	17	1						

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LTR
Maximum Queue (ft)	10	4	33	61	20
Average Queue (ft)	1	0	2	24	7
95th Queue (ft)	6	3	15	45	21
Link Distance (ft)	3464		530	1382	561
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Design Year (2040) Scenario 2 - PM Peak Hour

11/25/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	5
95th Queue (ft)	17
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	56	266	282	269	593	120
Average Queue (ft)	15	136	108	94	285	10
95th Queue (ft)	43	228	207	223	522	76
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)		0		0	8	
Queuing Penalty (veh)		0		1	1	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	525	552	531	62
Average Queue (ft)	110	111	221	15
95th Queue (ft)	751	748	634	72
Link Distance (ft)	3384	2213	1345	601
Upstream Blk Time (%)		1	1	
Queuing Penalty (veh)		0	1	
Storage Bay Dist (ft)				
Storage Blk Time (%)	3	5		
Queuing Penalty (veh)	1	0		

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	57	16
Average Queue (ft)	33	1
95th Queue (ft)	51	7
Link Distance (ft)	1168	1382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	93
Average Queue (ft)	31
95th Queue (ft)	60
Link Distance (ft)	861
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 57

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.5	1.6	3.4	1.1
Total Del/Veh (s)	29.4	4.7	91.0	5.9	30.1	26.1	12.0	21.2

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	1.6	0.4	3.9	0.4
Total Del/Veh (s)	19.0	5.3	43.4	18.9	45.5	5.6	19.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.4	2.6	2.7	1.5	0.6	0.0	6.2	2.8	2.6	4.4	10.0	1.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.3

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.5	0.1	0.1	0.0
Total Del/Veh (s)	0.5	0.9	0.6	5.7	0.7	0.8

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.5	3.2	0.2
Total Del/Veh (s)	20.5	0.6	8.5	17.8	14.3	11.7	3.5	13.4

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.3	0.0	0.1	2.5	1.4	0.0	0.0	0.0	0.1	0.1	0.8
Total Del/Veh (s)	36.6	10.7	6.9	28.5	8.4	31.3	0.4	10.9	15.1	22.5	9.8

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.1	2.8	0.5	0.0	1.2	0.7	1.8

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.5	0.1	1.3	0.5	2.1

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	35.8

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - AM Peak Hour

11/26/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	466	398	52	120	52	17	265	225
Average Queue (ft)	275	200	19	45	11	1	124	109
95th Queue (ft)	405	328	46	101	39	9	227	187
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	461	349	60	213	195	219	167	71
Average Queue (ft)	235	37	3	106	94	76	74	27
95th Queue (ft)	425	171	30	186	167	159	143	54
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		1						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0					0	0	
Queuing Penalty (veh)	1					0	0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	L	LTR	LTR
Maximum Queue (ft)	23	22	54	29
Average Queue (ft)	1	2	22	7
95th Queue (ft)	11	13	40	22
Link Distance (ft)	3462		1366	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - AM Peak Hour

11/26/2024

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	65	135	145	207	199	49
Average Queue (ft)	15	52	60	74	92	10
95th Queue (ft)	47	98	107	148	166	35
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	T	LTR	LTR
Maximum Queue (ft)	22	346	97	48	260	82	23
Average Queue (ft)	3	60	7	10	65	32	5
95th Queue (ft)	15	203	61	35	167	67	19
Link Distance (ft)		3384			2213	1356	601
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300		300	300			
Storage Blk Time (%)		1			0		
Queuing Penalty (veh)		0			0		

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - AM Peak Hour

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Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	58	30
Average Queue (ft)	30	3
95th Queue (ft)	48	17
Link Distance (ft)	1121	1366
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	58
Average Queue (ft)	27
95th Queue (ft)	49
Link Distance (ft)	1334
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 3

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBR	All
Denied Del/Veh (s)	0.5	1.7	0.0	0.0	1.7	3.4	1.3
Total Del/Veh (s)	47.8	6.4	85.7	7.4	32.3	21.1	29.8

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.4	0.1	0.1	1.7	0.3	0.6	3.8	0.4
Total Del/Veh (s)	33.4	5.8	37.0	25.0	60.7	75.6	6.2	28.4

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	2.4	3.2	3.2	1.6	1.1	0.0	6.6	8.2	4.4	6.2	12.4	2.1

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	3.0

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.1	1.2	1.4	4.7	1.9	1.2

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	1.0	3.3	0.4
Total Del/Veh (s)	25.6	1.4	28.8	36.8	11.7	30.7	7.2	24.3

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.3	3.4	0.9	3.2	0.0	0.0	0.1	0.1	0.5
Total Del/Veh (s)	54.7	15.8	12.2	34.3	7.1	3.0	34.0	30.4	34.5	14.4	13.0

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.5	3.0	0.2	0.1	0.8	0.6	2.1

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.6	0.0	0.3	0.3	2.7

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	50.7

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - PM Peak Hour

11/26/2024

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	730	635	135	108	103	69	156	381
Average Queue (ft)	415	305	26	40	32	11	62	177
95th Queue (ft)	678	604	92	86	79	52	132	327
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1						0
Queuing Penalty (veh)		2						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	589	484	210	187	176	196	54
Average Queue (ft)	252	170	34	117	102	75	104	17
95th Queue (ft)	565	576	221	193	176	159	173	44
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		7	0					
Queuing Penalty (veh)		38	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	10	0						
Queuing Penalty (veh)	22	1						

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	LTR	LTR
Maximum Queue (ft)	3	46	72	21
Average Queue (ft)	0	3	24	6
95th Queue (ft)	2	22	47	20
Link Distance (ft)	3464	530	1382	561
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - PM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	5
95th Queue (ft)	18
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	132	318	221	187	650	119
Average Queue (ft)	19	139	107	78	308	13
95th Queue (ft)	78	243	189	157	587	103
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)	0	1			11	
Queuing Penalty (veh)	0	0			2	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	L	T	R	LTR	LTR
Maximum Queue (ft)	38	270	30	29	321	11	116	36
Average Queue (ft)	6	83	3	4	70	1	43	6
95th Queue (ft)	26	201	17	18	202	7	85	23
Link Distance (ft)		3384			2213		1345	601
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300		300	300		300		
Storage Blk Time (%)		0			0			
Queuing Penalty (veh)		0			0			

Queuing and Blocking Report

Design Year (2040) Scenario 2 MITIGATED - PM Peak Hour

11/26/2024

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	56	10
Average Queue (ft)	32	0
95th Queue (ft)	50	5
Link Distance (ft)	1168	1382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	58
Average Queue (ft)	30
95th Queue (ft)	52
Link Distance (ft)	861
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 65

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.7	1.6	3.4	1.1
Total Del/Veh (s)	40.2	7.1	104.3	7.0	32.7	44.7	16.2	29.3

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	1.2	0.5	3.8	0.4
Total Del/Veh (s)	19.0	6.2	51.4	27.3	46.2	7.3	22.4

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	17.8	14.0	18.1	26.3	12.6	7.2	34.4	4.4	8.1	23.3	20.8	3.1

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	18.9

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.8	1.1	6.9	4.9	1.4

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.1	0.1	0.7	1.5	0.3
Total Del/Veh (s)	30.0	1.8	12.6	37.4	16.6	29.7	11.3	22.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.1	1.7	0.1	0.1	0.1	0.1	1.1
Total Del/Veh (s)	20.6	7.6	8.3	9.9	4.2	83.3	6.2	65.8	16.1	5.7

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.2	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	10.0	5.0	1.3	0.3	5.0	5.9	5.0

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.1
Total Del/Veh (s)	8.6	2.4	9.6	9.8	8.0

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	53.1

Queuing and Blocking Report
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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	691	612	219	228	80	52	462	309
Average Queue (ft)	345	287	26	102	18	3	208	146
95th Queue (ft)	553	504	136	189	58	29	369	275
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		5					1	
Queuing Penalty (veh)		4					3	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	480	492	152	292	272	290	192	92
Average Queue (ft)	203	74	17	170	150	139	82	41
95th Queue (ft)	391	275	75	266	247	259	156	79
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1						
Queuing Penalty (veh)		7						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	2	0			0	1	0	
Queuing Penalty (veh)	6	0			0	2	0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	TR	L	TR	LTR
Maximum Queue (ft)	18	235	245	289	289	266	211	25
Average Queue (ft)	2	76	120	155	74	171	58	4
95th Queue (ft)	11	165	211	263	193	256	125	13
Link Distance (ft)		3456			522		1157	553
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250		250	250		250		
Storage Blk Time (%)		0	0	2	0	1		
Queuing Penalty (veh)		0	1	5	0	3		

Queuing and Blocking Report
Design Year (2040) Scenario 1 - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	232	186	298	268	322	165
Average Queue (ft)	106	84	182	126	182	66
95th Queue (ft)	194	154	269	221	291	126
Link Distance (ft)	725			3384	3225	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)	0				1	
Queuing Penalty (veh)	0				1	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	109	162	39	32
Average Queue (ft)	5	8	5	7
95th Queue (ft)	54	74	25	25
Link Distance (ft)	3384	2213	671	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Queuing and Blocking Report
Design Year (2040) Scenario 1 - AM Peak Hour

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	110	4	65
Average Queue (ft)	58	0	15
95th Queue (ft)	91	3	49
Link Distance (ft)	1121	1651	1191
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	157	257
Average Queue (ft)	79	93
95th Queue (ft)	123	176
Link Distance (ft)	1253	1157
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 32

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.8	0.0	0.0	1.8	0.8	3.4	1.2
Total Del/Veh (s)	57.3	8.3	84.8	7.6	35.5	41.0	27.1	36.5

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	1.1	0.5	0.3	3.9	0.4
Total Del/Veh (s)	22.5	5.9	46.3	32.4	59.1	101.7	7.5	25.9

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	22.2	33.2	17.7	26.6	16.9	8.7	30.3	22.1	10.1	33.4	25.1	6.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	22.9

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.5	1.3	1.4	13.1	2.2	2.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	1.2	2.0	0.5
Total Del/Veh (s)	53.5	10.6	70.1	79.6	13.5	89.3	53.9	59.2

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.0		1.1	2.5	0.1	0.1	0.1	0.1	0.6
Total Del/Veh (s)	18.2	10.8	10.8		3.0	1.5	82.4	16.8	36.3	8.4	7.8

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.1	0.0	0.0	0.2
Total Del/Veh (s)	9.3	5.4	1.5	0.3	2.7	1.0	4.1

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.1
Total Del/Veh (s)	16.5	2.8	8.6	2.4	8.5

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	75.4

Queuing and Blocking Report
Design Year (2040) Scenario 1 - PM Peak Hour

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	904	805	158	180	157	141	485	495
Average Queue (ft)	480	402	33	90	31	15	145	228
95th Queue (ft)	827	755	125	153	89	71	302	406
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)							0	
Queuing Penalty (veh)							0	
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		5					0	2
Queuing Penalty (veh)		9					1	3

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	508	504	189	316	291	285	204	94
Average Queue (ft)	155	98	15	185	169	139	100	34
95th Queue (ft)	402	371	127	284	269	257	185	69
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		3	0					
Queuing Penalty (veh)		21	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	4	0			0	0		
Queuing Penalty (veh)	15	0			1	1		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	TR	L	TR	LTR
Maximum Queue (ft)	18	309	274	242	155	297	165	34
Average Queue (ft)	2	147	105	131	74	188	79	5
95th Queue (ft)	11	265	211	219	139	279	145	20
Link Distance (ft)		3456			522		1137	553
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250		250	250		400		
Storage Blk Time (%)		1	0	0				
Queuing Penalty (veh)		4	0	1				

Queuing and Blocking Report
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Intersection: 4: CSAH 42 & 142nd Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	40	19
Average Queue (ft)	3	4
95th Queue (ft)	27	15
Link Distance (ft)	1048	520
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	659	400	410	448	1400	460
Average Queue (ft)	272	286	240	141	779	243
95th Queue (ft)	588	445	410	331	1681	586
Link Distance (ft)	726			3384	2957	
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	3					
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)	2	32	4	0	36	
Queuing Penalty (veh)	10	67	22	1	68	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	196	137	31	22
Average Queue (ft)	13	5	8	5
95th Queue (ft)	114	97	27	20
Link Distance (ft)	3384	2213	665	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Queuing and Blocking Report
Design Year (2040) Scenario 1 - PM Peak Hour

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	120	58
Average Queue (ft)	60	14
95th Queue (ft)	91	45
Link Distance (ft)	1162	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	305	148
Average Queue (ft)	124	69
95th Queue (ft)	228	124
Link Distance (ft)	1280	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 228

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.1	0.0	1.7	1.5	3.4	1.1
Total Del/Veh (s)	40.1	6.2	100.9	6.4	33.9	43.0	13.9	29.0

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	1.1	0.6	3.8	0.4
Total Del/Veh (s)	17.4	6.2	50.4	27.2	46.4	6.8	21.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.1	0.3	0.1
Total Del/Veh (s)	18.1	14.1	16.9	27.5	13.2	6.4	34.9	3.8	8.7	32.8	23.4	4.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	19.3

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.6	1.1	6.7	2.1	1.4

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.1	0.0	0.2	1.4	0.2
Total Del/Veh (s)	23.4	1.7	7.6	27.2	7.8	19.5	10.0	14.0

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.3	0.1	0.1	0.1	0.1	0.2
Total Del/Veh (s)	7.2	5.2	4.6	7.0	1.7	31.2	3.7	21.7	6.1	3.0

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	9.7	5.2	1.6	0.3	5.0	5.5	5.0

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.1
Total Del/Veh (s)	8.8	2.5	10.4	10.6	8.5

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	47.3

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - AM Peak Hour

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	572	541	139	243	68	17	434	296
Average Queue (ft)	345	291	20	106	13	1	207	126
95th Queue (ft)	536	487	86	193	45	9	346	247
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)							0	
Queuing Penalty (veh)							0	
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		3					0	
Queuing Penalty (veh)		3					1	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	407	262	227	276	263	266	192	90
Average Queue (ft)	189	59	17	169	151	134	82	40
95th Queue (ft)	356	200	76	260	241	232	159	75
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1	0					
Queuing Penalty (veh)		5	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	1				0	0		
Queuing Penalty (veh)	4				0	0		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	TR	L	TR	LTR
Maximum Queue (ft)	14	253	227	286	355	296	372	25
Average Queue (ft)	1	82	115	155	82	184	79	4
95th Queue (ft)	7	180	205	264	209	285	219	15
Link Distance (ft)		3456			522		1157	553
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250		250	250		250		
Storage Blk Time (%)		0	0	3	0	3	0	
Queuing Penalty (veh)		0	1	6	0	9	0	

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	229	125	267	118	142	158	137	170
Average Queue (ft)	98	58	154	49	64	85	70	67
95th Queue (ft)	183	107	232	101	113	138	121	125
Link Distance (ft)	713			3388	3388	3223	3223	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	22	49	27	23
Average Queue (ft)	1	2	4	5
95th Queue (ft)	8	19	18	20
Link Distance (ft)	3388	2212	659	589
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - AM Peak Hour

01/20/2025

Intersection: 7: Emery Ave & Southwest Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	120	58
Average Queue (ft)	60	15
95th Queue (ft)	92	45
Link Distance (ft)	1121	1191
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	167	259
Average Queue (ft)	82	102
95th Queue (ft)	138	202
Link Distance (ft)	1253	1157
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 30

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.8	0.0	0.0	2.0	1.8	3.4	1.2
Total Del/Veh (s)	47.9	8.9	86.4	7.4	34.5	71.6	27.6	33.0

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	1.2	0.5	0.9	3.8	0.4
Total Del/Veh (s)	20.6	6.2	46.8	29.5	58.6	86.7	7.0	25.2

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	25.9	33.1	17.8	28.8	15.0	3.5	30.7	19.7	9.4	25.7	2.1	1.2

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	22.9

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.4	1.3	0.9	14.3	3.4	1.4

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.2	1.4	0.2
Total Del/Veh (s)	30.0	2.1	18.8	26.1	6.3	21.3	7.6	17.3

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	1.8	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	10.3	6.5	7.5	14.3	1.4	0.3	36.4	12.3	28.2	5.2	4.6

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.1	0.0	0.0	0.2
Total Del/Veh (s)	9.4	5.5	1.5	0.4	2.9	1.2	4.3

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.1
Total Del/Veh (s)	16.4	2.8	8.1	2.5	8.2

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	51.7

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - PM Peak Hour

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	687	706	148	197	122	104	397	466
Average Queue (ft)	412	331	25	94	28	13	141	231
95th Queue (ft)	614	551	53	169	80	58	272	420
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		2					0	1
Queuing Penalty (veh)		4					0	3

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	564	365	317	315	291	226	84
Average Queue (ft)	149	78	22	186	175	131	99	34
95th Queue (ft)	386	309	154	284	274	240	180	64
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1	0					
Queuing Penalty (veh)		8	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	3	0			1	0	0	
Queuing Penalty (veh)	10	0			1	1	0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	TR	L	TR	LTR
Maximum Queue (ft)	17	303	284	277	267	334	155	23
Average Queue (ft)	2	142	110	143	75	185	72	3
95th Queue (ft)	10	245	210	241	175	287	130	13
Link Distance (ft)		3456			522		1137	553
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250		250	250		400		
Storage Blk Time (%)		1	0	1	0	0		
Queuing Penalty (veh)		5	0	2	0	0		

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - PM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	4
95th Queue (ft)	17
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	208	273	270	85	105	223	220	100
Average Queue (ft)	110	135	131	35	51	143	131	43
95th Queue (ft)	186	232	231	76	89	205	204	76
Link Distance (ft)	714			3388	3388	2955	2955	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)	0	1	0					
Queuing Penalty (veh)	0	1	0					

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	55	24	39	27
Average Queue (ft)	4	2	7	7
95th Queue (ft)	25	20	26	24
Link Distance (ft)	3388	2212	653	589
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Design Year (2040) Scenario 1 Mitigated - PM Peak Hour

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	134	72
Average Queue (ft)	64	16
95th Queue (ft)	101	51
Link Distance (ft)	1162	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	277	135
Average Queue (ft)	122	63
95th Queue (ft)	229	111
Link Distance (ft)	1280	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 37

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	1.8	0.0	0.0	1.5	1.7	3.5	1.1
Total Del/Veh (s)	32.4	4.9	91.1	5.9	34.5	39.0	11.7	25.4

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	1.5	0.7	3.8	0.4
Total Del/Veh (s)	19.2	5.9	41.1	18.9	46.6	6.9	17.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	492.6	0.0	375.3	0.1	0.1	0.1
Total Del/Veh (s)	8.5	4.3	6.4	26.0	26.7	21.4	993.8	720.7	949.3	61.8	40.9	10.0

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	47.8
Total Del/Veh (s)	128.1

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1	0.0
Total Del/Veh (s)	0.5	1.2	0.8	6.1	0.7	1.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.1	1.0	3.3	0.6
Total Del/Veh (s)	21.8	0.7	7.8	24.8	12.4	15.5	5.9	14.6

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.9	1.5	0.1	0.1	0.1	0.1	1.1
Total Del/Veh (s)	27.3	7.0	6.4	4.0	3.6	32.0	3.7	51.4	13.9	4.8

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	312.5	428.8	0.1	0.1	0.0	0.0	187.9
Total Del/Veh (s)	552.7	661.6	369.2	299.8	3.9	4.5	241.8

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	1224.5	20.3	0.0	0.0	354.6
Total Del/Veh (s)	1635.9	1249.6	4.8	5.6	353.0

Total Network Performance

Denied Del/Veh (s)	133.1
Total Del/Veh (s)	181.2

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - AM Peak Hour

01/20/2025

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	461	419	54	154	64	14	441	317
Average Queue (ft)	278	224	14	70	13	1	216	106
95th Queue (ft)	419	378	38	126	44	14	355	216
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1					0	
Queuing Penalty (veh)		1					1	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	444	244	204	220	171	228	209	105
Average Queue (ft)	193	61	13	100	75	76	79	39
95th Queue (ft)	373	220	63	185	146	169	158	75
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1	0					
Queuing Penalty (veh)		7	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	2	0				0		
Queuing Penalty (veh)	6	0				1		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	B19	WB	B22	NB	SB
Directions Served	LT	R	T	LTR	T	LTR	LTR
Maximum Queue (ft)	16	65	11	486	21	1179	38
Average Queue (ft)	1	20	0	196	1	1171	7
95th Queue (ft)	10	53	8	397	13	1178	24
Link Distance (ft)	3464		1750	530	1048	1165	561
Upstream Blk Time (%)				1		78	
Queuing Penalty (veh)				6		504	
Storage Bay Dist (ft)		250					
Storage Blk Time (%)							
Queuing Penalty (veh)							

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	15
Average Queue (ft)	2
95th Queue (ft)	10
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	124	116	265	201	210	125
Average Queue (ft)	51	40	114	84	100	46
95th Queue (ft)	104	81	213	159	178	87
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	118	39	22	31
Average Queue (ft)	9	2	5	7
95th Queue (ft)	67	23	20	25
Link Distance (ft)	3384	2213	671	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - AM Peak Hour

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	1142	325	50
Average Queue (ft)	750	103	10
95th Queue (ft)	1529	460	40
Link Distance (ft)	1121	1651	1191
Upstream Blk Time (%)	52		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	1289	1201	61
Average Queue (ft)	1222	1068	18
95th Queue (ft)	1484	1514	49
Link Distance (ft)	1259	1191	1165
Upstream Blk Time (%)	88	67	
Queuing Penalty (veh)	0	187	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 713

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.7	2.6	3.4	1.3
Total Del/Veh (s)	37.0	5.5	83.4	6.4	33.2	42.7	14.7	26.0

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	1.8	0.6	0.4	3.8	0.4
Total Del/Veh (s)	20.8	5.8	37.3	22.8	57.3	61.7	6.8	20.3

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	190.1		169.6	0.1	0.1	0.1
Total Del/Veh (s)	5.8	6.7	6.6	23.0	22.2	16.3	767.5		770.5	97.1	90.8	21.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	25.2
Total Del/Veh (s)	132.3

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.6	1.2	1.1	8.1	2.7	1.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	1.3	3.0	0.7
Total Del/Veh (s)	29.2	1.2	21.4	66.3	13.0	27.3	8.8	26.9

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.5	1.0	2.8	0.1	0.1	0.1	0.1	0.5
Total Del/Veh (s)	16.6	9.6	7.8	10.5	2.8	2.6	31.9	8.8	58.8	7.5	6.7

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	663.1	566.9	0.1	0.1	0.0	0.0	300.3
Total Del/Veh (s)	629.1	656.4	394.5	481.2	3.6	5.0	284.7

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	1414.2	0.0	0.0	0.0	499.3
Total Del/Veh (s)	1558.8	1063.8	4.3	5.2	380.0

Total Network Performance

Denied Del/Veh (s)	169.8
Total Del/Veh (s)	182.6

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - PM Peak Hour

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	571	500	136	134	70	47	286	282
Average Queue (ft)	329	246	25	57	22	4	132	128
95th Queue (ft)	499	433	91	112	57	30	230	230
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1						
Queuing Penalty (veh)		1						

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	465	490	278	188	161	195	191	80
Average Queue (ft)	154	78	16	102	76	82	91	35
95th Queue (ft)	377	313	123	179	152	172	166	69
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		1	0					
Queuing Penalty (veh)		8	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	2	0						
Queuing Penalty (veh)	7	1						

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	WB	B22	NB	SB
Directions Served	LT	R	LTR	T	LTR	LTR
Maximum Queue (ft)	16	53	437	8	1160	47
Average Queue (ft)	1	17	166	0	1152	10
95th Queue (ft)	8	47	331	5	1160	34
Link Distance (ft)	3464		530	1048	1145	561
Upstream Blk Time (%)			0		73	
Queuing Penalty (veh)			2		572	
Storage Bay Dist (ft)		250				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - PM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	25
Average Queue (ft)	5
95th Queue (ft)	19
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	149	196	391	455	500	240
Average Queue (ft)	59	96	207	130	261	69
95th Queue (ft)	117	171	377	466	450	241
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)			6	1	6	
Queuing Penalty (veh)			37	3	11	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	144	104	27	27
Average Queue (ft)	7	7	6	5
95th Queue (ft)	61	58	21	21
Link Distance (ft)	3384	2213	665	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Opening Year (2029) Scenario 1 - PM Peak Hour

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	1199	395	53
Average Queue (ft)	872	142	9
95th Queue (ft)	1646	541	37
Link Distance (ft)	1168	1421	1219
Upstream Blk Time (%)	64		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	1316	1230	40
Average Queue (ft)	1288	1135	15
95th Queue (ft)	1348	1500	42
Link Distance (ft)	1286	1219	1145
Upstream Blk Time (%)	97	69	
Queuing Penalty (veh)	0	233	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 874

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.0	0.0	0.0	1.6	2.0	3.4	1.1
Total Del/Veh (s)	32.6	4.9	96.3	6.4	33.6	57.4	13.3	25.5

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.0	0.5	3.8	0.4
Total Del/Veh (s)	15.5	6.1	48.8	23.7	45.9	6.5	20.7

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	21.6	14.3	17.2	26.2	14.1	12.4	35.5	3.5	8.3	31.6	22.2	2.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	19.5

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1	0.0
Total Del/Veh (s)	0.9	1.7	1.0	13.8	3.1	1.4

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1	1.0	3.3	0.5
Total Del/Veh (s)	29.3	1.8	11.3	33.9	14.4	27.7	10.0	20.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.8	1.4	0.1	0.1	0.1	0.1	0.9
Total Del/Veh (s)	13.1	6.9	8.5	4.4	3.2	28.6	4.5	38.5	11.0	4.7

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	9.2	4.9	1.7	0.3	4.9	5.8	4.8

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.1
Total Del/Veh (s)	9.0	2.4	10.2	10.4	8.4

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	49.3

Queuing and Blocking Report

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	480	430	52	199	54	24	400	226
Average Queue (ft)	276	219	15	95	12	1	216	118
95th Queue (ft)	413	363	38	173	42	11	347	208
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1					0	
Queuing Penalty (veh)		1					1	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	389	317	148	276	256	278	176	87
Average Queue (ft)	159	62	18	156	142	122	73	38
95th Queue (ft)	298	207	81	257	238	228	142	68
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		1						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0	0			0	0		
Queuing Penalty (veh)	1	0			0	1		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	B19	WB	WB	NB	NB	SB
Directions Served	L	T	R	T	L	TR	L	TR	LTR
Maximum Queue (ft)	22	194	241	7	289	306	289	338	29
Average Queue (ft)	4	75	115	0	154	84	186	78	4
95th Queue (ft)	16	152	215	5	263	203	284	221	16
Link Distance (ft)		3456		1750		522		1157	553
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250		250		250		
Storage Blk Time (%)		0	0		2		3	0	
Queuing Penalty (veh)		0	1		5		10	0	

Queuing and Blocking Report

Opening Year (2029) Scenario 1 Mitigated - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	10
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	252	230	290	271	340	158
Average Queue (ft)	106	79	169	112	168	64
95th Queue (ft)	206	157	253	213	283	125
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)	0	0		0	1	
Queuing Penalty (veh)	1	0		0	1	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	28	14	32	31
Average Queue (ft)	2	1	4	5
95th Queue (ft)	15	6	20	21
Link Distance (ft)	3384	2213	671	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	118	4	61
Average Queue (ft)	58	0	15
95th Queue (ft)	94	3	47
Link Distance (ft)	1121	1651	1191
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	188	269
Average Queue (ft)	80	102
95th Queue (ft)	136	195
Link Distance (ft)	1253	1157
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 23

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.8	3.1	3.4	1.2
Total Del/Veh (s)	45.4	6.7	82.6	7.1	33.9	76.9	19.1	30.1

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.2	0.0	0.0	1.2	0.5	0.2	3.9	0.4
Total Del/Veh (s)	26.3	6.4	42.7	29.6	60.6	45.6	6.8	25.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	21.3	36.0	18.2	26.6	16.3	9.8	32.9	20.6	9.7	32.8	36.4	2.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	23.8

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.6	0.1	0.1	0.0
Total Del/Veh (s)	1.9	1.3	1.1	15.0	5.7	1.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	1.6	3.3	0.8
Total Del/Veh (s)	49.5	5.1	47.9	51.0	10.3	39.2	12.9	33.4

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.3	1.0	1.5	0.1	0.1	0.1	0.1	0.5
Total Del/Veh (s)	13.7	9.9	9.7	8.9	2.5	1.4	45.0	16.3	77.9	4.9	7.0

7: Emery Ave & Southwest Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.2	0.1	0.0	0.0	0.2
Total Del/Veh (s)	10.9	5.9	1.7	0.2	2.9	1.0	4.5

9: Emery Ave & Northwest Access Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.1
Total Del/Veh (s)	20.5	2.9	8.7	2.5	9.5

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	60.7

Queuing and Blocking Report

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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	613	582	154	179	98	89	264	335
Average Queue (ft)	374	301	28	95	26	11	127	160
95th Queue (ft)	555	505	97	168	69	51	230	280
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		2						0
Queuing Penalty (veh)		3						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	584	401	277	291	304	198	102
Average Queue (ft)	187	105	31	157	150	144	94	39
95th Queue (ft)	466	403	191	268	263	278	178	75
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		3	0					
Queuing Penalty (veh)		17	1					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	5	0			0	0	0	
Queuing Penalty (veh)	16	1			1	1	0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	EB	B10	WB	WB	NB	NB	SB
Directions Served	L	T	R	T	L	TR	L	TR	LTR
Maximum Queue (ft)	26	294	281	8	261	190	361	181	25
Average Queue (ft)	3	143	115	0	138	67	211	71	4
95th Queue (ft)	14	259	220	6	235	133	329	136	17
Link Distance (ft)		3456		1750		522		1137	553
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250		250		400		
Storage Blk Time (%)		1	0		1		0		
Queuing Penalty (veh)		4	0		1		1		

Queuing and Blocking Report

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Intersection: 4: CSAH 42 & 142nd Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	11	19
Average Queue (ft)	1	4
95th Queue (ft)	12	16
Link Distance (ft)	1048	520
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	458	375	347	260	787	386
Average Queue (ft)	195	221	179	81	357	115
95th Queue (ft)	468	381	304	158	663	375
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)	0				1	
Queuing Penalty (veh)	1				0	
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)	2	14	1	0	15	
Queuing Penalty (veh)	10	30	3	0	28	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	142	64	31	22
Average Queue (ft)	12	3	7	5
95th Queue (ft)	84	29	24	20
Link Distance (ft)	3384	2213	665	601
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Queuing and Blocking Report

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Intersection: 7: Emery Ave & Southwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	143	4	70
Average Queue (ft)	68	0	15
95th Queue (ft)	109	3	46
Link Distance (ft)	1162	1421	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			250
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Emery Ave & Northwest Access

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	347	6	161
Average Queue (ft)	139	0	68
95th Queue (ft)	268	4	121
Link Distance (ft)	1280	1219	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			250
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 116

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.6	1.0	3.3	1.1
Total Del/Veh (s)	34.2	5.1	89.0	6.3	34.3	30.4	12.8	25.4

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	1.5	0.5	3.8	0.4
Total Del/Veh (s)	18.6	6.1	47.3	20.8	43.8	6.9	19.3

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	4.9	4.3	5.4	7.2	1.1	0.0	13.8	14.6	7.6	7.3	22.2	2.2

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	4.8

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.0
Total Del/Veh (s)	0.6	1.0	0.5	5.8	0.8	0.8

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.2	2.9	0.2
Total Del/Veh (s)	36.2	0.7	8.3	19.7	10.1	8.4	2.6	10.5

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.8	0.2	0.0	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	45.2	16.9	8.8	22.4	18.9	17.1	0.5	4.1	13.6	7.1	17.0

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.2	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	10.9	3.6	1.4	0.3	3.8	3.4	3.6

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.8	0.1	3.0	1.8	2.3

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	41.1

Queuing and Blocking Report
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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	547	476	46	149	69	24	410	249
Average Queue (ft)	311	245	16	61	16	1	223	108
95th Queue (ft)	472	402	38	121	50	14	355	198
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		2					0	
Queuing Penalty (veh)		1					0	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	445	217	105	222	196	230	166	96
Average Queue (ft)	219	50	16	119	106	83	76	39
95th Queue (ft)	394	150	62	194	173	170	140	78
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		1						
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0							
Queuing Penalty (veh)	1							

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	10	31	91	19	125	21
Average Queue (ft)	0	4	23	1	41	6
95th Queue (ft)	5	19	59	14	86	20
Link Distance (ft)	3462			528	1366	554
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250	250			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
Design Year (2040) Scenario 3 - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	100	150	181	90	118	167	177	66
Average Queue (ft)	22	57	78	15	23	63	53	21
95th Queue (ft)	74	111	141	53	75	132	128	51
Link Distance (ft)	713			3382	3382	874	874	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	L	TR	LTR
Maximum Queue (ft)	23	178	192	93	84	320	320	91	39	30
Average Queue (ft)	2	75	86	43	28	186	171	31	3	2
95th Queue (ft)	13	143	152	78	63	285	282	71	18	15
Link Distance (ft)		3382	3382			2207	2207		1345	590
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	300			300	300			200		
Storage Blk Time (%)						1	0			
Queuing Penalty (veh)						0	0			

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	98	79
Average Queue (ft)	44	20
95th Queue (ft)	74	60
Link Distance (ft)	1121	1366
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	74
Average Queue (ft)	37
95th Queue (ft)	67
Link Distance (ft)	1328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 4

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	1.9	0.0	0.0	1.7	2.9	3.4	1.3
Total Del/Veh (s)	57.7	6.3	93.0	8.2	39.0	33.7	24.6	35.5

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.5	0.3	0.1	1.1	0.4	0.1	3.9	0.5
Total Del/Veh (s)	36.3	5.6	37.4	29.0	63.7	54.3	6.4	29.8

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	5.0	4.5	3.5	2.8	2.0	0.1	46.0	18.8	39.9	7.4	22.6	4.5

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	17.2

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	1.2	0.8	5.3	1.3	1.1

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.2	2.8	0.1
Total Del/Veh (s)	42.6	1.5	16.6	26.8	9.5	12.8	3.0	14.2

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	2.2	0.2	2.3	0.1		0.0	0.1	0.1	0.1
Total Del/Veh (s)	57.7	39.7	16.0	35.1	25.3	3.8	28.1		16.1	11.5	5.0	32.3

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.4	0.4	0.1	0.1	0.0	0.0	0.3
Total Del/Veh (s)	9.7	6.4	1.7	0.1	1.6	1.6	5.4

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.1	0.0	0.0	0.2
Total Del/Veh (s)	6.2	0.4	1.3	0.7	4.8

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	61.8

Queuing and Blocking Report
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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	908	772	133	204	148	123	242	445
Average Queue (ft)	469	371	28	89	38	21	82	210
95th Queue (ft)	819	723	94	176	102	78	188	363
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		2					0	1
Queuing Penalty (veh)		3					1	1

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	597	232	269	284	272	249	73
Average Queue (ft)	248	170	15	147	147	131	107	23
95th Queue (ft)	586	581	140	259	266	252	200	54
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		9	0					
Queuing Penalty (veh)		47	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	13	0			0	0	0	
Queuing Penalty (veh)	30	0			0	0	0	

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	L	LTR	LTR
Maximum Queue (ft)	22	10	44	494	35
Average Queue (ft)	1	0	7	211	8
95th Queue (ft)	9	7	26	445	24
Link Distance (ft)	3462			1376	554
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250	250		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Design Year (2040) Scenario 3 - PM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	4
95th Queue (ft)	17
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	127	232	234	84	111	289	233	41
Average Queue (ft)	54	98	104	21	34	132	91	8
95th Queue (ft)	106	186	190	61	83	237	189	29
Link Distance (ft)	713			3382	3382	874	874	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)		0					0	
Queuing Penalty (veh)		0					0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LTR
Maximum Queue (ft)	46	651	646	375	48	368	353	22	224	363	21
Average Queue (ft)	5	329	331	76	12	205	186	2	130	42	3
95th Queue (ft)	26	546	543	295	37	334	319	13	231	184	14
Link Distance (ft)		3382	3382			2207	2207			1334	590
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			300	300			300	200		
Storage Blk Time (%)		12	13			2	1		4		
Queuing Penalty (veh)		1	11			0	0		2		

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	167	35
Average Queue (ft)	80	3
95th Queue (ft)	128	18
Link Distance (ft)	1168	1376
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	109
Average Queue (ft)	60
95th Queue (ft)	93
Link Distance (ft)	855
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 97

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	2.0	0.0	0.0	1.6	1.3	3.3	1.1
Total Del/Veh (s)	28.2	4.7	94.0	5.8	34.3	49.5	10.9	22.7

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	1.5	0.5	3.8	0.4
Total Del/Veh (s)	18.4	6.2	45.5	18.0	44.6	6.6	18.3

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.7	4.3	5.2	6.6	4.4	2.1	16.1	22.9	6.5	9.0	17.4	3.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	5.6

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.5	1.0	0.7	2.7	1.7	0.8

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.8	3.3	0.4
Total Del/Veh (s)	19.2	0.4	12.9	22.3	12.7	14.7	4.2	14.1

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.0	0.1	0.1	0.6
Total Del/Veh (s)	11.5	8.2	7.6	8.7	7.2	161.1	0.6	114.9	49.4	18.2	13.2

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	13.5	3.3	1.0	0.3	3.8	3.5	3.5

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.7	0.1	1.8	1.2	1.8

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	39.6

Queuing and Blocking Report
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Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	394	358	48	120	51	5	433	225
Average Queue (ft)	250	196	14	53	11	0	241	96
95th Queue (ft)	370	330	36	107	38	2	378	168
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1					0	
Queuing Penalty (veh)		1					1	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	428	157	104	219	200	220	174	102
Average Queue (ft)	214	56	16	106	90	76	76	40
95th Queue (ft)	373	118	62	184	164	163	144	74
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)					0			
Queuing Penalty (veh)					0			

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	B19	WB	NB	SB
Directions Served	LT	R	T	LTR	LTR	LTR
Maximum Queue (ft)	16	37	7	169	143	33
Average Queue (ft)	1	3	0	41	41	7
95th Queue (ft)	8	20	5	117	97	22
Link Distance (ft)	3464		1750	530	1372	561
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
Opening Year (2029) Scenario 3 - AM Peak Hour

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Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	60	175	161	191	266	75
Average Queue (ft)	16	71	77	79	132	27
95th Queue (ft)	45	132	139	151	228	59
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LT	LTR	LTR
Maximum Queue (ft)	43	20	299	271	27
Average Queue (ft)	2	1	50	115	6
95th Queue (ft)	26	9	186	291	22
Link Distance (ft)	3384		2213	1356	601
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		300			
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Queuing and Blocking Report
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Intersection: 7: Emery Ave & West Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	82	10	78
Average Queue (ft)	41	0	24
95th Queue (ft)	65	5	65
Link Distance (ft)	1121	1651	1372
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	79
Average Queue (ft)	33
95th Queue (ft)	63
Link Distance (ft)	1334
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.4	1.3	3.4	1.2
Total Del/Veh (s)	38.9	5.7	77.6	7.3	29.6	44.7	18.1	26.0

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.4	0.2	0.1	1.1	0.3	0.2	3.9	0.4
Total Del/Veh (s)	30.8	5.0	37.6	27.4	59.7	91.8	6.4	27.3

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.7	4.5	3.6	2.1	2.4	0.3	34.3	32.0	28.9	7.0	10.1	3.2

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	13.8

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.9	1.1	0.9	4.7	0.6	1.0

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.9	3.0	0.4
Total Del/Veh (s)	28.2	1.3	23.3	31.4	10.2	27.6	6.8	21.4

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.2	0.1	0.5	0.8	2.0	57.9	49.8	0.1	0.1	3.3
Total Del/Veh (s)	18.6	11.6	10.4	12.9	4.3	2.3	1358.5	1308.9	44.4	12.3	95.5

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.4	0.4	0.1	0.1	0.0	0.0	0.3
Total Del/Veh (s)	8.2	6.3	2.1	0.0	1.5	1.4	5.1

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	708.4	0.1	0.0	0.0	518.7
Total Del/Veh (s)	754.8	55.9	0.4	0.3	425.5

Total Network Performance

Denied Del/Veh (s)	44.2
Total Del/Veh (s)	106.4

Queuing and Blocking Report
Opening Year (2029) Scenario 3 - PM Peak Hour

01/20/2025

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	574	510	148	159	112	106	190	342
Average Queue (ft)	329	224	27	77	30	10	78	156
95th Queue (ft)	500	417	94	140	79	55	158	281
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		0						0
Queuing Penalty (veh)		1						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	587	457	238	268	276	205	60
Average Queue (ft)	215	115	19	133	133	121	96	20
95th Queue (ft)	509	466	167	220	236	239	174	48
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		3	0					
Queuing Penalty (veh)		17	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	6	0			0	1		
Queuing Penalty (veh)	12	0			0	2		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LTR
Maximum Queue (ft)	28	4	87	480	19
Average Queue (ft)	1	0	8	169	5
95th Queue (ft)	14	3	41	410	18
Link Distance (ft)	3464		530	1382	561
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Opening Year (2029) Scenario 3 - PM Peak Hour

01/20/2025

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	20
Average Queue (ft)	5
95th Queue (ft)	18
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	104	228	174	200	635	296
Average Queue (ft)	47	114	96	82	272	14
95th Queue (ft)	93	188	154	155	488	81
Link Distance (ft)	725			3384	876	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)		260	365			300
Storage Blk Time (%)		0			7	
Queuing Penalty (veh)		0			2	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LT	LTR	LTR
Maximum Queue (ft)	336	75	305	1359	22
Average Queue (ft)	27	5	28	1331	5
95th Queue (ft)	261	79	159	1469	19
Link Distance (ft)	3384		2213	1345	601
Upstream Blk Time (%)				78	
Queuing Penalty (veh)				229	
Storage Bay Dist (ft)		300			
Storage Blk Time (%)	1		0		
Queuing Penalty (veh)	0		0		

Queuing and Blocking Report
Opening Year (2029) Scenario 3 - PM Peak Hour

01/20/2025

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	148	51
Average Queue (ft)	80	3
95th Queue (ft)	122	23
Link Distance (ft)	1168	1382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	914	44
Average Queue (ft)	737	7
95th Queue (ft)	1219	31
Link Distance (ft)	861	2579
Upstream Blk Time (%)	75	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 264

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	1.8	0.0	0.0	1.6	1.8	3.4	1.1
Total Del/Veh (s)	27.0	4.5	91.8	5.9	35.5	58.3	11.1	22.4

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	1.5	0.6	3.7	0.4
Total Del/Veh (s)	18.1	6.0	45.3	15.5	43.8	7.0	17.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	6.0	4.2	5.2	6.2	1.0	0.0	12.2	12.0	5.5	6.1	17.7	3.0

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	4.6

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1	0.0
Total Del/Veh (s)	0.5	0.9	0.8	4.1	0.8	0.7

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.2	3.1	0.2
Total Del/Veh (s)	31.6	0.6	7.1	17.3	9.9	6.9	2.4	9.4

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.8	0.2	0.1	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	28.7	19.2	8.5	24.8	20.2	18.9	1.0	2.9	20.3	8.2	18.3

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.5	3.3	1.2	0.3	3.7	4.1	3.4

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.6	0.1	3.8	1.9	2.4

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	38.7

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - AM Peak Hour

01/20/2025

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	387	343	47	120	52	17	460	273
Average Queue (ft)	237	182	13	51	11	1	237	100
95th Queue (ft)	339	307	34	105	38	7	391	194
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1					1	
Queuing Penalty (veh)		0					3	

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	412	161	105	196	199	163	164	112
Average Queue (ft)	198	53	17	102	90	65	71	41
95th Queue (ft)	337	121	68	175	164	129	133	79
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	0							
Queuing Penalty (veh)	1							

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	EB	B19	WB	WB	NB	SB
Directions Served	LT	R	T	L	TR	LTR	LTR
Maximum Queue (ft)	9	40	10	62	11	106	26
Average Queue (ft)	1	4	0	22	1	37	6
95th Queue (ft)	9	20	7	50	10	78	21
Link Distance (ft)	3462		1750		528	1366	554
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		250		250			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - AM Peak Hour

01/20/2025

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	2
95th Queue (ft)	11
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	60	103	168	90	107	139	134	71
Average Queue (ft)	16	51	66	12	20	53	45	19
95th Queue (ft)	43	87	126	49	68	108	103	52
Link Distance (ft)	713			3382	3382	874	874	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	L	TR	LTR
Maximum Queue (ft)	29	176	186	91	98	335	294	82	29	30
Average Queue (ft)	3	82	90	44	33	181	168	29	3	4
95th Queue (ft)	17	148	153	76	77	273	262	69	15	20
Link Distance (ft)		3382	3382			2207	2207		1345	590
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	300			300	300			200		
Storage Blk Time (%)						0	0			
Queuing Penalty (veh)						0	0			

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - AM Peak Hour

01/20/2025

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	81	74
Average Queue (ft)	40	21
95th Queue (ft)	68	60
Link Distance (ft)	1121	1366
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	72
Average Queue (ft)	35
95th Queue (ft)	63
Link Distance (ft)	1328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 4

1: US 52 SB Ramps & CSAH 42 Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	1.9	0.0	0.0	1.6	1.2	3.4	1.2
Total Del/Veh (s)	52.2	6.3	79.9	7.8	32.0	12.7	18.7	31.3

2: US 52 NB Ramps & CSAH 42 Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.3	0.1	0.1	1.0	0.3	0.1	3.9	0.4
Total Del/Veh (s)	40.3	6.6	36.2	26.9	59.6	55.9	6.3	30.6

3: Emery Ave & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	4.0	4.2	3.5	2.6	2.1	0.1	34.7	36.2	29.1	6.8	17.5	4.4

3: Emery Ave & CSAH 42 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	13.8

4: CSAH 42 & 142nd Street Performance by movement

Movement	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.9	1.3	1.6	6.7	2.8	1.2

5: Minnesota 55 & CSAH 42 Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.2	2.6	0.1
Total Del/Veh (s)	39.1	1.4	12.7	23.7	9.6	11.8	2.7	13.2

6: Fischer Ave & Minnesota 55 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	2.3	0.2	2.4	0.1		0.0	0.1	0.1	0.1
Total Del/Veh (s)	63.1	40.6	12.4	37.5	30.3	4.5	22.7		11.0	18.0	3.7	33.5

7: Emery Ave & West Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.1	0.0	0.0	0.3
Total Del/Veh (s)	8.5	6.3	1.4	0.0	1.6	1.1	5.2

8: Fischer Ave & East Access Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.2
Total Del/Veh (s)	5.9	0.3	0.8	0.7	4.5

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	59.5

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - PM Peak Hour

01/20/2025

Intersection: 1: US 52 SB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	707	648	67	179	153	102	177	330
Average Queue (ft)	398	298	25	81	33	15	78	162
95th Queue (ft)	799	704	50	147	90	63	150	283
Link Distance (ft)	2405	2405			533	533	696	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250	485				430
Storage Blk Time (%)		1						0
Queuing Penalty (veh)		1						0

Intersection: 2: US 52 NB Ramps & CSAH 42

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	510	585	483	240	258	314	201	70
Average Queue (ft)	269	183	50	140	133	134	105	22
95th Queue (ft)	592	591	275	236	232	274	174	51
Link Distance (ft)		533	533	1750	1750		703	
Upstream Blk Time (%)		6	0					
Queuing Penalty (veh)		33	0					
Storage Bay Dist (ft)	485					300		275
Storage Blk Time (%)	11	1			0	1		
Queuing Penalty (veh)	23	6			0	2		

Intersection: 3: Emery Ave & CSAH 42

Movement	EB	WB	NB	SB
Directions Served	LT	L	LTR	LTR
Maximum Queue (ft)	17	35	392	24
Average Queue (ft)	1	5	171	7
95th Queue (ft)	8	22	345	21
Link Distance (ft)	3462		1376	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - PM Peak Hour

01/20/2025

Intersection: 4: CSAH 42 & 142nd Street

Movement	SB
Directions Served	LR
Maximum Queue (ft)	21
Average Queue (ft)	5
95th Queue (ft)	18
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Minnesota 55 & CSAH 42

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	136	175	217	82	84	271	223	39
Average Queue (ft)	54	75	96	17	32	109	71	7
95th Queue (ft)	107	140	173	58	75	199	157	27
Link Distance (ft)	713			3382	3382	874	874	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		260	365					300
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 6: Fischer Ave & Minnesota 55

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LTR
Maximum Queue (ft)	34	472	511	374	125	402	384	17	223	263	26
Average Queue (ft)	5	298	303	64	14	219	198	1	115	26	3
95th Queue (ft)	22	456	460	249	72	345	329	9	207	129	17
Link Distance (ft)		3382	3382			2207	2207			1334	590
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			300	300			300	200		
Storage Blk Time (%)		10	10			2	1		2		
Queuing Penalty (veh)		1	8			0	0		1		

Queuing and Blocking Report

Opening Year (2029) Scenario 3 Mitigated - PM Peak Hour

01/20/2025

Intersection: 7: Emery Ave & West Access

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	166	44
Average Queue (ft)	83	4
95th Queue (ft)	130	23
Link Distance (ft)	1168	1376
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Fischer Ave & East Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	103
Average Queue (ft)	58
95th Queue (ft)	89
Link Distance (ft)	855
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 75

Appendix C



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 Heat Content Emission Factors	Fire Suppression

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). 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.

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	0.0	0.0	0.0
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	0.0	0.0	0.0

Total CO ₂ Equivalent Emissions (metric tons) - Stationary Combustion	0.0
Total Biomass CO ₂ Equivalent Emissions (metric tons) - Stationary Combustion	0.0

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 equipment.

(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 CO₂ 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[illegible]

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 CO₂ Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO ₂ (kg)
Motor Gasoline		0 gallons	0.0
Diesel Fuel		0 gallons	0.0
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
Biodiesel		0 gallons	0.0
Liquefied Natural Gas (LNG)		0 gallons	0.0
Compressed Natural Gas (CNG)		0 scf	0.0

Note: emissions here are only for the gasoline portion of the fuel, biogenic CO2 emissions are reported below

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH₄/N₂O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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	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	
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	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
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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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	Diesel	1960-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH ₄ (g)	N ₂ O (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)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Airport Equipment	LPG	-	-	-
	Gasoline	-	-	-
	Diesel	-	-	-
Industrial/Commercial Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Logging Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
Railroad Equipment	Diesel	-	-	-
	LPG	-	-	-
	Gasoline	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO ₂ Equivalent Emissions (metric tons) - Mobile Sources	0.0
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.

Scope 2 Emissions from Purchase of Electricity

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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:

(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

Source ID	Source Description	Source Area (sq ft)	eGRID Subregion <i>where electricity is consumed</i>	Electricity Purchased (kWh)	CO ₂ Emissions (lb/MWh)	CH ₄ Emissions (lb/MWh)	N ₂ O Emissions (lb/MWh)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O 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
					<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				0				0.0	0.0	0.0	0.0	0.0	0.0

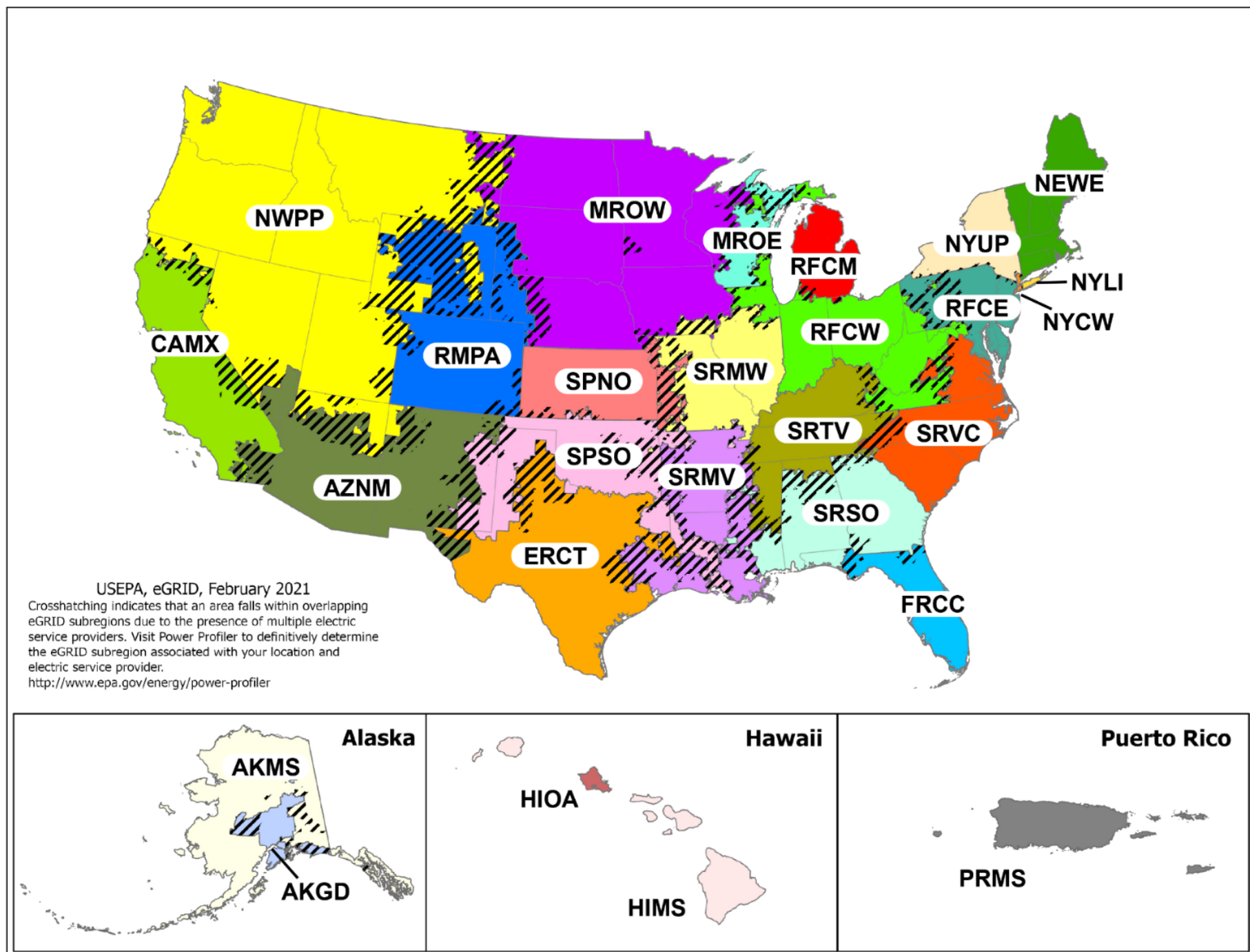
GHG Emissions

CO ₂ Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	0.0
Market-Based Electricity Emissions	0.0

Notes:

1. CO₂, CH₄ and N₂O emissions are estimated using methodology provided in EPA's Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance - Indirect Emissions from Purchased Electricity (January 2016).

Figure 1. EPA eGRID2019, February 2021.



Scope 3 Emissions from Waste



Guidance

(A) Enter annual waste data in ORANGE cells. Example entry is shown in first row (*GREEN Italics*).

(B) Choose the appropriate material and disposal method from the drop down options. For the average-data method, use one of the mixed material types, such as mixed MSW. If the exact waste material is not available, consider an appropriate proxy. For example, dimensional lumber can be used as a proxy for wood furniture.

(C) Choose an appropriate disposal method. Note that not all disposal methods are available for all materials. If there is a #NA or # Value error in the emissions column, you must pick a new material type or appropriate disposal method.

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

[illegible]

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO ₂ e (kg)
Recycled	-
Landfilled	-
Combusted	-
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

EPA Climate Leaders Simplified GHG Emissions Calculator (Optional 3.0)

Total CO₂ Equivalent Emissions (metric tons) - Waste

0.0



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 Heat Content Emission Factors	Fire Suppression

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). 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.

Scope 1 Emissions from Stationary Combustion Sources

Guidance

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

Table 1. Stationary Source Fuel Combustion

[illegible]

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	35,209,552	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 CO₂, CH₄ and N₂O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO ₂ (kg)	CH ₄ (g)	N ₂ O (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	1,916,808.0	36,265.8	3,521.0
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	1,916,808.0	36,265.8	3,521.0
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	1,916,808.0	36,265.8	3,521.0

Total CO₂ Equivalent Emissions (metric tons) - Stationary Combustion	1,918.8
Total Biomass CO₂ Equivalent Emissions (metric tons) - Stationary Combustion	0.0

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U.S. Environmental Protection Agency

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.

- (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.

Help - Market-Based Method

Table 1. Total Amount of Electricity Purchased by eGRID Subregion

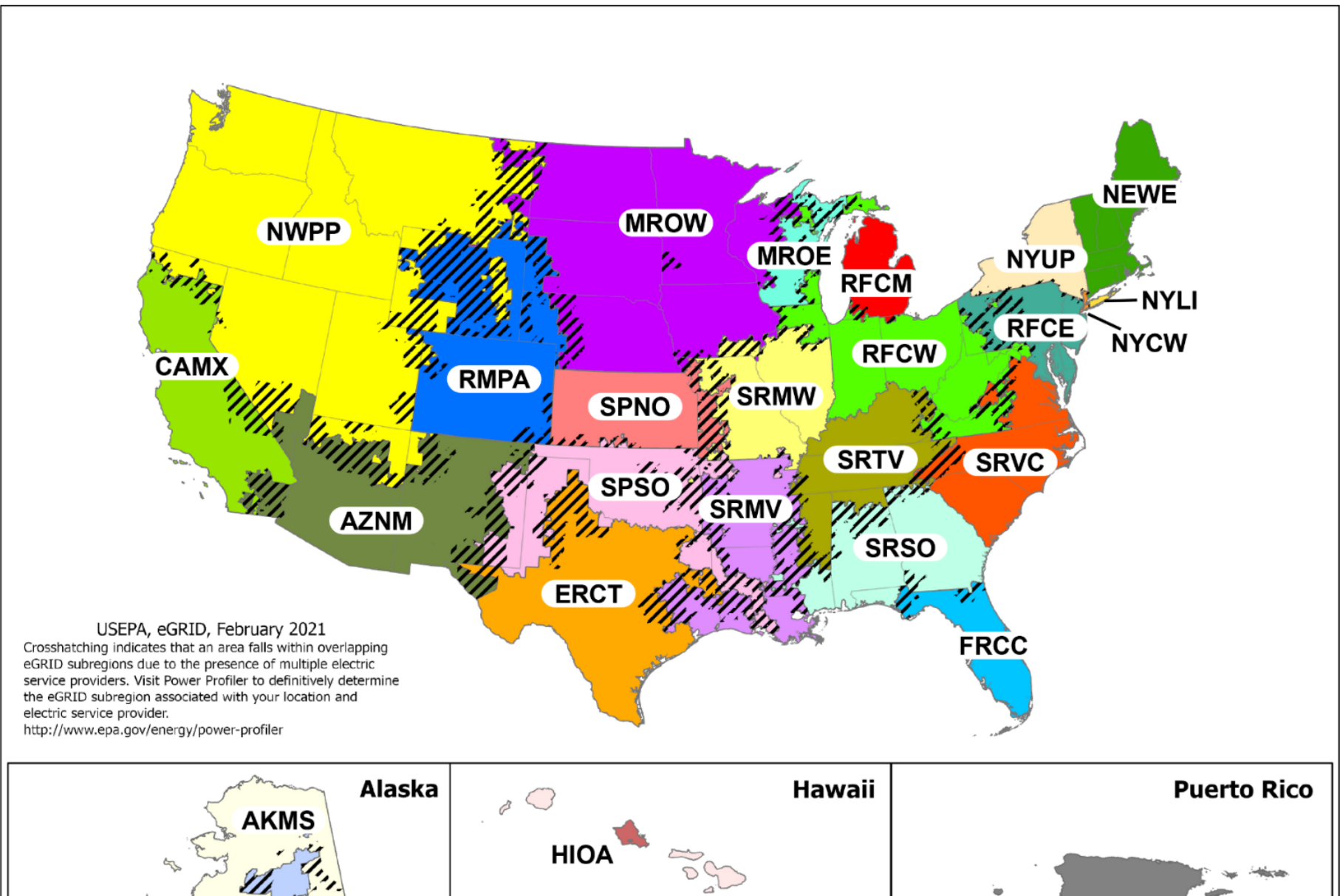
Source ID	Source Description	Source Area (sq ft)	eGRID Subregion <i>where electricity is consumed</i>	Electricity Purchased (kWh)	CO ₂ Emissions (lb/MW hr)	CH ₄ Emissions (lb/MW hr)	N ₂ O Emissions (lb/MW hr)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O 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
Apartments	Electricity Use	1,450	MROW (MRO West)	8,027,200	<enter factor>	<enter factor>	<enter factor>	8,817,076.5	955.2	136.5	8,817,076.5	955.2	136.5
Commercial	Electricity Use	500,000	MROW (MRO West)	7,050,000	<enter factor>	<enter factor>	<enter factor>	7,743,720.0	839.0	119.9	7,743,720.0	839.0	119.9
					<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>						
					<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>						
					<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>						
					<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>						
Total Emissions for All Sources				15,077,200				16,560,796.5	1,794.2	256.3	16,560,796.5	1,794.2	256.3

CO ₂ Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	7,567.0
Market-Based Electricity Emissions	7,567.0

Notes:

1. CO₂, CH₄ and N₂O 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.





Total Emissions by Disposal Method

Waste Material	CO ₂ e (kg)
Recycled	648,474
Landfilled	-
Combusted	1,962,234
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

Total CO ₂ Equivalent Emissions (metric tons) - Waste	2,610.7
--	---------

	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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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
Light-Duty Trucks	Biodiesel		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
Medium-Duty Trucks	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
Heavy-Duty Trucks	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
Buses	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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH ₄ (g)	N ₂ O (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)	593,598	7,372,487	41,552
	Gasoline (4 stroke)	-	-	-
	Diesel	2,119,994	423,999	996,397
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Airport Equipment	Gasoline	-	-	-
	Diesel	-	-	-
Industrial/Commercial Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Logging Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
Railroad Equipment	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO ₂ Equivalent Emissions (metric tons) - Mobile Sources	27,456.9
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.



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.

Unit Conversions

Heat Content

Emission Factors

Fire Suppression

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). 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.

Scope 1 Emissions from Stationary Combustion Sources



Guidance

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

Table 1. Stationary Source Fuel Combustion

[illegible]

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	128,226,121	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 CO₂, CH₄ and N₂O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO ₂ (kg)	CH ₄ (g)	N ₂ O (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	6,980,630.0	132,072.9	12,822.6
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	6,980,630.0	132,072.9	12,822.6
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	6,980,630.0	132,072.9	12,822.6

Total CO ₂ Equivalent Emissions (metric tons) - Stationary Combustion	6,987.8
Total Biomass CO ₂ Equivalent Emissions (metric tons) - Stationary Combustion	0.0

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 equipment.

(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 CO₂ 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[illegible]

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 CO₂ Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO ₂ (kg)
Motor Gasoline	444,845	gallons	3,905,742.6
Diesel Fuel	1,576,044	gallons	16,091,412.8
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
Biodiesel	0	gallons	0.0
Liquefied Natural Gas (LNG)	0	gallons	0.0
Compressed Natural Gas (CNG)	0	scf	0.0

Note: emissions here are only for the gasoline portion of the fuel, biogenic CO2 emissions are reported below

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH₄/N₂O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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 CH₄/N₂O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH ₄ (g)	N ₂ O (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)	440,412	5,469,912	30,829
	Gasoline (4 stroke)	-	-	-
	Diesel	1,572,899	314,580	739,262
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Airport Equipment	LPG	-	-	-
	Gasoline	-	-	-
	Diesel	-	-	-
Industrial/Commercial Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Logging Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
Railroad Equipment	Diesel	-	-	-
	LPG	-	-	-
	Gasoline	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO ₂ Equivalent Emissions (metric tons) - Mobile Sources	20,371.3
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.

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:

(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

Source ID	Source Description	Source Area (sq ft)	eGRID Subregion <i>where electricity is consumed</i>	Electricity Purchased (kWh)	CO ₂ Emissions (lb/MWh)	CH ₄ Emissions (lb/MWh)	N ₂ O Emissions (lb/MWh)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)
Bldg-012	East Power Plant Technology Park	12,517 / 2,300,000	HIMS (HICC Miscellaneous) MROW (MRO West)	200,000 / 46,460,000	<enter factor>	<enter factor>	<enter factor>	0.0 / 51,031,664.0	0.0 / 5,528.7	0.0 / 789.8	237,120.0 / 51,031,664.0	28.6 / 5,528.7	4.4 / 789.8
					<enter factor>	<enter factor>	<enter factor>						
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Total Emissions for All Sources				46,460,000				51,031,664.0	5,528.7	789.8	51,031,664.0	5,528.7	789.8

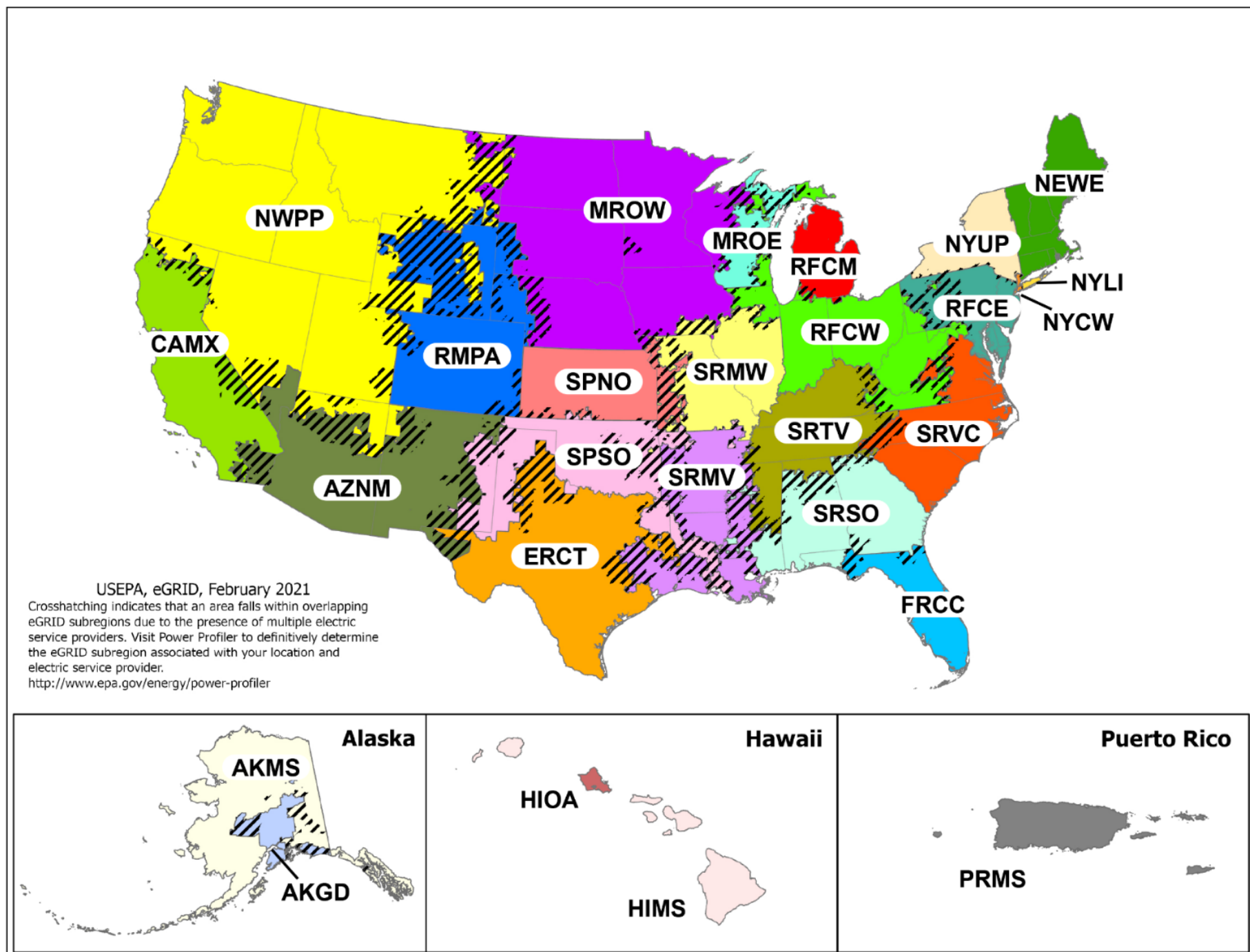
GHG Emissions

CO ₂ Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	23,317.4
Market-Based Electricity Emissions	23,317.4

Notes:

1. CO₂, CH₄ and N₂O emissions are estimated using methodology provided in EPA's Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance - Indirect Emissions from Purchased Electricity (January 2016).

Figure 1. EPA eGRID2019, February 2021.



Scope 3 Emissions from Waste



Guidance

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

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

[illegible]

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO ₂ e (kg)
Recycled	85,096
Landfilled	4,589,632
Combusted <i>EPA Climate Leaders Simplified GHG Emissions Calculator (Optional 3.0)</i>	-
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-

Anaerobically Digested (Wet Digestate with Curing)	-
--	---

Total CO ₂ Equivalent Emissions (metric tons) - Waste	4,674.7
--	---------



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 Heat Content Emission Factors	Fire Suppression

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). 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.

Scope 1 Emissions from Stationary Combustion Sources



Guidance

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

Table 1. Stationary Source Fuel Combustion[illegible]

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	47,270,955	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 CO₂, CH₄ and N₂O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO ₂ (kg)	CH ₄ (g)	N ₂ O (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	2,573,430.8	48,689.1	4,727.1
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	2,573,430.8	48,689.1	4,727.1
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	2,573,430.8	48,689.1	4,727.1

Total CO₂ Equivalent Emissions (metric tons) - Stationary Combustion	2,576.1
Total Biomass CO₂ Equivalent Emissions (metric tons) - Stationary Combustion	0.0

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 equipment.

(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 CO₂ 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[illegible]

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 CO₂ Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO ₂ (kg)
Motor Gasoline	483,528	gallons	4,245,372.4
Diesel Fuel	1,713,092	gallons	17,490,666.1
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
Biodiesel	0	gallons	0.0
Liquefied Natural Gas (LNG)	0	gallons	0.0
Compressed Natural Gas (CNG)	0	scf	0.0

Note: emissions here are only for the gasoline portion of the fuel, biogenic CO2 emissions are reported below

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH₄/N₂O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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 ₂ O Emissions					
Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH ₄ (g)	N ₂ O (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 ₂ O Emissions				
Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH ₄ (g)	N ₂ O (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)	478,708	5,945,557	33,510
	Gasoline (4 stroke)	-	-	-
	Diesel	1,709,672	341,934	803,546
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Airport Equipment	LPG	-	-	-
	Gasoline	-	-	-
	Diesel	-	-	-
Industrial/Commercial Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Logging Equipment	LPG	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
Railroad Equipment	Diesel	-	-	-
	LPG	-	-	-
	Gasoline	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO ₂ Equivalent Emissions (metric tons) - Mobile Sources	22,142.7
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.

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

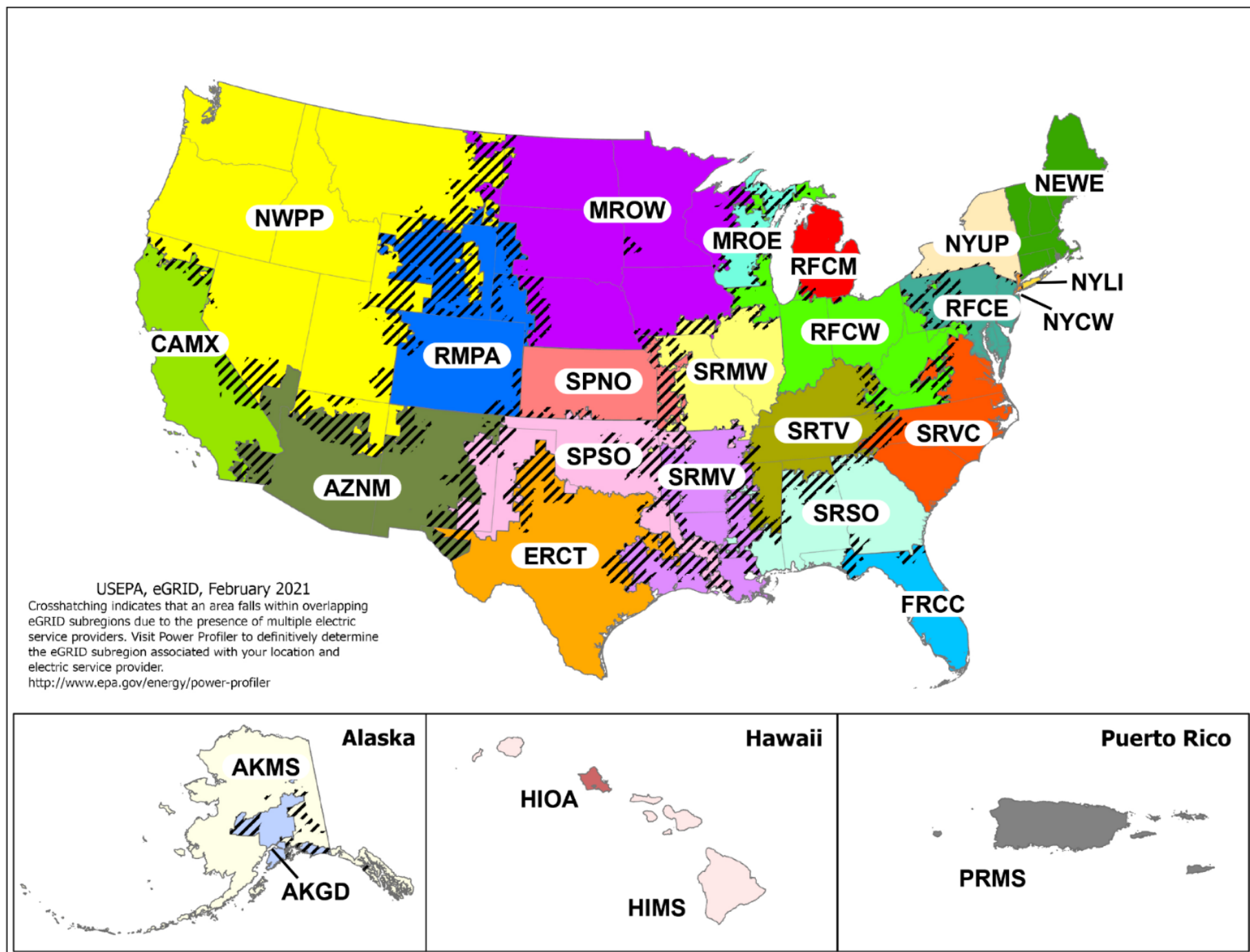
Example entry is shown in first row (*GREEN Italics*) for a facility that purchases RECs for 100% of its consumption, and therefore has a market-based emission factor of 0.

Help - Market-Based Method

Source ID	Source Description	Source Area (sq ft)	eGRID Subregion <i>where electricity is consumed</i>	Electricity Purchased (kWh)	CO ₂ Emissions (lb/MW-hr)	CH ₄ Emissions (lb/MW-hr)	N ₂ O Emissions (lb/MW-hr)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)
Bldg-012	East Power Plant Industrial Park	12,517 / 2,500,000	HIMS (HICC Miscellaneous) MROW (MRO West)	200,000 / 16,500,000	<enter factor>	<enter factor>	<enter factor>	0.0 / 18,123,600.0	0.0 / 1,963.5	0.0 / 280.5	237,120.0 / 18,123,600.0	28.6 / 1,963.5	4.4 / 280.5
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Total Emissions for All Sources				16,500,000				18,123,600.0	1,963.5	280.5	18,123,600.0	1,963.5	280.5

CO ₂ Equivalent Emissions (metric tons)	
Location-Based Electricity Emissions	8,281.0
Market-Based Electricity Emissions	8,281.0

Figure 1. EPA eGRID2019, February 2021.



Scope 3 Emissions from Waste



Guidance

(A) Enter annual waste data in ORANGE cells. Example entry is shown in first row (*GREEN Italics*).

(B) Choose the appropriate material and disposal method from the drop down options. For the average-data method, use one of the mixed material types, such as mixed MSW. If the exact waste material is not available, consider an appropriate proxy. For example, dimensional lumber can be used as a proxy for wood furniture.

(C) Choose an appropriate disposal method. Note that not all disposal methods are available for all materials. If there is a #NA or # Value error in the emissions column, you must pick a new material type or appropriate disposal method.

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

[illegible]

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO ₂ e (kg)
Recycled	2,231,550
Landfilled	-
Combusted	6,752,505
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

Total CO ₂ Equivalent Emissions (metric tons) - Waste	
2019	1,000
2020	1,000
2021	1,000
2022	1,000
2023	1,000
2024	1,000
2025	1,000
2026	1,000
2027	1,000
2028	1,000
2029	1,000
2030	1,000

8,984.1

Appendix D



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

June 13, 2024

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

RE: Natural Heritage Review of the proposed **Gillys Farm**,
T115N R18W Sections 27, 28, & 33; Dakota County

Dear Twin Cities - Environmental (Kimley-Horn),

For all correspondence regarding the Natural Heritage Review of this project please include the project ID **MCE-2024-00412** in the email subject line.

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

State-listed Species

- [Loggerhead shrikes](#) (*Lanius ludovicianus*), a state-listed endangered bird, have been documented in the vicinity of the project site. 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. Minnesota's Endangered Species Statute (Minnesota Statutes, section 84.0895) and associated Rules (Minnesota Rules, part 6212.1800 to 6212.2300 and 6134) prohibit the take of endangered or threatened plants or animals, including their parts or seeds, without a permit. Given the potential for this species to be found in the vicinity of the project, **tree and shrub removal is required to be avoided during the breeding season, April through July.**

Please contact Review.NHIS@state.mn.us to confirm that the above avoidance measure will be implemented or to inform us that avoidance is not feasible. If avoidance is not feasible, a qualified surveyor needs to conduct a survey for active nests before any trees or shrubs will be removed. Requirements for surveys and lists of DNR certified lists of surveyors can be found at the [Natural Heritage Review website](#).

- [Lark sparrow](#) (*Chondestes grammacus*) and [Bell's vireo](#) (*Vireo bellii*), both state-listed bird species of special concern, has been documented in the vicinity of the project. Lark sparrows are found in open, dry grassland areas with scattered trees and shrubs. Bell's vireo prefers shrub thickets within or bordering open habitats such as grasslands or wetlands. Both birds build their nest on the ground, in a shrub or a small tree. **If feasible, avoid initial disturbance to grassland areas and tree/shrub removal from May 15th through August 15th to avoid disturbance of nesting birds.**
- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed nearby, all of Minnesota's bats, including the federally endangered northern long-eared bat ([Myotis septentrionalis](#)), can be found throughout Minnesota. During the active season (approximately April-November) bats roost underneath bark, in cavities, or in crevices of both live and dead trees. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, **the DNR recommends that tree removal be avoided from June 1 through August 15.**
- Please visit the [DNR Rare Species Guide](#) for more information on the habitat use of these species and recommended measures to avoid or minimize impacts.

Federally Protected Species

- The area of interest overlaps with a U.S Fish and Wildlife Service (USFWS) Rusty Patched Bumble Bee [High Potential Zone](#). The [rusty patched bumble bee](#) (*Bombus affinis*) is federally listed as endangered and is likely to be present in suitable habitat within High Potential Zones. 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 rusty patched bumble bee may be impacted by a variety of land management activities including, but not limited to, prescribed fire, tree-removal, haying, grazing, herbicide use, pesticide use, land-clearing, soil disturbance or compaction, or use of non-native bees. If applicable, **the DNR recommends reseeding disturbed soils with native species of grasses and forbs using [BWSR Seed Mixes](#) or [MnDOT Seed Mixes](#).**

To ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online [Information for Planning and Consultation \(IPaC\) tool](#). Please note that all projects, regardless of whether there is a federal nexus, are subject to federal take prohibitions. The IPaC review will determine if prohibited take is likely to occur and, if not, will generate an automated letter. The [USFWS RPBB guidance](#) provides guidance on avoiding impacts to rusty patched bumble bee and a key for determining if actions are likely to affect the species; the determination key can be found in the appendix.

Environmental Review and Permitting

- Please include a copy of this letter and the MCE-generated Final Project Report in any state or local license or permit application. Please note that measures to avoid or minimize disturbance to the above rare features may be included as restrictions or conditions in any required permits or licenses.
- For additional information regarding solar projects, please see [Commercial Solar Siting Guidance](#) and [Prairie Establishment & Maintenance Technical Guidance for Solar Projects](#) documents.

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

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

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

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

Sincerely,

Molly Barrett
Natural Heritage Review Specialist
Molly.Barrett@state.mn.us

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



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:
Project Code: 2025-0039886
Project Name: Dakota East

01/09/2025 21:10:44 UTC

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

To Whom It May Concern:

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

Threatened and Endangered Species

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

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

Consultation Technical Assistance

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

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

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

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

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

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

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

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

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

Northern Long-Eared Bats

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

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

Examples of unsuitable habitat include:

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

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

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

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

species list report for your records.

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

Whooping Crane

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

Other Trust Resources and Activities

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

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

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

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

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

State Department of Natural Resources Coordination

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

Minnesota

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

Email: Review.NHIS@state.mn.us

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: 2025-0039886

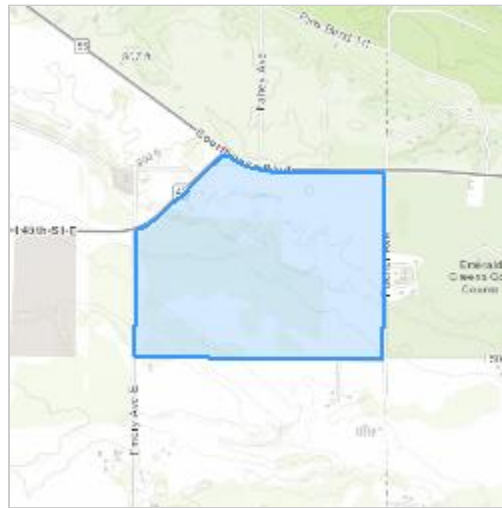
Project Name: Dakota East

Project Type: Commercial Development

Project Description: Proposed development project in 2025.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@44.7372408,-92.98466457010497,14z>



Counties: Dakota County, Minnesota

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 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 Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

MAMMALS

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

CLAMS

NAME	STATUS
Higgins Eye (pearlymussel) <i>Lampsilis higginsii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5428	Endangered
Salamander Mussel <i>Simpsonaias ambigua</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6208	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Rusty Patched Bumble Bee <i>Bombus affinis</i> There is proposed critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9383 General project design guidelines: https://ipac.ecosphere.fws.gov/project/RRHEZ7ZDL5ACPEGT36YSPTTNXU/documents/generated/5967.pdf	Endangered
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Rusty Patched Bumble Bee <i>Bombus affinis</i> https://ecos.fws.gov/ecp/species/9383#crithab	Proposed

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

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

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

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

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

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

Ensure Your Eagle List is Accurate and Complete

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

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

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

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

Breeding Season (■)

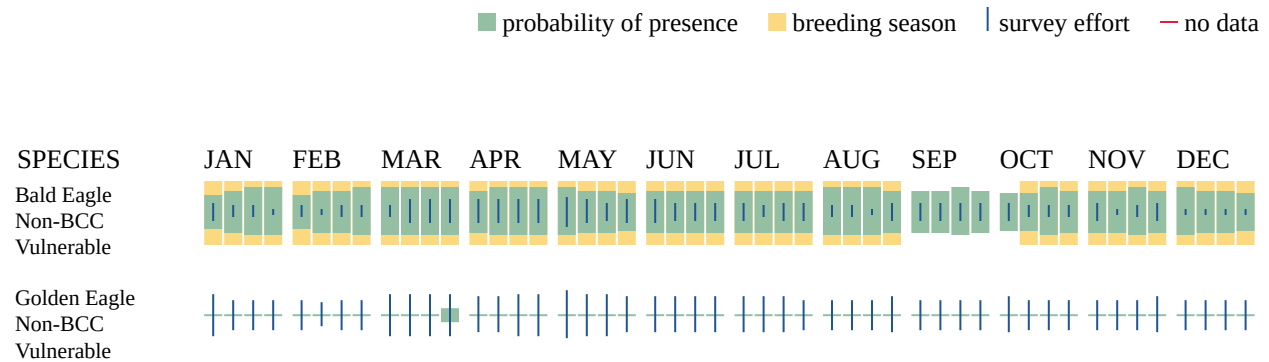
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (!)

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

No Data (—)

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



Additional information can be found using the following links:

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

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

-
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 <i>Pluvialis dominica</i> 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Dolichonyx oryzivorus</i> 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
Cerulean Warbler <i>Setophaga cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 21 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> 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
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> 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/8329	Breeds Jun 1 to Aug 20

NAME	BREEDING SEASON
Henslow's Sparrow <i>Centronyx henslowii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Lesser Yellowlegs <i>Tringa flavipes</i> 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 <i>Calidris melanotos</i> 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
Prairie Loggerhead Shrike <i>Lanius ludovicianus excubitorides</i> 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/8833	Breeds Feb 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> 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
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> 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 <i>Euphagus carolinus</i> 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
Semipalmated Sandpiper <i>Calidris pusilla</i> 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/9603	Breeds elsewhere
Upland Sandpiper <i>Bartramia longicauda</i> 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 <i>Hylocichla mustelina</i> 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 (■)

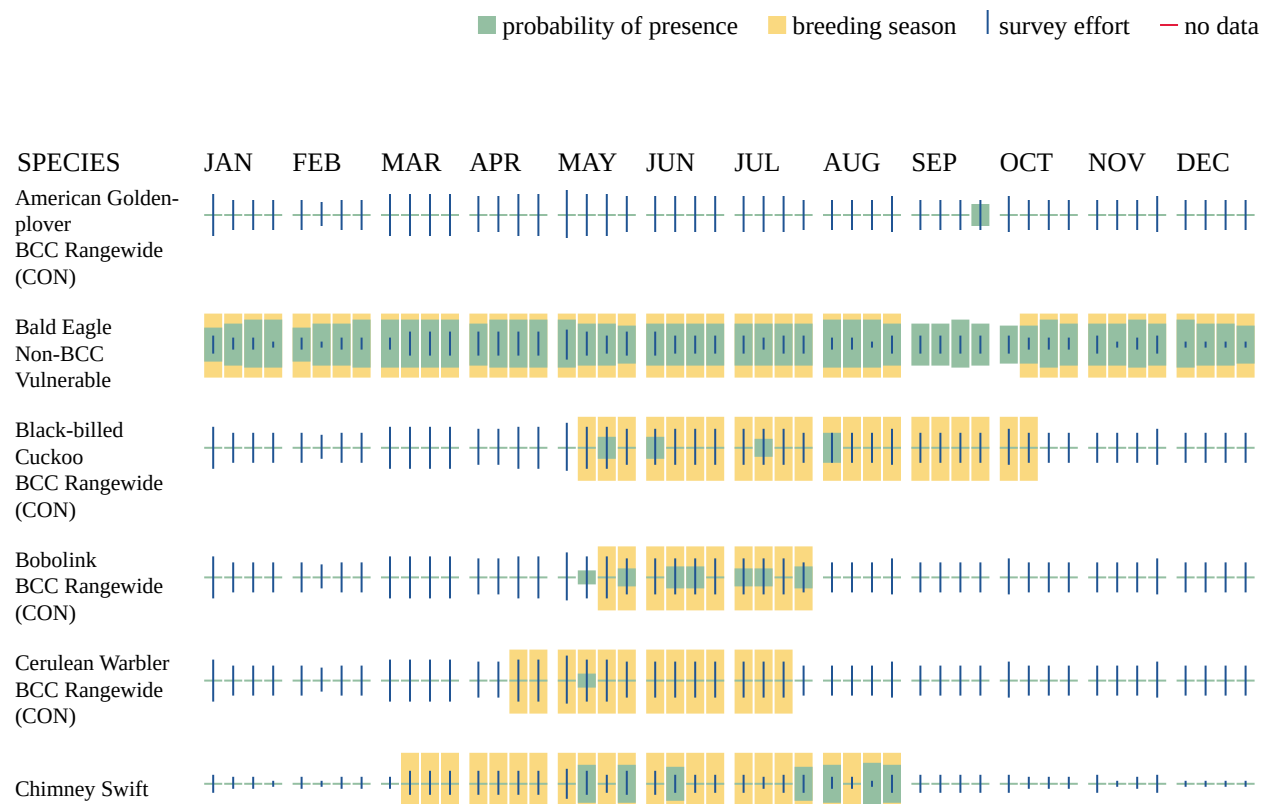
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

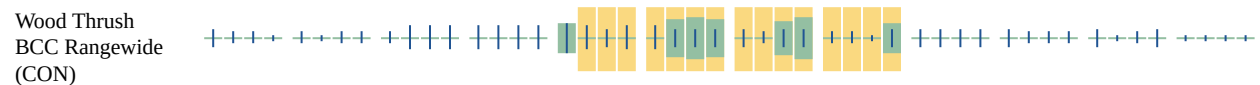
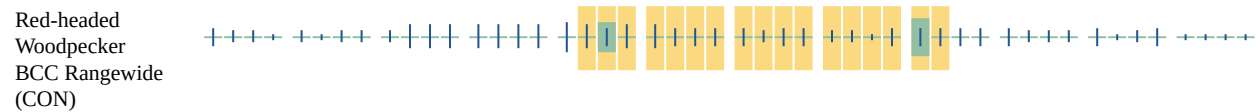
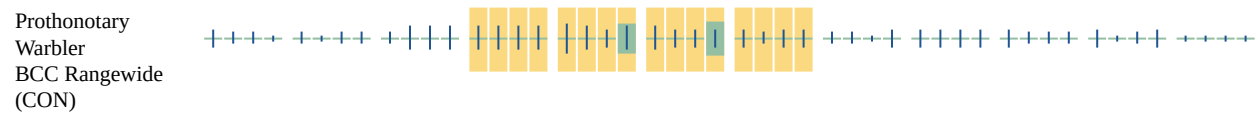
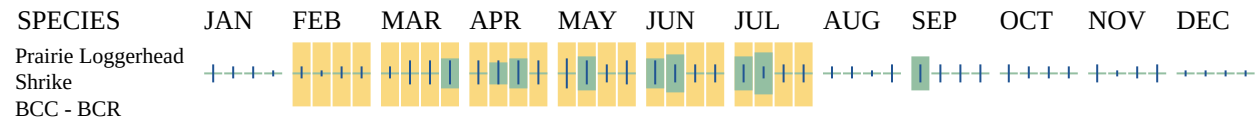
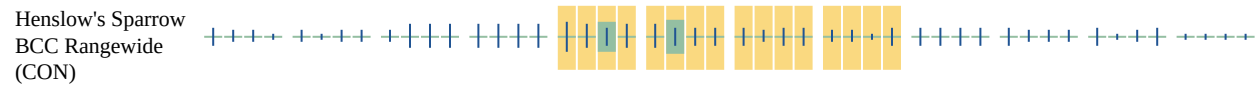
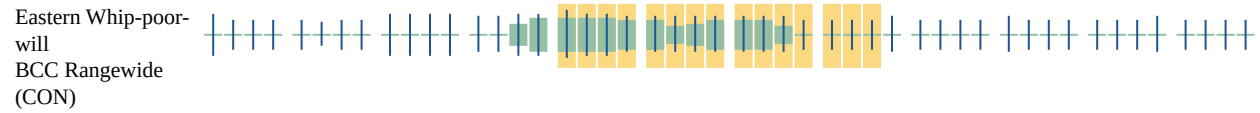
Survey Effort (|)

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.



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 avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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.

RIVERINE

- R4SBC

IPAC USER CONTACT INFORMATION

Agency: Kimley-Horn
Name: Cady Peterson
Address: 14800 Galaxie Ave Suite 200
City: Apple Valley
State: MN
Zip: 55124
Email: cady.peterson@kimley-horn.com
Phone: 9529052923

Appendix E

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 Draft AUAR and Mitigation Plan comment period began March 18, 2025, and comments were accepted through April 17, 2025. Five (5) comment letters were received from government agencies. Responses to those comments are included in the following sections.

1. Dakota County

Comment	Response
<i>Environmental Resources</i>	
Plate 1 of the Geologic Atlas of Dakota County, Minnesota publication date 2023, maps a bedrock fault from the Study Area, northeast to the Mississippi River. See attached map (DakotaEast.pdf). Faults and fractures in the bedrock underlying the Study Area can quickly transport contaminants toward downgradient private water supply wells, Spring Lake and the Mississippi River.	Comment noted. This information will be documented in the AUAR.

Comment	Response
The MN Department of Natural Resources (DNR) has produced several maps that delineate the vulnerability of groundwater to contamination. The Study Area is mapped as highly vulnerable on the DNR Pollution Sensitivity of Near Surface Materials Map available at https://www.dnr.state.mn.us/waters/groundwater_section/mapping/mn-hydro-atlas.html. The dataset for the map estimates the pollution sensitivity of near surface materials from the transmission time of water through 3 feet of soil and 7 feet of surficial geology to a depth of 10 feet from the land surface. According to the DNR Pollution Sensitivity of the Bedrock Surface available at https://www.dnr.state.mn.us/waters/groundwater_section/mapping/mn-hydro-atlas.html, the entire Study Area is mapped as highly sensitive. This map of the sensitivity to groundwater pollution is based on characteristics of rock and sediment known to overlie the Prairie du Chien-Jordan bedrock aquifers. Due to the vulnerability of the groundwater to contamination, efforts should be made to minimize the use of chemicals on the Study Area. Lawn care fertilizers and herbicides can impact the groundwater and drinking water aquifers. Providing thick, quality topsoil and a subsequent inspection to verify that it was provided in areas for lawn and landscaping is recommended. To reduce the need for chemicals and irrigation, plant native, drought tolerant landscape plants and tall fescue for lawn areas.	Comment noted.
To mitigate additional winter salt use associated with the planned increase in impervious surface, the project proposer should implement a chloride management plan for the proposed development. Consider winter-smart design of parking lots to reduce deicing salt and its impacts to aquatic life and water quality. Keep the angle of the 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 pavement. Minimize the flow of meltwater across roads and parking lots to mitigate refreezing across roads to reduce the need for deicing salt.	Comment noted.

Comment	Response
"Figure 11: Water Resources", which shows wells within a 1-mile buffer of the project proposal, is missing quite a few wells. Please refer to the attached shapefile/excel file for a complete well inventory. Additionally, please consider there are approximately 10 or more properties within the 10-mile buffer that likely have wells but no well record exists due to the age of the home being greater than the age of well regulation. If the irrigation well within the project boundary is no longer needed it must be sealed by a licensed well contractor. If any additional wells are discovered during site visits and/or during redevelopment, they should be examined by a licensed well contractor or a Dakota County well inspector to determine the status. Information about property transfer requirements as they pertain to wells is on our webpage at https://www.co.dakota.mn.us/HomeProperty/SellingProperty/WellRequirements	Comment noted. Figure 11 has been updated to include the private wells near the AUAR Study Area. As noted, if any wells are no longer needed within the AUAR Study Area, they will be sealed by a licensed contractor.
Wastewater	
In Scenario 2, surface discharge or a rapid infiltration basin for discharge of non-contact cooling water should not be in the vicinity of the geologic fault on the Study Area, see attached map. Scale inhibitor agents should not be added to the non-contact cooling water in a data center. These chemicals should not be infiltrated to the groundwater in the Hastings Drinking Water Supply Management Area and on this Study Area where downgradient homes rely on private drinking water wells for their water.	Comment noted. More investigation and additional studies are needed to determine if a Rapid Infiltration Basin is feasible for this development. The project proposer will continue to work with the city to determine what type of wastewater discharge systems may be possible for the proposed developments within the AUAR Study Area.
Water Appropriation	
It is stated that in Scenario 1 the agricultural irrigation well would still be in use. This well is allowed for nonpotable uses. This section states that the use of the well will be "redefined from irrigation to industrial/municipal". This well cannot be redefined to municipal. Municipal wells are public water supply wells. The onsite well was rotary drilled and is not full-length grouted, therefore it would not be allowed to be a public water supply well. Isolation distances from contaminant sources need to be maintained from the well in accordance with MN Rules 4725 Wells and Boring.	Comment noted. It is noted that the irrigation well cannot be redefined to a municipal well and be used for public consumption. The AUAR will be updated to discuss the potential for the well and/or the appropriations to be used for

Comment	Response
	a larger industrial user for nonpotable water.
Transportation	
Dakota County Transportation staff responded to the consultant team and provided comments regarding the Traffic Impact Analysis of 1-21-2025. We have no other comments related to Transportation.	Comment noted. The city and project proposer will continue to coordinate with the county regarding traffic and transportation needs for any future development within the AUAR Study Area.

2. Metropolitan Council

Comment	Response
Climate Change	
The discussion of anticipated climate trends is adequate; however, the AUAR would benefit from considering if different scenarios merit different adaptations. The list of adaptations is well suited to Scenarios 2 and 3, but do not consider how adaptations like clustering development could reduce the impervious surfaces associated with the single-family residential uses in Scenario 1 or how the adoption of environmentally responsible farming practices could limit the non-point source pollution generated by Scenario 1's agricultural acreage.	Comment noted. Additional information will be added to the climate adaptation table.
Permits and Approvals	
As noted in the Draft AUAR, Scenarios 2 and 3 would require a comprehensive plan amendment, both to align the land use with proposed project and to bring the eastern portion of the site into the Metropolitan Urban Service Area (MUSA).	Comment noted.

Comment	Response
Land Use	
The Draft AUAR identifies three possible scenarios: a mainly residential scenario, a technology park campus, and a light industrial scenario. If the second or third scenario is pursued, it could add 1,200 or more jobs in this part of Rosemount, which would exceed the Transportation Analysis Zone #728 allocation of employment. Met Council staff notes that in this Draft AUAR, the City commits "to modify the TAZ allocations, if necessary. The City will continue to work with Metropolitan Council on housing and residential units' areas within the city." (p. 74)	Comment noted.
A planned segment of the Rosemount Greenway Regional Trail (Dakota County) is less than 0.1 mile north of the AUAR area. A long-range plan developed by Dakota County was approved by the Metropolitan Council in 2012. While the integrated Traffic Impact Analysis includes reference to this planned trail (pdf pg. 157), the AUAR should acknowledge Dakota County's Rosemount Greenway Regional Trail Long-Range Plan in Section 10. Land Use, parts a.ii. ("Planned land use...") and b. ("Discuss the project's compatibility..."). The City of Rosemount (RGU) and MNLCO Dakota County, LLC (proposer) should coordinate with Dakota County Parks to connect to the planned Rosemount Greenway Regional Trail in this area. Regional trails benefit residents and businesses alike, providing healthy recreation options and access to key local and regional destinations.	Comment noted. The city and the project proposer will continue to coordinate with Dakota County for the potential regional trail corridor within the AUAR Study Area.
Groundwater	

Comment	Response
As Rosemount works with the Minnesota Department of Natural Resources (DNR) to ensure water is available for the development and its use sustainable, any updates to the City's Local Water Supply Plan, including changes to water demand projections, must align with regional policies regarding sustainable water supplies and water resources. Through this process, the City should consider the availability of water during periods of stress such as a significant drought, when water use restrictions may be put into effect and the state's priority water use rules may limit the amount of water for industrial or commercial activities. The project proposer should use drought tolerant species, including native plants, to help limit the need for outdoor water use and to increase habitat. Reuse of captured stormwater may also help to offset the need for outdoor water use.	Comment noted.

Comment	Response
Wastewater	
It is assumed that sanitary sewer service for the AUAR study area will be provided by new City sanitary sewer extensions along County Road 42 (145th Street) from Driver Avenue to the west. Scenario 2 represents a proposed Mixed Business (Technology Park) development which includes 2,300,000 square feet of Mixed Business Campus, including a possible data center, with a potential wastewater discharge of 0.263 – 4.50 MGD. It is understood that a significant amount of wastewater from the development would be cooling water discharge for the proposed data center. Alternative methods of non-contact cooling water disposal such as rapid infiltration basins are being studied for the discharge of the non-contact cooling water onsite and will require a separate MPCA discharge permit. If Scenario 2 is pursued, the proposed data center 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. The City and developer should be aware that a peak day wastewater discharge of 4.5 MGD would represent a system impact. In addition, the Metropolitan Council's 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. The City and developers are encouraged to contact the 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, prior to sizing and investing in sewer infrastructure to serve the development. For more information, please contact Kristi Goble at kristi.goble@metc.state.mn.us or at 651-602-8114.	Comment noted. The city and project proposer will coordinate with Met Council for wastewater discharge estimates for the proposed development and if potential mitigation such as mitigation may be required, such as pre-treatment, attenuation through wastewater storage, or an alternative surface water or ground infiltration discharge are feasible solutions.

Comment	Response
Greenhouse Gas Emissions	
The Green House Gas emissions calculations included in the AUAR should be refined. It seems unlikely that the construction emissions from Scenario 1, where half the site remains in an undisturbed state and very different uses are contemplated, would be identical to those of Scenario 2. The project proposer should also consider the use of onsite solar panels or commit to purchasing energy from renewable sources to offset the large amount of GHG generated by Scenario 2's energy use.	Comment noted. As noted in the AUAR, the city will continue to encourage project proposers to consider renewable energy or purchasing energy from renewable sources.

3. Minnesota Pollution Control Agency (MPCA)

Comment	Response
Watershed • If Scenario 2 is chosen, there is a wide range of wastewater discharge listed on page 42. • The recommended action would be to recycle/reuse the water more to decrease the water used and discharged. • With anticipated increased precipitation and drought events, Scenario 2 could put additional stressors on the groundwater resources and on wastewater infrastructure. • If using Empire WWTP (Miss-Twin Cities HUC8), the water would be discharged in a different watershed than the facility (Miss-Lake Pepin). • The Vermillion River trout stream is four miles away as stated in the AUAR – consideration as to whether the stream would be impacted if water is removed from the watershed in various future climate scenarios could be beneficial.	Comment noted. The city will continue to work with the project proposer on potential water reuse to reduce the amount of water used and discharged. The city will also continue to work with the Metropolitan Council on the Empire WWTP capacity and solutions to reduce the amount of discharge to the plant. It is anticipated that the water supply for the proposed study area will be from the City's municipal water supply will be used for the proposed development within the AUAR Study Area. Other alternatives are being evaluated for

Comment	Response
• For all scenarios, there is an increase in impervious area. Design considerations should be taken to reduce salt usage which could lead to a chloride impairment for nearby sources. • Planning to store snow in areas that will not increase icy areas as the pile melts will be beneficial. • The goal is to develop with winter maintenance in mind and use less salt. • In MnSHIP, while there are no sites within the study area, there are several historical points within a mile of the study site.	non-potable water and further coordination with the applicable regulatory agencies will be completed. No impacts to the Vermillion River are anticipated as a result of the proposed development within the AUAR Study Area. The city will continue to encourage salt use management and snow storage areas for development in the AUAR Study Area. Comment noted on the historical points near the AUAR Study Area.

4. Vermillion River Watershed Joint Powers Organization (VRWJPO)

Comment	Response
Page 13 – Climate Adaptation and Resilience – Table 2. <i>Climate Considerations and Adaptations</i> , Project Design - There is mention of water efficient design being incorporated into landscaping, but no mention of water efficient irrigation design. We would suggest the City propose incorporation of both water efficient landscaping and irrigation design. We would also suggest that the City incorporate low salt design in Project Design.	Comment noted. The city will encourage water efficient irrigation design and low salt design within the AUAR Study Area.
Page 17 – Cover Type – Table 3. Cover Types, Wetlands and Shallow Lakes – This indicates that 0.64 acres of wetland exist within the study site. Later in the document, it states that a wetland delineation was completed by Kimley-Horn on October 8, 2024; however, the delineation is still pending approval by the Local Government Unit, so this number could change. Once the site's wetland delineation is approved, all tables, figures and narrative should reflect the approved delineation.	Comment noted.
Page 24 – ii-Zoning. In third paragraph, please add “30 foot” in front of “water Quality Corridor extends through.....”	Comment noted. The AUAR has been updated.

Comment	Response
Page 25 – Table 7. Please add “City of Rosemount” to table title.	Comment noted. This has been updated in the AUAR.
Page 42 – The document describes Scenario 2 as generating a peak day wastewater discharge rate ranging from 50,000 to 4,500,000 gallons per day; however, Table 11 only accounts for the domestic discharge and does not include the non-contact cooling water discharge. Table 11 should reflect the full wastewater discharge rate, accounting for both domestic discharge and non-contact cooling water discharge.	Comment noted. The table was to provide a comparison for domestic water discharge and not for industrial wastewater. We have documented the potential industrial wastewater discharge in the section.
Page 45 – Remove 4th paragraph in its entirety. The proposed site may discharge to the Vermillion River, but it does not discharge to a designated trout stream reach as the designated trout stream reach ends near State Highway 52.	Comment noted.
Page 47 – Table 12: All demands (both domestic and non-domestic) should be listed or otherwise described for Scenario 2 since the existing wells on site may not have the capacity to provide flows that will otherwise be needed from the City water supply.	Comment noted. All water demands have been documented in the AUAR.

5. Minnesota Department of Health

Comment	Response
Section 12.a.ii discussing groundwater does not mention the public water supply wells located at Emerald Green Golf Course located adjacent to the site. One of the public water supply wells is located in the Jordan aquifer and is considered vulnerable to contamination from activities at or near the land surface. Associated Figure 14 should be checked against Dakota County well database. It appears some domestic wells are missing. Stormwater management and spill response should consider the nearby public water supply wells and domestic supply wells. Additionally, the Jordan aquifer is significantly impacted by nitrate in this area, and stormwater management practices should take care not to worsen the impact. This potential impact is not mentioned within the draft AUAR.	Comment noted. Figure 14 has been updated to include the well index from Dakota County. Stormwater management for the AUAR Study Area will be required to meet local, state, and federal regulations including the reduction of phosphorus and nitrates.
Section 12.b.iii asserts that “These alternatives would result in no net increase of water appropriations for the Jordan aquifer.” While this may be true for this site, the Jordan aquifer is a regional resource, and potential impacts should be evaluated on a regional scale, not only the project scale. During the drought of 2023 the City of Rosemount used more than 1.2 billion gallons of water as reported on the MN Department of Natural Resources Permitting and Reporting System (MPARS). Scenarios 1 and 3 would result in an overall increase in water use from the Jordan aquifer on a regional scale. While the permitted amount from the well may not change in scenario 2 the actual water use will likely increase. The most recently reported water use for the irrigation well is significantly below the permitted volume. These potential impacts should be addressed within the draft AUAR.	Comment noted. As noted in the AUAR, the project proposers will continue to evaluate water supply and if any changes to their current water appropriations would be needed for any of the development scenarios. Additionally, using the irrigation well for nonpotable cooling water is being evaluated and considered to minimize the water demand for the city’s municipal system.

Appendix F

April 9, 2025

VIA EMAIL

Anthony Nemcek, Senior Planner
City of Rosemount
2875 145th Street West
Rosemount, Minnesota 55068
anthony.nemcek@rosemountmn.gov

RE: Dakota East Area – Alternative Urban Areawide Review

Dear: Anthony Nemcek

Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) for the Dakota East Area project (Project) located in Dakota County, Minnesota. The Project consists of the Dakota East AUAR Study Area, which encompasses an area totaling approximately 447 acres on eight parcels in the City of Rosemount, Dakota County, Minnesota (shown in Figure 2). MNLCO Dakota County, LLC is proposing to redevelop the study area from existing agriculture and extraction use to one of the following proposed scenarios. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

Watershed

- If Scenario 2 is chosen, there is a wide range of wastewater discharge listed on page 42.
 - The recommended action would be to recycle/reuse the water more to decrease the water used and discharged.
 - With anticipated increased precipitation and drought events, Scenario 2 could put additional stressors on the groundwater resources and on wastewater infrastructure.
 - If using Empire WWTP (Miss-Twin Cities HUC8), the water would be discharged in a different watershed than the facility (Miss-Lake Pepin).
 - The Vermillion River trout stream is four miles away as stated in the AUAR – consideration as to whether the stream would be impacted if water is removed from the watershed in various future climate scenarios could be beneficial.
- For all scenarios, there is an increase in impervious area. Design considerations should be taken to reduce salt usage which could lead to a chloride impairment for nearby sources.
 - Planning to store snow in areas that will not increase icy areas as the pile melts will be beneficial.
 - The goal is to develop with winter maintenance in mind and use less salt.
- In MnSHIP, while there are no sites within the study area, there are several historical points within a mile of the study site.

We appreciate the opportunity to review the Project. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or

Anthony Nemcek

Page 2

April 9, 2025

future permit actions by the MPCA. Ultimately, it is the responsibility of the Project Proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this AUAR, please contact me by email at chris.green@state.mn.us or by telephone at 507-476-4258.

Sincerely,

Chris Green

This document has been electronically signed.

Chris Green, Project Manager

Environmental Review Unit

Resource Management and Assistance Division

CG:rs

Attachment

cc: Dan Card, MPCA
Amy Timm, MPCA
Miranda Nichols, MPCA
Nicole Peterson, MPCA
Lauren Dickerson, MPCA
Innocent Eyoh, MPCA
Deepa deAlwis, MPCA
Julie Henderson, MPCA
David Sahli, MPCA



April 16, 2025

Anthony Nemcek
City of Rosemount
2875 145th Street W
Rosemount, MN 55068

Thank you for the opportunity to review the Alternative Urban Areawide Review (AUAR) for Dakota East Area in Rosemount totaling approximately 447 acres. County Physical Development staff reviewed the document and offer the following comments for consideration.

Environmental Resources

Please contact Environmental Resources at 952-891-7000 or environ@co.dakota.mn.us with questions or if additional information is needed.

11.a. Geology

Plate 1 of the Geologic Atlas of Dakota County, Minnesota publication date 2023, maps a bedrock fault from the Study Area, northeast to the Mississippi River. See attached map (DakotaEast.pdf). Faults and fractures in the bedrock underlying the Study Area can quickly transport contaminants toward downgradient private water supply wells, Spring Lake and the Mississippi River.

12.a.ii. Groundwater

The MN Department of Natural Resources (DNR) has produced several maps that delineate the vulnerability of groundwater to contamination. The Study Area is mapped as highly vulnerable on the DNR Pollution Sensitivity of Near Surface Materials Map available at

https://www.dnr.state.mn.us/waters/groundwater_section/mapping/mn-hydro-atlas.html. The dataset for the map estimates the pollution sensitivity of near surface materials from the transmission time of water through 3 feet of soil and 7 feet of surficial geology to a depth of 10 feet from the land surface. According to the DNR Pollution Sensitivity of the Bedrock Surface available at

https://www.dnr.state.mn.us/waters/groundwater_section/mapping/mn-hydro-atlas.html, the entire Study Area is mapped as highly sensitive. This map of the sensitivity to groundwater pollution is based on characteristics of rock and sediment known to overlie the Prairie du Chien-Jordan bedrock aquifers. Due to the vulnerability of the groundwater to contamination, efforts should be made to minimize the use of chemicals on the Study Area. Lawn care fertilizers and herbicides can impact the groundwater and drinking water aquifers. Providing thick, quality topsoil and a subsequent inspection to verify that it was provided in areas for lawn and landscaping is recommended. To reduce the need for chemicals and irrigation, plant native, drought tolerant landscape plants and tall fescue for lawn areas.

To mitigate additional winter salt use associated with the planned increase in impervious surface, the project proposer should implement a chloride management plan for the proposed development. Consider winter-smart design of parking lots to reduce deicing salt and its impacts to aquatic life and water quality. Keep the angle of the sun in mind to ensure it reaches and melts critical icy patches. Consider the direction of prevailing winter wind to

Physical Development Division

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prevent drifting snow, plant trees to create a living snow fence. Implement pavement alternatives such as permeable pavement. Minimize the flow of meltwater across roads and parking lots to mitigate refreezing across roads to reduce the need for deicing salt.

“Figure 11: Water Resources”, which shows wells within a 1-mile buffer of the project proposal, is missing quite a few wells. Please refer to the attached shapefile/excel file for a complete well inventory. Additionally, please consider there are approximately 10 or more properties within the 10-mile buffer that likely have wells but no well record exists due to the age of the home being greater than the age of well regulation. If the irrigation well within the project boundary is no longer needed it must be sealed by a licensed well contractor. If any additional wells are discovered during site visits and/or during redevelopment, they should be examined by a licensed well contractor or a Dakota County well inspector to determine the status. Information about property transfer requirements as they pertain to wells is on our webpage at <https://www.co.dakota.mn.us/HomeProperty/SellingProperty/WellRequirements>.

12.b.i. Wastewater

In Scenario 2, surface discharge or a rapid infiltration basin for discharge of non-contact cooling water should not be in the vicinity of the geologic fault on the Study Area, see attached map. Scale inhibitor agents should not be added to the non-contact cooling water in a data center. These chemicals should not be infiltrated to the groundwater in the Hastings Drinking Water Supply Management Area and on this Study Area where downgradient homes rely on private drinking water wells for their water.

12.b.iii. Water Appropriation

It is stated that in Scenario 1 the agricultural irrigation well would still be in use. This well is allowed for non-potable uses. This section states that the use of the well will be “redefined from irrigation to industrial/municipal”. This well cannot be redefined to municipal. Municipal wells are public water supply wells. The onsite well was rotary drilled and is not full-length grouted, therefore it would not be allowed to be a public water supply well. Isolation distances from contaminant sources need to be maintained from the well in accordance with MN Rules 4725 Wells and Boring.

Transportation

Dakota County Transportation staff responded to the consultant team and provided comments regarding the Traffic Impact Analysis of 1-21-2025. We have no other comments related to Transportation.

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 William Droste, District 4
Heidi Welch County Manager

Physical Development Division

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Dakota East Area AUAR

Geologic Map with Faults

 Tax Parcels

Contacts and faults

line type

— contact

— fault

---- disturbed strata

Bedrock geology polygons

Upper Ordovician

 Ogc - Galena Group, Cummingsville Formation

 Od - Galena Group, Decorah Shale

 Opg - Plateville and Glenwood Formations, undivided

Middle to Lower Ordovician

 Os - St. Peter Sandstone

Lower Ordovician

 Ops - Prairie du Chien Group, Shakopee Formation

 Opo - Prairie du Chien Group, Oneota Dolomite

Upper Cambrian

 Cp - Pine Bend Impact Structure

 Cj - Jordan Sandstone

 Cs - St. Lawrence Formation

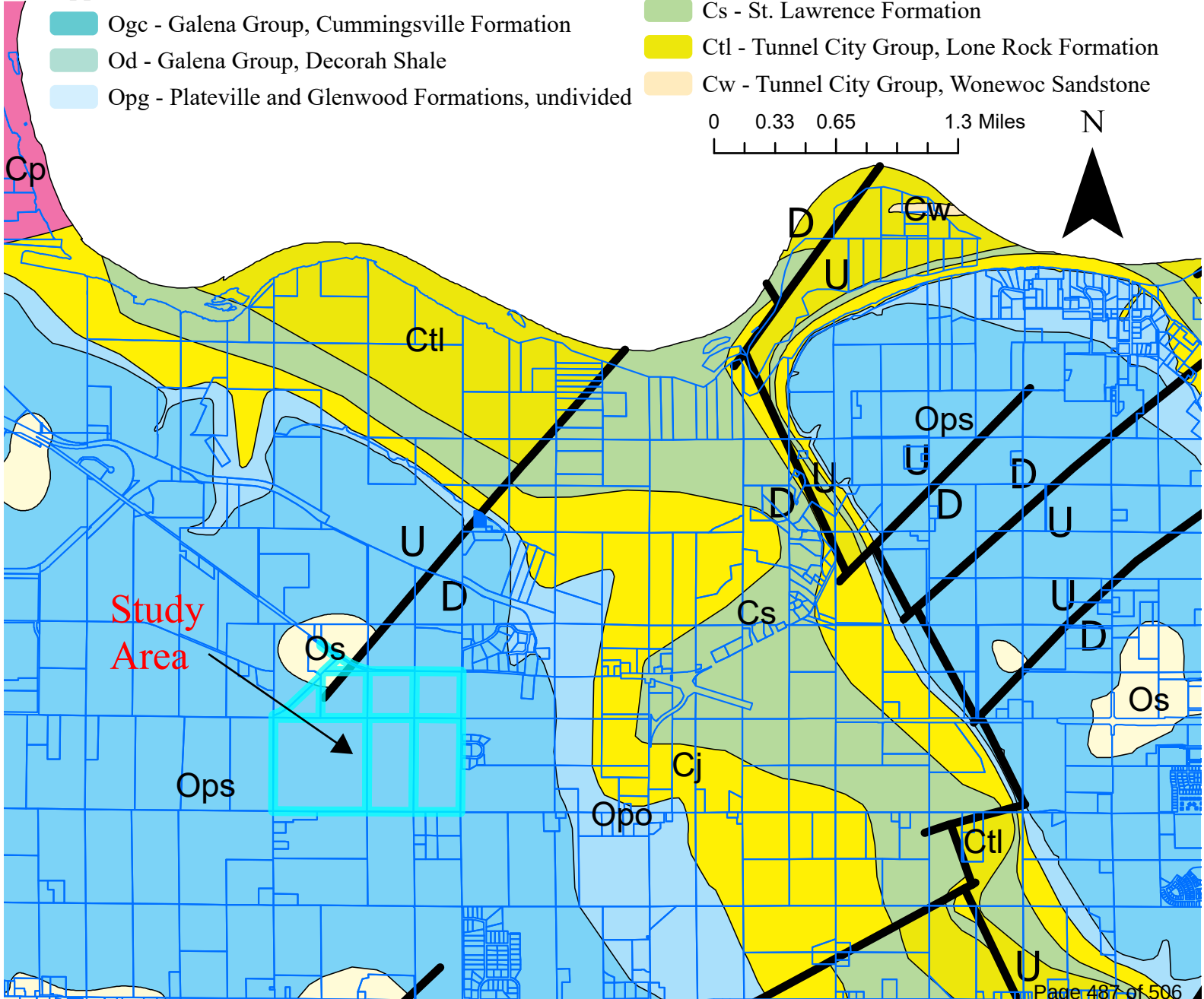
 Ctl - Tunnel City Group, Lone Rock Formation

 Cw - Tunnel City Group, Wonewoc Sandstone

0 0.33 0.65 1.3 Miles

N

Study Area





Protecting, Maintaining and Improving the Health of All Minnesotans

April 8, 2025

Anthony Nemcek
City of Rosemount
2875 145th St. W
Rosemount, MN 55068

Dear Anthony Nemcek,

Thank you for providing the Minnesota Department of Health (MDH) with the opportunity to comment on the Draft Alternative Urban Areawide Review (AUAR) for Dakota East Area. The mission of MDH is to protect, maintain, and improve the health of all Minnesotans. The careful planning and development of projects such as this one supports this mission and is an important step in ensuring health in all policies.

MDH has the following comments for section 12 of this AUAR:

Section 12.a.ii discussing groundwater does not mention the public water supply wells located at Emerald Green Golf Course located adjacent to the site. One of the public water supply wells is located in the Jordan aquifer and is considered vulnerable to contamination from activities at or near the land surface. Associated Figure 14 should be checked against Dakota County well database. It appears some domestic wells are missing. Stormwater management and spill response should consider the nearby public water supply wells and domestic supply wells. Additionally, the Jordan aquifer is significantly impacted by nitrate in this area, and stormwater management practices should take care not to worsen the impact. This potential impact is not mentioned within the draft AUAR.

Section 12.b.iii asserts that “These alternatives would result in no net increase of water appropriations for the Jordan aquifer.” While this may be true for this site, the Jordan aquifer is a regional resource, and potential impacts should be evaluated on a regional scale, not only the project scale. During the drought of 2023 the City of Rosemount used more than 1.2 billion gallons of water as reported on the MN Department of Natural Resources Permitting and Reporting System (MPARS). Scenarios 1 and 3 would result in an overall increase in water use from the Jordan aquifer on a regional scale. While the permitted amount from the well may not change in scenario 2 the actual water use will likely increase. The most recently reported water use for the irrigation well is significantly below the permitted volume. These potential impacts should be addressed within the draft AUAR.

Health starts where we live, learn, work, and play. To create and maintain healthy Minnesota communities, we must think in terms of health in all policies. Thank you again for the opportunity

to provide comments on this Draft Alternative Urban Areawide Review for Dakota East Area. Feel free to contact Anneka Munsell at (651) 201-5841 or anneka.munsell@state.mn.us if you have any questions regarding this letter.

Sincerely,

Anneka Munsell, PE
Source Water Protection District Hydrologist
Environmental Health Division
Minnesota Department of Health
PO Box 64975
Saint Paul, MN 55164-0975

CC:

David Bell, MDH, Environmental Review Coordinator
John Woodside, MDH, Hydrologist Supervisor
Steve Robertson, MDH, Source Water Protection Manager
Abby Shea, MDH, Source Water Protection Planner



April 17, 2025

Anthony Nemcek, Senior Planner
City of Rosemount
2875 145th Street West
Rosemount, MN 55068

RE: City of Rosemount – Draft Alternative Urban Areawide Review (AUAR) – Dakota East Area
Metropolitan Council Review File No. 23039-2
Metropolitan Council District No. 12

Dear Anthony Nemcek:

Metropolitan Council staff completed its review of the Dakota East Area Draft AUAR to determine its accuracy and completeness in addressing regional concerns. Staff conclude that the Draft AUAR is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies, though Scenario 2 has the potential to significantly impact the regional wastewater system. Staff offers the following comments for your consideration:

Item 7: Climate (MacKenzie Young-Walters, 651-602-1373)

The discussion of anticipated climate trends is adequate; however, the AUAR would benefit from considering if different scenarios merit different adaptations. The list of adaptations is well suited to Scenarios 2 and 3, but do not consider how adaptations like clustering development could reduce the impervious surfaces associated with the single-family residential uses in Scenario 1 or how the adoption of environmentally responsible farming practices could limit the non-point source pollution generated by Scenario 1's agricultural acreage.

Item 9: Permits and Approvals Required (MacKenzie Young-Walters, 651-602-1373)

As noted in the Draft AUAR, Scenarios 2 and 3 would require a comprehensive plan amendment, both to align the land use with proposed project and to bring the eastern portion of the site into the Metropolitan Urban Service Area (MUSA).

Item 10: Land Use, Forecasts (Todd Graham, 651-602-1322)

The Draft AUAR identifies three possible scenarios: a mainly residential scenario, a technology park campus, and a light industrial scenario. If the second or third scenario is pursued, it could add 1,200 or more jobs in this part of Rosemount, which would exceed the Transportation Analysis Zone #728 allocation of employment. Met Council staff notes that in this Draft AUAR, the City commits "to modify the TAZ allocations, if necessary. The City will continue to work with Metropolitan Council on housing and residential units' areas within the city." (p. 74)

Item 10: Land Use, Parks (Colin Kelly, 651-602-1361)

A planned segment of the Rosemount Greenway Regional Trail (Dakota County) is less than 0.1 mile north of the AUAR area. A long-range plan developed by Dakota County was approved by the Metropolitan Council in 2012. While the integrated Traffic Impact Analysis includes reference to this planned trail (pdf pg. 157), the AUAR should acknowledge Dakota County's Rosemount

Greenway Regional Trail Long-Range Plan in Section 10. Land Use, parts a.ii. ("Planned land use...") and b. ("Discuss the project's compatibility...").

The City of Rosemount (RGU) and MNLCO Dakota County, LLC (proposer) should coordinate with Dakota County Parks to connect to the planned Rosemount Greenway Regional Trail in this area. Regional trails benefit residents and businesses alike, providing healthy recreation options and access to key local and regional destinations.

Item 12: Water Resources, Groundwater (John Clark, 651-602-1452)

As Rosemount works with the Minnesota Department of Natural Resources (DNR) to ensure water is available for the development and its use sustainable, any updates to the City's Local Water Supply Plan, including changes to water demand projections, must align with regional policies regarding sustainable water supplies and water resources. Through this process, the City should consider the availability of water during periods of stress such as a significant drought, when water use restrictions may be put into effect and the state's priority water use rules may limit the amount of water for industrial or commercial activities.

The project proposer should use drought tolerant species, including native plants, to help limit the need for outdoor water use and to increase habitat. Reuse of captured stormwater may also help to offset the need for outdoor water use.

Item 12: Water Resources, Wastewater (Roger Janzig, 651-602-1119)

It is assumed that sanitary sewer service for the AUAR study area will be provided by new City sanitary sewer extensions along County Road 42 (145th Street) from Driver Avenue to the west.

Scenario 2 represents a proposed Mixed Business (Technology Park) development which includes 2,300,000 square feet of Mixed Business Campus, including a possible data center, with a potential wastewater discharge of 0.263 – 4.50 MGD. It is understood that a significant amount of wastewater from the development would be cooling water discharge for the proposed data center. Alternative methods of non-contact cooling water disposal such as rapid infiltration basins are being studied for the discharge of the non-contact cooling water onsite and will require a separate MPCA discharge permit.

If Scenario 2 is pursued, the proposed data center 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. The City and developer should be aware that a peak day wastewater discharge of 4.5 MGD would represent a system impact.

In addition, the Metropolitan Council's 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. The City and developers are encouraged to contact the 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, prior to sizing and investing in sewer infrastructure to serve the development. For more information, please contact Kristi Goble at kristi.goble@metc.state.mn.us or at 651-602-8114.

Item 18: Greenhouse Gas Emissions (MacKenzie Young-Walters, 651-602-1373)

The Green House Gas emissions calculations included in the AUAR should be refined. It seems unlikely that the construction emissions from Scenario 1, where half the site remains in an undisturbed state and very different uses are contemplated, would be identical to those of

Scenario 2. The project proposer should also consider the use of onsite solar panels or commit to purchasing energy from renewable sources to offset the large amount of GHG generated by Scenario 2's energy use.

The Council will not take formal action on the Draft AUAR. If you have any questions or need further information, please contact MacKenzie Young-Walters, Principal Reviewer, at 651-602-1373 or via email at mackenzie.young-walters@metc.state.mn.us. As always, you can also contact your Sector Representative, Merritt Clapp-Smith, at 651-602-1567 or via email at merritt.clapp-smith@metc.state.mn.us.

Sincerely,



Angela R. Torres, AICP, Senior Manager
Local Planning Assistance

CC: Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
 Susan Vento, Metropolitan Council District 12
 Judy Sventek, Water Resources Manager
 Merritt Clapp-Smith, Sector Representative
 MacKenzie Young-Walters, Principal Reviewer
 Reviews Coordinator

N:\CommDev\LPA\Communities\Rosemount\Letters\Rosemount 2025 Dakota East Area AUAR Ok With Comments 23039-2.docx



March 26, 2025

Anthony Nemcek, Senior Planner
City of Rosemount
2875 145th St W.
Rosemount, MN 55068

**RE: Draft AUAR review by VRWJPO: March 2025 Dakota East Area Draft
Alternative Urban Areawide Review for the City of Rosemount.**

The Vermillion River Watershed Joint Powers Organization (VRWJPO) appreciates the opportunity to review and comment on the March 2025 Draft Alternative Urban Areawide Review (AUAR) document prepared by Kimley-Horn for the City of Rosemount. Staff has reviewed this document and have the following comments:

- 1) Page 13 – Climate Adaptation and Resilience – Table 2. *Climate Considerations and Adaptations*, Project Design - There is mention of water efficient design being incorporated into landscaping, but no mention of water efficient irrigation design. We would suggest the City propose incorporation of both water efficient landscaping and irrigation design. We would also suggest that the City incorporate low salt design in Project Design.
- 2) Page 17 – Cover Type – Table 3. Cover Types, Wetlands and Shallow Lakes – This indicates that 0.64 acres of wetland exist within the study site. Later in the document, it states that a wetland delineation was completed by Kimley-Horn on October 8, 2024; however, the delineation is still pending approval by the Local Government Unit, so this number could change. Once the site's wetland delineation is approved, all tables, figures and narrative should reflect the approved delineation.
- 3) Page 24 – ii-Zoning. In third paragraph, please add “30 foot” in front of “water Quality Corridor extends through.....”
- 4) Page 25 – Table 7. Please add “City of Rosemount” to table title.

- 5) Page 42 – The document describes Scenario 2 as generating a peak day wastewater discharge rate ranging from 50,000 to 4,500,000 gallons per day; however, Table 11 only accounts for the domestic discharge and does not include the non-contact cooling water discharge. Table 11 should reflect the full wastewater discharge rate, accounting for both domestic discharge and non-contact cooling water discharge.
- 6) Page 45 – Remove 4th paragraph in its entirety. The proposed site may discharge to the Vermillion River, but it does not discharge to a designated trout stream reach as the designated trout stream reach ends near State Highway 52.
- 7) Page 47 – Table 12: All demands (both domestic and non-domestic) should be listed or otherwise described for Scenario 2 since the existing wells on site may not have the capacity to provide flows that will otherwise be needed from the City water supply.

Thank you for the opportunity to review and comment on the March 2025 Dakota East Area Draft Alternative Urban Areawide Review for the City of Rosemount. Please feel free to contact Jeff Dunn at jeff.dunn@co.dakota.mn.us or 952.891.7140 if you have any questions or comments.

Sincerely,



Jeff Dunn
VRWJPO Water Resources Engineer



Kelly Perrine
VRWJPO Senior Watershed Specialist

Cc: Tom Wolf, Scott County Board of Commissioners, VRWJPO Board Chair
Bill Droste, Dakota County Board of Commissioners, VRWJPO Board Vice Chair

City Council Regular Meeting: June 17, 2025

Tentative City Council Meeting: June 17, 2025

AGENDA ITEM: Request by Flint Hills Resources for an Interim Use Permit to construct a warehouse tent	AGENDA SECTION: CONSENT AGENDA
PREPARED BY: Anthony Nemcek , Senior Planner	AGENDA NO. 6.k.
ATTACHMENTS: Resolution, Site Location, Building Location, Structural Drawings, Blanket Agreement Area	APPROVED BY: TRM
RECOMMENDED ACTION: Motion to adopt a resolution approving an Interim Use Permit for a warehouse tent, subject to conditions.	

BACKGROUND

The City Council is being asked to consider a request by Flint Hills Resources (FHR) for what is essentially a modification of an existing interim use permit to construct a temporary warehouse building. Temporary buildings are an interim use in the I-2 Heavy Industrial zoning district. Most recently, in 2019, the City approved an IUP allowing FHR to construct three temporary warehouse buildings as well as blast-resistant modules and blast-resistant tents. The proposed structure is similar to the warehouse tents that have already been approved. The Planning Commission and staff are recommending approval of the Interim Use Permit with an expiration date the same as the existing IUP on site so that only one renewal will be required.

PLANNING COMMISSION ACTION

The Planning Commission held a public hearing during its regular meeting on May 27, 2025, to review the request and receive public comment. No public comments were received by the Commission. The Commission acknowledged the need and applicability of the Interim Use Permit for the proposed building. The Commission unanimously voted to recommend the Council approve the IUP request.

INTERIM USE PERMIT

The IUP is intended to permit temporary buildings with an exemption from certain zoning standards associated with permanent buildings, such as required materials, parking and landscaping. The IUP process has been used in other situations when the use is expected to be temporary, and the duration is clearly identified, such as the ancillary uses near the Dakota Aggregates mining operation. An IUP process is also used when the site use or improvements are of a temporary nature that will not adversely affect or inhibit future re-use of the site. As with other structures previously approved by the IUP, staff would prefer permanent structures as they are more visually appealing and, more importantly, provide tax base for the City. In past discussions with the applicant, they have agreed to pay taxes on the proposed buildings based upon the value of the structure. As the City is not the jurisdiction that determines valuation or what structures are, or are not, taxed, staff has again included this commitment in the conditions of approval.

The City and FHR have identified a Blanket Agreement Area within which the structures described above may be located. This allows FHR flexibility to place the structures in closer proximity to projects as they occur without needing additional approvals each time the structures are relocated. The applicant is not requesting a change to the boundaries of this area, which are shown on a map contained in the attachments. One of the original conditions of the IUP that was included to mitigate any impact from the westward expansion of the Blanket Agreement Area is being included in the recommendation, and that is that no temporary structures can be placed within 300 feet of Rich Valley Boulevard. Another 2013 condition that required additional conifers to be planted along Rich Valley Boulevard has been met and therefore is not included in the recommendation.

Legal Authority

The interim use permit approval is a quasi-judicial action, meaning that if the application meets the City Code and interim use permit regulations, then the interim use permit must be approved. Staff supports approval of this interim use permit. A detailed analysis of this finding is provided below.

1. The extent, location and intensity of the use will be substantially in compliance with the Comprehensive Plan.

Finding: The site is designated for General Industrial use in the 2040 Comprehensive Plan. The warehouse tent will support the refining of petroleum, a permitted use in the Heavy Industrial zoning district.

2. The use will provide adequate ingress and egress to minimize traffic congestion in the public streets.

Finding: Access to the site is located along Clark Road, east of the site. No changes are proposed to the traffic to and from the site.

3. The use will not be detrimental to the existing character of the development in the immediate neighborhood or endanger the public health, safety and general welfare.

Finding: The refinery complex with its exposed equipment, storage tanks and pipe racks has a heavy industrial character. Public health, safety and general welfare are served by conformance with building and fire codes and the IUP being visually screened from the US 52 right-of-way.

4. The use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

Finding: The construction projects that prompt the IUP are further development of the refinery complex as a permitted use in the I-2 District.

5. The use shall, in all other respects, conform to the applicable regulations of the district in which

it is located.

Finding: The use is consistent with applicable I-2 District standards and the IUP does not waive performance standards such as setbacks and utilizing existing or future planned parking facilities.

RECOMMENDATION

The Planning Commission and staff recommend the City Council approve an Interim Use Permit for a temporary warehouse building, subject to the recommended conditions within the attached resolution. This recommendation is based on the information submitted by the applicant and the findings made in this report.

**CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA**

RESOLUTION 2025-XX

**A RESOLUTION APPROVING AN INTERIM USE PERMIT FOR A WAREHOUSE
TENT**

WHEREAS, the City of Rosemount received an application from Flint Hills Resources (FHR) for the approval of an Interim Use Permit (IUP) to construct a warehouse tent within its Pine Bend Refinery at 12555 Clark Road, Rosemount, Minnesota; and

WHEREAS, the IUP will allow the use of the temporary structures during construction projects and maintenance which is expected to continue until December 31, 2029; and

WHEREAS, on May 27, 2025, the Planning Commission of the City of Rosemount held a public hearing to review the IUP application from FHR for the temporary structure; and

WHEREAS, the Planning Commission adopted a motion recommending that the City Council approve the IUP for FHR subject to the conditions listed below; and

WHEREAS, on December 17, 2019, the City Council of the City of Rosemount reviewed the Planning Commission's recommendation and the IUP for FHR.

NOW, THEREFORE, BE IT RESOLVED, the Council of the City of Rosemount hereby approves the IUP for Sixty-Five (65) Blast Resistant Modules, Twelve (12) Blast Resistant Enclosures, and Two (2) Warehouse Tents at 12555 Clark Road, Rosemount, Minnesota, subject to the following conditions:

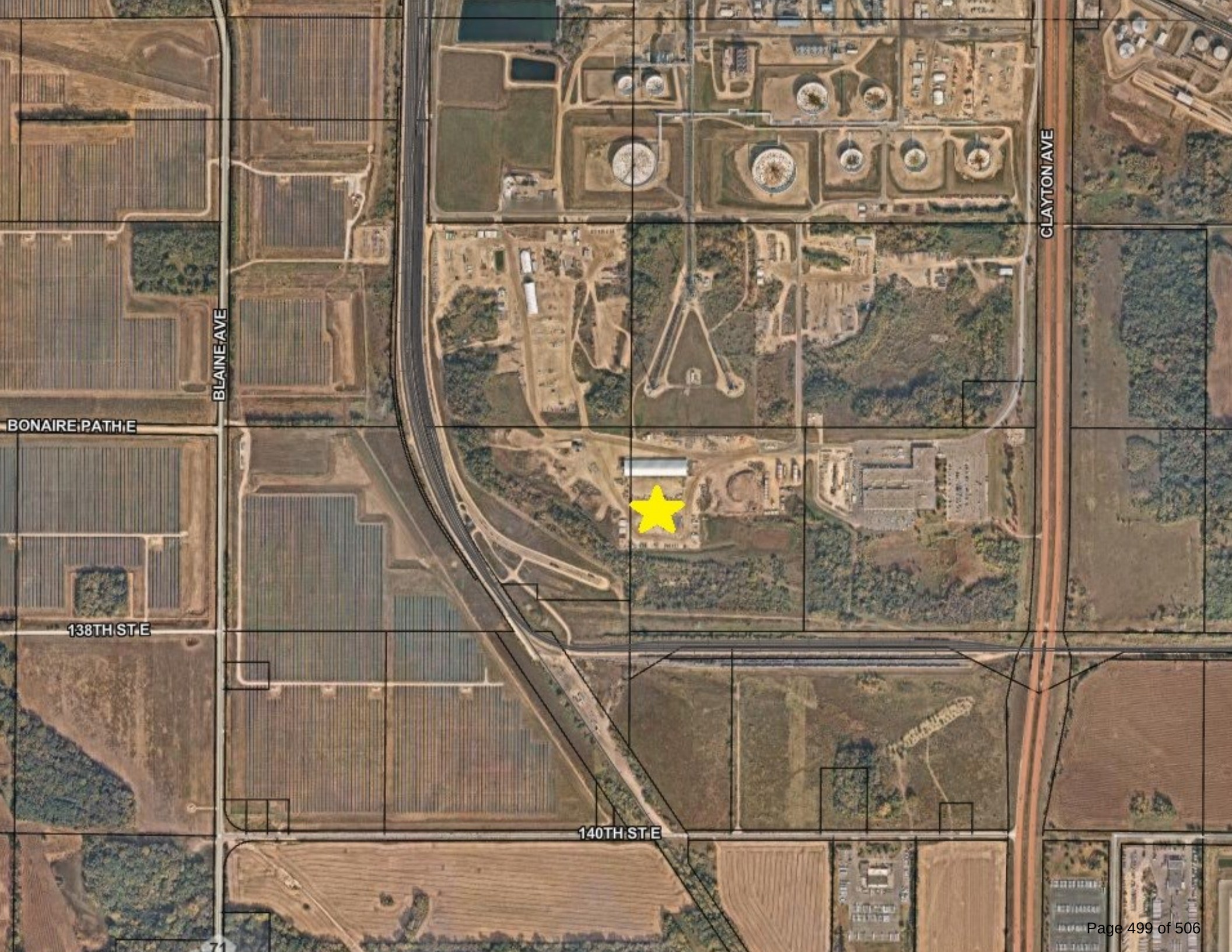
1. The Interim Use Permit expires on December 31, 2029.
2. The applicant shall ensure water draining off the tent does not create erosion of the gravel surface. If erosion is observed, the applicant shall take measures to contain sediment, repair and prevent future occurrences.
3. The applicant shall obtain the required building and grading permits and shall conform to all applicable building and fire codes.
4. The Heavy Industrial Site and Building Standards are waived to allow metal and fabric buildings within the areas shown on the Blanket Agreement Area map. No temporary metal or fabric buildings are allowed within 300 feet of the Rich Valley Boulevard right-of-way.
5. The placement of the warehouse tent is limited to the areas shown on the Blanket Agreement Area map.
6. The applicant shall pay property taxes on the structures based upon their value.

ADOPTED this 17th day of June, 2025, by the City Council of the City of Rosemount.

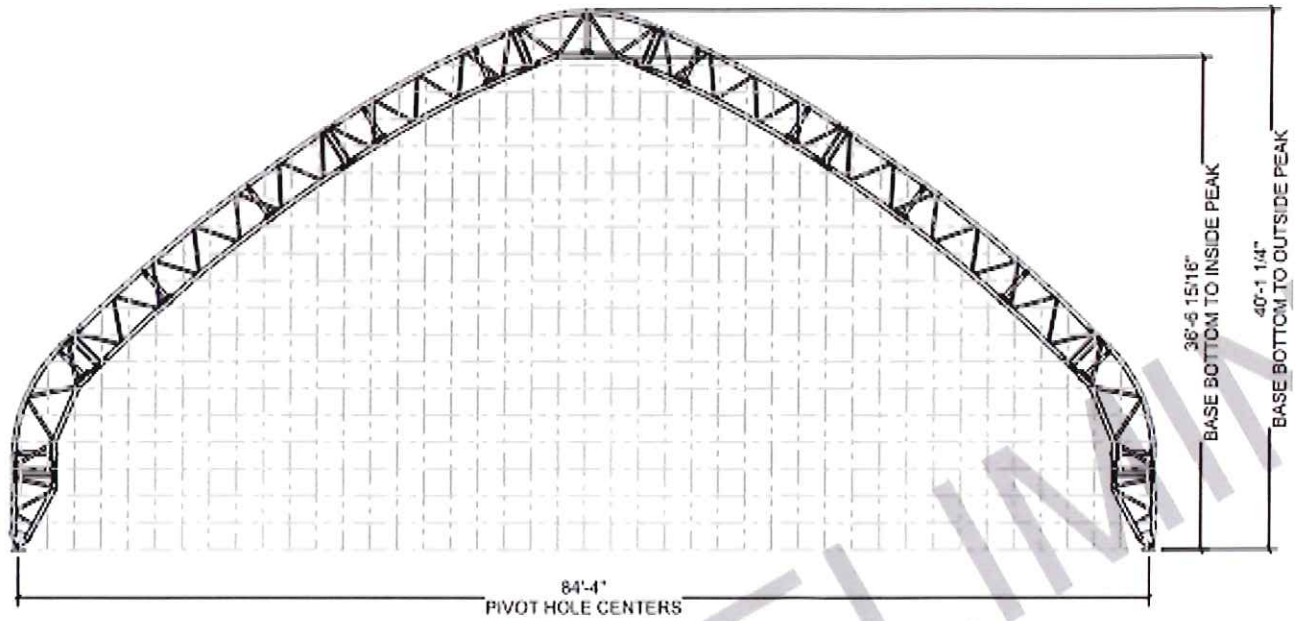
Jeffery D. Weisensel, Mayor

ATTEST:

Erin Fasbender, City Clerk



Flint Hills Fire Foam Storage Building



ADDITIONAL INFORMATION

THESE PRINTS IDENTIFY AND SHOW THE MAIN COMPONENTS AND CONNECTIONS FOR THIS BUILDING. LENGTH, WIDTH, AND OTHER IMPORTANT DIMENSIONS ARE ALSO PRESENT.

TO BEST UNDERSTAND HOW TO CONSTRUCT THIS BUILDING, THE INFORMATION CONTAINED WITHIN THESE SHEETS SHALL BE USED WITH THE INSTRUCTION MANUAL SHIPPED WITH THE BUILDING.

THE INSTRUCTIONS INCLUDE DETAILS NEEDED DURING CONSTRUCTION.

T085GPHF024155

DEVELOPED BY

ClearSpan

A DIVISION OF
ENGINEERING SERVICES & PRODUCTS CO.
1440 18TH AVENUE SW
DYERSVILLE, IA 52040
P: 563.875.6113
F: 563.875.2317
WWW.ESAPCO.COM

ORDER #:

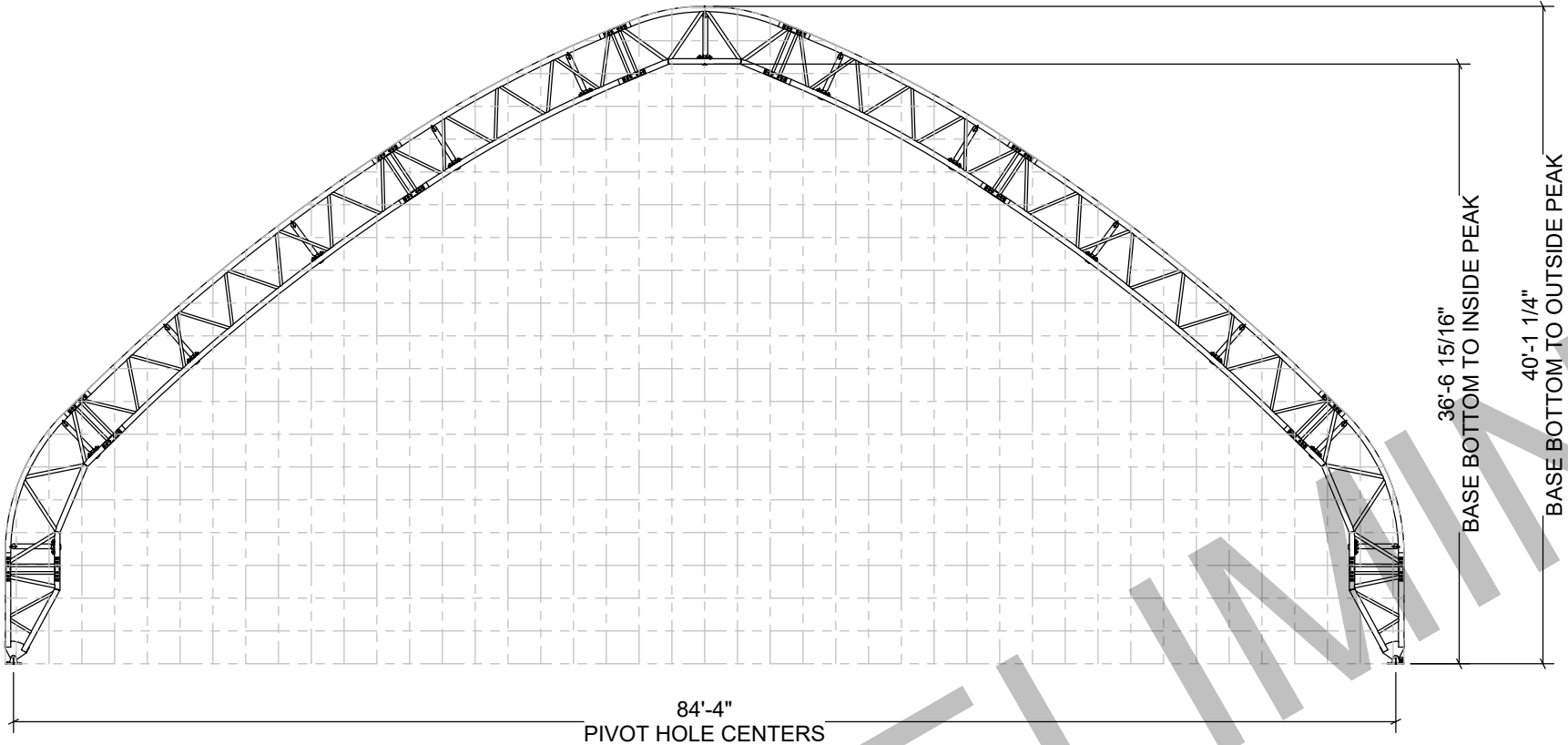
7897389

CUSTOMER #:

6377211

BUILDING CONTENT GUIDE:

- [A1]COVER SHEET
- [B1]GENERAL NOTES
- [C1]BUILDING PLAN VIEW
- [D1]MATERIAL SPECIFICATIONS
- [E1]RAFTER PROFILES
- [F1]SIDE PROFILES
- [G1]DETAIL LOCATIONS & BASE DETAILS
- [G2]GENERAL CONNECTION DETAILS
- [G3]CABLE LAYOUT & DETAILS
- [H1]BASE PLATE LAYOUT & DETAILS
- [I]OMITTED
- [J1]BUILDING REACTION DATA
- [K]OMITTED
- [L1 - L2]EAST ENDWALL: EW085GPF0733D
- [M1 - M2]WEST ENDWALL: EW085GPF0743D



WARNING: Cancer and Reproductive Toxicity - P65Warnings.ca.gov

CUSTOMER DESIGN APPROVAL

PLEASE SIGN AND CHECK THE APPROPRIATE BOX BELOW THE SIGNATURE AFTER REVIEWING THE DOCUMENTS.

MY SIGNATURE BELOW ACKNOWLEDGES THAT I HAVE READ AND REVIEWED ALL THE SHEETS LISTED IN THE CONTENT GUIDE AND AGREE TO THE SPECIFICATIONS SHOWN UNLESS OTHERWISE NOTED.

UPON ACCEPTANCE OF THE DRAWINGS, ANY DEVIATIONS FROM THE SIGNED DRAWINGS AND SPECIFICATIONS OUTLINED IN THE EXECUTED DRAWINGS ARE SUBJECT TO ADDITIONAL CHARGES AND MAY RESULT IN DELAY OF INSTALLATION OR DELIVERY OF YOUR STRUCTURE. A CHANGE ORDER WILL BE ISSUED TO YOU WITH THE OUTLINED ADDITIONAL COST ASSOCIATED WITH THESE CHANGES AND A PROPOSED NEW DELIVERY SCHEDULE.

NO CHANGES WILL BE ACCEPTED UNLESS WE HAVE A CHANGE ORDER SIGNED BY AN AUTHORIZED REPRESENTATIVE.

FIRE-RATED OR NON FIRE-RATED

DAF 12PE##NF** (NON FIRE-RATED)

TERMINATION OF FABRIC

POUND IN STRIP

FABRIC COLOR

WHITE

WEIGHT OF MATERIAL

12

oz.

CUSTOMER SIGNATURE

☐ APPROVE

DATE

☐ APPROVE WITH CHANGES

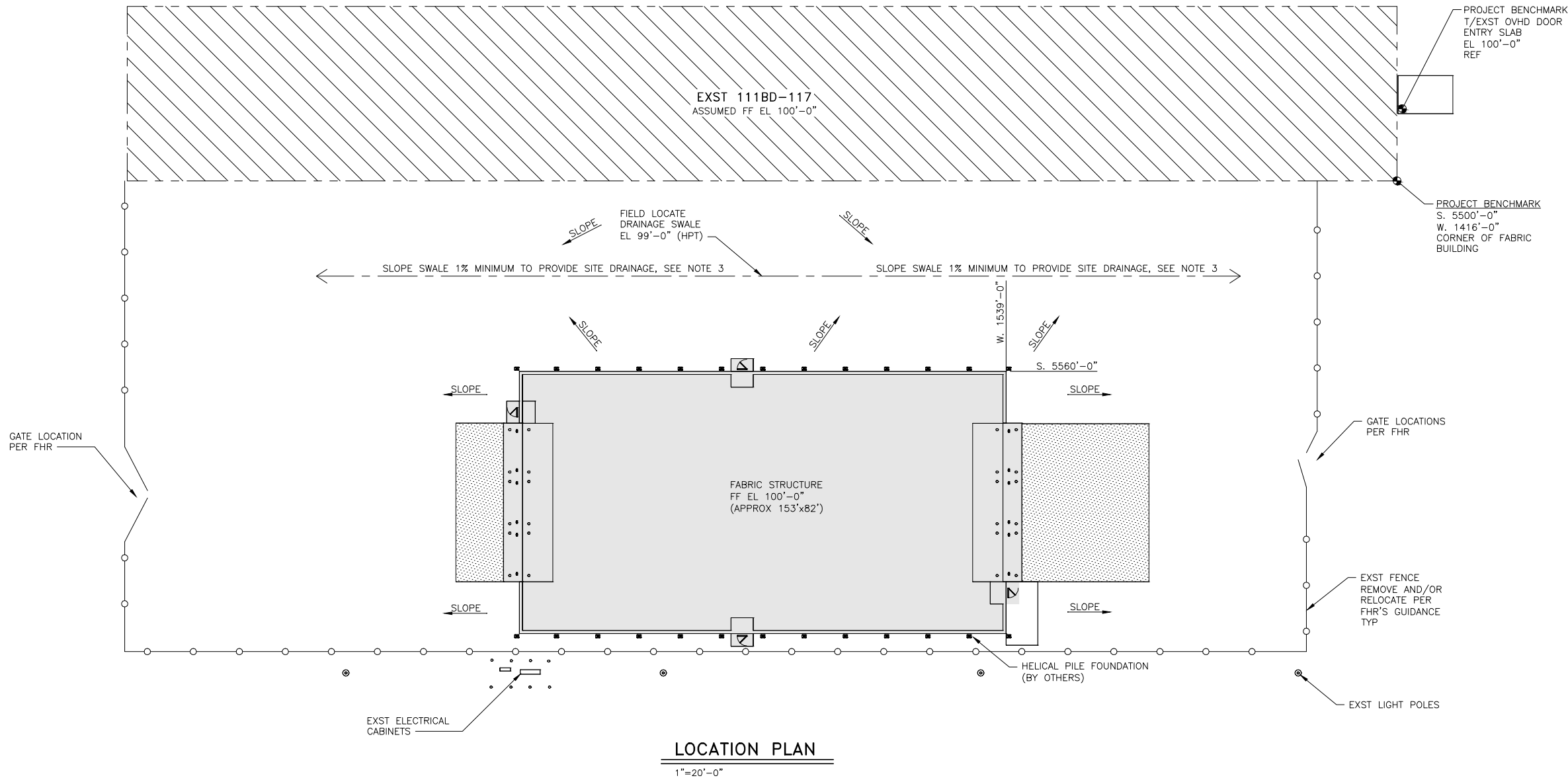
Issued for Interim Use Permit

DRAWING DETAILS		
DRAWN BY: TJL		CREATION DATE: 3/7/2025
REVISIONS:		
NO.	BY:	REVISION DATE:
1		
2		
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17

SHEET: A1



- NOTES:
- FOR STRUCTURAL GENERAL NOTES, SEE DRAWINGS PB111C00147.
 - FOR CONCRETE SLAB, SEE DRAWING PB111C00150.
 - SITE GRADING:
THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM BUILDING AT A SLOPE OF NOT LESS 1 UNIT VERTICAL IN 20 UNITS HORIZONTAL (5%) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR FROM THE FACE OF WALL. SWALES SHALL BE SLOPED NOT LESS THAT 2% WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED NOT LESS THAN 2% AWAY FROM THE BUILDING.



Issued for Interim Use Permit

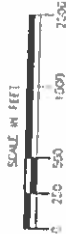
ISSUED FOR APPROVAL

Issued For Approval is intended for complete conformance with the design concept and is intended to provide client/owner opportunity for final comments or concerns before final document issuance. This drawing has been checked.

REV.	REV DATE	REVISION COMMENTS	BY	AP.	REV.	REV DATE	REVISION COMMENTS	BY	AP.	NOTICE: This drawing has not been published and is the sole property of FLINT HILLS RESOURCES, L.P., St. Paul, Minnesota, and is lent to the borrower for his confidential use only; and in consideration of the loan of this drawing the borrower promises and agrees that it shall not be reproduced, copied, lent or otherwise disposed of directly or indirectly, nor used for any purpose other than for which it is specifically furnished.	REF DWG NO	REFERENCE DESCRIPTION	 FLINT HILLS resources. Pine Bend Refinery	UNIT 111 FIRE FIGHTING FOAM TRANSITION 2024 LOCATION PLAN			
															ORIGINAL DATE: 02/26/25	DESIGNER: LAG	DRAWING NUMBER:
0A	03/26/25	ISSUED FOR APPROVAL PER PRJ-006380	LAG	MAJ							1085GPH024155	CLEAR SPAN DRAWING PACKAGE		JOB NO: PRJ-006380	DRAFTER: LAG	PB111C00149	0A
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REV.	REV DATE	REVISION COMMENTS	BY	AP.	REV.	REV DATE	REVISION COMMENTS	BY	AP.	NOTICE:	REF DWG NO	REFERENCE DESCRIPTION	UNIT 111 FIRE FIGHTING FOAM TRANSITION 2024 CONCRETE PLAN				
0.A	03/26/25	ISSUED FOR APPROVAL PER PRJ-006380	LAG	MAJ						This drawing has not been published and is the sole property of FLINT HILLS RESOURCES, L.P., St. Paul, Minnesota, and is lent to the borrower for his confidential use only; and in consideration of the loan of this drawing the borrower promises and agrees that it shall not be reproduced, copied, lent or otherwise disposed of directly or indirectly, nor used for any purpose other than for which it is specifically furnished.	10836PH024155	CLEAR SPAN DRAWING PACKAGE	 FLINT HILLS resources Pine Bend Refinery ORIGINAL DATE: 02/26/25 DESIGNER: LAG JOB NO: PRJ-006380 DRAFTER: LAG W.O.: - CHECKER: BAW/DGG SCALE: AS NOTED APPROVE: MAJ DRAWING NUMBER: PB111C00150 REV.: 0.A				

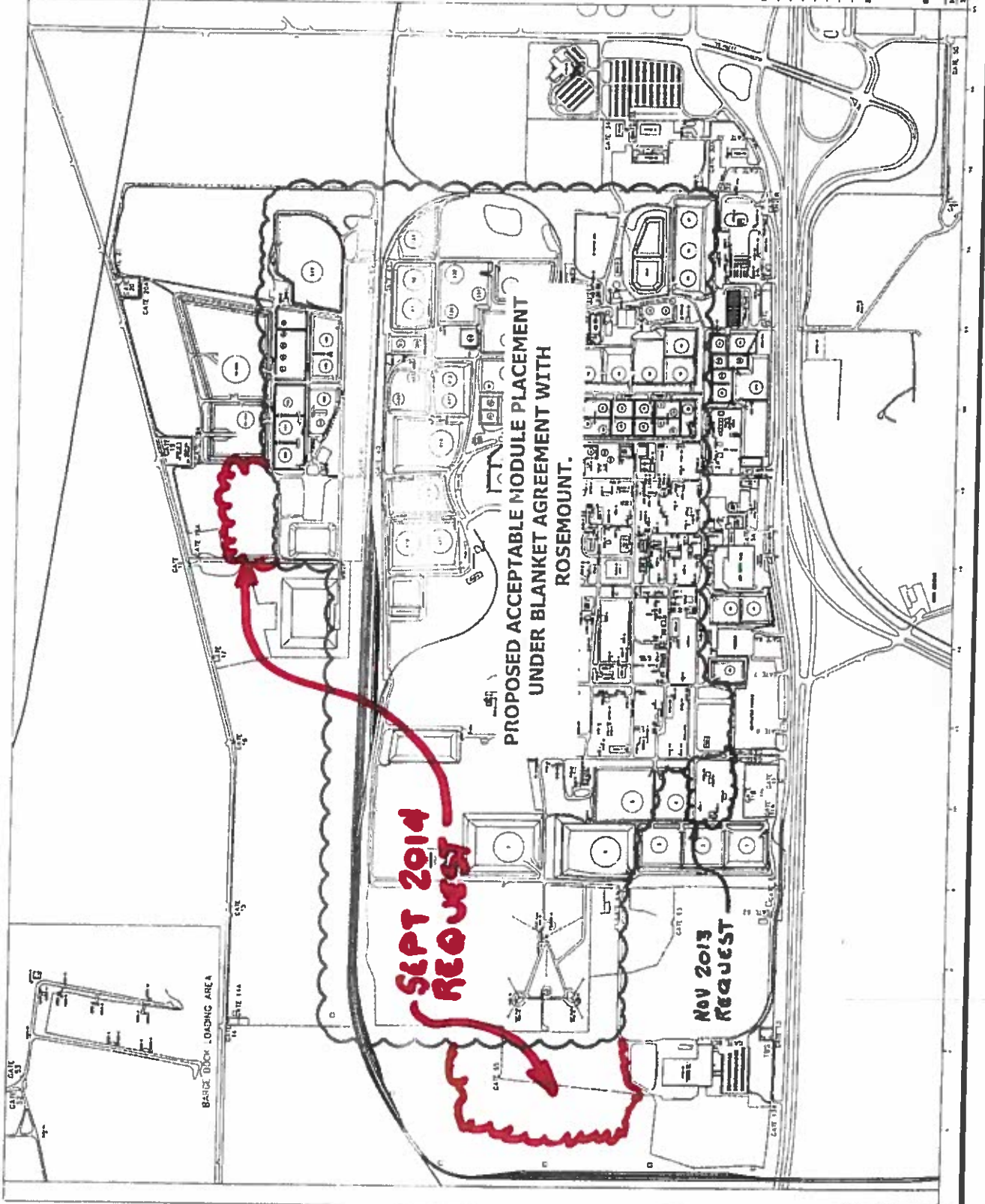
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The drawings are not to be used for any purpose other than the specific project for which they were prepared. Any use of the drawings for any other purpose without the written consent of Flint Hills Resources is prohibited. The drawings are the property of Flint Hills Resources and are to be kept in the possession of the person to whom they were issued. The drawings are to be returned to the person who issued them when they are no longer needed.



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FHR PINE BEND REFINERY

SCALE	AS SHOWN
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BY	
CHECKED	
APPROVED	



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Main Calendar

CITY HALL CLOSED - Juneteenth

June 19, 2025, All Day

[More Details](#)

Utility Commission Meeting

June 23, 2025, 5:30 PM - 7:00 PM

[More Details](#)

Parks and Natural Resources Commission Meeting

June 23, 2025, 7:00 PM - 8:00 PM

[More Details](#)

Planning Commission Meeting

June 24, 2025, 6:30 PM - 7:30 PM

[More Details](#)

Youth Commission Meeting

June 25, 2025, 3:45 PM - 4:45 PM

[More Details](#)

Public Safety in the Park

June 26, 2025, 5:00 PM - 7:30 PM @ Rosemount High School

Join us at your neighborhood park for a great opportunity to connect with your public safety officials! Be sure to bring the whole family, enjoy food, and get an up-close look at various public safety vehicles. This is a great opportunity to ask questions and get to know the people who help keep our community safe.

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July 2025

Su	M	Tu	W	Th	F	Sa
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Main Calendar

City Council Work Session Meeting

July 1, 2025, 5:00 PM - 6:00 PM

[More Details](#)

City Council Meeting

July 1, 2025, 7:00 PM - 8:00 PM

[More Details](#)

CITY HALL CLOSED - Independence Day

July 4, 2025, All Day

[More Details](#)

Port Authority Meeting

July 15, 2025, 6:00 PM - 7:00 PM

[More Details](#)

City Council Meeting

July 15, 2025, 7:00 PM - 8:00 PM

[More Details](#)

Planning Commission Meeting

July 22, 2025, 6:30 PM - 7:30 PM

[More Details](#)

Parks and Natural Resources Commission Meeting

July 28, 2025, 7:00 PM - 8:00 PM

[More Details](#)

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