AGENDA PACKET

VILLAGE OF LAKE ZURICH

Village Board of Trustees Meeting

July 7, 2025
07:00 pm

VILLAGE OF LAKE ZURICH
VILLAGE BOARD OF TRUSTEES MEETING

JULY 7, 2025
07:00 PM
AGENDA

1. **CALL TO ORDER**

2. **ROLL CALL**
   Mayor Thomas Poynton, Trustee Sujatha Bharadwaj, Trustee Jake Marx, Trustee William Riley, Trustee Marc Spacone, Trustee Roger Sugrue, Trustee Greg Weider.

3. **PLEDGE OF ALLEGIANCE**

4. **PUBLIC COMMENT**
   This is an opportunity for residents to comment briefly on matters included on the agenda and otherwise of interest to the Board of Trustees. Public Comment is limited to 30 minutes total and up to 5 minutes per speaker.

5. **PRESIDENT'S REPORT / COMMUNITY UPDATE**

   - Swearing in of Anthony Posadas as Firefighter/Paramedic

6. **CONSENT AGENDA**
   These titles will be read by the Village Clerk and approved by a single Roll Call Vote. Any item may be pulled from the Consent Agenda for discussion by any Village Trustee.

   A. Approval of Minutes from the Village Board Meeting of June 16, 2025

   Attachment: 6a.pdf

   B. Approval of Semi-Monthly Warrant Register Dated July 17, 2025 Totaling $3,376,777.84

   Attachment: 6b.pdf

   C. Ordinance Amending Title 3 of Chapter 3 of the Village of Lake Zurich Municipal Code to Increase Authorized Class -- I Liquor License for 'Simulation Zone, Inc Located at 189 South Rand Road (Assign Ord. #2025-07-615)

   Summary: Simulation Zone, Inc. located at 189 S. Rand Road has requested a full-service indoor interactive sports/entertainment Class-I Liquor License. They have completed the application and passed the background check. Staff request approval for the issuance of a Class-I Liquor License to Simulation Zone, Inc.

   Attachment: 6c.pdf

   D. Agreement with Lake Consolidated Emergency Communications for Providing a Backup Communications Center and Lease Agreement for Repurposing of Dispatch Space in the Lake Zurich Police Department

   Summary: The Lake Consolidated Emergency Communications (LakeComm) dispatch center will commence operations in the coming months. At that time, Lake Zurich dispatch staff and services will transition to LakeComm. LakeComm is required to establish an emergency backup location, which they have proposed to locate in Lake Zurich's current dispatch center. Through the proposed lease agreement, LakeComm would reimburse the Village for the modifications needed to establish their backup operations. The agreement would have a term of 25 years, through which LakeComm would compensate the Village for the leased space at a rate starting at $17,000 annually, starting in 2027.

   Attachment: 6d.pdf

   E. Ordinance Amending the Provisions of the Lake Zurich Zoning Code Title 9 and Land Development Code Title 10 (Assign

Ord. #2025-07-616)

Summary: From time to time, village development staff reviews the codes to ensure that they are updated, accurate, and serve the needs of the community. The Village is seeking to amend Zoning Code Chapter 7; Article E and Zoning Code Chapter 22 (Title 9) and Land Development Code Chapter 5 (Title 10).

The Planning and Zoning Commission held a public hearing on June 18, 2025 and voted 7-0 in favor of approval of the text amendment changes presented by staff. Staff requests the approval of the ordinance amending the provisions of the Lake Zurich Zoning Code Title 9 and Land Development Code Title 10.

Attachment: 6e.pdf

F. Ordinance Granting Final Plan Approval for the PUD and Approving and Authorizing the Execution of a Development Agreement Between the Village of Lake Zurich and SN Venture LLC Relating to the Development of the Reserves of Lake Zurich (Assign Ord. #2025-07-617 for the Final Plan and Ord #2025-07-618 for the Development Agreement)

Summary: SN Venture, LLC (OSK Capital Partners), represented by Mr. Lawrence Freedman, is requesting a Final Plan Approval for a Planned Unit Development for the property located at 670 South Old Rand Road. The applicant was granted a Development Concept Plan (Preliminary Plan) by the Village Board on September 3, 2024 through Ordinance 2024-09-585. Staff identified one modification to the Final Plan with the setback for homes along Old Rand Road being reduced to six feet resulting in a distance of 38 feet from the curb.

The Planning and Zoning Commission held a public meeting on March 19, 2025 and recommended approval of the final plan. Staff recommends approval of the ordinances approving the Final Plan of the PUD and development agreement with SN Venture, LLC.

Attachment: 6f _1_.pdf
Attachment: 6f _2_.pdf

G. Resolution for Revised Special Event Road Closures for Lake Zurich Triathlon (Assign Reso #2025-07-103)

Summary: The annual Lake Zurich Triathlon has been approved by the Village Board for Sunday, July 13, 2025 at Paulus Park. The revision on the resolution authorizes a request to the Illinois Department of Transportation to temporarily close the northbound right turn lane of Route 12 and the Southbound left turn lane of Route 12 onto eastbound Old McHenry Road from the hours of 6 am to 1 pm on July 13.

Attachment: 6g.pdf

H. Agreement with American Garage Floor Systems for Repair and Refinishing of the Fleet Services Garage Floors in the Amount Not-to-Exceed $39,800

Summary: Due to age and deteriorating conditions of the vehicle storage and fleet services garage floors, repairs and refinishing have been recommended. The FY 2025 budget includes $50,000 for the repair and refinishing of the Public Works Department Fleet Services garage floors.

Request for proposals were sent out and five proposals were received. Village staff reviewed the proposals, with American Garage Floor Systems coming in with the second -lowest proposal and provide a 15-year warranty on the floors. Staff recommends awarding a contract to American Garage Floor Systems to repair and refinish the garage floors for Public Works in the amount not-to-exceed $39,800 including contingency.

Attachment: 6h.pdf

I. Release of Surety for Geremarie Site Improvements at 550 Enterprise Parkway

Summary: JGS, LLC, dba Geremarie provided a guarantee of site improvements in the form of a Letter of Credit (LOC) issued by ByLine Bank for $152,631.02 as surety for site work for a new building at 550 Enterprise Parkway. Village engineer Manhard and staff have inspected the property and concur that the surety can be released. Staff recommends the release of the LOC issued by ByLine Bank in the full amount of $152,631.02.

Attachment: 6i.pdf

J. Release of Surety for Geremarie Addition at 1275 Ensell Road

Summary: JGS, LLC, dba Geremarie provided a guarantee of site improvements in the form of a Letter of Credit (LOC) issued by ByLine Bank for $140,744.17 as surety for the addition at 1275 Ensell Road. Village engineer Manhard and staff have inspected the property and concur that the surety can be released. Staff recommends the release of the LOC issued by ByLine Bank in the full amount of $140,744.17.

Attachment: 6j.pdf

K. Reduction in Surety for 7 Brew at 880 South Rand Road

Summary: Who Brew IL I, LLC has requested to reduce the cash surety provided to the Village from the original guarantee of $80, 437.10 to the amount of $8,043.17 for the property at 880 South Rand Road. The surety is required to guarantee site improvements for a period of two (2) years and cannot be less than 10% of the total initial cost of improvements. Village engineer Manhard Consulting and staff have inspected the property and concur that the site improvements guarantee may be reduced. Staff recommends a reduction in the surety to $8,043.71, the be held as a cash deposit with the Village.

Attachment: 6k.pdf

7. NEW BUSINESS - None at this time.

8. TRUSTEE REPORTS

9. VILLAGE STAFF REPORTS

A. Annual Treasurer's Report Publication Requirement in Compliance with the Illinois Compiled Statues Chapter 65 Section 5/3.1-35-65

10. ADJOURNMENT

The next regularly scheduled Village Board meeting is on Monday, July 21, 2025.

UNAPPROVED MINUTES
VILLAGE OF LAKE ZURICH
Board of Trustees
70 East Main Street

Monday, June 16, 2025 7:00 p.m.

1. **CALL TO ORDER** by Mayor Thomas M. Poynton at 7:02pm.
2. **ROLL CALL:** Mayor Poynton, Trustee Marx, Trustee Riley, Trustee Bharadwaj.

   Trustee Sugrue, Trustee Weider, and Trustee Spacone are absent tonight.

   Also in attendance: Village Manager Ray Keller, Public Works Director Mike Brown, Finance Director Kruse, Parks Director Caputo, Police Chief Husak, and Asst. Manager Michael Duebner.
3. **PLEDGE OF ALLEGIANCE**
4. **PUBLIC COMMENT**
   - 372 Kim Trail, Valerie Applebey, spoke on concerns about future Block A development and worries about the lakeside becoming less accessible for the general public. She requested the Board nullify the pending sale of Block A and build a new public park instead.
   - Mary Kozub, President of the Ancient Oaks Foundation, provided the Village Board an update on recent projects, including a new website, over $10,000 given to residents as part of the Buckthorn Bounty program to remove invasive buckthorn, and future grants for pollinator gardens.
5. **PRESIDENT'S REPORT / COMMUNITY UPDATE**
6. **CONSENT AGENDA**
   - A. **Approval of Minutes from the Village Board Meeting of June 2, 2025**
   - B. **Approval of Semi-Monthly Warrant Register Dated June 16, 2025 Totaling $1,554,084.21**
   - C. **Agreement with ESSCOE for the Police Department CCTV and Access Control System Updates in the Amount Not-to-Exceed $70,000**

     Summary: As a result of the relocation of Lake Zurich dispatch center staff to the consolidated dispatch center in Libertyville in the third quarter of this year, the Police Department requires the expansion of its CCTV and access control system. ESSCOE, LLC has been requested to submit a proposal for upgrading the existing system, which was originally installed and maintained by them, to meet the new operational requirements. These systems are highly integrated and technically intricate, and soliciting bids from multiple vendors is not be the most efficient or cost-effective approach for the Village.

     Staff recommends awarding a contract to ESSCOS, LLC for the expansion of CCTV and door access control systems in the Police Department in the amount not-to-exceed $70,000.

D. Agreement with Upland Design for the Key Parks Master Plan in the Amount Not-to-Exceed $98,910

Summary: The objective of the Parks Master Plan is to optimize the Village's existing key park properties while strategically planning for the future allocation of resources and potential redevelopment of these parks over the next 5 to 10 years. The FY 2025 Budget currently includes $100,000 in funding to support the development of the Master Plan.

The Village announced a Request for Proposal on March 3 for the development of a master plan for key parks and received twelve proposals in response. A multi-department review team evaluated the proposals and concluded that Upland Design Ltd.'s submittal offered the park development and renovation expertise that would best match the Village's needs at this time.

Staff recommends awarding an agreement to Upland Design Ltd. to develop a master plan for key parks in the amount not-to-exceed $98,910.

E. Agreement with Paramedic Billing Services for Providing Ambulance Billing Services in the Village of Lake Zurich

Summary: The Village is seeking new ambulance billing service since the last agreement with Andres Medical Service was updated in 1997. Many regulatory and compliance changes have occurred involving billing practices for Emergency Medical Service providers. Village staff researched vendors that are well versed in current regulatory standards of ambulance billing and practices that afford the community to receive EMS services that are cost-effective and reliable.

Staff had found a limited number of ambulance service providers available. Paramedic Billing Services stood out as their fee structure remains the same as Andres at 4% of revenues collected, while offering greater administrator support, record keeping, and assistance with federal and state reimbursement submittals.

Staff recommends the approval of an agreement with Paramedic Billing Services Inc as the Villages ambulance billing services provider.

Actions:

A motion was made by Trustee Marx, seconded by Trustee Riley, to approve the Consent Agenda as presented.

AYES: 4 Trustees Bharadwaj, Marx, Riley, Mayor Poynton.

NAYS: 0

ABSENT: 3

MOTION CARRIED.

7. NEW BUSINESS – No new items.

8. TRUSTEE REPORTS

- There were none.

9. VILLAGE STAFF REPORTS

A. Lake Michigan Water Project Update

Representatives from CLCJAWA and CDM Smith will join staff in providing a comprehensive update on the Lake Michigan Water Project.

- Director Mike Brown introduced the Executive Director of CLC JAWA Bill Soucie and Amrou Atassi of CDM Smith. Amrou gave a presentation on the status of the project, bid packages, agency approvals, easement acquisitions,

and future construction timeline, with groundbreaking of the new pumping stations expected by June 2026.

B. Parks Master Planning Process

- Parks Director Bonnie Caputo introduced Michelle Kelly from Upland Design to give a preview about what the planning process will look like in the coming months as the Village creates a new parks master plan for five key parks.

B. Monthly Data Metrics

10. ADJOURNMENT

A motion to adjourn was made by Trustee Riley, seconded by Trustee Marx.
AYES: 4 Trustees Riley, Bharadwaj, Marx, Mayor Poynton.
NAYS: 0
ABSENT: 3
MOTION CARRIED.

The meetings adjourned at 7:40 pm

Respectfully submitted:

Kyle Kordell, Deputy Village Clerk.

Approved by:

/s/Mayor Thomas M. Poynton

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 101 GENERAL			
	Dept 00000			
1	101-00000-10216	PETTY CASH SPECIAL EVENTS	4TH OF JULY 2025 - PETTY CASH	4,500.00
2	101-00000-21201	OTHER ACCOUNTS PAYABLE	WILDWOOD ESTATES	28,210.00
3	101-00000-21201	OTHER ACCOUNTS PAYABLE	670 S OLD RAND RD DEVELOPMENT	7,930.00
4	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - NONMOTOR DRY STORAGE	300.00
5	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - CAMP ALPINE	25.00
6	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - TRACK & FIELD	14.83
7	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - PRODUCTION	43.10
8	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - IMPULSE PRE	12.83
9	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JAZZ II	9.09
10	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JAZZ I A	16.90
11	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - PRODUCTION	92.83
12	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - IMPULSE JUNIOR	47.76
13	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - MINI JAZZ	10.80
14	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JAZZ I A	16.90
15	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - HIP HOP I	7.32
16	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JAZZ II	14.10
17	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - LB BARN MONDAY	20.00
18	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - DANCE & MOVE	7.42
19	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JAZZ IV	16.90
20	101-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - JUN 2025	489.77
		Total For Dept 00000		41,785.55
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	101-10001-48301	MISCELLANEOUS INCOME	UMBRELLA RETURN	(139.98)
2	101-10001-48310	CASH OVER/SHORT	2024 CORRECTION	6.25
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		(133.73)
	Dept 11006 LEGISLATIVE MAYOR & BOARD			
1	101-11006-51652	TRAINING AND MEETINGS	PARKING - DEPOSITION	46.00
2	101-11006-52111	OTHER PROFESSIONAL SVCS	2 FERN COURT	1,840.05

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
3	101-11006-53211	OTHER SUPPLIES	BUSINESS CARDS - BHARADWAJ	29.13
4	101-11006-54302	PUBLIC RELATIONS	ADOPT-A-BLOCK - BUCKETS, BAGS	99.64
5	101-11006-54302	PUBLIC RELATIONS	ADOPT-A-BLOCK - TRASH PICKERS	155.70
		Total For Dept 11006 LEGISLATIVE MAYOR & BOARD		2,170.52
	Dept 12001 VILLAGE ADMIN ADMINISTRATION			
1	101-12001-51652	TRAINING AND MEETINGS	STATE OF THE STATE BREAKFAST	90.00
2	101-12001-51654	MEMBERSHIPS & SUBSCRIP	ANNUAL DUES	164.00
3	101-12001-52111	OTHER PROFESSIONAL SVCS	PROPERTY TAX APPEAL REVIEWS	708.43
4	101-12001-52111	OTHER PROFESSIONAL SVCS	NATIONAL COMMUNITY SURVEY	19,300.00
5	101-12001-52201	VILLAGE ATTORNEY	LEGAL SERVICES - APR	5,433.75
6	101-12001-52202	LITIGATION	LEGAL SERVICES - APR	5,963.82
		Total For Dept 12001 VILLAGE ADMIN ADMINISTRATION		31,660.00
	Dept 12120 VILLAGE ADMIN HUMAN RESOURCES			
1	101-12120-51655	EMPLOYEE RECOGNITION	EMPLOYEE SERVICE AWARDS	1,594.00
2	101-12120-54303	LEGAL NOTICE/PUBLISHING	ACCOUNTANT JOB POSTING	250.00
		Total For Dept 12120 VILLAGE ADMIN HUMAN RESOURCES		1,844.00
	Dept 12180 VILLAGE ADMIN ECONOMIC DEVELOPMENT			
1	101-12180-51652	TRAINING AND MEETINGS	ICSCS CONFERENCE - ROOM	356.01
		Total For Dept 12180 VILLAGE ADMIN ECONOMIC DEVELOPMENT		356.01
	Dept 13001 FINANCE ADMINISTRATION			
1	101-13001-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP - 2025	38.75
2	101-13001-53207	PRINTING-STATIONERY/FORM	#10 ENVELOPES	257.06
3	101-13001-53207	PRINTING-STATIONERY/FORM	BUSINESS CARDS - KRUSE	29.13
4	101-13001-53208	OFFICE SUPPLIES	POSTAGE METER INK 06-2025	91.29
5	101-13001-53208	OFFICE SUPPLIES	CALCULATOR RIBBON, CORRECTION TAPE	13.63
6	101-13001-53208	OFFICE SUPPLIES	PAPER, FLOOR MAT	147.08
7	101-13001-53211	OTHER SUPPLIES	VH OFFICE CHAIRS	1,511.93

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

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Item	GL Number	GL Desc	Invoice Description	Amount
8	101-13001-54301	BANK & CREDIT CARD FEES	INVOICE CLOUD SERVICES - MAY	90.78
		Total For Dept 13001 FINANCE ADMINISTRATION		2,179.65
	Dept 17001 TECHNOLOGY ADMINISTRATION			
1	101-17001-52111	OTHER PROFESSIONAL SVCS	CLOUD STORAGE	119.88
2	101-17001-52111	OTHER PROFESSIONAL SVCS	GOOGLE SERVICE - MAY	43.20
3	101-17001-52111	OTHER PROFESSIONAL SVCS	SUPPORT AGMT 2025 - JUL	2,095.60
4	101-17001-53205	COMPUTER SUPPLIES	TONER	144.00
5	101-17001-53407	EQUIP MAINT PART&SUPPLIE	12V BATTERIES	21.95
6	101-17001-53407	EQUIP MAINT PART&SUPPLIE	WALL MOUNT FOR POLY PHONES	309.81
7	101-17001-53407	EQUIP MAINT PART&SUPPLIE	WALL MOUNT FOR POLY PHONES	241.52
8	101-17001-53407	EQUIP MAINT PART&SUPPLIE	POWER STRIL	57.90
9	101-17001-55255	COMPUTER SOFTWARE	ACROBAT PRO	16.79
		Total For Dept 17001 TECHNOLOGY ADMINISTRATION		3,050.65
	Dept 24001 POLICE ADMINISTRATION			
1	101-24001-51651	LICENSING/CERTIFICATIONS	SMITH - NOTARY CERT	16.00
2	101-24001-51651	LICENSING/CERTIFICATIONS	NOTARY REGISTRATION CNCL - SMITH	(16.00)
3	101-24001-51651	LICENSING/CERTIFICATIONS	SMITH - NOTARY STAMP	27.16
4	101-24001-51651	LICENSING/CERTIFICATIONS	NOTARY REGISTRATION - SMITH	16.00
5	101-24001-51655	EMPLOYEE RECOGNITION	911 WK RECOGNITION -SALAD	17.85
6	101-24001-51655	EMPLOYEE RECOGNITION	PILASKI RETIREMENT PLAQUE	113.50
7	101-24001-51655	EMPLOYEE RECOGNITION	NEW HIRES CAKE	52.90
8	101-24001-51655	EMPLOYEE RECOGNITION	911 WK RECOGNITION -SALAD, SANDWICHES	78.65
9	101-24001-52111	OTHER PROFESSIONAL SVCS	F&P COMMISSION MTG - PIZZA	76.88
10	101-24001-53211	OTHER SUPPLIES	EXTERIOR POW FLAG	32.99
11	101-24001-53211	OTHER SUPPLIES	EXTERIOR US FLAG	25.99
12	101-24001-53204	MOBILE VOICE & DATA	CELL PHONES - PD	619.54
13	101-24001-53209	UNIFORMS	SHIRT - BUFFO	61.05
14	101-24001-53401	CUSTODIAL SUPPLIES	CLEANING SUPPLIES - LYSOL	55.70
		Total For Dept 24001 POLICE ADMINISTRATION		1,178.21

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 24200 POLICE			
1	101-24200-44651	RED LIGHT/LOCAL ORDINANCE FINES	REF CITATION #C117837 PYMNT 05/28/25	25.00
		Total For Dept 24200 POLICE		25.00
	Dept 24210 POLICE OPERATIONS			
1	101-24210-51652	TRAINING AND MEETINGS	TRAINING - FREY	175.00
2	101-24210-52111	OTHER PROFESSIONAL SVCS	SOLICITOR PERMIT FINGERPRINTS A/C #03486	81.00
3	101-24210-52111	OTHER PROFESSIONAL SVCS	STARCOM - JUNE	1,932.00
4	101-24210-52704	MAINT-EQUIPMENT	NEW VEHICLES RADAR CABLES	396.00
5	101-24210-52704	MAINT-EQUIPMENT	TRAINING SIMULATOR ANNUAL FEE	1,500.00
6	101-24210-53207	PRINTING-STATIONERY/FORM	BICYCLE HELMET PROGRAM COUPONS	44.50
7	101-24210-53209	UNIFORMS	POLO - MARINE UNIT	29.94
8	101-24210-53209	UNIFORMS	LIGHT, SHIRT - PANIK	121.66
9	101-24210-53209	UNIFORMS	REIMB: EARPIECE	178.19
10	101-24210-53209	UNIFORMS	REIMB: KNIFE	264.27
11	101-24210-53210	SMALL TOOLS & EQUIP	REIMB: TRAFFIC CONTROL BUTTON	195.00
12	101-24210-53211	OTHER SUPPLIES	CPR KIT SUPPLIES - ZIPPER POUCHES, RAZORS	75.49
13	101-24210-53211	OTHER SUPPLIES	PRISONER BLANKETS	90.74
14	101-24210-54305	EMPLOYEE EXAMS	PRE-EMPLOYMENT POLYGRAPHS	1,680.00
		Total For Dept 24210 POLICE OPERATIONS		6,763.79
	Dept 24230 POLICE CRIME PREVENTION			
1	101-24230-51652	TRAINING AND MEETINGS	LONSKI - ADVANCED NASRO CLASS	400.00
2	101-24230-51652	TRAINING AND MEETINGS	REIMB: IJOA CONFERENCE HOTEL	333.50
3	101-24230-53209	UNIFORMS	REIMB: GLOCK NIGHT SIGHTS	172.07
4	101-24230-53209	UNIFORMS	REIMB: CID CLOTHING	188.84
		Total For Dept 24230 POLICE CRIME PREVENTION		1,094.41
	Dept 24240 POLICE INTERGOVERNMENTAL			
1	101-24240-51652	TRAINING AND MEETINGS	NIPAS ANNUAL MEETING	175.00
		Total For Dept 24240 POLICE INTERGOVERNMENTAL		175.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

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Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 25001 FIRE ADMINISTRATION			
1	101-25001-51652	TRAINING AND MEETINGS	ESO CONFERENCE - WOLTMAN	1,386.84
2	101-25001-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP - 2025	84.00
3	101-25001-51655	EMPLOYEE RECOGNITION	EMPLOYEE RECOGNITION - FRAMES	24.49
4	101-25001-51655	EMPLOYEE RECOGNITION	SHADOW BOXES	248.95
5	101-25001-51655	EMPLOYEE RECOGNITION	RETIREMENT - FLOWERS	100.00
6	101-25001-51655	EMPLOYEE RECOGNITION	DEPARTMENT PHOTOS	1,900.00
7	101-25001-51655	EMPLOYEE RECOGNITION	RETIREMENT - CAKES, CREAMER	139.48
8	101-25001-51655	EMPLOYEE RECOGNITION	PROMOTION - CAKE	48.00
9	101-25001-52111	OTHER PROFESSIONAL SVCS	SUPPORT AGMT 2025 - JUL	1,128.40
10	101-25001-52701	MAINT-BLDGS & GROUNDS	TRAINING TOWER INSPECTION	1,500.00
11	101-25001-52707	MAINT-OTHER	FITNESS EQUIPMENT MAINTENANCE	340.00
12	101-25001-52707	MAINT-OTHER	FITNESS EQUIPMENT MAINTENANCE	270.00
13	101-25001-52707	MAINT-OTHER	FITNESS EQUIPMENT MAINTENANCE	175.00
14	101-25001-52707	MAINT-OTHER	FITNESS EQUIPMENT MAINTENANCE	230.00
15	101-25001-53204	MOBILE VOICE & DATA	CELL PHONES - FIRE	141.16
16	101-25001-53209	UNIFORMS	PVC PATCHES	400.00
17	101-25001-53211	OTHER SUPPLIES	PLACEMATS, CONTAINERS, KITCHEN ITEMS	513.31
18	101-25001-53211	OTHER SUPPLIES	TOASTER OVEN, KITCHEN ITEMS	247.88
19	101-25001-53211	OTHER SUPPLIES	DRINKING GLASSES	38.99
20	101-25001-53211	OTHER SUPPLIES	EMPLOYEE RECOGNITION - FRAMES	535.94
21	101-25001-53211	OTHER SUPPLIES	TOWELS	169.96
22	101-25001-53211	OTHER SUPPLIES	TOWELS, DETERGENT, TISSUE, CLEANER	348.83
23	101-25001-53211	OTHER SUPPLIES	TOWELS, DETERGENT, CLEANER, TISSUE	216.76
24	101-25001-53211	OTHER SUPPLIES	DETERGENT	18.99
25	101-25001-53211	OTHER SUPPLIES	SOAP	120.22
26	101-25001-54305	EMPLOYEE EXAMS	POLYGRAPH EXAMS - MCGAHAN, BOLDT, YANEZ	1,050.00
27	101-25001-54305	EMPLOYEE EXAMS	EMPLOYEE SCREENING - POSADAS	775.00
28	101-25001-54305	EMPLOYEE EXAMS	BACKGROUND CHECKS	81.00
29	101-25001-53405	BLDG & GROUND MAINT SUPP	REFUND - FILTERS	(26.97)
		Total For Dept 25001 FIRE ADMINISTRATION		12,206.23

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 25320 FIRE FIRE SUPPRESSION			
1	101-25320-51652	TRAINING AND MEETINGS	TRAINING BOOK	313.44
2	101-25320-51652	TRAINING AND MEETINGS	IFSI ACCOMODATIONS - JOHNSON	604.55
3	101-25320-51652	TRAINING AND MEETINGS	IFSI ACCOMODATIONS - DEBOER	604.55
4	101-25320-51652	TRAINING AND MEETINGS	TRAINING PRGM MRG CLASS - BOOTH	475.00
5	101-25320-51652	TRAINING AND MEETINGS	TRAINING - FUNCTIONAL FIRE	41.00
6	101-25320-51652	TRAINING AND MEETINGS	REIMB: FIREMANSHIP	350.00
7	101-25320-51652	TRAINING AND MEETINGS	ANNUAL TRAINING FACILITY MEMBERSHIP	4,000.00
8	101-25320-51652	TRAINING AND MEETINGS	VEIS TRAINING - TANNER	75.00
9	101-25320-52704	MAINT-EQUIPMENT	EQUIPMENT MAINTENANCE - RADIOS	294.99
10	101-25320-53211	OTHER SUPPLIES	FASTENERS	15.61
11	101-25320-52111	OTHER PROFESSIONAL SVCS	FIRE STARCOM FEES - JUNE	2,206.00
12	101-25320-53204	MOBILE VOICE & DATA	CELL PHONES - FIRE	270.03
13	101-25320-53209	UNIFORMS	LION HOODS	4,945.08
14	101-25320-53209	UNIFORMS	BOOTS	410.00
15	101-25320-53209	UNIFORMS	SUSPENDERS	180.00
16	101-25320-53209	UNIFORMS	CLASSIC TIN, LOCKER TAGS	110.00
17	101-25320-53211	OTHER SUPPLIES	WRECKING BAR, DRILL HAMMER	90.32
18	101-25320-53211	OTHER SUPPLIES	TRAINING - SAFETY GUARDRAIL	982.35
19	101-25320-53211	OTHER SUPPLIES	REHAB SUPPLIES	11.21
20	101-25320-53211	OTHER SUPPLIES	REHAB SUPPLIES	36.99
		Total For Dept 25320 FIRE FIRE SUPPRESSION		16,016.12
	Dept 25330 FIRE EMS			
1	101-25330-51651	LICENSING/CERTIFICATIONS	REIMB: PARAMEDIC LICENSE	40.00
2	101-25330-53204	MOBILE VOICE & DATA	CELL PHONE - MAY	59.24
		Total For Dept 25330 FIRE EMS		99.24
	Dept 25340 FIRE SPECIAL RESCUE			
1	101-25340-51652	TRAINING AND MEETINGS	IFSI ACCOMODATIONS - KENYON	528.96
2	101-25340-55254	MACHINERY & EQUIPMENT	DIVE TEAM PPE - RESCUE EQUIPMENT	430.00
		Total For Dept 25340 FIRE SPECIAL RESCUE		958.96

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	Dept 25350 FIRE FIRE PREVENTION BUREAU			
1	101-25350-51652	TRAINING AND MEETINGS	ESO CONFERENCE - WOLTMAN	1,386.84
2	101-25350-53204	MOBILE VOICE & DATA	CELL PHONES - FIRE	202.51
	Total For Dept 25350 FIRE FIRE PREVENTION BUREAU			1,589.35
	Dept 28001 COMMUNITY DEVELOPMENT ADMINISTRATION			
1	101-28001-51652	TRAINING AND MEETINGS	PZC TRAINING	65.00
2	101-28001-51652	TRAINING AND MEETINGS	PARKING - DEPOSITION	15.86
3	101-28001-52111	OTHER PROFESSIONAL SVCS	MAY 2025 BUILDING SERVICES	10,996.45
4	101-28001-52111	OTHER PROFESSIONAL SVCS	TEXT AMENDMENTS AD #2306783	57.50
5	101-28001-52113	ENGR/ARCHITECTURAL	880 S RAND RD	1,375.00
6	101-28001-52113	ENGR/ARCHITECTURAL	1275 ENSELL	1,287.50
7	101-28001-52113	ENGR/ARCHITECTURAL	455 S RAND RD	750.00
8	101-28001-52113	ENGR/ARCHITECTURAL	629 ROSE RD	2,385.00
9	101-28001-52113	ENGR/ARCHITECTURAL	442 S RAND RD	580.00
10	101-28001-52113	ENGR/ARCHITECTURAL	865 TELSER	2,372.50
11	101-28001-52113	ENGR/ARCHITECTURAL	504 N OLD RAND RD	357.50
12	101-28001-52113	ENGR/ARCHITECTURAL	JANKE SUBDIVISION	307.50
13	101-28001-52113	ENGR/ARCHITECTURAL	PAULUS PARK IMPROVEMENTS	885.00
14	101-28001-52113	ENGR/ARCHITECTURAL	410 TELSER RD	307.50
15	101-28001-52113	ENGR/ARCHITECTURAL	COMMUNITY DEVELOPMENT ENGINEERING	930.00
16	101-28001-52113	ENGR/ARCHITECTURAL	255 QUENTING RD	1,772.50
17	101-28001-52113	ENGR/ARCHITECTURAL	BUILDING PERMIT REVIEWS - 2025	5,860.00
18	101-28001-52113	ENGR/ARCHITECTURAL	1170 SYCAMORE LN	297.50
19	101-28001-52604	SWEEPING & MOWING	VIOLATION MOW - JUN	420.00
20	101-28001-52604	SWEEPING & MOWING	VIOLATION MOW - MAY	315.00
21	101-28001-52604	SWEEPING & MOWING	VIOLATION MOW - JUN	180.00
22	101-28001-53207	PRINTING-STATIONERY/FORM	BUSINESS CARDS - MODRZEJEWSKI	44.13
	Total For Dept 28001 COMMUNITY DEVELOPMENT ADMINISTRATION			31,561.44

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	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	101-36001-51651	LICENSING/CERTIFICATIONS	FENTON ISA	120.00
2	101-36001-51652	TRAINING AND MEETINGS	MAY MEETING	20.00
3	101-36001-51652	TRAINING AND MEETINGS	MAY MEETING	20.00
4	101-36001-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP - 2025	33.50
5	101-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/12	32.55
6	101-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/19	34.75
7	101-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/26	34.75
8	101-36001-52113	ENGR/ARCHITECTURAL	2025 LZ GENERAL ENGINEERING	7,147.50
9	101-36001-52113	ENGR/ARCHITECTURAL	2025 LZ GENERAL ENGINEERING	6,508.75
10	101-36001-52113	ENGR/ARCHITECTURAL	24455 N US HWY 12	1,390.00
11	101-36001-52113	ENGR/ARCHITECTURAL	23153 W MILLER RD	350.00
12	101-36001-52602	WASTE REMOVAL	LRS STICKERS - 500 #2001-2500	1,780.00
13	101-36001-52603	LAKE/WATER QUALITY MGMT	2024 NAM STEWARDSHIP	15,450.00
14	101-36001-52603	LAKE/WATER QUALITY MGMT	2025 LZ MS4 PROGRAM	2,252.50
15	101-36001-52603	LAKE/WATER QUALITY MGMT	BRAEMAR BEAVER REMOVAL	1,150.00
16	101-36001-52605	MOSQUITO ABATEMENT	MOSQUITO CONTROL 2024	11,972.00
17	101-36001-52701	MAINT-BLDGS & GROUNDS	VILLAGE HALL PEST CONTROL - JUN	79.50
18	101-36001-52701	MAINT-BLDGS & GROUNDS	FIRE STA #1 PEST CONTROL - JUN	83.00
19	101-36001-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 06/12	66.63
20	101-36001-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 06/19	66.63
21	101-36001-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 06/26	104.62
22	101-36001-52701	MAINT-BLDGS & GROUNDS	CLEANING SERVICES - JUN	5,716.85
23	101-36001-52701	MAINT-BLDGS & GROUNDS	PD DIAGNOSTIC	200.00
24	101-36001-52701	MAINT-BLDGS & GROUNDS	PD RTU 2 COMPRESSOR	7,469.00
25	101-36001-52701	MAINT-BLDGS & GROUNDS	PD ANNUAL INSPECTION	498.00
26	101-36001-52701	MAINT-BLDGS & GROUNDS	PD CARPET CLEANING	250.00
27	101-36001-52701	MAINT-BLDGS & GROUNDS	505 TRIPLE TRAP CLEANING	2,265.42
28	101-36001-52701	MAINT-BLDGS & GROUNDS	PD PEST CONTROL - JUN	93.00
29	101-36001-52701	MAINT-BLDGS & GROUNDS	PW PEST CONTROL - JUN	49.00
30	101-36001-52702	MAINT-LAWN & LANDSCAPING	2025 BED MAINT	844.92
31	101-36001-52702	MAINT-LAWN & LANDSCAPING	2025 BED MAINT	844.92

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32	101-36001-53204	MOBILE VOICE & DATA	PW TRUCK DATA PLAN	360.00
33	101-36001-53204	MOBILE VOICE & DATA	CELL PHONE - MAY	2.64
34	101-36001-53208	OFFICE SUPPLIES	OFFICE CHAIRS	246.18
35	101-36001-53208	OFFICE SUPPLIES	CABLE	24.95
36	101-36001-53208	OFFICE SUPPLIES	MOUSE PAD	3.98
37	101-36001-53208	OFFICE SUPPLIES	CABLE	21.70
38	101-36001-53208	OFFICE SUPPLIES	LABEL TAPE	14.52
39	101-36001-53209	UNIFORMS	PPE SHIRTS SS	105.00
40	101-36001-53209	UNIFORMS	PPE HAT LOGOS	30.00
41	101-36001-53209	UNIFORMS	PPE PANTS TAX REFUND	(24.37)
42	101-36001-53209	UNIFORMS	PPE PANTS	328.99
43	101-36001-53209	UNIFORMS	PPE GLOVES	40.69
44	101-36001-53209	UNIFORMS	PPE SHORT SLEEVE SHIRTS	182.24
45	101-36001-53209	UNIFORMS	PPE LONG SLEEVE SWEATSHIRTS	188.97
46	101-36001-53209	UNIFORMS	PPE SAFETY GLASSES	56.40
47	101-36001-53209	UNIFORMS	PPE SAFETY GLASSES	57.00
48	101-36001-53209	UNIFORMS	PPE VESTS	4.50
49	101-36001-53209	UNIFORMS	PPE UNIFORMS SS	712.44
50	101-36001-53210	SMALL TOOLS & EQUIP	WEDGE BAG	85.90
51	101-36001-53211	OTHER SUPPLIES	CONES	396.90
52	101-36001-53211	OTHER SUPPLIES	AED KIT	215.28
53	101-36001-53401	CUSTODIAL SUPPLIES	TISSUE, TOWELS, CLEANSER	1,060.00
54	101-36001-53403	LANDSCAPING SUPPLIES	SEED, STAPLES	312.00
55	101-36001-53403	LANDSCAPING SUPPLIES	SEED, STAPLES, BLANKET, PELLET	151.70
56	101-36001-53404	RIGHT OF WAY SUPPLIES	DRAINAGE	36.28
57	101-36001-53404	RIGHT OF WAY SUPPLIES	MANHOLE	705.00
58	101-36001-53404	RIGHT OF WAY SUPPLIES	STAINERS	68.99
59	101-36001-53404	RIGHT OF WAY SUPPLIES	STAINERS	80.98
60	101-36001-53404	RIGHT OF WAY SUPPLIES	STAINERS	51.97
61	101-36001-53405	BLDG & GROUNDS SUPPLIES	CONES	54.14
62	101-36001-53405	BLDG & GROUNDS SUPPLIES	DOOR STOPPER	79.90
63	101-36001-53405	BLDG & GROUNDS SUPPLIES	FLAGS	168.00

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64	101-36001-53405	BLDG & GROUNDS SUPPLIES	CAP SCREWS	22.50
65	101-36001-54305	EMPLOYEE EXAMS	EMPLOYEE MEDICAL EXAMS	240.00
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		73,013.16
	Dept 36420 PUBLIC WORKS PARK MAINTENANCE			
1	101-36420-52701	MAINT-BLDGS & GROUNDS	PAULUS PK PEST CONTROL - JUN	84.04
2	101-36420-52701	MAINT-BLDGS & GROUNDS	BUFFALO CREEK PEST CONTROL - JUN	77.22
3	101-36420-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 06/26	122.66
4	101-36420-52701	MAINT-BLDGS & GROUNDS	CLEANING SERVICES - JUN	7,444.31
5	101-36420-52701	MAINT-BLDGS & GROUNDS	BCB THERMOSTAT	127.50
6	101-36420-52701	MAINT-BLDGS & GROUNDS	BCB THERMOSTAT	793.00
7	101-36420-52702	MAINT-LAWN & LANDSCAPING	2025 BED MAINT	2,732.80
8	101-36420-52702	MAINT-LAWN & LANDSCAPING	2025 BED MAINT	2,732.80
9	101-36420-52704	MAINT-EQUIPMENT	MAINTENANCE OF FIRE EXTINGUISHERS	210.04
10	101-36420-53201	ELECTRICITY	200 S RAND RD	299.24
11	101-36420-53201	ELECTRICITY	PARK ELECTRIC	31.33
12	101-36420-53201	ELECTRICITY	1432 CONRAD LN	49.44
13	101-36420-53210	SMALL TOOLS & EQUIP	BLADES	32.73
14	101-36420-53401	CUSTODIAL SUPPLIES	TISSUE, TOWELS, CLEANSER	605.68
15	101-36420-53403	LANDSCAPING SUPPLIES	SEED, STAPLES, BLANKET, PELLET	577.35
16	101-36420-53403	LANDSCAPING SUPPLIES	WEED CONTROL	320.60
17	101-36420-53403	LANDSCAPING SUPPLIES	WEED CONTROL	37.94
18	101-36420-53405	BLDG & GROUND MAINT SUPP	PAULUS FENCE CARBON FIBER	16.79
19	101-36420-53405	BLDG & GROUND MAINT SUPP	CABLE	133.77
20	101-36420-53405	BLDG & GROUND MAINT SUPP	PAULUS PARK BOX STRUTS	81.72
21	101-36420-53405	BLDG & GROUND MAINT SUPP	TAPCON KIT	42.48
22	101-36420-53405	BLDG & GROUND MAINT SUPP	LOCKS	126.34
23	101-36420-53405	BLDG & GROUND MAINT SUPP	BEV PAV LIGHTING WIRE	122.58
24	101-36420-53405	BLDG & GROUND MAINT SUPP	DOOR STOPPER	25.98
25	101-36420-53405	BLDG & GROUND MAINT SUPP	FLAGS	168.00
26	101-36420-53405	BLDG & GROUND MAINT SUPP	BEV PAV FAUCET	93.32
27	101-36420-53405	BLDG & GROUND MAINT SUPP	BEV PAV VENT	34.93

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28	101-36420-53405	BLDG & GROUND MAINT SUPP	PLUMBING SUPPLIES	10.11
29	101-36420-53405	BLDG & GROUND MAINT SUPP	BOCCI REPAIRS	34.56
30	101-36420-53405	BLDG & GROUND MAINT SUPP	BOUY ANCHORS	78.21
31	101-36420-53405	BLDG & GROUND MAINT SUPP	MSD WATERING	78.98
32	101-36420-53405	BLDG & GROUND MAINT SUPP	PAULUS GATES	589.09
33	101-36420-53405	BLDG & GROUND MAINT SUPP	PAULUS GATES TAX CREDIT	(40.87)
34	101-36420-53405	BLDG & GROUND MAINT SUPP	BEVERAGE PAVILION LIGHTS	355.97
35	101-36420-53417	SAND & GRAVEL	SAND	215.48
36	101-36420-54306	EQUIPMENT RENTAL	AUGER RENTAL	234.60
		Total For Dept 36420 PUBLIC WORKS PARK MAINTENANCE		18,680.72
	Dept 36471 PUBLIC WORKS FLEET SERVICES			
1	101-36471-51652	TRAINING AND MEETINGS	2025 IPSI - MATHESON, REUSCH	850.00
2	101-36471-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/12	32.68
3	101-36471-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/19	32.68
4	101-36471-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/26	32.68
5	101-36471-52111	OTHER PROFESSIONAL SVCS	I-PASS REPLENISH	20.00
6	101-36471-52111	OTHER PROFESSIONAL SVCS	SAFETY INSPECTIONS	238.00
7	101-36471-52111	OTHER PROFESSIONAL SVCS	PUMP TEST 212	375.00
8	101-36471-52111	OTHER PROFESSIONAL SVCS	PUMP TEST 214	375.00
9	101-36471-52111	OTHER PROFESSIONAL SVCS	PUMP TEST 215	375.00
10	101-36471-52111	OTHER PROFESSIONAL SVCS	PUMP TEST 211	375.00
11	101-36471-52111	OTHER PROFESSIONAL SVCS	PUMP TEST 210	375.00
12	101-36471-52703	MAINT-VEHICLES	TRACK MACHINE REPAIRS	6,631.25
13	101-36471-52703	MAINT-VEHICLES	342 INTERIOR	100.00
14	101-36471-52703	MAINT-VEHICLES	PAINT VAC TUBE	536.85
15	101-36471-53211	OTHER SUPPLIES	WELDING GAS	258.64
16	101-36471-53211	OTHER SUPPLIES	SPLIT LOOM	49.50
17	101-36471-53211	OTHER SUPPLIES	SPLIT LOOM	44.50
18	101-36471-53406	AUTO PARTS & SUPPLIES	WARNING LIGHTS 295	229.04
19	101-36471-53406	AUTO PARTS & SUPPLIES	PUMP PANEL LIGHT	248.46
20	101-36471-53406	AUTO PARTS & SUPPLIES	HITCH PLATE NEW TRUCKS	136.41

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21	101-36471-53406	AUTO PARTS & SUPPLIES	FUEL DOOR 110	45.56
22	101-36471-53406	AUTO PARTS & SUPPLIES	STARTER	252.05
23	101-36471-53406	AUTO PARTS & SUPPLIES	BRAKE PADS	185.37
24	101-36471-53406	AUTO PARTS & SUPPLIES	BELT	22.37
25	101-36471-53406	AUTO PARTS & SUPPLIES	TPMS SENSOR	189.48
26	101-36471-53406	AUTO PARTS & SUPPLIES	SHIFT PLATE 532	62.93
27	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - CORE RETURN	36.00
28	101-36471-53406	AUTO PARTS & SUPPLIES	BATTERY	304.78
29	101-36471-53406	AUTO PARTS & SUPPLIES	DEF FILTERS	100.60
30	101-36471-53406	AUTO PARTS & SUPPLIES	BATTERIES	304.78
31	101-36471-53406	AUTO PARTS & SUPPLIES	BATTERY	250.59
32	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - CORE RETURN	(36.00)
33	101-36471-53406	AUTO PARTS & SUPPLIES	WIRE	39.99
34	101-36471-53406	AUTO PARTS & SUPPLIES	FUSE BLOCK	67.96
35	101-36471-53406	AUTO PARTS & SUPPLIES	BELTS 215	143.19
36	101-36471-53406	AUTO PARTS & SUPPLIES	SPARK PLUGS	49.14
37	101-36471-53406	AUTO PARTS & SUPPLIES	BATTERY	161.48
38	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - PARTS RETURN	(161.48)
39	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - PARTS RETURN	(161.48)
40	101-36471-53406	AUTO PARTS & SUPPLIES	FILTERS	54.24
41	101-36471-53406	AUTO PARTS & SUPPLIES	TENSIONER	33.19
42	101-36471-53406	AUTO PARTS & SUPPLIES	WARNING LIGHT 247	386.00
43	101-36471-53406	AUTO PARTS & SUPPLIES	SENSOR	150.00
44	101-36471-53406	AUTO PARTS & SUPPLIES	WARNING LIGHTS B&Z	1,404.61
45	101-36471-53406	AUTO PARTS & SUPPLIES	TAX CREDIT	(104.05)
46	101-36471-53406	AUTO PARTS & SUPPLIES	SEAT BELT BUCKLE 107	162.45
47	101-36471-53406	AUTO PARTS & SUPPLIES	SWITCH 7495	62.46
48	101-36471-53406	AUTO PARTS & SUPPLIES	WIPER MOTOR 104	158.72
49	101-36471-53406	AUTO PARTS & SUPPLIES	SEAT COVER	415.22
50	101-36471-53406	AUTO PARTS & SUPPLIES	WATER PUMP	246.29
51	101-36471-53407	EQUIP MAINT PART&SUPPLIE	LOCK TITE	37.59
52	101-36471-53407	EQUIP MAINT PART&SUPPLIE	PUMP CARB	123.81

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53	101-36471-53407	EQUIP MAINT PART&SUPPLIE	WIRE HARNESS	265.18
54	101-36471-53407	EQUIP MAINT PART&SUPPLIE	COUPLER	103.47
55	101-36471-53407	EQUIP MAINT PART&SUPPLIE	SPARK PLUG	7.38
56	101-36471-53407	EQUIP MAINT PART&SUPPLIE	SPARK PLUG	7.11
57	101-36471-53407	EQUIP MAINT PART&SUPPLIE	BELT	27.18
58	101-36471-53407	EQUIP MAINT PART&SUPPLIE	CLAMPS	12.10
59	101-36471-53407	EQUIP MAINT PART&SUPPLIE	NUMBERS	4.80
60	101-36471-53414	CHEMICALS	LOCK TITE	23.60
61	101-36471-53414	CHEMICALS	LOCK TITE	40.80
62	101-36471-53414	CHEMICALS	PRIMER	14.47
63	101-36471-53414	CHEMICALS	CLEANER	15.31
64	101-36471-53415	FUELS	DIESEL & FUEL #1921109	5,903.62
65	101-36471-53415	FUELS	DIESEL & FUEL #1921108	9,050.25
66	101-36471-53418	LUBRICANTS & FLUIDS	SAW OIL	107.52
67	101-36471-53418	LUBRICANTS & FLUIDS	GEAR OIL	35.38
68	101-36471-53418	LUBRICANTS & FLUIDS	OIL	59.20
69	101-36471-53418	LUBRICANTS & FLUIDS	DEF FILTERS	203.88
70	101-36471-53418	LUBRICANTS & FLUIDS	OIL	33.69
		Total For Dept 36471 PUBLIC WORKS FLEET SERVICES		32,218.47
	Dept 67001 RECREATION ADMINISTRATION			
1	101-67001-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP - 2025	120.00
2	101-67001-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP - 2025	38.75
3	101-67001-53204	MOBILE VOICE & DATA	CELL PHONE - MAY	3.94
4	101-67001-53207	PRINTING-STATIONERY/FORM	FY25 FALL WINTER BROCHURE	4,185.00
5	101-67001-53208	OFFICE SUPPLIES	CLEAR COAT	12.29
6	101-67001-53208	OFFICE SUPPLIES	STICKY NOTES & DE-SOLV IT	28.51
7	101-67001-53208	OFFICE SUPPLIES	ADIRONDEK CHAIR LOGO SUPPLIES	31.44
8	101-67001-53208	OFFICE SUPPLIES	PICKLEBALL YARD SIGNS, PLASTIC SILVERWARE, PAPER PLTS	35.92
9	101-67001-53208	OFFICE SUPPLIES	FOLDERS, MARKERS	123.66
10	101-67001-53208	OFFICE SUPPLIES	PAPER	131.97
11	101-67001-53211	OTHER SUPPLIES	HOT ASPHALT SIGN	187.96

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12	101-67001-53211	OTHER SUPPLIES	ADIRONDEK CHAIR LOGO SUPPLIES	20.00
13	101-67001-53211	OTHER SUPPLIES	BCA DOOR BANNER	415.00
14	101-67001-53212	PROGRAM SUPPLIES	COSTUMES - FANS	7.88
15	101-67001-53212	PROGRAM SUPPLIES	JACKETS	348.00
		Total For Dept 67001 RECREATION ADMINISTRATION		5,690.32
	Dept 67935 RECREATION DANCE			
1	101-67935-52115	RECREATION PROGRAM SERVICE	LESSON PLANS	75.00
2	101-67935-53211	OTHER SUPPLIES	PATCHES, PENS, JOURNALS, VINYL	232.17
3	101-67935-53211	OTHER SUPPLIES	RECITAL TAPE	34.72
4	101-67935-53211	OTHER SUPPLIES	RECITAL TAPE	18.99
5	101-67935-53211	OTHER SUPPLIES	COSTUMES - FANS	13.99
6	101-67935-53211	OTHER SUPPLIES	RECITAL SUPPLIES - RAZOR BLADES, STORAGE BAGS	29.39
7	101-67935-53211	OTHER SUPPLIES	RECITAL SUPPLIES - TONGS, SPOONS, TABLE COVER	9.25
8	101-67935-53211	OTHER SUPPLIES	RECITAL FOOD - WATER, SODAS	55.44
9	101-67935-53211	OTHER SUPPLIES	RECITAL FLOWERS	117.88
10	101-67935-53211	OTHER SUPPLIES	COSTUME PICK UP FOOD - PIZZA	64.09
11	101-67935-53211	OTHER SUPPLIES	RECITAL FOOD - TACO BAR	585.41
12	101-67935-54306	EQUIPMENT RENTAL	RENTAL EQUIPMENT	97.50
		Total For Dept 67935 RECREATION DANCE		1,333.83
	Dept 67940 RECREATION PRESCHOOL			
1	101-67940-53212	PROGRAM SUPPLIES	MARIGOLDS & SOIL	54.76
2	101-67940-53212	PROGRAM SUPPLIES	BUTTER, JARS, STRAWS, PAINT, TAPE, FELT, PENS	83.05
3	101-67940-53212	PROGRAM SUPPLIES	FOAM BRUSHES & PAINT	12.94
4	101-67940-53212	PROGRAM SUPPLIES	PICTURES	19.88
		Total For Dept 67940 RECREATION PRESCHOOL		170.63
	Dept 67960 RECREATION CAMPS			
1	101-67960-53209	UNIFORMS	DAY CAMP UNIFORMS	2,755.50
2	101-67960-53212	PROGRAM SUPPLIES	SCISSORS, PLATES, GOOGLY EYES, POM POMS	155.75

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3	101-67960-53212	PROGRAM SUPPLIES	WRISTBANDS, LANYARD STRING, KIDS CARDS	154.48
4	101-67960-53212	PROGRAM SUPPLIES	ID BADGES	47.98
5	101-67960-53212	PROGRAM SUPPLIES	DAY CAMP T-SHIRTS FOR CAMPERS	2,106.25
		Total For Dept 67960 RECREATION CAMPS		5,219.96
	Dept 67965 RECREATION ATHLETICS			
1	101-67965-52115	RECREATION PROGRAM SERVICE	HOT SHOTS SPORTS - SPRING	4,263.00
2	101-67965-52115	RECREATION PROGRAM SERVICE	SPRING HORSE - 5 PART	1,260.00
3	101-67965-53212	PROGRAM SUPPLIES	ID BADGES	199.49
4	101-67965-53212	PROGRAM SUPPLIES	CORNHOLE BAGS	83.56
		Total For Dept 67965 RECREATION ATHLETICS		5,806.05
	Dept 67970 RECREATION AQUATICS			
1	101-67970-51651	LICENSING/CERTIFICATIONS	CERTIFICATIONS	94.00
2	101-67970-53211	OTHER SUPPLIES	SAFETY POSTS, WHITEBOARDS, CLEANER, CORDS	130.88
3	101-67970-53211	OTHER SUPPLIES	WHITEBOARD RETURN	(84.99)
4	101-67970-53211	OTHER SUPPLIES	RECEIPT BOOK	5.81
5	101-67970-53211	OTHER SUPPLIES	FIRST AID - ANTISEPTIC WIPES	32.65
6	101-67970-53211	OTHER SUPPLIES	SAFETY POSTS	36.71
7	101-67970-53211	OTHER SUPPLIES	SAFETY POSTS	22.94
8	101-67970-53211	OTHER SUPPLIES	FIRST AID SUPPLIES	7.57
9	101-67970-53211	OTHER SUPPLIES	STAFF FOOD FOR TRAINING - PIZZA	27.25
10	101-67970-53211	OTHER SUPPLIES	SCHEDULING MEMBERSHIP	24.95
11	101-67970-53211	OTHER SUPPLIES	ADIRONDEK CHAIR LOGO SUPPLIES	40.00
		Total For Dept 67970 RECREATION AQUATICS		337.77
		Total For Fund 101 GENERAL		**297,051.31**
	Fund 202 MOTOR FUEL TAX			
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	202-36001-52701	MAINT-BLDGS & GROUNDS	2025 BED MAINT	359.10
2	202-36001-52701	MAINT-BLDGS & GROUNDS	2025 BED MAINT	359.10

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3	202-36001-53201	ELECTRICITY	STREETLIGHT ELECTRIC	15,057.69
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		15,775.89
		Total For Fund 202 MOTOR FUEL TAX		**15,775.89**
	Fund 207 SPECIAL EVENTS FUND			
	Dept 00000			
1	207-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - JUN 2025	2.81
		Total For Dept 00000		2.81
	Dept 67600 RECREATION SPECIAL EVENTS ADMIN			
1	207-67600-53212	PROGRAM SUPPLIES	SPONSORSHIP PLAQUES	489.32
		Total For Dept 67600 RECREATION SPECIAL EVENTS ADMIN		489.32
	Dept 67601 RECREATION ROCK THE BLOCK			
1	207-67601-53212	PROGRAM SUPPLIES	RTB LED FOAM GIVEAWAYS	3,000.00
		Total For Dept 67601 RECREATION ROCK THE BLOCK		3,000.00
	Dept 67603 RECREATION FARMERS MARKET			
1	207-67603-52115	RECREATION PROGRAM SERV	FARMERS MARKET BAND 07/18	200.00
		Total For Dept 67603 RECREATION FARMERS MARKET		200.00
	Dept 67699 RECREATION MISC SPECIAL EVENTS			
1	207-67699-53212	PROGRAM SUPPLIES	EGG HUNT COSTUME CLEANING	70.95
2	207-67699-53212	PROGRAM SUPPLIES	COFFEE & PLATES	27.70
3	207-67699-53212	PROGRAM SUPPLIES	ARBOR DAY - MUNCHKINS	65.96
4	207-67699-53212	PROGRAM SUPPLIES	ARBOR DAY - WATER, SODA	12.48
		Total For Dept 67699 RECREATION MISC SPECIAL EVENTS		177.09
		Total For Fund 207 SPECIAL EVENTS FUND		**3,869.22**

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Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 210 TIF #1			
	Dept 10490 GENERAL GOVERNMENT TIF			
1	210-10490-52201	VILLAGE ATTORNEY	LEGAL SERVICES - APR	1,081.00
		Total For Dept 10490 GENERAL GOVERNMENT TIF		1,081.00
		Total For Fund 210 TIF #1		**1,081.00**
	Fund 214 TIF #2 DOWNTOWN			
	Dept 10490 GENERAL GOVERNMENT TIF			
1	214-10490-52201	VILLAGE ATTORNEY	LEGAL SERVICES - APR	905.20
		Total For Dept 10490 GENERAL GOVERNMENT TIF		905.20
		Total For Fund 214 TIF #2 DOWNTOWN		**905.20**
	Fund 227 DISPATCH CENTER			
	Dept 00000			
1	227-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - JUN 2025	50.17
		Total For Dept 00000		50.17
	Dept 24220 POLICE DISPATCH			
1	227-24220-51652	TRAINING AND MEETINGS	HARPER - CTO RECERTIFICATION	475.00
2	227-24220-53210	SMALL TOOLS & EQUIP	DISPATCH CLEANING - SWIFFER	50.37
		Total For Dept 24220 POLICE DISPATCH		525.37
		Total For Fund 227 DISPATCH CENTER		**575.54**
	Fund 310 TIF #1 DEBT SERVICE			
	Dept 10490 GENERAL GOVERNMENT TIF			
1	310-10490-56603	INTEREST	DEBT SERVICE PRINCIPAL AND INTEREST	206,842.50
		Total For Dept 10490 GENERAL GOVERNMENT TIF		206,842.50
		Total For Fund 310 TIF #1 DEBT SERVICE		**206,842.50**

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Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 401 VILLAGE CAPITAL PROJECTS			
	Dept 00000			
1	401-00000-21207	CONTRACTS RETAIN PAYABLE	PROMENADE IMPROVEMENTS	12,857.82
2	401-00000-21207	CONTRACTS RETAIN PAYABLE	PAULUS PARK OSLAD IMPROVEMENT GRANT	(19,740.64)
		Total For Dept 00000		(6,882.82)
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	401-36001-55251	LAND IMPROVEMENTS	PROMENADE IMPROVEMENTS	80,537.22
2	401-36001-55251	LAND IMPROVEMENTS	2025 PARKING LOT PROJECT	1,085.50
3	401-36001-55251	LAND IMPROVEMENTS	PROMENADE LANDSCAPING DESIGN, PRELIM ENG	542.75
4	401-36001-55251	LAND IMPROVEMENTS	PROMENADE LANDSCAPING DESIGN, PRELIM	700.00
5	401-36001-55251	LAND IMPROVEMENTS	PAULUS PARK OSLAD IMPROVEMENT GRANT	197,406.28
6	401-36001-55252	BLDG & BLDG IMPROVEMENTS	DRAINAGE	4.99
7	401-36001-55252	BLDG & BLDG IMPROVEMENTS	LABEL TAPE	75.95
8	401-36001-55252	BLDG & BLDG IMPROVEMENTS	PRESSURE WASHER FLUE	1,334.21
9	401-36001-55252	BLDG & BLDG IMPROVEMENTS	VH EXTERIOR BID AD #2309068	126.50
10	401-36001-55252	BLDG & BLDG IMPROVEMENTS	PD HVAC CONTROL SYSTEM REPLACEMENT	55,567.71
11	401-36001-55252	BLDG & BLDG IMPROVEMENTS	VHBO WINDOW FROST	719.00
12	401-36001-55253	INFRASTRUCTURE IMPROVEMT	WATER TANK PLUMBING	105.48
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		338,205.59
	Dept 36470 PUBLIC WORKS STORM WATER CONTROL			
1	401-36470-55253	INFRASTRUCTURE IMPROVEMT	BUFFALO CREEK IMPROVEMENTS - BRISTOL TRL	1,827.50
		Total For Dept 36470 PUBLIC WORKS STORM WATER CONTROL		1,827.50
		Total For Fund 401 VILLAGE CAPITAL PROJECTS		**333,150.27**
	Fund 405 NHR CAPITAL PROJECTS			
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	405-36001-55253	INFRASTRUCTURE IMPROVEMT	PROMENADE VALVE	19.90

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Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*
2	405-36001-55253	INFRASTRUCTURE IMPROVEMT	INFRASTRUCTURE IMPROVEMENTS	817,571.15
3	405-36001-55253	INFRASTRUCTURE IMPROVEMT	PLANTER PROTECTION	271.60
4	405-36001-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	7,003.75
5	405-36001-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	20,653.75
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		845,520.15
		Total For Fund 405 NHR CAPITAL PROJECTS		**845,520.15**
	Fund 501 WATER & SEWER			
	Dept 00000			
1	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 480 S RAND RD	5,077.80
2	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 454 N OLD RAND RD	4,030.00
3	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 1035 RAUPP CT	4,030.00
4	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 1055 AVERY RIDGE	4,030.00
5	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 1066 AVERY RIDGE	4,030.00
6	501-00000-21204	LC CONNECTION FEES PAYABLE	LC CONNECTION FEE - 1077 AVERY RIDGE	4,030.00
7	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #005708-02 FINAL	30.00
8	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #001816-04 FINAL	39.66
9	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #006695-02 FINAL	46.94
10	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #003022-06 FINAL	39.66
11	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #002479-01 FINAL	206.98
12	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #002239-05 FINAL	26.82
13	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #006165-01 FINAL	158.29
14	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #006551-01 FINAL	563.22
15	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #003298-01 FINAL	39.66
16	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #005590-01 FINAL	49.51
17	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #006457-01 FINAL	30.00
18	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #003067-04 FINAL	67.05
19	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #004459-02 FINAL	29.50
20	501-00000-21206	WATER BILLING REFUNDS	UB REF - A/C #004345-01 FINAL	538.24
21	501-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - JUN 2025	54.25
22	501-00000-27102	IEPA LOAN PAYABLE	2008 IEPA LOAN PRINCIPAL AND INTEREST	62,109.22

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Item	GL Number	GL Desc	Invoice Description	Amount
23	501-00000-27104	WATER METER LEASE OBLIG	WATER METER LEASE PAYMENT #28	41,654.20
		Total For Dept 00000		130,911.00
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	501-36001-51651	LICENSING/CERTIFICATIONS	REIMB: CDL DRIVERS LICENSE	50.00
2	501-36001-51654	MEMBERSHIPS & SUBSCRIP	2025 AWWA MEMBERSHIP	87.00
3	501-36001-51652	TRAINING AND MEETINGS	2025 IPSI - MATHESON, REUSCH	850.00
4	501-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/12	38.08
5	501-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/19	35.88
6	501-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 06/26	35.88
7	501-36001-52201	VILLAGE ATTORNEY	LEGAL SERVICES - APR	603.75
8	501-36001-53203	TELEPHONE & DATA SVCS	SCADA CELLPHONE/MODEM CONNECTION - JUN	111.00
9	501-36001-53209	UNIFORMS	PPE SHIRTS SS	105.00
10	501-36001-53209	UNIFORMS	PPE HAT LOGOS	30.00
11	501-36001-53209	UNIFORMS	HIP BOOTS - BERNARDO	216.76
12	501-36001-53209	UNIFORMS	PPE GLOVES	40.70
13	501-36001-53209	UNIFORMS	WORK BOOTS - BERNARDO	300.00
14	501-36001-53209	UNIFORMS	PPE SAFETY GLASSES	56.40
15	501-36001-53209	UNIFORMS	PPE SAFETY GLASSES	57.00
16	501-36001-53209	UNIFORMS	PPE VESTS	4.50
17	501-36001-53209	UNIFORMS	PPE UNIFORMS SS	712.44
18	501-36001-54305	EMPLOYEE EXAMS	EMPLOYEE MEDICAL	45.00
19	501-36001-56603	INTEREST	DEBT SERVICE 2016B INTEREST	2,150.00
20	501-36001-56603	INTEREST	2008 IEPA LOAN PRINCIPAL AND INTEREST	2,998.08
21	501-36001-56603	INTEREST	WATER METER LEASE PAYMENT #28	13,593.38
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		22,120.85
	Dept 36530 PUBLIC WORKS WATER BILLING			
1	501-36530-52111	OTHER PROFESSIONAL SVCS	WATER BILL PROCESSING - MAY 2025	591.59
2	501-36530-53206	POSTAGE & SHIPPING	WATER BILL PROCESSING - MAY 2025	2,737.61
3	501-36530-54301	BANK & CREDIT CARD FEES	INVOICE CLOUD SERVICES - MAY	1,724.82
		Total For Dept 36530 PUBLIC WORKS WATER BILLING		5,054.02

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Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 36550 PUBLIC WORKS WATER SERVICE			
1	501-36550-52113	ENGR/ARCHITECTURAL	REIMB: LMW PROJECT	179,323.69
2	501-36550-52701	MAINT-BLDGS & GROUNDS	2025 BED MAINT	110.21
3	501-36550-52701	MAINT-BLDGS & GROUNDS	2025 BED MAINT	110.21
4	501-36550-52708	MAINT-PUMPS	WELL 8 REPAIRS/PHASE 1	61,438.32
5	501-36550-53211	OTHER SUPPLIES	LEAD SAMPLE COLLECTION BINS	56.36
6	501-36550-53403	LANDSCAPING SUPPLIES	TOPSOIL #235983	100.00
7	501-36550-53403	LANDSCAPING SUPPLIES	TOPSOIL #234016	100.00
8	501-36550-53405	BLDG & GROUND MAINT SUPP	REPLACEMENT MAILBOX FOR 964 PHEASANT RIDGE RD	28.47
9	501-36550-53405	BLDG & GROUND MAINT SUPP	WELL 8 MOTOR CONTROL RELAY COILS	213.03
10	501-36550-53410	METERS PARTS & SUPPLIES	REPLACEMENT OMNI WATER METER REGISTERS	3,240.00
11	501-36550-53410	METERS PARTS & SUPPLIES	REPLACEMENT OMNI WATER METER REGISTERS	4,050.00
12	501-36550-53410	METERS PARTS & SUPPLIES	WATER METER WIRE SPLICE CONNECTORS	20.38
13	501-36550-53413	DISTRIBUTION SYS REPAIR	WM REP CLAMPS, SRVC FITTINGS, COUPLINGS, TEE BOLTS	7,952.02
14	501-36550-53414	CHEMICALS	BULK WTR COND SALT - WELL #10	2,677.50
15	501-36550-53414	CHEMICALS	BULK WTR COND SALT - WELL #9	2,765.70
16	501-36550-53414	CHEMICALS	BULK WTR COND SALT - WELL #12	2,746.80
17	501-36550-55252	BLDG & BLDG IMPROVEMENTS	FILL STATION CONDUIT & ELEC SERVICE	5,200.00
18	501-36550-55253	INFRASTRUCTURE IMPROVEMT	INFRASTRUCTURE IMPROVEMENTS	315,239.39
19	501-36550-55253	INFRASTRUCTURE IMPROVEMT	SRVC CALL - RESTORE BLDG PLUMB/252 WHITNEY RD/'25 WTR MAIN PROJ	505.50
20	501-36550-55253	INFRASTRUCTURE IMPROVEMT	HYDRANT METER FITTINGS/MAIN ST BEAUTIFICATION PROJ	1,640.10
21	501-36550-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	7,641.25
22	501-36550-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	8,606.25
23	501-36550-55253	INFRASTRUCTURE IMPROVEMT	WM REPLACEMENT UNDER 1060 MILLBROOK DR	17,650.00
24	501-36550-55254	MACHINERY & EQUIPMENT	M-6300 CRONKHITE TRAILER 473BF3722S1000142	29,523.00
25	501-36550-55254	MACHINERY & EQUIPMENT	BINDER/CHAINS	885.38
26	501-36550-55254	MACHINERY & EQUIPMENT	NUMBERS - NEW TRAILER	1.96
		Total For Dept 36550 PUBLIC WORKS WATER SERVICE		651,825.52
	Dept 36560 PUBLIC WORKS SEWER SERVICE			
1	501-36560-52701	MAINT-BLDGS & GROUNDS	ANNUAL GENERATOR INSPECTIONS & PREVENTATIVE MAINTENANCE	1,146.00

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Item	GL Number	GL Desc	Invoice Description	Amount
2	501-36560-52701	MAINT-BLDGS & GROUNDS	ANNUAL GENERATOR INSPECTIONS & PREVENTATIVE MAINTENANCE	940.00
3	501-36560-52710	MAINT-INST & SCADA	ANNUAL LIFT STATION FLOW METER CALIBRATION	5,265.00
4	501-36560-53201	ELECTRICITY	ELECTRICITY/SANITARY VACUUM PRIMING STRUCTURES	31.34
5	501-36560-53416	CONCRETE & ASPHALT	CONCRETE WALK REPAIR/BETTY DR LIFT STATION	1,401.75
6	501-36560-53416	CONCRETE & ASPHALT	CONCRETE REPAIR/BETTY DR LIFT STATION	167.20
7	501-36560-55253	INFRASTRUCTURE IMPROVEMT	INFRASTRUCTURE IMPROVEMENTS	420,673.80
8	501-36560-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	7,309.75
9	501-36560-55253	INFRASTRUCTURE IMPROVEMT	MAIN ST STREETSCAPE	14,985.00
		Total For Dept 36560 PUBLIC WORKS SEWER SERVICE		451,919.84
		Total For Fund 501 WATER & SEWER		**1,261,831.23**
	Fund 601 MEDICAL INSURANCE			
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	601-10001-52111	OTHER PROFESSIONAL SVCS	HR DEPENDEND AUDIT - DOWNPYMNT	1,600.00
2	601-10001-52340	MEDICAL ADMIN FEE	IPBC INSURANCE COVERAGE - JUN 2025	163.50
3	601-10001-52341	HEALTH INS. FIXED COSTS	IPBC INSURANCE COVERAGE - JUN 2025	277,462.86
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		279,226.36
		Total For Fund 601 MEDICAL INSURANCE		**279,226.36**
	Fund 603 RISK MANAGEMENT			
	Dept 00000			
1	603-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - JUN 2025	1.74
		Total For Dept 00000		1.74
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	603-10001-52114	LIABILITY INSURANCE CLAIMS	DESTROYED UNIT #1099	150.00
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		150.00
		Total For Fund 603 RISK MANAGEMENT		**151.74**

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	Fund 615 EQUIPMENT REPLACEMENT			
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	615-36001-55261	VEHICLES - POLICE	NEW CAR MATS	275.90
2	615-36001-55263	VEHICLES - PUBLIC WORKS	TRAILER HITCHES NEW TRUCKS	188.07
3	615-36001-55263	VEHICLES - PUBLIC WORKS	HITCH PLATE NEW TRUCKS	157.24
4	615-36001-55263	VEHICLES - PUBLIC WORKS	PLOW SHOCK NEW TRUCKS	363.02
5	615-36001-55263	VEHICLES - PUBLIC WORKS	LIGHT MOUNT NEW TRUCKS	648.25
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		1,632.48
		Total For Fund 615 EQUIPMENT REPLACEMENT		**1,632.48**
	Fund 710 PERFORMANCE ESCROW			
	Dept 00000			
1	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0186 - 23 PINE AVE	500.00
2	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0616 - 231 SANDY POINT	500.00
3	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0230 - 565 ANDREW LN	500.00
4	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0224 - 1161 BERKSHIRE LN	500.00
5	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0229 - 565 RED BRIDGE	300.00
6	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0172 - 1031 APPLE BLOSSO	500.00
7	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0442 - 442 S RAND RD	1,000.00
8	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0272 - 432 PHEASANT RIDG	500.00
9	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0199 - 351 OAKWOOD DR	250.00
10	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0211 - 555 RIPPLE BROOK	500.00
11	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0189 - 209 S PLEASANT	500.00
12	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0124 - 349 DENBERRY DR	500.00
13	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0113 - 325 TELSER RD	1,000.00
14	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0361 - 596 BRAEMAR LN	500.00
15	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0036 - 1179 DONEGAL LN	500.00
16	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0400 - 410 OLD MILL GROV	500.00
17	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0162 - 449 GRAND AVE	500.00
18	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0278 - 750 OAKWOOD RD	1,000.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
19	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0043 - 769 WHITE BIRCH	500.00
20	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0171 - 2 IRONWOOD CT	500.00
21	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0051 - 805 WATERFORD CT	500.00
22	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0431 - 16 MANOR RD	300.00
23	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0521 - 755 JOHN CT	500.00
24	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0143 - 1170 SYCAMORE DR	500.00
25	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0244 - 1136 AMHERST CT	500.00
26	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0120 - 6 MARGATE CT	500.00
27	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0131 - 264 WEST LN	500.00
28	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0116 - 4 SHEFFIELD CT	500.00
29	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0584 - 260 HIDDEN CREEK	500.00
30	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0296 - 340 HICKORY RD	300.00
31	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD23-0139 - 1323 CONRAD LN	1,020.00
32	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD23-0140 - 1323 CONRAD LN	105.00
33	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0275 - 590 DUNHILL DR	500.00
34	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0151 - 1055 CEDAR CREEK	500.00
35	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0104 - 850 OLD MILL GROV	3,600.00
36	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0243 - 125 FERN RD	500.00
37	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0209 - 450 THISTLE LN	500.00
38	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0074 - 136 FOREST AVE	500.00
39	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0161 - 731 FOXMOOR LN	500.00
40	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD25-0130 - 1213 RODGERS CT	500.00
41	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	REF TEMP OCCUPANCY - 927 S RAND RD	3,000.00
42	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	REF TEMP OCCUPANCY - 60 LAKE ZURICH DR	1,500.00
43	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	BOND REF #PB22-0199 - 153 CANTERBURY WAY	170.00
44	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	BOND REF #PB22-0200 - 155 CANTERBURY WAY	170.00
45	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	BD PYMNT REF #PB21-0316 - 474 N OLD RAND	3,060.00
46	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	BD PYMNT REF #PB18-0311 - 11 BEECH DR	3,060.00
47	710-00000-25202	OCCUPANCY PERMIT DEPOSITS	REF TEMP OCCUPANCY FEE - 1065 S RAND RD	5,000.00
		Total For Dept 00000		39,835.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 17001 TECHNOLOGY ADMINISTRATION			
1	710-17001-53214	PEG CABLE EXPENSE	PEG CHANNEL CONFIGURATION FILES	2.99
		Total For Dept 17001 TECHNOLOGY ADMINISTRATION		2.99
		Total For Fund 710 PERFORMANCE ESCROW		**39,837.99**
	Fund 720 PAYROLL CLEARING			
	Dept 00000			
1	720-00000-22253	IMRF W/H	PR DEDUCTIONS - MAY 2025	1,704.17
2	720-00000-22253	IMRF W/H	PR DEDUCTIONS - MAY 2025	60,862.80
3	720-00000-22301	DENTAL / VISION BENEFITS	IPBC INSURANCE COVERAGE - JUN 2025	16,626.18
4	720-00000-22403	AFLAC PLANS PAYABLE	AFLAC INSURANCE PREMIUM - MAY	6,032.26
5	720-00000-22404	SUPPLEMENTAL LIFE INS PAYABLE	IPBC INSURANCE COVERAGE - JUN 2025	2,496.39
6	720-00000-22502	PAYROLL PAYABLE	PR06202025 REPL CK	780.94
7	720-00000-22502	PAYROLL PAYABLE	PR 06062025 REPL CK 665540902DD	60.97
8	720-00000-22502	PAYROLL PAYABLE	PR 06062025 REPL CK 665540971DD	88.05
9	720-00000-22502	PAYROLL PAYABLE	PR 06202025 REPL CK 669760550DD	318.36
10	720-00000-22502	PAYROLL PAYABLE	PR 06062025 REPL CK 665540984DD	165.18
		Total For Dept 00000		89,135.30
		Total For Fund 720 PAYROLL CLEARING		**89,135.30**
	Fund 731 SSA #8 HEATHERLEIGH SUBDV			
	Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY			
1	731-10099-52604	SWEEPING & MOWING	2025 BED MAINT	49.36
2	731-10099-52604	SWEEPING & MOWING	2025 BED MAINT	49.36
		Total For Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY		98.72
		Total For Fund 731 SSA #8 HEATHERLEIGH SUBDV		**98.72**

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*
	Fund 734 SSA #11 LZ PINES SUBDV			
	Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY			
1	734-10099-52604	SWEEPING & MOWING	2025 BED MAINT	2.03
2	734-10099-52604	SWEEPING & MOWING	2025 BED MAINT	2.03
		Total For Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY		4.06
		Total For Fund 734 SSA #11 LZ PINES SUBDV		**4.06**
	Fund 735 SSA #13 CONVENTRY CRK SUB			
	Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY			
1	735-10099-52604	SWEEPING & MOWING	2025 BED MAINT	44.44
2	735-10099-52604	SWEEPING & MOWING	2025 BED MAINT	44.44
		Total For Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY		88.88
		Total For Fund 735 SSA #13 CONVENTRY CRK SUB		**88.88**

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 7/7/2025

$3,376,777.84

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*

Fund Totals:

Fund 101 GENERAL	297,051.31
Fund 202 MOTOR FUEL TAX	15,775.89
Fund 207 SPECIAL EVENTS FUND	3,869.22
Fund 210 TIF #1	1,081.00
Fund 214 TIF #2 DOWNTOWN	905.20
Fund 227 DISPATCH CENTER	575.54
Fund 310 TIF #1 DEBT SERVICE	206,842.50
Fund 401 VILLAGE CAPITAL PROJECTS	333,150.27
Fund 405 NHR CAPITAL PROJECTS	845,520.15
Fund 501 WATER & SEWER	1,261,831.23
Fund 601 MEDICAL INSURANCE	279,226.36
Fund 603 RISK MANAGEMENT	151.74
Fund 615 EQUIPMENT REPLACEMENT	1,632.48
Fund 710 PERFORMANCE ESCROW	39,837.99
Fund 720 PAYROLL CLEARING	89,135.30
Fund 731 SSA #8 HEATHERLEIGH SUBDV	98.72
Fund 734 SSA #11 LZ PINES SUBDV	4.06
Fund 735 SSA #13 CONVENTRY CRK SUB	88.88
	$ 3,376,777.84

OFFICE OF THE VILLAGE MANAGER

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6c

Date: June 24, 2025

To: Ray Keller, Village Manager

From: Michael Duebner, Assistant Village Manager

Subject: Liquor License Issuance to Simulation Zone, Inc.

Issue: Simulation Zone, Inc. located at 189 S Rand Road in the Lakeview Plaza has requested a full-service indoor interactive sports/entertainment Class-I Liquor License for the dispensing of alcoholic beverages inside the establishment.

Analysis: Simulation Zone, Inc. completed the application and passed the background check for issuance of a Class-I Liquor License for dispensing of alcoholic beverages. This class of liquor license among others includes the following conditions:

- Interactive sports/entertainment equipment at the facility preclude the ability to wager money or to receive a return on investment.
- This license therefore does not include videogaming under the Illinois Video Gaming Act (230 ILCS 40/Aft. 5). Liquor licensure related to video gaming in the Village is the subject of separate liquor licensing authority and regulation

Staff is working with the business to complete submission of supplementary documentation. Once received, the local liquor license will be issued.

Recommendation: Staff is requesting consideration and approval of the proposed ordinance to issue a Class-I Liquor License to Simulation Zone, Inc.

w/Attachments: Ordinance issuing a Class-I license.

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-07-615

ORDINANCE AMENDING TITLE 3 OF CHAPTER 3 OF THE VILLAGE OF LAKE ZURICH MUNICIPAL CODE TO INCREASE AUTHORIZED CLASS – I INTERACTIVE SPORTS/ENTERTAINMENT LIQUOR LICENSE FOR 'SIMULATION ZONE, INC LOCATED AT 189 SOUTH RAND ROAD

NOW, THEREFORE, BE IT ORDAINED by the Mayor and the Board of Trustees of the Village of Lake Zurich, Lake County, Illinois, as follows:

SECTION 1: The number of **Class I Interactive Sports/Entertainment** liquor licenses authorized by section 3-3b-14 of Chapter 3 of Title 3 of the Village Code of the Village of Lake Zurich is hereby **increased** by one for ***Simulation Zone, Inc.*** located at ***189 South Rand Road*** in accordance with the Village Code of the Village of Lake Zurich. Issuance of the license is subject to the approval and action of the Local Liquor Commissioner of the Village of Lake Zurich.

SECTION 2: If any section, paragraph, clause or provision of this Ordinance shall be invalid, the invalidity thereof shall not affect any of the other provisions of this Ordinance.

SECTION 3: This Ordinance shall be in full force and effect immediately upon its passage and approval as provided by law.

SECTION 4: That if any provision of this ordinance or application thereof to any entity or person or circumstance is declared invalid or held to be unlawful, such declaration or holding shall not affect the validity of any other portion or provision of this Ordinance and such declaration or holding shall be severable from the remainder hereof.

SECTION 5: That Section 3-3B-14 of Chapter 3 of Title 3 of the Lake Zurich Municipal Code entitled "NUMBER OF LICENSES" be and is hereby further amended with the corresponding number of licenses in each class, shown with bold letters with underscoring below:

Class	Description	Maximum Number Issued
A	Restaurant Full Service	18
A-1	Restaurant Outdoor Café Full Service	19
B	Retail Sales and Delivery	15
B-1	Annual Tasting Add-On	3
B-2	Single Event Add-On	0
C	Retail Sales Convenience	7
E	Club	1
F	Single Private Event	0
G	Single Public Event	0
G-1	Multiple Public Event	1
H	Complimentary Dispensing of Beer & Wine	1
I	Indoor Interactive Sports Facilities	~~1~~ 2
K	Gift Boutique	0
M	BYOB Corkage	0
N	Craft Distillery	1
O	Off-Site Catering	0
P	Craft Brewery	2
R	Outdoor Concession / Beer Garden	1
V	Video Gaming	16
W	Boutique Wine & Sparking Beverage	1
Y	Brew Pub	0

PASSED this _____ day of July, 2025 by the following vote:

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of July, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

POLICE DEPARTMENT

200 Mohawk Trail
Lake Zurich, Illinois 60047
(847) 719-1690
www.lakezurich.org

Always our Best

MEMORANDUM

AGENDA ITEM 6d

Date: June 23, 2025

To: Ray Keller, Village Manager

From: Steve Husak, Police Chief

C: Michael Duebner, Assistant Village Manager

Subject: Lake Consolidated Emergency Communications (LakeComm) / Lake Zurich Backup Emergency Communications Center

Issue:
In recent years, governmental entities within Lake County have made the decision to consolidate more than a dozen independent primary and secondary Public Safety Answering Points (PSAPs) within the county. This consolidation aims to enhance the service provided by these PSAPs while simultaneously optimizing the allocation of appropriate public safety resources to their respective locations, ensuring timely delivery of critical information.

The Lake Consolidated Emergency Communications (LakeComm) dispatch center will commence operations in the coming months. At that time, Lake Zurich dispatch staff and services will transition to LakeComm.

Analysis:
Emergency Communications Centers are mandated to have backup dispatch centers in place in the event that primary centers need to be evacuated. Lake Zurich has been previously identified as a suitable facility to house the back-up Emergency Communications Center (ECC) for LakeComm.

Lake Zurich currently houses office and equipment for the Lake County Emergency Telephone System Board to facilitate the administration of the shared 9-1-1 telephone system and the county-wide Computer Aided Dispatch system.

In order to prepare the existing Lake Zurich dispatch center for use as the LakeComm back up ECC, some renovation is required. Village staff has identified a vendor that can accomplish this specialized work in a timely manner. As indicated in the lease, renovation costs will be reimbursed by the Lake County Emergency Telephone System Board or LakeComm.

Recommendation:
The Village of Lake Zurich is committed to the concept of PSAP consolidation in order to provide the most timely, effective, and efficient 9-1-1 and emergency dispatch service to Lake County residents and first responders. A key part of the success of the project is to have a viable backup center in the area.

Staff is requesting the Village Board's authorization to execute contracts for the repurposing of existing dispatch spaces at the Lake Zurich Police facility. These spaces will be utilized to provide backup communications center space for Lake Consolidated Emergency Communications (LakeComm). Additionally, staff has requested authorization to offer and execute a 25-year lease agreement with LakeComm for hosting backup communication center space. The lease rate will be $11 per square foot, commencing in May 2026 and subject to annual adjustments.

w/ Attachment:

1. Lake Consolidated Emergency Communications / Lake Zurich back up ECC lease agreement
2. Firehouse Service Co. Renovation Quote

Date: December 10,2024

To: **Michael Duebner**
Clty of Lake Zurich

300 mohawk trail,
Lake Zurich, Illinois 60047

From: Justin Morson
FireHouse Service Company
8411B Crystal Springs Road
Woodstock, Illinois 60098
815-821-5267

RE: DISPATCH CENTER RENOVATION FHSC Project #24-32022

After reviewing the project scope of work itemized below located at 200 Mohawk trail, Lake Zurich, Illinois 60047, I hereby offer preliminary budgetary items for the renovation of the existing dispatch room to meet the basic design criteria for a newly deployed "back up dispatch center". The below workload creates a unitary cost of just above 100 dollars per square foot of renovated commercial space.

Preliminary budget estimated $140,800.00

The following items are the basic workload as noted through preliminary drawings of the proposed workstations and requirements

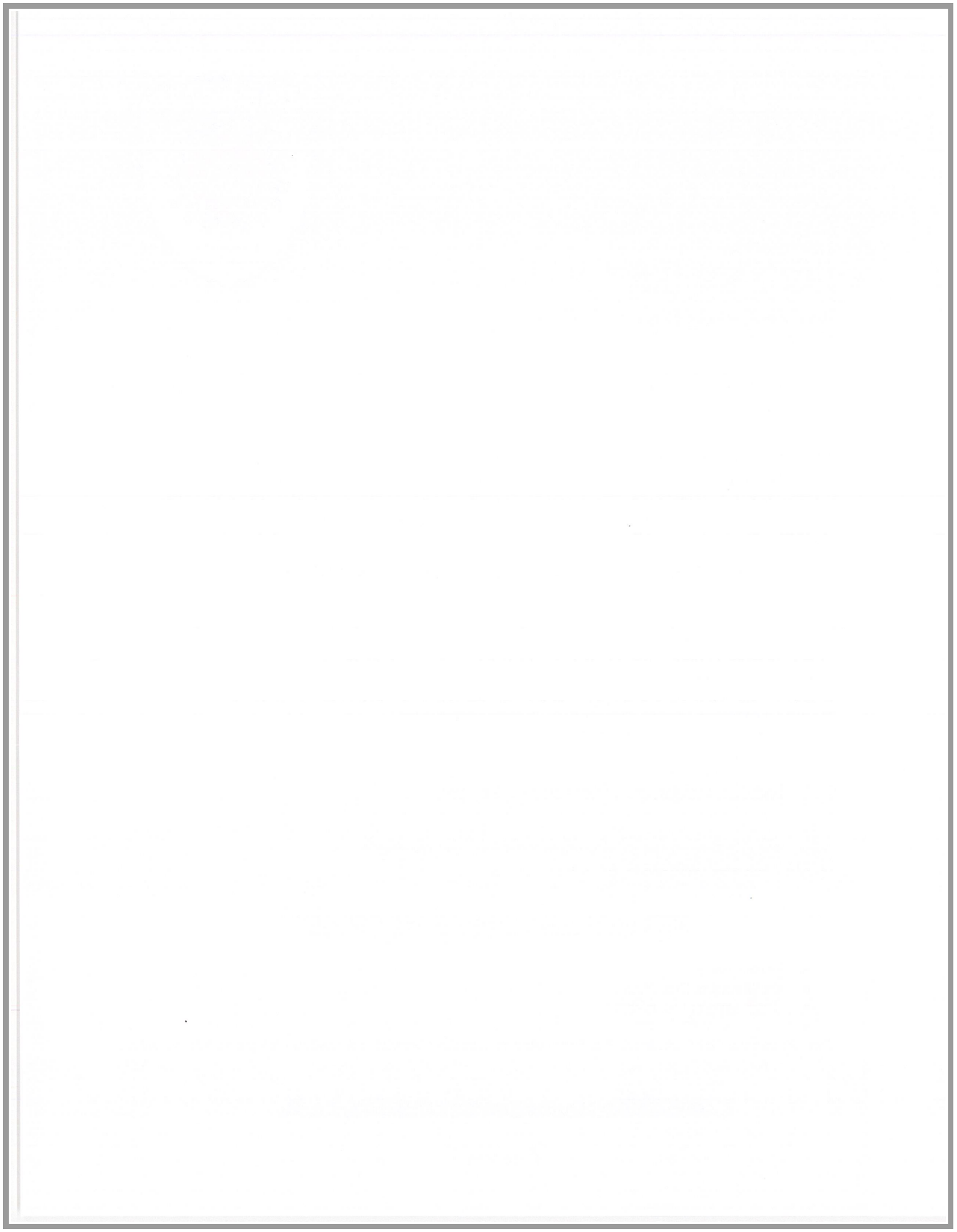
21,500 Demolition of existing, protections, recycling costs, dumpsters
4500 relocation of overhead lighting circuitry (location and fixture TBD)
11,200 installation of new ceiling grid approx half the space to match from office demo
21,000 new lighting fixtures and controls (material allowance)
8200 labor for installation of above assumed fixtures
6500 carpentry (from wall removal and column framing Drywall patching)
28000 dedicated electrical workload as assumed (overhead and under floor pulls to spaces)
6800 Data line updating and pulled to data switch gear
4000 Relocation of display wall into the existing space noted as "PRESS ROOM"
12,500 Installation of carpet tiles (matching will be impossible) wall removal mandates the carpet install
4000 site supervision due to nature and location of the workload
12,800 Profit and overhead to contractor

EXCLUDED FROM THE ABOVE BUDGET

- Permit Fees
- Architectural Drawings
- Engineering Documents
-

This proposal is not a contract. It is for preliminary budgeting with finalization with permitted drawings

WWW.FIREHOUSESERVICECOMPANY.COM



LEASE AGREEMENT

This lease agreement ("**Agreement**"), is made by and between Lake Consolidated Emergency Communications ("**LakeComm**"), having those duties, powers and functions as provided under the Emergency Telephone System Act (50 ILCS 750/1 *et seq.*), the Illinois Intergovernmental Cooperation Act (5 ILCS 220/1 *et seq.*) and Lake County ordinances, and the Village of Lake Zurich, an Illinois municipal corporation ("**Lake Zurich**").

WHEREAS, Lake Zurich staffs and operates its own police department and law enforcement operations, said department located at the public facility at 200 Mohawk Trail, Lake Zurich, Illinois ("**Department**"); and

WHEREAS, the central administrative and operations facility for the Department is located at 200 Mohawk Trail, Lake Zurich, Illinois ("**Facility**"); and

WHEREAS, Lake Zurich currently houses redundant and backup servers used to run the shared 9-1-1 Phone System and the countywide Computer Aided Dispatch (CAD) System at its Facility; and

WHEREAS, Lake Zurich currently houses office and server space for the Lake County Emergency Telephone System Board at its Facility to facilitate the administration of the shared 9-1-1 Phone System and the countywide CAD System; and

WHEREAS, Lake Zurich has been previously identified and offered a portion of their Facility to house the back-up Emergency Communications Center (ECC) for LakeComm; and

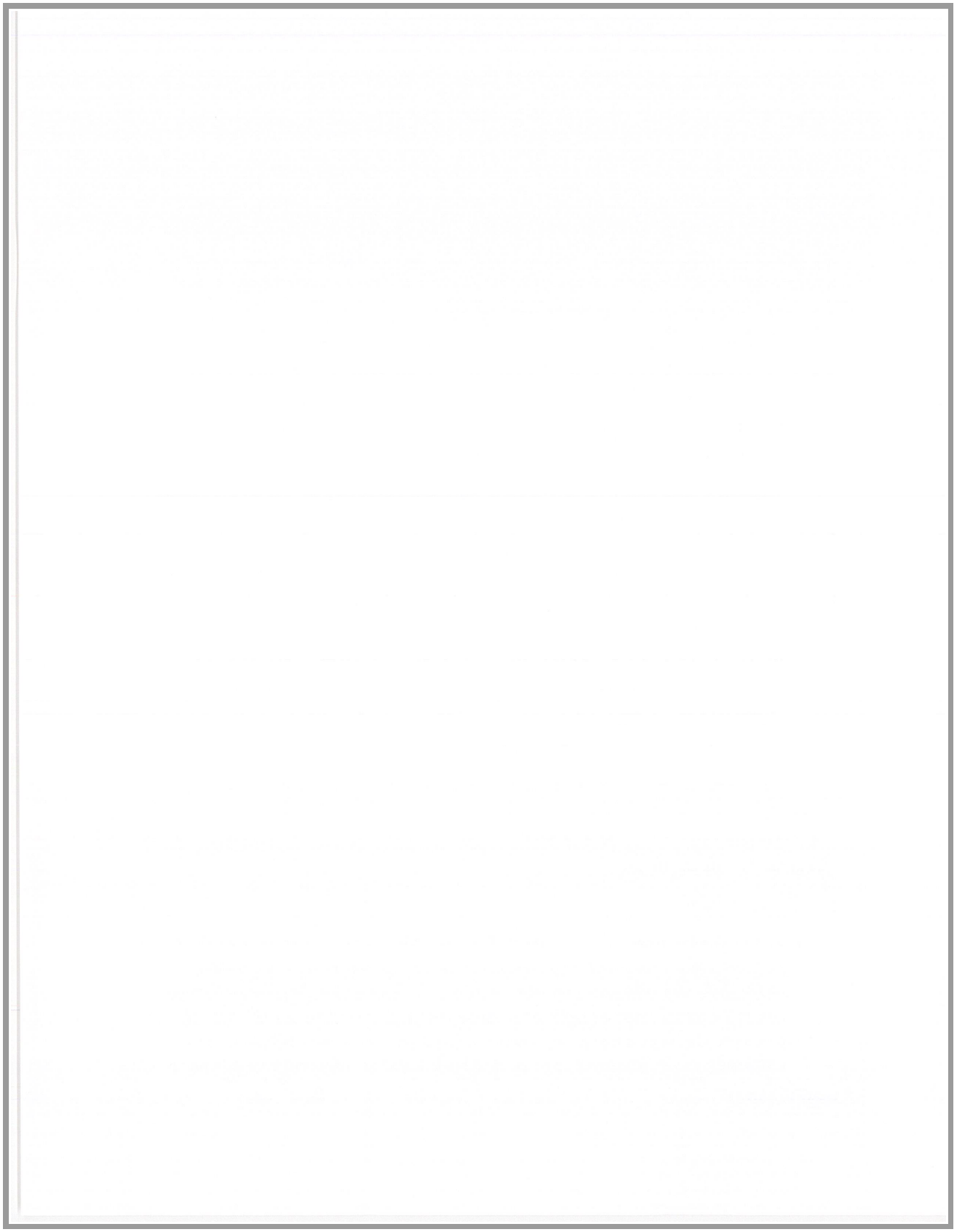
WHEREAS, it is a benefit to the LakeComm system to be authorized to utilize the space identified herein for the purposes set forth herein; and

WHEREAS, as set forth hereinafter, there are financial and service reliability benefits to Lake Zurich to allow LakeComm access to and use of the spaces identified herein.

NOW, THEREFORE, in consideration of the foregoing and the covenants contained herein, the parties hereby agree as follows:

1) Lake Zurich shall:

   a) Allow LakeComm access to and use of the following existing dedicated working space, including utility service for the space (electric, heating, air conditioning, and back-up power, along with reasonable access to and from the space and to the general common area space and facilities for LakeComm employees pursuant to Lake Zurich's security protocols. Access to and from any authorized LakeComm equipment installations will follow existing safety access procedures and guidelines. The space and its access points



(together, "**Premises**") is located in the Lake Zurich Police Department at 200 Mohawk Trail, Lake Zurich Illinois, 60047. The specific spaces comprising the Premises are identified as:

(1) 9-1-1 Emergency Communications Center

(2) Office 239;

(3) Room 240 (Server Room); while Lake Zurich retains the right to utilize this space for Lake Zurich needs, best efforts will be made to accommodate additional server space in room #240 (the telecommunications room), where previous Lake County ETSB equipment is housed for equipment needed to back-up the 9-1-1 Phone System and CAD System; and

(4) The general common area entry and exit area spaces to and from the above 9-1-1 Emergency Communications Center, Office 239 and Room 240

(5) The common restrooms and breakroom within the Lake Zurich Police Department facility.

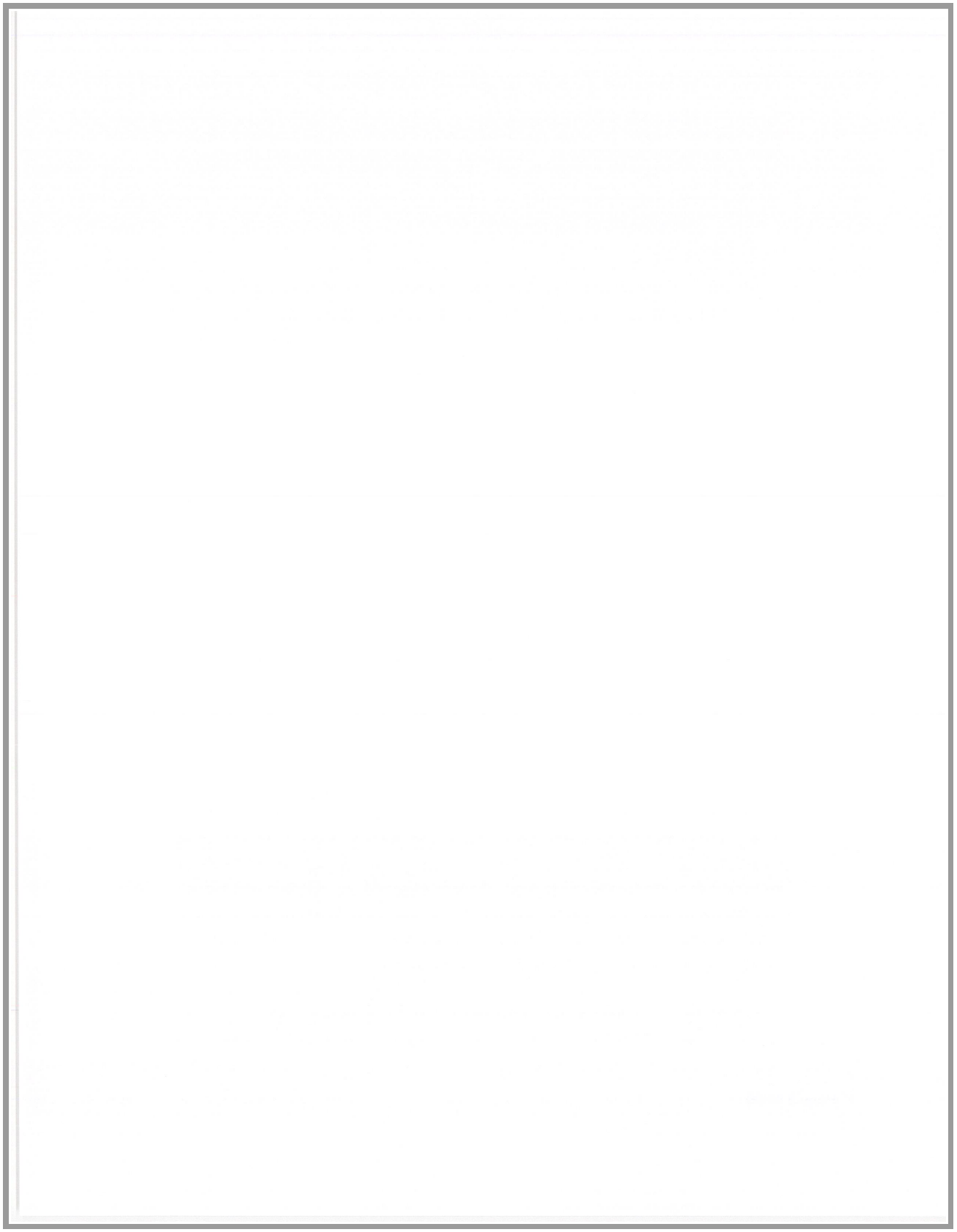
The Premises are further identified in **Exhibit A** hereto.

b) Allow LakeComm to install and use any and all needed connections to communications systems, as well as any other connections necessary for the completion of the Premises and the proper operation of LakeComm's administration of its 9-1-1, CAD, and Radio systems, provided no such connections can interfere with, or cause any interruption or interference with Lake Zurich communications equipment or systems.

c) Review and approve placement of any equipment or communication lines prior to their installation within the police department, radio tower, and communications shelter.

d) Contract for and direct the remodeling tasks to incorporate LakeComm's back-up ECC configuration which includes 16 back-up dispatch positions for LakeComm employees. Lake Zurich affirms that the construction contracts will contain appropriate provisions for insurance and indemnification during the remodeling phase and that there will be compliance with any and all applicable local, state and federal laws and regulations including, but not limited to, the Illinois Prevailing Wage Act (820 ILCS 130/1 *et seq.*) and the Employment of Illinois Workers on Public Works Act (30 ILCS 570/0.01 *et seq.*).

e) Keep the inside and outside of the Premises clean and well maintained, including the improvements of which the Premises is a part, the common areas, parking areas, walks,



driveways, sewer and water lines, heat, air-conditioning, elevator, entrances, exterior walls, roof, windows, and doors.

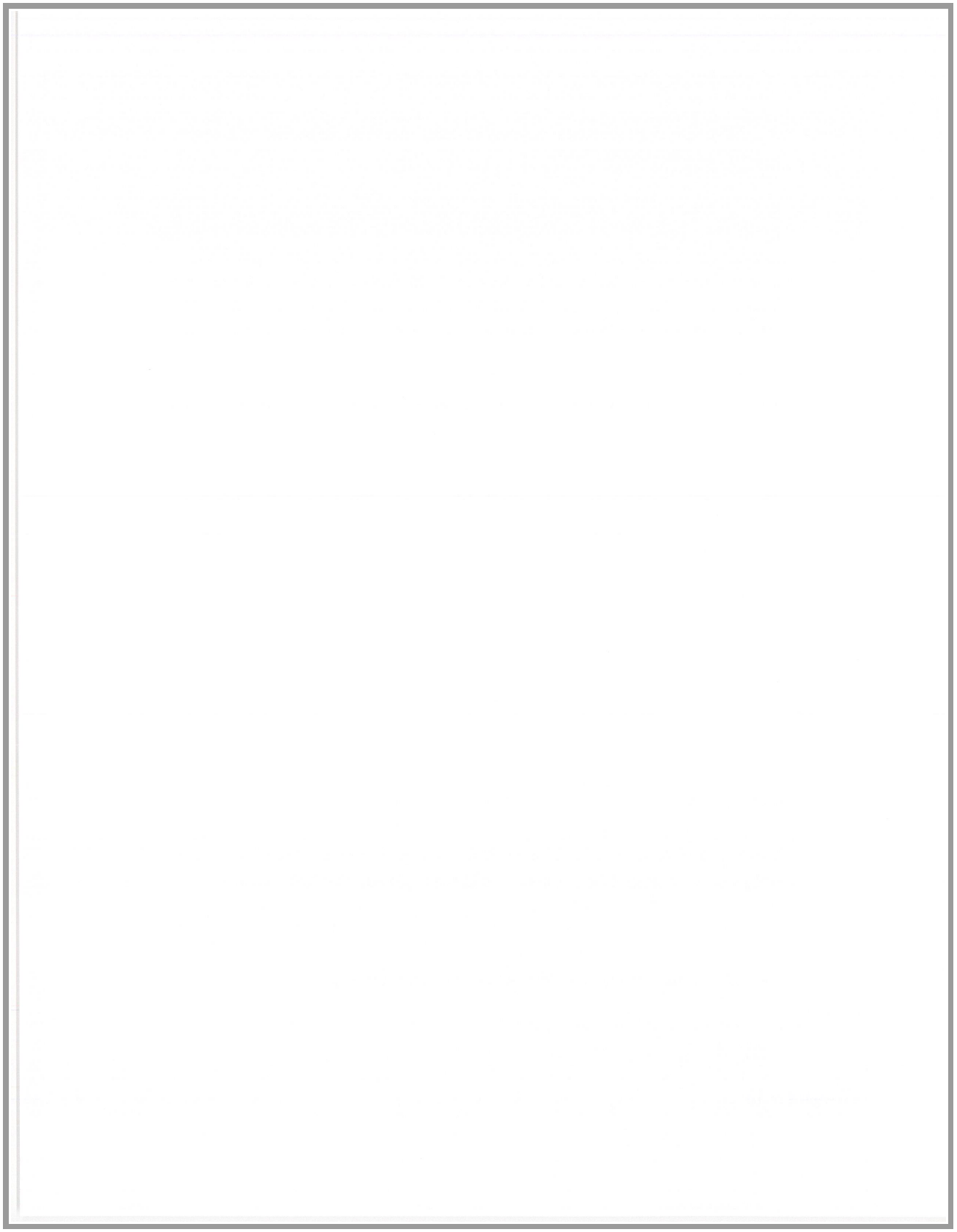
f) Not be liable for damages resulting from interruption of, failure of or delay in furnishing any service or utility, whether it is the responsibility of Lake Zurich or of others when the damages are caused by events beyond the reasonable control of Lake Zurich. Unless provided by law, Lake Zurich shall not be liable in damages on account of any loss to LakeComm's personal property or equipment occasioned by the failure of the heating apparatus to heat the Premises sufficiently, by any defect or surge in the electric wiring or by reason of any latent defect in, around or about the Department, and shall maintain appropriate insurance to protect its own interest with respect to such risks. Lake Zurich agrees to secure a policy of public liability insurance for its entire Lake Zurich facility at 200 Mohawk Trail, Lake Zurich, Illinois, 60047 including the Premises, which will respond to claims for damages because of bodily injury or death of any person, as well as claims for property damage. No provision herein shall serve to waive, alter or change the current immunities enjoyed by Lake Zurich under the Illinois Local Governmental and Governmental Employees Tort Immunity Act (745 ILCS 10/1 et. seq.), Illinois common law or any other applicable legal protection afforded Lake Zurich under the law.

g) Immediately report to the LakeComm Executive Director any communication, electronic or system intrusions, risks, breaches that impact the common telecommunications network, facilities or systems in place in the Department and used by LakeComm, that come to the attention of Lake Zurich or its staff.

2. In exchange for use of the Premises, LakeComm shall:

a) In the event that Lake Zurich is not reimbursed for the cost of remodeling its building for the backup ECC, in the manner stated in Section 1(d), by the Lake County Emergency Telephone System Board, as agreed upon during the ETSB's January 7, 2025, Board Meeting, LakeComm would be responsible for said reimbursement. The reimbursable amount is not to exceed the bid amount of $140,800 obtained by Lake Zurich in December 2024 unless authorized by the contract for the work or proper change order approved by LakeComm to prepare the premises to accommodate the requirements for the backup ECC. Such reimbursement will be paid pursuant to the provisions of the Local Government Prompt Payment Act (50 ILCS 505/1 et seq.)

b) Pay rent according to the rent schedule attached and made part of this Lease as Lease Exhibit B. Payments shall be made by LakeComm annually.



c) Be responsible for its own telephone and internet/data services including initial set up/connection costs and use and maintenance fees.

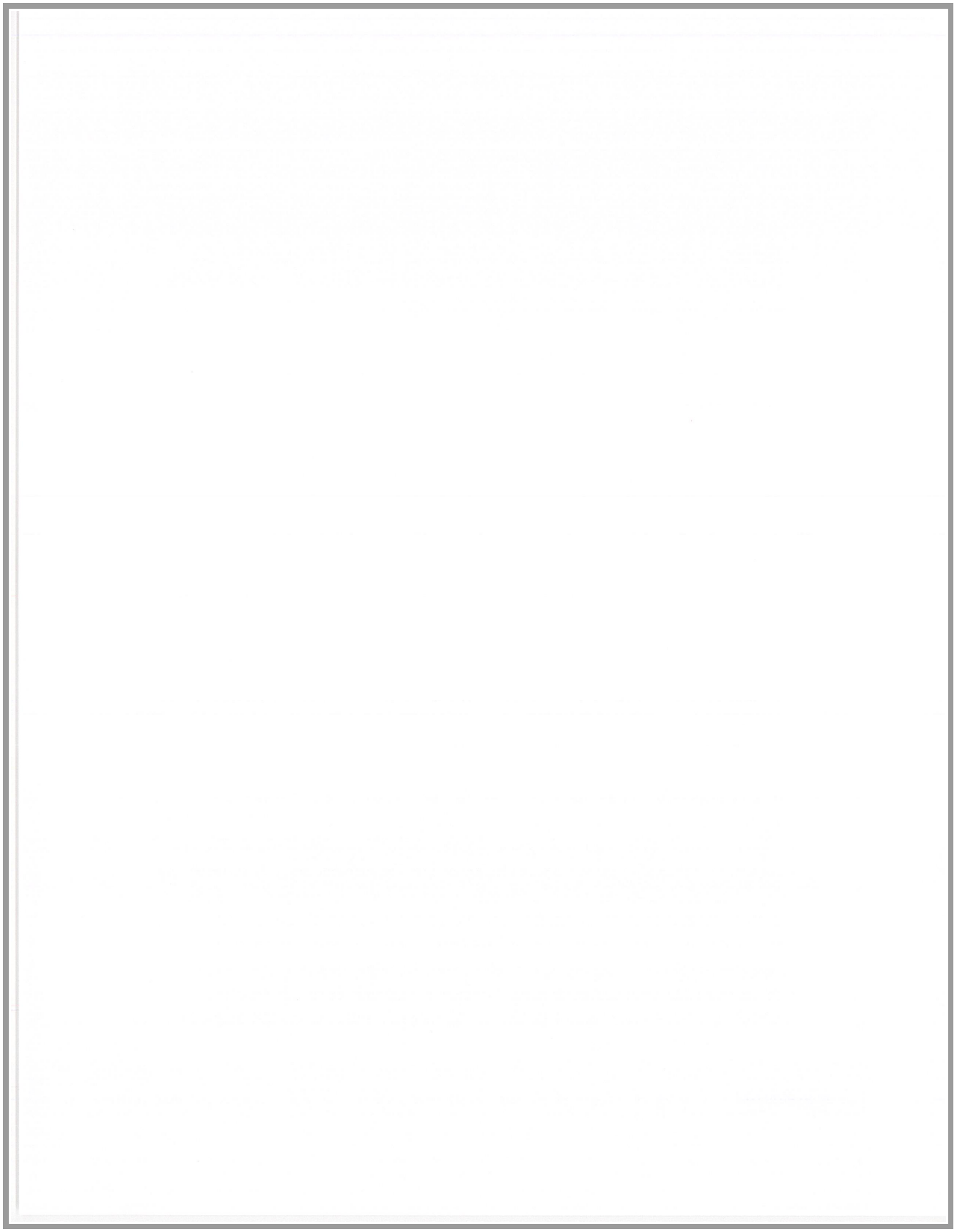
d) Use and occupy the Premises in a careful, safe and proper manner, to commit no waste and to keep Premises in a clean and safe condition in accordance with this Agreement and with all laws, regulations, orders, ordinances, and the lawful directions of proper public officers. LakeComm agrees that the uses of the Premises shall be consistent with the current Lake Zurich standards of good operations.

e) Not permit the accumulation of rubbish, trash, garbage or refuse in or around the Premises and will either remove same at LakeComm's expense or use a service as Lake Zurich directs.

f) Not create any openings in the roof or exterior walls, nor make any alterations or additions to the Premises without prior written consent of Lake Zurich.

g) Not cause or permit any lien or encumbrance, whether created by act of LakeComm, operation of law or otherwise, to attach to or be placed upon Lake Zurich's title or interest in the Premises. In case of any such lien attaching, LakeComm shall immediately pay and remove such lien or furnish security or indemnify Lake Zurich in a manner satisfactory to Lake Zurich in its sole discretion to protect Lake Zurich against any defense or expense arising from such lien. Except during any period in which LakeComm appeals any judgment or obtains a rehearing of any such lien, or in the event judgment is stayed, LakeComm shall immediately pay any judgment rendered against the Premises, Lake Zurich or LakeComm, *Tenant*, with all proper costs and charges, and shall have the lien released and any judgment satisfied.

h) Be fully responsible for any damage to the Premises and personal property located within the Department and Premises unless directly caused by the negligent or willful conduct of Lake Zurich, ordinary wear and tear excepted. LakeComm will also be fully responsible for all of its personal property located on Department property or within the Premises. LakeComm will maintain the appropriate insurance coverage for all of the described purposes in this paragraph, including proper coverages to protect and indemnify Lake Zurich against internet-based risks related to errors and omissions, negligence regarding safeguarding data and communications, damages or losses to others caused by such acts or omissions, data and communications infrastructure, privacy, governance and control liability, or bodily injury and property damage where



such injury, death or damage occurs, in whole or in part, because of or, in any manner arising out of, or in connection with, LakeComm's use of the Premises.

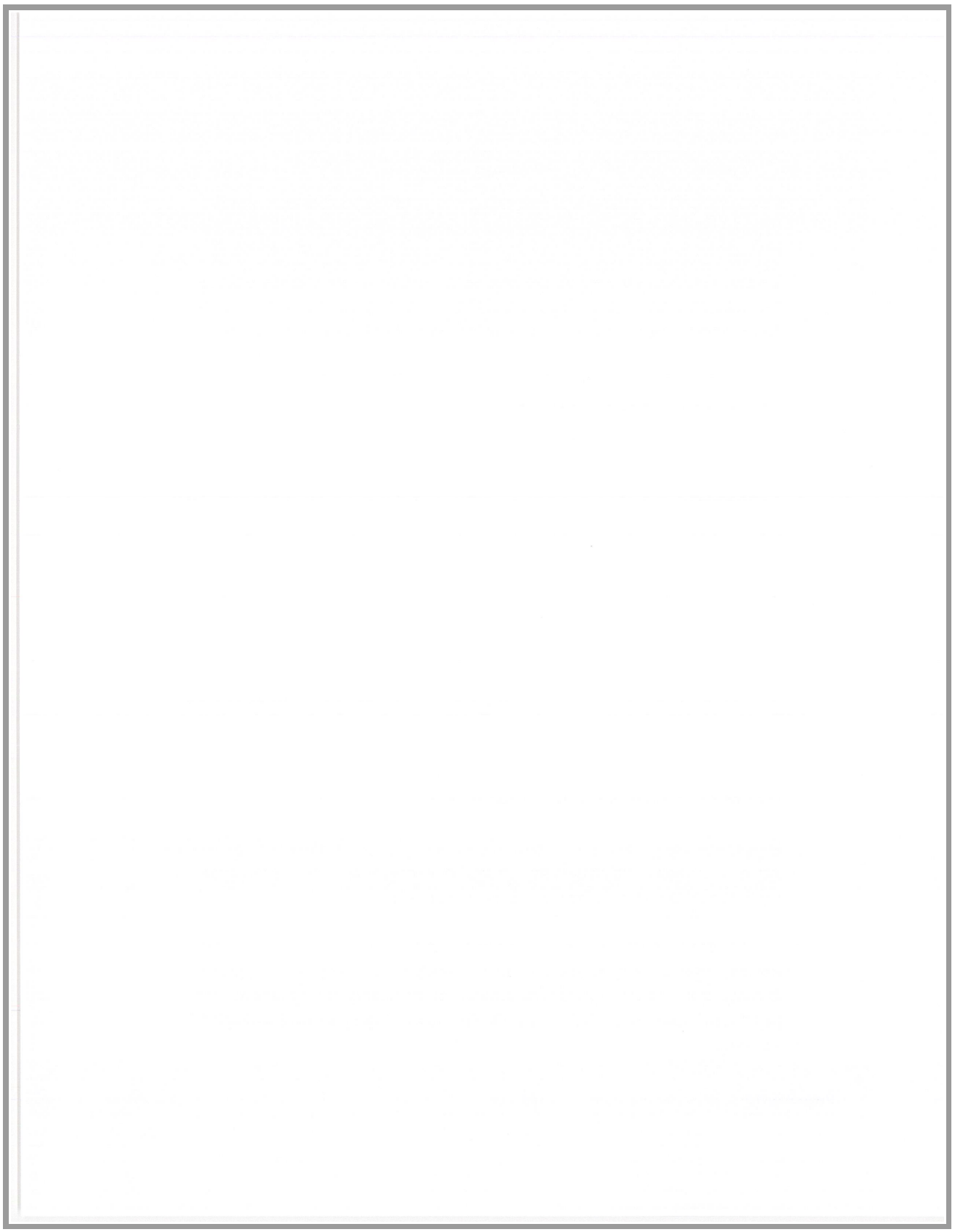
i) Indemnify, defend, and hold Lake Zurich harmless against all liabilities, judgments, amounts paid in settlement, arbitration or mediation awards, costs, damages, and expenses (including reasonable attorney's fees, expenses, and court costs), whether such claim is related to or arises from personal injury or property damage which may be expended by or accrue against, be charged to, or be recovered from Lake Zurich or LakeComm by reason of LakeComm's performance of or failure to perform any of LakeComm's obligations under this Lease, or LakeComm's negligent acts or failure to act, or resulting from the acts or failure to act of LakeComm's contractors, respective officers, directors, agents, or employees.

j) For those common use electronic connections, facilities, operating systems, hardware and software, LakeComm will work with, coordinate, and install such security and operating measures and systems as are recommended as needed by the Lake Zurich communications and technology staff. Any communication, electronic or system intrusions, risks, breaches that impact the common telecommunications network, facilities or systems in place in the Department and used by LakeComm, that come to the attention of LakeComm or its staff, shall be immediately reported to the Lake Zurich Chief of Police. Deinstallation and removal of outdated equipment or communications lines shall take place within 30 days of their decommissioning.

k) Not perform or permit, nor allow any of its staff, consultants, or contractors, to engage in any practice that is injurious to the Premises, is illegal, or increases the rate of insurance on the Premises or Department. LakeComm shall keep out of the Premises materials which cause a fire hazard or safety hazard and shall comply with reasonable requirements of Lake Zurich's fire insurance carrier.

l) Shall ensure that its invitees are supervised and abide by all conditions and terms of this Agreement. LakeComm invitees shall always be deemed to be under LakeComm's supervision while on the Premises or in the Department.

m) Not discriminate on the basis of race, color, sex, gender identity, age, religion, disability, national origin, ancestry, sexual orientation, marital status, parental status, military discharge status, or source of income in the use or occupancy of the Premises or any part thereof. LakeComm shall not use the Premises for any impermissible religious activities.



n) Comply with all laws and reasonable rules and regulations in the operations of the Department including, but not limited to, any parking lot rules and regulations.

3. Both Parties agree:

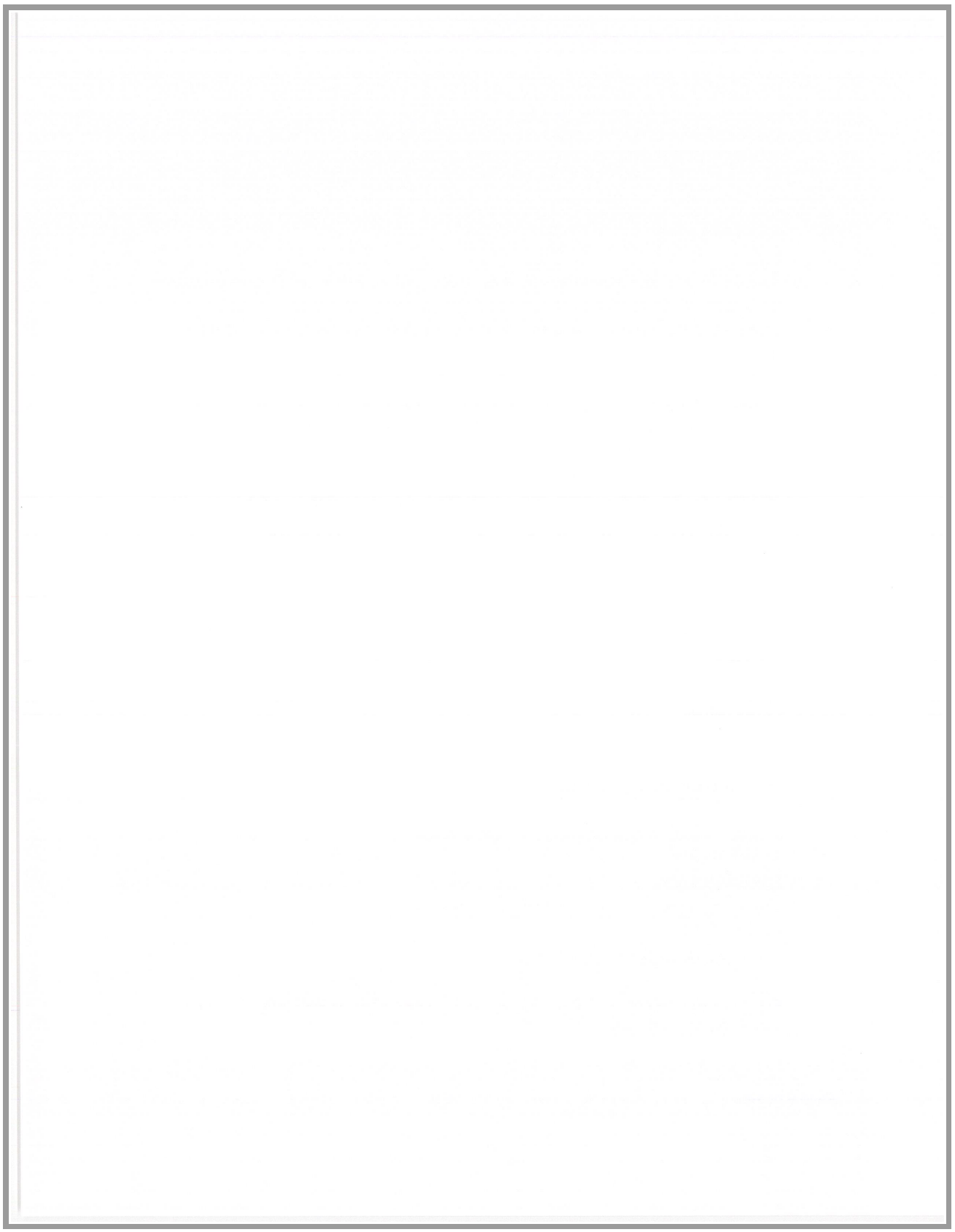
a) That the term of the Agreement will be for twenty-five (25) years, effective from the date it is signed by both Parties, to be automatically renewed for successive, five-year terms unless either Party provides written notice of termination eighteen (18) months prior to the expiration of the then-current Agreement.

b) Notwithstanding any other provision herein, either Party may terminate the Agreement at any time and reason upon three hundred sixty-five (365) days prior written notice. Notice may be given by email to the officials listed below, at their then-current email address, but shall not be deemed received unless the recipient acknowledges receipt. In addition to or in lieu of email, all notices and other communications regarding the terms of this Agreement shall be in writing and shall be deemed received within three business days after being deposited in the U.S. Mail, proper postage prepaid, if properly addressed as follows, respectively:

To Lake Zurich:
Ray Keller
Village Manager
70 E. Main St.
Lake Zurich, IL 60047
Ph.: 847-438-5141
Email: ray.keller@lakezurich.org

To Lake Consolidated Emergency Communications:
Jason E. Kern
Executive Director
Lake Consolidated Emergency Communications
Ph.: 847-984-2320
Email: jason.kern@lakecomm911.org

Any change in the contact information above shall be communicated using the same notice provisions listed above.



c) If the Agreement is terminated, LakeComm, within one (1) year and at its sole expense, shall remove furnishings and equipment and restore the Premises as nearly as possible to the condition they were in prior to taking possession. Non-standard improvements shall be removed as part of LakeComm's restoration obligation unless Lake Zurich agrees in writing to leave them. The remodeling tasks referenced further above (to incorporate LakeComm's back-up ECC configuration) shall not be considered "non-standard" improvements.

d) None of the terms or conditions of the Agreement shall be altered, modified, waived or abandoned unless they are completed in writing and are signed by both Parties.

e) Nothing contained in this Agreement shall be deemed or construed by the parties hereto nor by any third party as creating the relationship of principal and agent or of partnership or of joint venture between the parties hereto.

f) This Agreement may be executed in counterparts, each of which shall constitute and be deemed as one and the same document.

g) This Agreement shall be governed by the laws of Illinois, without giving effect to principles of conflict of laws, and all matters arising under this agreement, including all tort claims shall be brought only in the Nineteenth Judicial Circuit of Lake County, Illinois.

Signed:

_____ day of _____, 2025

Village of Lake Zurich

By:_____
Village President

18 day of June, 2025

Lake Consolidated Emergency Communications

By: _____
Member Board of Directors, Chair

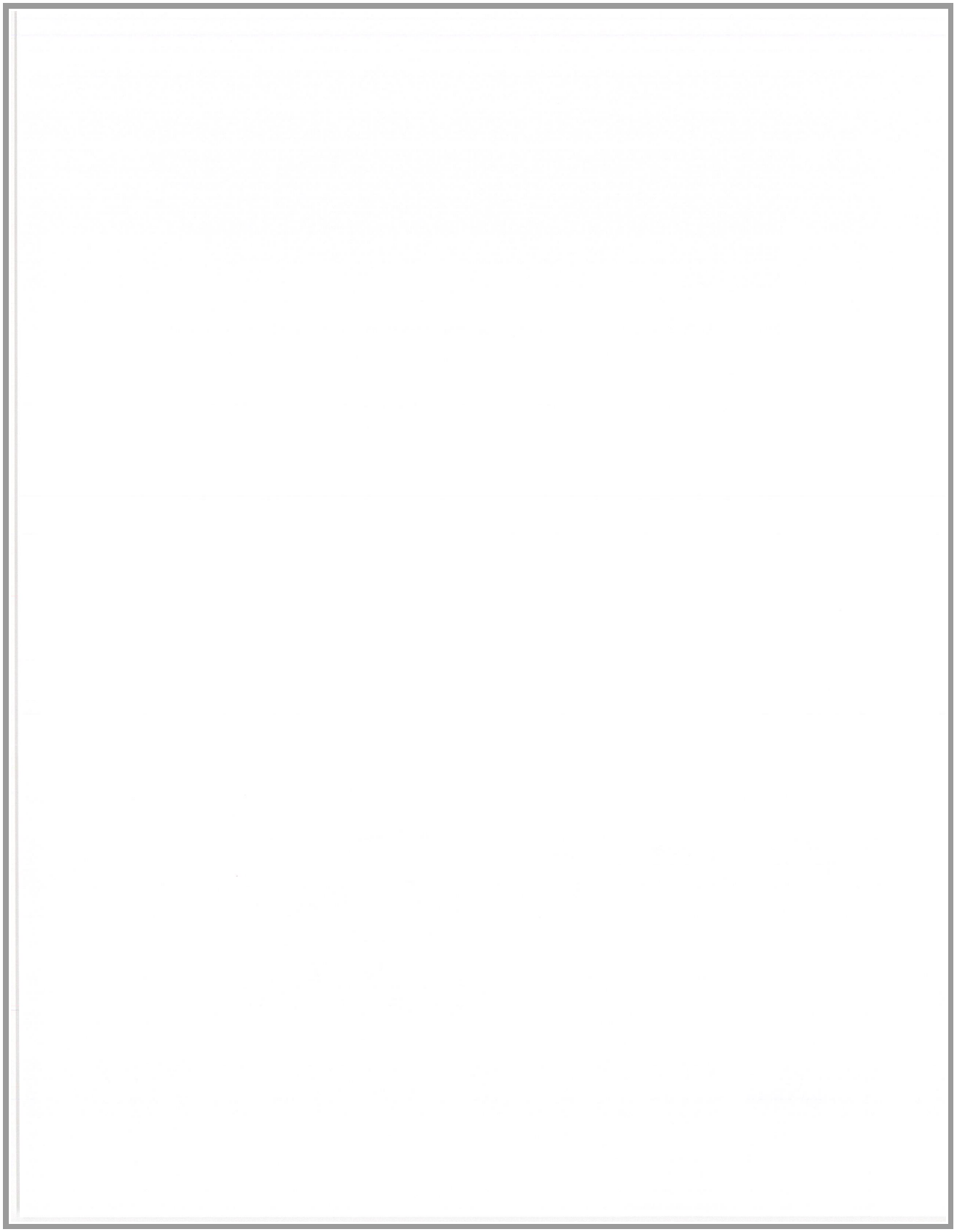


EXHIBIT A:

Upon approval of this Agreement and transition of Lake Zurich dispatch services to the Regional Operations Center (ROC), LakeComm may occupy the Premises defined in this lease and shall commence paying Lake Zurich according to the rent schedule below.

The lease year's rental amount shall be in accordance with LakeComm's fiscal year (May 1 to April 30), with each subsequent year's rent being the amount shown or calculated for the next following lease year.

Leased Space

LakeComm back-up Emergency Communications Center (ECC): 1,565 square feet

Square Footage Calculations:

Backup ECC:	1,290 square feet
Office 239:	275 square feet
Total Dedicated Space:	1,565 square feet

Shared Space (LakeComm and Lake Zurich) – no charge

Room 240 (Server Room):	364 square feet

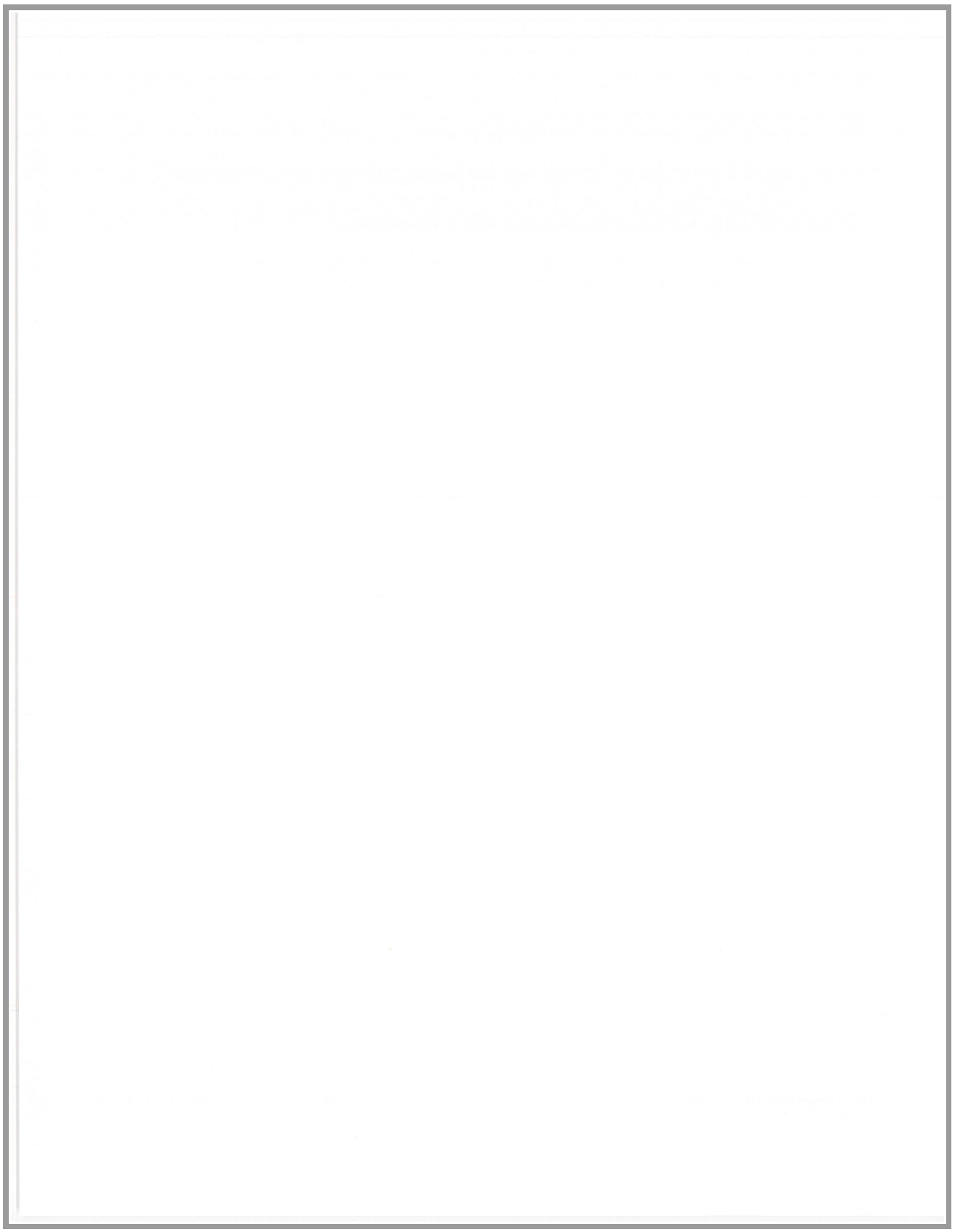
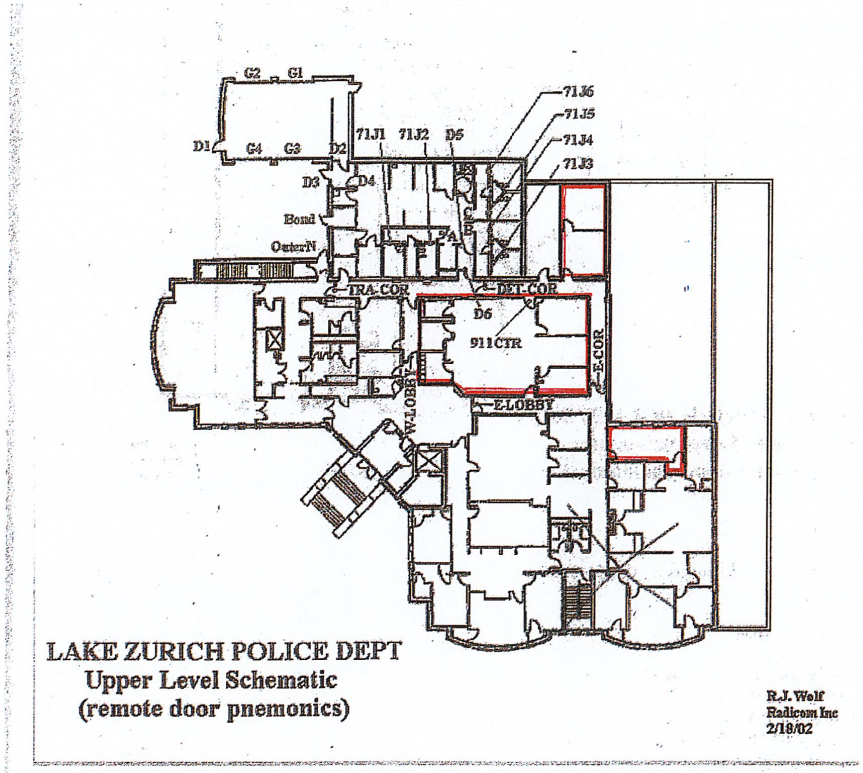


EXHIBIT A (continued):



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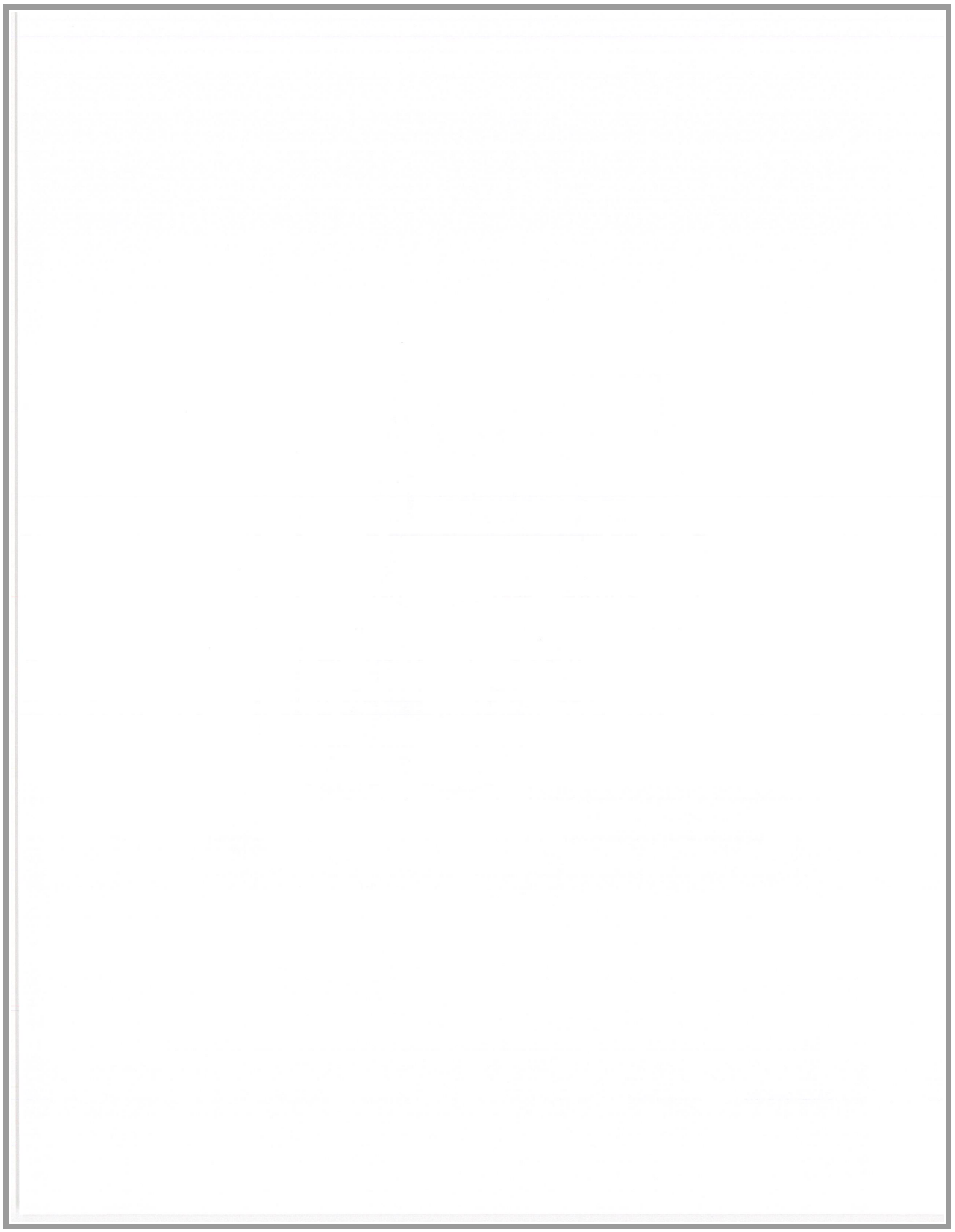

EXHIBIT B

Rent Schedule

Lease Year	LakeComm Fiscal Year	Rent	Notes
0	2025/26	No Rent	Initial Occupancy through April 30, 2026
1	2027	$17,000	First full year begins May 1, 2026
2	2028	$17,340	Years 2-5 2% annual increase applied
3	2029	$17,686	Years 2-5 2% annual increase applied
4	2030	$18,040	Years 2-5 2% annual increase applied
5	2031	$18,401	Years 2-5 2% annual increase applied
6	2032		Years 6-25 annual increase based on CPI used for PTELL
7	2033		
8	2034		
9	2035		
10	2036		
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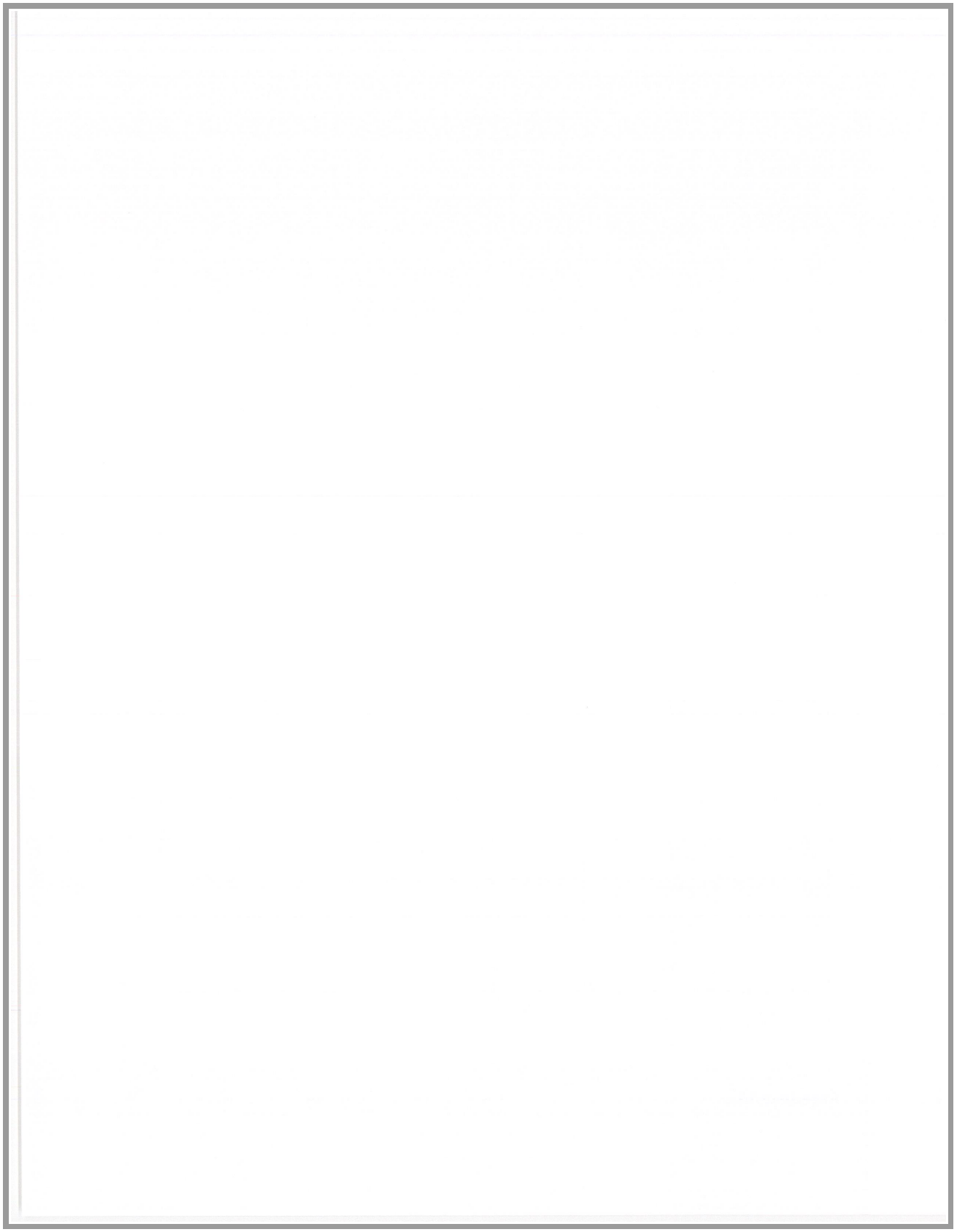


COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6e

Date: July 7, 2025

To: Ray Keller, Village Manager RK

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
David Modrzejewski, Building Services Supervisor

Re: Zoning Application for Text Amendments
Miscellaneous Amendments to the Zoning Code

Issue: The Village of Lake Zurich (the "*Applicant*"), has filed an application for amendments to the text of the Lake Zurich Municipal Code. Specifically, the Village is seeking amendments to the following sections of the code:

- Zoning Code Chapter 7 – Special Districts and Overlay Districts (Municipal Uses)
- Zoning Code Chapter 22 and Land Development Code Chapter 5 (Limits on Construction)

2014-2019 Strategic Plan: This agenda item is consistent with the following objectives under Goal #2 – Development:

- Update regulations and develop proactive policies which will include revision of the Comprehensive Plan
- Become more business friendly and customer oriented

Background: From time to time, village development staff reviews the codes to ensure that they are updated, accurate, and serve the needs and aspirations of the community. This process ensures their effectiveness and provides the necessary clarity, flexibility and opportunity to properly regulate development in the community.

Analysis: The following are the proposed amendments to sections of the Lake Zurich Zoning Code:

a. *Chapter 7; Article E (Title 9 Zoning Code):* Amendments to the text of the Lake Zurich Zoning Code for the purpose of ensuring the ability to deliver uninterrupted

and adequate, reliable municipal services, by making them exempt from any further provisions of the Village Zoning Ordinance thereby streamlining municipal infrastructure projects and basic, fundamental municipal services and facilities without interference, interruption or delay to the establishment and continuous provision of basic and critical or essential municipal operations.

b. *Section 9-22-4 (Title 9 Zoning Code) and Section 10-5-6 (Title 10 Land Development Code)*: Amendments to the text of the Lake Zurich Zoning and Land Development Codes for the purpose of setting limitations on the duration of construction of improvements by means of defining a 2-year site and subdivision improvement period.

The Planning and Zoning Commission (PZC) held a public hearing on June 18, 2025 and voted 7-0 in favor of recommending approval of the presented amendments with feedback to staff but no further conditions. No additional public comment was provided. The video from the PZC meeting can be accessed via the following link:
https://play.champds.com/lakezurichil/event/159

Further detailed analysis, summary and clarification of the proposed amendments are contained with the attached staff report to the PZC.

Recommendation

At their meeting on June 18, 2025, the Planning and Zoning Commission recommended approval of the text amendments.

Staff concurs and therefore requests approval of the attached ordinance amending the provisions of the Lake Zurich Zoning Code Title 9 and Land Development Code Title 10, with specific attachments based on the following findings. The Amended Codes:

1. Will enhance the effectiveness of the Lake Zurich Municipal Code;
2. Will provide the Village Board with additional clarity, flexibility and opportunity to properly regulate development in the community;
3. Will not negatively affect Lake Zurich's efforts to promote a positive image; and
4. Will not adversely affect the Village's ability in enforcing other regulations pertaining to Building, Zoning, Land Development or any other code or ordinance that protects the health, safety and welfare of the community.

Attachments:

- Approval Ordinance including the following exhibits:
  - Exhibit A – Copy of the Public Notice to the Daily Herald Newspaper, May 31, 2025
  - Exhibit B – June 18, 2025 staff report and Planning and Zoning Commission final recommendation/conditions

VILLAGE OF LAKE ZURICH

ORDINANCE No. 2025-07-616

AN ORDINANCE AMENDING CHAPTERS OF TITLE 9 AND TITLE 10 OF THE LAKE ZURICH MUNICIPAL CODE
(Miscellaneous Zoning Code Amendments)

WHEREAS, the Village of Lake Zurich ("Applicant") filed an application on May 29, 2025, seeking to amend certain provisions within Title 9 ("Zoning Code") and Title 10 ("Land Development Code") of the Lake Zurich Municipal Code ("Municipal Code"), such provisions set forth in Chapters 7 and 22 of said Zoning Code and Chapter 5 of said Land Development Code, ("Application"); and

WHEREAS, these changes are proposed to promote and ensure the timely and appropriate completion of municipal facilities and of private development improvements; and

WHEREAS, in compliance with the law, and the requirements of Title 9 of the Municipal Code, notice was published on May 31, 2025, in the Daily Herald newspaper informing the public of a public hearing to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on June 18, 2025, to consider this Application for amendments to the current provisions of Title 9 and Title 10 of the Municipal Code, a copy of said notice attached hereto as **Exhibit A;** and

WHEREAS, at its June 18, 2025 meeting, the PZC held a public hearing on these text amendments and received the STAFF REPORT dated June 18, 2025, consisting of 5 pages, all as set forth in **Exhibit B**, and considered the Application for these amendments to Title 9 and Title 10 of the Municipal Code, and, after the conclusion of the public hearing, the PZC voted to recommend that the Board of Trustees approve such amendments to the existing provisions of the Municipal Code.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Board of Trustees of the Village of Lake Zurich, Lake County, Illinois, as follows:

SECTION 1: ADOPTION AND INCORPORATION OF RECITALS. The foregoing recitals are hereby incorporated into this Ordinance as the findings of the Mayor and Board of Trustees.

SECTION 2: APPROVAL OF AMENDMENTS TO TITLE 9 OF THE LAKE ZURICH MUNICIPAL CODE. The Board of Trustees, pursuant to the authority vested in it under the laws of the State of Illinois and the Lake Zurich Municipal Code, hereby adopts and approves the following amendments to Chapter 7 and 22 of Title 9, the Zoning Code, specifically as follows:

A. An amendment to Chapter 7 entitled "Special Districts and Overlay Districts" of Title 9 of the Municipal Code by adding the following new Article E entitled "Municipal Buildings, Structures and Uses," as depicted below, in bold print and to read in its entirety as set forth below:

ARTICLE E. MUNICIPAL BUILDINGS, STRUCTURES AND USES

9-7E-1: Purposes
9-7E-2: Authorized Municipal Structures and Uses

9-7E-1: PURPOSES:
To protect, preserve and dedicate Village revenue most efficiently for ongoing, uninterrupted municipal services and establish flexibility in the planning and development processes to best serve the public. The provisions herein are intended to assure adequate, reliable municipal services, by facilitating municipal infrastructure projects and basic, fundamental municipal services and facilities without preconditions or procedures, nor interference, interruption or delay to or with the prompt establishment and continuous provision of basic and critical or essential municipal operations.

9-7E-2: AUTHORIZED MUNICIPAL STRUCTURES AND USES
The following categories and types of Village structures, services and uses owned or operated by the Village of Lake Zurich are authorized as follows in any zoning district in the Village.

Essential or critical Village services or uses, including, but not limited to basic or supporting infrastructure, facilities, structures, improvements and related appurtenances, are authorized and permitted. Such services, uses, infrastructure, facilities, structures, improvements and related appurtenances are further exempt from any further provisions of the Village Zoning Ordinance.

Park and recreational services or uses, including, but not limited to structures, improvements, uses and related facilities are authorized and permitted. Such structures, improvements, uses and related

facilities are further exempt from any further provisions of the Village Zoning Ordinance.

Any municipal services or uses which do not fall within the above two categories shall be classified as permitted uses within the underlying zoning districts in which such municipal services or uses are classified.

B. An amendment to Section 9-22-4 entitled "Procedure", of Chapter 22 entitled "Planned Unit Developments" of Title 9 of the Municipal Code by adding a new subsection 9 entitled "Completion of Construction," to follow the existing subsections 1 through 8, of Section 9-22-4.C as depicted below, those provisions shown in bold print to be added, to read as set forth below:

8. Limitation On Final Plan Approval: Construction shall commence in accordance with the approved final plan within two (2) years after the approval of such plan, or such other time as may be approved by the board of trustees. Failure to commence **and continue** construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1Jof this title, automatically render void the final plan approval and all approvals of the planned unit development and all permits based on such approvals, and the manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the planned unit development that have not yet been completed.

9. Completion of Construction: Construction shall be completed within 2 years of approval of the Final Plan or the issuance of a construction permit as determined by the Village Manager, unless a construction schedule is submitted by the developer and approved by the village outlining an alternate site or subdivision improvement period as outlined in Section 10-5-6-B of the Municipal Code.

SECTION 3: APPROVAL OF AMENDMENTS TO TITLE 10 OF THE LAKE ZURICH MUNICIPAL CODE. The Board of Trustees, pursuant to the authority vested in it under the laws of the State of Illinois and the Lake Zurich Municipal Code, hereby adopts and approves the following amendments to Chapter 5 of Title 10, the Land Development Code, specifically as follows:

A. An amendment to Section 10-5-6 entitled "Construction of Required Improvements", of Chapter 5 entitled "Procedure for Subdivision Approval" of Title 10 of the Municipal Code by replacing the current Paragraph B with the following new paragraph B, comprised of subsections 1 and 2 and entitled "B. Site Or Subdivision Improvements Period" as depicted below, with those provisions of the new Paragraph B shown in bold print, and by redesignating the current Paragraph B as Paragraph C of Section 10-5-6, and renumbering subsequent paragraphs to read as set forth below,:

10-5-6: CONSTRUCTION OF REQUIRED IMPROVEMENTS:

A. Installation Required: After approval of the final plan by the Village Board, and after approval of the plans and specifications for required improvements by the Village Engineer and Board of Trustees, the subdivider shall install street and utility improvements, and other improvements indicated on the plan, in accordance with specifications hereinafter provided. If such improvements are not installed as required at the time the final plat is submitted for approval, the subdivider shall, before the recording of his plat, enter into a contract with the Village agreeing to install the required improvements. Such contract shall be in such form as required by Section 10-5-5 of this Chapter.

B. Site Or Subdivision Improvement Period
1. Compliance with Subdivision Design Standards: As a condition subsequent to the Village's approval of a Site or the Final Plan for a Planned Unit Development (PUD) or a final plat of subdivision, the developer shall, within two (2) years from the date of approval of the Final Plan, final plat of subdivision or the issuance of a construction permit for Site or Subdivision Improvements as described herein, construct and pay for the improvements required herein.

Site improvements shall include but not be limited to principal buildings and structures, accessory structures and site features such as driveways, parking areas, landscape areas and stormwater management features.

Subdivision improvements shall include but not be limited to public and private streets, utilities, stormwater management features, and landscaping.

2. Inspection of Site and Subdivision Improvements: During construction of the site or subdivision improvements, the Village Engineer or inspectors designated by the Village shall conduct inspections of the site or subdivision improvements at all such times as may be determined appropriate by the Village. At any time that the Village Engineer or inspectors determine that construction is not in compliance with the standards and procedures established herein, the Village shall have the authority to order all work to be stopped at the recommendation of the Village Engineer or inspectors until such time that the work is brought into compliance with the Ordinance governing such approval or the Lake Zurich Municipal Code.

The developer shall cause all such work to be completed prior to the expiration of the 2-year improvement period or shall request an extension of the improvement period to be granted by the Village. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the letter of credit or other guarantees to complete

said improvements as described in the Final Plan for the PUD, the final plat of subdivision or other approvals granted for such work.

~~B~~ **C**. Deeding Of Improvements: All underground public improvements up to the property line shall be deeded over to the Village and become the property of the Village after approval by the Village Engineer and when accepted by resolution of the Village Board. All labor and material for installing underground public improvements shall be furnished by the subdivider. All testing required for acceptance shall be done by the subdivider under the supervision of the Village Engineer. (Ord. 89-08-335, 8-21-1989)

SECTION 4: FINDINGS AND RECOMMENDATION. The findings and recommendations of the PZC and the STAFF REPORT and other filings provided to the PZC are hereby accepted as the Board's own and shall be made a part of the official record for the Application and are attached hereto as **Exhibit B.**

SECTION 5: SEVERABILITY. If any section, paragraph, subdivision, clause, sentence or provision of this Ordinance shall be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair, invalidate or nullify the remainder thereof, which remainder shall remain and continue in full force and effect.

SECTION 6: CONFLICTS. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 7: APPLICABILITY. All properties that are rendered non-conforming with respect to the provisions contained within this ordinance following the passage of such ordinance shall be brought into compliance with the provisions contained within this ordinance within thirty (30) days of the effective date provided in Section 8 of this ordinance.

SECTION 8: EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage and approval, as provided by law.

PASSED THIS _____ day of July, 2025.

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of July, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

Exhibit A

Copy of the Public Notice to the Daily Herald Newspaper,
published on May 31, 2025

VILLAGE OF LAKE ZURICH
NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN to all persons that the Village of Lake Zurich Planning & Zoning Commission shall conduct a public hearing on June 18, 2025, at 7:00 P.M. in the Board Room of the Lake Zurich Village Hall, 70 East Main Street, Lake Zurich, Illinois, for the purpose of considering a zoning application filed by the Village requesting various miscellaneous amendments to the text of the Lake Zurich Zoning Code as necessary. A copy of the application and the Zoning Code are on file with, and available for public inspection during regular Village business hours at the Lake Zurich Community Development Department.

At said public hearing, the Planning & Zoning Commission shall accept all testimony and evidence pertaining to said application and shall consider any and all possible zoning actions, including granting amendments to the text of the Lake Zurich Municipal Code that may be necessary or convenient to accomplish such actions. All interested persons are invited to attend and be heard.

Orlando Stratman
Chairperson, Planning & Zoning Commission

Exhibit B

Staff Report and Findings of the Planning and Zoning Commission
Dated June 18, 2025.

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

APPLICATION PZC 2025-08 **AGENDA ITEM 4.A**
PZC Hearing Date: June 18, 2025

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
David Modrzejewski, Building Services Supervisor

Re: PZC 2025-08 Zoning Application for Amendments to the Lake Zurich Zoning and Land Development Code

SUBJECT

The Village of Lake Zurich, (the "Applicant") requests amendments to the text of the Lake Zurich Zoning and Land Development Code for the purpose of clarifying and increasing the effectiveness of the codes.

GENERAL INFORMATION

Requested Action: Text Amendments

Applicant: Village of Lake Zurich

Staff Coordinator: Sarosh Saher, Community Development Director

LIST OF EXHIBITS

A. Development Application and Attachments
B. Draft Ordinance Language

Staff Report **Community Development Department**
APPLICATION PZC 2025-08 **PZC Hearing Date: June 18, 2025**

BACKGROUND

The Village of Lake Zurich (the "Applicant"), is the Applicant for the proposed text amendment to the Lake Zurich Building and Zoning Code. Staff offers the following additional information:

- **Courtesy Review.** Due to the miscellaneous nature of the amendments, no courtesy review of the Village Board was requested.

- **Proposed Amendments.** The following is a summary of the language that is proposed to be amended in the various sections of the Lake Zurich Zoning Code:

    1. The Village of Lake Zurich, (the "Applicant") requests amendments to the text of the Lake Zurich Zoning Code for the purpose of ensuring the ability to deliver uninterrupted and adequate, reliable municipal services, by streamlining municipal infrastructure projects and basic, fundamental municipal services and facilities without interference, interruption or delay to the establishment and continuous provision of basic and critical or essential municipal operations.

    2. The Village of Lake Zurich, (the "Applicant") requests amendments to the text of the Lake Zurich Zoning and Land Development Codes for the purpose of setting limitations on the duration of construction of improvements by means of defining a 2-year site and subdivision improvement period.

Details on the language of the amendments to the text of the Zoning and Land Development Codes is attached.

GENERAL FINDINGS

Staff of the Community Development Department offers the following findings on the amendments to the sections of the Code.

9-18-3 STANDARDS FOR AMENDMENTS

A. Standards: Amending the zoning map or the text of the zoning code is a matter committed to the sound legislative discretion of the board of trustees and is not dictated by any set standard. However, in determining whether a proposed amendment should be granted or denied, the board of trustees shall act in what it reasonably believes to be in the best interest of the general public, and may consider, among other factors, the following factors as they may be relevant to a particular application:

    1. The consistency of the proposed amendment with the purposes of this zoning code.

        Staff Response: Standard met. The proposed are amendments to the text of the Lake Zurich Zoning Code. Staff has found the proposed amendments will

enhance the purposes of the zoning and land development codes as they relate to the proper functions and operations of the village.

2. The community need for the proposed amendment and for the uses and development it would allow.

Staff Response: Standard met. The efficient and effective use of Village resources and prompt, timely and uninterrupted municipal services will be facilitated by these amendments.

Setting an expectation on the completion of larger development projects such as PUDs and subdivisions has a direct bearing on the health, safety and welfare of the community.

3. If a specific parcel of property is the subject of the proposed amendment, then the following factors:

Staff Response: Not Applicable. The text amendments do not pertain to any specific property, rather they are applicable to all property within the community.

RECOMMENDATION

The recommendation of the Planning and Zoning Commission should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-18-3: Standards for Amendments

Based on the review of staff, the standards for approval have been met and therefore staff recommends that the Planning and Zoning Commission make these standards a part of the official record of the Application.

Staff of the Community Development Department therefore recommends the approval of Application PZC 2025-08. Staff further finds that the amended Lake Zurich Building and Zoning Codes:

1. Will enhance the effectiveness of the Lake Zurich Municipal Code;
2. Will provide the Village Board with additional clarity, flexibility and opportunity to properly regulate development in the community;
3. Will not negatively affect Lake Zurich's efforts to promote a positive image; and
4. Will not adversely affect the Village's ability in enforcing other regulations pertaining to Building, Zoning, Land Development or any other code or ordinance that protects the health, safety and welfare of the community.

Staff Report **Community Development Department**
APPLICATION PZC 2025-08 **PZC Hearing Date: June 18, 2025**

Respectfully Submitted,

Sarosh Saher,
Community Development Director

Attachments:
1. Article E: Village (Municipal) Buildings, Structures and Uses
2. Site or Subdivision Improvement Period

Staff Report **Community Development Department**
APPLICATION PZC 2025-08 **PZC Hearing Date: June 18, 2025**

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

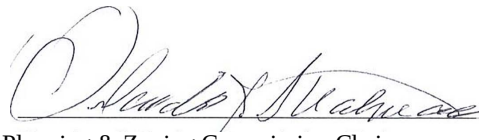
MISCELLANEOUS AND PROCEDURAL AMENDMENTS TO THE LAKE ZURICH BUILDING AND ZONING CODE
June 18, 2025

The Planning & Zoning Commission recommends approval of Application PZC 2025-08, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated June 18, 2025 for this Application for the following reasons:

1. Will enhance the effectiveness of the Lake Zurich Municipal Code;
2. Will provide the Village Board with additional clarity, flexibility and opportunity to properly regulate development in the community;
3. Will not negatively affect Lake Zurich's efforts to promote a positive image; and
4. Will not adversely affect the Village's ability in enforcing other regulations pertaining to Building, Zoning, Land Development or any other code or ordinance that protects the health, safety and welfare of the community.

☐ Without any further additions, changes, modifications and/or approval conditions.

☐ With the following additions, changes, modifications and/or approval conditions:



Planning & Zoning Commission Chairman

ANNEXATION AND ZONING APPLICATION

Community Development Department
505 Telser Rd.
Lake Zurich, IL 60047
Phone: (847) 540-1696
Fax: (847) 540-1769

(Please Type or Print)

1. Address of Subject Property: N/A
2. **Please attach complete legal description**
3. Property Identification number(s): N/A
4. Owner of record is: N/A Phone: _____
   E-Mail _____ Address: _____
5. Applicant is (**if different from owner**): Village of Lake Zurich Phone: 847-540-1696
   E-Mail _____ Address: 70 E Main Street
6. Applicant's interest in the property (owner, agent, realtor, etc.): N/A
7. All existing uses and improvements on the property are: N/A
8. The proposed uses on the property are: N/A
9. List any covenants, conditions, or restrictions concerning the use, type of improvements, setbacks, area, or height requirements placed on the Subject Property and now of record and the date of expiration of said restrictions:
   N/A
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    N/A
11. For applications requiring a public hearing, please attach a list which contains the PIN, owner, and owner's mailing address of all properties located within 250 feet (excluding all Public Right-of-Ways) of the Subject Property.

THE APPLICANT'S SIGNATURE BELOW INDICATES THE INFORMATION CONTAINED IN THIS APPLICATION AND ON ANY ACCOMPANYING DOCUMENTS IS TRUE AND CORRECT.
THE APPLICANT ALSO ACKNOWLEDGES IF THE CONSULTANT EXPENSES EXCEED THE INITIAL ESCROW DEPOSIT, THE APPLICANT WILL REIMBURSE THE ACCOUNT IMMEDIATELY.

Sarosh Saher
(Name of applicant)

(Signature of applicant)

Subscribed and sworn to before me this 21st day of May, 2025.

(Notary Public)

My Commission Expires

"OFFICIAL SEAL"
NADINE J GERLING
Notary Public, State Of Illinois
Commission No. 835910
My Commission Expires July 03, 2028

(**Name of Owner, if different**)

(Signature of Owner, if different)

Subscribed and sworn to before me this _____ day of _____, 2025.

(Notary Public)

My Commission Expires _____

Village of Lake Zurich
Proposed Text Amendment

Amendments to Title 9 and Title 10 of the Lake Zurich Municipal Code

Proposal: Various miscellaneous and procedural amendments to the text of the zoning and building codes to enhance their effectiveness.

1. The Village of Lake Zurich, (the "Applicant") requests amendments to the text of the Lake Zurich Zoning Code for the purpose of ensuring the ability to deliver uninterrupted and adequate, reliable municipal services, by streamlining municipal infrastructure projects and basic, fundamental municipal services and facilities without interference, interruption or delay to the establishment and continuous provision of basic and critical or essential municipal operations.

2. The Village of Lake Zurich, (the "Applicant") requests amendments to the text of the Lake Zurich Zoning and Land Development Codes for the purpose of setting limitations on the duration of construction of improvements by means of defining a 2-year site and subdivision improvement period.

Submitted by:

Sarosh Saher, Community Development Director
Village of Lake Zurich
505 Telser Road
Lake Zurich, IL 60047

Dated: May 29, 2025

TITLE 9 ZONING
CHAPTER 7 SPECIAL DISTRICTS AND OVERLAY DISTRICTS

ARTICLE E. VILLAGE (MUNICIPAL) BUILDINGS, STRUCTURES AND USES

SECTION:
9-7E-1: Purposes
9-7E-2: Authorized Municipal Structures and Uses

9-7E-1: PURPOSES:
To protect, preserve and dedicate Village revenue most efficiently for ongoing, uninterrupted municipal services and establish flexibility in the planning and development processes to best serve the public. The provisions herein are intended to assure adequate, reliable municipal services, by facilitating municipal infrastructure projects and basic, fundamental municipal services and facilities without preconditions or procedures, nor interference, interruption or delay to the prompt establishment and continuous provision of basic and critical or essential municipal operations.

9-7E-2: AUTHORIZED MUNICIPAL STRUCTURES AND USES
The following categories and types of Village structures, services and uses owned or operated by the Village of Lake Zurich are authorized as follows in any zoning district in the Village. Essential or critical Village services or uses, including, but not limited to basic or supporting infrastructure, facilities, structures, improvements and related appurtenances, are authorized and permitted. Such services, uses, infrastructure, facilities, structures, improvements and related appurtenances are further exempt from any further provisions of the Village Zoning Ordinance. Park and recreational services or uses, including, but not limited to structures, improvements, uses and related facilities are authorized and permitted. Such structures, improvements, uses and related facilities are further exempt from any further provisions of the Village Zoning Ordinance. Any municipal services or uses which do not fall within the above two categories shall be classified as permitted uses within the underlying zoning districts that such municipal services or uses are classified.

TITLE 9
CHAPTER 22
SECTION 9-22-4

8. Limitation On Final Plan Approval: Construction shall commence in accordance with the approved final plan within two (2) years after the approval of such plan, or such other time as may be approved by the board of trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1Jof this title, automatically render void the final plan approval and all approvals of the planned unit development and all permits based on such approvals, and the manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the planned unit development that have not yet been completed.

Construction shall be completed within 2 years of approval of the Final Plan, unless a construction schedule is submitted by the developer and approved by the village outlining an alternate site or subdivision improvement period as outlined in Section 10-5-6-B of the Municipal Code.

TITLE 10

CHAPTER 5 PROCEDURE FOR SUBDIVISION APPROVAL

SECTION 6 CONSTRUCTION OF REQUIRED IMPROVEMENTS

B. Site Or Subdivision Improvement Period
1. Compliance with Subdivision Design Standards: As a condition subsequent to the Village's approval of the Final Plan for a Planned Unit Development (PUD) or a final plat of subdivision, the developer shall, within two (2) years from the date of approval of the Final Plan or final plat of subdivision as described herein, construct and pay for the subdivision improvements required herein. Site improvements shall include but not be limited to principal buildings and structures, accessory structures and site features such as driveways, parking areas, landscape areas and stormwater management features. Subdivision improvements shall include but not be limited to public and private streets, utilities, stormwater management features, and landscaping.

2. Inspection of Site and Subdivision Improvements: During construction of the site or subdivision improvements, the Village Engineer or inspectors designated by the Village shall conduct inspections of the site or subdivision improvements at all such times as may be determined appropriate by the Village. At any time that the Village Engineer or inspectors determines that construction is not in compliance with the standards and procedures established herein, the Village shall have the authority to order all work to be stopped at the recommendation of the Village Engineer or inspectors until such time that the work is brought into compliance with this Ordinance.

The developer shall cause all such work to be completed prior to the expiration of the 2-year improvement period or shall request an extension of the improvement period to be granted by the Village. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the letter of credit or other guarantees to complete said improvements as described in the Final Plan for the PUD or the final plat of subdivision.

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

MEMORANDUM

Date: July 7, 2025

To: Ray Keller, Village Manager

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
David Modrzejewski, Building Services Supervisor

RE: Final Plan and Development Agreement Approval
670 South Old Rand Road – The Reserves of Lake Zurich
SN Venture, LLC (OSK Capital Partners)

AGENDA ITEM 6f

Issue. SN Venture, LLC, represented by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the attorney for the Developer, (the "Applicant"), is requesting Final Plan Approval for a Planned Unit Development for the development of the property located at 670 South Old Rand Road, legally described in Exhibit A attached hereto (the "Subject Property").

Specifically, the applicant is seeking:

- Final Plan Approval for a Planned Unit Development to construct 18 single-family detached residences and 18 single-family attached townhomes, along with open space amenities and stormwater management facilities.
- Approval of a Development Agreement providing for the terms and conditions of the development.

Village Strategic Plan: This agenda item is consistent with the following objectives under Goal #2, Development:

- Expand the Village's role as a major regional economic hub in Lake County
- Become more business friendly and customer oriented.

Background

The Applicant was granted Development Concept Plan (Preliminary Plan) approval by the Village Board on September 3, 2024 through Ordinance 2024-09-585 entitled "An Ordinance Granting Approval of a Planned Unit Development, Amendment to the Official Zoning Map, Preliminary

Plat, Development Concept Plan, Special Use Permits and Modifications to the Zoning and Land Development Code for a Residential Subdivision, *OSK Residential Development – 670 South Old Rand Road.*"

Analysis. The final plan is intended to particularize, refine, and implement the development concept plan and to serve as a complete, thorough, and permanent public record of the planned unit development and the manner in which it is to be developed. Review of the final plan requires consideration of the following:

1. Whether the final plan is in substantial conformity with the approved development concept plan; and
2. The merit or lack of merit of any departure of the final plan from substantial conformity with the approved development concept plan; and
3. Whether the final plan complies with any and all conditions imposed by approval of the development concept plan; and
4. Whether the final plan complies with the provisions of this zoning code and all other applicable federal, state, and village codes, ordinances, and regulations.

Community Development staff identified one modification to the Final Plan, which differed from the approved Preliminary Plan – the setback for homes along Old Rand Road had been reduced by six (6) feet, resulting in a distance of 38 feet from the curb of the street instead of 44 feet.

The Planning and Zoning Commission (PZC) considered the application at a public meeting on March 19, 2025 and found that the Final Plan was in substantial conformance with the approved development concept plan approved through Ordinance 2024-09-585 and other applicable codes and ordinances. The PZC therefore voted 6-0 in favor of recommending approval of the final plan for the development of the property, subject to the conditions outlined in the staff report.
The video from the PZC meeting can be accessed via the link:
https://play.champds.com/lakezurichil/event/150

A detailed evaluation and summary of the project can be found in the Staff Report that was provided to the Planning and Zoning Commission, which is a part of the attached Ordinance.

Development Agreement

As part of the approval granted in the development concept plan, the Developer was required to enter into a binding development agreement with the village for the development of the property. The agreement provides for the terms and conditions of the development and is attached along with this memo. Significant points of note within the agreement are as follows:

1. Public Street Improvements and fees in lieu of construction. Old Rand Road and Buesching Road – the public rights-of-way that are owned and maintained by the Village will be used to provide access to the Development. These roadways will also be used to provide access for construction vehicles, materials and equipment necessary to complete the development and

will likely experience wear and tear. In lieu of the reconstruction of such public roadways, the Developer will be required to reimburse the village for the reconstruction of the two streets along the frontages of the Subject Property at the cost equivalent to $277,000.00, such cost being based on an Engineering opinion of Probable Cost (EOPC) prepared by the Village Engineer. The Village is offering the developer the option of making the payment either in one lump sum, or in 36 equal installments at the time of issuance of building permits for the residential buildings.

2. Sidewalk Improvements. All sidewalks within the subdivision will be constructed by the Developer. However, along the frontage of the Property with Old Rand Road, the Developer will be required to either construct a 5-foot wide sidewalk or pay a fee in lieu of constructing the sidewalk or a combination thereof. The fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting Village standards.

   The Developer will also be required to construct a pedestrian crosswalk across Old Rand Road to connect the Property to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance. The crosswalk will need to be constructed with appropriate devices to warn of pedestrians within the crosswalk.

3. Wetland and Creek Stabilization Improvements: The Developer will be required to complete the restoration of the Wetland areas and creek located along the northerly portion of the property. This work will include construction aimed at preventing or reversing erosion along the banks and bed of the creek through methods involving vegetative stabilization and/or structural stabilization (hard armoring) and other integrated means as necessary.

4. Backup SSA. Establishment of an Open Space, Stormwater Management, Snow Removal, Roadway Repair and Replacement Special Service Area to allow the village, the ability to recover the cost of maintaining all common areas/outlots, open space, natural area(s), the stormwater management and stormwater retention/detention areas and facilities, all landscape materials within common open space, as well as the maintenance of such areas in the event the HOA defaults on its responsibilities.

5. Performance Security. Performance security in the form of Letters of Credit for specified items of work including all improvements within public rights-of-way, the wetland and creek stabilization area, and the construction of all public infrastructure and stormwater management features on the site.

6. Construction Sequencing. The Developer will be required to ensure the safe and efficient completion of the project by providing the Village with a detailed construction sequence schedule that outlines the timeline for all activities beginning with earth-disturbing activities through to completion of the project. The schedule will be required to incorporate phasing of site clearing and construction where necessary to limit areas of active earth disturbance around sensitive areas of the site. The Developer and its contractors will be required to maintain open communication with the Village and all stakeholders throughout the project.

7. Construction Observation. The Village of Lake Zurich will employ, at Developer's expense, the services of a civil engineer to observe, monitor and inspect certain aspects of the development to ensure that they are being constructed according to the design plans, specifications, and codes. Construction observation will be required for water and sanitary utility construction, construction within the public roadway, stormwater management facility construction, and construction within wetlands or waterways that traverse the property being developed.

8. Construction Time Limitations: The Developer will be required to complete construction of the project within 2 years of approval of the Final Plan, unless a construction schedule is submitted and approved by the village outlining an alternate time period as outlined in the Municipal Code. Failure to meet the approved timeline will authorize the Village to draw on the Letter of Credit or other guarantees to complete the improvements or stabilize the property in the event these remain incomplete.

9. Fees: In addition to Building permit fees, the developer will be required to pay school, library and park impact fees, all necessary Lake Zurich and Lake County connection fees, including the recently instituted Lake Michigan Water CLC-JAWA connection fee. The fees will need to be paid at the time of issuance of a building permit requested for each building proposed to be constructed.

The Development Agreement is attached and presented to the Village Board for approval through an enabling ordinance, and follows the exhibits on the Final Plan.

Recommendation

At their meeting on March 19, 2025, the Planning and Zoning Commission recommended approval of the final plan incorporating the conditions for approval provided by staff in its report.

Staff therefore recommends approval of the attached ordinance for approval of the Final Plan of the PUD, with its specific attachments based on the following conditions for approval that are contained within the accompanying approval ordinance.

Staff also recommends approval of the development agreement between the Developer and Village outlining the terms and conditions of the development.

1. Conform with the following documentation submitted as part of the Final Plan and subject to required revisions and additional documentation required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.

i. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
ii. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.

b. Final Plan Submittal prepared by Pappageorge Haymes Partners dated February 14, 2025 consisting of the following exhibits:
Final Plat of Subdivision. Final Plat of Subdivision for The Reserves of Lake Zurich prepared by Vanderstappen Land Surveying, Inc. dated June 9, 2025.
Architectural Exhibits: Last Revised June 16, 2025
i. Cover and Index – Sheet A00
ii. Architectural Renderings – Sheets A01-A04
iii. Current Site Plan – Sheet A05
iv. Plat of Subdivision – Sheet A06
v. Single-family Home Plans and Elevations – Sheets A07-A08
vi. Row Home (multiple-family) Plans and Elevations – Sheets A09-A11
Landscape Plans – last updated February 14, 2025
i. Landscape Plan – Sheet L100
ii. Landscape Details – Sheet L200
Civil Plans – last updated June 16, 2025
i. Cover, existing conditions and notes – C000-C002
ii. Site Demolition Plan – Sheets C100-C103
iii. Site Geometry Plan – Sheets C200-C203
iv. Site Utility Plan – Sheets C300-C303
v. Utility Annotation Details – C304-C308
vi. Sanitary Profiles – C309-C315
vii. Water Profiles – C315-C323
viii. Grading and Paving Plan – Sheets C400-C403
ix. Grading Detail – Sheets C404-C408
x. Soil Erosion & Sediment Control Plan – Sheets C500-C503
xi. Operation and Maintenance Plan – C600
xii. Site work details – Sheets C700-C706
Civil Exhibits last updated June 16, 2025
i. Stormwater related exhibits – CX-1 through CX-6
ii. Fire Hydrant coverage and truck turning exhibits – CX-7, CX-8
iii. Phasing Exhibit – CX-9

c. Retaining Wall Plans, prepared by Virgilio & Associates dated May 30, 2025.

d. Stormwater Management Report, prepared by Eriksson Engineering Associates, Ltd. last revised on June 16, 2025.

e. Stormwater Maintenance Plan, prepared by Eriksson Engineering Associates, Ltd. dated June 16, 2025.

f. Creek Restoration & Revegetation Plan comprised of USACE Nationwide 13 Preconstruction Notification (670 S. Old Rand Road), prepared by Gary R. Weber Associates, Inc. dated June 9, 2025.

g. Civil Stormwater Permit Applications

i. NPES NOI
ii. WDO Permit Application

h. EOPC prepared by Eriksson Engineering, dated June 16, 2025.
i. Drain Tile Study prepared by Huddleston McBride, dated June 4, 2025.
j. Site Lighting exhibits including the following:
   i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
   ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
k. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022, indicating the trees proposed to be removed and those to be preserved.
l. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.
m. Traffic Control Details

2. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition. The maintenance of such landscape material shall be the responsibility of the HOA established for the development as described in Item 9 herein.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner. The maintenance of such trees, hedges, signs or other obstructions shall be the responsibility of the HOA established for the development as described in Item 9 herein.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the Property along the east, south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The Property line along the south of the development shall be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the development should be designed with adequate width.

7. Developer shall complete the restoration of the areas designated as Wetland within the Final Plat of Subdivision and natural waterway (creek) in compliance with all applicable requirements and standards of the Village and all applicable local, state and federal agencies. Such work shall include, but not be limited to construction aimed at preventing or reversing erosion along the banks and bed of the creek that extends along the northerly portion of the property, through methods involving vegetative stabilization and/or structural stabilization (hard armoring) and other integrated means as necessary.

8. Such work shall commence only after review and approval of all plans and specification of the Village and other jurisdictional agencies, and in conjunction with the earthwork related to the project. Such work shall be completed prior to the construction of homes along the northerly boundary of the wetland areas so as to allow access for equipment and materials used during the stabilization improvements of the creek and its surrounding areas.

9. The Developer shall design and construct a means of access to the stormwater management facilities for the purpose of conducting maintenance of such facilities located within the areas north of the built-out portion of the Development. Such access way shall be designed to accommodate for materials, vehicles, equipment authorized by the HOA and when necessary, authorized by the Village, to allow for the maintenance of these facilities.

10. The Developer shall establish a Home Owners Association (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space, consistent with the requirements herein. The provisions for such HOA shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

11. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

12. Old Rand Road and Buesching Road that are public rights-of-way and owned and maintained by the Village shall be used to provide access to the development on the

property. It is understood that such roadways will also be used to provide access for construction vehicles, materials and equipment necessary to complete the development. Upon completion of the development in substantial form, the roadways shall be resurfaced in conformance with the Village standards for roadway re-construction, including but not limited to installation of village utilities, curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village.

In lieu of the reconstruction of such public roadways, Developer shall reimburse the village for the reconstruction of the two streets along the frontages of the Property at the cost equivalent to $277,000.00, such cost being based on an Engineering opinion of Probable Cost (EOPC) as prepared by the Village Engineer.

Such fees are exclusive of any building permit, connection or impact fees owed to the Village or other governmental agencies. The Village may be reimbursed for this amount as follows:

a. One (1) lump-sum installment for the full amount as outlined in this section; or
b. Individual installments to be paid to the Village prior to the issuance of a building permit for each of the 18 single-family detached and 18 single-family attached residences. The installment for the single-family attached residences shall be paid prior to the issuance of a permit for the building comprising one or more attached residences.

13. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

14. All sidewalks within the Development on the Property shall be constructed by the Developer as part of the development.

    A 5-foot wide sidewalk shall be constructed along the frontage of the Property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the Developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for 5-foot wide sidewalk meeting village standards for the length of frontage of the Property where no sidewalk is proposed.

15. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

16. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

17. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:
    - Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.
    - Such backup SSA shall be accompanied by a short and long-term maintenance plan prepared by the Developer and approved by the Village Engineer.

18. The Developer shall be responsible for payment of all development impact fees (development contributions) connection fees and permit fees as a condition of the approval of the PUD and Final Plat. The school impact fees, library impact fees and park impact fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building.

    Development impact fees shall be paid as outlined below:

    School district Impact fees:
    For attached single-family townhouses
    a. 1-2-bedroom unit $795.00
    b. 3-bedroom unit $1,275.00
    c. 4-bedroom unit $2,445.00

    For detached single-family homes
    a. 1-3-bedroom unit $2,545.80
    b. 4-bedroom unit $4,336.95
    c. 5-bedroom unit $5,206.50

    Library district impact fees - Ela Area Public Library
    $120 per unit regardless of number of bedrooms

Developer shall pay the above fees directly to the respective school and library district and provide the village with proof of payment prior to the issuance of a building permit.

Lake Zurich Park Impact fees

For attached single-family townhouses

a.	1-bedroom unit	$2,700.00
b.	2-bedroom unit	$5,166.00
c.	3-bedroom unit	$6,598.80
d.	4-bedroom unit	$9,540.00

For detached single-family residences

a.	2-bedroom unit	$3,636.00
b.	3-bedroom unit	$6,921.00
c.	4-bedroom unit	$8,118.00
d.	5-bedroom unit	$10,044.00

Lake Michigan Water (CLC-JAWA) Connection Fee.
$3,500.

Developer shall pay the required park impact fees at the time of requesting permits for construction of the buildings. These fees are collected in addition to the plan review and building permit fees.

Building Permit Fees/Village Fees. Developer shall pay all building permit fees and village connection fees as outlined and required under Title 13 of the Lake Zurich Municipal Code.

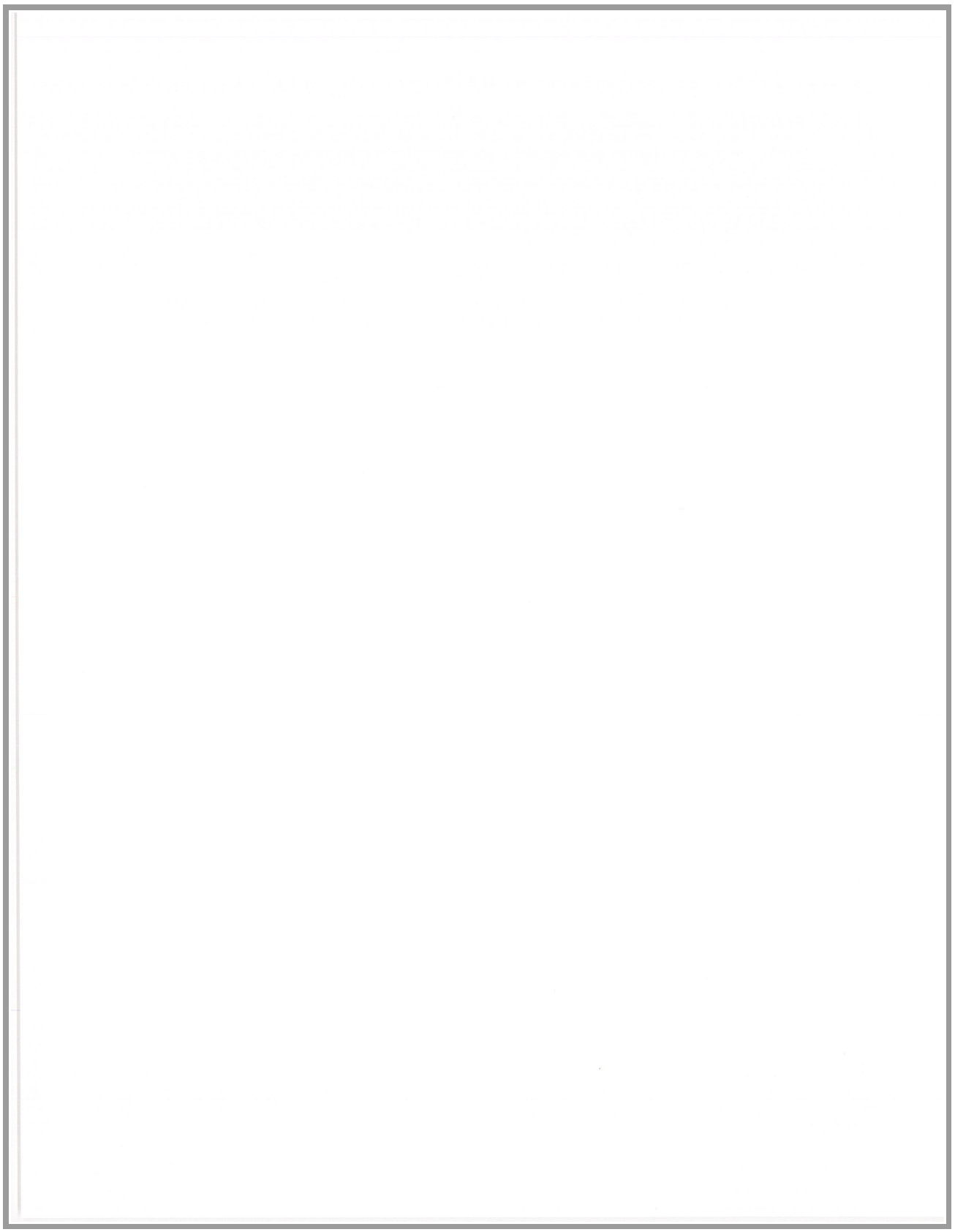
All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

19. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Plan, or such other time as may be approved by the Village Board of Trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the manager shall have the right, without further direction, to initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless a construction schedule is submitted by the Developer and approved by the village outlining an alternate improvement period as outlined in the Village Code. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the Letter of Credit or other guarantees to complete said improvements as described in the Final Plan.

20. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

- Approval Ordinance for the Final Plan including the following exhibits:
  - Exhibit A – Legal description of the property
  - Exhibit B – Final Plan documents
  - Exhibit C – March 19, 2025 staff report and planning and zoning commission final recommendation/conditions
- Approval Ordinance for the Development Agreement including the following exhibit:
  - Exhibit A – Legal description of the property
  - Exhibit B – An Agreement by and between the Village Of Lake Zurich and SN Venture, LLC relating to the Development of the Reserves of Lake Zurich – 670 South Old Rand Road



VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-07-617

AN ORDINANCE GRANTING FINAL PLAN APPROVAL FOR A PLANNED UNIT DEVELOPMENT

670 South Old Rand Road – The Reserves of Lake Zurich (OSK Capital Partners)

WHEREAS, SN Venture, LLC, represented by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the attorney for the Developer is the applicant and Developer (the "Applicant" and "Developer") of certain property for a planned unit development (the "PUD") for the property commonly referred to as the Reserves of Lake Zurich at 670 South Old Rand Road ("Property"), said Property legally described in Exhibit A hereto; and

WHEREAS, Applicant and Developer, is the legal title holder of the Property (hereinafter also referred to as "Owner"), and has petitioned the Village for the requested PUD and development of the Property; and

WHEREAS, the Applicant proposes to develop approximately 9 acres of land with 36 residences comprising of 18 single-family detached homes and 18 single-family attached townhomes, Stormwater management facilities, a centrally located open space amenity and include approximately 2 acres of additional open space comprised of a creek and wetland areas on the northerly end of the Property; and

WHEREAS, the Applicant has been granted approval of a planned unit development, including the initial development concept plan, special use permits and modifications to the Zoning and Land Development Code through Ordinance No. 2024-09-585, passed on September 3, 2024; and

WHEREAS, the Applicant seeks Final Plan approval as required by Chapter 22 of the Village Zoning Code ("Final Plan") of that PUD attached hereto and made a part hereof as **Exhibit B**; and

WHEREAS, the Final Plan is intended to particularize, refine, and implement the initial development concept plan approved through Ordinance No. 2024-09-585, and to serve as a complete, thorough, and permanent public record of the PUD and the manner in which it is to be developed, and is required to be in substantial conformity with the approved development concept plan; and

WHEREAS, in compliance with the law, and the requirements of the Village of Lake Zurich Zoning Code ("Zoning Code"), notice of a public meeting was published on March 1, 2025, in *The Daily Herald,* and the Village posted a public meeting sign on the Property on February 28, 2025, both the newspaper and sign notices informing the public of a meeting to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on March 19, 2025, to consider the Application for the requested approvals; and

WHEREAS, the PZC received the STAFF REPORT dated March 19, 2025, and considered the request for Final Plan approval for a planned unit development to allow the development of the vacant Property, and considered all information presented by the Applicant, and the applicable factors required under of the Zoning Code; and recommended that the Board of Trustees approve the requested final zoning approvals requested in this Application; and

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich met on July 7, 2025, and considered the findings and recommendations of the PZC, including the STAFF REPORT dated March 19, 2025, along with the final findings and recommendations of the PZC, said required zoning standards, findings and recommendations attached hereto as **Exhibit C** including:

1. The approval of the Final Plan for the Planned Unit Development on the Property in accordance with the procedure and standards set forth in Chapter 22, Section 9-22-4 entitled "Procedure" and specifically Subsection C entitled "Final Plan" of said Section, of the Lake Zurich Zoning Code.

and having considered all of the facts and circumstances affecting the Application and these approvals, the President and Board of Trustees have determined that the applicable standards have been met by the Applicant.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Board of Trustees of the Village of Lake Zurich, Lake County, Illinois, as follows:

SECTION 1: ADOPTION AND INCORPORATION OF RECITALS. The foregoing recitals, findings, recommendations, exhibits and plans are incorporated herein as findings, conclusions and requirements of the President and Board of Trustees, and all **Exhibits** referenced herein are made a part of and incorporated into this Ordinance and related approvals, except as otherwise provided below.

SECTION 2: *GRANT OF FINAL PLAN FOR A PLANNED UNIT DEVELOPMENT (PUD)*. The President and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois and Chapters 19, 20, 21 and 22 of the Lake Zurich Zoning Code and applicable law and ordinances, hereby grant the following zoning approval(s), as in substantial conformity with the development concept plan approval, as shown and provided in the STAFF REPORT dated March 19, 2025, and final findings and recommendations of the Planning and Zoning Commission attached as Exhibit C, all consisting of 18 pages:

A. The Final Plan for this PUD, attached hereto and made a part hereof as **Exhibit B,** to authorize the redevelopment of the vacant Property as approved in accordance with the standards and provisions set forth in Ordinance No. 2024-09-585.

B. The foregoing approvals, including the Final Plan for the PUD, shall be further subject to the following conditions:

1. Conform with the following documentation submitted as part of the Final Plan and subject to required revisions and additional documentation required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:

   a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.

      i. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.

      ii. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.

   b. Final Plan Submittal prepared by Pappageorge Haymes Partners dated February 14, 2025 consisting of the following exhibits:

      Final Plat of Subdivision. Final Plat of Subdivision for The Reserves of Lake Zurich prepared by Vanderstappen Land Surveying, Inc. dated June 9, 2025.

      Architectural Exhibits: Last Revised June 16, 2025

      i. Cover and Index – Sheet A00
      ii. Architectural Renderings – Sheets A01-A04
      iii. Current Site Plan – Sheet A05
      iv. Plat of Subdivision – Sheet A06
      v. Single-family Home Plans and Elevations – Sheets A07-A08
      vi. Row Home (multiple-family) Plans and Elevations – Sheets A09-A11

      Landscape Plans – last updated February 14, 2025

      i. Landscape Plan – Sheet L100
      ii. Landscape Details – Sheet L200

      Civil Plans – last updated June 16, 2025

      i. Cover, existing conditions and notes – C000-C002
      ii. Site Demolition Plan – Sheets C100-C103
      iii. Site Geometry Plan – Sheets C200-C203
      iv. Site Utility Plan – Sheets C300-C303
      v. Utility Annotation Details – C304-C308
      vi. Sanitary Profiles – C309-C315
      vii. Water Profiles – C315-C323
      viii. Grading and Paving Plan – Sheets C400-C403
      ix. Grading Detail – Sheets C404-C408

x. Soil Erosion & Sediment Control Plan – Sheets C500-C503
xi. Operation and Maintenance Plan – C600
xii. Site work details – Sheets C700-C706

Civil Exhibits last updated June 16, 2025

i. Stormwater related exhibits – CX-1 through CX-6
ii. Fire Hydrant coverage and truck turning exhibits – CX-7, CX-8
iii. Phasing Exhibit – CX-9

c. Retaining Wall Plans, prepared by Virgilio & Associates dated May 30, 2025.
d. Stormwater Management Report, prepared by Eriksson Engineering Associates, Ltd. last revised on June 16, 2025.
e. Stormwater Maintenance Plan, prepared by Eriksson Engineering Associates, Ltd. dated June 16, 2025.
f. Creek Restoration & Revegetation Plan comprised of USACE Nationwide 13 Preconstruction Notification (670 S. Old Rand Road), prepared by Gary R. Weber Associates, Inc. dated June 9, 2025.
g. Civil Stormwater Permit Applications
    i. NPES NOI
    ii. WDO Permit Application
h. EOPC prepared by Eriksson Engineering, dated June 16, 2025.
i. Drain Tile Study prepared by Huddleston McBride, dated June 4, 2025.
j. Site Lighting exhibits including the following:
    i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
    ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
k. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022, indicating the trees proposed to be removed and those to be preserved.
l. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.
m. Traffic Control Details

2. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition. The maintenance of such landscape material shall be the responsibility of the HOA established for the development as described in Item 9 herein.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner. The maintenance of such trees, hedges, signs or

other obstructions shall be the responsibility of the HOA established for the development as described in Item 9 herein.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the Property along the east, south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The Property line along the south of the development shall be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the development should be designed with adequate width.

7. Developer shall complete the restoration of the areas designated as Wetland within the Final Plat of Subdivision and natural waterway (creek) in compliance with all applicable requirements and standards of the Village and all applicable local, state and federal agencies. Such work shall include, but not be limited to construction aimed at preventing or reversing erosion along the banks and bed of the creek that extends along the northerly portion of the property, through methods involving vegetative stabilization and/or structural stabilization (hard armoring) and other integrated means as necessary.

   Such work shall commence only after review and approval of all plans and specification of the Village and other jurisdictional agencies, and in conjunction with the earthwork related to the project. Such work shall be completed prior to the construction of homes along the northerly boundary of the wetland areas so as to allow access for equipment and materials used

during the stabilization improvements of the creek and its surrounding areas.

8. The Developer shall design and construct a means of access to the stormwater management facilities for the purpose of conducting maintenance of such facilities located within the areas north of the built-out portion of the Development. Such access way shall be designed to accommodate for materials, vehicles, equipment authorized by the HOA and when necessary, authorized by the Village, to allow for the maintenance of these facilities.

9. The Developer shall establish a Home Owners Association (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space, consistent with the requirements herein. The provisions for such HOA shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

10. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

    Old Rand Road and Buesching Road that are public rights-of-way and owned and maintained by the Village shall be used to provide access to the development on the property. It is understood that such roadways will also be used to provide access for construction vehicles, materials and equipment necessary to complete the development. Upon completion of the development in substantial form, the roadways shall be resurfaced in conformance with the Village standards for roadway re-construction, including but not limited to installation of village utilities, curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village.

    In lieu of the reconstruction of such public roadways, Developer shall reimburse the village for the reconstruction of the two streets along the frontages of the Property at the cost equivalent to $277,000.00, such cost being based on an Engineering opinion of Probable Cost (EOPC) as prepared by the Village Engineer.

Such fees are exclusive of any building permit, connection or impact fees owed to the Village or other governmental agencies. The Village may be reimbursed for this amount as follows:

a. One (1) lump-sum installment for the full amount as outlined in this section; or
b. Individual installments to be paid to the Village prior to the issuance of a building permit for each of the 18 single-family detached and 18 single-family attached residences. The installment for the single-family attached residences shall be paid prior to the issuance of a permit for the building comprising one or more attached residences.

11. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

12. All sidewalks within the Development on the Property shall be constructed by the Developer as part of the development.

    A 5-foot wide sidewalk shall be constructed along the frontage of the Property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the Developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for 5-foot wide sidewalk meeting village standards for the length of frontage of the Property where no sidewalk is proposed.

13. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

14. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

15. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled “Procedure for Subdivision Approval,” which are applicable to a

PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:

- Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.
- Such backup SSA shall be accompanied by a short and long-term maintenance plan prepared by the Developer and approved by the Village Engineer.

16. The Developer shall be responsible for payment of all development impact fees (development contributions) connection fees and permit fees as a condition of the approval of the PUD and Final Plat. The school impact fees, library impact fees and park impact fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building.

Development impact fees shall be paid as outlined below:

School district Impact fees:
For attached single-family townhouses

a. 1-2-bedroom unit $795.00
b. 3-bedroom unit $1,275.00
c. 4-bedroom unit $2,445.00

For detached single-family homes

a. 1-3-bedroom unit $2,545.80
b. 4-bedroom unit $4,336.95
c. 5-bedroom unit $5,206.50

Library district impact fees - Ela Area Public Library
$120 per unit regardless of number of bedrooms

Developer shall pay the above fees directly to the respective school and library district and provide the village with proof of payment prior to the issuance of a building permit.

Lake Zurich Park Impact fees
For attached single-family townhouses

a. 1-bedroom unit $2,700.00
b. 2-bedroom unit $5,166.00
c. 3-bedroom unit $6,598.80

d. 4-bedroom unit $9,540.00

For detached single-family residences
a. 2-bedroom unit $3,636.00
b. 3-bedroom unit $6,921.00
c. 4-bedroom unit $8,118.00
d. 5-bedroom unit $10,044.00

Lake Michigan Water (CLC-JAWA) Connection Fee.
$3,500.

Developer shall pay the required park impact fees at the time of requesting permits for construction of the buildings. These fees are collected in addition to the plan review and building permit fees.

Building Permit Fees/Village Fees. Developer shall pay all building permit fees and village connection fees as outlined and required under Title 13 of the Lake Zurich Municipal Code.

All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

17. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Plan, or such other time as may be approved by the Village Board of Trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the manager shall have the right, without further direction, to initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless a construction schedule is submitted by the Developer and approved by the village outlining an alternate improvement period as outlined in the Village Code. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the Letter of Credit or other guarantees to complete said improvements as described in the Final Plan.

18. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land

Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

SECTION 3: COMPLIANCE WITH ORDINANCE AND ALL CODES. Except as otherwise specifically provided in writing in advance by the Village, no work may be commenced on the Property pursuant to the approvals granted in this Ordinance until all conditions precedent of this Ordinance to such work have been fulfilled and after all permits, approvals, and other authorizations for such work have been properly applied for, paid for, and granted in accordance with applicable law. As well, Applicant shall have no right to final approvals or permits for use and occupancy of the Property until all work and requirements provided for hereinabove are properly completed. Ongoing maintenance in good repair, consistent with these approvals, shall be required at all times.

SECTION 4: SEVERABILITY. If any section, paragraph, subdivision, clause, sentence or provision of this Ordinance shall be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair, invalidate or nullify the remainder thereof, which remainder shall remain and continue in full force and effect.

SECTION 5: CONFLICTS. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 6. RECORDING OF FINAL PLAN. The Village Clerk shall cause this Ordinance to be recorded promptly with the Lake County Recorder of Deeds against the Property and each individual lot created therein.

SECTION 7 EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage and approval and publication, as provided by law.

SECTION 8: BINDING EFFECT; SUCCESSION IN INTEREST. This Ordinance shall constitute a covenant running with the land and be binding upon and inure to the benefit of the parties hereto, their successors in interest, assignees, lessees, and upon any successor municipal authorities of the Village and successor municipalities. Except as otherwise expressly provided herein, upon the conveyance or assignment by Applicant of its interest in the Property to any successor, assign or nominee, Applicant shall be released from any and all further liability or responsibility under this Ordinance except to the extent previously undertaken by Applicant, or for which Applicant has posted security to perform an obligation in which case Applicant shall be bound to continue to complete its performance unless a replacement bond or letter of credit is posted by the new owner or Applicant, and accepted by the Village, which shall not be unreasonably withheld. In such event, the Applicant shall be released from the underlying obligation to perform. The Village shall thereafter look only to the successor, assign, or nominee of duties and obligations of Applicant hereby undertaken.

PASSED THIS _____ day of July, 2025.

AYES:

NAYS:

ABSENT:

APPROVED this _____ day of July, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

EXHIBIT A
Legal description of Property

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED, (EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCELS INVOLVED: 14-20-400-002, 14-20-400-003

EXHIBIT B

Final Plan exhibits as outlined in Section 2.B.1 submitted as part of the Application,
as revised per Village reviews and requirements

EXHIBIT C

March 19, 2025 staff report and planning and zoning commission final recommendation/conditions consisting of 18 pages

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-07-618

AN ORDINANCE APPROVING AND AUTHORIZING THE EXECUTION AND ATTESTATION OF A DEVELOPMENT AGREEMENT BY AND BETWEEN THE VILLAGE OF LAKE ZURICH AND SN VENTURE LLC RELATING TO THE DEVELOPMENT OF THE RESERVES OF LAKE ZURICH
(670 South Old Rand Road)

WHEREAS, SN Venture, LLC, is the Applicant, Developer and Owner (the "Applicant," "Developer" and "Owner") of certain property for a Planned Unit Development (the "PUD") for the property commonly referred to as The Reserves of Lake Zurich at 670 South Old Rand Road ("Property"), said Property legally described in Exhibit A hereto; and

WHEREAS, Applicant proposes to develop approximately nine (9) acres of land area, consisting of two (2) parcels a mixed-residential subdivision consisting of 18 single-family attached townhomes and 18 single-family detached homes, a central recreational open space, stormwater management facilities and natural open areas including a wetland area and naturally occurring waterway (the "Development"); and

WHEREAS, Applicant has been granted Development Concept Plan (Preliminary Plan) approval by the Village Board through Ordinance No. 2024-09-585 entitled "An Ordinance Granting Approval of a Planned Unit Development, Amendment to the Official Zoning Map, Preliminary Plat, Development Concept Plan, Special Use Permits and Modifications to the Zoning and Land Development Code for a Residential Subdivision - *OSK Residential Development – 670 South Old Rand Road,"* passed on September 4, 2024; and

WHEREAS, Applicant has been granted Final Plan approval by the Village Board through Ordinance No. 2025-07-617 entitled "An Ordinance Granting Final Plan Approval for a Planned Unit Development – *The Reserves of Lake Zurich - 670 South Old Rand Road,*" passed on July 7, 2025; and

WHEREAS, the Village and Applicant desire to enter into a Development Agreement for the purpose of providing for the terms and conditions of the development and use of the Property in compliance with Ordinances No. 2024-09-585 and 2025-07-,

and all applicable federal, state, and Village laws, statutes, codes, ordinances, resolutions, rules, and regulations ("Requirements of Law");

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS, as follows:

SECTION 1. Recitals. The foregoing recitals are hereby incorporated into, and made a part of this Ordinance as findings of the President and Board of Trustees of the Village of Lake Zurich.

SECTION 2. Approval and Execution. The Development Agreement by and between the Village and Applicant, in substantially the form attached to this Ordinance as Exhibit B and in a final form acceptable to the Village Attorney, is hereby approved. The Village Board President and the Village Clerk are hereby authorized and directed to execute and attest the Development Agreement on behalf of the Village upon receipt of an original copy of the Development Agreement duly executed by the Owner. The Village Manager is authorized to take such further steps and execute any such additional documentation as may be needed to facilitate or implement the terms of the Development Agreement.

SECTION 3. Recordation. The Village Clerk shall be, and is hereby, authorized and directed to record the fully executed Development Agreement on behalf of the Village upon execution by the Village President and attestation by the Village Clerk.

SECTION 4. Effective Date. This Development Agreement shall be in effect upon passage by the President and Board of Trustees of the Village of Lake Zurich by a vote of majority of the corporate authorities then holding office, in the manner required by law.

PASSED THIS _____ day of July, 2025.

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of July, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

EXHIBIT A
Legal Description

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED, (EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCELS INVOLVED: 14-20-400-002, 14-20-400-003

Exhibit B

AN AGREEMENT BY AND BETWEEN THE VILLAGE OF LAKE ZURICH AND SN VENTURE LLC RELATING TO THE DEVELOPMENT OF THE RESERVES OF LAKE ZURICH *(670 South Old Rand Road)*

AN AGREEMENT BY AND BETWEEN
THE VILLAGE OF LAKE ZURICH AND SN VENTURE LLC
RELATING TO THE DEVELOPMENT OF
THE RESERVES OF LAKE ZURICH
(670 South Old Rand Road)

THIS AGREEMENT is made and entered into this _____ day of _____, 2025, by and between the Village of Lake Zurich, a municipal corporation (hereinafter referred to as "Village"); and SN Venture, LLC, an Illinois Limited Liability Company (hereinafter referred to as "Applicant," "Owner" or "Developer").

W I T N E S S E T H:

WHEREAS, the Property which is the subject of this agreement is legally described on Exhibit "A" attached hereto and hereby made a part hereof, hereinafter referred to as the "Subject Property"; and

WHEREAS, Applicant is the legal title holder of the Subject Property, said real property consisting of approximately nine (9) acres of land area, consisting of two (2) parcels and located at 670 South Old Rand Road in the Village of Lake Zurich as described on Exhibit "A"; and

WHEREAS, Applicant wishes to undertake the development of the Subject Property with a mixed-residential subdivision consisting of 18 single-family attached townhomes and 18 single-family detached homes, a central recreational open space, stormwater management facilities and natural open areas including a naturally occurring waterway (the "Development"); and

WHEREAS, the development of the Subject Property as provided herein will promote the sound planning and development of the Village as a balanced community and will be beneficial to the Village; and

WHEREAS, the Village approved a Development Concept Plan for a Planned Unit Development on September 4, 2024, through Lake Zurich Ordinance No. 2024-09-585 entitled "An Ordinance Granting Approval of a Planned Unit Development, Amendment to the Official Zoning Map, Preliminary Plat, Development Concept Plan, Special Use Permits and Modifications to the Zoning and Land Development Code for a Residential Subdivision - OSK Residential Development – 670 South Old Rand Road"; and

WHEREAS, the Village approved the Final Plan for the Planned Unit Development and Final Plat of Subdivision on [Final Plan Approval Date], through Lake Zurich Ordinance No. [Ordinance No.], the documents for such approval being listed in said Ordinance, and are attached hereto and incorporated herein as Exhibit B (collectively the "Approved Development Concept and Final Plan and Final Plat of Subdivision"); and

WHEREAS, the effectiveness of said Ordinance No. [Ordinance No.] is conditioned in part upon the execution and recording of a development agreement for the Mixed-residential

Subdivision in the form of this Agreement and to the satisfaction of the Village, including among other matters the installation of the required public and private improvements; and

WHEREAS, the Village and the Developer desire that the Mixed-residential Subdivision be developed and used only in substantial compliance with this Agreement and in compliance with the Approved Final Plan for the Planned Unit Development, Final Plat of Subdivision and all applicable federal, state, and Village laws, statues, codes, ordinances, resolutions, rules, and regulations ("Requirements of Law").

NOW, THEREFORE, in consideration of the foregoing recitals, which are hereby incorporated into and made a part of this Agreement, and the mutual covenants and agreements set forth below, the Village and the Developer hereby agree as follows:

Section 1. Execution and Recording of this Agreement and Final Plat of Subdivision. Immediately after execution of this Agreement by the Developer, the Village shall affix all required Village signatures and certifications to the Approved Final Plat of Subdivision; provided, however, that no such signatures and certifications shall be affixed by the Village until the Developer shall have (1) obtained all other required approvals, sworn statements, signatures, and certifications on such Final Plat, (2) presented the Village with adequate evidence of merchantable fee simple title to the Mixed-residential Subdivision being vested in the Developer, (3) posted the performance security required pursuant to Section 16 of this Agreement, and (4) deposited with the Village Clerk a sufficient sum, in current funds, to reimburse the Village for the actual cost of recording the Approved Final Plat of Subdivision and this Agreement. After final approval, execution, and certification of the Approved Final Plat of Subdivision by the Village, the Village shall promptly cause the Approved Final Plat of Subdivision and this Agreement to be properly recorded with the Lake County Recorder of Deeds.

Section 2. Back-up Open Space, Stormwater Management, Special Service Area. Promptly after the approval of the Final Plat of Subdivision by the Village, the Village shall give all notices required by, and shall hold public hearings as required and pursuant to the Illinois Special Service Area Tax Law, 35 ILCS 200/27-5 et seq., for the purpose of considering and establishing a back-up special service area exclusively for the subject Subdivision (the "back-up Special Service Area"), for the purpose of generating revenues sufficient to allow the Village to assume the obligations of maintaining repairing and/or replacing within the Subdivision the following: Any common areas/outlots, open space, natural area(s) and waterways, including landscape materials, and stormwater management and stormwater retention/detention areas and facilities, should the Developer and its successors default on its obligations to ensure that these areas and features are timely and properly cared for, maintained and replaced. The Developer agrees to cooperate with the creation of the back-up Special Service Area and shall not, and hereby agrees not to, object to the creation of the back-up Special Service Area. Developer shall include provisions in the Declaration of Covenants, Conditions and Restrictions (the “Declaration”) for the Homeowners Association (defined below) permitting the creation of the Back-Up SSA.

Developer agrees to provide such agreement to cooperate with the creation of the back-up Special Service Area by appropriate written documentation, if so requested by the Village. The Developer shall pay to the Village, immediately upon presentation of a written invoice therefor,

all reasonable legal, engineering, and other consulting or administrative fees, costs, and expenses incurred or accrued for that time spent on work in connection with the review and processing of plans for, and the creation of, the back-up Special Service Area, including without limitation all reasonable costs incurred by the Village for publications and recordings required in connection with the foregoing. The Developer and its successors acknowledge their responsibility to timely pay for the maintenance, repair and/or replacement costs set forth herein, of all property owned by the Developer and its successors, and for all tax levies pursuant to this Special Service Area in the event of the ultimate institution of such Special Service Area.

Developer also agrees to easement rights, including easement language within the Final Plat of Subdivision for the Subject Property for the Village to access the Subject Property for the performance of the above maintenance using the revenues from the backup Special Service Area, including for the common maintenance of the stormwater and any natural resource protection areas within the Subdivision that requires the future owners to maintain the stormwater and any natural resource protection areas, including landscape materials and all other common areas. Such language shall also create the right, without obligation, for the Village to enter the common areas/outlots, open space, natural area(s), and stormwater management and stormwater retention/detention areas and facilities for necessary or emergency maintenance and/or maintain, repair and/or replace and preserve the areas and impose the costs of such work on the homeowners, with lien rights in the event of nonpayment, or by recourse to the imposition of the revenues derived from the backup SSA.

Section 3. Homeowners Association (HOA). The Developer shall establish one or more Home Owners Association(s) (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, to assume the ongoing maintenance, repair and/or replacement responsibilities within the Subdivision, as provided herein. The provisions for such declaration shall be subject to the review and approval of the Village. Developer shall be responsible for the preparation (and submittal to the Village for review and approval) and ultimate recording of an appropriate declaration of covenants, restrictions and easements creating an HOA for the Subdivision.

Section 4. Sidewalk Improvements. Village, Developer and Owner acknowledge and agree that sidewalks and parkway trees are required within and along the right of way as set forth on the Final Plan attached hereto and made a part hereof as Exhibit B (the "Final Plan").

A. Within the Subdivision: The Subject Property, as subdivided and developed by Developer substantially as provided in the Final Plan, is herein referred to as the "Development". Developer agrees to comply with the determination of Village following its receipt of the recommendation of Village to install within the subdivision, the sidewalks in lieu of a cash donation or contribution for sidewalks. Such sidewalks shall be installed in compliance with the applicable standards of Village of Lake Zurich. No final occupancy for a home on any block shall be granted prior to the completion of a sidewalk along the frontage of such home along the street. No home on any block that is granted a temporary occupancy permit shall be occupied for longer than nine (9) months without a sidewalk along that property being completed.

B. Along the frontage of the property with Old Rand Road: A 5-foot wide sidewalk shall be constructed along the frontage of the Subject Property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the Developer to be used by the Village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting Village standards for the length of frontage of the Subject Property where no sidewalk is proposed. Such fee shall be paid in one lump-sum installment prior to the issuance of the Site Engineering Permit.

   A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the Subject Property to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per Village standards and devices to warn of pedestrians within the crosswalk as depicted on the Final Plan.

C. Along the frontage of the property with Buesching Road: Sidewalks along the frontage of Buesching Road shall be constructed in compliance with the approved Final Plan.

D. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

Section 5. Street Improvements: Village, Developer and Owner acknowledge and agree that street improvements are required for the Development.

A. Public Streets: All streets required to provide public street access into and from the Development for general traffic shall be utilized for construction, accessed and maintained in accordance with, and as required by or pursuant to the standards of Village of Lake Zurich. Such streets are designated public streets under the jurisdiction of the Village and include Old Rand Road on the west side of the Development and Buesching Road on the east side of the Development.

   Old Rand Road and Buesching Road that are public rights-of-way and owned and maintained by the Village shall be used to provide access to the Development. It is understood that such roadways will also be used to provide access for construction vehicles, materials and equipment necessary to complete the Development. Upon completion of the development in substantial form, the roadways shall be resurfaced in conformance with the Village standards for roadway re-construction, including but not limited to installation of village utilities, curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village.

   In lieu of the reconstruction of such public roadways, Developer shall reimburse the village for the reconstruction of the two streets along the frontages of the Subject Property at the cost equivalent to $277,000.00, such cost being based on an Engineering opinion of Probable Cost (EOPC) as prepared by the Village Engineer. Such fees are

exclusive of any building permit, connection or impact fees owed to the Village or other governmental agencies. The Village may be reimbursed for this amount as follows:

a. One (1) lump-sum installment for the full amount as outlined in this section; or
b. Individual installments to be paid to the Village prior to the issuance of a building permit for each of the 18 single-family detached and 18 single-family attached residences. The installment for the single-family attached residences shall be paid prior to the issuance of a permit for the building comprising one or more attached residences.

B. All Streets within the boundaries of the Development shall be designated as "private streets" and shall be owned and maintained by the HOA. Such streets shall be constructed by the Developer at its cost and in compliance with the approved Final Plan.

Section 6. Street Lights. Street lights as required by the Final Plan shall be installed by and at the expense of Developer along the private streets in conformance with standards and requirements of Commonwealth Edison (ComEd). Street lights shall be energized prior to the first occupancy permit issued. ComEd has the exclusive right to effect the installation of required streetlights, and ComEd controls the time of commencement of street light installation and completion thereof. Accordingly, if the Developer has paid ComEd in a timely manner and in full for installation of all required street lights, and ComEd delays installation thereof for any reason not attributable to or caused by any act or omission of the Developer, and if, further, such delay by ComEd causes a failure to meet the specified completion date for street light installation, then the Developer shall not be responsible for such failure and the Village shall not penalize the Developer therefor by withholding certificates of occupancy or any other certificates or permits. The Developer and its successors shall be solely responsible for all streetlight installation, energy charges from ComEd or any other source of operation of all street lights within the Subdivision at all times.

Section 7. Water and Sanitary Sewer Service: The Development on the Subject Property shall be connected to public water and sanitary sewer mains/systems. Developer shall be required to construct and install any required extension to the existing water main from the current location of such main(s), bringing the line to the Subject Property from the appropriate location(s) designated by Village. Such water and sewer connections shall be made for any homes to be built on the Subject Property prior to and as a condition of the issuance of an occupancy permit. All connections to said water and sanitary sewer systems shall be made by Developer in accordance with the Final Plan approved by Village, and Developer shall pay all applicable water connection fees to the Village as required by Village Codes. Developer shall additionally pay all applicable Lake County sewer connection fees at rates that are established at the time of requesting such permits.

Developer agrees to connect to Village water and sanitary sewerage systems as required by the codes and ordinances of Village and as set forth on the Final Plan. Village represents and warrants that it owns, operates and maintains (i) a potable water supply and distribution system, and (ii) a sanitary sewer system, each of which systems and mains have, and at all times will have, sufficient capacity to accommodate the anticipated potable water, fire protection and sanitary

sewer needs of the Subject Property and the residents of the Subject Property to the extent that the Subject Property is developed in accordance with the Final Plan. Such Final Plan will be reviewed by the Corporate Authorities of Village, and approved for the development of the Subject Property in accordance with all applicable codes and ordinances. Village agrees that said Final Plan shall include the Final Plat of Subdivision for the Property as required by the terms of Village's Land Development Code. Said Final Plan approval shall be effective for the term as outlined within the provisions contained within the Land Development Code. Developer agrees that no work related to water and sanitary improvements shall commence prior to obtaining approval of the pertinent local, county or state agencies and posting of any required improvement guaranties. No such approval by the pertinent local, county or state agencies and/or posting of the required improvement guaranties by Developer shall delay the permitting or construction described in Section 20 below.

Section 8. Stormwater Improvements: The development on the Subject Property shall be constructed by Developer in compliance with all applicable Village and County stormwater restrictions and requirements in accordance with final engineering plans to be approved by Village.

Section 9. Wetland and Creek Stabilization Improvements: Developer shall complete the restoration of the Wetland areas and creek in compliance with all applicable requirements and standards of the Village and all applicable local, state and federal agencies. Such work shall include, but not be limited to construction aimed at preventing or reversing erosion along the banks and bed of the creek that extends along the northerly portion of the property, through methods involving vegetative stabilization and/or structural stabilization (hard armoring) and other integrated means as necessary. Such work shall commence in conjunction with the earthwork related to the project and completed prior to the construction of homes along the northerly boundary of the wetland areas so as to allow access for equipment and materials used during the stabilization improvements of the creek and its surrounding areas.

Section 10. Impact Fees/Building Permit Fees/Village Fees: Developer shall pay all Development Impact Fees and Contributions, Water and Sanitary Connection Fees, and Building Permit Fees and deposits as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, library impact fees, water and sanitary connection fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building. The fee amount per unit shall be paid as outline in Exhibit C.

Village hereby represents that there are currently no recapture agreements applicable to the Subject Property.

Village agrees that no fee increases or new types or classifications of land development, subdivision, impact or building permit fees, donations, requirements, costs or impositions not in existence as of the date of this Agreement will be imposed upon the Subject Property or Developer in connection with its development of the Subject Property for a period of four (4) years after recording of the Final Plat for the Subject Property. Upon expiration of said four (4) year period, Village may thereafter adopt other and further development fees or requirements or modify any then-existing fees or requirements as long as such fees or requirements are imposed by a Village

ordinance of general applicability. The provisions in this paragraph excludes any sewer connection and other development related fees owed to Lake County, or other fees imposed by governmental agencies not under the control of the Village.

Section 11. Easements: Developer and Owner, with respect to the portion of the Subject Property then owned by such party, shall provide all on-site easements which may be required to enable the Subject Property to receive water and sanitary sewer service and other public utilities, including cable television. Such required easements and easement provisions shall be depicted on the Final Plat. The location for all public improvements, including public utilities, streets, fire protection and emergency services shall be as shown on final engineering plans approved by Village, with all utilities to be placed underground.

Section 12. Final Plan: The Final Plan shall include but not be limited to all final plats of subdivision, final planned unit development plans, final landscape plans, final engineering plans, and final building elevations which are in substantial conformance with the Preliminary Plan and subject to compliance with the Zoning and Land Development Codes and all other documents and reports related to the development. Developer may submit one or more final plats of subdivision for the Subject Property and Village shall approve such final plats of subdivision so submitted provided they are in substantial conformance with the terms and conditions of this Agreement, the Preliminary Plan, and otherwise meet all requirements of the Village Zoning and Land Development Codes, as modified by this Agreement. All final plats of subdivision shall comply with Village Land Development Code in all respects unless specifically stated otherwise in this Agreement, and as indicated on the Preliminary Plan. The final plat(s) of subdivision approved by Village for the Subject Property is/are herein referred to individually and collectively, as the case may be, as the "Final Plat".

Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such plan, or such other time as may be approved by the Village board of trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the planned unit development and all permits based on such approvals; and the manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the planned unit development that have not yet been completed.

Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless for good cause shown, additional time is requested by the Developer, including the submission of a proposed construction schedule and such extension is approved by the Village Staff outlining an alternate construction period as outlined in the Municipal Code. Based on a failure to request and be granted approval by the Village for an extension of time, the Village Board of Trustees shall have the right to draw on the Letter of Credit or other guarantees to complete said Improvements as described in the Final Plan.

Section 13. Plan Changes: Subject to staff review and approval, and without the requirement to amend this Agreement, Developer may construct additional floor plans, models, elevations, and building types so long as they are consistent with Village Municipal Code

Requirements. Any change or modification to the engineering plans and specifications or any change or modification to the building plans or changes in the Preliminary Plan which are determined by the Village Manager (as defined in the Lake Zurich Municipal Code) as: (i) in substantial compliance with the Preliminary Plan or other plans or plats as approved by the Village Board; (ii) in compliance with the Lake Zurich Municipal Code, as amended, except as specifically varied herein; and (iii) in compliance with good engineering practice, are herein referred to as an "Incidental Change." Any change in the product mix set forth in the Preliminary Plan that does not affect the configuration or increase the overall density shall be an Incidental Change hereunder. Incidental Changes may be approved or rejected by the Village Manager without Planning and Zoning Commission or Village Board review or public hearing.

Section 14. Code Compliance: Except state or county mandates which are outside of the control of Village, for a period of two years from the Effective Date of this Agreement, any changes to Village's Building, Plumbing, Electrical, Fire Prevention codes ("Village Codes") shall not be applicable to the development of the Subject Property. In the event that any modifications or amendments to the above referenced codes affecting the Subject Property benefit Developer during the term of this agreement, said modification shall be effective as to the Subject Property.

Section 15. Marketing Signage and Marketing Trailer, Construction and Storage Trailers: Developer may place and utilize one (1) one marketing trailer and one (1) construction supply storage trailer upon such parts of the Subject Property as required for development and/or construction purposes. Developer shall have the right to install and maintain marketing signage per the attached Exhibit D.

Section 16. Subdivision Improvement Guarantee: Developer shall post one or more performance guarantees for the required subdivision improvements and off-site improvements in the form of an irrevocable Letter of Credit (the "Letter of Credit") as determined by the Village in the format attached to this Agreement as Exhibit E and approved by Village. Public and private improvements shall hereinafter be referred to as "Improvements." The amount of the Letter of Credit shall be based on the Village Engineer opinion of the probable cost of the Improvements (the "EOPC") to ensure that the work is being guaranteed to cover the cost of construction of the Development.

Periodic reductions in the guarantee, as the case may be, will be approved by Village based upon the Village Engineer's certification of completion of work on the affected Improvements based upon documentation supplied from time to time by Developer and the inspection of such Improvements by the Village Engineer. The Village Engineer shall notify Developer without unreasonable delay of (1) its certification of the completion of the work on account of which Developer requests a reduction in the Letter of Credit, and any corresponding reduction in the Letter of Credit, or (2) any deficiencies in the work on the affected Improvements or incomplete work on such Improvements, each to be identified with specificity, and detail of all corrections to defective work and/or work to be completed in order to obtain the Village Engineer's certification of completion of the work on the affected Improvements. Any necessary re-inspection shall be completed within fifteen (15) days following notice from Developer to the Village Engineer that it has corrected such deficiencies and/or completed such work, as the case may be.

The Letter of Credit shall be automatically renewed on an annual basis and extended for an additional year until the completion and approval or acceptance of the Improvements, in order to guarantee ongoing work on the Development. Extensions of time to complete the Improvements shall require that the Letter of Credit be renewed automatically for such extended period of time. The amount of such renewal of the Letter of Credit shall be based on an updated EOPC of the then current cost of construction of the remaining Improvements in the Development.

Once complete, Village shall accept the public improvements and maintenance provisions (i.e. underground utilities before road improvements are complete) after such improvements have been installed, tested and approved by Village, and Developer has satisfied the Village's final acceptance and maintenance requirements. No such acceptance of the public improvements by Village and/or posting of the required Letter of Credit by Developer shall hold up the permitting or construction described in Section 20 hereof.

Section 17. Demolition, Soil Erosion Control & Grading Plan Approval (Initial Plans): If separately requested by Developer, and upon review and approval of the Initial Plans and required permits from other local, state and federal agencies, Village shall permit Developer to proceed with site demolition, site clearing (including tree removal) and earthwork prior to the approval of any Final Plans (i.e. Final Subdivision Improvement Plans and Final Plats) provided Developer posts with Village guarantees in the form of a Surety (the "Surety") in the format attached to this Agreement as Exhibit E and approved by Village for such site demolition, site clearing and earthwork in the amount sufficient to restore the affected area, including, without limitation, the costs of erosion control, re-spreading topsoil and seeding the disturbed area. Such Demolition, Soil Erosion Control & Grading Plan Approval (the "Initial Plans") shall only pertain to "mass grading" and not to excavation for the construction and installation of utilities.

Section 18. IEPA Permits. Developer shall prepare and Village will execute (review and provide signature) and return to Developer both IEPA Sanitary Sewer Main Extension and IEPA Water Main Extension Permits ("IEPA Permits") within one (1) week of submittal thereof by Developer, and only upon approval of the Final Plan.

Section 19. Sanitary Sewer and Water Main Improvements: Upon Village review and approval of the Final Utility Plan, the required Letter of Credit described in Section 16 above in the amount of such work contemplated with such improvements, and approval of all necessary permits by the Illinois Environmental Protection Agency (IEPA), Village will allow Developer to install the sanitary sewer main and water main for this Subdivision.

Section 20 Building and Occupancy Permits: The construction of new buildings and structures shall only commence upon issuance of a building permit for such building or structure. Village shall allow the permitting and construction of one or more model homes and/or speculative homes. The model homes may be utilized for the purpose of sales offices. Developer shall have the right to occupy and use said models, as well as their garages, for sales, sales promotions and offices for sales personnel, all as may be desirable or in any way connected with the sales of homes on the Subject Property. Each model and speculative home shall only be allowed for construction after an access roadway constructed to binder course is installed and prior to potable water and

sanitary service being available. Permits for such model and speculative home shall only be issued after Village staff and fire prevention bureau are satisfied that access to these structures is safe and adequate.

No final certificate of occupancy for any new home within the Development shall be issued until compliance with the applicable requirements of this Agreement and until water and sanitary service is connected, inspected and approved by Village.

Section 21. Temporary Certificate of Occupancy. Temporary Certificates of Occupancy for individual residences may be granted only between the months of December and April when the construction of a single-family residence or townhouse building containing multiple attached residences has been completed but, for good cause, minor building and site improvements that are affected by weather conditions, such as seeding or sod, final grading, asphalt or concrete work, or the like, have not been completed. Such temporary certificate of occupancy shall be issued by the Village's Building Official, but only after a request therefor, payment of the required fee, and posting of the required bond. No temporary certificate of occupancy shall be issued except after a finding by the building official that such permit will not adversely affect the health, welfare, or safety of the occupants or the general public. Prior to issuance of a temporary or final certificate of occupancy, permission will not be authorized for any residential structure to be used for human occupancy, or for storage of any furniture, or household belongings within a structure or on the property.

Section 22. Construction Sequencing. Developer shall coordinate the various construction activities, including site clearing, demolition, earthwork, infrastructure installation, and house construction, to minimize disruption on the adjoining roadways and adjacent properties, control erosion and sediment runoff into any adjoining offsite stormwater facilities and waterways, and ensure the safe and efficient completion of the Improvements. Developer shall prepare and provide to the Village a detailed construction sequence schedule in the form of a Gantt chart or similar format that outlines the timeline for all activities beginning with earth-disturbing activities through to completion of the Improvements. Such schedule shall incorporate phasing of site clearing and construction where necessary to limit areas of active earth disturbance around sensitive areas of the site. At all times, the Developer and its contractors shall maintain open communication with the Village and all stakeholders throughout the completion of the Improvements.

Section 23. Pre-construction meeting(s) required. The Village shall require Developer, its general contractor, sub-contractors and trades, to attend one or more pre-construction meetings with and relevant local and municipal representatives to review construction requirements prior to the commencement of any work. Such meeting shall ensure that all permits, agreements and guarantees (Sureties such as Letters of Credit) and applicable fees are in place, including those related to off-site improvements and wetland and creek stabilization. At all times during the project, Developer shall follow the details and requirements as outlined in the pre-construction meeting.

Section 24. Designated Erosion Control Inspector (DECI) required. In conformance with the Designated Erosion Control Inspector (DECI) program of the Lake County Stormwater

Management Commission, the Developer shall employ and assign an independent DECI during the course of completion of the Improvements. The DECI shall serve as the liaison between the Developer and Village's Enforcement Officers (EO) to inspect and report on the status of installed Erosion Control and Sediment Control devices. The DECI shall produce reports on such matters as needed and in the format required by the Village.

Section 25. Inspections of Site and Subdivision Improvements required. During construction of the site or subdivision improvements, the Village Engineer or inspectors designated by the Village shall conduct inspections of the site or subdivision improvements at such times as may be determined appropriate by the Village. At any time that the Village Engineer or inspectors determines that construction is not in compliance with the standards and procedures established herein, the Village shall have the authority to order all work to be stopped at the recommendation of the Village Engineer or inspectors until such time that the work is brought into compliance with the approved Final Plan.

Section 26. Construction Observation. The Village of Lake Zurich shall employ, at Developer's expense, the services of a civil engineer to observe, monitor and inspect certain aspects of the development to ensure that they are being constructed according to the design plans, specifications, and codes. Construction observation will be required for water and sanitary utility construction, construction within the public roadway, stormwater management facility construction, and construction within wetlands or waterways that traverse the Property being developed.

The Village's engineer designated for observation shall visit the site regularly and at a frequency that the Village deems necessary to oversee the progress, check for quality control, resolve any issues, and provide feedback to the Village. This will ensure that the construction project is completed successfully and meets safety, functionality, and the Village's construction, development and compliance standards for those items to be dedicated and accepted by the Village for ownership and maintenance in the long term. The Village shall have the right to increase the frequency of Construction Observation activities should the developer fail to demonstrate that the construction project is being completed safely, in a timely manner and to the Village's construction, development and compliance standards.

The Developer will establish a Ten Thousand and No/100 Dollars ($10,000.00) escrow, which shall be replenished in the event that the balance of such escrow decreases below Five Thousand and No/100 Dollars ($5,000.00), which shall be drawn upon by the Village for its reasonable inspection & review costs incurred pursuant to its duties and obligations relative to construction observation. Any balance of such funds remaining upon completion of all construction observation activities performed in connection with the development of the Subject Property shall be refunded to Developer within thirty (30) days following the completion of all plan reviews and inspections.

Section 27. Site and Surrounding Area Maintenance during Construction. Developer shall at all times during the construction of the project take measures to ensure safety, protect the surrounding environment, and maintain regulatory compliance. Developer shall prepare a plan to implement a regular street sweeping schedule to remove construction debris caused by the project.

Developer shall use appropriate equipment including specialized street sweepers designed to handle construction debris, focus on high-traffic areas, entry/exit points and areas prone to debris accumulation. Developer shall properly dispose of or store on site all construction debris and collected materials. Any subsequent purchasers of all or a portion of the Subject Property (or any of the parcels or any lot created hereunder individually) by purchasing all or any part of the Subject Property shall by such purchase, automatically acknowledge agreement with all of the provisions of this Paragraph, and shall be deemed to have done so without any other confirming documentation.

Section 28. Impact Requirements: Developer and Owner agree that any and all recaptures, contributions, dedications, donations and easements provided for in this Agreement substantially advance legitimate governmental interests of Village including, but not limited to, providing its residents, and in particular the residents of the Subject Property, with access to and use of public utilities, streets, fire protection and emergency services. Developer and Owner further agree that the recaptures, contributions, dedications, donations and easements required by this Agreement are uniquely attributable to, reasonably related to and made necessary by the development of the Subject Property. Developer and Owner agree to waive any possible objections to any of these recaptures, contributions, dedications, donations or easements.

Any subsequent purchasers of all or a portion of the Subject Property (or any of the parcels or any lot created hereunder individually) by purchasing all or any part of the Subject Property shall by such purchase automatically acknowledge agreement with all of the provisions of this Paragraph, and shall be deemed to have done so without any other confirming documentation.

Section 29. Disconnection: The Subject Property is annexed to the Village. Owner and each of their respective successors, heirs, executors and assigns all agree that during the term of this Agreement they will not seek to disconnect any portion or all of the Subject Property or any of the respective parcels from Village, and that they will oppose any disconnection proceeding that may be filed.

Section 30. Warranties and Representations: Developer and Owner, with respect to the portion of the Subject Property then owned by such party, represent and warrant to Village as follows:

A. As of the Execution Date of this Agreement, the legal title holder of record of the Subject Property is as set forth on the first page of this Agreement. As of the Effective Date of this Agreement, Owner and Developer shall have closed the sale of the Subject Property, and Developer shall be the title holder of record of the Subject Property, legal title of which shall be retained by Owner.

B. That other than Developer, Owner and Owner's mortgagee(s), no other entity or person has any interest in the Subject Property or any of the matters as herein proposed.

C. That Developer has provided the legal descriptions of the Subject Property set forth in this Agreement and that said legal descriptions are accurate and correct.

Section 31. General Provisions:

A. Notices: Notice or other writings which any party is required to, or may wish to, serve upon any other party in connection with this Agreement shall be in writing and shall be delivered personally or sent by registered or certified mail, return receipt requested, postage prepaid, or by Federal Express, UPS or other nationally recognized courier, addressed as follows:

(1) If to Village or Corporate Authorities:

Mayor
VILLAGE OF LAKE ZURICH
70 East Main Street
Lake Zurich, Illinois 60047

With a copy to:

Village Manager
VILLAGE OF LAKE ZURICH
70 East Main Street
Lake Zurich, Illinois 60047; and

KLEIN, THORPE AND JENKINS, LTD.
20 North Wacker Drive, Suite 1660
Chicago, Illinois 60606-2903
Attn: Scott Uhler

(2) If to Owner:

[Owner Name]
[Owner Address]

With a copy to:

[Owner's Attorney]
[Owner's Attorney Address]

And to:

[Any additional party Subject to this agreement]

(3) If to Developer:

[Developer Name]
[Developer Address]

With a copy to:

[Developer's Attorney]
[Developer's Attorney Address]

or to such other address as any party may from time to time designate in a written notice to the other parties.

B. Continuity of Obligations:

(1) The provisions of this Agreement shall inure to the benefit of and shall be binding upon Developer and Owner, and each of their respective successors in any manner in title and shall be binding upon Village and the successor Corporate Authorities of Village and any successor municipality. Developer and Owner, with respect to the portion of the Subject Property then owned by such party, and each of their respective successors shall at all times during the term of this Agreement remain liable to Village for the faithful performance of all obligations imposed upon Developer and Owner by this Agreement until such obligations have been fully performed or until Village, at its sole option, has otherwise released Developer and/or Owner from any or all of such obligations.

(2) All terms and conditions of this Agreement shall constitute covenants running with the land and shall bind each subsequent record owner of any portion or all of the Subject Property, including individual lot owners. Nothing contained in this Agreement shall be construed to restrict or limit the right of an owner to sell or convey all or any portion of the Subject Property, whether improved or unimproved. Upon transfer of any or all of the Subject Property, all rights, duties and interest of the legal title owner hereunder with respect to the portion of the Subject Property so conveyed shall run to the benefit of and be binding upon owner's successors in interest, and such owner's obligations under this Agreement with respect to the portion of the Subject Property so conveyed shall terminate; provided, however, that solely with respect to transfer by Developer of any undeveloped portion of the Subject Property, or other applicable development security with respect to such undeveloped portion of the Subject Property so conveyed are posted by the new owner and/or developer and are approved and accepted by Village, which approval and acceptance shall not be unreasonably withheld, conditioned and/or delayed. In the event of any sale, transfer or assignment of all or any part of the Subject Property by Developer to another builder or developer for the purposes of building and development, such subsequent owner, builder or developer shall be entitled to all rights and benefits with respect to such portion of the Subject Property conveyed to such subsequent owner, builder or developer, as the case may be.

(3) Owner has executed this Agreement as the legal title holder of the Subject Property on the Execution Date and, following the closing with Developer and at the time that this Agreement is recorded, and not as the developer. Accordingly, Village hereby agrees and acknowledges that Owner shall have no obligations hereunder, including, without limitation, no obligation to develop the Subject Property and/or to construct any improvements thereon, all of which development obligations rest solely with Developer. [In no event shall: (a) a default by Developer hereunder be deemed a default by Owner hereunder; and (b) a default by Owner hereunder be deemed a default by Developer hereunder.]

C. Court Contest: In the event that the development of the Subject Property or other terms of this Agreement are challenged in any court proceeding, the period of time during which such litigation is pending, including (without limitation) the appeal time therefor, shall not be included, if allowed by law, in calculating the twenty (20) year period provided in subparagraph O below.

D. Remedies: Village, Developer and Owner, and each of their respective successors and assigns, covenant and agree that in the event of default of any of the terms, provisions or conditions of this Agreement by any of the parties, or their successors or assigns, which default exists uncorrected for a period of ten (10) days after written notice to any party to such default, the party seeking to enforce said provision shall have the right of specific performance and if said party prevails in a court of law, it shall be entitled to specific performance. It is further expressly agreed by and between the parties hereto that the remedy of specific performance herein given shall not be exclusive of any other remedy afforded by law to the parties, or their successor or successors in title. [In no event shall: (a) a default by Developer hereunder be deemed a default by Owner hereunder and Owner shall not be liable for any default of Developer; and (b) a default by Owner hereunder be deemed a default by Developer hereunder and Developer shall not be liable for any default of Owner.]

E. Survival of Representations: The parties agree that the representations, warranties and recitals set forth in the preambles to this Agreement are material to this Agreement and the parties hereby confirm and admit their truth and validity and hereby incorporate such representations, warranties and recitals into this Agreement and the same shall continue during the period of this Agreement.

F. Captions and Paragraph Headings: The captions and paragraph headings used herein are for convenience only and are not a part of this Agreement and shall not be used in construing it.

G. No Waiver or Relinquishment of Right to Enforce Agreement: Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements and conditions herein contained, or any of them, upon the other party imposed, shall not constitute or be construed as a waiver or relinquishment of either party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.

H. Village Approval or Direction: Where Village approval or direction is required by this Agreement, such approval or direction means the approval or direction of the Corporate Authorities of Village unless otherwise expressly provided herein or required by law, and any such approval may be required to be given only after and if all requirements for granting such approval have been met unless such requirements are inconsistent with the express provisions of this Agreement.

I. Recording: This Agreement, and any subsequent amendments thereto shall be recorded by Village in the office of the Recorder of Deeds in Lake County, Illinois at the expense of Village.

J. Amendment: This Agreement sets forth all the promises, inducements, agreements, conditions and understandings between the parties relative to the subject matter thereof, and there are no promises, agreements, conditions or understandings, either oral or written, express or implied, between them, other than are herein set forth. Except as herein otherwise provided, no

subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the parties hereto unless authorized in accordance with law and reduced in writing and signed by them.

K. Counterparts: This Agreement may be executed in two (2) or more counterparts, each of which taken together, shall constitute one and the same instrument.

L. Conflict: In the event of a conflict in the provisions of the text of this Agreement and the Exhibits attached hereto, the text of the Agreement shall control and govern. In the event that any regulations, resolutions, or ordinances of Village are inconsistent with or conflict with the terms or provisions of this Agreement, the terms or provisions of this Agreement shall supersede the regulations, resolutions, or ordinances in question to the extent of such inconsistency or conflict.

M. Definition of Village: When the term Village is used herein it shall be construed as referring to the Corporate Authorities of Village unless the context clearly indicates otherwise.

N. Execution of Agreement: This Agreement shall be signed last by Village and the President of Village shall affix the date on which he or she signs this Agreement on Page 1 hereof, which date shall be the Execution Date of this Agreement. The Effective Date of this Agreement shall be the date set forth in Section 1 above.

O. Term of Agreement: Subject to the terms set forth in Section 1 hereof, this Agreement shall be in full force and effect for a term of twenty (20) years from and after the Execution Date of this Agreement.

P. Mutual Assurances. The parties agree to do all things necessary and appropriate to carry out the terms and conditions of this Agreement and to aid and assist each other in furthering the intent of the parties as reflected by the terms of this Agreement, including without limitation, the holding of public hearings, enactment by Village of such resolutions and ordinances as are required herein, the execution of permits, applications and agreements and the taking of such other actions as may be necessary to enable the parties to comply with the terms and provisions of this Agreement. Owner shall have no liability, obligation or expense payments related to such mutual assurances and cooperation.

Q. Cooperation. Village, Developer and Owner shall do all things necessary or appropriate to carry out the terms and provisions of this Agreement and to aid and assist each other in carrying out the terms and objectives of this Agreement and the intentions of the parties as reflected by said terms, including the terms of the any ordinance passed concurrently herewith. Village, Developer and Owner shall act in good faith, reasonably and promptly with respect to all consents, approvals and actions required or requested of it or taken by it hereunder or in connection with the development of the Subject Property. During the term of this Agreement, Developer and Owner, with respect to that portion of the Subject Property then owned by it, may continue the current uses on the Subject Property including farming and general agricultural uses as to those portions of the Subject Property not then developed. Owner shall have no liability, obligation or expense payments related to such mutual assurances and cooperation.

R. Limited Rights/Obligation of Owner. Owner has executed this Agreement as the current legal title holder of the Subject Property and, following the closing with Developer and at the time that this Agreement is recorded, and not as the developer. Accordingly, Village hereby agrees and acknowledges that Owner shall have no obligations hereunder, including, without limitation, no obligation to develop the Subject Property and/or to construct any improvements thereon, all of which development obligations rest solely with Developer.

S. Reimbursement to Village for Legal and Other Fees and Expenses:

To Effective Date of Agreement: Developer, concurrently, with the approval of this Agreement, shall reimburse Village for the following expenses incurred in the preparation and review of this Agreement, and any ordinances, letters of credit, plats, easements or other documents relating to the Subject Property:

(a) The costs incurred by Village for engineering services;
(b) The costs incurred by Village for establishing the backup (dormant) Special Services Area (SSA) on the Subject Property;
(b) All attorneys' fees incurred by Village in connection with this Agreement and the zoning approvals of the Subject Property; and
(c) Miscellaneous Village expenses, such as but not limited to legal publication costs, recording fees, consultant fees and copying expenses.

In the event Developer fails to pay any such amounts, Owner shall have no liability related thereto.

From and After Effective Date of Agreement: Except as otherwise expressly provided in the paragraph immediately following this paragraph, upon written demand by Village made by and through its Mayor, Developer from time to time but not more frequently than once a month shall promptly reimburse Village for all expenses and costs incurred by Village in the administration of this Agreement, including engineering fees, inspection fees, as required, attorneys' fees and out-of-pocket expenses involving various and sundry matters such as, but not limited to, preparation and publication, if any, of all notices, resolutions, ordinances and other documents required hereunder. In the event Developer fails to pay any such amounts, Owner shall have no liability related thereto.

Notwithstanding the immediately preceding paragraph, Developer shall in no event be required to reimburse Village or pay for any expenses or costs of Village as aforesaid more than once, whether such are reimbursed or paid through special assessment proceedings, through fees established by Village ordinances or otherwise.

Such costs and expenses incurred by Village in the administration of this Agreement shall be evidenced to Developer upon its request, by a sworn statement of Village; and such costs and expenses may be further confirmed by Developer at its option from additional documents designated from time to time by Developer relevant to determining such costs and expenses.

In any event that any third party or parties institute any legal proceedings against Owner, Developer and/or Village, which relate to the terms of this Agreement, then, in that event,

Developer, on notice from Village shall assume, fully and vigorously, the entire defense of such lawsuit and all expenses of whatever nature relating thereto; provided, however:

(a) Developer shall not make any settlement or compromise of the lawsuit, or fail to pursue any available avenue of appeal of any adverse judgment, without the approval of Village.

(b) If Village, in its sole discretion, determines there is, or may probably be, a conflict of interest between Village and Developer, on an issue of importance to Village having a potentially substantial adverse effect on Village, then Village shall have the option of being represented by its own legal counsel. In the event Village exercises such option, then Developer shall reimburse Village, from time to time on written demand from the Mayor of Village and notice of the amount due, for any expenses, including but not limited to court costs, attorneys' fees and witnesses' fees, and other expenses of litigation, incurred by Village in connection therewith.

In the event Village institutes legal proceedings against Developer and/or Owner for violation of this Agreement and secures a judgment in its favor, the court having jurisdiction thereof shall determine and include in such judgment all expenses of such legal proceedings incurred by Village, including but not limited to the court costs and attorneys' fees, witnesses' fees, etc., incurred by Village in connection therewith (and any appeal thereof). Developer and/or Owner, as the case may be, may, in the sole discretion of such party, appeal any such judgment rendered in favor of Village against Developer and/or Owner. Owner shall have no liability related to any obligations of and/or legal proceedings against Developer for violation of this Agreement or any obligations, acts or omissions of Developer hereunder.

T. Land Trustee Exculpation. This instrument is executed by the undersigned Land Trustee, not personally but solely as Trustee in the exercise of the power and authority conferred upon and vested in it as such Trustee. It is expressly understood and agreed that all the warranties, indemnities, representations, covenants, undertakings and agreements herein made on the part of the Trustee are undertaken by it solely in its capacity as Trustee and not personally. No personal liability or personal responsibility is assumed by or shall at any time be asserted or enforceable against the Trustee on account of any warranty, indemnity, representation, covenant, undertaking or agreement of the Trustee in this instrument.

(Signature pages follow)

IN WITNESS WHEREOF, the parties hereto have set their hands and seals to this Agreement on the day and year first above written.

VILLAGE OF LAKE ZURICH,
an Illinois municipal corporation

By: _____
Village Mayor

ATTEST:

By: _____
Village Clerk

Owner:

[Owner Name and address

By: _____
Name: _____
Title: _____

Developer:

[Developer Name and Address]
an Illinois corporation/partnership

By: _____
Name: _____
Title: _____

VILLAGE ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____ and _____, respectively the Lake Zurich Village Mayor and Village Clerk, are personally known to me to be the same persons whose names are subscribed to the foregoing instrument, and that they appeared before me this day in person and severally acknowledged that they signed and delivered the said instrument and caused the corporate seal of said municipal corporation to be affixed thereto, pursuant to authority given by the Board of Trustees of said municipal corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

OWNER ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____, the owner, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument as such _____, and that he appeared before me this day in person and acknowledged that he signed and delivered the said instrument as his/her free and voluntary act, and as the free and voluntary act of said company, as trustee as aforesaid, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

DEVELOPER ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____, the [title] of _____, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument as such _____, and that he appeared before me this day in person and acknowledged that he signed and delivered the said instrument as his free and voluntary act, and as the free and voluntary act of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

EXHIBIT LIST

A. Legal Description
B. Final Plan Documents
C. Impact Fees/Building Permit Fees/Village Fees
D. Marketing Signage and Marketing Trailer, Construction and Storage Trailers
E. Letter of Credit Format

EXHIBIT A
LEGAL DESCRIPTION

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED, (EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCELS INVOLVED: 14-20-400-002, 14-20-400-003

Exhibit B. Final Plan Documents

a. Final Plan Submittal prepared by Pappageorge Haymes Partners dated February 14, 2025 consisting of the following exhibits:
Final Plat of Subdivision. Final Plat of Subdivision for The Reserves of Lake Zurich prepared by Vanderstappen Land Surveying, Inc. dated June 9, 2025.
Architectural Exhibits: Last Revised June 16, 2025
   i. Cover and Index – Sheet A00
   ii. Architectural Renderings – Sheets A01-A04
   iii. Current Site Plan – Sheet A05
   iv. Plat of Subdivision – Sheet A06
   v. Single-family Home Plans and Elevations – Sheets A07-A08
   vi. Row Home (multiple-family) Plans and Elevations – Sheets A09-A11
Landscape Plans – last updated February 14, 2025
   i. Landscape Plan – Sheet L100
   ii. Landscape Details – Sheet L200
Civil Plans – last updated June 16, 2025
   i. Cover, existing conditions and notes – C000-C002
   ii. Site Demolition Plan – Sheets C100-C103
   iii. Site Geometry Plan – Sheets C200-C203
   iv. Site Utility Plan – Sheets C300-C303
   v. Utility Annotation Details – C304-C308
   vi. Sanitary Profiles – C309-C315
   vii. Water Profiles – C315-C323
   viii. Grading and Paving Plan – Sheets C400-C403
   ix. Grading Detail – Sheets C404-C408
   x. Soil Erosion & Sediment Control Plan – Sheets C500-C503
   xi. Operation and Maintenance Plan – C600
   xii. Site work details – Sheets C700-C706
Civil Exhibits last updated June 16, 2025
   i. Stormwater related exhibits – CX-1 through CX-6
   ii. Fire Hydrant coverage and truck turning exhibits – CX-7, CX-8
   iii. Phasing Exhibit – CX-9

b. Retaining Wall Plans, prepared by Virgilio & Associates dated May 30, 2025.

c. Stormwater Management Report, prepared by Eriksson Engineering Associates, Ltd. last revised on June 16, 2025.

d. Stormwater Maintenance Plan, prepared by Eriksson Engineering Associates, Ltd. dated June 16, 2025.

e. Creek Restoration & Revegetation Plan comprised of USACE Nationwide 13 Preconstruction Notification (670 S. Old Rand Road), prepared by Gary R. Weber Associates, Inc. dated June 9, 2025.

f. Civil Stormwater Permit Applications
   i. NPES NOI
   ii. WDO Permit Application

g. EOPC prepared by Eriksson Engineering, dated June 16, 2025.

h. Drain Tile Study prepared by Huddleston McBride, dated June 4, 2025.

i. Site Lighting exhibits including the following:
   i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
   ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).

j. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022, indicating the trees proposed to be removed and those to be preserved.

k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

l. Traffic Control Details

Exhibit C. Impact Fees/Building Permit Fees/Village Fees

A. School district Impact fees:

For attached single-family townhouses

a.	1-2-bedroom unit	$795.00
b.	3-bedroom unit	$1,275.00
c.	4-bedroom unit	$2,445.00

For detached single-family homes

a.	1-3-bedroom unit	$2,545.80
b.	4-bedroom unit	$4,336.95
c.	5-bedroom unit	$5,206.50

B. Library district impact fees - Ela Area Public Library - $120 per unit regardless of number of bedrooms

Village of Lake Zurich does not collect these fees, rather requires that the developer pay them directly to the respective school and library district and provides the village with proof of payment.

C. Lake Zurich Park Impact fees

For attached single-family townhouses

a.	1-bedroom unit	$2,700.00
b.	2-bedroom unit	$5,166.00
c.	3-bedroom unit	$6,598.80
d.	4-bedroom unit	$9,540.00

For detached single-family residences

a.	2-bedroom unit	$3,636.00
b.	3-bedroom unit	$6,921.00
c.	4-bedroom unit	$8,118.00
d.	5-bedroom unit	$10,044.00

Village of Lake Zurich collects these at the time of requesting permits for construction of the buildings. These fees are collected in addition to the plan review and building permit fees.

D. CLC-JAWA Connection Fee. $3,500. The Village of Lake Zurich is in the process of transferring to Lake Michigan water supply over the next five years. As such all new water connections are subject to this fee.

E. Building Fees/Village Fees. Refer to Title 13 of the Lake Zurich Municipal Code for all Building Permit Fees. All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

Exhibit D.
Marketing Signage and Marketing Trailer, Construction and Storage Trailers

Marketing Signage Requirements. Also known as Real Estate Activity Signs (Title 12 of the Lake Zurich Municipal Code)

12. Real Estate Activity Sign
When a structure or lot is offered for sale, lease, or rent, such lot is permitted an additional temporary sign as follows:

a. Real estate activity signs are permitted in all districts. Real estate signs must be located on the site of the property for sale, lease, or rent.

b. Real estate signs are limited to one per street frontage.

c. Real estate activity signs may be constructed as either freestanding, wall, or window signs.

d. Real estate activity signs are limited to 16 square feet in residential districts and 32 square feet in all other districts.

e. Freestanding signs are limited to five feet in height and must be located within five feet from any lot line.

f. Real estate activity signs may not be illuminated.

g. Real estate activity signs must be removed within five days of final closing, lease, or rental. If such real estate signs are used in conjunction with a promotional event related to the sale, lease or rent, such signs may be installed 48 hours prior to event and must be removed within 24 hours of the end of the event.

Marketing Trailer, and Construction and Storage Trailers must be located designed and operated in conformance with the 2018 Building Codes adopted by the Village of Lake Zurich.

Exhibit E. Letter of Credit Format

SAMPLE LETTER OF CREDIT

DATE OF ISSUE:[Date]	IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER [*] DATE AND PLACE OF EXPIRY: [1 YEAR FROM ISSUE DATE, TO BE INSERTED AT TIME OF ISSUANCE]
APPLICANT: [Developer Name] [Developer Address]	BENEFICIARY: VILLAGE OF LAKE ZURICH 70 EAST MAIN STREET LAKE ZURICH, IL 60047
ADVISING BANK: [Name of Bank if Applicable]	AMOUNT: $[Insert LOC amount here) (in U.S. DOLLARS)

WE, [Bank Name] (THE "BANK"), HEREBY ISSUE TO THE VILLAGE OF LAKE ZURICH, 70 EAST MAIN STREET, LAKE ZURICH, IL 9THE BENEFICIARY) THIS IRREVOCABLE LETTER OF CREDIT NUMBER [ ]* (THE "LETTER OF CREDIT"), IN THE AGGREGATE AMOUNT USD[$] AVAILABLE WITH [Bank Name] AGAINST PRESENTATION OF THE FOLLOWING DOCUMENTS:

1. BENEFICIARY'S SIGNED DRAFT AT SIGHT DRAWN ON [Bank Name], BEARING THE CLAUSE "DRAWN UNDER [Bank Name] LETTER OF CREDIT NO.[*] DATED [*]."

2. BENEFICIARY'S CERTIFICATE SIGNED BY THE VILLAGE CLERK OF VILLAGE OF LAKE ZURICH, STATING EITHER:
(A) THAT SAID LETTER OF CREDIT IS ABOUT TO EXPIRE AND HAS NOT BEEN EXTENDED; OR (B) THAT WORK HAS NOT BEEN COMPLETED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND AGREEMENTS (INCLUDING ANY AMENDMENTS THEREOF) FOR THE FOLLOWING PROJECT:

(The "Project")
[describe the project, location, type of land use, number of units, etc., in one or 2 sentences]

AND

3. THE ORIGINAL OF THIS LETTER OF CREDIT AND ALL AMENDMENTS, IF ANY.

THIS IRREVOCABLE LETTER OF CREDIT SHALL EXPIRE ON *[expiration date]; PROVIDED, HOWEVER, THE UNDERSIGNED SHALL SEND THE VILLAGE CLERK, BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED, OR OVERNIGHT COURIER AT LEAST 35 DAYS PRIOR TO THE EXPIRATION DATE THAT SAID LETTER OF CREDIT IS ABOUT TO EXPIRE. IN NO EVENT SHALL THIS IRREVOCABLE LETTER OF CREDIT OR THE OBLIGATIONS CONTAINED HEREIN EXPIRE EXCEPT UPON SAID PRIOR WRITTEN NOTICE, IT BEING EXPRESSLY AGREED BY THE UNDERSIGNED THAT THE ABOVE EXPIRATION DATE SHALL BE EXTENDED AS SHALL BE REQUIRED TO COMPLY WITH THIS NOTICE PROVISION.

THE EXPIRATION DATE OF THIS STANDBY LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR SUCCESSIVE ONE YEAR PERIODS, UNLESS ISSUER NOTIFIES BENEFICIARY BY REGISTERED MAIL OR OTHER RECEIPTED MEANS OF DELIVERY SENT TO BENEFICIARY'S ABOVE STATED ADDRESS SIXTY (60) OR MORE DAYS BEFORE THE THEN CURRENT EXPIRATION DATE THAT ISSUER ELECTS NOT TO EXTEND THE EXPIRATION DATE.

PARTIAL AND MULTIPLE DRAWS ARE PERMITTED. FOLLOWING ANY PARTIAL DRAW HONORED BY US, WE WILL ENDORSE THIS LETTER OF CREDIT AND RETURN THE ORIGINAL TO THE BENEFICIARY BY OVERNIGHT COURIER SERVICE, PROVIDED THERE IS A BALANCE AND THE LETTER OF CREDIT HAS NOT EXPIRED.

THE UNDERSIGNED FURTHER AGREES THAT THIS IRREVOCABLE LETTER OF CREDIT SHALL REMAIN IN FULL FORCE AND EFFECT AND PERTAIN TO ANY AND ALL AMENDMENTS OR MODIFICATIONS WHICH MAY BE MADE FROM TIME TO TIME TO THE PLANS, SPECIFICATIONS AND AGREEMENTS FOR THE PROJECT, WITHOUT NOTICE FROM THE VILLAGE OF SUCH AMENDMENTS OR MODIFICATIONS.

ALL BANKING CHARGES ASSOCIATED WITH THIS LETTER OF CREDIT ARE FOR THE ACCOUNT OF THE APPLICANT.

THIS LETTER OF CREDIT SETS FORTH IN FULL THE TERMS OF OUR UNDERTAKING, AND SUCH UNDERTAKING SHALL NOT IN ANY WAY BE MODIFIED, AMPLIFIED OR LIMITED BY REFERENCE TO ANY DOCUMENT, INSTRUMENT OR AGREEMENT REFERRED TO IN THIS STANDBY LETTER OF CREDIT, EXCEPT ONLY ISP98 REFERRED TO HEREIN, AND ANY SUCH REFERENCE SHALL NOT BE DEEMED TO INCORPORATE HEREIN ANY SUCH DOCUMENT, INSTRUMENT OR AGREEMENT.

ALL ACTS, REQUIREMENTS AND OTHER PRECONDITIONS FOR THE ISSUANCE OF THE IRREVOCABLE LETTER OF CREDIT HAVE BEEN COMPLETED.

THE BANK HEREBY UNDERTAKES AND ENGAGES THAT ALL DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT WILL BE DULY HONORED IF PRESENTED TO [Bank Name] BY 4:00 PM CENTRAL TIME ON OR BEFORE THE THEN CURRENT EXPIRY DATE. IF, WITHIN TEN (10) DAYS OF THE DATE ANY DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT IS PRESENTED, WE FAIL

TO HONOR THE DRAWING, WE AGREE TO PAY ALL REASONABLE ATTORNEY FEES, COURT COSTS AND OTHER EXPENSES INCURRED BY THE VILLAGE OF LAKE ZURICH, IN ENFORCING THE TERMS OF THIS LETTER OF CREDIT.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES 1998 ("ISP98"), INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 590.

PLEASE ADDRESS ALL CORRESPONDENCE REGARDING THIS LETTER OF CREDIT TO [Bank Name] REFERENCING THE LETTER OF CREDIT NUMBER MENTIONED ABOVE. FOR TELEPHONE ASSISTANCE, PLEASE CONTACT [Bank representative at Phone Number] OR BY EMAIL TO [email address]

At the Heart of Community

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

APPLICATION PZC 2025-04 **AGENDA ITEM 3.A**
PZC Meeting Date: March 19, 2025

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
David Modrzejewski, Building Services Supervisor

Date: March 19, 2025

Re: PZC 2025-04: Final Plan Approval for 670 South Old Rand Road
Mixed Residential Development by OSK Capital Partners LLC

SUBJECT

Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, (the "Applicant") requests Final Plan Approval of a Planned Unit Development for a new residential subdivision for the property at 670 South Old Rand Road. The property is an assemblage of two parcels containing 9-acres located between North Old Rand Road and Buesching Road, and legally described in Exhibit A attached hereto (the "Subject Property").

OSK Capital Partners, LLC is the contract purchaser of the property. The owner of the property is Mr. Henry C. Joern of Ingleside, IL.

GENERAL INFORMATION

Requested Action:	Final Plan Approval for a Planned Unit Development
Current Zoning:	R-6 Multiple Family Residential District OS Open Space District
Current Use:	Unimproved Land & Single-Family Residence

Staff Report **Community Development Department**
APPLICATION PZC 2025-04 **PZC Meeting Date: March 19, 2025**

Proposed Use: Single-Family Homes and Residential Townhomes

Property Location: 670 South Old Rand Road

Applicant: Lawrence M. Freedman, representing OSK Capital Partners, LLC

Owner: Henry C. Joern

Staff Coordinator: Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Ordinance No. 2024-09-585
D. Site Photos
E. Aerial Map
F. Zoning Map
G. Parcel Map
H. Development Application and Attachments
I. Development Review Comments

BACKGROUND

Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, (the "Applicant")"), is seeking Final Plan Approval for the proposed Planned Unit Development located on the east side of Old Rand Road near the intersection with Buesching Road, at 670 South Old Rand Road, and legally described in Exhibit A attached hereto (the "Subject Property"). The Applicant filed an application with the Village of Lake Zurich (the "Application") seeking:

- Final Plan Approval for a Planned Unit Development (PUD) to develop the property with multiple-family residences and single-family homes.

The Subject Property is located within the Village's R-6 multiple family residential District and OS open space district.

The submitted plans propose a redevelopment of the existing site with a mix of detached single-family homes and attached single-family townhouses within the area rezoned within the R-6 multiple-family residential district through Ordinance No. 2024-09-585. The development will also include a private road system with access points from South Old Rand and South Buesching Road to ensure connectivity. Additionally, the plans incorporate significant infrastructure enhancements, such as water and sewer improvements, on-site streetlighting, pedestrian pathways, and landscaping upgrades.

The Subject Property also includes an approximately 2-acre greenspace, rezoned within the OS open space district through Ordinance No. 2024-09-585, encompassing the wetland and creek area while preserving the required 50-foot buffer. The development proposes the stabilization of the streambanks of the creek that flows this area of the development.

Pursuant to public notice published on March 1, 2025, in the Daily Herald, a public meeting was scheduled with the Lake Zurich Planning & Zoning Commission for March 19, 2025, to consider the Final Plan. On February 28, 2025, the Village posted a public hearing sign on the Subject Property (Exhibit B).

Prior Development Concept Plan (Preliminary Plan) Approval:

On September 3, 2024, the Applicant was granted Development Concept Plan (Preliminary Plan) approval for the development through Ordinance No. 2024-09-585 entitled "An Ordinance Granting Approval of a Planned Unit Development, Amendment to the Official Zoning Map, Preliminary Plat, Development Concept Plan, Special Use Permits and Modifications to the Zoning and Land Development Code for a Residential Subdivision." The ordinance specifically granted the following zoning approvals:

1. An amendment to the Zoning Map of the Village of Lake Zurich to rezone the Subject Property from R-1/2 Single-Family Residential District to R-6 Multiple Family Residential District, and OS Open Space District, in accordance with the procedure and standards set forth in Chapter 18, Section 9-18-2 entitled "Procedure" and 9-18-3 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Amendments," including general conformance with the Comprehensive Plan for this Subject Property and the Village of Lake Zurich subject to the PUD and Development Concept Plan for the property; and

2. The PUD and Development Concept Plan for the Property to authorize a residential subdivision in accordance with the standards for the grant of a special use set forth at Chapter 19, Section 9-19-3 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Special Use Permits," in accordance with the procedures for a planned unit development concept plan set forth at Chapter 22, Section 9-22-4 of the Zoning Code of the Village of Lake Zurich and in accordance with the standards for the grant of a planned unit development set forth at Chapter 22, Section 9-22-5 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Planned Unit Developments"; and

3. Specific conditions for approval related to the development concept plan, including the following:

    a. Substantial conformance with the submitted documentation as part of the application subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies.

b. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition.

c. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

d. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

e. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east, south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

f. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

g. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

h. The Developer shall establish a Home Owners Association (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space. The provisions for such HOA shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

i. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

j. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

k. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

l. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

m. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

n. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:

- Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

o. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building.

p. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

The following modifications to the Zoning and Land Development Code were granted as follows:

i. The Applicant is granted a modification to Sections 9-3-11.B.2 which provides for a minimum lot area per unit of no more than 5,000 square feet, said modification authorizing the construction of new single-family residential buildings with a minimum lot area of 4,680 square feet for the northwesterly units, 4,455 square feet for the northeasterly units, and 3,680 square feet for the six easterly units facing Buesching Road.

ii. The Applicant is granted a modification to Sections 9-3-11.B.3 which provides for a minimum lot width of 75 feet, said modification authorizing the construction of new single-family residential buildings with a minimum lot width of 44.82 feet for the northerly units and 31.8 feet for the six easterly units facing Buesching Road.

iii. The Applicant is granted a modification to Sections 9-3-11.C.2.b which provides for a minimum interior side yard of 7 feet, said modification authorizing the construction of new single-family residential buildings with a minimum side yard of 4 feet for garages on the northerly lots (the principal residences meet the setback requirement of 7 feet), and 4 feet for the garages and single-family residential units for the six easterly units facing Buesching Road.

iv. The Applicant is granted a modification to Sections 9-3-11.E.7 which provides for Front and Corner Side Yard Adjustment Next to Existing Structures (otherwise known as Average setbacks), which is 51 feet for its frontage along Old Rand Road, and 24

feet for lots frontage along Buesching Road, said modification authorizing the location of the single-family buildings along Old Rand Road with a setback of 27 feet for the northerly lots and authorizing the location of the single-family buildings along Buesching Road with a setback of 25 feet.

v. The Applicant is granted a modification to Sections 9-3-11.C.3 which provides for a minimum rear yard of 30 feet, said modification authorizing the construction of the principal building on the northerly lots with a minimum rear yard setback of 2o feet. The principal buildings on the easterly lots facing Buesching Road will meet the requirements of the code with a rear yard setback of 40 feet.

A Copy of Ordinance No. 2024-09-585 containing the terms and conditions of the development is attached for reference as **Exhibit C**. The video stream of the Village Board meeting when the approval was granted can be viewed at the following link:
VillageBoardMeeting-09-03-2024

Staff additionally offers the following additional information:

A. **PZC Recommendation for Approval of the Development Concept Plan.** The Development Concept Plan was presented to the Planning and Zoning Commission at a public hearing on June 19, 2024, and the discussion was continued to the next meeting on July 17, 2024. The videos from the PZC meetings can be viewed at the following links:
Planning&ZoningCommissionMeeting-06-19-2024
Planning&ZoningCommissionMeeting-07-17-2024

B. **Zoning District**. The property is located in the R-6 Multiple Family Residential District and the OS Open Space District. The R-6 district is intended to function principally as a transition between single-family detached houses and other zoning districts and to provide for lower density townhouse and two-family building types, which may result in higher densities than in single-family developments. The wetland area of the Subject Property is designated within the OS district and will be preserved and maintained.

GENERAL FINDINGS

Staff of the Community Development Department and its Development Review Team (DRT) have evaluated the Final Plan in accordance with the requirements for evaluation provided within Section 9-11-4.C entitled “Final Plan.”

The final plan is intended to particularize, refine, and implement the development concept plan and to serve as a complete, thorough, and permanent public record of the planned unit development and the manner in which it is to be developed. Such final plan is required to be in substantial conformity with the approved development concept plan.

Staff Report
APPLICATION PZC 2025-04

Community Development Department
PZC Meeting Date: March 19, 2025

Evaluation of the Final Plan:
Per the requirements of the zoning code, the Planning and Zoning Commission (PZC), with the assistance and advice of village staff and consultants (DRT) is required to review and act on the plan. The PZC is required to consider:

1. Whether the final plan is in substantial conformity with the approved development concept plan; and
2. The merit or lack of merit of any departure of the final plan from substantial conformity with the approved development concept plan; and
3. Whether the final plan complies with any and all conditions imposed by approval of the development concept plan; and
4. Whether the final plan complies with the provisions of this zoning code and all other applicable federal, state, and village codes, ordinances, and regulations.

RECOMMENDATION

The recommendation of the Planning and Zoning Commission should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-11-4.C Final Plan

Staff of the Community Development Department recommends the approval of PZC 2025-04, subject to the following conditions:

1. Substantial conformance with the following documentation submitted as part of the application subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
   b. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
   c. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
   d. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners dated February 14, 2025 consisting of the following exhibits:
      Architectural Exhibits:
      i. Cover and Index – Sheet A00
      ii. Architectural Renderings – Sheets A01-A04
      iii. Current Site Plan – Sheet A05
      iv. Plat of Subdivision – Sheet A06
      v. Single-family Home Plans and Elevations – Sheets A07-A08
      vi. Row Home (multiple-family) Plans and Elevations – Sheets A09-A11
      Civil Exhibits
      vii. Site Demolition Plan – Sheets C100-C103
      viii. Site Geometry Plan – Sheets C200-C203

ix. Site Utility Plan – Sheets C300-C303
x. Grading and Paving Plan – Sheets C400-C403
xi. Grading Detail – Sheets C404-C406
xii. Soil Erosion & Sediment Control Plan – Sheets C500-C503
xiii. Site work details – Sheets C600-C603

Landscape Exhibits

xiv. Landscape Plan – Sheet L100
xv. Landscape Details (Sheet L200

e. Civil Stormwater Permit Applications
   i. NPES NOI
   ii. WDO Permit Application
f. Site Development Budget (EOPC) prepared by McShane Construction Company, dated May 9, 2024.
g. Site Lighting exhibits including the following:
   i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
   ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
h. Boundary and Topographic Survey prepared by Vanderstappen Land Surveying, Inc, dated January 21, 2025.
i. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.
j. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.
k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

2. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east,

south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

8. The Developer shall establish a Home Owners Association (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space. The provisions for such HOA shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

9. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

10. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

11. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for

5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

12. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

13. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

14. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:
    - Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

15. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building.

16. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

Respectfully Submitted,

Colleen McCauley
Village Planner

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

670 South Old Rand Road
July 17, 2024

The Planning & Zoning Commission recommends approval of Application PZC 2024-08, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated July 17, 2024 for this Application and subject to any changes or approval conditions as listed below:

1. Substantial conformance with the following documentation submitted as part of the application subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated July 12, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
   b. Legal Description of the Subject Property.
   c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
   d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
   a. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners dated May 15, 2024 and last updated on July 12, 2024 consisting of the Cover and Index, Current Site Plan, Single-family Home Plans and Elevations, Row Home (multiple-family) Plans and Elevations, views from neighboring properties, Aerial Rendering, various views including – from central green space, from Buesching Road.
   b. Site distance Studies Sheets CX1.0-2.0 prepared by Eriksson Engineering Associates, Ltd., dated July 1, 2024.
   c. Civil Exhibits including the following and as updated per the current overall site plan:
      ix. Site Demolition Plan – Sheet C100
      x. Site Geometry Plan – Sheet C200
      xi. Site Utility Plan – Sheet C300
      xii. Grading and Paving Plan – Sheet C400
      xiii. Site work details – Sheets C500-C503
   d. Landscape Exhibits including the following and as updated per the current overall site plan
      xiv. Rendered Landscape Plan – Sheet L100 (color)
      xv. Landscape Plan – Sheet L100
      xvi. Landscape Details (Sheet L200
   e. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.
   f. Site Lighting exhibits including the following:
      iii. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.

iv. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).

g. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.

h. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.

i. Preliminary Jurisdictional Field Report prepared by Lake County dated August 25, 2022.

j. Preliminary Hydraulic Analysis Existing Conditions Report dated April 26, 2024 prepared by Eriksson Engineering Associates, Ltd.

k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

2. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east, south and west lot lines. The trees classified as “heritage trees” in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the “Village of Lake Zurich Tree Replacement Worksheet” to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the “average market value” for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

8. The Developer shall establish a Home Owners Association (HOA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space. The provisions for such HOA shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

9. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

10. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

11. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

12. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

13. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

14. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village agreeing to install all the required improvements and providing

surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:

a. Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

15. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building.

16. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

☒ Without any further additions, changes, modifications and/or approval conditions.

☐ With the following additions, changes, modifications and/or approval conditions:

Planning & Zoning Commission Chairman

Staff Report **Community Development Department**
APPLICATION PZC 2025-04 **PZC Meeting Date: March 19, 2025**

EXHIBIT B
HEARING SIGN ON SUBJECT PROPERTY

LAW OFFICES

ASH, ANOS, FREEDMAN & LOGAN, L.L.C.
95 REVERE DRIVE, SUITE G
NORTHBROOK, IL 60062

LAWRENCE M. FREEDMAN

BARRY ASH
BRUCE T. LOGAN, OF COUNSEL

TELEPHONE: 312-346-1390
FAX: 312-346-7847
LMFREEDMAN@AFLAW.COM

May 17, 2024

Mr. Orlando Stratman
Chairperson
Planning and Zoning Commission
Village of Lake Zurich
505 Telser Road
Lake Zurich, IL 60047

Re: 670 S. Old Rand Road, Lake Zurich, IL

Dear Chairperson Stratman:
:

We represent OSK Capital Partners, LLC ("OSK"), the contract purchaser of the subject property, which comprises approximately 8.8 acres with .92 acres of wetlands, and is currently under the R-1/2 zoning classification.

OSK is seeking to develop the subject property with 20 attached single family homes and 18 unattached single family homes. In conjunction therewith, OSK will be requesting Development Concept Plan Approval, which will include rezoning the property to the R-6 Multiple Family Residential District.

It is contemplated that Old Rand Road will provide primary access for the proposed development with secondary access on Buesching Road. All required utilities are available to the site.

The proposed development contains a number of features which will not only benefit the development but will enhance the surrounding neighborhood. Such features will include:

- a variety of detached and attached single homes with both attached and detached garages.
- a pedestrian path which will connect Old Rand Road to Buesching Road.
- Improvements to the wetlands' appearance and health of vegetation.
- A design which orients the front doors of the homes to face the development's main road with the detached single family homes backing up to the wetlands
- Providing easy fire truck access with no dead end streets
- Locating the 2.5 story detached single family homes along Buesching Road. across from existing detached single family homes, with the 3 story attached single family homes being located on the interior of the development or along Rand Road across from dense vegetation where there are no neighboring residences.

- Providing a landscaping buffer as well as fencing between our development and the property to the south

In support of our request we are providing the following:

1. Application
2. Architectural Drawings
    1. 4 renderings
    2. Current site plan
    3. Preliminary plat of subdivision
    4. Proposed house plans
    5. Proposed house elevations
3. Civil Drawings
    1. Site Demolition Plan
    2. Site Geometry Plan
    3. Site Utility Plan
    4. Grading and Paving Plan
    5. Site Work Details
4. Landscape Drawings
    1. Rendered Landscape Plan
    2. Landscape Plan
    3. Landscape Details
    4. Landscape Narrative
5. Estimated Cost/Budget
6. Site Lighting Drawings
    1. Photometric Site Plan
    2. Site Lighting Plan
    3. Light Fixture cut sheets
7. Stormwater Report

8. Survey and Legal Description
9. Traffic Study
10. Tree Inventory
11. Evidence of Title

We would appreciate being scheduled for a public hearing. Thank you.

Very truly yours,

ASH, ANOS, FREEDMAN & LOGAN, L.L.C.

BY: Lawrence M. Freedman

LMF:eas
Enclosure

ZONING APPLICATION

Community Development Department
505 Telser Rd.
Lake Zurich, IL 60047
Phone: (847) 540-1696
Fax: (847) 540-1769

(Please Type or Print)

1. Address of Subject Property: 670 Old Rand Road
2. Please attach complete legal description
3. Property Identification number(s): 14-20-400-002 and 1420-400-003
4. Owner of record is: Henry Joern Phone: 814-417-8732
   E-Mail _____ Address: 670 Old Rand Road, Lake Zurich, IL 60047
5. Applicant is (if different from owner): Lawrence M. Freedman Phone: 312-346-1390
   E-Mail lmfreedman@aflaw.com Address: 95 Revere Drive, Ste G, Northbrook, IL 60062
6. Applicant's interest in the property (owner, agent, realtor, etc.): Agent for OSK Capitol, LLC
7. All existing uses and improvements on the property are: R-1/2 Single Family
8. The proposed uses on the property are: R-6 Attached and Detached Single Family Rowhomes
9. List any covenants, conditions, or restrictions concerning the use, type of improvements, setbacks, area, or height requirements placed on the Subject Property and now of record and the date of expiration of said restrictions:
   None
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    Sales contract pending zoning approval
11. For applications requiring a public hearing, please attach a list which contains the PIN, owner, and owner's mailing address of all properties located within 250 feet (excluding all Public Right-of-Ways) of the Subject Property.

THE APPLICANT'S SIGNATURE BELOW INDICATES THE INFORMATION CONTAINED IN THIS APPLICATION AND ON ANY ACCOMPANYING DOCUMENTS IS TRUE AND CORRECT.
THE APPLICANT ALSO ACKNOWLEDGES IF THE CONSULTANT EXPENSES EXCEED THE INITIAL ESCROW DEPOSIT, THE APPLICANT WILL REIMBURSE THE ACCOUNT IMMEDIATELY.

Lawrence M. Freedman _____
(Name of applicant) (Signature of applicant)

Subscribed and sworn to before me this ____ day of May, 2021.

Leslie M. Mercado My Commission Expires _____
(Notary Public)

Notary Public State of Illinois
Official Seal
Leslie M Mercado
Comm. # 980507
My Commission Expires 10/31/2027

Henry Joern _____
(Name of Owner, if different) (Signature of Owner, if different)

Subscribed and sworn to before me this 17th day of May, 2021.

Leslie M. Mercado My Commission Expires _____
(Notary Public)

Notary Public State of Illinois
Official Seal
Leslie M Mercado
Comm. # 980507
My Commission Expires 10/31/2027

Please indicate what form of zoning relief your application requires. For assistance, please contact Staff:

☑ Zoning Code **Map** Amendment to change zoning of Subject Property from R-1/2 to R-6

☐ Zoning Code **Text** Amendment to amend the following section(s) of the Zoning Code _____

(See Section 18-103 of the Lake Zurich Zoning Code for specific standards. If a specific parcel is the subject of this amendment, then provide the additional information listed in Section 18-103C.)

☐ Special Use Permit/Amendment for _____

(See Section 19-103 of the Lake Zurich Zoning Code for specific standards.)

☑ Planned Unit Development/Major Adjustment/Amendment

(Planned Unit Developments are a distinct category of special use and are intended to create a more desirable environment than through strict application of the zoning and subdivision regulations. See Section 22-105 of the Lake Zurich Zoning Code for specific standards. Please list all the 'modifications' requested in the cover letter.)

☐ Variation for _____

(See Section 17-104 of the Lake Zurich Zoning Code for specific standards. Please indicate what your specific hardships are in the cover letter.)

☐ Modification to the Land Development Code (includes retaining walls more than 2 feet in height)
(See Section 10-6-18 of the Land Development Code for specific standards.)

☐ Preliminary Plat of Subdivision

☐ Final Plat of Subdivision or Amendment to Plat of Subdivision
(See Sections 10-5-2 and 10-5-9 of the Land Development Code for specific standards.)

☐ Site Plan Approval/Major Adjustment/Amendment
(See Section 20-103 of the Lake Zurich Zoning Code for specific standards.)

☐ Exterior Appearance Approval or Amendment
(See Section 21-103 of the Lake Zurich Zoning Code for specific standards.)

APPLICATION TO ANNEX CERTAIN TERRITORY

All land annexed to the Village is classified automatically after such annexation in the R-1\2 Single Family Residential District. The owner must file an application for a Zoning Map amendment if he or she desires a different zoning classification for the Subject Property.

☐ Petition to Annex Certain Territory (Please complete attached petition)

☐ Application to Annex Certain Territory

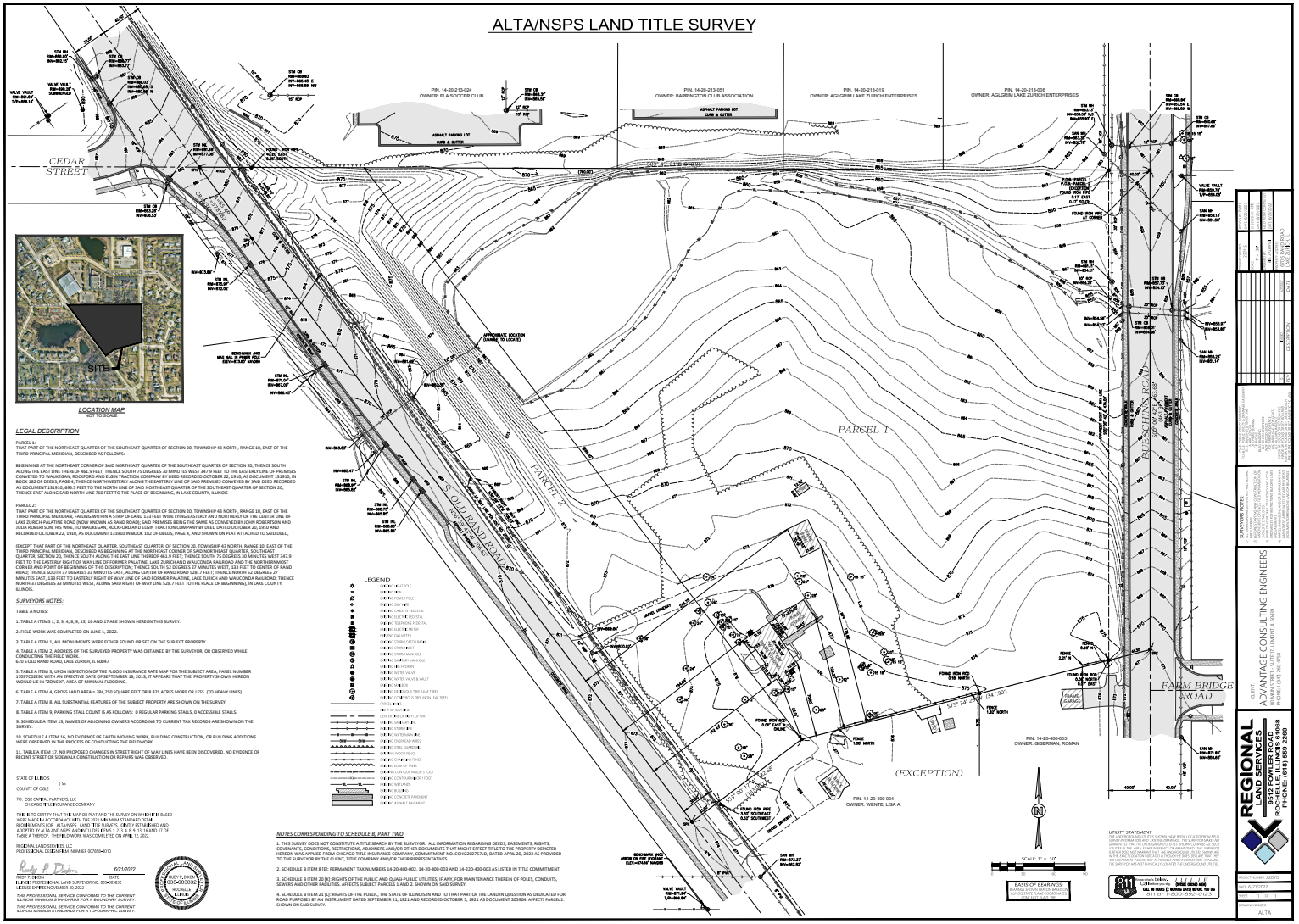
COMPREHENSIVE PLAN APPLICATION

☐ Comprehensive Plan **Map** Amendment for _____

_____

☐ Comprehensive Plan **Text** Amendment for _____

_____


ALTA/NSPS LAND TITLE SURVEY
CEDAR STREET
S. OLD RAND ROAD
PARCEL 1
PARCEL 2
FARM BRIDGE ROAD
(EXCEPTION)
PIN: 14-20-213-024
OWNER: ELA SOCCER CLUB
PIN: 14-20-213-051
OWNER: BARRINGTON CLUB ASSOCIATION
PIN: 14-20-213-019
OWNER: AGLGRIM LAKE ZURICH ENTERPRISES
PIN: 14-20-213-006
OWNER: AGLGRIM LAKE ZURICH ENTERPRISES
PIN: 14-20-400-005
OWNER: GISERMAN, ROMAN
PIN: 14-20-400-004
OWNER: WENTE, LISA A.
LOCATION MAP
NOT TO SCALE
LEGAL DESCRIPTION
SURVEYORS NOTES:
NOTES CORRESPONDING TO SCHEDULE B, PART TWO
LEGEND
BASIS OF BEARINGS
SCALE: 1" = 30'
UTILITY STATEMENT
REGIONAL LAND SERVICES
3512 FOWLER ROAD
ROCHELLE, ILLINOIS 61068
PHONE: (815) 562-2200
ADVANTAGE CONSULTING ENGINEERS
ALTA

ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

CHICAGO TITLE INSURANCE COMPANY

Commitment Number:

CCHI2202757LD

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Countersigned By:

Michael J. Nolan
Authorized Officer or Agent

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CHICAGO TITLE INSURANCE COMPANY **COMMITMENT NO. CCHI2202757LD**

Transaction Identification Data for reference only:

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Insurance Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Email: chicagocommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Main Fax: (312)223-3018

Order Number: CCHI2202757LD
Property Ref.: 670 S. Old Rand Road, Lake Zurich, IL 60047

SCHEDULE A

1. Commitment Date: April 20, 2022
2. Policy to be issued:

   (a) ALTA Owner's Policy 2006
   Proposed Insured: Osk Capital Partners, LLC
   Proposed Policy Amount: $2,950,000.00

3. The estate or interest in the Land described or referred to in this Commitment is:

   Fee Simple

4. The Title is, at the Commitment Date, vested in:

   Henry C. Joern and Rita Joern

5. The Land is described as follows:

   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

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EXHIBIT "A"

Legal Description

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED,

(EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

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SCHEDULE B, PART I
REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.

7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.

8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

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SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**

2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**

3. **Easements, or claims of easements, not shown by the Public Records.**

4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**

5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**

6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically**

7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.

E 8. Taxes for the year 2021 and 2022.

Taxes for the year 2021 and 2022 are not yet due or payable.

Taxes for the year 2020, amounting to $2,835.36 are marked paid of record.
Permanent Index Number: 14-20-400-002.
(Affects part of the Land)

Taxes for the year 2020, amounting to $11,303.46 are marked paid of record.
Permanent Index Number: 14-20-400-003.
(Affects part of the Land)

M 9. The following described portion of the Land apparently is not assessed for general real estate taxes for the

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SCHEDULE B, PART II
EXCEPTIONS
(continued)

year(s) 2020 and prior. This commitment/policy is subject to said taxes.

That part of Parcel 1 falling under S. Bueshing Road.
The West 33 feet of Parcel 2 falling under Rand Road.

G 10. Please be advised that our search did not disclose any open mortgages of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

B 11. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.

A 12. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

F 13. Due to office closures in place or that might occur, we should be provided with our standard form of indemnity (GAP Indemnity) for defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the Commitment Date but prior to the date of recording of the instruments under which the Proposed Insured acquires the estate or interest or mortgage covered by this commitment. Note: Due to office closures related to covid-19 we may be temporarily unable to record documents in the normal course of business.

H 14. If applicable, the spouse or civil union partner of the party in title should join in the conveyance or mortgage for the purpose of releasing homestead.

D 15. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: Osk Capital Partners, LLC

a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.

c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.

d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

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SCHEDULE B, PART II
EXCEPTIONS
(continued)

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

C 16. The legal description provided in Schedule A is for convenience only. An ALTA survey that more particularly describes the property in question should be provided and this commitment is subject to further exceptions, if any, as may be deemed necessary.

P 17. Due to the COVID-19 pandemic, some or all of the recorded document necessary for our review were not available from the Lake County Recorder's office. As such, the title finding is for convenience only. Please consult with your local underwriter to discuss.

I 18. Rights of the public, the State of Illinois, the municipality and the adjoining owners in and to that part of the Land, if any, taken or used for road purposes.

J 19. Rights of Way for drainage tiles, ditches, feeders, laterals and underground pipes, if any.

K 20. Rights of the public and quasi-public utilities, if any, for maintenance therein of poles, conduits, sewers and other facilities.

L 21. Rights of the public, the State of Illinois in and to that part of the Land in question as dedicated for road purposes by an instrument dated September 21, 1921 and recorded October 5, 1921 as Document 205904.

(Affects Parcel 2)

N 22. Note for information (Endorsement Requests):

All endorsement requests should be made prior to closing to allow ample time for the company to examine required Documentation.

Note: before any endorsements can be approved, we should be informed as to the land use and as to what type of structure is on the land.

(This note will be waived for the policy,)

O 23. Informational Note:

To schedule any closings in the Chicago Commercial Center, please call (312)223-2707.

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;

(b) the Commitment to Issue Policy;

(c) the Commitment Conditions;

(d) Schedule A;

(e) Schedule B, Part I-Requirements;

(f) Schedule B, Part II-Exceptions; and

(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I-Requirements;

(ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or

(iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.

(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.

(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars ($2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

END OF CONDITIONS

1031 EXCHANGE SERVICES

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

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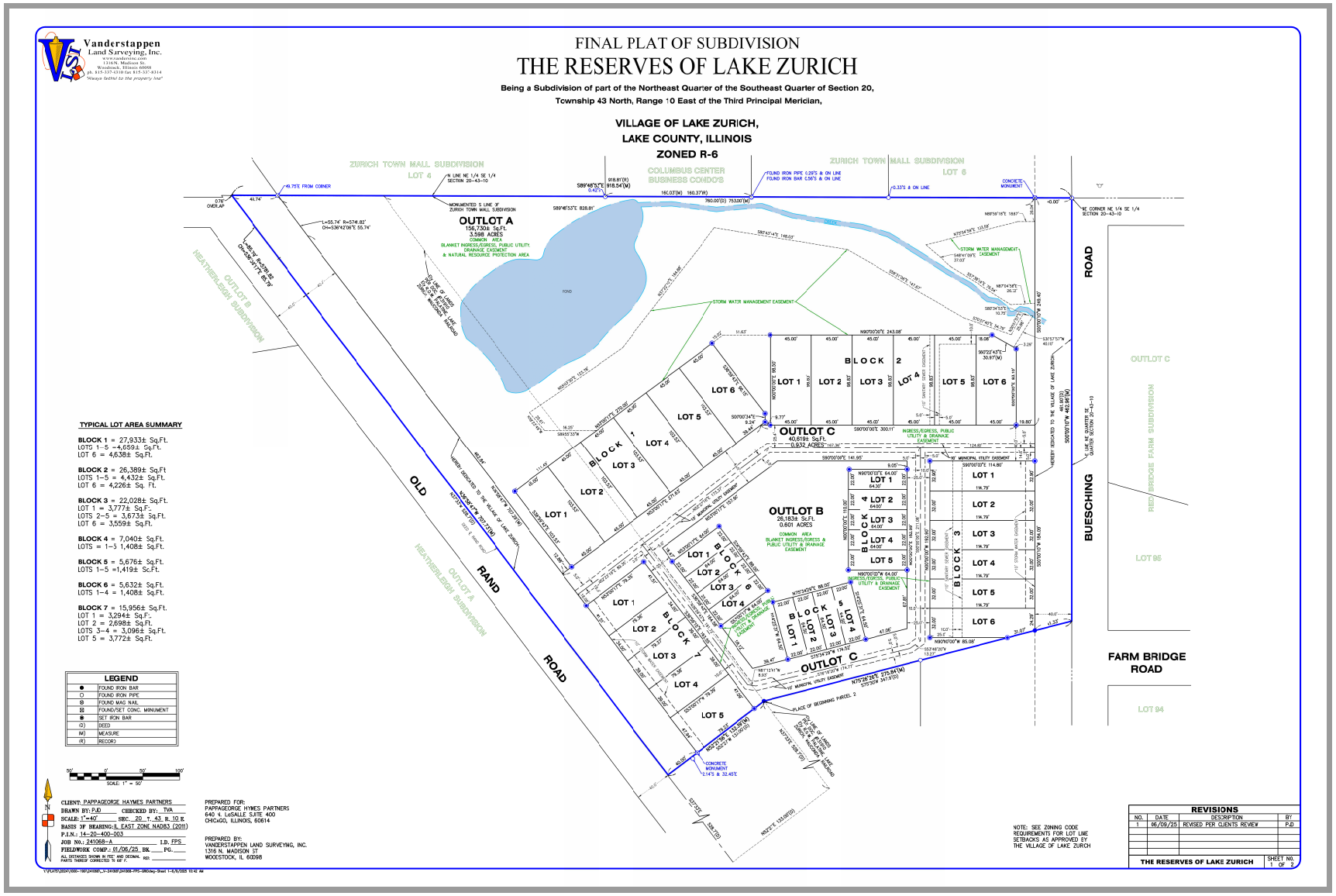
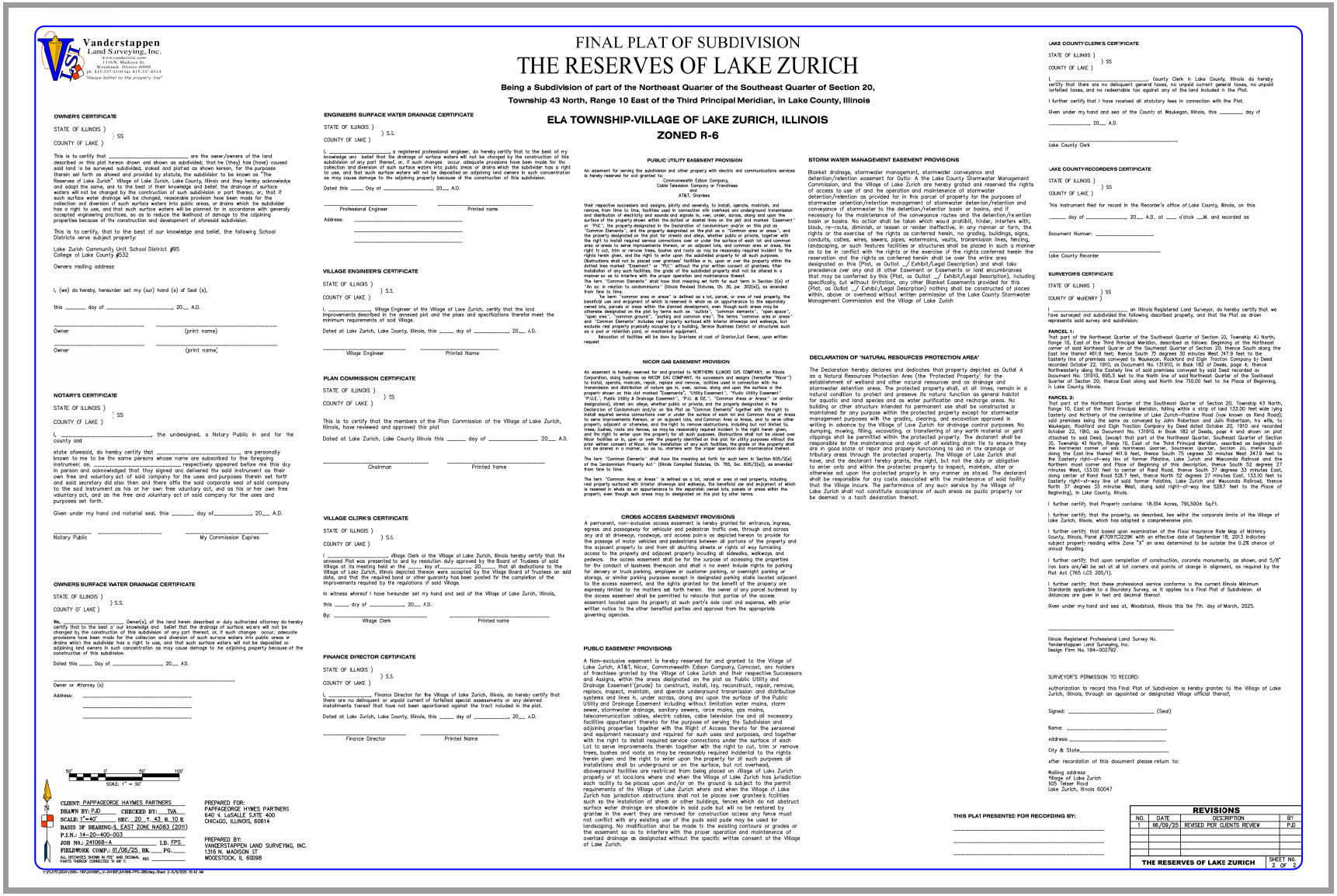

Vanderstappen
Land Surveying, Inc.
FINAL PLAT OF SUBDIVISION
THE RESERVES OF LAKE ZURICH
Being a Subdivision of part of the Northeast Quarter of the Southeast Quarter of Section 20,
Township 43 North, Range 10 East of the Third Principal Meridian,
VILLAGE OF LAKE ZURICH,
LAKE COUNTY, ILLINOIS
ZONED R-6
OUTLOT A
156,730± Sq.Ft.
3.598 ACRES
COMMON AREA
BLANKET INGRESS/EGRESS, PUBLIC UTILITY, DRAINAGE EASEMENT & NATURAL RESOURCE PROTECTION AREA
OUTLOT B
26,183± Sq.Ft.
0.601 ACRES
COMMON AREA
BLANKET INGRESS/EGRESS & PUBLIC UTILITY & DRAINAGE EASEMENT
OUTLOT C
40,619± Sq.Ft.
0.932 ACRES
INGRESS/EGRESS, PUBLIC UTILITY & DRAINAGE EASEMENT
ZURICH TOWN MALL SUBDIVISION
LOT 4
ZURICH TOWN MALL SUBDIVISION
LOT 5
COLUMBUS CENTER BUSINESS CONDO'S
HEATHERLEIGH SUBDIVISION
OUTLOT B
HEATHERLEIGH SUBDIVISION
OUTLOT A
REDBRIDGE FARM SUBDIVISION
OUTLOT C
LOT 95
LOT 94
OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7
STORM WATER MANAGEMENT EASEMENT
INGRESS/EGRESS, PUBLIC UTILITY & DRAINAGE EASEMENT
10' MUNICIPAL UTILITY EASEMENT
CONCRETE MONUMENT
PLACE OF BEGINNING PARCEL 2
TYPICAL LOT AREA SUMMARY
BLOCK 1 = 27,933± Sq.Ft.
LOTS 1-5 =4,659± Sq.Ft.
LOT 6 = 4,638± Sq.Ft.
BLOCK 2 = 26,389± Sq.Ft
LOTS 1-5 = 4,432± Sq.Ft.
LOT 6 = 4,226± Sq. Ft.
BLOCK 3 = 22,028± Sq.Ft.
LOT 1 = 3,777± Sq.F.;
LOTS 2-5 = 3,673± Sq.Ft.
LOT 6 = 3,559± Sq.Ft.
BLOCK 4 = 7,040± Sq.Ft.
LOTS = 1-3 1,408± Sq.Ft.
BLOCK 5 = 5,676± Sq.Ft.
LOTS 1-5 =1,419± Sc.Ft.
BLOCK 6 = 5,632± Sq.Ft.
LOTS 1-4 = 1,408± Sq.Ft.
BLOCK 7 = 15,956± Sq.Ft.
LOT 1 = 3,294± Sq.F.;
LOT 2 = 2,698± Sq.Ft.
LOTS 3-4 = 3,098± Sq.Ft.
LOT 5 = 3,772± Sq.Ft.
LEGEND
FOUND IRON BAR
FOUND IRON PIPE
FOUND MAG NAIL
FOUND/SET CONC. MONUMENT
SET IRON BAR
DEED
MEASURE
RECORD
SCALE: 1" = 50'
CLIENT: PAPPAGEORGE HAYMES PARTNERS
DRAWN BY: PJD CHECKED BY: TVA
SCALE: 1"=40' SEC. 20 T. 43 R. 10 E
BASIS OF BEARING: IL EAST ZONE NAD83 (2011)
P.I.N.: 14-20-400-003
JOB NO.: 241068-A I.D. FPS
FIELDWORK COMP.: 01/06/25 BK. PG.
PREPARED FOR:
PAPPAGEORGE HYMES PARTNERS
640 N. LASALLE SUITE 400
CHICAGO, ILLINOIS, 60614
PREPARED BY:
VANDERSTAPPEN LAND SURVEYING, INC.
1316 N. MADISON ST
WOODSTOCK, IL 60098
NOTE: SEE ZONING CODE REQUIREMENTS FOR LOT LINE SETBACKS AS APPROVED BY THE VILLAGE OF LAKE ZURICH
REVISIONS
NO. DATE DESCRIPTION BY
1 06/09/25 REVISED PER CLIENTS REVIEW PJD
THE RESERVES OF LAKE ZURICH
SHEET NO. 1 OF 2



Vanderstappen Land Surveying, Inc.
www.vanderinc.com
1316N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-5316 fax 815-337-4314
"Always faithful to the property line"

FINAL PLAT OF SUBDIVISION
THE RESERVES OF LAKE ZURICH

Being a Subdivision of part of the Northeast Quarter of the Southeast Quarter of Section 20, Township 43 North, Range 10 East of the Third Principal Meridian, in Lake County, Illinois

ELA TOWNSHIP-VILLAGE OF LAKE ZURICH, ILLINOIS
ZONED R-6

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

This is to certify that _____ are the owner/owners of the land described on this plat hereon drawn and shown as subdivided; that he (they) has (have) caused said land to be surveyed, subdivided, staked and platted as shown hereon, for the purposes therein set forth as allowed and provided by statute, the subdivisior to be known as "The Reserves of Lake Zurich". Village of Lake Zurich, Lake County, Illinois and they hereby acknowledge and adopt the same, and to the best of their knowledge and belief, the drainage of surface waters will not be changed by the construction of such subdivision or part thereof, or, that if such surface water drainage will be changed, reasonable provision have been made for the collection and diversion of such surface waters into public areas, or drains which the subdivider has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices, so as to reduce the likelihood of damage to the adjoining properties because of the construction and development of aforesaid subdivision.

This is to certify, that to the best of our knowledge and belief, the following School Districts serve subject property:

Lake Zurich Community Unit School District #95
College of Lake County #532

Owners mailing address:

I, (we) do hereby, hereunder set my (our) hand (s) of Seal (s),

this _____ day of _____, 20___ A.D.

_____ _____
Owner (print name)

_____ _____
Owner (print name)

NOTARY'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____, the undersigned, a Notary Public in and for the county and

state aforesaid, do hereby certify that _____, are personally known to me to be the same persons whose name are subscribed to the foregoing instrument as _____, respectively appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act of said company for the uses and purposes therein set forth and said secretary did also then and there affix the said corporate seal of said company to the said instrument as his or her own free voluntary act, and as his or her own free voluntary act, and as the free and voluntary act of said company for the uses and purposes set forth.

Given under my hand and notarial seal, this _____ day of_____, 20___ A.D.

_____ _____ _____
Notary Public My Commission Expires

OWNERS SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

We, _____, Owner(s), of the land herein described or duly authorized attorney do hereby certify that to the best o' our knowledge and belief that the drainage of surface waters will not be changed by the construction of this subdivision of any part thereof, or, if such changes occur, adequate provisions have been made for the collection and diversion of such surface waters into public areas or drains which the subdivider has a right to use, and that such surface waters will not be deposited on adjoining land owners in such concentration as may cause damage to he adjoining property because of the construction of this subdivision.

Dated this _____ Day of _____, 20___ A.D.

_____
Owner or Attorney (s)
Address: _____

50' 0' 50' 100'
SCALE: 1" = 50'

CLIENT: PAPPAGEORGE HAYMES PARTNERS
DRAWN BY: PJD CHECKED BY: TVA
SCALE: 1"=40' SEC. 20 T. 43 R. 10 E
BASIS OF BEARING-IL EAST ZONE NAD83 (2011)
P.I.N.: 14-20-400-003
JOB NO.: 241068-A I.D. FPS
FIELDWORK COMP.: 01/06/25 BK. ____ PG. ____
ALL DISTANCES SHOWN IN FEET AND DECIMAL ADD _____ PARTS THEREOF CORRECTED TO 100' F.

PREPARED FOR:
PAPPAGEORGE HYMES PARTNERS
640 N. LaSALLE SUITE 400
CHICAGO, ILLINOIS, 60614

PREPARED BY:
VANDERSTAPPEN LAND SURVEYING, INC.
1316 N. MADISON ST
WOODSTOCK, IL 60098

ENGINEERS SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

I, _____, a registered professional engineer, do hereby certify that to the best of my knowledge and belief that the drainage of surface waters will not be changed by the construction of this subdivision of any part thereof, or, if such changes occur adequate provisions have been made for the collection and diversion of such surface waters into public areas or drains which the subdivider has a right to use, and that such surface waters will not be deposited on adjoining land owners in such concentration as may cause damage to the adjoining property because of the construction of this subdivision.

Dated this _____ Day of _____, 20___ A.D.

_____ _____
Professional Engineer Printed name
Address: _____

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

I, _____, Village Engineer of the Village of Lake Zurich, certify that the land improvements described in the annexed plat and the plans and specifications thereto meet the minimum requirements of said Village.

Dated at Lake Zurich, Lake County, Illinois, this _____ day of _____, 20___ A.D.

_____ _____
Village Engineer Printed Name

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

This is to certify that the members of the Plan Commission of the Village of Lake Zurich, Illinois, have reviewed and approved this plat

Dated at Lake Zurich, Lake County Illinois this _____ day of _____, 20___ A.D.

_____ _____
Chairman Printed Name

VILLAGE CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

I, _____, Village Clerk of the Village of Lake Zurich, Illinois hereby certify that the annexed Plat was presented to and by resolution duly approved by the Board of Trustees of said Village at its meeting held on the _____ day of_____, 20_____, that all dedications to the Village of Lake Zurich, Illinois depicted thereon were accepted by the Vilage Board of Trustees on said date, and that the required bond or other guaranty has been posted for the completion of the improvements required by the regulations of said Village.

In witness whereof I have hereunder set my hand and seal of the Village of Lake Zurich, Illinois,

this _____ dcy of _____, 20___ A.D.

By: _____ _____
Village Clerk Printed name

FINANCE DIRECTOR CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

I, _____, Finance Director for the Village of Lake Zurich, Illinois, do hereby certify that there are no delinquent or unpaid current of forfeited special assessments or any deferred installments thereof that have not been apportioned against the tract included in the plat.

Dated at Lake Zurich, Lake County, Illinois, this _____ day of _____, 20___ A.D.

_____ _____
Finance Director Printed Name

PUBLIC UTILITY EASEMENT PROVISION

An easement for serving the subdivision and other property with electric and communications services is hereby reserved for and granted to:

Commonwealth Edison Company,
Cable Television Company or Franchisees
and
AT&T, Grantees

their respective successors and assigns, jointly and severally, to install, operate, maintain, and remove, from time to time, facilities used in connection with overhead and underground transmission and distribution of electricity and sounds and signals in, over, under, across, along and upon the surface of the property shown within the dotted or dashed lines on the plat and marked "Easement", or "PUE", the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as a "Common area or areas", and the property designated on this plat for Storm Water Detention Purposes, and the right to cut, trim or remove trees, bushes, roots and saplings that interfere with the aforesaid uses or rights. The grant of this easement also includes the right to enter upon the subdivided property and lots and common area or areas, the right to cut, trim or remove trees, bushes and roots as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over grantees' facilities in or, upon or over the property within the dotted lines marked "Easement" or "PU;" without the prior written consent of grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have that meaning set forth for such term in Section 2(e) of "An act in relation to condominiums" (Illinois Revised Statutes, Ch. 30, par. 302(e)), as amended from time to time.

The term "common area or areas" is defined as a lot, parcel, or area of real property, the beneficial use and enjoyment of which is reserved in whole or as appurtenance to the separately owned lots, parcels or areas within the planned development, even though such areas may be designated on this plat by other terms, such as "open space", "open area", "greenway", "buffer", "open area", "common ground", "parking and common area". The terms "common area or areas" and "Common Elements" includes real property surfaced with interior driveways and walkways, but excludes real property precisely occupied by a building, Service Business District or structures such as a pool or retention pond, or mechanical equipment.

Relocation of facilities will be done by Grantees at cost of Grantor/Lot Owner, upon written request

NICOR GAS EASEMENT PROVISION

An easement is hereby reserved for and granted to NORTHERN ILLINOIS GAS COMPANY, an Illinois Corporation, doing business as NICOR GAS COMPANY, its successors and assigns (hereafter "Nicor") to install, operate, maintain, repair, replace and remove, facilities used in connection with the transmission and distribution of nature gas in, over, across, along and upon the surface of the property shown on this slat marked "Easements", "Utility Easement:", "Public Utility Easement" "P.U.E.", Public Utility & Drainage Easement", "P.U. & D.E.", "Common Areas or Areas" (or similar designations), street and alleys, whether public or private, and the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property granted to Commonwealth Edison Company, AT&T, Grantees, and the property designated on this plat for Common Areas or Areas, and to serve other property, adjacent or otherwise, and the right to remove obstructions, including but not limited to, trees, bushes, roots and fences, as may be reasonably required incident to the right herein given, and the right to enter upon the property for all such purposes. Obstructions shall not be placed over Nicor facilities or in, upon or over the property identified on this plat for utility purposes without the prior written consent of Nicor. After installation of any such facilities, the grade of the property shall not be altered in a manner, so as to, interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in Section 605/2(e) of the Condominium Property Act" (Illinois Compiled Statutes, Ch. 765, Sec. 605/2(e)), as amended from time to time.

The term "Common Area or Areas" is defined as a lot, parcel or area of real property, including real property surfaced with interior driveways and walkways, the beneficial use and enjoyment of which is reserved in whole as an appurtenance to the separately owned lots, parcels or areas within the property, even though such areas may be designated on this plat by other terms.

CROSS ACCESS EASEMENT PROVISIONS

A permanent, non-exclusive access easement is hereby granted for entrance, ingress, egress and passageway for vehicular and pedestrian traffic over, through and across any and all driveways, roadways, and access points as depicted hereon to provide for the passage of motor vehicles and pedestrians between all portions of the property and the adjacent property to and from all abutting streets or rights of way furnishing access to the property and adjacent property including all sidewalks, walkways, and pedwas. the access easement shall be for the purpose of accessing the properties for the conduct of business thereupon and shall n no event include rights for parking for delivery or truck parking, employee or customer parking, or overnight parking or storage, or similar parking purposes except in designated parking stalls located adjacent to the access easement, and the rights granted for the benefit of the property are expressly limited to he matters set forth herein. the owner of any parcel burdened by the access easement shall be permitted to relocate that portion of the access easement located upon its property at such part's sole cost and expense, with prior written notice to the other benefited parties and approval from the appropriate governing agencies.

PUBLIC EASEMENT PROVISIONS

A Non-exclusive easement is hereby reserved for and granted to the Village of Lake Zurich, AT&T, Nicor, Commonwealth Edison Company, Comcast, anc holders of franchises granted by the Village of Lake Zurich and their respective Successors and Assigns, within the areas designated on the plat as Public Utility and Drainage Easement("private) to construct, install, lay, reconstruct, repair, remove, replace, inspect, maintain, and operate underground transmission and distribution systems and lines h, under across, along anc upon the surface of the Public Utility and Drainage Easement including without limitation water mains, storm sewer, stormwater drainage, sanitary sewers, tarce mains, gas mains, telecommunication cables, electric cables, cable television line and all necessary facilities oppurtenant thereto for the purpose of serving the Subdivision and adjoining properties together with the Right of Access thereto for the personnel and equipment necessary and required for such uses and purposes, and together with the right to install required service connections under the surface of each Lot to serve improvements therein together with the right to cut, trim or remove trees, bushes and roots as may be reasonably required incidental to the rights herein given and the right to enter upon the property for all such purposes all installations shall be underground or on the surface, but not overhead, aboveground facilities are restricted from being placed on Village of Lake Zurich property or at locations where and when the Village of Lake Zurich has jurisdiction each facility to be places upon and/or on the ground is subject to the permit requirements of the Village of Lake Zurich where and when the Village of Lake Zurich has jurisdiction obstructions shall not be places over grantees facilities such as the installation of sheds or other buildings, fences which do not obstruct surface water drainage are allowable in said pude but will no be restored by grantee in the event they are removed for construction access any fence must not conflict with any existing use of the pude said pude may be used for landscaping. No modification shall be made to the existing contours or grades or the easement so as to interfere with the proper operation and maintenance of overland drainage as designated without the specific written consent of the Village of Lake Zurich.

STORM WATER MANAGEMENT EASEMENT PROVISIONS

Blanket drainage, stormwater management, stormwater conveyance and detention/retention easement for Outlot A the Lake County Stormwater Management Commission, and the Village of Lake Zurich are hereby grated and reserved the rights of access to use of and the operation and maintenance of stormwater detention/retention as provided for in this parcel of property for the purposes of stormwater cetention/retention management of stormwater detenion/retention and conveyance of stormwater to the detention/retention basin or basins, and if necessary for the maintenance of the conveyance routes and the detention/re ention basin or basins. No action shall be taken which would prohibit, hinder, interfere with, block, re-route, diminish, or lessen or render ineffective, in any manner or form, the rights or the exercise of the rights as conferred herein, no grading, buildings, signs, conduits, cables, wires, sewers, pipes, watermains, vaults, transmission lines, fencing, landscaping, or such features facilities or structures shall be placed in such a manner as to be in conflict with the rights or the exercise of the rights conferred herein the reservation and the rights as conferred herein shall be over the entire area designated on this (Plat, as Outlot __/ Exhibit/Legal Description) and shall take precedence over any and all other Easement or Easements or land encumbrances that may be conferred by this (Plat, as Outlot __/ Exhibit/Legal Description), including specifically, but without limitation, any other Blanket Easements provided for this (Plat, as Outlot __/ Exhibit/Legal Description) nothing shall be constructed of places within, above or overhead without written permission of the Lake County Stormwater Management Commission and the Village of Lake Zurich

DECLARATION OF 'NATURAL RESOURCES PROTECTION AREA'

The Declaration hereby declares and dedicates that property depicted as Outlot A as a Natural Resources Protection Area (the Protected Property', for the establishment of wetland and other natural resources and as drainage and stormwater detention areas. The protected property shall, at all times, remain in a natural condition to protect and preserve its natura function as general habitat for aquatic and land species and as water purification and recharge areas. No building or other structure intended for permanent use shall be constructed or maintained for any purpose within the protected property except for stormwater management purposes with the grading, clearing, and excavation approved in writing in advance by the Village of Lake Zurich for drainage control purposes. No dumping, mowing, filling, excavating, or transferring of any earth material or yard clippings shall be permitted within the protected property. The declarant shall be responsible for the maintenance and repair of all existing drain tile to ensure they are in good state of repair and property functioning to aid in the drainage of tributary areas through the protected property. The Village of Lake Zurich shall have, and the declarant hereby grants, the right, but not the duty or obligation to enter onto and within the protectec property to inspect, maintain, alter or otherwise act upon the protected property in any manner as stated. The declarant shall be responsible for any costs associated with the maintenance of said facility that the Village incurs. The performance of any such service by the Village of Lake Zurich shall not constitute acceptance of such areas as public property nor be deemed to a tacit declaration thereof.

LAKE COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____ County Clerk in Lake County, Illinois do hereby certify that there are no delinquent general taxes, no unpaid current general taxes, no unpaid forfeited taxes, and no redeemable tax against any of the land included in the Plat.

I further certify that I have received all statutory fees in connection with the Plat.

Given under my hand and seal of the County at Waukegan, Illinois, this _____ day of _____, 20___ A.D.

_____
Lake County Clerk

LAKE COUNTY RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

This Instrument filed for record in the Recorder's office of Lake County, Illinois, on this _____ day of _____, 20___ A.D., at ____ o'clock ___M. and recorded as Document Number: _____

_____
Lake County Recorder

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF McHENRY)

I _____ an Illinois Registered Land Surveyor, do hereby certify that we have surveyed and subdivided the following described property, and that the Plat as drawn represents said survey and subdivision;

PARCEL 1:
That part of the Northeast Quarter of the Southeast Quarter of Section 20, Township 43 North, Range 10, East of the Third Principal Meridian, described as follows: Beginning at the Northeast corner of said Northeast Quarter of the Southeast Quarter of Section 20; thence South along the East line thereof 461.9 feet; thence South 75 degrees 30 minutes West 147.9 feet to the Easterly line of premises conveyed to Waukecan, Rockford and Elgin Traction Company by Deed recorded October 22, 1910, as Document No. 131910, in Book 182 of Deeds, page 4; thence Northwesterly along the Easterly line of said premises conveyed by said Deed recorded as Document No. 131910, 695.5 feet to the North line of said Northeast Quarter of the Southeast Quarter of Section 20; thence East along said North line 730.00 feet to he Place of Beginning, in Lake County, Illinois.

PARCEL 2:
That part of the Northeast Quarter of the Southeast Quarter of Section 20, Township 43 North, Range 10, East of the Third Principal Meridian, falling within a strip of laid 133.00 feet wide lying Easterly and Northerly of the centerline of Lake Zurich—Palatine Road (now known as Rand Road); said premises being the same as conveyed by John Robertson and Julia Robertson, his wife, to Waukegan, Rockford and Elgin Traction Company by Deed dated October 20, 1910 and recorded October 22, 1910, as Document No. 131910 in Book 182 of Deeds, page 4 and shown on plat attached to said Deed, (except that part of the Northeast Quarter, Southeast Quarter of Section 20, Township 43 North, Range 10, East of he Third Principal Meridian, described as beginning at the Northeast corner of said Northeast Quarter, Southeast Quarter, Section 20, thence South along the East line thereof 461.9 feet, thence South 75 degrees 30 minutes West 347.8 feet to the Easterly right-of-way line of former Palatine, Lake Zurich and Wauconda Railroad and the Northern most corner and Place of Beginning of this description, thence South 52 degrees 27 minutes West, 133.00 feet to center of Rand Road, thence South 37 degrees 33 minutes East, along center of Rand Road 528.7 feet, thence North 52 degrees 27 minutes East, 133.00 feet to Easterly right-of-way line of said former Palatine, Lake Zurich and Wauconda Railroad, thence North 37 degrees 33 minutes West, along said right-of-way line 528.7 feet to the Place of Beginning), in Lake County, Illinois.

I further certify, that Property contains: 18.154 Acres, 791,500± Sq.Ft.

I further certify, that the property, as described, lies within the corporate limits of the Village of Lake Zurich, Illinois, which has adopted a comprehensive plan.

I further certify, that based upon examination of the Flooc Insurance Rate Map of McHenry County, Illinois, Panel #17097C0229K with an effective date of September 18, 2013 indicates subject property residing within Zone "X" on area determined to be outside the 0.2% chance of annual flooding.

I further certify, that upon completion of construction, concrete monuments, as shown, and 5/8" iron bars are/will be set at all lot corners and points of change in alignment, as required by the Plat Act (765 LCS 205/1).

I further certify, that these professional service conforms to the current Illinois Minimum Standards applicable to a Boundary Survey, as it applies to a Final Plat of Subdivision. All distances are given in feet and decimal thereof.

Given under my hand and seal at, Woodstock, Illinois this tie 7th. day of March, 2025.

_____
Illinois Registered Professional Land Survey No.
Vanderstappen Land Surveying, Inc.
Design Firm No. 184—002792

SURVEYOR'S PERMISSION TO RECORD:

authorization to record this Final Plat of Subdivision is hereby grantec to the Village of Lake Zurich, Illinois, through an appointed or designated Village official thereof.

Signed: _____ (Seal)

Name: _____

address: _____

City & State_____

after recordation of this document please return to:

Mailing address:
Village of Lake Zurich
505 Telser Road
Lake Zurich, Illinois 60047

THIS PLAT PRESENTED FOR RECORDING BY:

_____
_____
_____

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06/09/25	REVISED PER CLIENTS REVIEW	PJD

THE RESERVES OF LAKE ZURICH — SHEET NO. 2 OF 2

670 South Old Rand Road

Lake Zurich

Village Board Submittal

June 16, 2025

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The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
1	05.17.2024	Issue for PZC
2	08.15.2025	Issue for Final PZC
3	06.16.2025	Issue for Village Board

orientation

project number 232885

scale As Noted

date 6/16/25

sheet title Cover and Index

sheet number A00

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1 Aerial Rendering
SCALE: 1/1"=1'-0"

The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
1	05.17.2024	Issue for PZC
2	08.14.2025	Issue for Final PZC
3	08.16.2025	Issue for Village Board

orientation

project number 232885

scale As Noted

date 6/16/25

sheet title Aerial Rendering

sheet number A01

1 Rendering from Old Rand Rd Entry

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The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
1	05.17.2024	Issue for PZC
2	08.14.2025	Issue for Final PZC
3	08.16.2025	Issue for Village Board

orientation

project number 232885

scale As Noted

date 6/16/25

sheet title Rendering from Old Rand Rd Entry

sheet number A02

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1 Rendering at Central Green Space
SCALE: 1"=1'

The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
1	05.17.2024	Issue for PZC
2	08.16.2024	Issue for Final PZC
3	06.16.2025	Issue for Village Board

orientation

project number 232885

scale As Noted

date 6/16/25

sheet title Rendering at Central Green Space

sheet number A03

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1 Rendering from Buesching Rd Entry
SCALE: 1"=1'-0"

The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
1	05.17.2024	Issue for PZC
2	08.14.2025	Issue for Final PZC
3	08.16.2025	Issue for Village Board

orientation

project number 232885

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date 6/16/25

sheet title Rendering from Buesching Rd Entry

sheet number A04

1 Current Site Plan

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The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

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orientation
project number 232885
scale As Noted
date 6/16/25
sheet title Current Site Plan
sheet number A05

Deck
Great Room
Kitchen
Powder
Foyer
Dining Room
Front Porch
1st Floor Plan
Primary Bedroom
Primary Bath
WIC
Office
Laundry
Bath 2
Open
Bedroom 2
Bedroom 3
2nd Floor Plan
Deck
Living Room
Dining Room
Kitchen
Pantry
Laundry
Powder
Garage
Desk Niche
Foyer
Front Porch
1st Floor Plan
Balcony
Primary Bedroom
Primary Bath
WIC
Bedroom 2
Sitting Area
2nd Bath
Bedroom 3
2nd Floor Plan
Front Porch
Alt Entry
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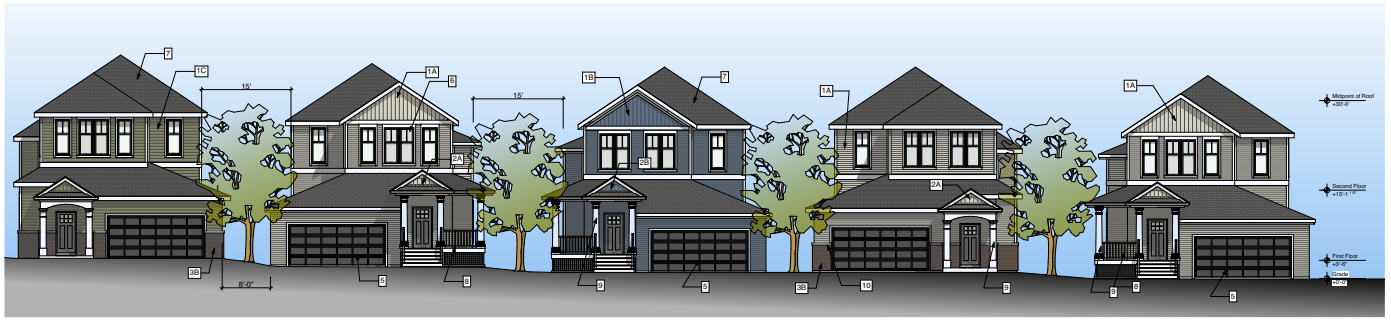
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner
date
description
05.17.2024
Issue for PZC
08.15.2025
Issue for Final PZC
09.16.2025
Issue for Village Board
orientation
project number
232885
scale
As Noted
date
6/16/25
sheet title
Single Family Home Plans
sheet number
A06



1 Single Family Home Elevations along Interior Road
NOT TO SCALE

2 Single Family Home Elevations along Buesching Road
NOT TO SCALE

Material Legend	
1	Prefinished Fiber Cement Siding
1A	Color A
1B	Color B
1C	Color C
1D	Color D
1E	Color E
2	Prefinished Fiber Cement Shakes
2A	Color A
2B	Color B
2C	Color C
3	Modular Masonry Brick
3A	Color A
3B	Color B
4	Cast Stone Base
5	Overhead Hollow Metal Door
6	Premium Vinyl Windows
7	Asphalt Shingles
8	Painted Wood Railing
9	Painted PVC Manufactured Column
10	Cast Stone Sill

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The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
	05.17.2024	Issue for PZC
	08.14.2024	Issue for Final PZC
	06.16.2025	Issue for Village Board

orientation

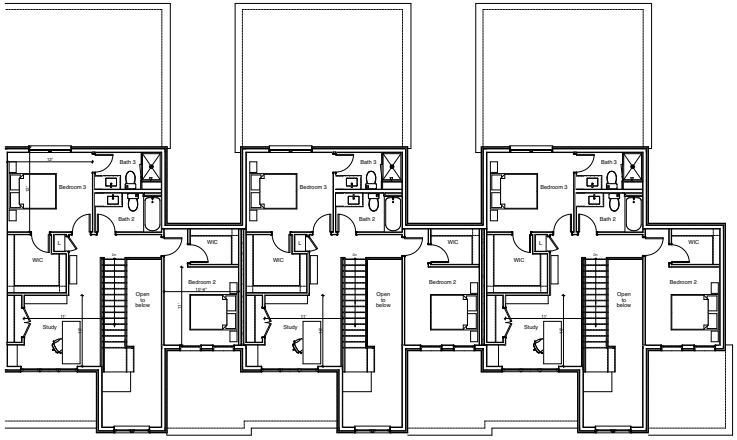
project number 232885

scale As Noted

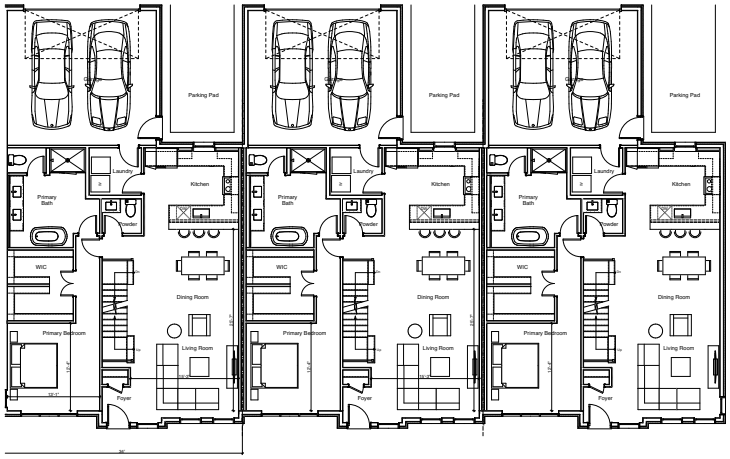
date 6/16/25

sheet title Single Family Home Elevations

sheet number A07

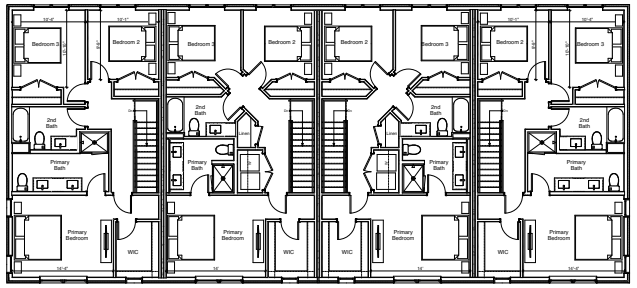


4 2nd Floor Plan
SCALE: 1/8" = 1'-0"

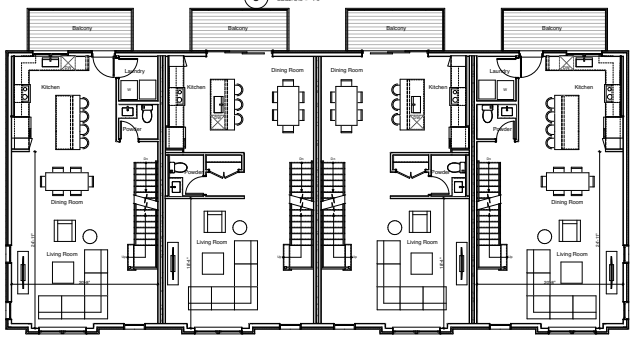


5 1st Floor Plan
SCALE: 1/8" = 1'-0"

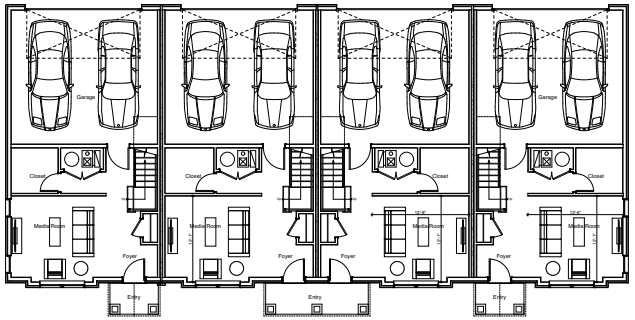
Rand Road Row Home Plans



3 3rd Floor Plan
SCALE: 1/8" = 1'-0"



2 2nd Floor Plan
SCALE: 1/8" = 1'-0"



1 1st Floor Plan
SCALE: 1/8" = 1'-0"

Interior Row Home Plans

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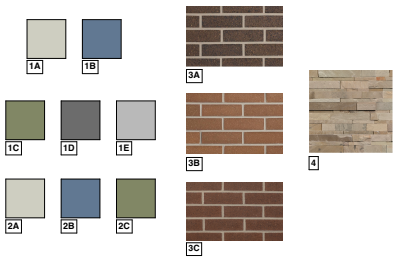
The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
	05.17.2024	Issue for PZC
	08.19.2024	Issue for Final PZC
	09.16.2025	Issue for Village Board

orientation
project number 232885
scale As Noted
date 6/16/25
sheet title Row Home Plans
sheet number A08

1 Interior Row Home Building - Front Elevation
NOT TO SCALE

Material Legend	
1	Prefinished Fiber Cement Siding
1A	Color A
1B	Color B
1C	Color C
1D	Color D
1E	Color E
2	Prefinished Fiber Cement Shakes
2A	Color A
2B	Color B
2C	Color C
3	Modular Masonry Brick
3A	Color A
3B	Color B
4	Cast Stone Base
5	Overhead Hollow Metal Door
6	Premium Vinyl Windows
7	Asphalt Shingles
8	Painted Wood Railing
9	Painted PVC Manufactured Column
10	Cast Stone Sill



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The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
	05.17.2024	Issue for PZC
	08.16.2024	Issue for Final PZC
	06.16.2025	Issue for Village Board

orientation

project number 232885

scale As Noted

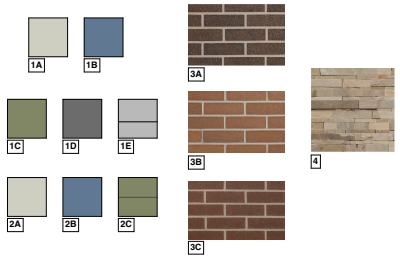
date 6/16/25

sheet title Interior Row Home Elevations

sheet number A09

1 Rand Road Row Home Building - Front Elevation

Material Legend	
1	Prefinished Fiber Cement Siding
1A	Color A
1B	Color B
1C	Color C
1D	Color D
1E	Color E
2	Prefinished Fiber Cement Shakes
2A	Color A
2B	Color B
2C	Color C
3	Modular Masonry Brick
3A	Color A
3B	Color B
4	Cast Stone Base
5	Overhead Hollow Metal Door
6	Premium Vinyl Windows
7	Asphalt Shingles
8	Painted Wood Railing
9	Painted PVC Manufactured Column
10	Cast Stone Sill



Pappageorge Haymes Partners

PAPPAGEORGE HAYMES

The Reserve at Lake Zurich
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners
owner

	date	description
	05.17.2024	Issue for PZC
	08.14.2025	Issue for Final PZC
	09.16.2025	Issue for Village Board

orientation

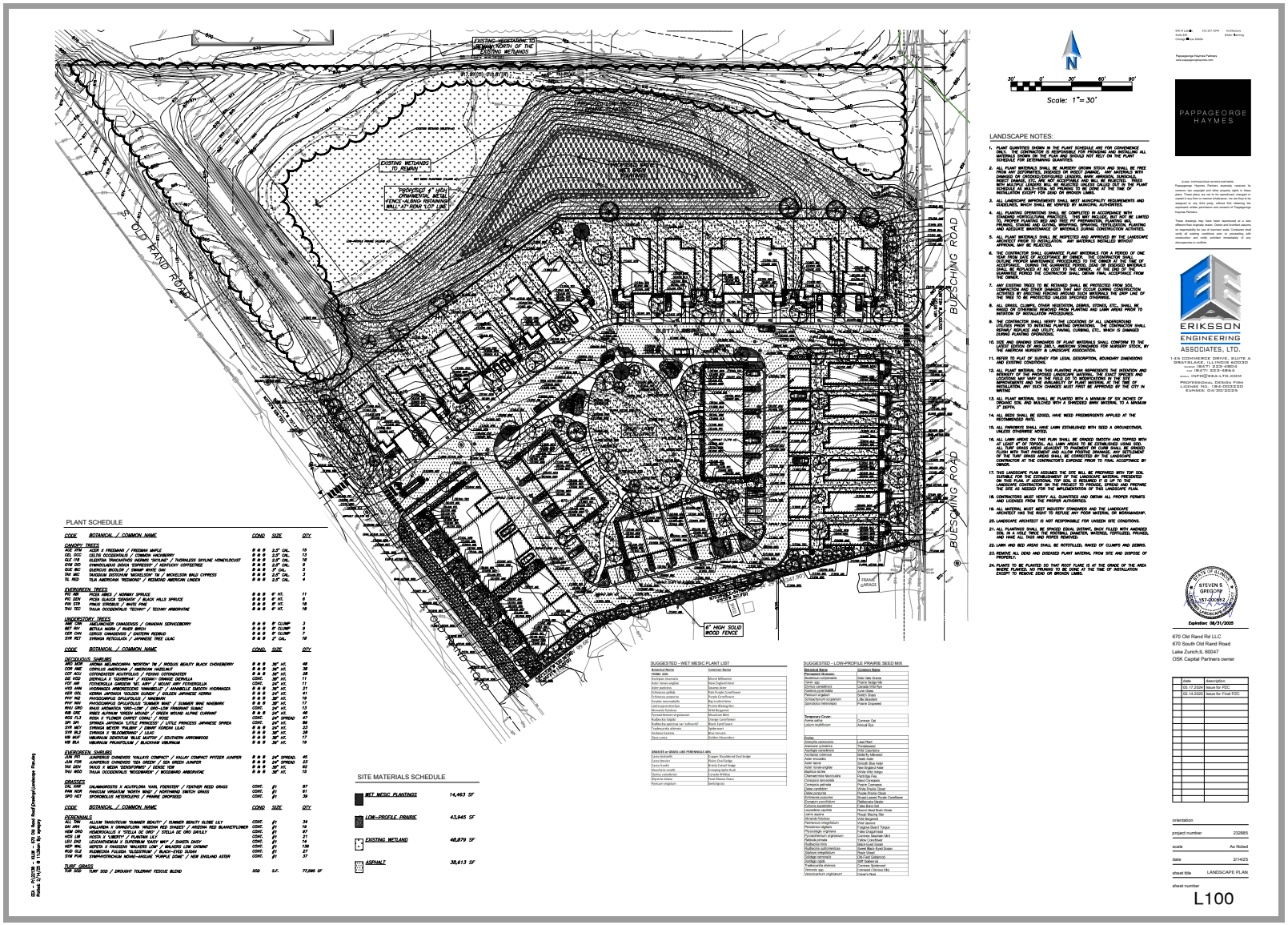
project number 232885

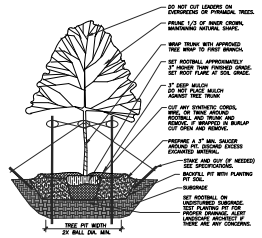
scale As Noted

date 6/16/25

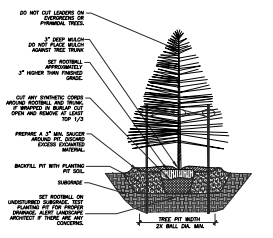
sheet title Rand Road Row Home Elevations

sheet number A10

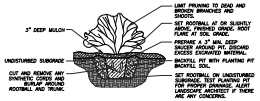

EXISTING WETLANDS TO REMAIN
PROPOSED 6' HIGH ORNAMENTAL METAL FENCE ALONG RETAINING WALL AT ROW'S LOT LINE
EXISTING WETLANDS TO REMAIN
6' HIGH SOLID WOOD FENCE
S. OLD RAND ROAD
BUESCHING ROAD
FOX RIVER DRIVE
Scale: 1"= 30'
LANDSCAPE NOTES:
PLANT SCHEDULE
SITE MATERIALS SCHEDULE
SUGGESTED - WET MESIC PLANT LIST
SUGGESTED - LOW-PROFILE PRAIRIE SEED MIX
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
STEVEN P. GREGORY
Expiration: 06/31/2025
orientation
project number 232885
scale As Noted
date 2/14/25
sheet title LANDSCAPE PLAN
sheet number
L100



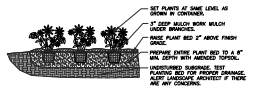
1 TREE PLANTING DETAIL
Not To Scale
329343-B1



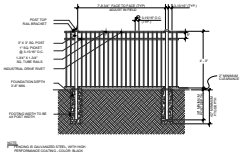
2 EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE
329343-B2



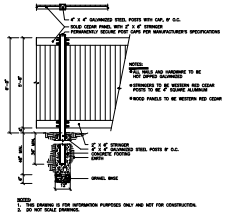
3 SHRUB PLANTING DETAIL
Not To Scale
329333-B1



4 ANNUAL, PERENNIAL, & GROUNDCOVER DETAIL
Not To Scale
329301-B3



5 4' ORNAMENTAL METAL FENCE
Not To Scale
323119-B3



6 6' SOLID WOOD PANEL FENCE WITH STEEL POSTS
NOT TO SCALE
323129.23-33

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184.005322
EXPIRES: 04/30/2025

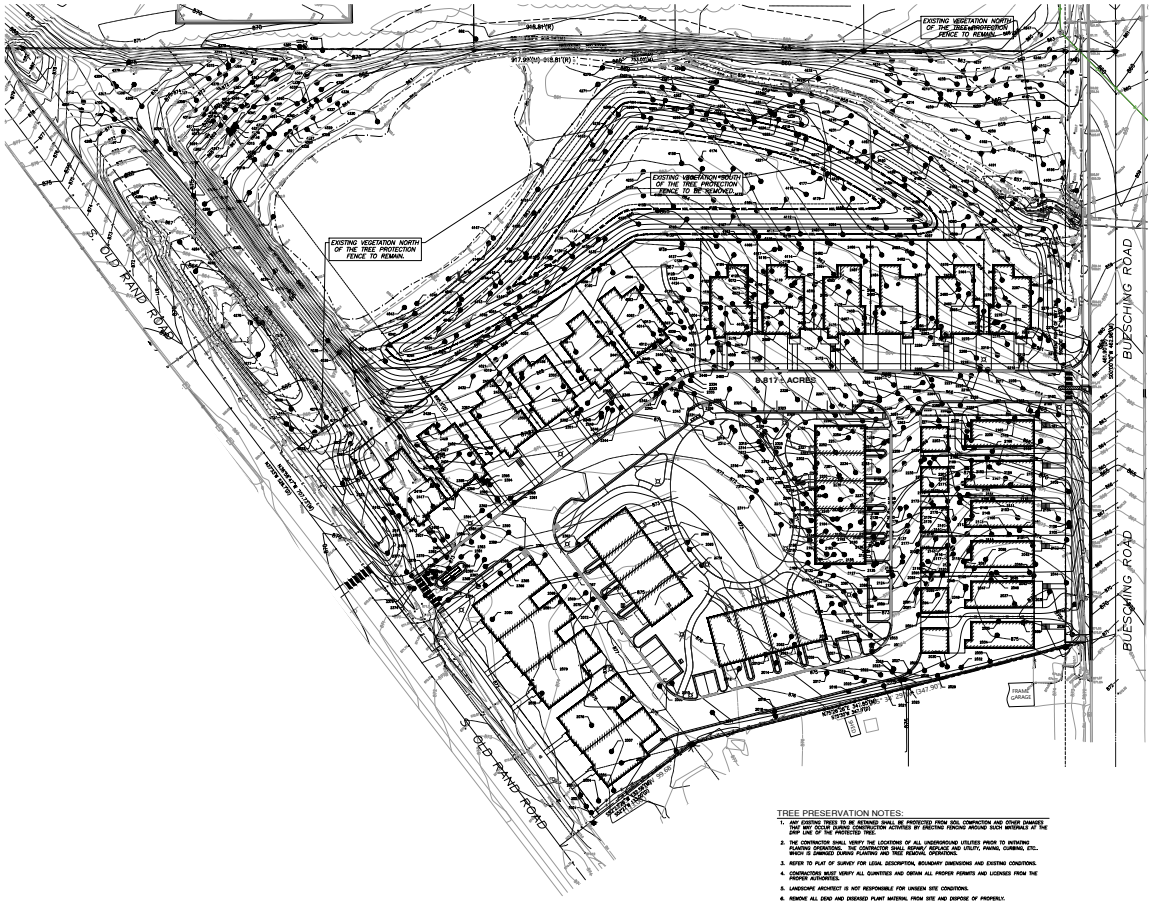
STEVEN S. GREGOIRE
157-006862
Expiration: 06/31/2025

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC

orientation
project number 232885
scale As Noted
date 2/14/25
sheet title LANDSCAPE DETAILS
sheet number
L200

ED. = PLOT.DTB = 6/18 = 670 Old Rand Road\Zoning\Landscape Plans.dwg
Robert 2/14/25 @ 11:02am By: rgregor



TREE PRESERVATION NOTES:

1. ANY EXISTING TREES TO BE RETAINED SHALL BE PROTECTED FROM SOIL COMPACTION AND OTHER DAMAGES THAT MAY OCCUR DURING CONSTRUCTION ACTIVITIES BY ERECTING FENCING AROUND SUCH MATERIALS AT THE DRIP LINE OF THE PROTECTED TREE.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INITIATING PLANTING OPERATIONS. THE CONTRACTOR SHALL REPAIR/ REPLACE ANY UTILITY, PAVING, CURBING, ETC., WHICH IS DAMAGED DURING PLANTING AND TREE REMOVAL OPERATIONS.
3. REFER TO PLAT OF SURVEY FOR LEGAL DESCRIPTION, BOUNDARY DIMENSIONS AND EXISTING CONDITIONS.
4. CONTRACTORS MUST VERIFY ALL QUANTITIES AND OBTAIN ALL PROPER PERMITS AND LICENSES FROM THE PROPER AUTHORITIES.
5. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR UNSEEN SITE CONDITIONS.
6. REMOVE ALL DEAD AND DISEASED PLANT MATERIAL FROM SITE AND DISPOSE OF PROPERLY.
7. PRUNE ALL EXISTING VEGETATION TO REMAIN ON SITE.
8. TREES INDICATED WITH LARGE DOT AND TAG # NORTH OF TREE PROTECTION FENCE ARE TO REMAIN.
9. ALL TREES SOUTH OF TREE PROTECTION FENCE ARE TO BE REMOVED.
10. SEE EXISTING TREE TABLE ON SHEET TP050 FOR DETAILED TREE INFORMATION.

N

Scale: 1"= 30'

PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.

STEVEN S GREGORY 157-006862 REGISTERED PROFESSIONAL ENGINEER

Expiration: 08/31/2025

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC

orientation

project number 232885

scale As Noted

date 2/14/25

sheet title TREE PRESERVATION PLAN

sheet number TP100

TREE PRESERVATION NOTES:
ERIKSSON ENGINEERING
ASSOCIATES, LTD.
14N COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@ERA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184.005322
EXPIRES: 04/30/2025
STEVEN P. GREGORY
157-006362
Expiration: 08/31/2025
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner
date
description
05.17.2024
Issue for PZC
09.19.2024
Issue for Final PZC
orientation
project number
232885
scale
As Noted
date
2/14/25
sheet title
TREE PRESERVATION PLAN TABLE
sheet number
TP200

RESIDENTIAL DEVELOPMENT

670 S. OLD RAND ROAD
LAKE ZURICH, IL 60047

PUBLIC WORKS DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

(847) 540-1696
LakeZurich.org

At the Heart of Community

Record Drawing (As-Built) Requirements

The following information must be a provided to the Village of Lake Zurich Building and Zoning Division prior to acceptance of public improvements and/or issuance of a final occupancy permit.

General Submittal Requirements

A. The owner's Illinois licensed professional engineer (Engineer) shall prepare a record drawing set of plans with the elevations, lengths, locations, etc. typed and/or drawn to scale alongside the planned information and the planned information shall be neatly crossed-out so that it is still legible.

B. The title sheet shall identify the plan sheets that have record information. The owner's Engineer shall attach a certificate to the plan certifying that the record information substantially conforms to the approved final engineering plan.

C. Benchmark information. NAVD88 and Illinois East State Plane Coordinates required.

D. Two (2) sets of record drawings shall be submitted "for review." Upon approval, Engineer shall provide the following:

1. Two (2) paper and one (1) Mylar set of "approved" signed and sealed record drawings along with Autocad DWG and Adobe PDF digital files.
2. An X,Y,Z coordinate file in excel or text format for all structures with descriptors.

Plan Requirements (as applicable)

A. Master utility plans shall include:

1. Storm and Sanitary Sewer
   a. Location of Storm and Sanitary structures.
   b. Rim and invert elevations.
   c. Pipe length and slope between structures.
   d. Sump pump discharge locations.
2. Water Main
   a. Location of Water Valves, Vaults and Fire Hydrants.
   b. Grade ring elevation of Fire Hydrants.
   c. Rim and Top of Pipe elevations for Valve Vaults.
   d. Rim and Top of Valve stem for Vault Boxes.
   e. Buffalo Box locations.

B. Grading plans shall include:

1. Topographic spot elevations and contours for overland flow paths, detention ponds, storage facilities and building pads.
2. Detention pond restrictor size, invert elevation, emergency overflow size, and elevation.
3. Drain tile information provided from the Subsurface Drainage Inventory, or identified during construction as follows: location, connection, size, material, and inverts for those drain tiles that are part of the stormwater management system.
4. Applicable stormwater calculations or other information verifying conformance with the permitted plan set.
5. Lowest floor and low opening elevations of structures. Low opening sizes where vents are required.
6. Top of foundation elevations.
7. Driveway slopes.

C. Street Lighting Locates (poles, wire run locations, hand holes, controllers, pedestals).

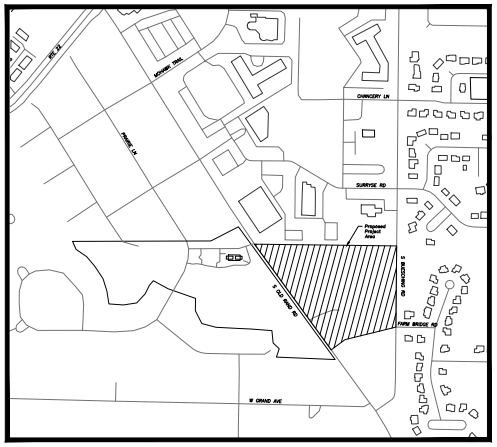
D. Landscaping plans shall include all landscaping species, locations, sizes, maintenance responsibilities, and the like.

Other Requirements

A. Verification of required native vegetation planted (seed tags, invoices).

B. Owner shall provide two (2) concrete monuments per project unless directed otherwise by the village engineer. The monuments shall consist of five-eighths inch (5/8") stainless steel rod. To ensure positional stability, the rod shall be driven to refusal or when the driving rate decreases to one foot (1') per sixty (60) seconds. Each stainless steel rod shall be installed in a plastic grooved sleeve to prevent frost heave in the winter. Each monument shall have an aluminum security cap placed in twelve inch (12") diameter concrete to protect the integrity of the monument. Horizontal and vertical positions shall be established utilizing the global positioning system with a horizontal accuracy achieving first order or 1:100,000 (see exhibit no. 32 in section 10-5-b-1 of the Village Code).

C. It shall be the building owner's responsibility to ensure compliance with the 2010 ADA Standards for Accessible Design and the Illinois Accessibility Code.



LOCATION MAP (NTS)

CIVIL SHEET INDEX

C000 CIVIL COVER SHEET
C001 EXISTING CONDITIONS
C002 NOTES & LEGENDS
C100 SITE DEMOLITION PLAN – OVERALL
C101 SITE DEMOLITION PLAN – NORTHWEST
C102 SITE DEMOLITION PLAN – NORTHEAST
C103 SITE DEMOLITION PLAN – SOUTH
C200 SITE GEOMETRY PLAN – OVERALL
C201 SITE GEOMETRY PLAN – NORTHWEST
C202 SITE GEOMETRY PLAN – NORTHEAST
C203 SITE GEOMETRY PLAN – SOUTH
C300 SITE UTILITY PLAN – OVERALL
C301 SITE UTILITY PLAN – NORTHWEST
C302 SITE UTILITY PLAN – NORTHEAST
C303 SITE UTILITY PLAN – SOUTH
C304 UTILITY ANNOTATION DETAIL
C305 UTILITY ANNOTATION DETAIL
C306 UTILITY ANNOTATION DETAIL
C307 UTILITY ANNOTATION DETAIL
C308 UTILITY ANNOTATION DETAIL
C309 SANITARY PROFILES
C310 SANITARY PROFILES
C311 SANITARY PROFILES
C312 SANITARY PROFILES
C313 SANITARY PROFILES
C314 SANITARY PROFILES
C315 SANITARY PROFILES
C316 WATER PROFILES
C317 WATER PROFILES
C318 WATER PROFILES
C319 WATER PROFILES
C320 WATER PROFILES
C321 WATER PROFILES
C322 WATER PROFILES
C323 WATER PROFILES
C400 GRADING & PAVING PLAN – OVERALL
C401 GRADING & PAVING PLAN – NORTHWEST
C402 GRADING & PAVING PLAN – NORTHEAST
C403 GRADING & PAVING PLAN – SOUTH
C404 GRADING DETAIL
C405 GRADING DETAIL
C406 GRADING DETAIL
C407 GRADING DETAIL
C408 GRADING DETAIL
C500 SOIL EROSION & SEDIMENT CONTROL PLAN – OVERALL
C501 SOIL EROSION & SEDIMENT CONTROL PLAN – NORTHWEST
C502 SOIL EROSION & SEDIMENT CONTROL PLAN – NORTHEAST
C503 SOIL EROSION & SEDIMENT CONTROL PLAN – SOUTH
C600 OPERATION & MAINTENANCE PLAN
C700 SITE WORK DETAILS
C701 SITE WORK DETAILS
C702 SITE WORK DETAILS
C703 SITE WORK DETAILS
C704 SITE WORK DETAILS
C705 TRAFFIC CONTROL DETAILS

PUBLIC WORKS DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

(847) 540-1696
Fax (847) 719- 3182
LakeZurich.org

At the Heart of Community

MEMORANDUM

Date: August 2, 2023

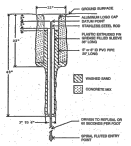
From: Jodi McCarthy, PE, CFM, CPESC

Subject: Concrete Monumentation
Ordinance 10-5-b-1

The Village Code has a set of requirements related to Record Drawing Requirements, of which one item is providing concrete monumentation. The current code reads as follows:

10-5-b-1 B. Owner shall provide two (2) concrete monuments per project unless directed otherwise by the village engineer. The monuments shall consist of five-eighths inch (5/8") stainless steel rod. To ensure positional stability, the rod shall be driven to refusal or when the driving rate decreases to one foot (1') per sixty (60) seconds. Each stainless steel rod shall be installed in a plastic grooved sleeve to prevent frost heave in the winter. Each monument shall have an aluminum security cap placed in twelve inch (12") diameter concrete to protect the integrity of the monument. Horizontal and vertical positions shall be established utilizing the global positioning system with a horizontal accuracy achieving first order or 1:100,000 (see exhibit no. 32 in section 10-5-b-1 of the Village Code).

EXHIBIT NO. 32



The standards provided in the ordinance are similar to those of state and federal agencies (such as USGS and IDOT) when setting permanent monumentation. The cost, time, and effort involved with meeting these standards are significant, and exceed the requirements established by the Plat Act of Illinois for boundary surveys and plats. We would recommend that the Village code be revised to meet the state statute as listed below:

Plat Act (Part 1270 of Title 68 of the Administrative Code), Section 1270.56(b)(8)(I), *"Concrete monuments shall be a minimum size of 3" in diameter by 24" in length, or 4" square by 24" in length, and shall have a precise corner mark and shall be redefaced by at least a ¼" re-bar or ½" or larger iron pipe."*

In addition, we would note that the approximate frost depth in this area is 40" and there should be a minimum depth of 42" to set the bottom of the monument below the typical frost depth.

Reference: Plat Act - https://ilga.gov/commission/jcar/admincode/068/06801270000056t.html

2

SURVEY PROVIDED BY:

Plat of Survey and Topography Provided By Vanderstappen Land Surveying, Inc. on 01/06/2025. Order Number 220116.

J.U.L.I.E.

Note: The exact location of all utilities shall be verified by the contractor prior to construction activities. For utility locations call J.U.L.I.E. 1 (800) 892-0123

04114 Lake ■, 312 337 3344 Architecture
Suite 401 Urban Planning
Chicago ■ 6xxx 60604

Pappageorge Haymes Partners
www.pappageorgehaymes.com

PAPPAGEORGE HAYMES

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These drawings may have been reproduced at a size different than originally drawn. Owner and Architect assume no responsibility for use of incorrect scale. Contractor shall verify all existing conditions prior to proceeding with the work and notify architect immediately of any discrepancies or conflicts.

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
WWW.ERIKSSON-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184-003220
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation

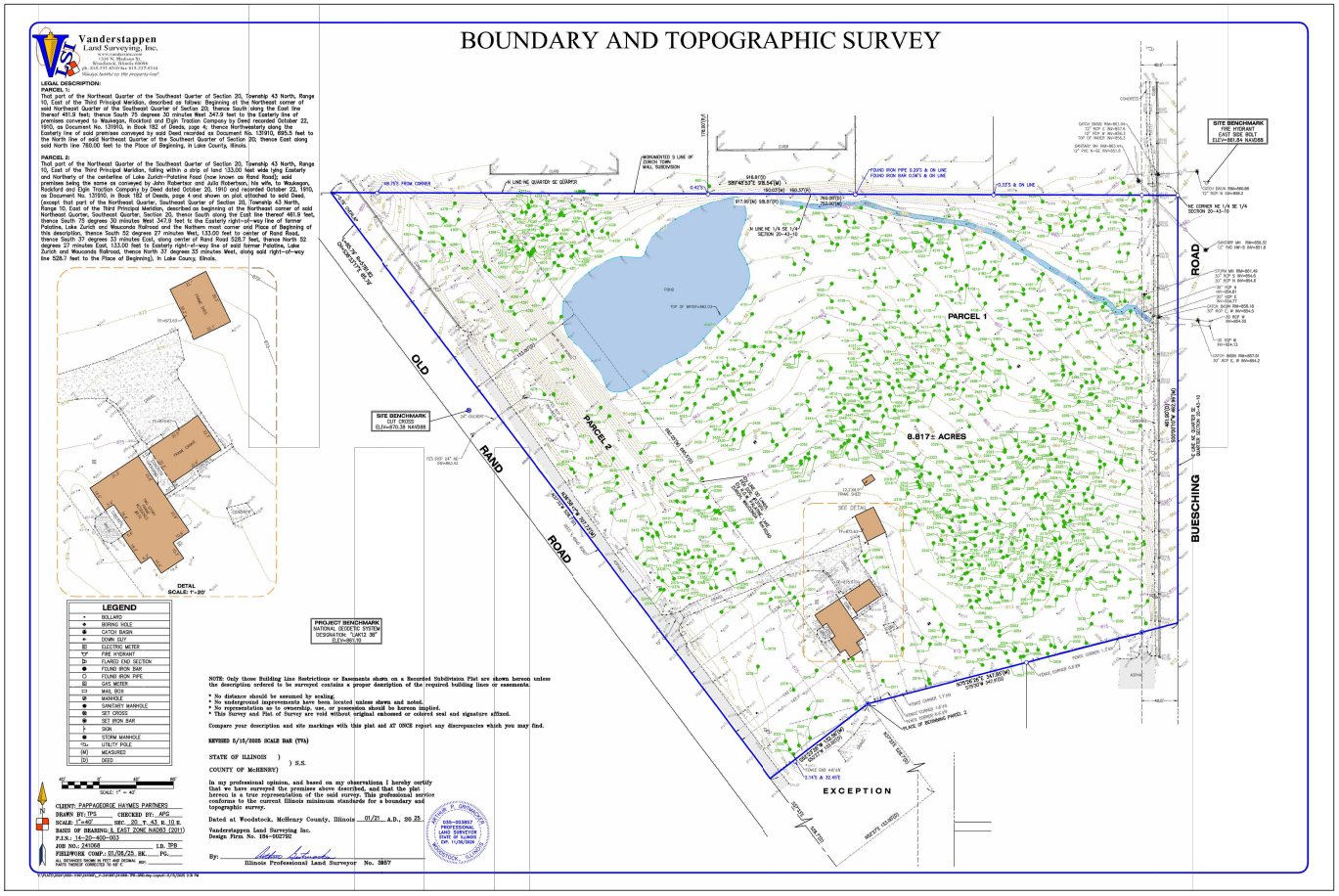
project number 232885

scale As Noted

date 06/16/25

sheet title CIVIL COVER SHEET

sheet number C000


BOUNDARY AND TOPOGRAPHIC SURVEY
Vanderstappen
Land Surveying, Inc.
LEGAL DESCRIPTION:
PARCEL 1:
PARCEL 2:
LEGEND
DETAIL
SCALE: 1"=20'
SITE BENCHMARK
CUT CROSS
ELEV=970.39 NAVD88
PROJECT BENCHMARK
NATIONAL GEODETIC SYSTEM
DESIGNATION "LW13 38"
ELEV=960.10
SITE BENCHMARK
FIRE HYDRANT
EAST SIDE BOLT
ELEV=961.84 NAVD88
PARCEL 1
PARCEL 2
8.617± ACRES
OLD RAND ROAD
RAND ROAD
BUESCHING ROAD
EXCEPTION
NOTE: Only those Building Line Restrictions or Easements shown on a Recorded Subdivision Plat are shown hereon unless the description ordered to be surveyed contains a proper description of the required building lines or easements.
• No distance should be assumed by scaling.
• No underground improvements have been located unless shown and noted.
• No representation as to ownership, use, or possession should be hereon implied.
• This Survey and Plat of Survey are void without original embossed or colored seal and signature affixed.
Compare your description and site markings with this plat and AT ONCE report any discrepancies which you may find.
REVISED 5/15/2025 SCALE BAR (TVA)
STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)
In my professional opinion, and based on my observations I hereby certify that we have surveyed the premises above described, and that the plat hereon is a true representation of the said survey. This professional service conforms to the current Illinois minimum standards for a boundary and topographic survey.
Dated at Woodstock, McHenry County, Illinois 01/21 A.D., 20 25.
Vanderstappen Land Surveying Inc.
Design Firm No. 184-002792
By:
Illinois Professional Land Surveyor No. 3857
CLIENT: PAPPAGEORGE HAYMES PARTNERS
DRAWN BY: TFS CHECKED BY: APG
SCALE: 1"=40' SEC. 20 , T. 43 N. R. 10 E.
BASIS OF BEARING: IL EAST ZONE NAD83 (2011)
P.I.N.: 16-20-400-003
JOB NO.: 241068 I.D. TFS
FIELDWORK COMP.: 01/08/25 BK. PG.
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F.
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
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670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
date description
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04.18.2025 Village Resubmittal
06.18.2025 Village Resubmittal
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title EXISTING CONDITIONS
sheet number
C001

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES

A. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

B. FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DECI), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:

- UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
- AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

C. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

D. A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA 1 UNDERLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPERVIOUS SURFACE SHALL BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED FOR SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

E. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.

F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.

G. ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.

H. SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURES AS APPROVED BY THE ENFORCEMENT OFFICER.

I. APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.

J. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.

K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.

L. IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.

M. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.

N. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

O. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.

G:\Regulatory Program\SESC handouts\SOIL EROSION AND SEDIMENT CONTROL NOTES.doc

STORMWATER MANAGEMENT COMMISSION

TYPICAL CONSTRUCTION SEQUENCING

1.) Installation of soil erosion and sediment control SE/SC measures
   a.) Selective vegetation removal for silt fence installation
   b.) Silt fence installation
   c.) Construction fencing around areas not to be disturbed
   d.) Stabilized construction entrance

2.) Tree removal where necessary (clear & grub)

3.) Construct sediment trapping devices (sediment traps, basins…)

4.) Construct detention facilities and outlet control structure with restricter & temporary perforated riser

5.) Strip topsoil, stockpile topsoil and grade site

6.) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)

7.) Install storm sewer, sanitary sewer, water and associated inlet & outlet protection

8.) Permanently stabilize detention basins with seed and erosion control blanket

9.) Temporarily stabilize all areas including lots that have reached temporary grade

10.) Install roadways

11.) Permanently stabilize all outlet areas

12.) Install structures and grade individual lots

13.) Permanently stabilize lots

14.) Remove all temporary SE/SC measures after the site is stabilized with vegetation

* Soil erosion and sediment control maintenance must occur every two weeks and after every ½ or greater rainfall event

U:\Regulatory Program\SESC handouts\TYPICAL CONSTRUCTION SEQUENCING.doc

INTENDED SEQUENCE OF MAJOR SEDIMENT AND EROSION CONTROL MEASURES

1. Install Stabilized Construction Entrance
2. Install All Downslope and Sideslope Perimeter Controls Before Commencement of Any Ground Disturbing Activity. Refer To Plans For Where Each Control Is Necessary For Construction To Proceed.
3. Clear and Stabilize Disturbed Areas As Soon As Feasible.
4. Protect Storm Sewer Inlets Immediately As Grates Are Set Into Their Permanent Final Elevations or Weather Is Likely.
5. Construct Sedimentation Basins and Structures.
6. Perform Grading Operations and Installation of Site Improvements and Utilities.
7. Install Erosion Control Seeding and Plantings.
8. Remove Accumulated Sediment From Basins and Along Silt Fences.
9. Construction of Infiltration Measures Shall Take Place Following Stabilization of Upstream Drainage Areas.
10. Remove Temporary Sediment and Erosion Control Measures Following Final Stabilization of All Disturbed Areas.

SOIL EROSION & SEDIMENTATION CONTROL NOTES

1. Illinois Urban Manual Shall Govern All Soil Erosion and Sediment Control, and Related Work.
2. Contractor Shall Be Responsible for Compliance With IEPA NPDES and ILR10 Permit Requirements for Project.
3. Soil Disturbance Shall Be Conducted In Such a Manner as To Minimize Erosion. Consider Phasing Requirements, and Consider the Time of Year, Site Conditions, and the Use of Temporary or Permanent Measures.
4. Soil Erosion and Sediment Control Features Shall Be Constructed Prior to the Commencement of Upland Disturbance.
5. Temporary Soil Stabilization Shall Be Applied to Topsoil Stockpiles and Disturbed Areas Where Construction Activity Will Not Occur For a Period of More Than 14 Calendar Days. Temporary Seeding Shall Be Applied Within 7 Calendar Days of the End of Active Hydrologic Disturbance. The Sediment Control Measures Shall Be Maintained On A Daily Basis Until Such Time As Permanent Stabilization And Final Grading Is Complete. Permanent Stabilization Shall Be Completed Within 14 Days After Completion of Final Grading of Slot.
6. All Temporary And Permanent Erosion Control Measures Shall Be Removed Within 30 Days After Final Site Stabilization Is Achieved Or After The Temporary Measures Are No Longer Necessary. Trapped Sediment And Other Disturbed Soil Areas Shall Be Permanently Stabilized.
7. Final Site Stabilization Is Defined By The EPA General Permit As Meaning That All Soil Disturbing Activities At The Site Have Been Completed, And That A Uniform Perennial Vegetative Cover With A Density Of 70 Percent Of The Cover For Unpaved Areas And Areas Not Covered By Permanent Structures Has Been Established Or Equivalent Permanent Stabilization Measures (Such As The Use Of Riprap, Gabions, Or Geotextiles) Have Been Employed.
8. All Storm Sewer Structures That Are, Or Will Be, Functioning During Construction Shall Be Protected, Including Those Under The Jurisdiction Of Another Agency. The General Contractor Shall Use "Catch-All" Inlet Protectors (or equal) and Silva Wattles Around The Grate In Landscaped Areas And "Catch-All" Inlet Protectors (or equal) In Paved Areas To Prevent Siltation.
9. All Storm Sewer Structures That Are, Or Will Be, Functioning During Construction Shall Be Protected, Including Those Under The Jurisdiction Of Another Agency. The General Contractor Shall Use "Catch-All" Inlet Protectors (or equal) and Filter Wattles Around The Grate In Landscaped Areas And "Catch-All" Inlet Protectors (or equal) In Paved Areas To Prevent Siltation.
10. All Temporary And Permanent Sediment And Erosion Control Measures Must Be Maintained, Repaired, And Inspected In Conformance With All Applicable EPA--NPDES Phase II And Lake County SESC Requirements.
11. Following The Termination Of Construction Activities And Prior To Sale Of Any Lot, The Owner Shall Provide Each Prospective Buyer A Copy Of The Storm Water Pollution Prevention Plan, Inspection Reports, And Records Of Any Changes Made To Complete The Notice Of Intent For A Period Of At Least Three Years Following Final Stabilization.
12. Install And Maintain 24" Fence At The Perimeter Of The Construction Zone And Wetland Areas And As Shown On The Plans. Maintain 6ft Fence Throughout Construction And Until Vegetation Has Been Fully Established.
13. Contractor Shall Provide Qualified Soil Erosion and Sediment Control Inspector Services In Accordance with The Lake County Soil Erosion and Sediment Control Ordinance. Shall Occur At Every Seven Calendar Days Or Within 24 Hours of a 0.5" or Greater Rainfall Event. Engineer Shall Be Copied on Inspection Logs.
14. The Erosion Control Measures Indicated On The Drawings Are The Minimum Requirements. Additional Measures May Be Required As Directed By The Qualified Soil and Erosion Sediment and Control Inspector Or Governing Agency.
15. Unless Otherwise Indicated on the Drawings, Stabilize All Areas Disturbed During Construction By Seeding With Seed Mix North American Green Blend SC-150BF Erosion Control Blanket, or Approved Equal.
16. Repair Measures of Applicable Quantities of Oil or Hazardous Materials If They Occur in Accordance with EPA NPDES Requirements.
17. All Concrete Washout Shall Conform To The Temporary Concrete Washout Facility* Standards Code #642 of the Illinois Urban Manual, Latest Edition.
18. If Necessary, The SWPPP Shall Be Modified To Reflect Changes Required During The Effective Period Of The EPA NPDES General Permit No ILR10 and Local and County Permits.
19. Dewatering of Excavations Shall be Performed in a Manner Such as Through the use of Filter Bags or Polymer Filtration Systems Such That No Soil Is Discharged Sediment Laden Water Into Storm Sewers Tributary to Open Water.

GRADING NOTES

1. The Grading and Construction of Proposed Improvements Shall Be Done In A Manner Which Will Allow For Positive Drainage, and Not Cause Ponding of Stormwater on the Surface of Proposed Improvements.
2. All Landscaped Areas Disturbed By Construction Shall Be Resprayed With 6 Inches (Min.) to 12 Inches (Max.) Topsoil and Seeded Unless Noted Otherwise On The Landscape Drawings.
3. Refer to Architectural Drawings for Locations and Patterns of Expansion and Control Joints in Concrete Pavement and Sidewalks.
4. Accessible Parking Spaces and Loading Spaces Shall Be Sloped at Maximum 2.0% in Any Direction. Maximum Sidewalk Cross Slopes Shall be 2.0%. Maximum Longitudinal Sidewalk Slope Shall Be 4.8%. Contact Engineer If Conflicts Exist.
5. Rebuild Existing Structures and Adjust Rim Elevations to Match Proposed Ground Elevations.

UTILITY NOTES

1. Utility Service Lines as Shown Hereon are Approximate. Coordinate The Exact Locations With the Plumbing Contractor and/or the Owner's Construction Representative Prior to Installation of Any New Utilities.
2. Refer to Plumbing Drawings for Continuation of All Utilities Within 5 Feet of Building Face.
3. Field Verify Invert & Locations of Existing Utility Mains Prior to Installing Any On-Site Utilities or Structures. All Elevations and Inverts Referencing Said Utility Shall Be Field Verified Prior To Installation Of Any New Structures. Contact The Engineer Immediately If Slopes or Inverts Conflict With Those Shown On Grading Plan & Supplementary Grading Info Sheet Drawings.
4. Coordinate the Relocation Of Any Utilities Encountered And Replacement Of Any Utilities Damaged Within Influence Zone Of New Construction. If A Utility Location Not Shown On The Plans Is Encountered During Excavation, The Contractor Shall Contact the Engineer Prior to Work Continuing.
5. All Water Main and Services Shall Be Installed at a Minimum Depth of 5.5' From Top of Finished Ground Elevation to Top of Main.
6. Protection of water supplies shall be as described in Section 735.202 of the Illinois Recommended Standards for Sewage Works or Section 41-2.01 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
7. Clean Out All Existing and Proposed Storm Inlets and Catch Basins at the Completion of Construction.
8. Provide Adequate Coupling Device and/or Oversized Concrete Thread--End Section to Accommodate HDPE Storm Sewer.
9. The "Standard Specifications for Water and Sewer Main Construction in Illinois", Current Edition Shall Govern Work Where Applicable.
10. Roof Drains/Downspouts Are Prohibited from Being Connected to the Public Storm Sewer.

STRUCTURE NOTES

1. All Catch Basins to Be Installed in Paved Areas Shall Have Neenah R2504-Q Frame & Grate or Approved Equal.
2. All Catch Basins to Be Installed in Landscaped Area Shall Have Neenah R2504-S Frame & Grate or Approved Equal. For Curve Sections Install a Minimum of 4" Grade Rings For Topsoil Regrades. For Flat Slab Tops Install the Following Minimum Height of Grade Rings
   - 4' Diameter Structure- 0"
   - 5' Diameter Structure- 4"
   - 6' Diameter Structure- 8"
3. All Catch Basins to Be Installed Along Curb and Gutter Shall Have Neenah R3067-V Frame & Grate or Approved Equal.
4. All Catch Basins to Be Installed Along Depressed Curb and Gutter (See R-6.12) Shall Have East Jordan Iron Works 5120 Catch Basin Inlet Frame and Grate, or Approved Equal.
5. Where Structures are Shown Along the Curbline, Unless Specifically Stated Otherwise, It Is Intended That the Frame of the Structure Is To Fall Within the Flowline Of The Gutter or at the Pavement Edge Where No Gutter Exists.
6. All Manholes Shall Have Neenah R1713-B Frames & Closed Lid (Non-Ventilated Type) with "Village of Lake Zurich — Sanitary" or Village of Lake Zurich — Sanitary" Imprinted as Appropriate.
7. For All Structures Indicated To Be Adjusted, Remove and Reset Existing Rings, Grates, Covers, Barrel Sections, or Flat Slab Top as Necessary.
8. All Flared End Sections 12" and Larger Shall Include an ADOT Standard Grate.
9. All Flared End Sections Shall Be Concrete.
10. All Sanitary Manholes Shall Include an External Chimney Seal.

GEOMETRY NOTES

1. All Dimensions Contained Hereto Reference Back Of Curb, Face Of Retaining Wall, Edge Of Pavement, Center of Structure and Outside Face Of Building Foundation Unless Otherwise Noted.
2. All Pavement Striping Shall Be 4" Wide Yellow Paint Per Specifications, Two Coats for Latex Paints. All Cross Hatch Striping Shall Be 40" At 2'-0" Centers.
3. All Accessible Parking Signs (R7-8) Must Be Placed at the Center of the Space and Within 5 Feet of the Space.
4. Refer to Architectural Drawings for Exact Locations of All Buildings.
5. Refer to Architectural Drawings for Locations and Details of Ramps and Sidewalks.
6. Traffic Sign Posts Shall Be Breakaway Even U--Channel Posts, 2-lb/ft, 11 Gauge Steel, Embedded 42" Minimum Into Ground.

DEMOLITION NOTES

1. All Signs to Be Removed Shall Be Salvaged and Stored In the Owner's Facility for Future Use or Applicable.
2. Village Should Fire and Police of Construction Related Traffic Routes Prior to Start of Road and Boundary Road are to be Kept Open.
3. Coordinate Existing Utility Removal with Local Authorities and Utility Companies Having Jurisdiction.
4. Coordinate Removal of Overhead Wires And Utility Poles With Authorities Having Jurisdiction And Respective Utility Providers.
5. All Excavations Shall be Full Depth, Neatly Sawed Straight Lines Over Underground Utility Lines Crossing Or Adjacent Existing Pavement, Curb, Sidewalk, Etc. At Points Locating Proposed Connections To Existing Utilities Under Unfavorable Conditions, Utilize Hand Excavation As Necessary To Remove Minimum Amount Necessary for Installation of Proposed Improvements. Dry Trenching Is Not Permitted.
6. Provide and Maintain All Necessary Traffic Control and Safety Measures Required During Demolition and Construction Operations Within Or Near the Public Right-of-Way.
7. All Light Poles to Be Removed From Private Property Shall Be Disposed Of By The Contractor Unless Noted Otherwise On Plans. Coordinate Removal of Electrical Lines With Electrical Engineer and Owner Prior to Demolition.
8. Perform Tree Pruning In All Locations Where Proposed Construction Activity Encroaches Within The Dripline Of Existing Trees. Remove Any Dead Or Damaged Branches Within The Drip Line Of Existing Trees To Remain Shall Be Done Outside Away From Trunk A Angle In Excess Of 1" Diameter And Cambium Shall Not Be Cut By Machine Blade Or Other Means. Paint Cuts Over 1" Diameter With Tree Paint Approved By The Architect Prior To Operations For A Variance From This Procedure.
9. Coordinate Tree Removal with Landscape Architect. All Trees To Be Removed Shall Be Removed In Their Entirety and Stumps Shall Be Ground to Proposed Subgrade, Use As Mulch For Proposed Landscaping Where Applicable and Acceptable to Architect.
10. Provide Tree Protection Fencing Prior To Construction Operations. Maintain Throughout Construction.

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Inlet	
	Area Drain	
	Clean Out	
	Flared End Section	
	Storm Sewer	
	Sanitary Sewer	
	Combined Sewer	
	Water Main	
	Gas Line	
	Overhead Wires	
	Electrical Cable (Buried)	
	Telephone Line	
	Fire Hydrant	
	Valve Vault	
	Buffalo Box	
	Monument	
	Bollard	
	Gas Valve	
	Gas Meter	
	Electric Meter	
	Electric Manhole	
	Hand Hole	
	Light Pole	
	Light Pole w/ Yard Arm	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Sign	
	Mailbox	
	Accessible Parking Stall	
	Curb & Gutter	
	Depressed Curb	
	Curb Transition	
	Gutter Elevation	
	Pavement Elevation	
	Sidewalk Elevation	
	Ground Elevation	
	Top of Retaining Wall Elevation	
	Swale	
	Contour Line	
	Deciduous Tree	
	Coniferous Tree	
	Brushline	
	Tree Protection Fencing w/ Silt Line	

SOIL EROSION & SEDIMENTATION CONTROL LEGEND

- Silt Fence
- Erosion Control Blanket — North American Green C125 Or Approved Equal
- Permanent Turf Reinforcement Mat — North American Green C350 Or Approved Equal
- Catch--All, Flex Chop Safeguard (or equal) Paved or Existing Stabilized Area

PAVING & SURFACE LEGEND

- Asphalt Pavement Section — 1 1/2" Hot Mix Asphalt, D, IL-9.5, N50 / 2 1/2" Hot Mix Asphalt, IL-19.0, N50 / Prime Coat (0.20 gal/sy adj) / 8" Aggregate Base Course, Type B, Crushed, CA-6
- Heavy-Duty Asphalt Pavement Section — 1 1/2" Hot Mix Asphalt, D, IL-9.5, N50 / 3 1/2" Hot Mix Asphalt, IL-19.0, N50 / Prime Coat (0.20 gal/sy adj) / 10" Aggregate Base Course, Type B, Crushed, CA-6
- Public Way Asphalt Pavement Section Replace In Kind
- Concrete Driveway Section — 6" Portland Cement Concrete, Curing and Sealing Compound / 4" Aggregate Base Course, Type B, Crushed
- Concrete Sidewalk Section — 5" Portland Cement Concrete, Curing and Sealing Compound / 4" Aggregate Base Course, Type B, Crushed
- Gravel Shoulder Replace In Kind
- Stormwater Overland Flow Path
- Ridge Line/High Point

DEMOLITION LEGEND

- Utility Line Removal
- Bituminous Pavement Removal (Full Depth)
- Concrete Pavement Removal (Full Depth)
- Gravel Removal (Full Depth)
- Pavement Sawcut
- Curb & Gutter Removal
- Structure Removal
- Tree Removal

DRAWN BY: [illegible] 312.337.3344 Architecture
Suite 615 Silver Planning
Chicago, Illinois 60606

Pappageorge Haymes Partners
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PAPPAGEORGE HAYMES

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PROFESSIONAL ENGINEER
LICENSE NO. 184.003220
EXPIRES: 11/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

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scale As Noted
date 06/16/25
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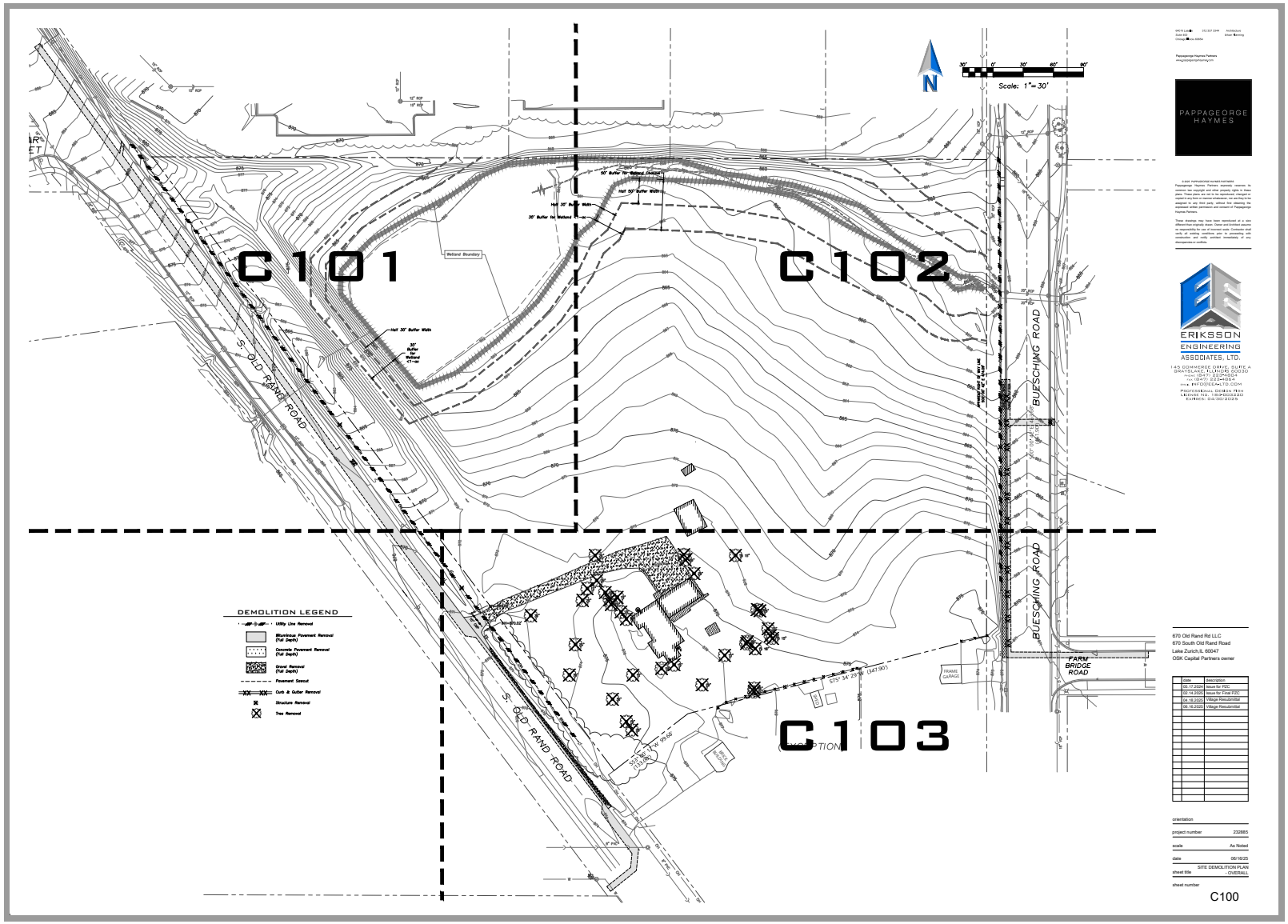
sheet number C002


C101
C102
C103
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
DEMOLITION LEGEND
Utility Line Removal
Bituminous Pavement Removal (Full Depth)
Concrete Pavement Removal (Full Depth)
Gravel Removal (Full Depth)
Pavement Sawcut
Curb & Gutter Removal
Structure Removal
Tree Removal
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
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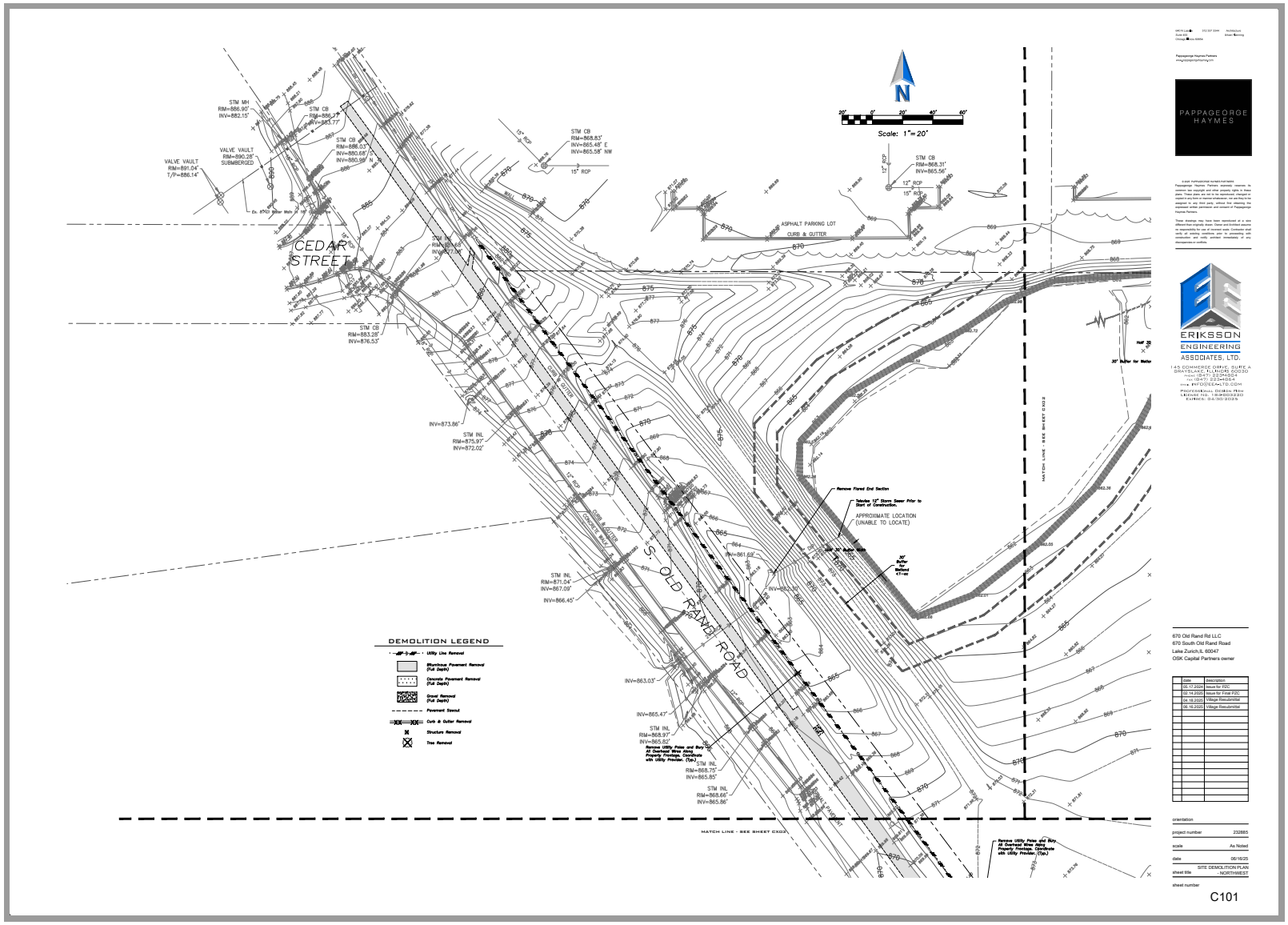
sheet number C100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CEDAR STREET
S. OLD RAND ROAD
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Bituminous Pavement Removal (Full Depth)
Concrete Pavement Removal (Full Depth)
Gravel Removal (Full Depth)
Pavement Sawcut
Curb & Gutter Removal
Structure Removal
Tree Removal
ASPHALT PARKING LOT
CURB & GUTTER
APPROXIMATE LOCATION (UNABLE TO LOCATE)
MATCH LINE - SEE SHEET C102
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
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project number 232885
scale As Noted
date 06/16/25
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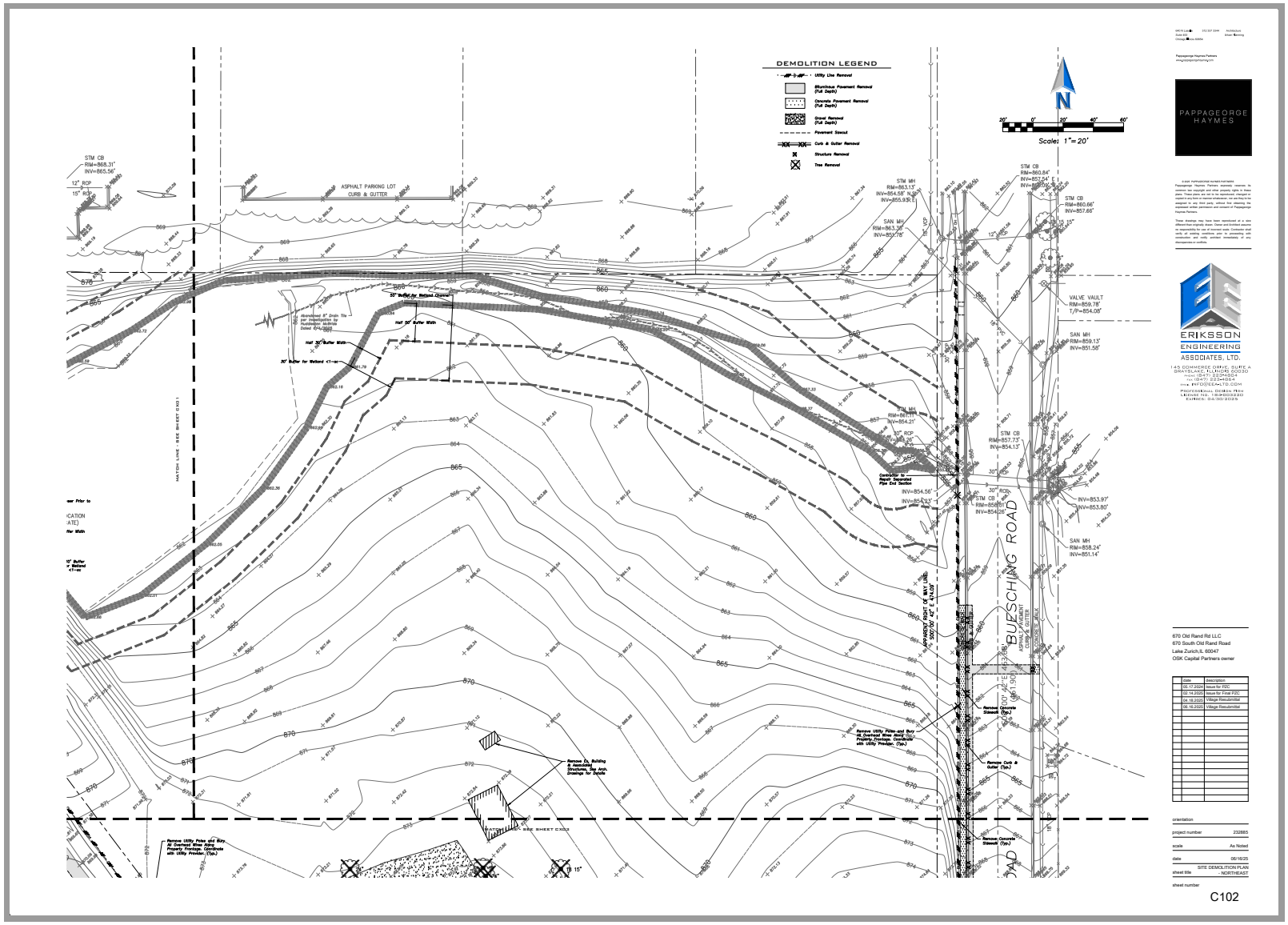
sheet number C101


DEMOLITION LEGEND
Utility Line Removal
Bituminous Pavement Removal (Full Depth)
Concrete Pavement Removal (Full Depth)
Gravel Removal (Full Depth)
Pavement Sawcut
Curb & Gutter Removal
Structure Removal
Tree Removal
Scale: 1" = 20'
ASPHALT PARKING LOT CURB & GUTTER
BUESCHING ROAD
STM CB RIM=868.31' INV=865.56'
STM MH RIM=863.13' INV=854.58' N,W INV=855.93' E
STM CB RIM=860.84' INV=857.24' E INV=857.04' W
STM CB RIM=860.66' INV=857.66'
SAN MH RIM=863.38' INV=853.78'
VALVE VAULT RIM=859.78' T/P=854.08'
SAN MH RIM=859.13' INV=851.58'
STM MH RIM=861.96' INV=854.21'
STM CB RIM=857.73' INV=854.13'
STM CB RIM=858.61' INV=854.26'
INV=853.97'
INV=853.80'
SAN MH RIM=858.24' INV=851.14'
Remove Ex. Building & Associated Site Improvements. See Arch. Drawings for Details
Remove Utility Poles and Guy #2 Overhead Wires Along Property Frontage. Coordinate with Utility Provider. (Typ.)
Remove Concrete Sidewalk (Typ.)
Remove Curb & Gutter (Typ.)
MATCH LINE - SEE SHEET C102
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
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project number 232885
scale As Noted
date 06/16/25
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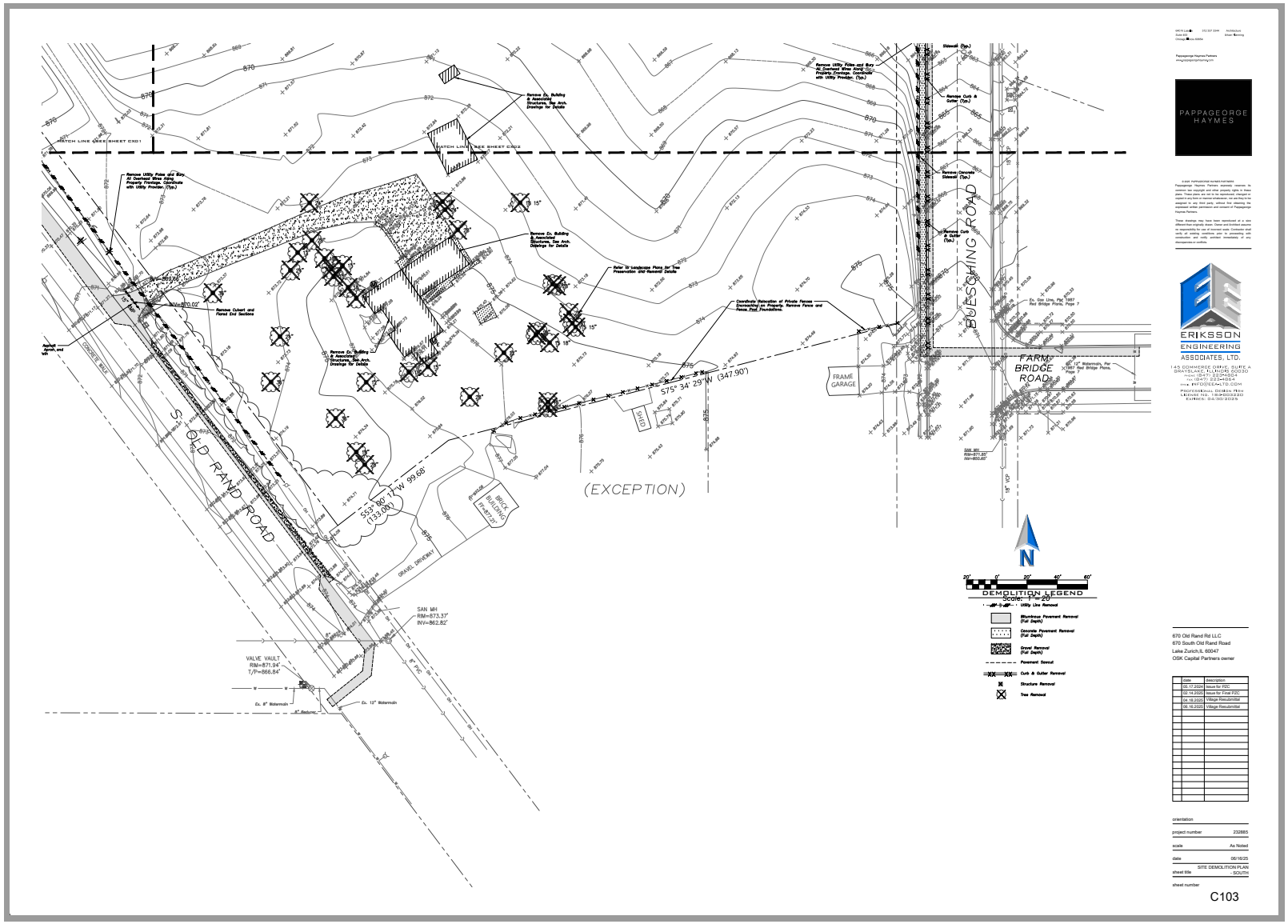
sheet number C102


MATCH LINE SEE SHEET EX01
MATCH LINE SEE SHEET EX02
S OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
S53° 00' 17"W 99.68'
(133.00')
S75° 34' 29"W (347.90')
FRAME GARAGE
BRICK BUILDING
GRAVEL DRIVEWAY
CONCRETE WALK
SAN MH
RIM=873.37'
INV=862.82'
VALVE VAULT
RIM=871.94'
T/P=866.84'
Ex. 8" Watermain
Ex. 12" Watermain
N
DEMOLITION LEGEND
Scale: 1" = 20'
Utility Line Removal
Bituminous Pavement Removal (Full Depth)
Concrete Pavement Removal (Full Depth)
Gravel Removal (Full Depth)
Pavement Sawcut
Curb & Gutter Removal
Structure Removal
Tree Removal
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670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
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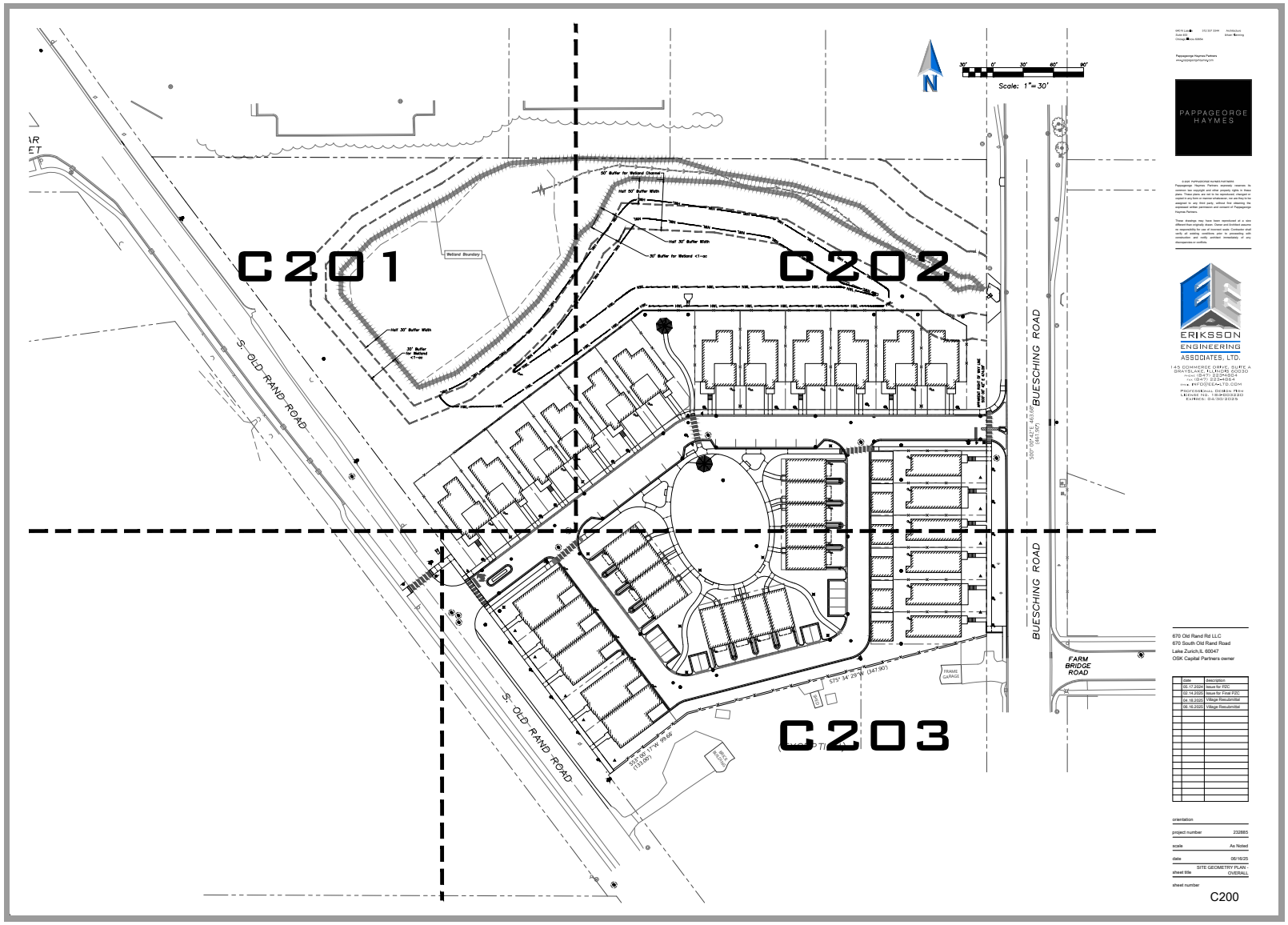
C201
C202
C203
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BUESCHING ROAD
FARM BRIDGE ROAD
Wetland Boundary
50' Buffer for Wetland Channel
Half 50' Buffer Width
30' Buffer for Wetland <1-ac
Half 30' Buffer Width
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145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
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project number 232885
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date 06/16/25
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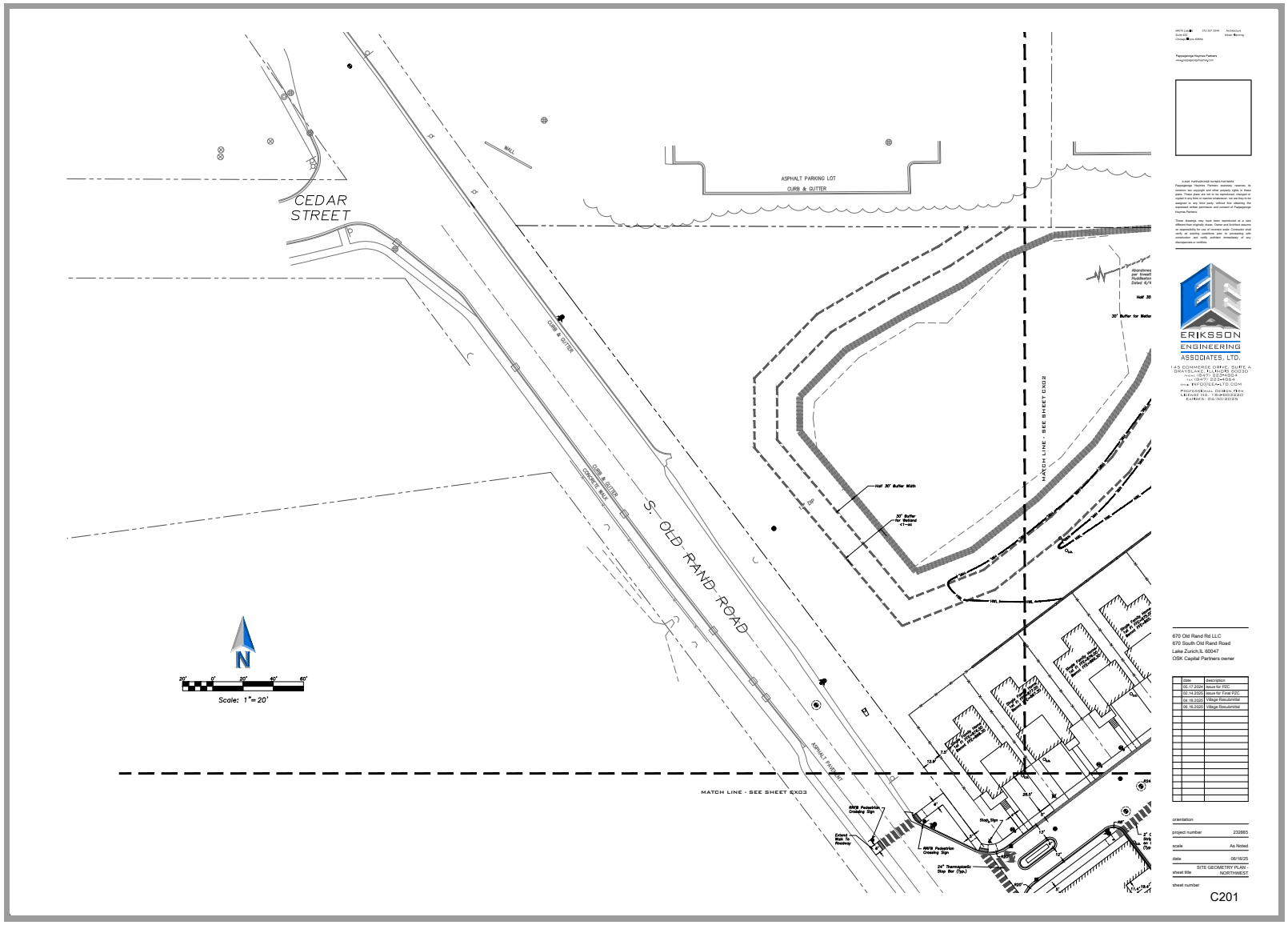
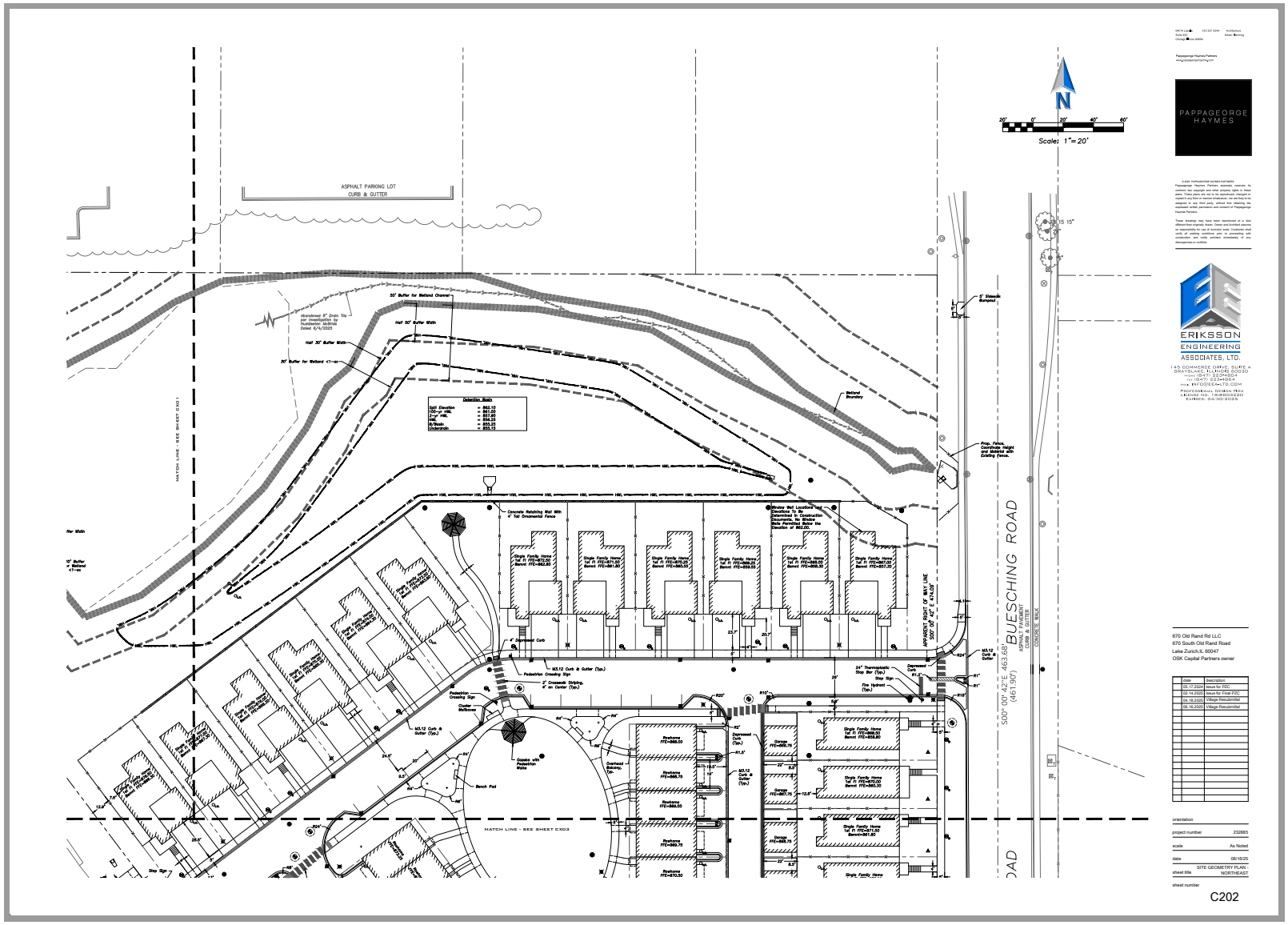
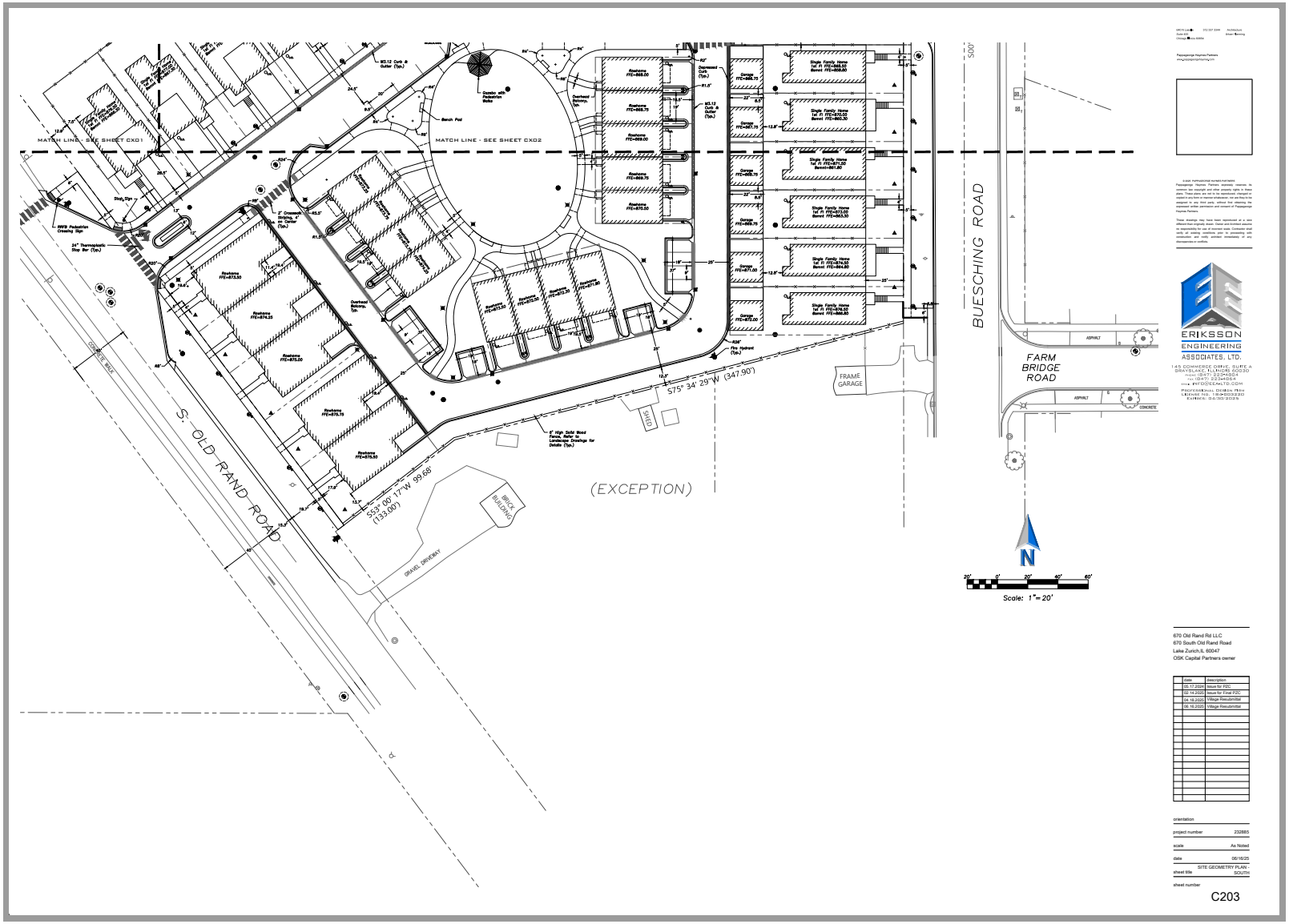
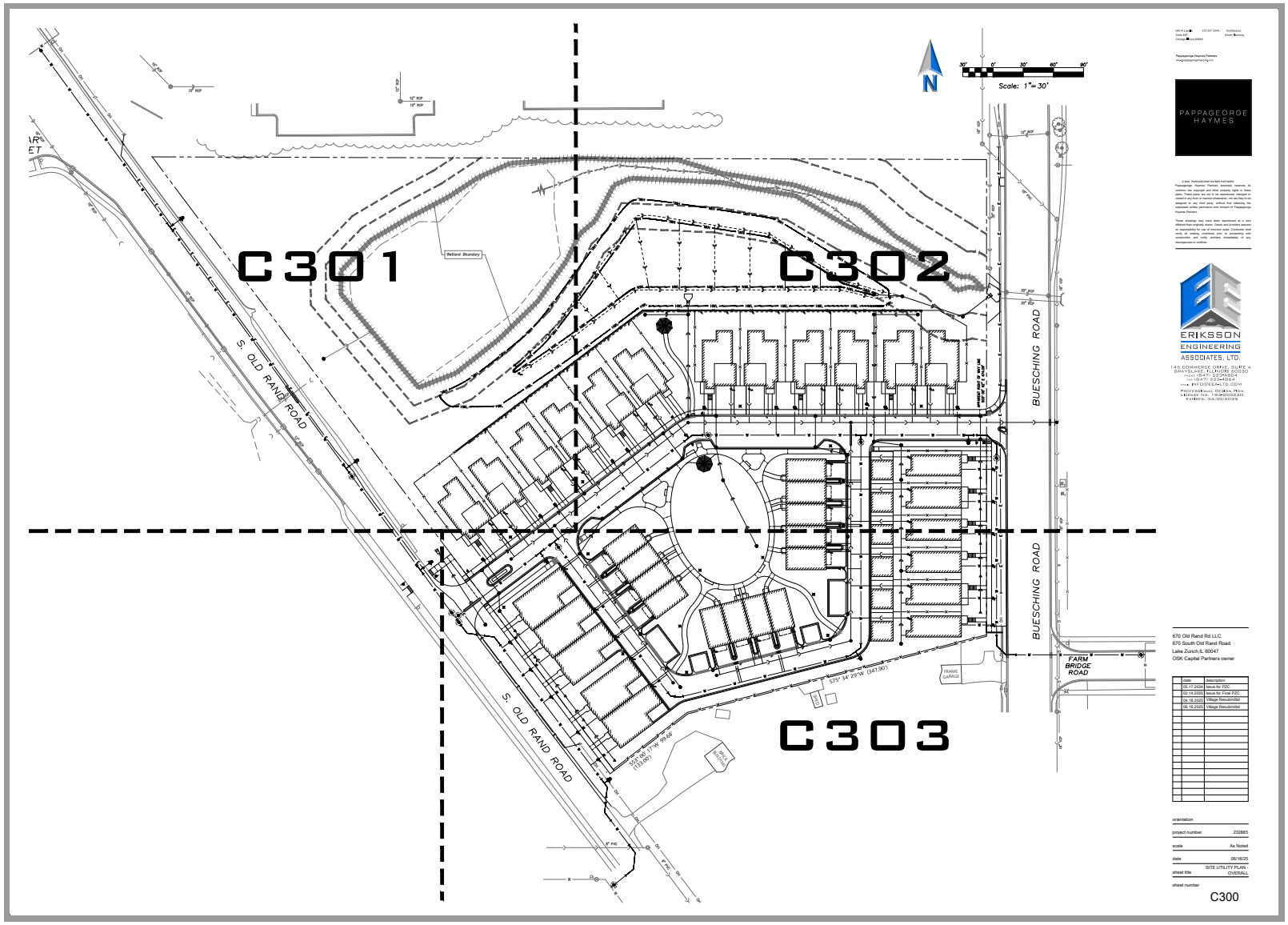
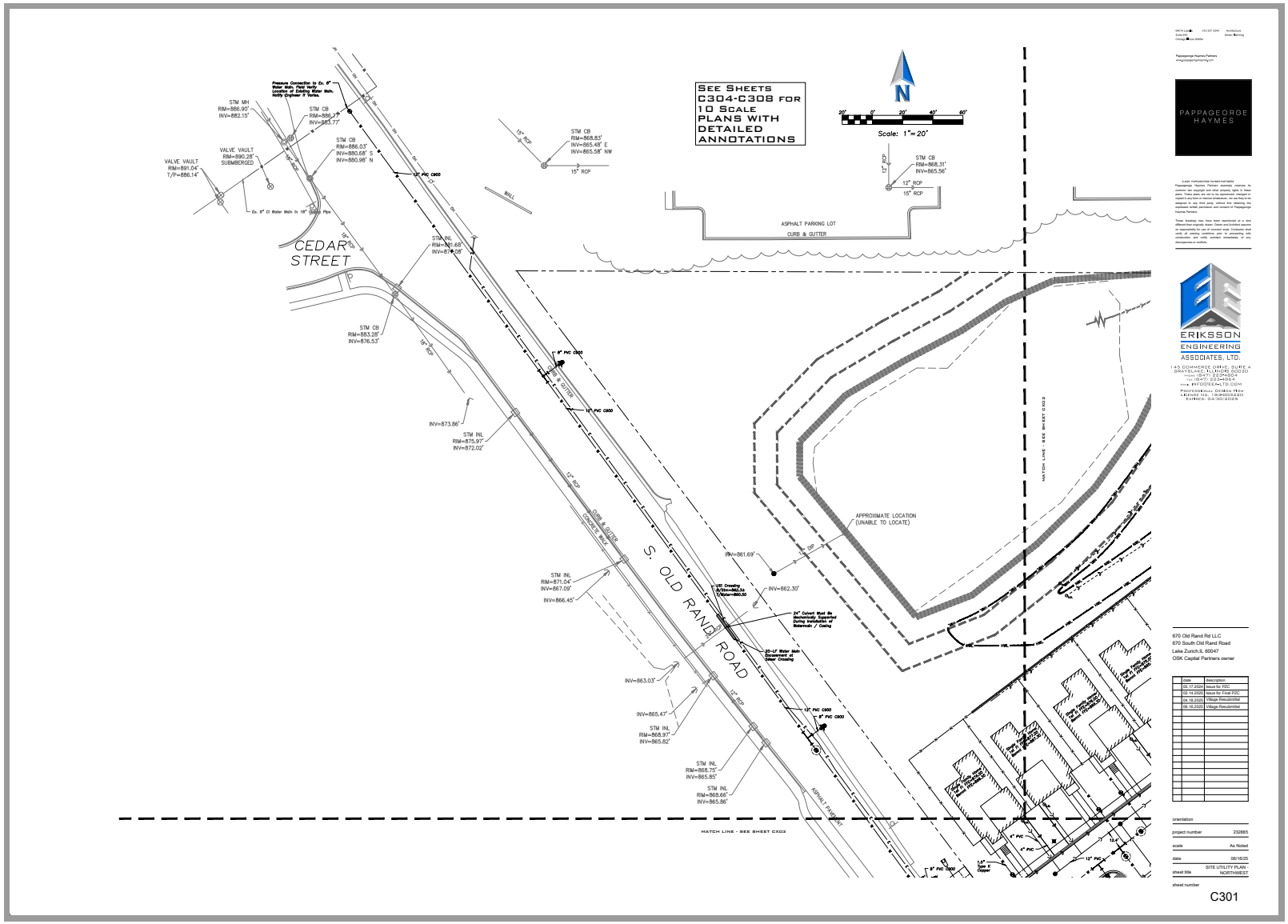
sheet number C200

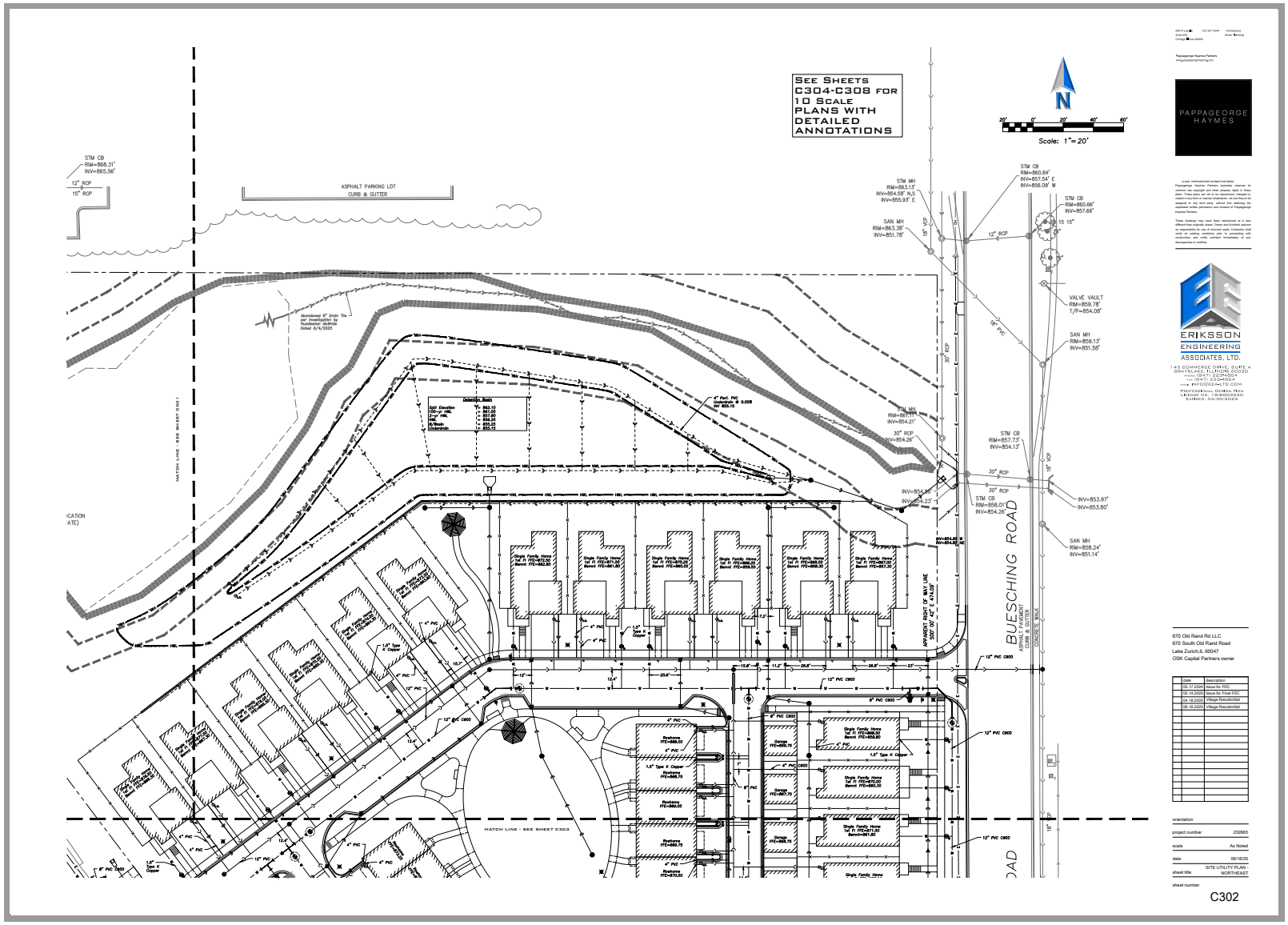

CEDAR
STREET
ASPHALT PARKING LOT
CURB & GUTTER
WALL
CURB & GUTTER
CONCRETE WALL
S. OLD RAND ROAD
ASPHALT PAVEMENT
MATCH LINE - SEE SHEET EX03
MATCH LINE - SEE SHEET EX03
Half 30' Buffer Width
30' Buffer for Wetland (7+/-ac)
30' Buffer for Wetla
Abandonmen per Invest Rectification Dated 4/4
N
Scale: 1"= 20'
ERIKSSON
ENGINEERING
ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@EEA-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE GEOMETRY PLAN - NORTHWEST
sheet number
C201

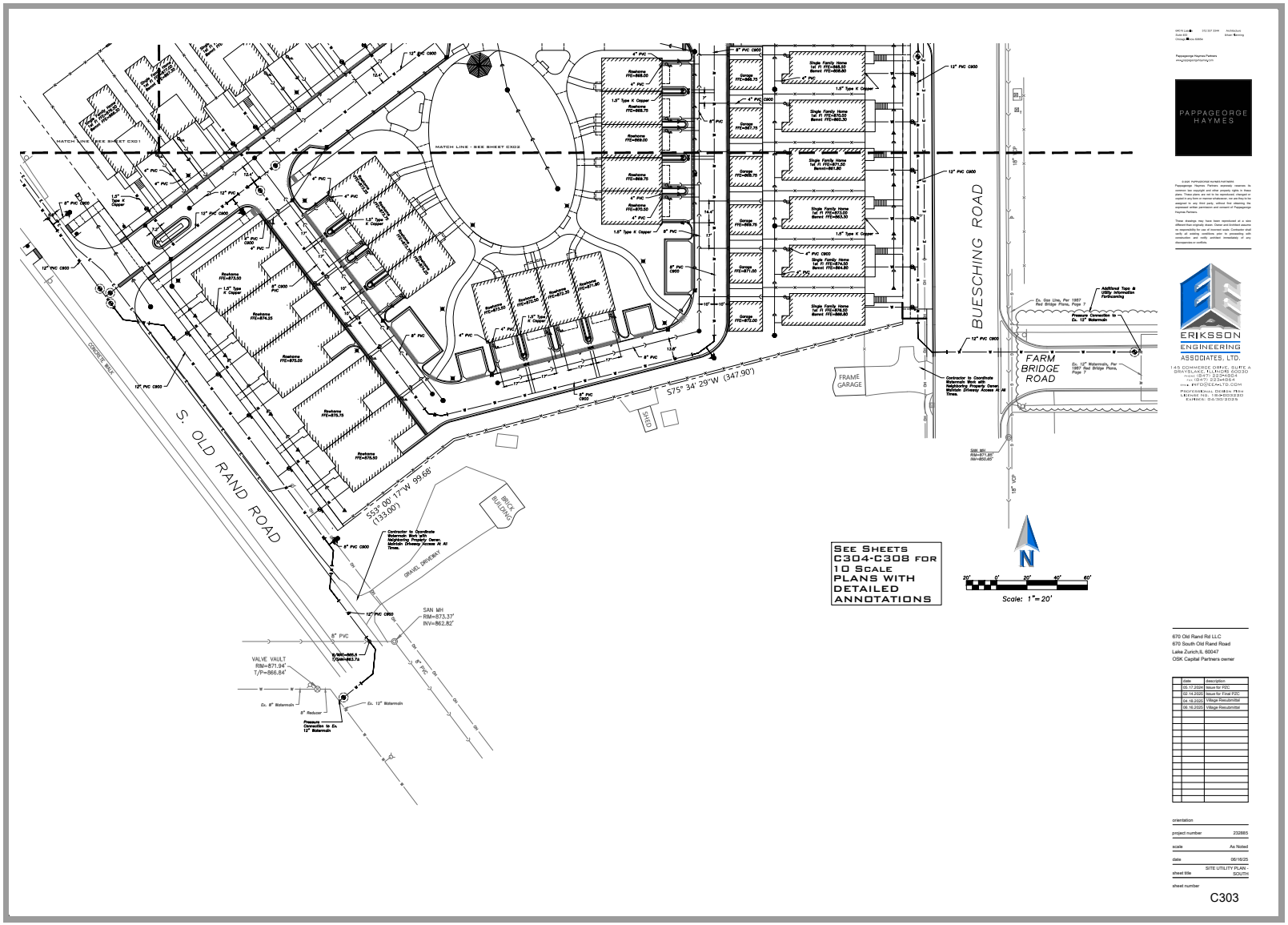

N
Scale: 1"= 20'
ASPHALT PARKING LOT
CURB & GUTTER
BUESCHING ROAD
MATCH LINE - SEE SHEET C203
MATCH LINE - SEE SHEET C201
Detention Basin
Wetland Boundary
Prop. Fence, Coordinate Height and Material with Existing Fence.
Concrete Retaining Wall With 4' Tall Ornamental Fence
Single Family Home
Rowhome
Duplex
Bench Pad
Stop Sign
Pedestrian Crossing Sign
24" Thermoplastic Stop Bar (Typ.)
Fire Hydrant (Typ.)
Depressed Curb (Typ.)
M3.12 Curb & Gutter (Typ.)
5' Crosswalk Striping, 4" on Center (Typ.)
Gazebo with Pedestrian Gate
Concrete Walk
Asphalt Pavement
Curb & Gutter
APPARENT RIGHT OF WAY LINE
S00° 00' 42"E 463.68'
(461.90')
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@ESE-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE GEOMETRY PLAN - NORTHEAST
sheet number C202

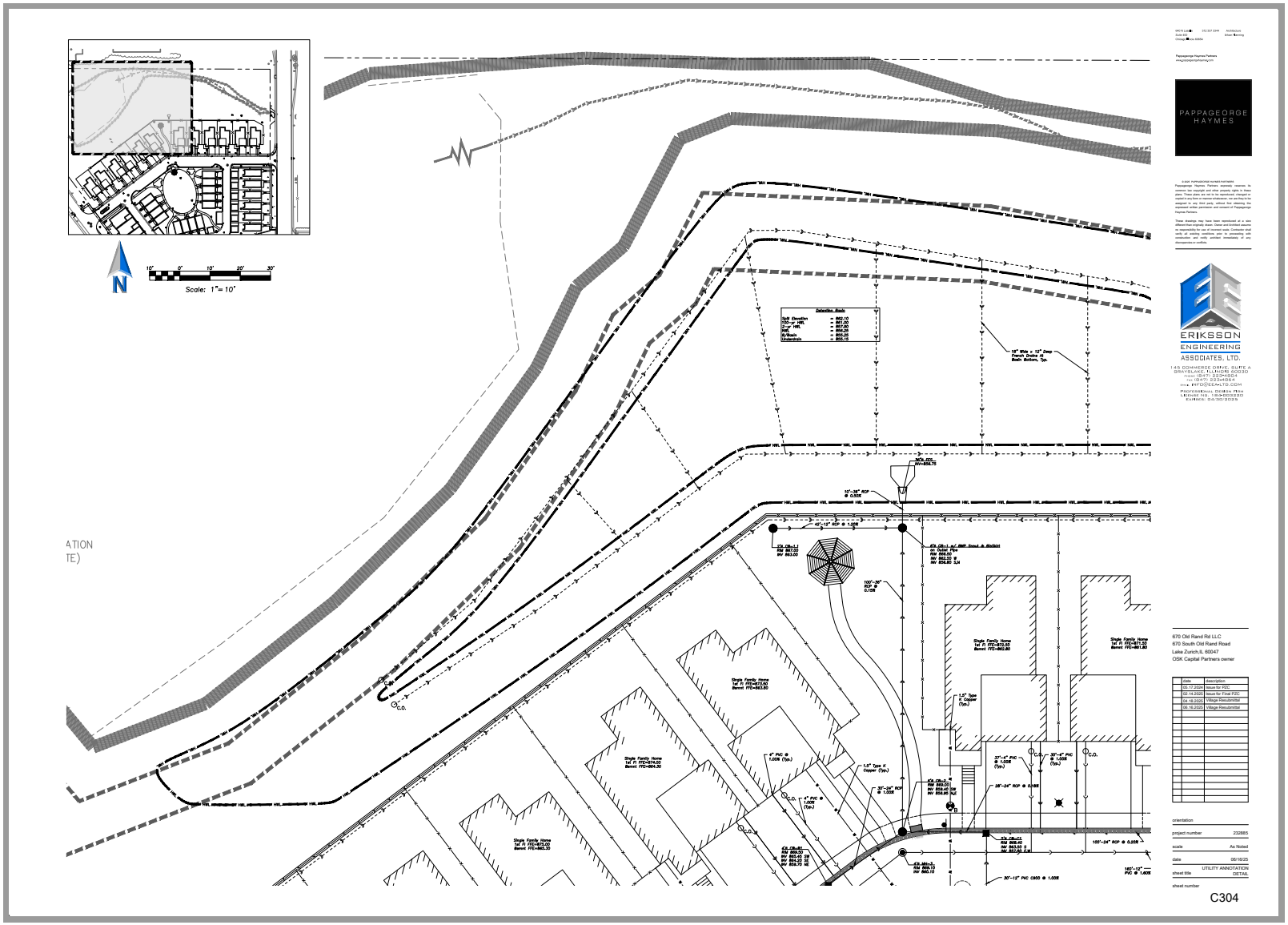

MATCH LINE - SEE SHEET CX01
MATCH LINE - SEE SHEET CX02
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
S75° 34' 29"W (347.90')
S53° 00' 17"W 99.68'
(133.00')
FRAME GARAGE
SHED
BRICK BUILDING
GRAVEL DRIVEWAY
COMBINED SEWER
N
Scale: 1"= 20'
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE GEOMETRY PLAN - SOUTH
sheet number C203

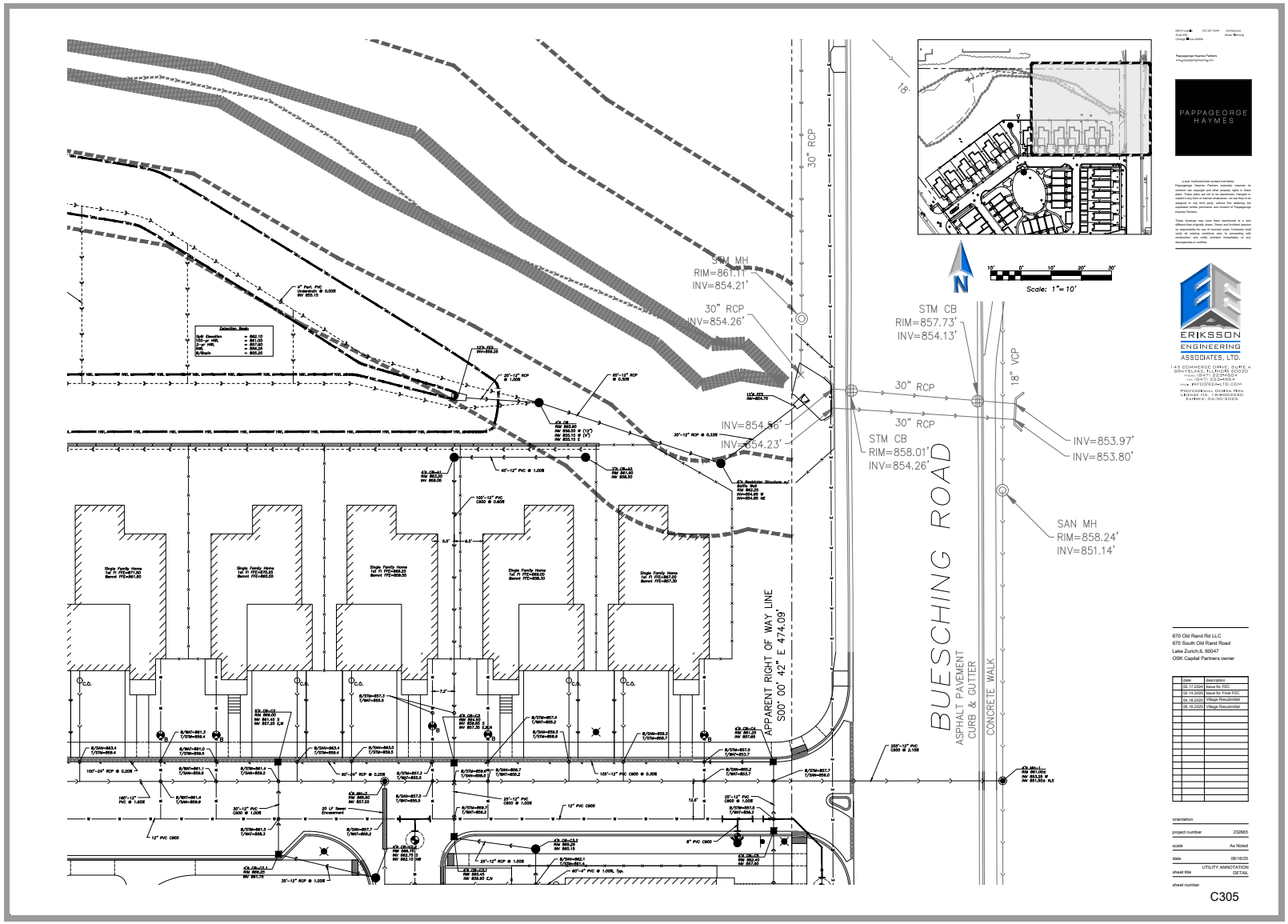

C301
C302
C303
S. OLD RAND ROAD
S. OLD RAND ROAD
BUESCHING ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE UTILITY PLAN - OVERALL
sheet number
C300

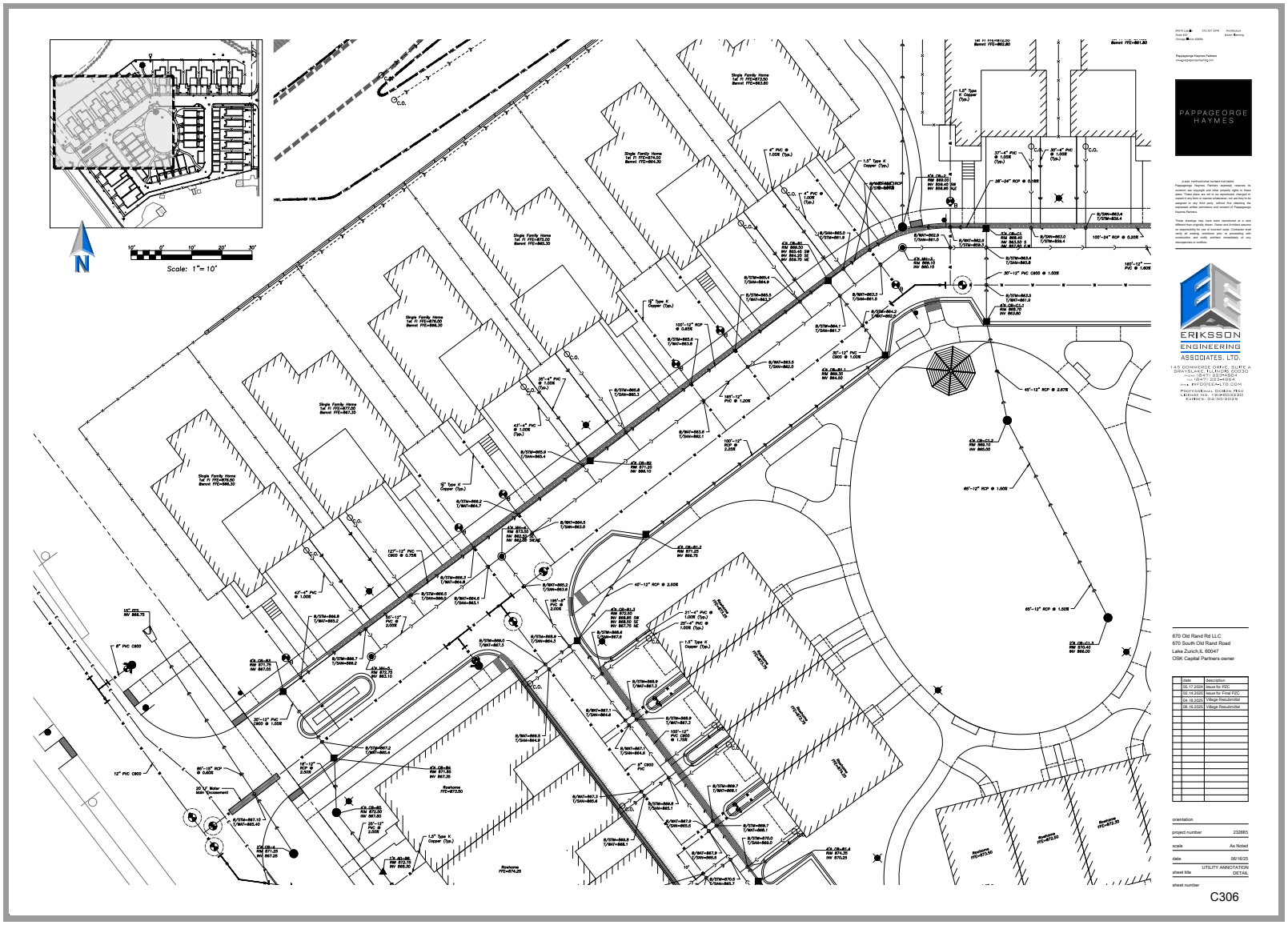

SEE SHEETS C304-C308 FOR 10 SCALE PLANS WITH DETAILED ANNOTATIONS
Scale: 1"=20'
CEDAR STREET
S. OLD RAND ROAD
ASPHALT PARKING LOT
CURB & GUTTER
APPROXIMATE LOCATION (UNABLE TO LOCATE)
MATCH LINE - SEE SHEET C303
MATCH LINE - SEE SHEET C303
STM MH RIM=886.90' INV=882.15'
STM CB RIM=886.27' INV=885.77'
STM CB RIM=886.03' S INV=880.68' S INV=880.98' N
VALVE VAULT RIM=891.04' T/P=886.14'
VALVE VAULT RIM=890.26' SUBMERGED
STM CB RIM=883.28' INV=876.53'
STM INL RIM=861.68' INV=874.08'
STM INL RIM=875.97' INV=872.02'
INV=873.86'
STM INL RIM=871.04' INV=867.09'
INV=866.45'
INV=863.03'
INV=865.47'
STM INL RIM=865.97' INV=865.82'
STM INL RIM=868.75' INV=865.85'
STM INL RIM=865.66' INV=865.86'
STM CB RIM=868.83' INV=865.48' E INV=865.58' NW
STM CB RIM=868.31' INV=865.56'
INV=861.69'
INV=862.30'
24" Culvert Must Be Horizontally Supported During Installation of Watermain / Casing
20-LF Water Main Encasement at Creek Crossing
Remove Connection to Ex. 6" Water Main. Verify Location of Existing Water Main. Notify Engineer if Varies.
Ex. 8" CI Water Main in 18" Casing Pipe
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE UTILITY PLAN - NORTHWEST
sheet number
C301

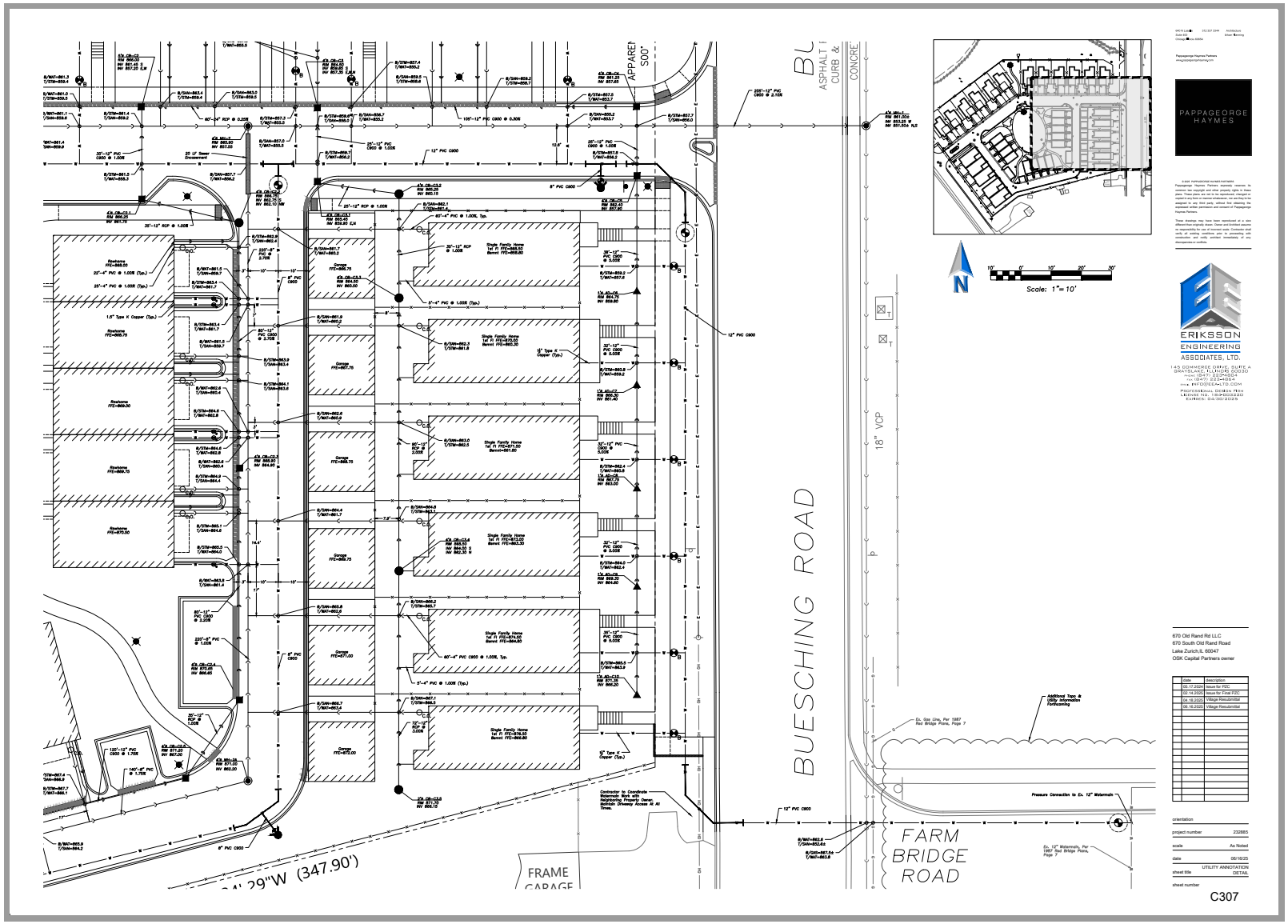

See Sheets C304-C308 for 10 Scale Plans with Detailed Annotations
Scale: 1"=20'
ASPHALT PARKING LOT CURB & GUTTER
BUESCHING ROAD
MATCH LINE - SEE SHEET C303
MATCH LINE - SEE SHEET C301
STM CB RIM=868.31' INV=865.56'
12" RCP
15" RCP
STM MH RIM=863.13' INV=854.58' N,S INV=855.97' E
SAN MH RIM=863.38' INV=851.78'
STM CB RIM=860.84' INV=857.54' E INV=856.09' W
STM CB RIM=860.66' INV=857.66'
VALVE VAULT RIM=859.78' T/P=854.08'
SAN MH RIM=859.13' INV=851.58'
STM MH RIM=861.21' INV=854.21'
30" RCP INV=854.26'
STM CB RIM=857.73' INV=854.13'
STM CB RIM=858.01' INV=854.26'
INV=853.97'
INV=853.80'
SAN MH RIM=858.24' INV=851.14'
12" PVC C900
8" PVC C900
4" PVC
1.5" Type K Copper
Single Family Home
Duplex
Rowhome
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE UTILITY PLAN - NORTHEAST
sheet number
C302

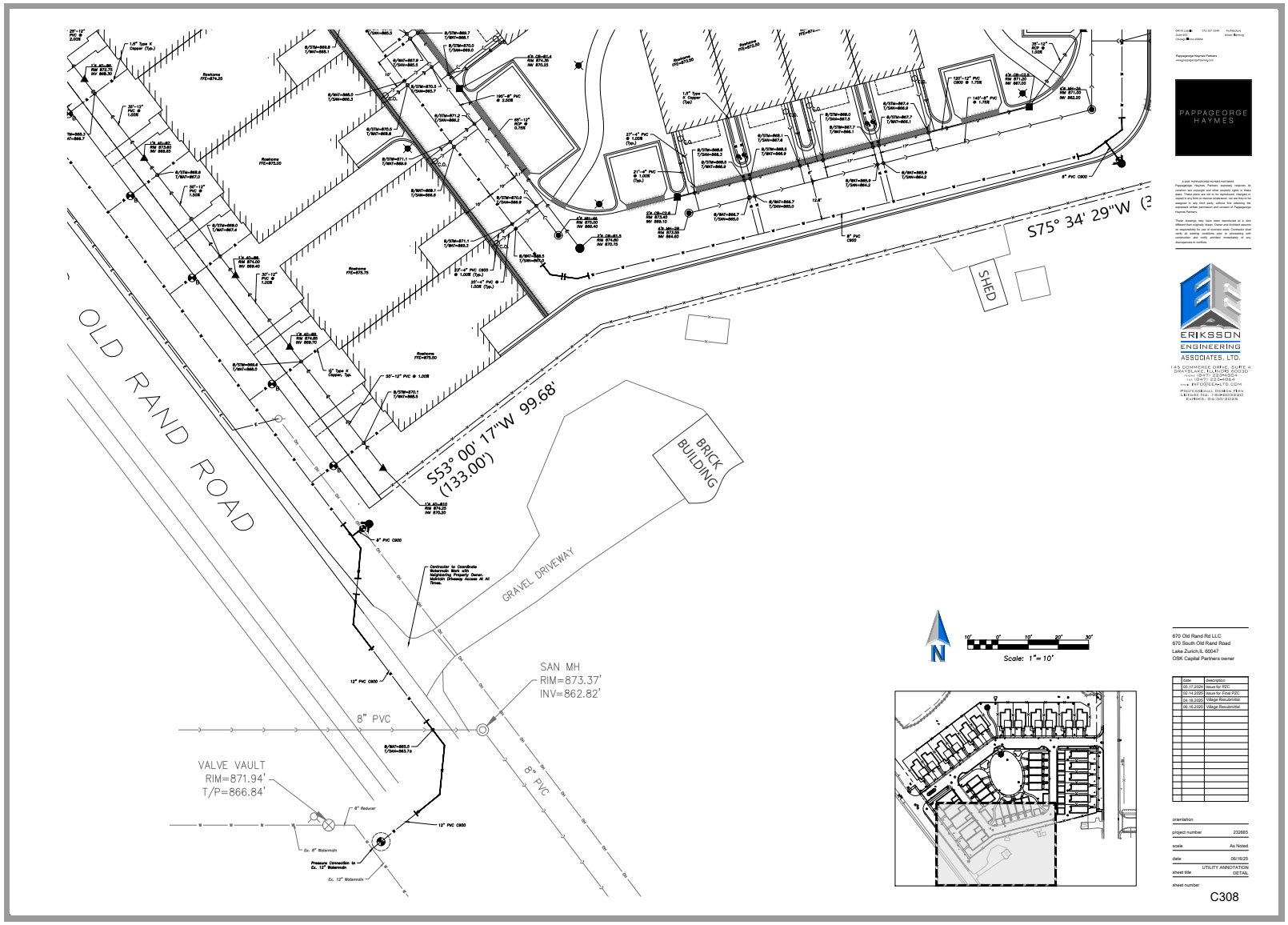

MATCH LINE - SEE SHEET CX01
MATCH LINE - SEE SHEET CX02
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
S75° 34' 29"W (347.90')
S53° 00' 17"W 99.68'
(133.00')
CONCRETE WALK
GRAVEL DRIVEWAY
BRICK BUILDING
FRAME GARAGE
SHED
SAN MH
RIM=873.37'
INV=862.82'
VALVE VAULT
RIM=871.94'
T/P=866.64'
Ex. 8" Watermain
8" Reducer
Ex. 12" Watermain
Pressure Connection to Ex. 12" Watermain
Ex. Gas Line, Per 1957 Red Bridge Plans, Page 7
Additional Tops & Utility Information Forthcoming
Ex. 12" Watermain, Per 1957 Red Bridge Plans, Page 7
Contractor to Coordinate Watermain Work with Neighboring Property Owner. Maintain Driveway Access At All Times.
SEE SHEETS C304-C308 FOR 10 SCALE PLANS WITH DETAILED ANNOTATIONS
N
Scale: 1"= 20'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE UTILITY PLAN - SOUTH
sheet number C303

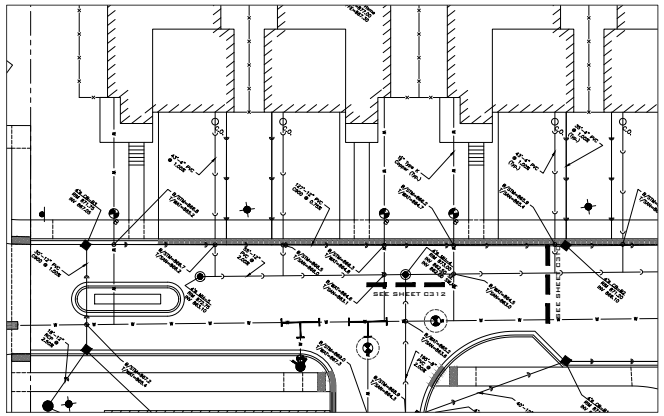

N
Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
C304

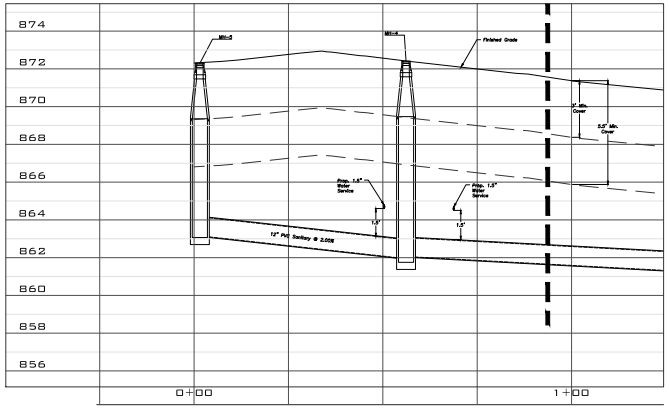

SAN MH
RIM=861.11'
INV=854.21'
30" RCP
INV=854.26'
30" RCP
18" RCP
INV=854.56'
INV=854.23'
STM CB
RIM=857.73'
INV=854.13'
30" RCP
30" RCP
18" VCP
STM CB
RIM=858.01'
INV=854.26'
INV=853.97'
INV=853.80'
SAN MH
RIM=858.24'
INV=851.14'
BUESCHING ROAD
ASPHALT PAVEMENT
CURB & GUTTER
CONCRETE WALK
APPARENT RIGHT OF WAY LINE
S00° 00' 42" E 474.09'
Scale: 1"=10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title UTILITY ANNOTATION DETAIL
sheet number C305


N
Scale: 1" = 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@ESE-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title UTILITY ANNOTATION DETAIL
sheet number
C306


BUESCHING ROAD
FARM BRIDGE ROAD
FRAME GARAGE
18" VCP
12" PVC C900
8" PVC C900
Scale: 1"=10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title UTILITY ANNOTATION DETAIL
sheet number C307


OLD RAND ROAD
S53° 00' 17"W 99.68'
(133.00')
S75° 34' 29"W (3
SHED
BRICK BUILDING
GRAVEL DRIVEWAY
SAN MH
RIM=873.37'
INV=862.82'
8" PVC
6" PVC
VALVE VAULT
RIM=871.94'
T/P=866.84'
8" Reducer
Ex. 8" Watermain
Pressure Connection to Ex. 12" Watermain
Ex. 12" Watermain
Contractor to Coordinate Watermain Work with Neighboring Property Owner, Maintain Driveway Access At All Times.
8" PVC C900
12" PVC C900
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
Scale: 1"=10'
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title UTILITY ANNOTATION DETAIL
sheet number
C308





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
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PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003230
EXPIRES: 04/30/2026

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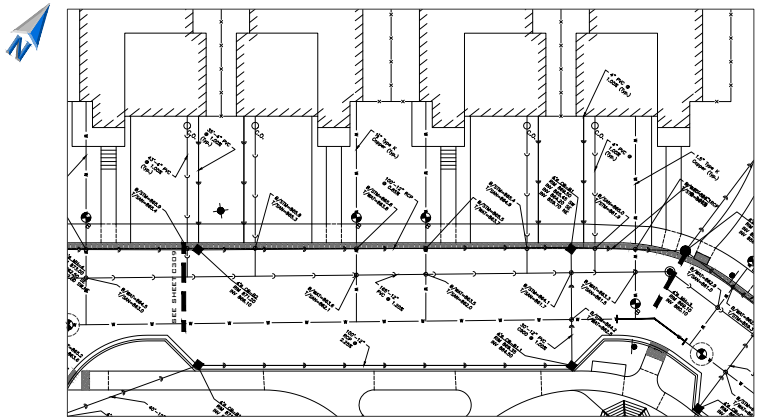
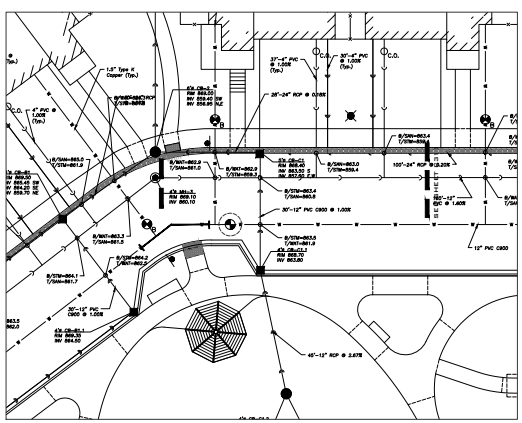
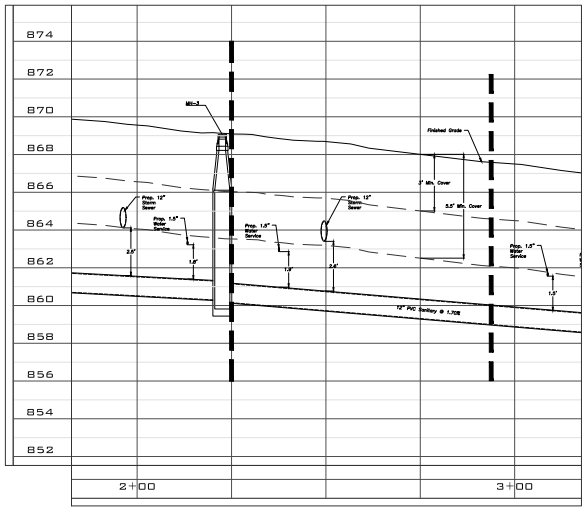
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SANITARY PROFILES
sheet number C309







SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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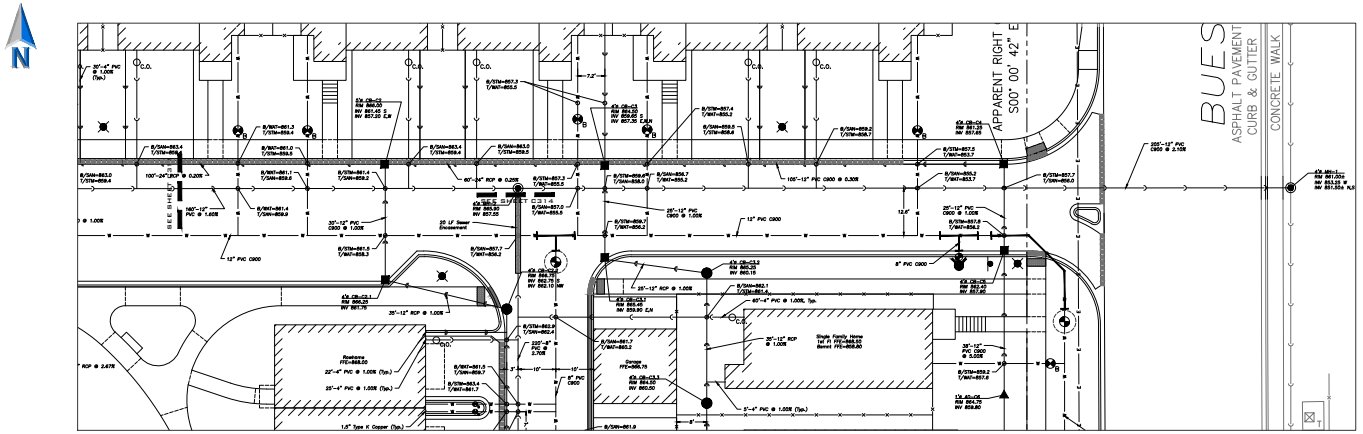
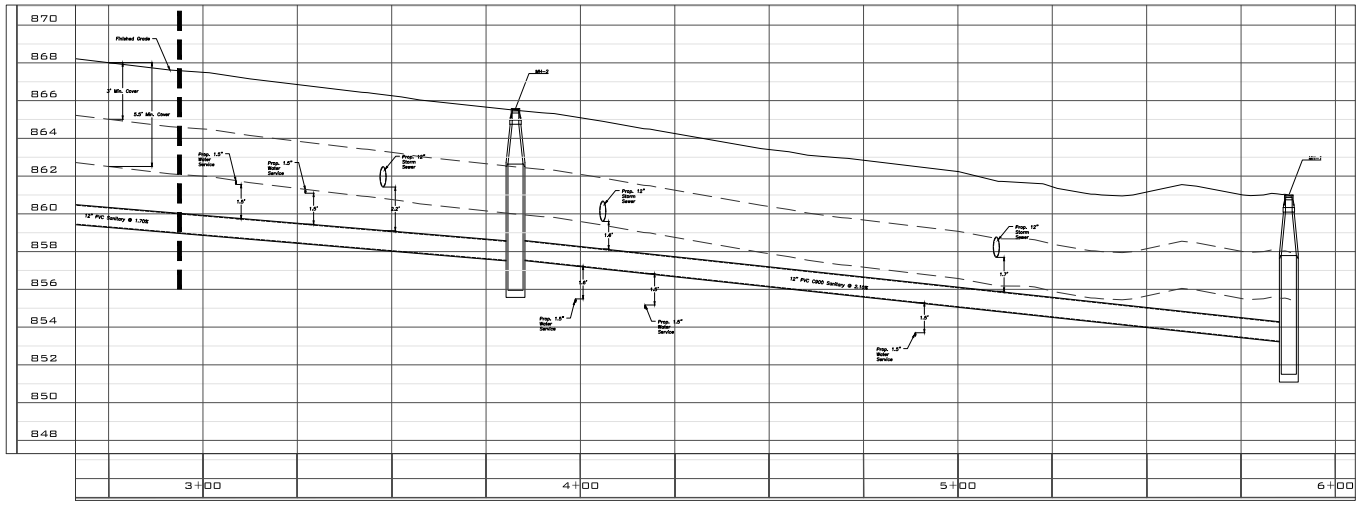
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@ESE-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184-003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SANITARY PROFILES
sheet number C310





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.

145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
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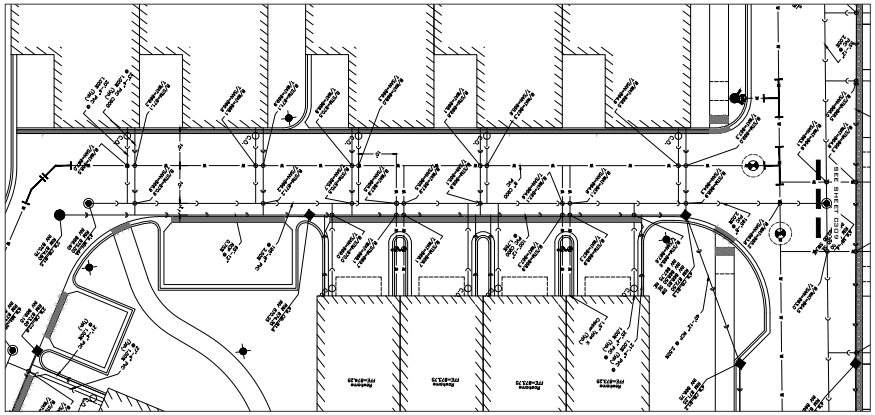
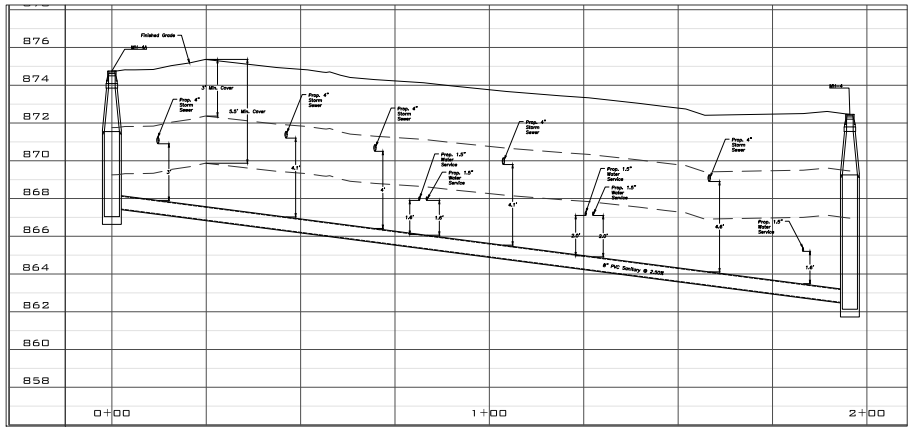
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SANITARY PROFILES
sheet number C311





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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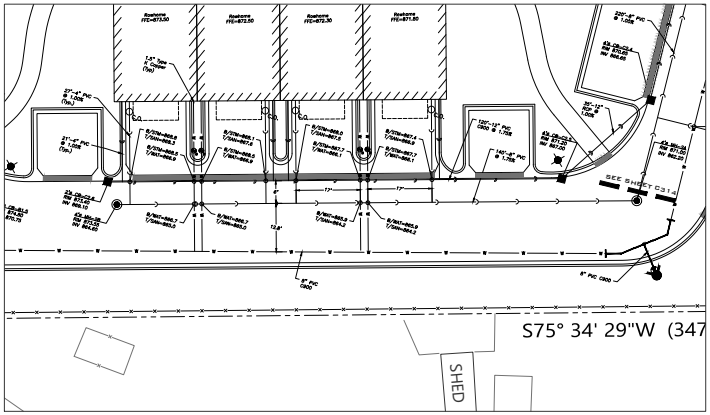
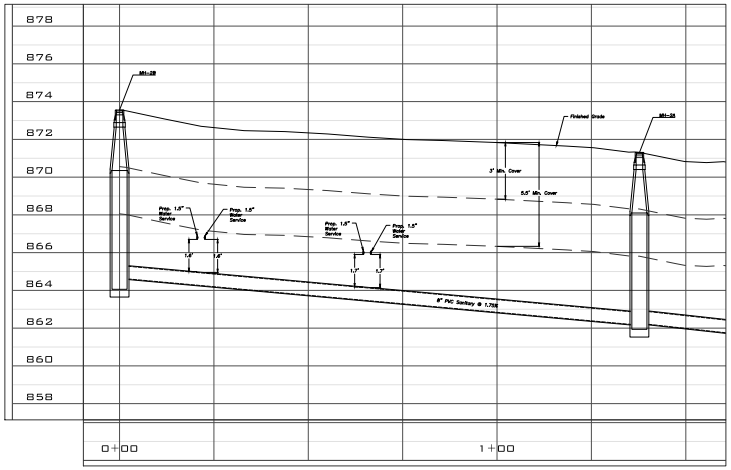
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SANITARY PROFILES
sheet number C312





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

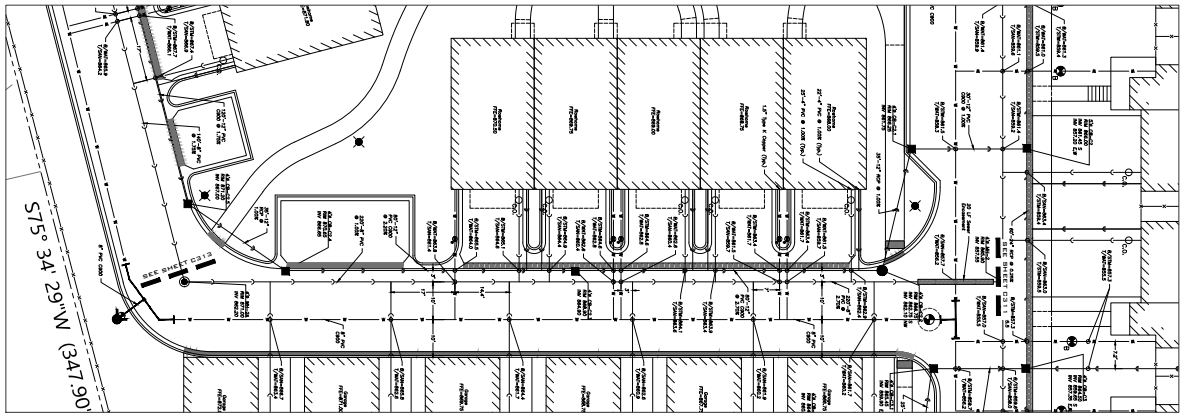
PAPPAGEORGE HAYMES

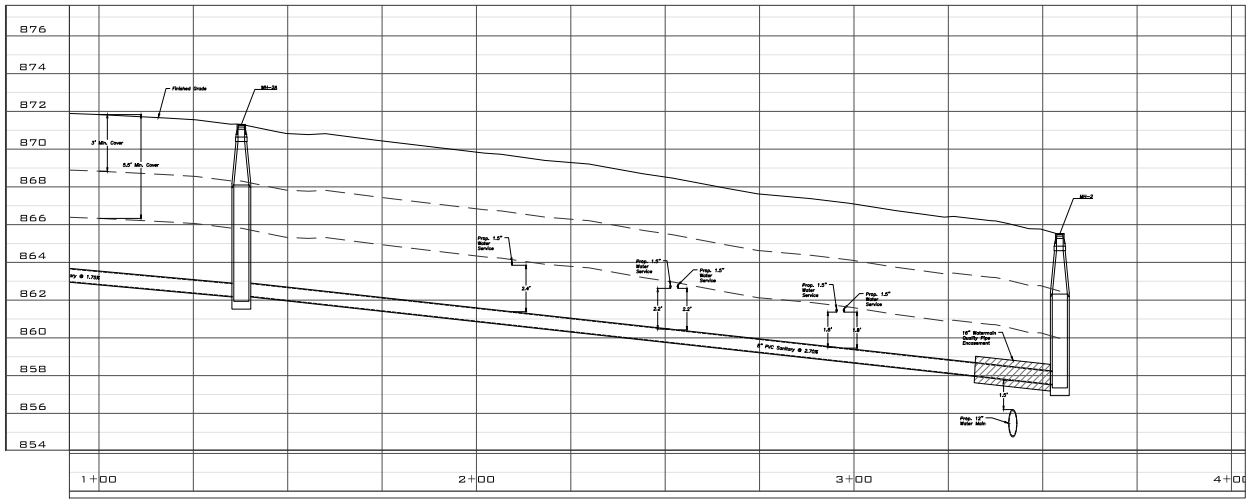
ERIKSSON ENGINEERING ASSOCIATES, LTD.

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SANITARY PROFILES
sheet number C313





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

Pappageorge Haymes Partners
www.pappageorgehaymes.com

PAPPAGEORGE HAYMES

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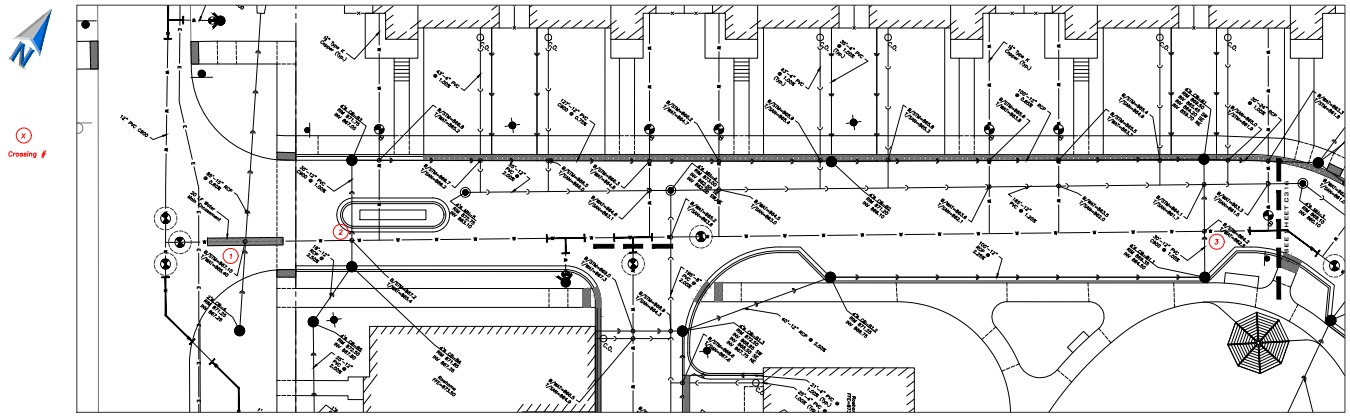
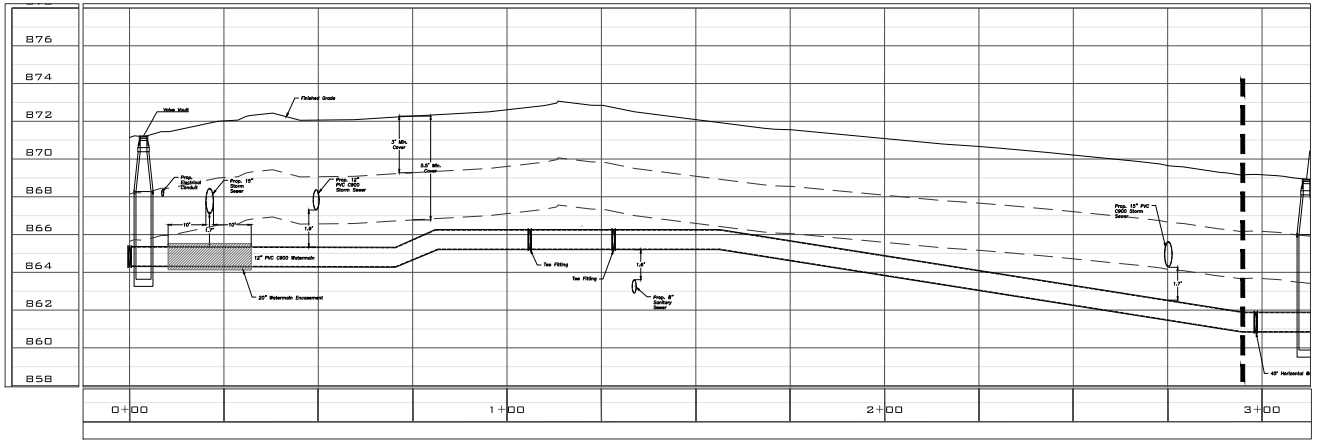
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation	
project number	232885
scale	As Noted
date	06/16/25
sheet title	SANITARY PROFILES
sheet number	C314





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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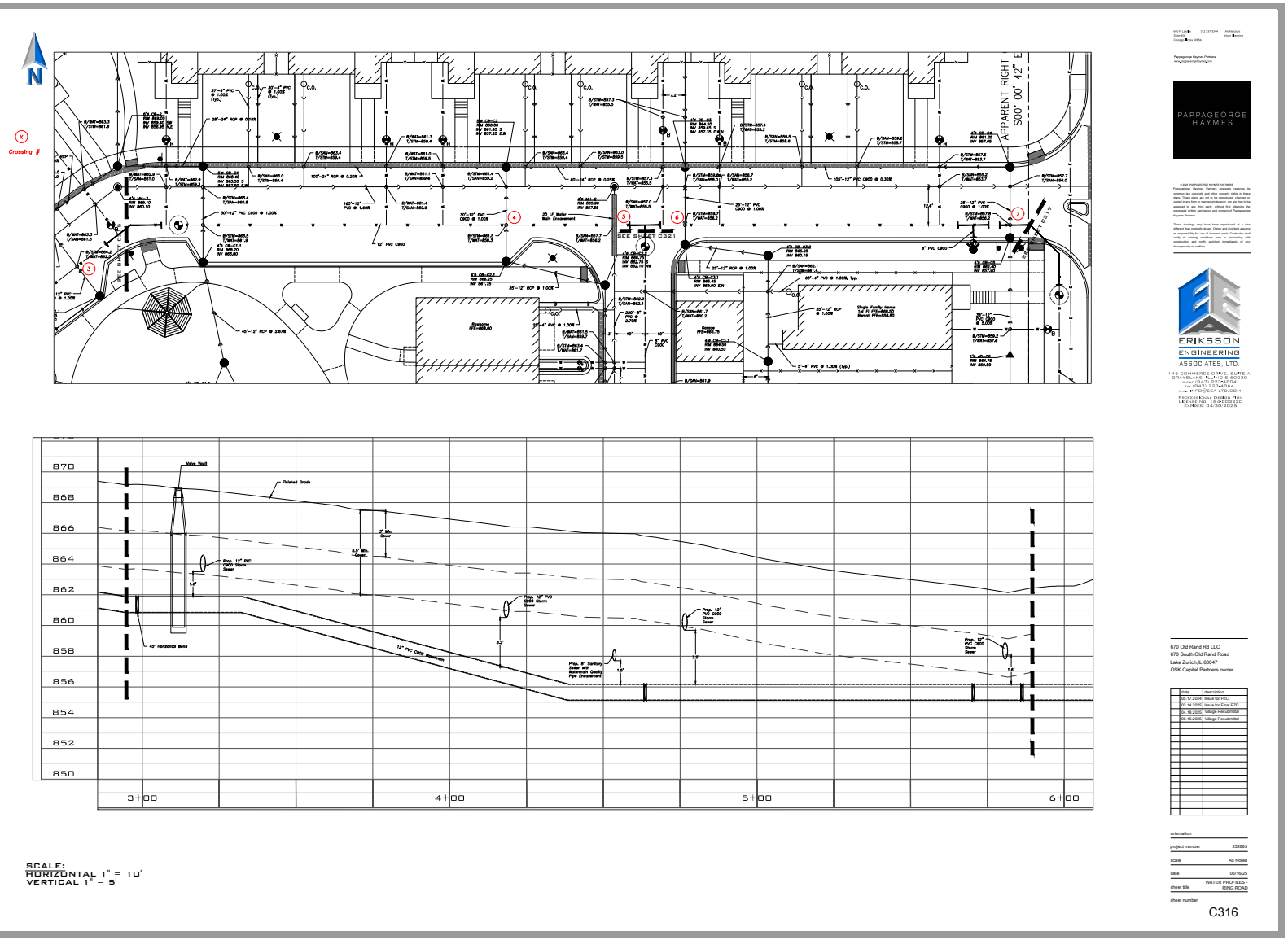
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - RING ROAD
sheet number C315



SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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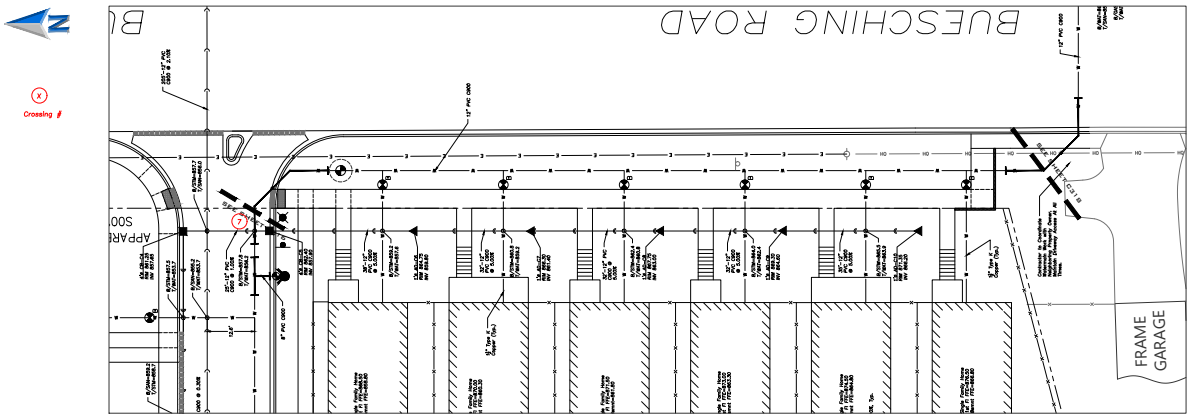
ERIKSSON ENGINEERING ASSOCIATES, LTD.

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - RING ROAD
sheet number C316



SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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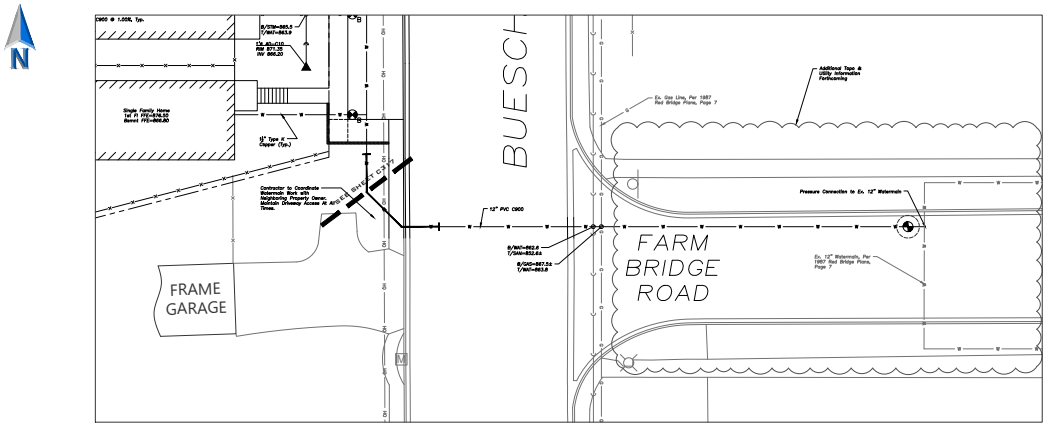
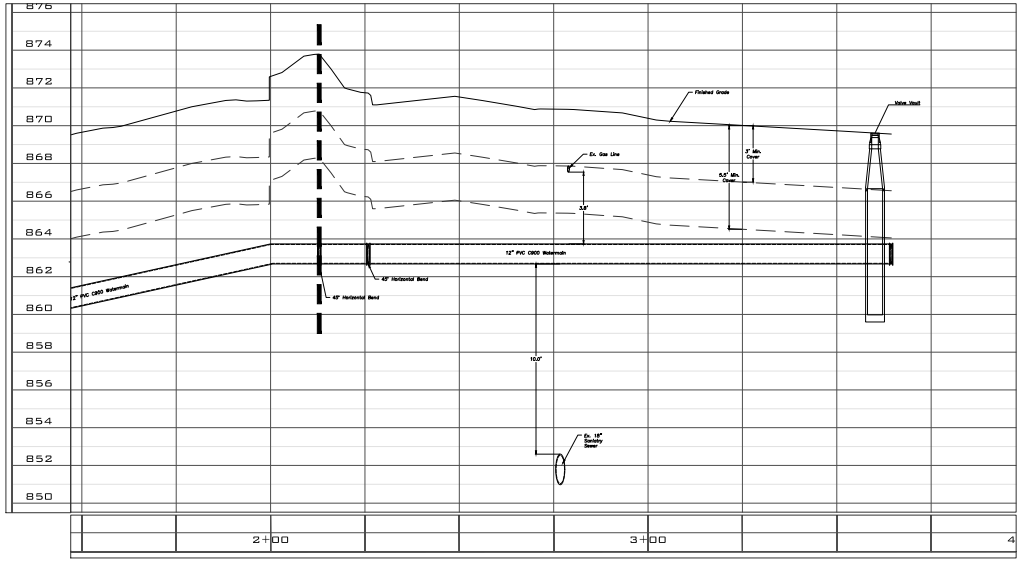
LICENSE NO.: 184.003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - BUESCHING ROAD
sheet number C317





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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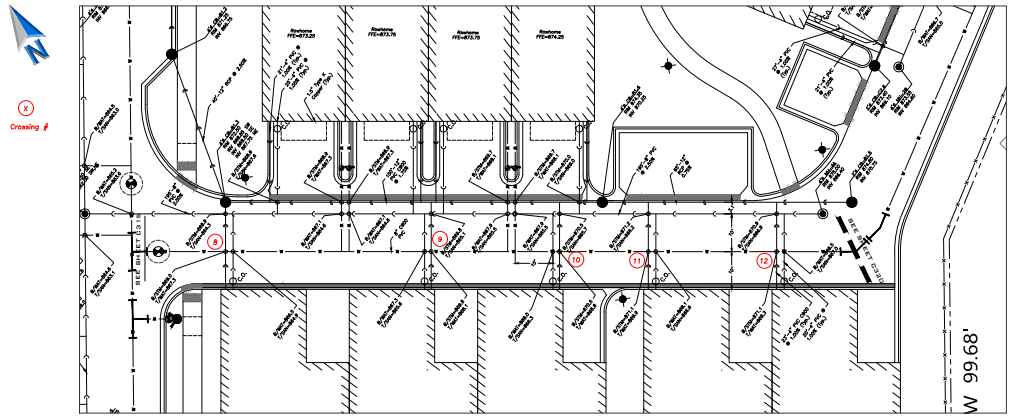
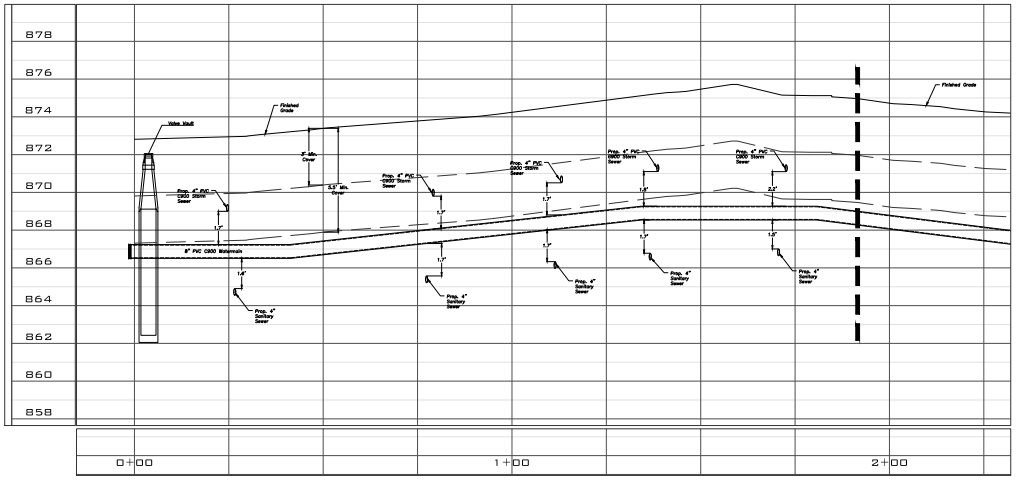
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

	date	description
	05.17.2024	Issue for PZC
	02.14.2025	Issue for Final PZC
	04.18.2025	Village Resubmittal
	06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - FARM BRIDGE ROAD
sheet number C318





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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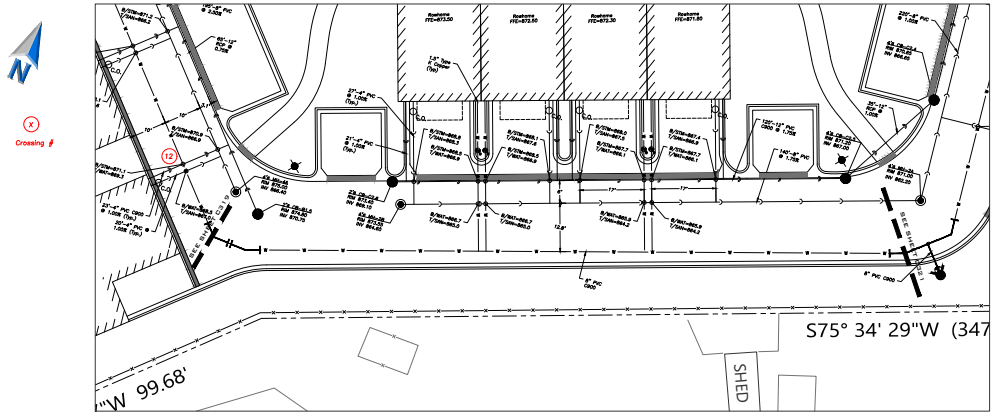
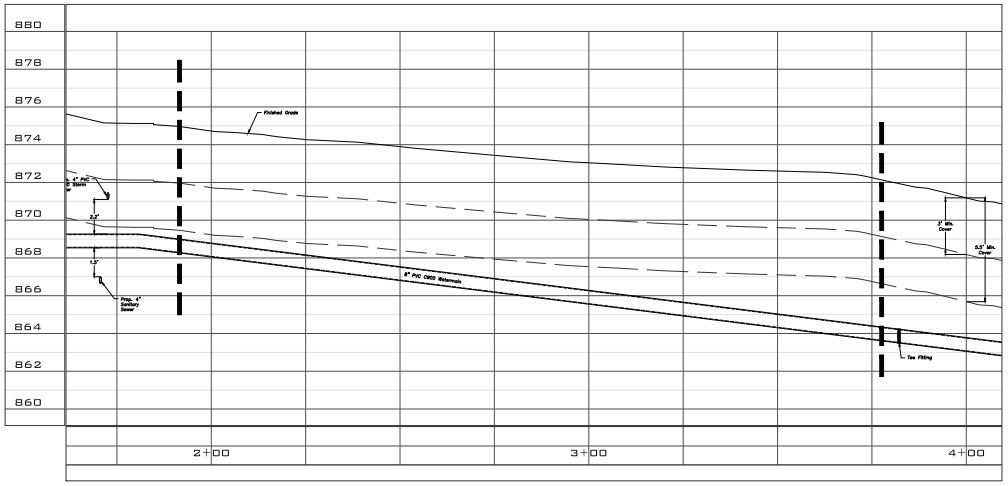
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - RING ROAD
sheet number C319





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

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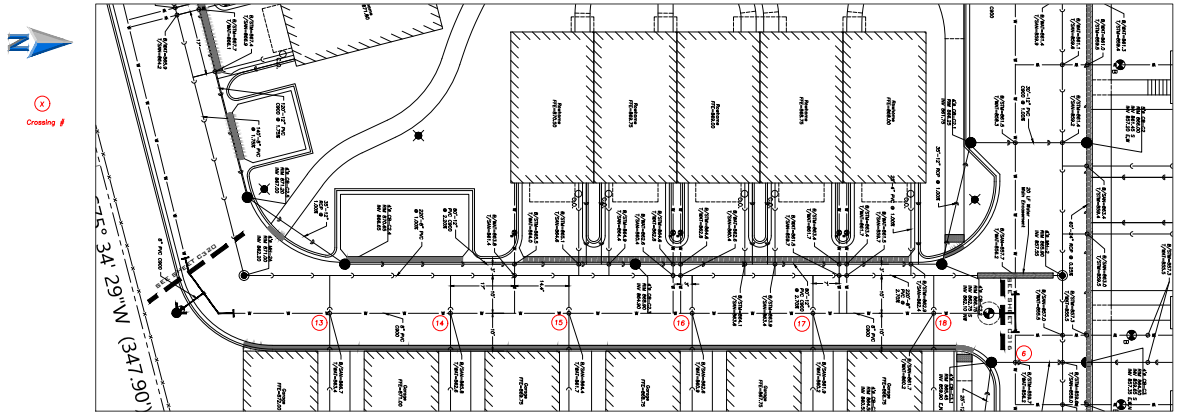
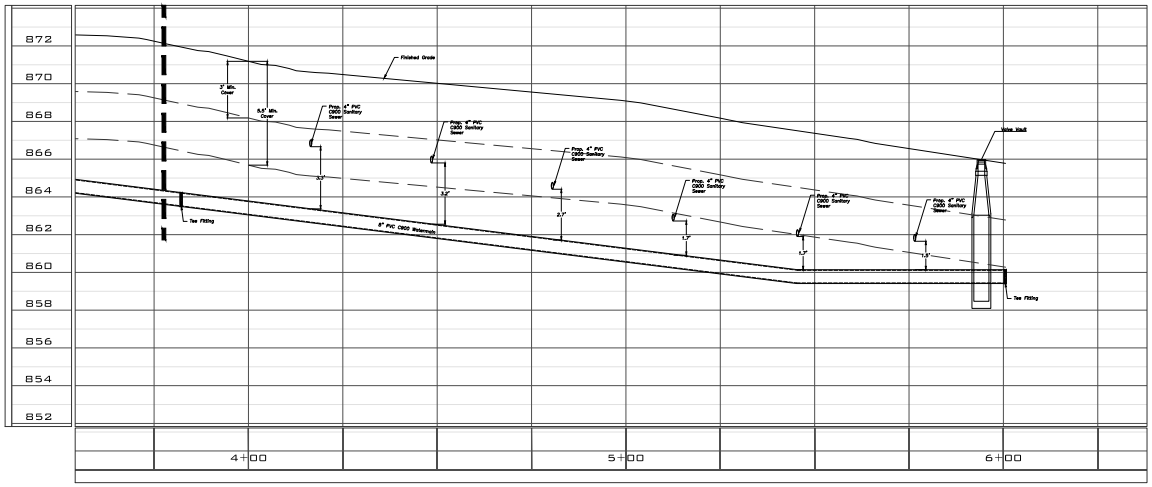
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation	
project number	232865
scale	As Noted
date	06/16/25
sheet title	WATER PROFILES - RING ROAD
sheet number	C320





SCALE:
HORIZONTAL 1" = 10'
VERTICAL 1" = 5'

PAPPAGEORGE HAYMES

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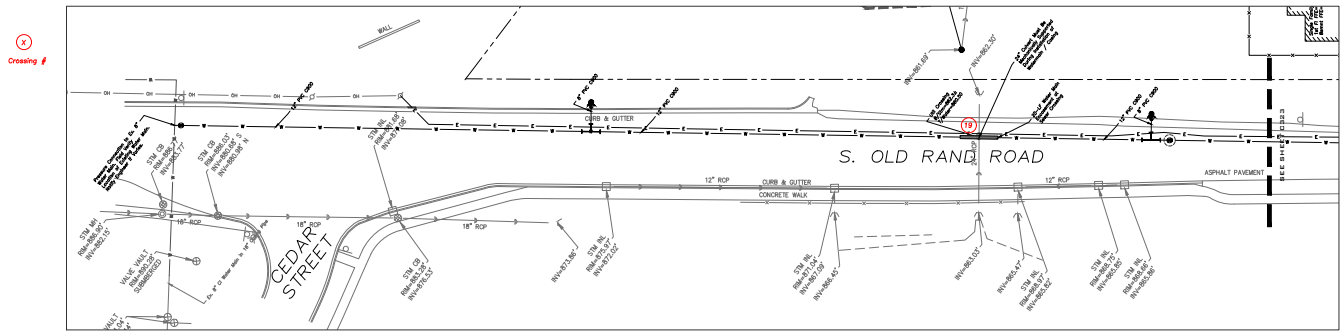
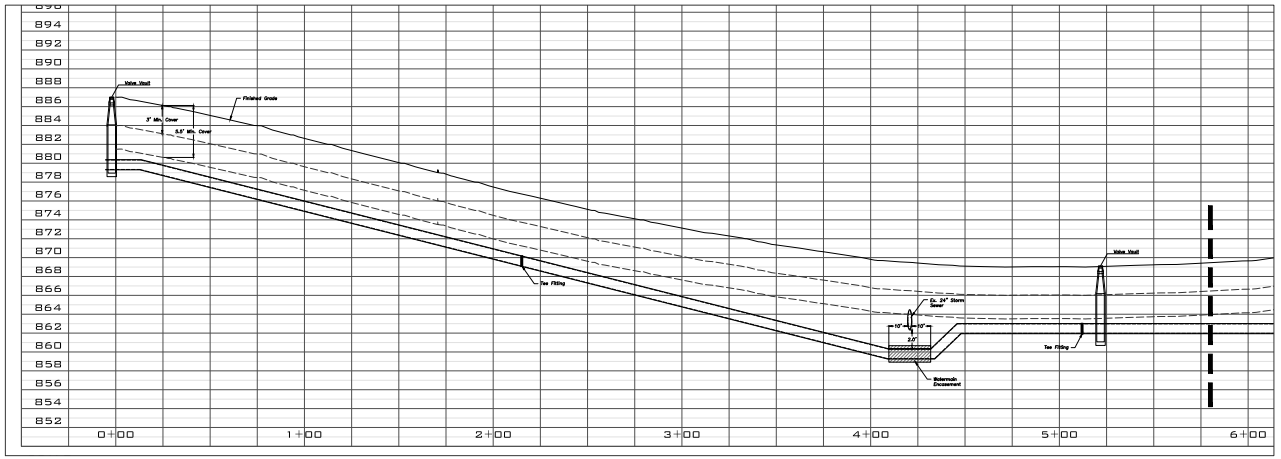
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184-003230
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - RING ROAD
sheet number C321





SCALE:
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

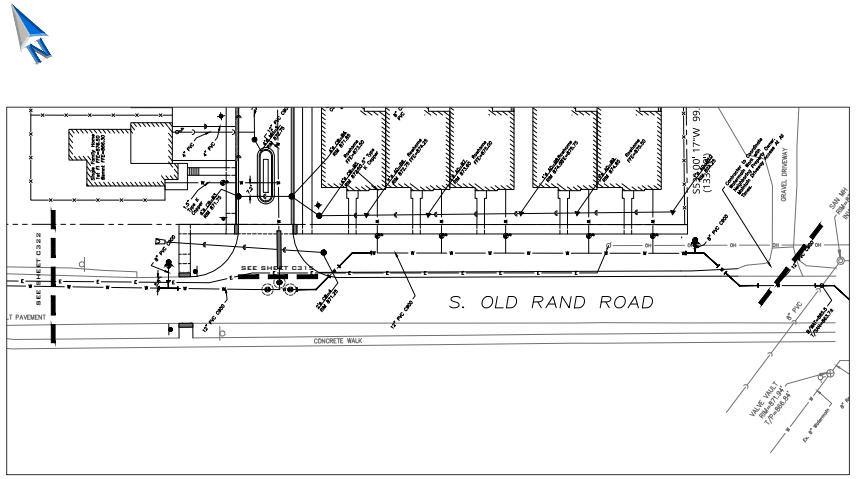
PAPPAGEORGE HAYMES

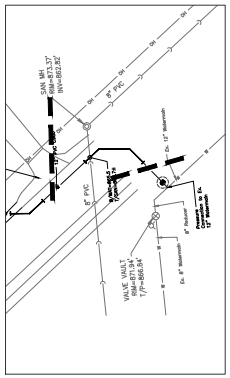
ERIKSSON ENGINEERING ASSOCIATES, LTD.

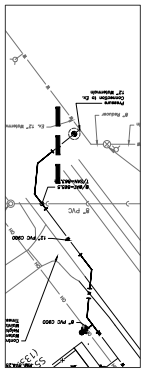
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

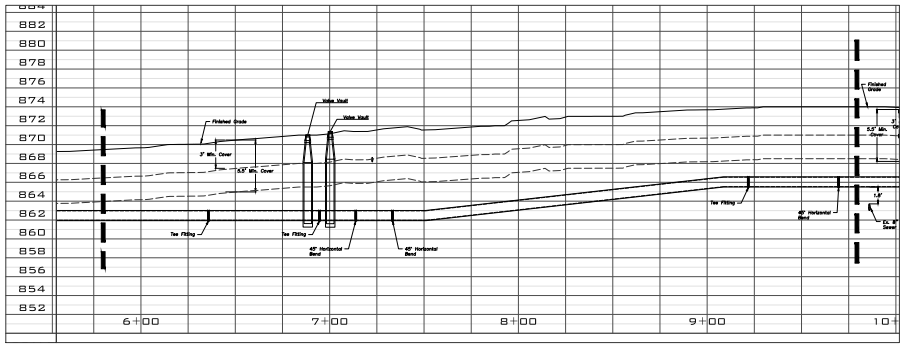
date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

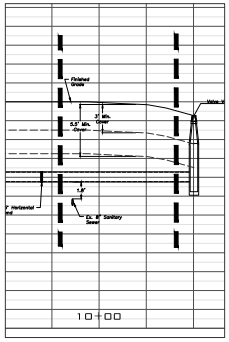
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - OLD RAND ROAD
sheet number C322

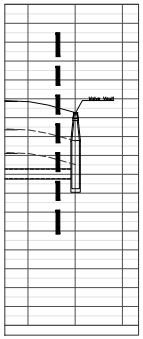












SCALE:
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.

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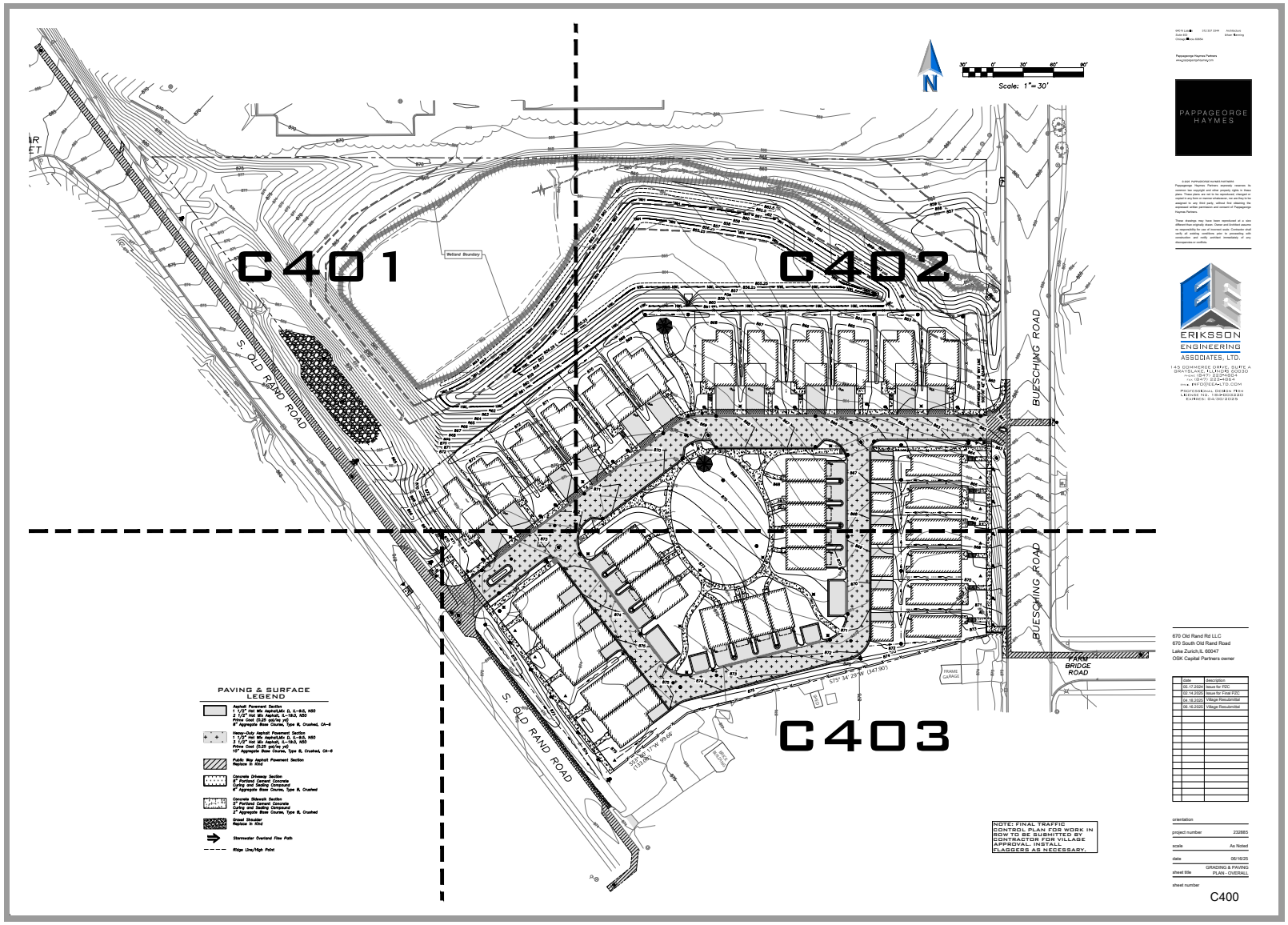
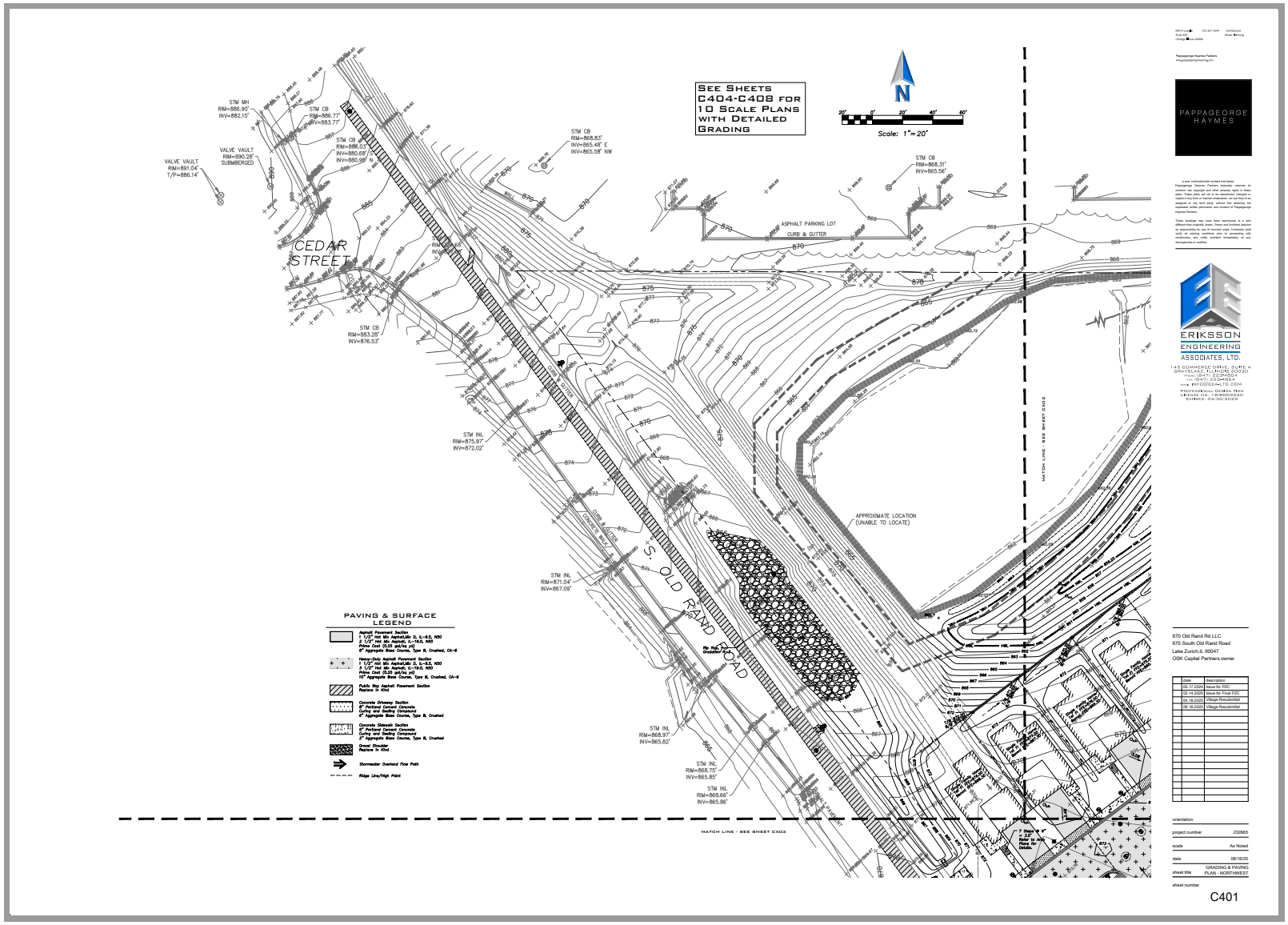
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title WATER PROFILES - OLD RAND ROAD
sheet number C323


C401
C402
C403
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
Scale: 1"= 30'
PAVING & SURFACE LEGEND
NOTE: FINAL TRAFFIC CONTROL PLAN FOR WORK IN ROW TO BE SUBMITTED BY CONTRACTOR FOR VILLAGE APPROVAL. INSTALL FLAGGERS AS NECESSARY.
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING & PAVING PLAN - OVERALL
sheet number C400


SEE SHEETS C404-C408 FOR 10 SCALE PLANS WITH DETAILED GRADING
Scale: 1"=20'
CEDAR STREET
S. OLD RAND ROAD
ASPHALT PARKING LOT
CURB & GUTTER
APPROXIMATE LOCATION (UNABLE TO LOCATE)
MATCH LINE - SEE SHEET C403
PAVING & SURFACE LEGEND
PAPPAGEORGE HAYMES
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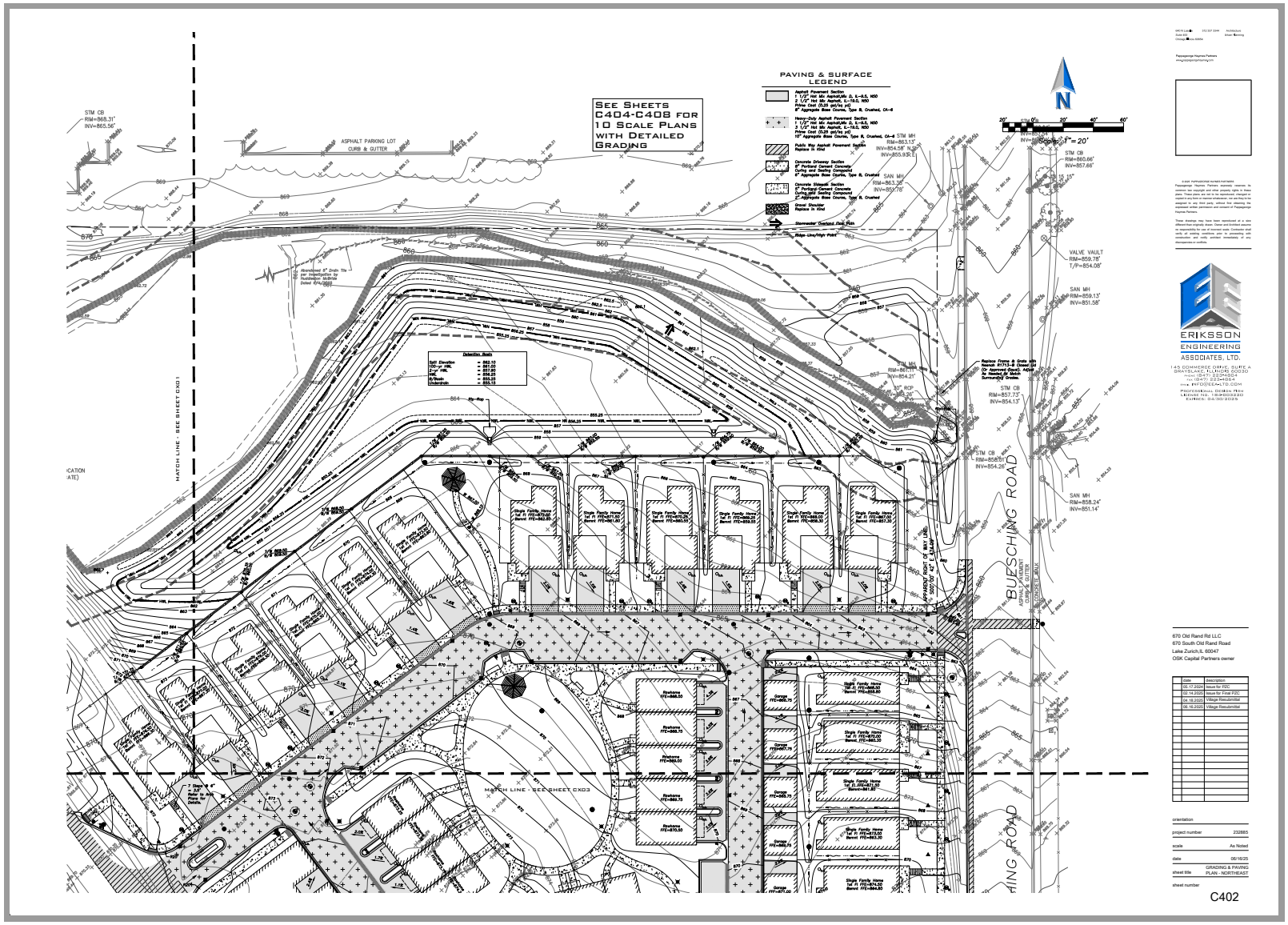
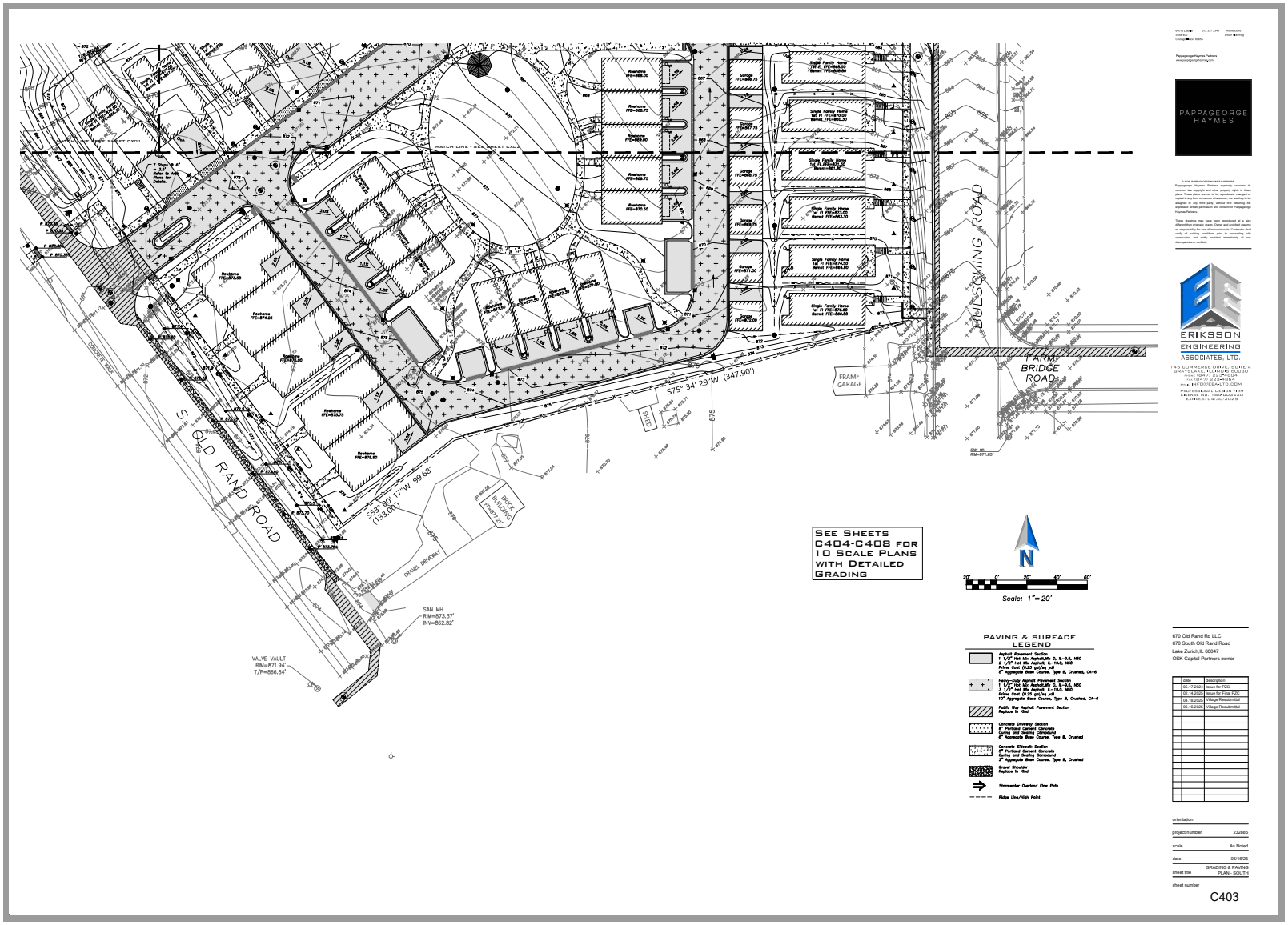
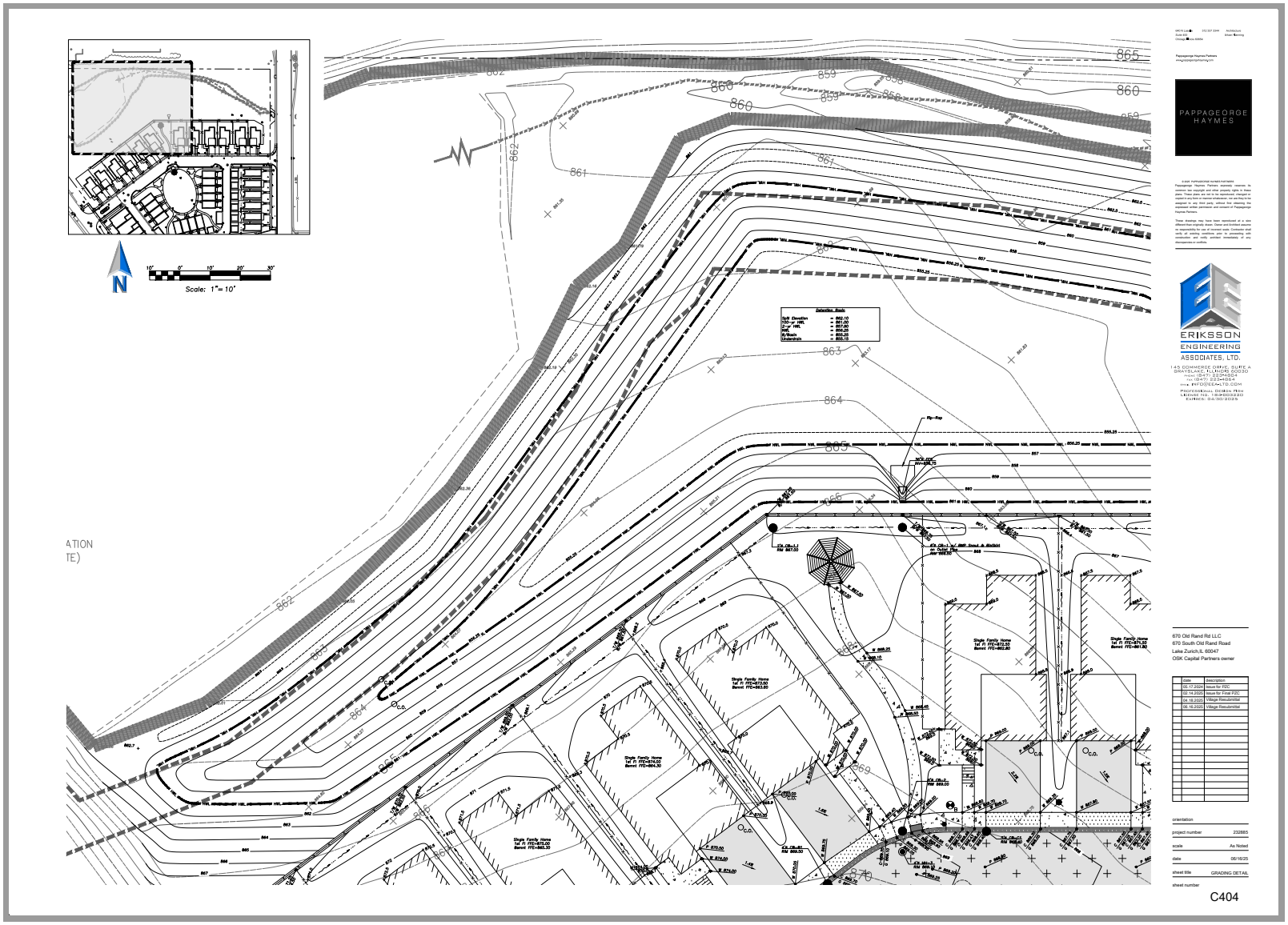
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING & PAVING PLAN - NORTHWEST
sheet number
C401


PAVING & SURFACE LEGEND
SEE SHEETS C404-C408 FOR 10 SCALE PLANS WITH DETAILED GRADING
Scale: 1" = 20'
BUESCHING ROAD
MATCH LINE - SEE SHEET CX03
ASPHALT PARKING LOT CURB & GUTTER
VALVE VAULT RIM=859.78' T/P=854.08'
SAN MH RIM=859.13' INV=851.58'
STM CB RIM=857.73' INV=854.17'
SAN MH RIM=858.24' INV=851.14'
STM CB RIM=860.66' INV=857.66'
SAN MH RIM=863.38' INV=855.78'
STM MH RIM=863.13' INV=854.56' N
INV=855.83' E
STM MH RIM=867.11' INV=854.21'
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING & PAVING PLAN - NORTHEAST
sheet number C402


OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
S75° 34' 29"W (347.90')
S53° 30' 17"W 99.68'
(133.00')
FRAME GARAGE
GRAVEL DRIVEWAY
BRICK BUILDING #19437
SAN MH
RIM=873.37'
INV=862.82'
VALVE VAULT
RIM=871.94'
T/P=866.84'
SEE SHEETS C404-C408 FOR 10 SCALE PLANS WITH DETAILED GRADING
N
Scale: 1"= 20'
PAVING & SURFACE LEGEND
Asphalt Pavement Section
Heavy-Duty Asphalt Pavement Section
Public Way Asphalt Pavement Section
Replace In Kind
Concrete Driveway Section
Concrete Sidewalk Section
Gravel Shoulder
Replace In Kind
Stormwater Overland Flow Path
Ridge Line/High Point
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING & PAVING PLAN - SOUTH
sheet number C403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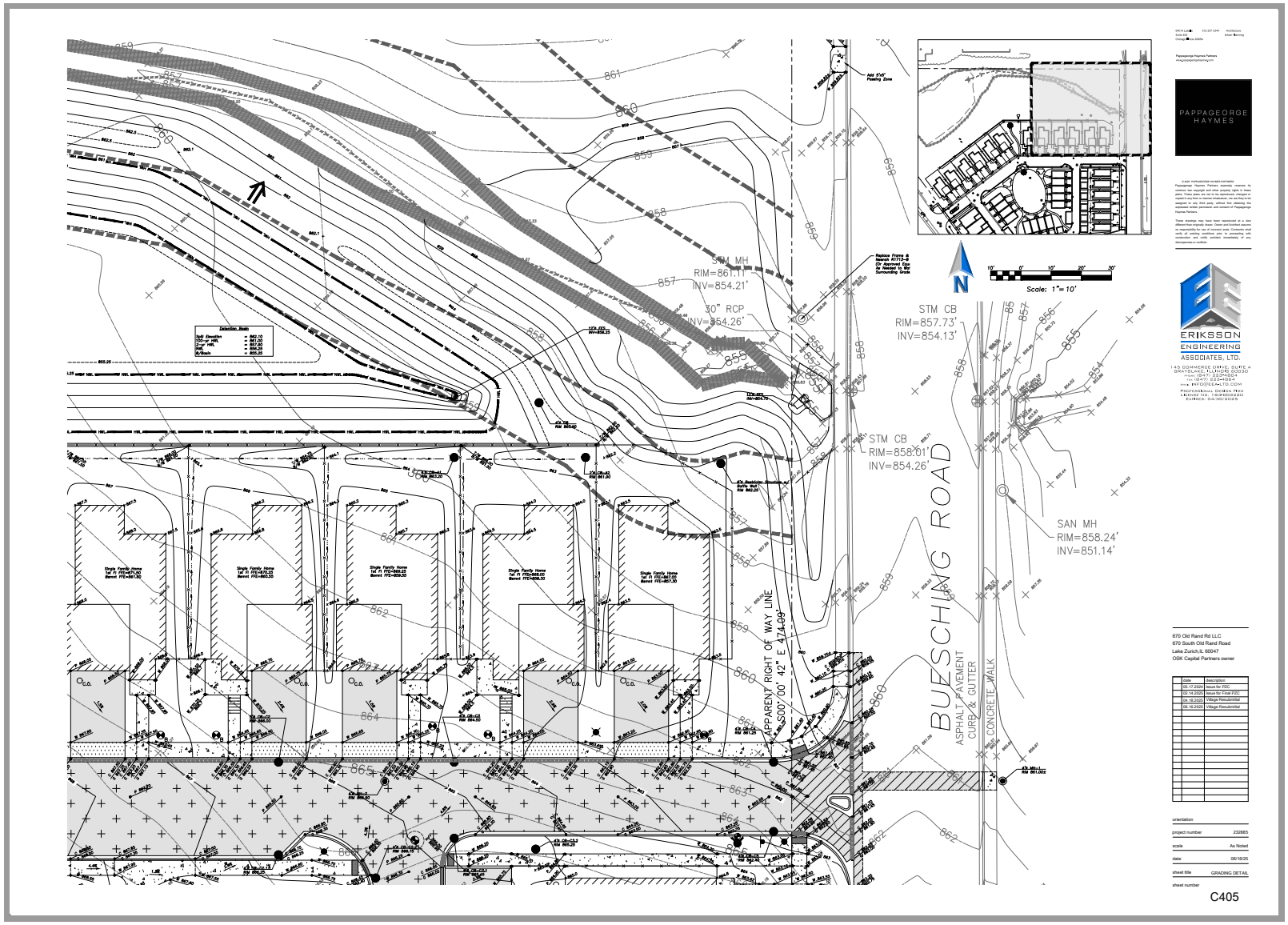
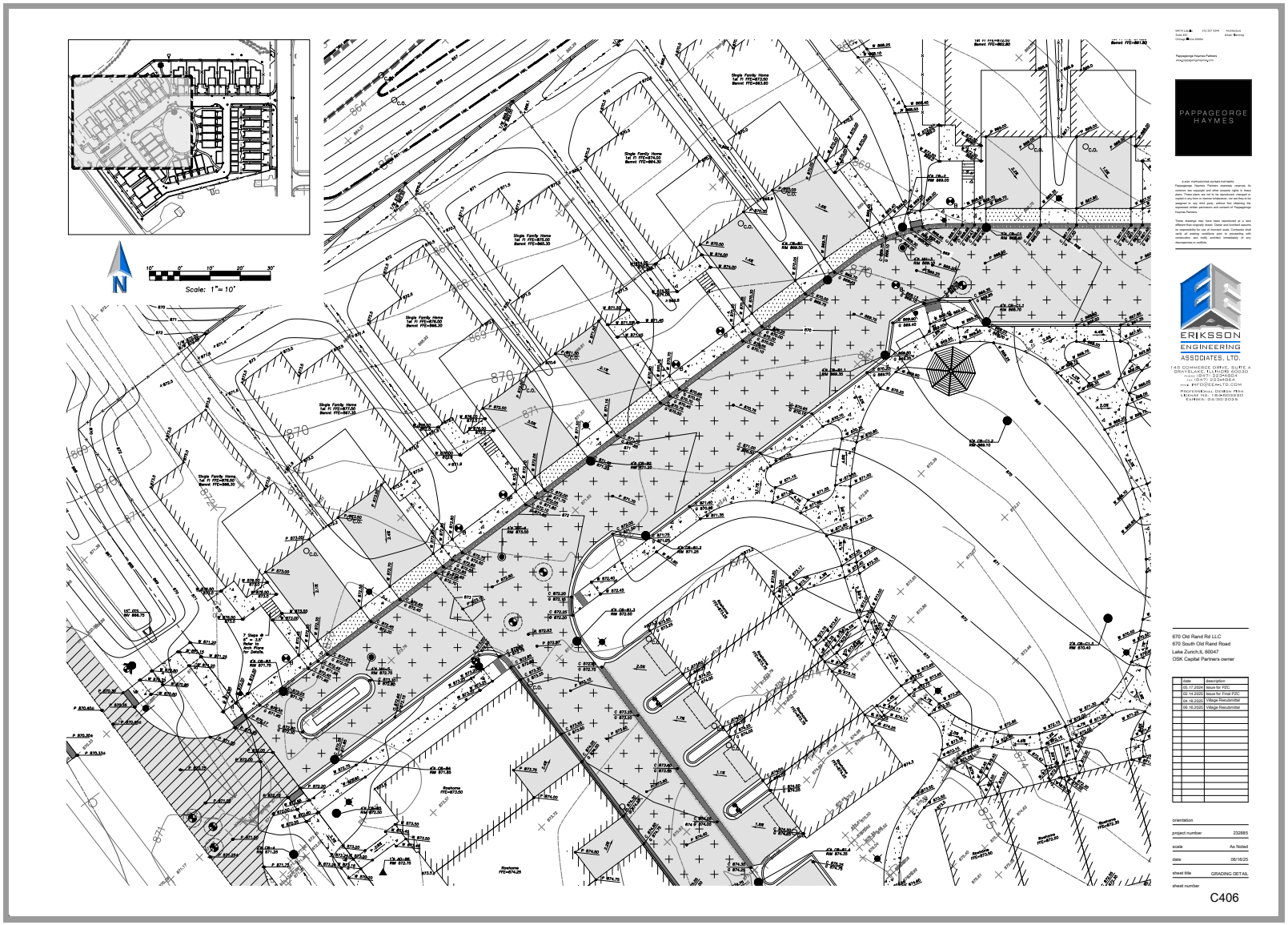
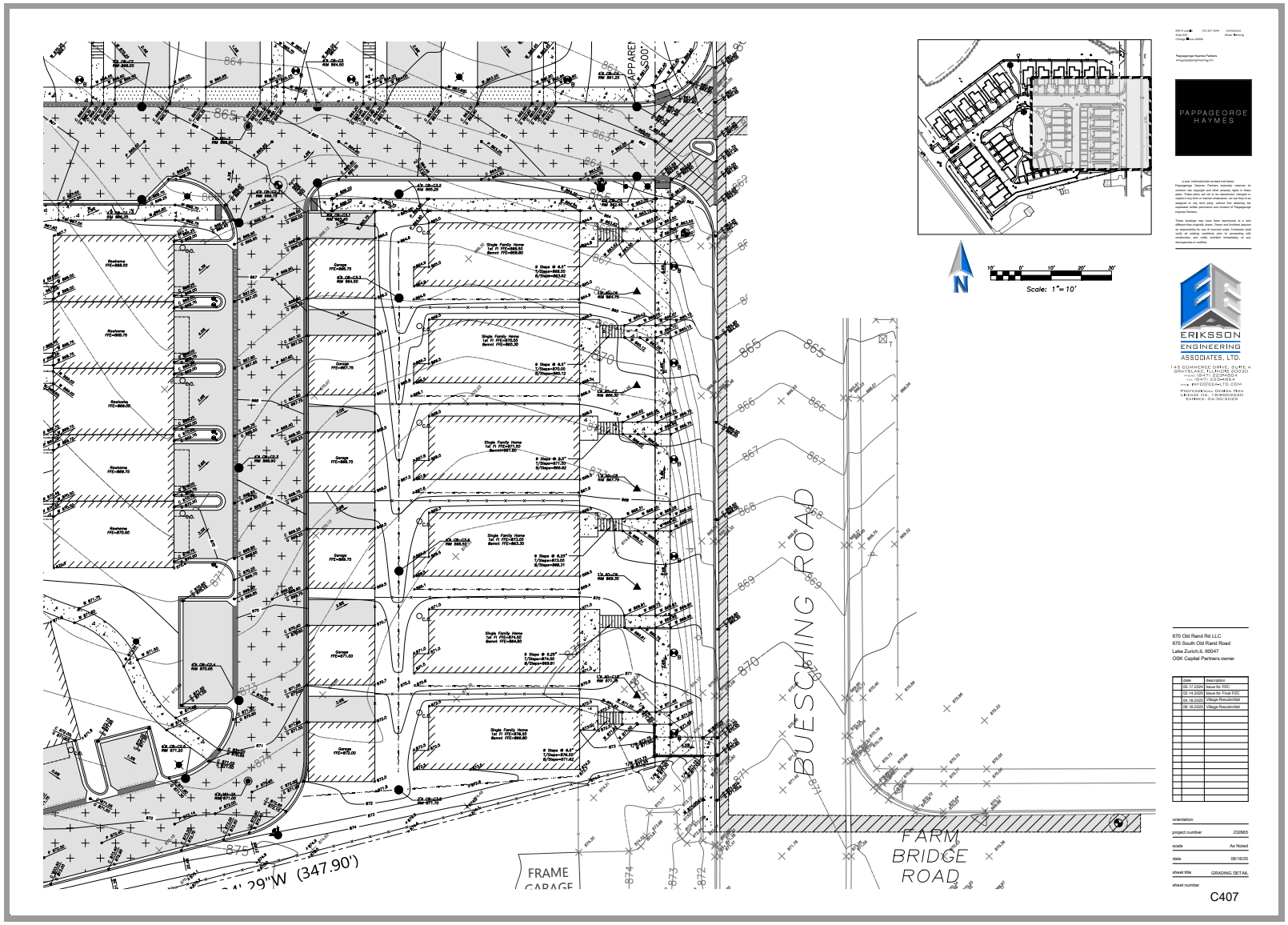
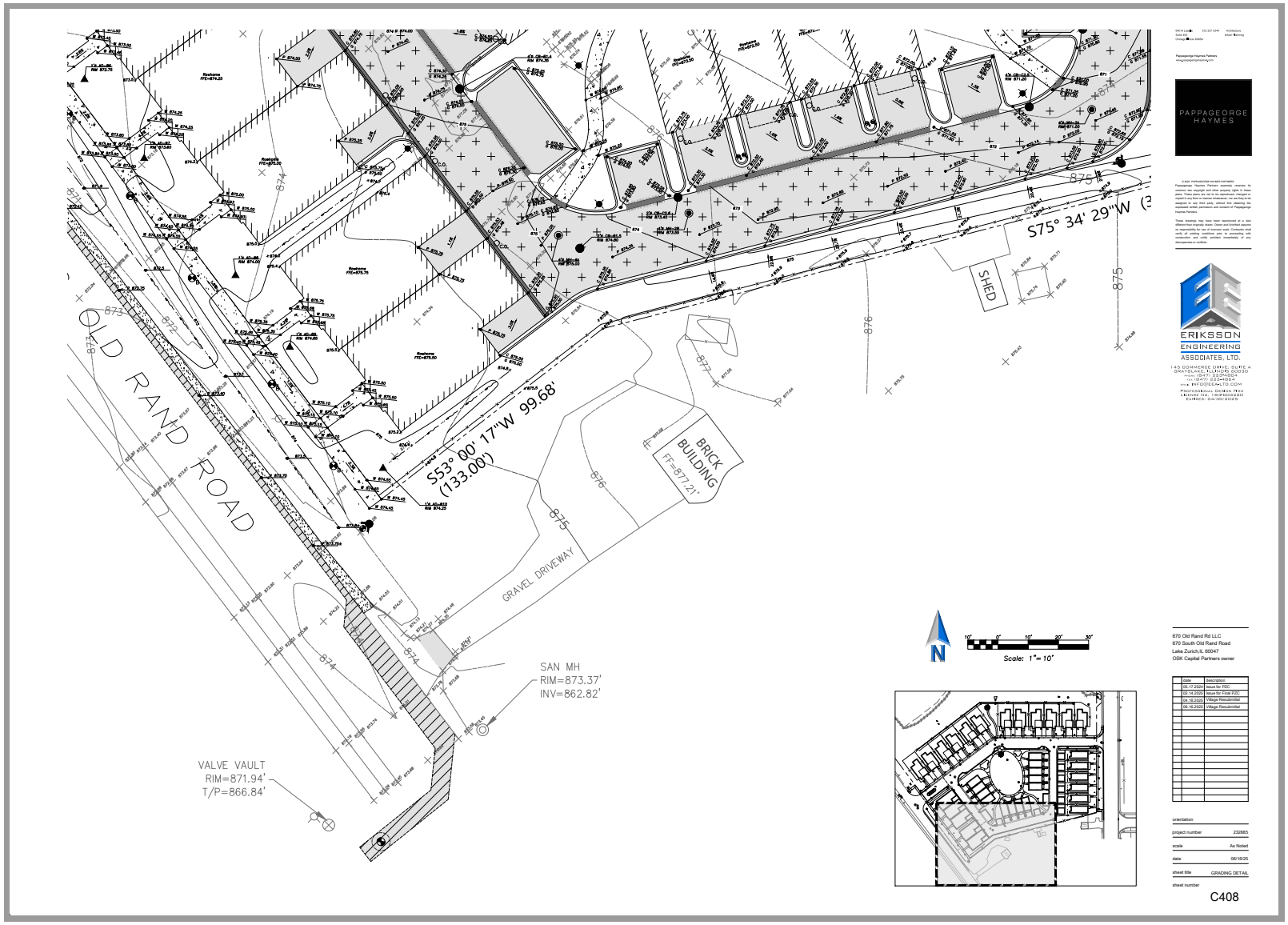
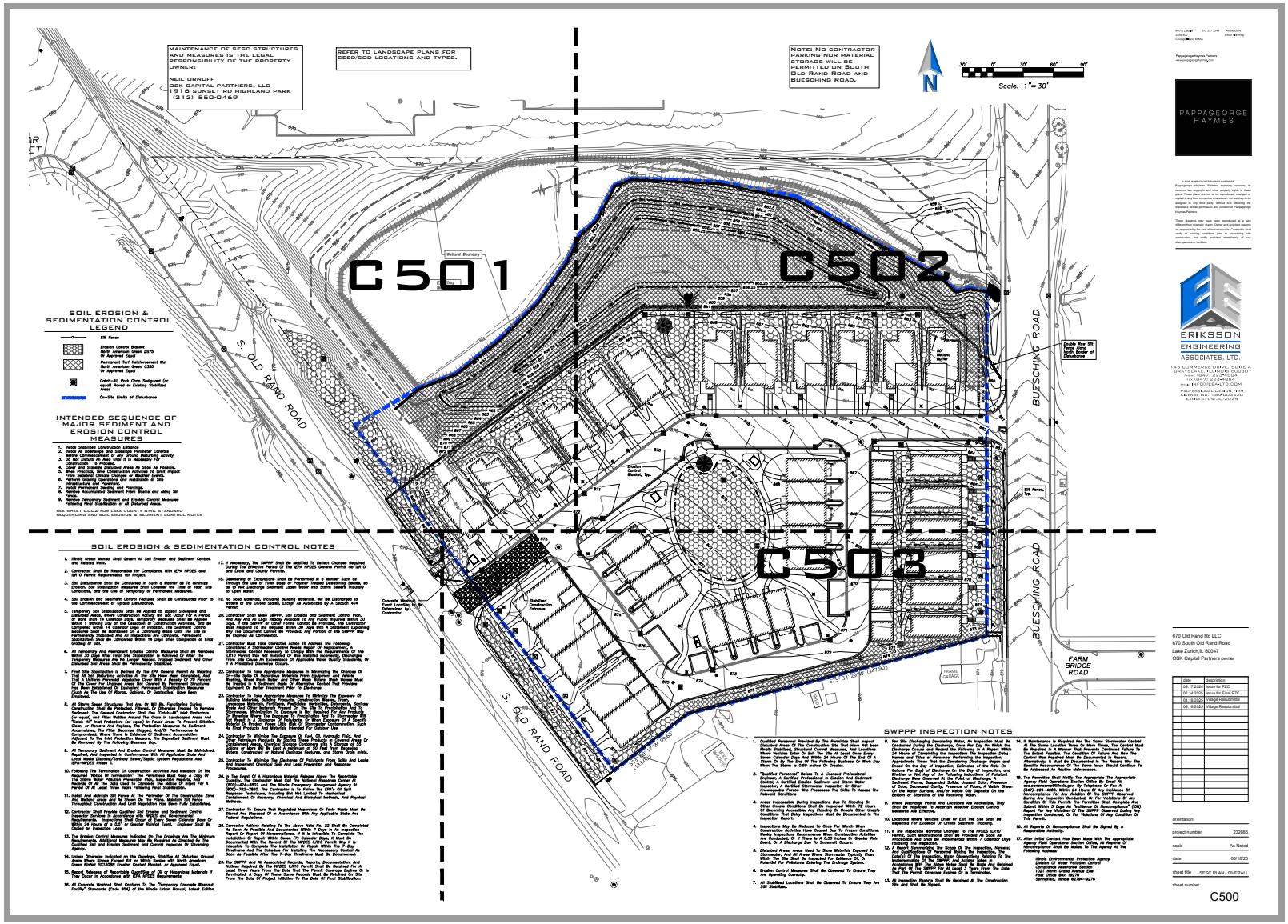
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
C404

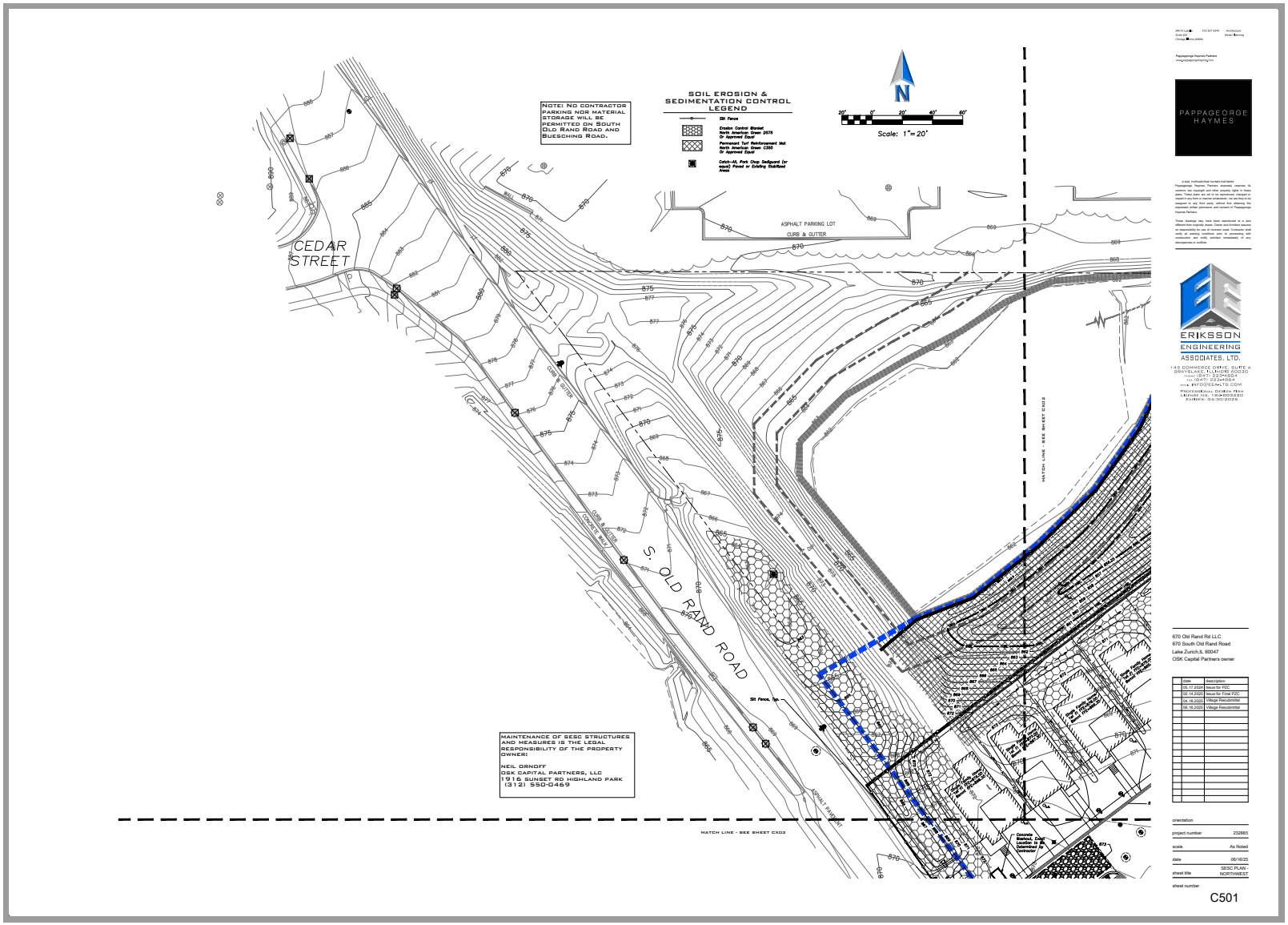

SAN MH
RIM=861.11'
INV=854.21'
30" RCP
INV=854.26'
STM CB
RIM=857.73'
INV=854.13'
STM CB
RIM=858.01'
INV=854.26'
SAN MH
RIM=858.24'
INV=851.14'
BUESCHING ROAD
ASPHALT PAVEMENT
CURB & GUTTER
CONCRETE WALK
APPARENT RIGHT OF WAY LINE
S00° 00' 42" E 474.09'
Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING DETAIL
sheet number C405

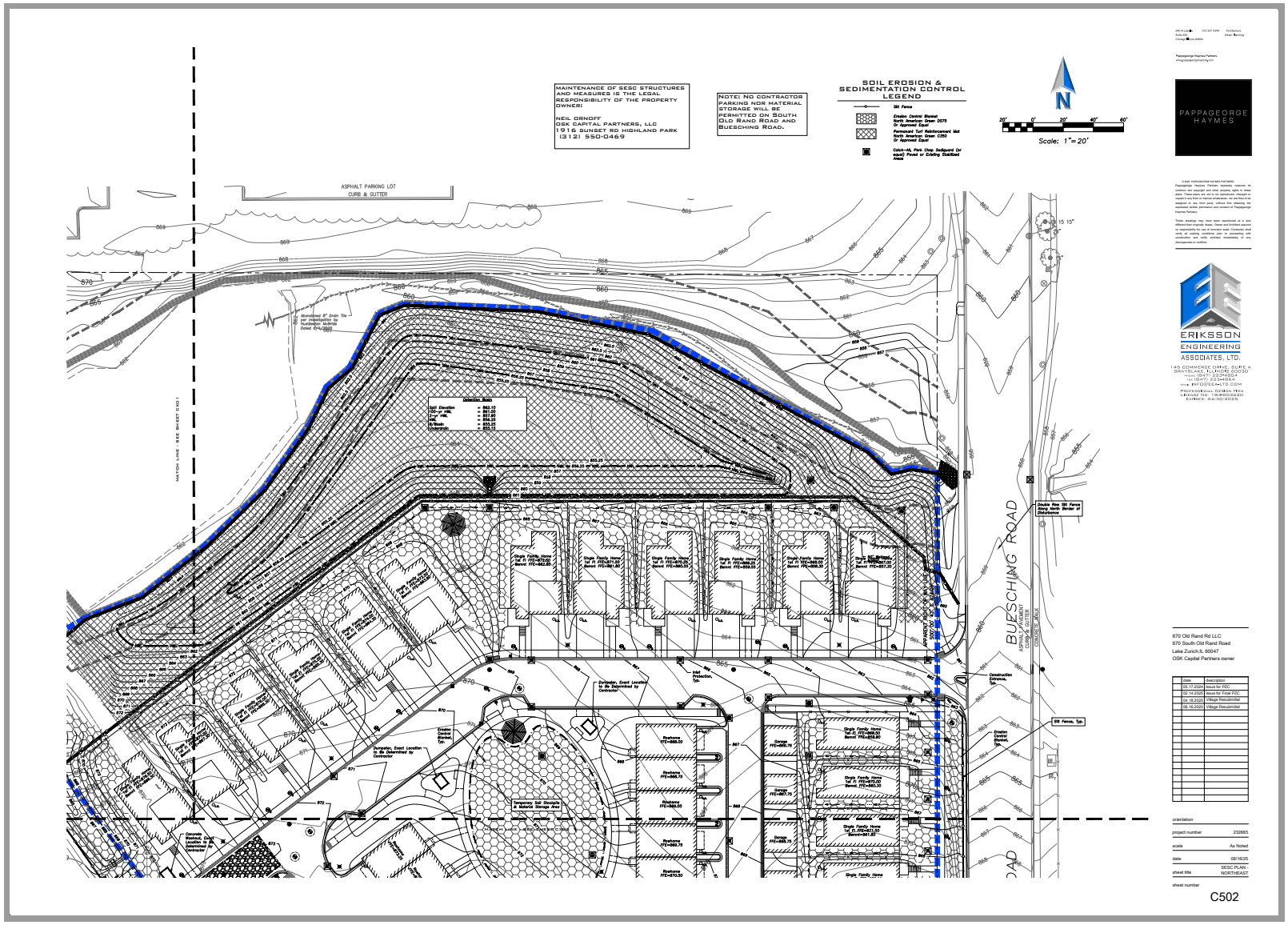

Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING DETAIL
sheet number
C406

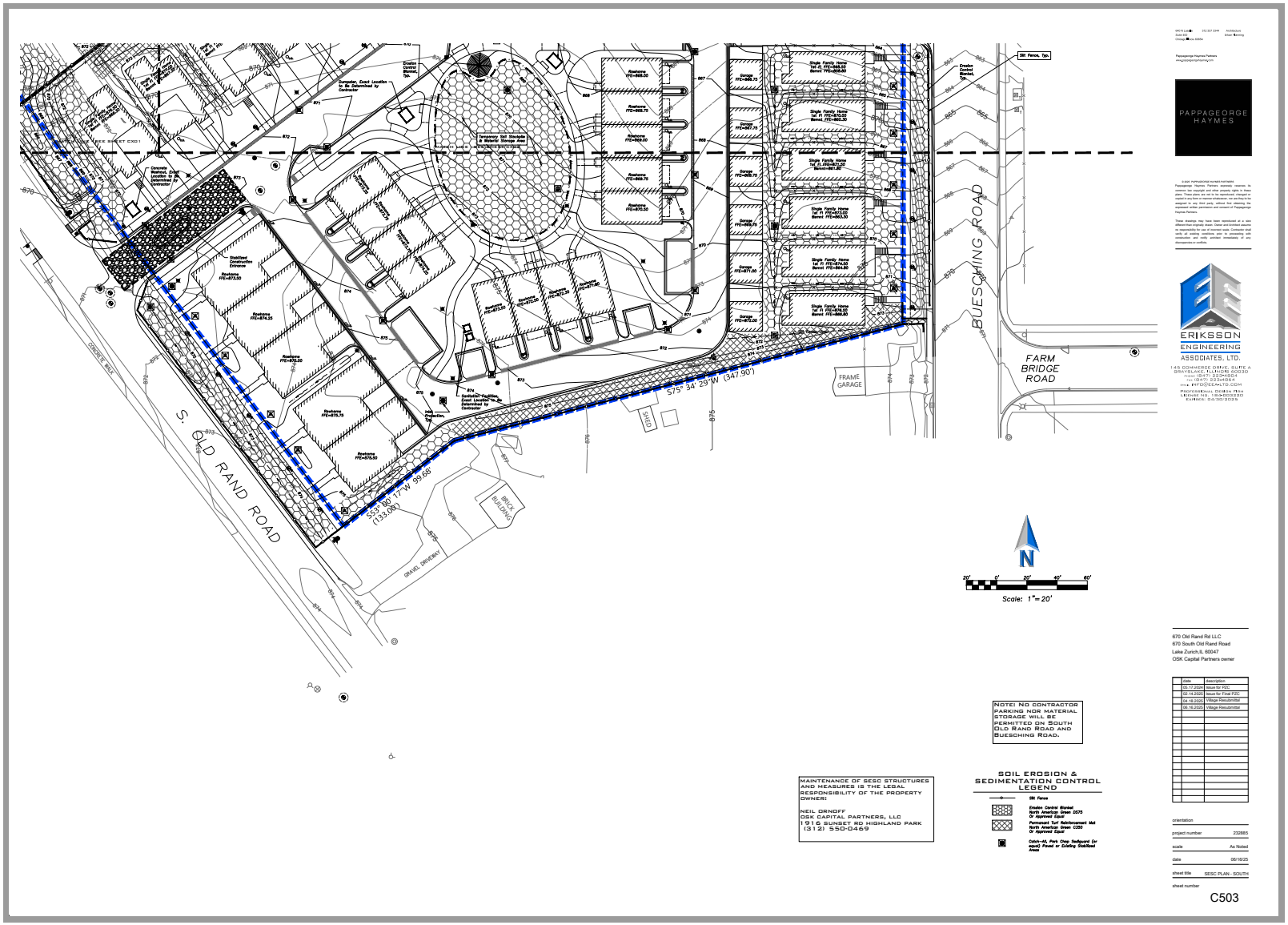

BUESCHING ROAD
FARM BRIDGE ROAD
FRAME GARAGE
(347.90')
Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING DETAIL
sheet number C407

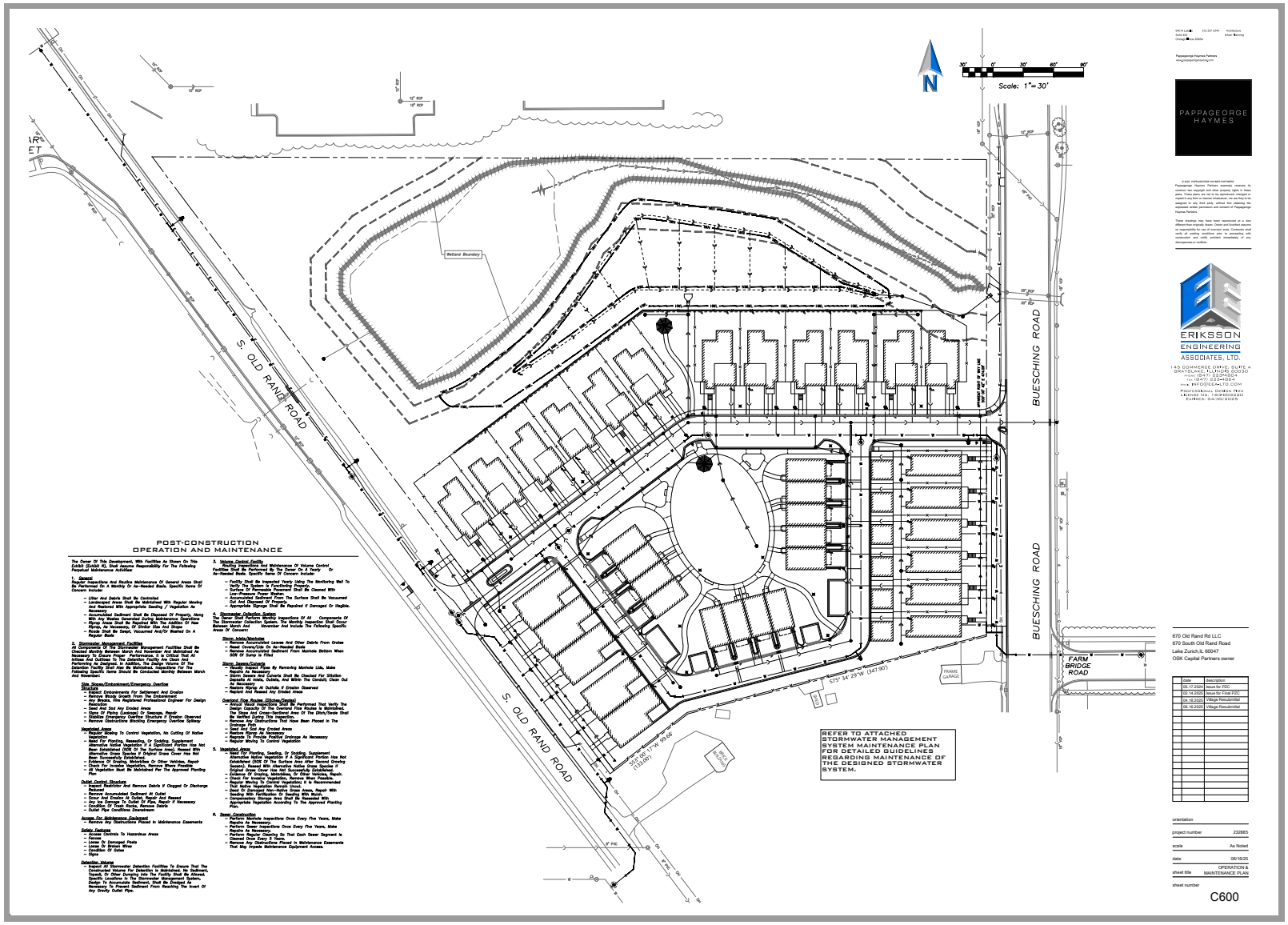

OLD RAND ROAD
S53° 00' 17"W 99.68'
(133.00')
S75° 34' 29"W (3
SHED
BRICK BUILDING
FF=877.21'
GRAVEL DRIVEWAY
SAN MH
RIM=873.37'
INV=862.82'
VALVE VAULT
RIM=871.94'
T/P=866.84'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
Scale: 1"=10'
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title GRADING DETAIL
sheet number
C408

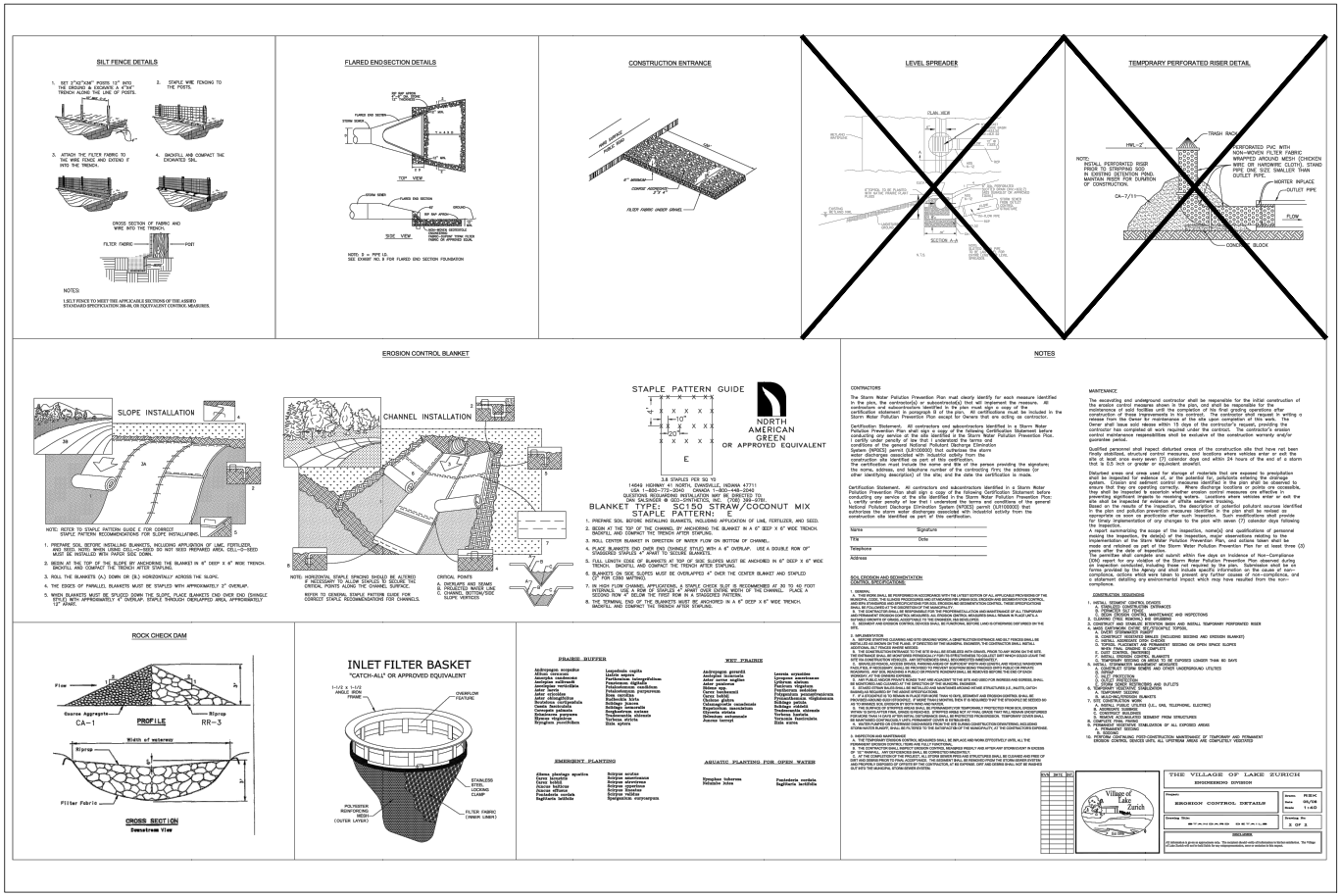

MAINTENANCE OF SESC STRUCTURES AND MEASURES IS THE LEGAL RESPONSIBILITY OF THE PROPERTY OWNER:
NEIL ORNOFF
OSK CAPITAL PARTNERS, LLC
1916 SUNSET RD HIGHLAND PARK
(312) 550-0469
REFER TO LANDSCAPE PLANS FOR SEED/SOD LOCATIONS AND TYPES.
NOTE: NO CONTRACTOR PARKING NOR MATERIAL STORAGE WILL BE PERMITTED ON South Old Rand Road and Buesching Road.
Scale: 1"= 30'
C501
C502
C503
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
SOIL EROSION & SEDIMENTATION CONTROL LEGEND
INTENDED SEQUENCE OF MAJOR SEDIMENT AND EROSION CONTROL MEASURES
SOIL EROSION & SEDIMENTATION CONTROL NOTES
SWPPP INSPECTION NOTES
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
C500


NOTE: NO CONTRACTOR PARKING NOR MATERIAL STORAGE WILL BE PERMITTED ON SOUTH OLD RAND ROAD AND BUESCHING ROAD.
SOIL EROSION & SEDIMENTATION CONTROL LEGEND
Silt Fence
Scale: 1"=20'
CEDAR STREET
ASPHALT PARKING LOT
CURB & GUTTER
S. OLD RAND ROAD
MATCH LINE - SEE SHEET C503
MAINTENANCE OF SESC STRUCTURES AND MEASURES IS THE LEGAL RESPONSIBILITY OF THE PROPERTY OWNER:
NEIL ORNOFF
OSK CAPITAL PARTNERS, LLC
1916 SUNSET RD HIGHLAND PARK
(312) 550-0469
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@ESE-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SESC PLAN - NORTHWEST
sheet number
C501


MAINTENANCE OF SESC STRUCTURES AND MEASURES IS THE LEGAL RESPONSIBILITY OF THE PROPERTY OWNER:
NEIL DRNOFF
OSK CAPITAL PARTNERS, LLC
1916 SUNSET RD HIGHLAND PARK
(312) 550-0469
NOTE: NO CONTRACTOR PARKING NOR MATERIAL STORAGE WILL BE PERMITTED ON SOUTH OLD RAND ROAD AND BUESCHING ROAD.
SOIL EROSION & SEDIMENTATION CONTROL LEGEND
Silt Fence
Erosion Control Blanket Or Equivalent Per Spec 2575 Or Approved Equal
Permanent Turf Reinforcement Mat North American Green C350 Or Approved Equal
Catch-All, Park Chip Safeguard (or equal) Fixed or Sliding Stabilized Areas
N
20' 0' 20' 40' 60'
Scale: 1"=20'
ASPHALT PARKING LOT CURB & GUTTER
BUESCHING ROAD
Temporary Soil Stockpile & Material Storage Area
Dumpster, Exact Location to Be Determined by Contractor
Construction Entrance, Typ.
Silt Fence, Typ.
Double Row Silt Fence Along North Border of Disturbance
Erosion Control Blanket, Typ.
Inlet Protection, Typ.
Concrete Washout Area
Single Family Home
Rockome
Duplex
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@ESA-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SESC PLAN - NORTHEAST
sheet number
C502


S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
S75° 34' 29"W (347.90')
S53° 80' 17"W 99.68'
(133.00')
FRAME GARAGE
SHED
BRICK BUILDING
GRAVEL DRIVEWAY
CONCRETE WALK
Inventory Soil Stockpile & Material Storage Area
Contractor Control Location, to be Determined by Contractor
Construction Entrance Location, to be Determined by Contractor
Temporary Soil Stockpile Location, to be Determined by Contractor
Concrete Washout Location, to be Determined by Contractor
Dumpster Corral Location, to be Determined by Contractor
Portable Toilet Location, to be Determined by Contractor
Stabilized Construction Entrance
Inlet Protection, Typ.
Silt Fence, Typ.
Single Family Home
Duplex
Roadway
Bioswale
Detention
Open Space
N
Scale: 1"= 20'
NOTE: NO CONTRACTOR PARKING NOR MATERIAL STORAGE WILL BE PERMITTED ON SOUTH OLD RAND ROAD AND BUESCHING ROAD.
MAINTENANCE OF SESC STRUCTURES AND MEASURES IS THE LEGAL RESPONSIBILITY OF THE PROPERTY OWNER:
NEIL ORNOFF
OSK CAPITAL PARTNERS, LLC
1916 SUNSET RD HIGHLAND PARK
(312) 550-0469
SOIL EROSION & SEDIMENTATION CONTROL LEGEND
Silt Fence
Erosion Control Blanket North American Green S75 Or Approved Equal
Permanent Turf Reinforcement Mat North American Green C350 Or Approved Equal
Cobble #2, Park Chip Safeguard (or equal) Paved or Existing Stabilized Areas
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@EEA-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SESC PLAN - SOUTH
sheet number C503


N
Scale: 1"= 30'
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
Retand Boundary
REFER TO ATTACHED STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLAN FOR DETAILED GUIDELINES REGARDING MAINTENANCE OF THE DESIGNED STORMWATER SYSTEM.
POST-CONSTRUCTION OPERATION AND MAINTENANCE
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title OPERATION & MAINTENANCE PLAN
sheet number C600



PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.

145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@ESE-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184.003220
EXPIRES: 04/30/2026

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
07.14.2025	Issue for Final PZC
08.18.2025	Village Resubmittal
09.16.2025	Village Resubmittal

orientation

project number 232885

scale As Noted

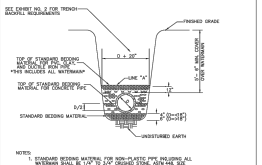
date 09/16/25

sheet title SITE WORK DETAILS

sheet number C700

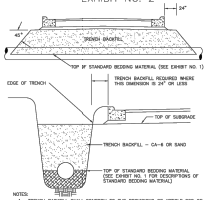
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.

EXHIBIT NO. 1



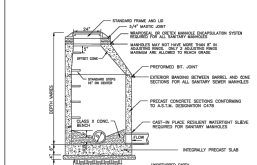
TYPICAL TRENCH AND STANDARD BEDDING

EXHIBIT NO. 2



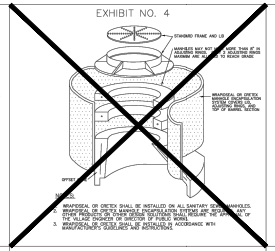
TRENCH BACKFILL

EXHIBIT NO. 3



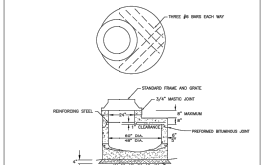
STANDARD MANHOLE

EXHIBIT NO. 4



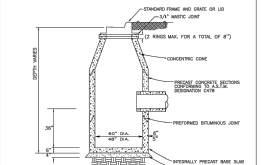
WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM

EXHIBIT NO. 5



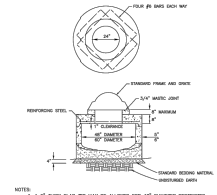
FLAT TOP FOR RESTRICTED DEPTH MANHOLE

EXHIBIT NO. 7



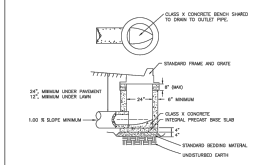
CATCH BASIN

EXHIBIT NO. 8



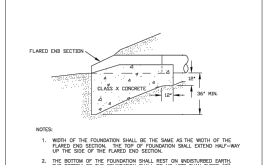
FLAT SLAB TOP FOR RESTRICTED DEPTH C.B.

EXHIBIT NO. 9



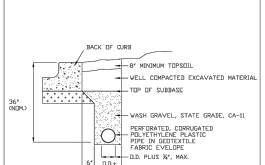
INLET

EXHIBIT NO. 10



FOUNDATION FOR FLARED END SECTION

EXHIBIT NO. 11



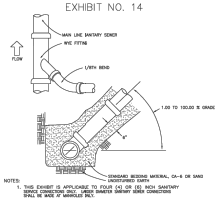
UNDERDRAIN

EXHIBIT NO. 12

STREET	PAVEMENT DESIGN
MAJOR	4" GRANULAR SUB-BASE 9" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 2" BITUMINOUS SURFACE COURSE
COLLECTOR	3" GRANULAR SUB-BASE 6" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
MINOR	3" AGGREGATE BASE COURSE 5" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
CUL-DE-SAC	SAME AS MINOR
MARGINAL ACCESS	SAME AS MINOR
IN BUSINESS AND INDUSTRIAL DISTRICTS	3" GRANULAR SUB-BASE 8" BITUMINOUS AGGREGATE MIXTURE 3" BITUMINOUS CONCRETE

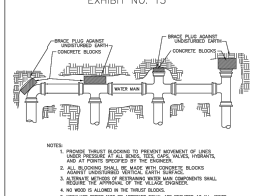
MINIMUM STANDARDS FOR STREET DESIGN

EXHIBIT NO. 14



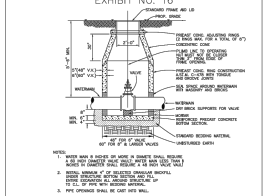
SANITARY SERVICE CONNECTION

EXHIBIT NO. 15



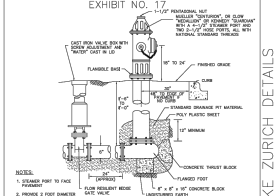
THRUST BLOCK

EXHIBIT NO. 16



VALVE VAULT

EXHIBIT NO. 17



FIRE HYDRANT

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540-1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 1

PROJECT NO. DETAILS
DATE 1/10/03
SCALE NTS
DESIGNED BY DESIGN
DRAWN BY DTM
CHECKED BY EL

SHEET 1 / 3

© COPYRIGHT 2003

VILLAGE OF LAKE ZURICH DETAILS

PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184.003220
EXPIRES: 04/30/2029

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
07.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.18.2025	Village Resubmittal

orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE WORK DETAILS
sheet number C701

NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.

EXHIBIT NO. 13

THESE STANDARDS SUPERCEDE ALL OTHER STANDARDS

LAKE ZURICH UTILITY MATERIAL STANDARDS

SANITARY SEWER

Pipe	PVC, SDR – 26, meeting requirements of ASTM – 3034 Gasketed Joint / Cell Classification 12454 – B Ductile Iron, Class 52, meeting ANSI A21.51 Service Laterals: PVC, SDR 42 or better, SDR 35 or 26
Bedding Materials	1/4" to 3/4" crushed stone, size CA–7 to CA–11, 12" over the top of pipe
Manholes	Pre–Cast Concrete with Bench and Rubber Boots Cast Iron Frames and Lids: Neenah Type 1 self–sealing Marked "Sanitary Sewer" Manufactured Manhole Encapsulation System is required on all sanitary manholes Contractor shall be qualified by manufacturer to install Wrapidseal Exterior manhole joints are not to be mortared or sealed Manhole must be water tight and sealed from the outside Fiberglass steps
Casing	Casing pipe must be ductile iron or steel Manufactured pipe chocks must be used between the pipe and casing Pea gravel must be jetted through the casing, with concrete mortar on the ends Casing to be installed as required by the "Standard Specifications for Water and Sewer Construction in Illinois" 5th Edition, 1996, with all services considered as mains If PVC pipe (DR35) is used, #4 solid copper tracing wire is required for locating purposes
Forcemain	

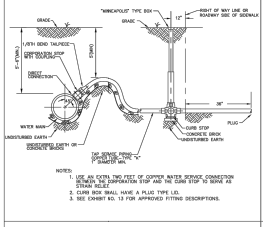
WATERMAIN

Fire Hydrants	Clow Medallion, 5 1/4 " with Auxiliary Valve Kennedy Guardian, 5 1/4 " with Auxiliary Valve Mueller Centurion, 5 1/4 " with Auxiliary Valve 5 1/4 " three–way (2 hose nozzles and 1 pumper nozzle) Painted Safety Red
Pipe	Class 52 Ductile Iron, cement lined, Megalugs Series 1100 required at all fittings Polyethylene Encasement with polyethylene film, is not permitted
Bedding Materials	1/4" to 3/4" crushed stone, size CA–7 to CA–11, 12" over the top of pipe
Valves	Clow, American Flow Control Kennedy Resilient Wedge Mueller Resilient Wedge, 2360 series 500 MRS Resilient Wedge Valve UL/FM Gerotal Mueller Resilient Wedge Valve Non–Rising Stem, Mechanical Joint Cast iron body and bonnet with Nonrising Stem Type 1 self–sealing Marked "Water"
Manholes	Cast iron body and bonnet with Nonrising Stem Type 1 self–sealing Marked "Water" Cast iron body and bonnet or steel Manufactured pipe chocks must be used between the pipe and casing Pea gravel must be jetted through the casing, with concrete mortar on the ends Casing to be installed as required by the "Standard Specifications for Water and Sewer Construction in Illinois" 5th Edition, 1996, with all services considered as mains
Corporation Stop	Mueller H – 15000 – 1" Size AY McDonald 4701
Roundarg	Mueller H–15014 – 1" Stop, Minneapolis Pattern AY McDonald 4701
B–Box	Mueller H – 10300 Upper section inside diameter 1 1/4" Mueller H – 10302 Upper section inside diameter 1 1/2"
Service Line	Type K Copper, or as required by plumbing code
Tapping Sadalle	Double Banded Stainless Steel Tapping Sleeve with 1" corporation stop
Hardware	All nuts and bolts below grade shall be stainless steel

WATERMAIN INSTALLATION SPECIFICATIONS

1. Watermains shall not be exposed for any reason without the approval of the Superintendent – Utilities.
2. Filling mains, pressure connections, pressure tests, tie–ins, and chlorinations require 48–hour notification to the Superintendent – Utilities.
3. Pressure connections and tie–ins to the Village systems will be scheduled and witnessed by the Utilities Division personnel.
4. Once mains are tied to the Village system, no valves or hydrants shall be operated by anyone other than Utility Division personnel.
5. Filling and flushing will be done by the Utilities Division only.
6. Water for pressure tests will be supplied by the Utilities Division, but it is the responsibility of the contractor to provide a backflow preventer or an approved anti–siphon method before the pump.
7. Corporation cocks and 1" copper lines for the chlorination and sampling shall be installed at locations determined by the Utilities Division.
8. Chlorination will not be performed on service lines until all final permanent water valves are installed.
9. Water vaults for 6" valves and larger must have on inside diameter of 60".

EXHIBIT NO. 18



NOTES:
1. USE AN EXTRA TWO FEET OF COPPER WATER SERVICE CONNECTION BETWEEN THE CORPORATION STOP AND THE CURB STOP TO SERVE AS STRAIN RELIEF.
2. CURB BOX SHALL HAVE A PLUG TYPE LID.
3. SEE EXHIBIT NO. 13 FOR APPROVED FITTING DESCRIPTIONS.

WATER SERVICE CONNECTION

EXHIBIT NO. 19

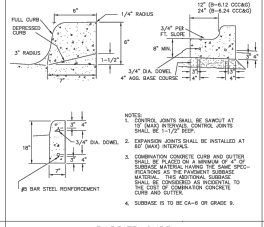
STREET	RIGHT–OF–WAY WIDTH	PAVEMENT WIDTH	RADIUS OF CURVES	LENGTH OF HORZ. CURVES	TANGENT BETWEEN REVERSE CURVES	MAXIMUM GRADE	MINIMUM GRADE	SIGHT DISTANCE
MAJOR	100 FT.	64 FT.	500 FT.	200 FT.	200 FT.	8%	0.5%	500 FT.
COLLECTOR	80 FT.	44 FT.	400 FT.	200 FT.	200 FT.	8%	0.5%	400 FT.
MINOR	60 FT.	30 FT.	150 FT.	100 FT.	—	8%	0.5%	200 FT.
CUL–DE–SAC	100 FT.	84 FT.	150 FT.	100 FT.	—	8%	0.5%	200 FT.
MARGINAL ACCESS	60 FT.	30 FT.	400 FT.	200 FT.	100 FT.	8%	0.5%	200 FT.
IN BUSINESS AND INDUSTRIAL SUB	80–100 FT.	54 FT.	500 FT.	200 FT.	200 FT.	2%	0.5%	500 FT.

*PAVEMENT WIDTHS ARE MEASURED BACK OF CURB TO BACK OF CURB AND INCLUDE ADDITIONAL WIDTH FOR ON–STREET PARKING.

(a) FIFTY (50) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN TWO HUNDRED (200) FEET.
(b) FIFTY (50) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN ONE HUNDRED (100) FEET.

MINIMUM STANDARDS FOR STREET DESIGN

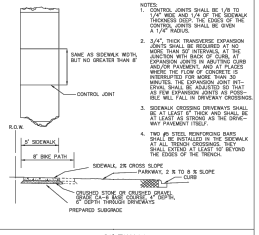
EXHIBIT NO. 24



NOTES:
1. CONTROL JOINTS SHALL BE SAWCUT AT 10' (MAX) INTERVALS. CONTROL JOINTS SHALL BE 1–1/2" DEEP.
2. EXPANSION JOINTS SHALL BE INSTALLED AT 80' (MAX) INTERVALS.
3. COMBINATION CONCRETE CURB AND GUTTER SHALL BE PLACED ON A MINIMUM OF 4" OF CRUSHED STONE BASE COURSE, CA–6 OR AS SPECIFICATIONS AT THE PAVEMENT SUBBASE MATERIAL. THIS ADDITIONAL SUBBASE SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF COMBINATION CONCRETE CURB AND GUTTER.
4. SUBBASE IS TO BE CA–6 OR GRADE 9.

BARRIER CURB

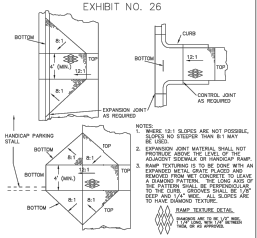
EXHIBIT NO. 25



NOTES:
1. CONTROL JOINTS SHALL BE 1/8 TO 1/4" WIDE AND 1/4 OF THE SIDEWALK THICKNESS IN DEPTH. AT CURVES IN THE CONTROL JOINTS SHALL BE GIVEN A 1/4" RADIUS.
2. 3/4" THICK TRANSVERSE EXPANSION JOINTS SHALL BE REQUIRED AT NO MORE THAN 30' INTERVALS, AT THE JUNCTION WITH BACK OF CURB, AT JUNCTIONS WITH CURB AND GUTTER AND/OR PAVEMENT, AND AT PLACES WHERE THE FLOW OF CONCRETE IS INTERRUPTED BY MANHOLES OR INLETS. MINUTES THE EXPANSION JOINT INTERVAL SHALL BE ADJUSTED SO THAT AS FEW EXPANSION JOINTS AS POSSIBLE WILL FALL IN DRIVEWAY CROSSINGS.
3. SIDEWALK CROSSING DRIVEWAYS SHALL BE AT LEAST 6" THICK AND SHALL BE REINFORCED AS REQUIRING THE DRIVEWAY PAVEMENT ITSELF.
4. TWO #5 STEEL REINFORCING BARS SHALL BE INSTALLED IN THE SIDEWALK AT ALL TRENCH CROSSINGS. THEY SHALL EXTEND AT LEAST 10' BEYOND THE EDGES OF THE TRENCH.

SIDEWALK

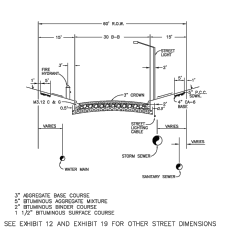
EXHIBIT NO. 26



NOTES:
1. WHERE 12:1 SLOPES ARE NOT POSSIBLE, SLOPES NO STEEPER THAN B:1 MAY BE USED.
2. EXPANSION JOINT MATERIAL SHALL NOT PROTRUDE ABOVE THE LEVEL OF THE ADJACENT SIDEWALK OR HANDICAP RAMP.
3. RAMP TEXTURING IS TO BE DONE WITH AN EXPANDED METAL GRATE PLACED AND REMOVED WHILE THE CONCRETE IS STILL IN A PLASTIC STATE. THE LONG AXIS OF THE PATTERN SHALL BE PERPENDICULAR TO THE RAMP. THE GRATE SHALL BE 1/8" DEEP AND 1/4" WIDE. ALL SLOPES ARE TO HAVE DIAMOND TEXTURE.

RAMP TEXTURE DETAIL
RAMPS ARE TO BE 1/2" WIDE, 1/4" DEEP WITH 1/4" BETWEEN THEM, OR AS APPROVED.

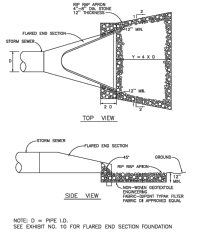
HANDICAP RAMP



3" AGGREGATE BASE COURSE
5" BITUMINOUS AGGREGATE MIXTURE
2" BITUMINOUS BINDER COURSE
1 1/2" BITUMINOUS SURFACE COURSE

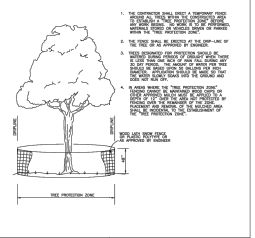
SEE EXHIBIT 12 AND EXHIBIT 19 FOR OTHER STREET DIMENSIONS

TYPICAL MINOR STREET DESIGN DETAIL



NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

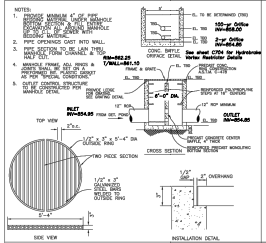
FLARED END SECTION RIP RAP



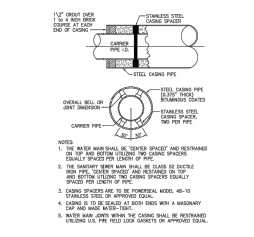
1. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES TO BE PRESERVED AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE VILLAGE OR ANY OTHER AGENCY. NO WORK OF ANY KIND SHALL BEGIN UNTIL THE PROTECTIVE FENCING IS INSTALLED AND APPROVED.
2. THE TREE SHALL BE ERECTED A THE DRIP–LINE OF THE TREE, OR AS SHOWN ON THE PLANS.
3. TREES DESIGNATED FOR PROTECTION SHOULD BE MARKED DURING APPROVED OF DEVELOPMENT WORK. THESE TREES SHALL BE CLEARLY MARKED SO THAT THEY ARE NOT REMOVED OR DAMAGED DURING CONSTRUCTION. APPROVED SHALL BE MADE BY THE VILLAGE OR ANY OTHER AGENCY. TREES SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE VILLAGE AND ANY OTHER AGENCY.
4. IN AREAS WHERE THE TREE PROTECTION ZONE CANNOT BE FENCED, SUCH AS WORK WITHIN APPROVED BUILDING ENVELOPE, A MINIMUM OF 12" (PART TO THE AREA NOT AFFECTED BY CONSTRUCTION SHALL BE PROTECTED BY PLYWOOD OR EQUIVALENT MATERIAL. NO EQUIPMENT, MATERIALS OR TEMPORARY STRUCTURES SHALL BE ALLOWED WITHIN THE TREE PROTECTION ZONE.

TREE PROTECTION FENCE

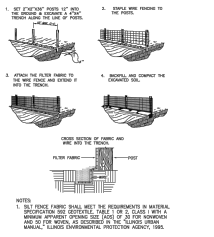
UTILITY MATERIAL STANDARDS



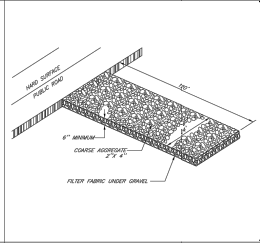
OUTLET CONTROL STRUCTURE



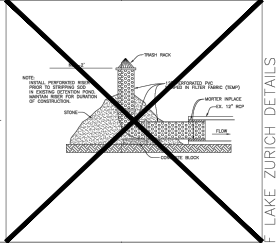
PIPE CASING DETAIL



SILT FENCE DETAIL



GRAVEL CONSTRUCTION ENTRANCE



TEMPORARY PERFORATED RISER DETAIL

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540–1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 2

PROJECT NO.	DETAILS
DATE	1/10/03
SCALE	NTS
DESIGNED BY	DESIGN
DRAWN BY	DTM
CHECKED BY	EL
SHEET	2 / 3

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PAPPAGEORGE HAYMES

ERIKSSON ENGINEERING ASSOCIATES, LTD.

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PHONE (847) 223–4804
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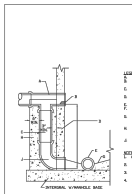
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184.005220
EXPIRES: 04/30/2029

date	description
05.17.2024	Issue for PZC
02.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.18.2025	Village Resubmittal

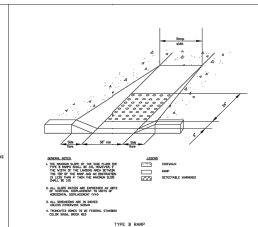
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich, IL 60047
OSK Capital Partners owner

orientation	
project number	232885
scale	As Noted
date	06/16/25
sheet title	SITE WORK DETAILS
sheet number	C702

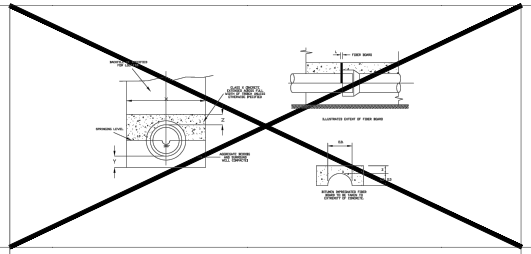
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.



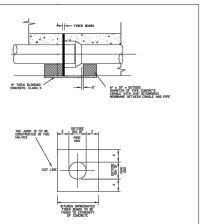
OUTSIDE DROP PIPE DETAIL



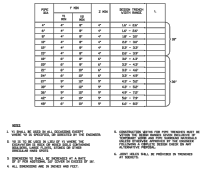
HANDICAP RAMP DETAIL



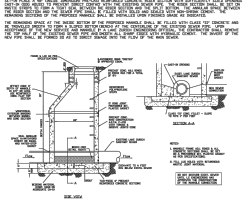
MASS CONCRETE ARCH



FLEXIBLE JOINT



BEDDING DETAILS: PIPES IN SINGLE TRENCHES



STANDARD MH CONSTRN. OVER EXSTG SEWER

VILLAGE OF LAKE ZURICH DETAILS

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540-1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 3

PROJECT NO. DETAILS
DATE 7/31/03
SCALE NTS
DESIGNED BY RK
DRAWN BY RK
CHECKED BY EL

SHEET 3
3

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PAPPAGEORGE HAYMES

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PROFESSIONAL DESIGN FIRM
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EXPIRES: 04/30/2029

670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

date	description
05.17.2024	Issue for PZC
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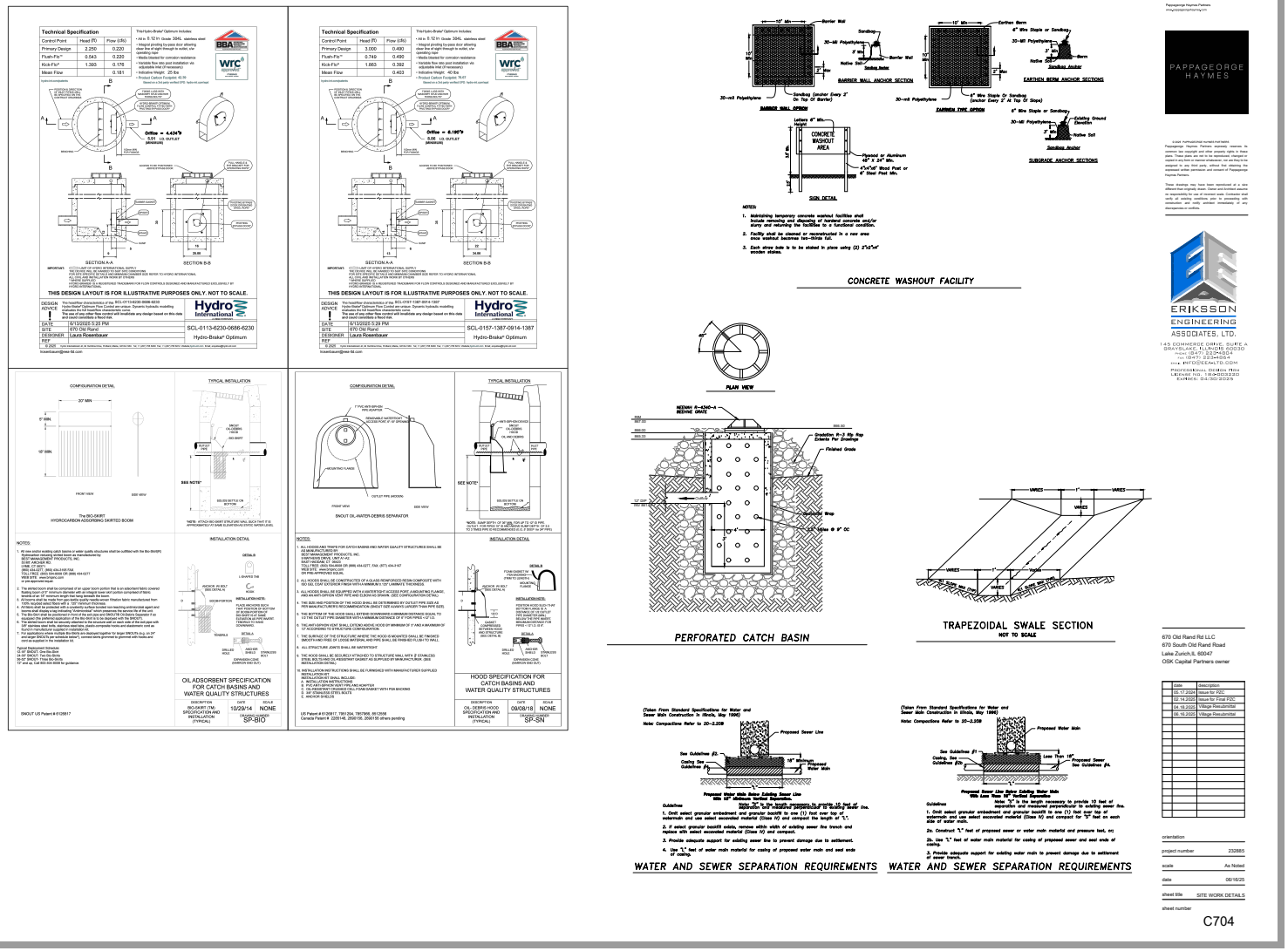
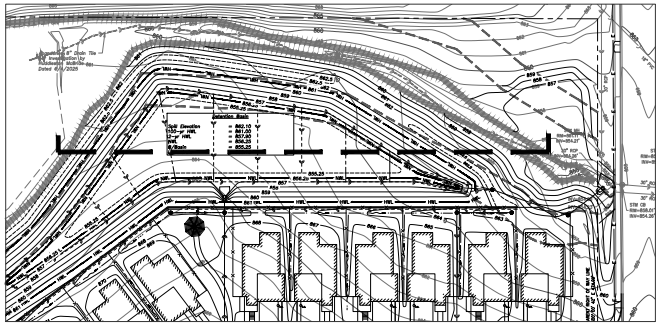
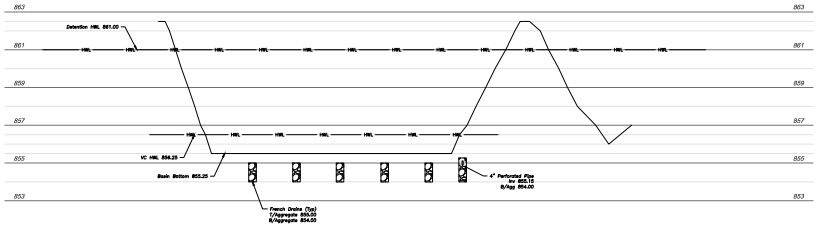
06.16.2025	Village Resubmittal

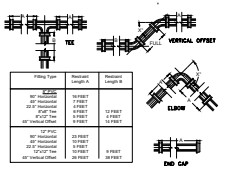
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE WORK DETAILS
sheet number C703


Technical Specification
Control Point | Head (ft) | Flow (cfs)
Primary Design | 2.250 | 0.220
Flush-Flo™ | 0.543 | 0.220
Kick-Flo® | 1.393 | 0.176
Mean Flow | | 0.181
Orifice = 4.424"ø
0.91 LS OUTPUT (MAXIMUM)
SECTION A-A
SECTION B-B
THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.
DESIGN ADVICE
DATE 10/13/2025 5:25 PM
SITE 870 Old Rand
DESIGNER Laura Rosenbauer
REF
SCL-0113-6230-0686-6230
Hydro-Brake® Optimum
Technical Specification
Control Point | Head (ft) | Flow (cfs)
Primary Design | 3.000 | 0.490
Flush-Flo™ | 0.749 | 0.490
Kick-Flo® | 1.663 | 0.392
Mean Flow | | 0.403
Orifice = 6.180"ø
0.98 LS OUTPUT (MAXIMUM)
SECTION A-A
SECTION B-B
THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.
DESIGN ADVICE
DATE 10/13/2025 5:29 PM
SITE 870 Old Rand
DESIGNER Laura Rosenbauer
REF
SCL-0157-1387-0914-1387
Hydro-Brake® Optimum
CONFIGURATION DETAIL
TYPICAL INSTALLATION
FRONT VIEW
SIDE VIEW
SEE NOTE*
The BIO-SKIRT
HYDROCARBON ADSORBING SKIRTED BOOM
INSTALLATION DETAIL
OIL ADSORBENT SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES
SP-BIO
SNOUT OIL-WATER DEBRIS SEPARATOR
HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES
SP-SN
Barrier Wall
Sandbag
30-mil Polyethylene
Sandbag Anchor
BARRIER WALL ANCHOR SECTION
BARRIER WALL OPTION
Earthen Berm
6" Wire Staple or Sandbag
Native Soil
EARTHEN BERM ANCHOR SECTIONS
EARTHEN BERM OPTION
Existing Ground Elevation
SUBGRADE ANCHOR SECTIONS
CONCRETE WASHOUT AREA
Plywood or Aluminum
2"x4"x4'-0" Wood Post or
4' Steel Post Min.
SIGN DETAIL
NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes ¼th–½th full.
3. Each straw bale is to be staked in place using (2) 2"x2"x4' wooden stakes.
CONCRETE WASHOUT FACILITY
PLAN VIEW
NEENAH R-4340-A NEENAH GRATE
Gradation #-2 Rip Rap Extends Per Drawings
Finished Grade
Geotextile Wrap
Class B @ 6" OC
PERFORATED CATCH BASIN
VARIES
1'
TRAPEZOIDAL SWALE SECTION
NOT TO SCALE
(Taken From Standard Specifications for Water and Sewer Main Construction In Illinois, May 1996)
Note: Compactions Refer to 20-2.20B
Proposed Sewer Line
Proposed Water Main
See Guideline #3
Casing, See Guideline #4
18" Minimum
Proposed Water Main
Proposed Water Main Below Existing Sewer Line With 18" Minimum Vertical Separation.
Guidelines
1. Grell select granular embedment and granular backfill to one (1) foot over top of watermain and use select encoded material (Class IV) and compact the length of "L".
2. If select granular backfill exists, remove within width of existing sewer this trench and replace with select encoded material (Class IV) and compact.
3. Provide adequate support for existing sewer line to prevent damage due to settlement.
4. Use "L" feet of water main material for casing of proposed water main and seal ends of casing.
WATER AND SEWER SEPARATION REQUIREMENTS
Less Than 18"
Proposed Sewer See Guideline #4
Proposed Sewer Line Below Existing Water Main With Less Than 18" Vertical Separation.
Note: "X" is the length necessary to provide 10 feet of separation between the proposed sewer and the existing water line.
2a. Construct "L" feet of proposed sewer or water main material and pressure test, or
2b. Use "L" feet of water main material for casing of proposed sewer and seal ends of casing.
3. Provide adequate support for existing water main to prevent damage due to settlement of sewer trench.
WATER AND SEWER SEPARATION REQUIREMENTS
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003220
EXPIRES: 04/30/2026
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
date | description
05.17.2024 | Issue for PZC
05.14.2025 | Issue for Final PZC
04.18.2025 | Village Resubmittal
06.16.2025 | Village Resubmittal
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SITE WORK DETAILS
sheet number C704

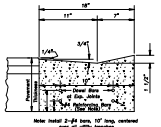




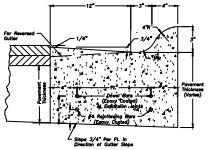
BASIN CROSS SECTION



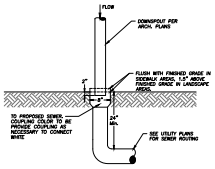
THRUST RESTRAINT



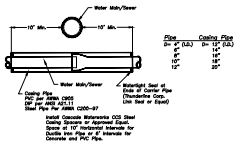
DEPRESSED CURB



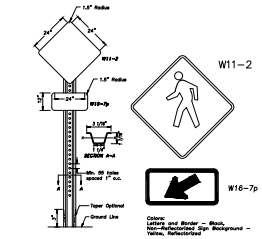
M-3.12 CURB & GUTTER



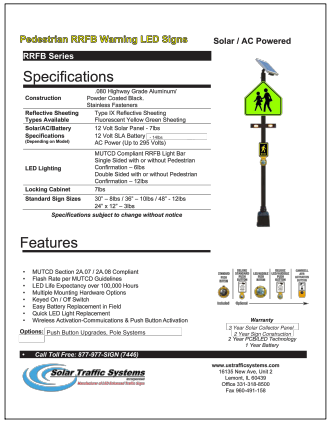
DOWNSPOUT CONNECTION



WATER MAIN PROTECTION DETAIL



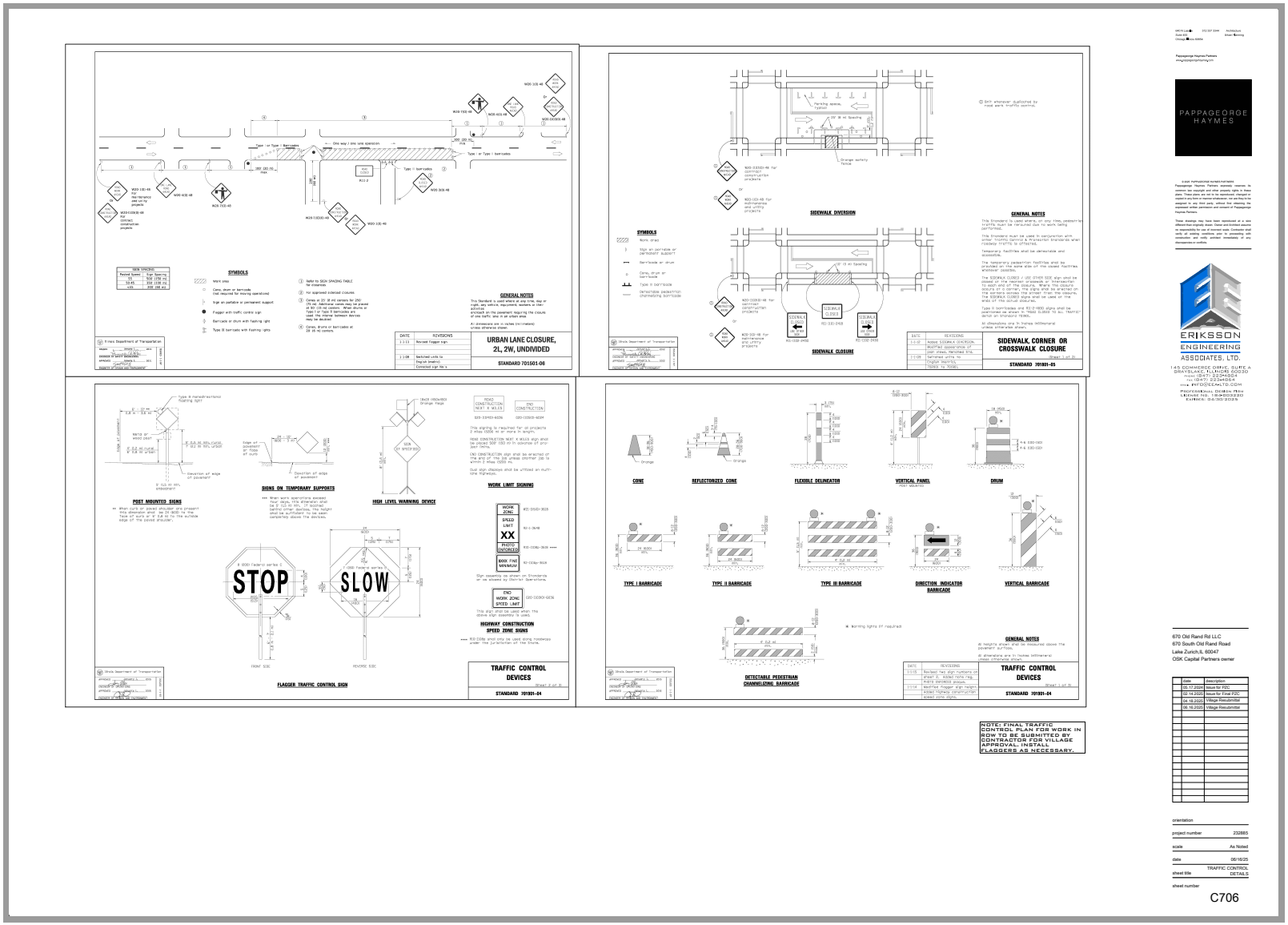
PEDESTRIAN CROSSING SIGN

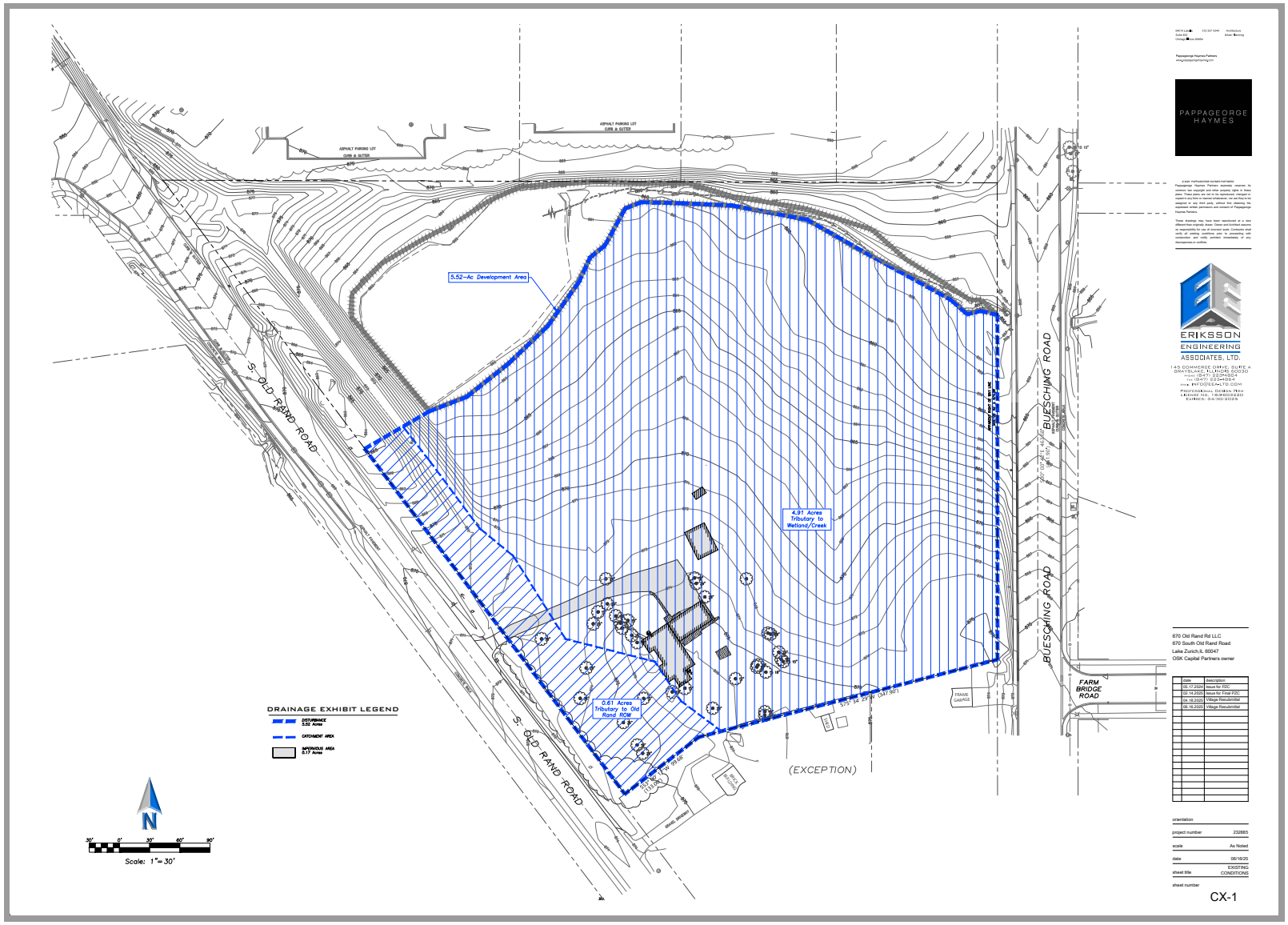


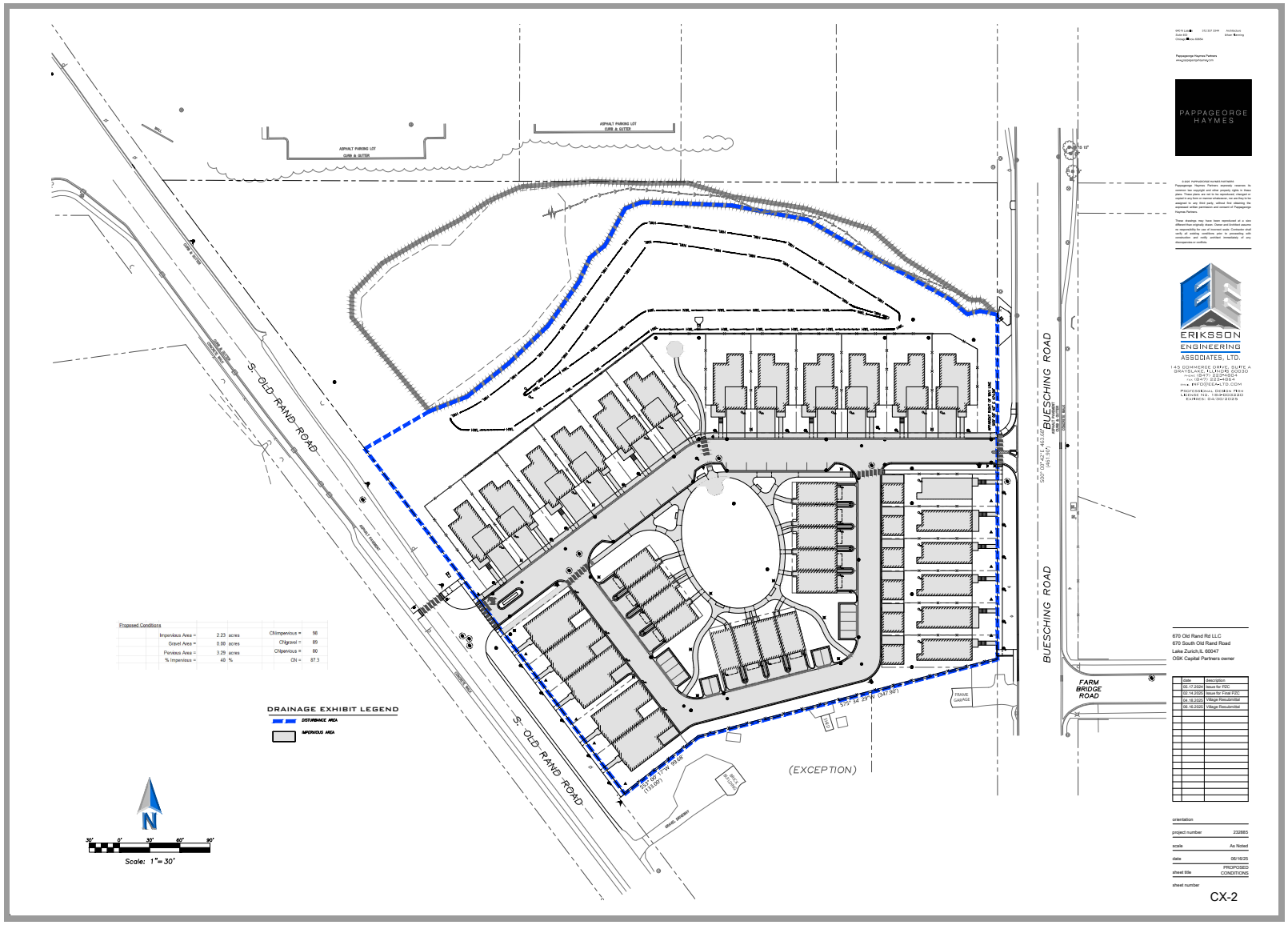
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner

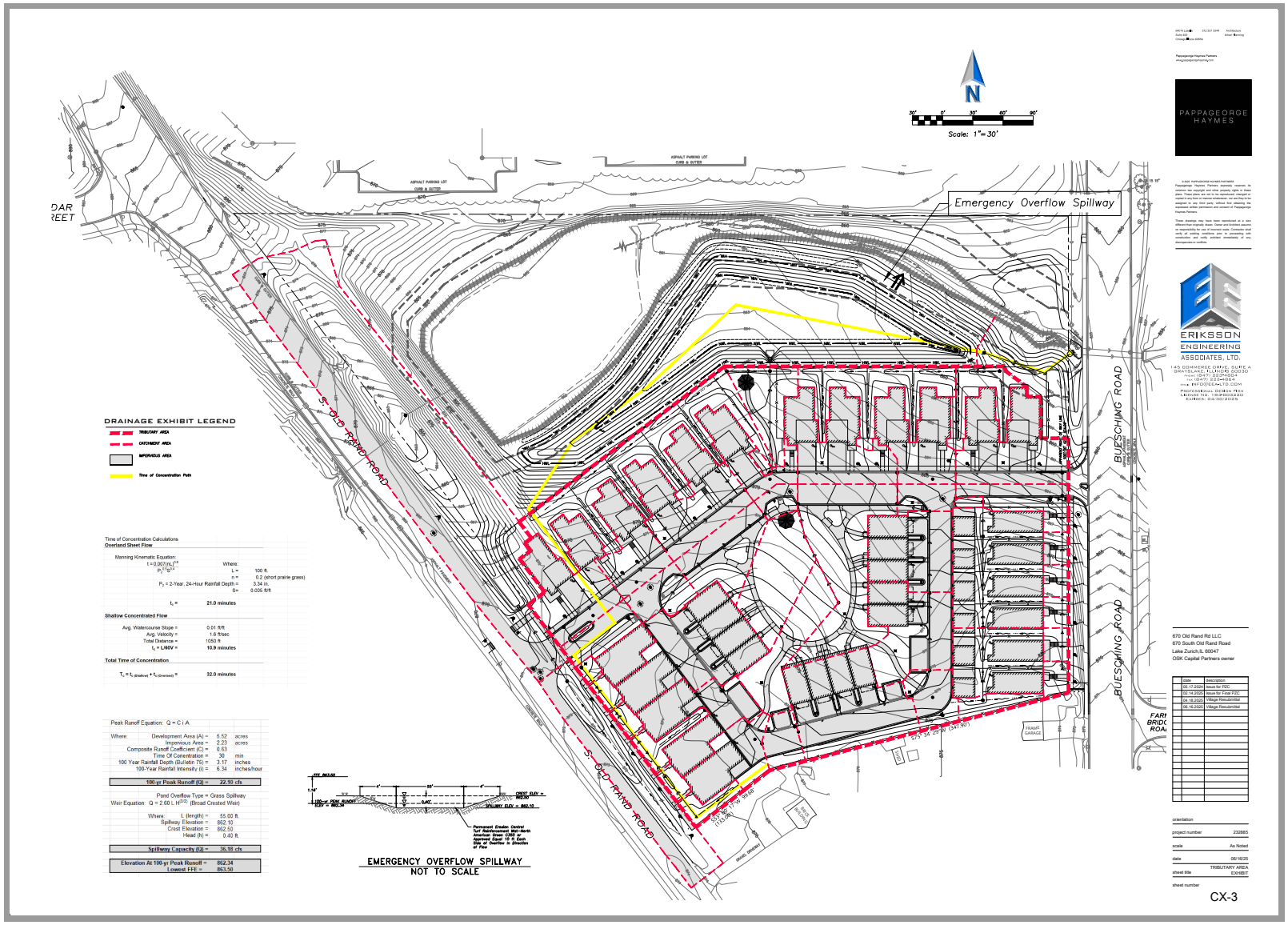
date	description
05.17.2024	Issue for PZC
03.14.2025	Issue for Final PZC
04.18.2025	Village Resubmittal
06.16.2025	Village Resubmittal

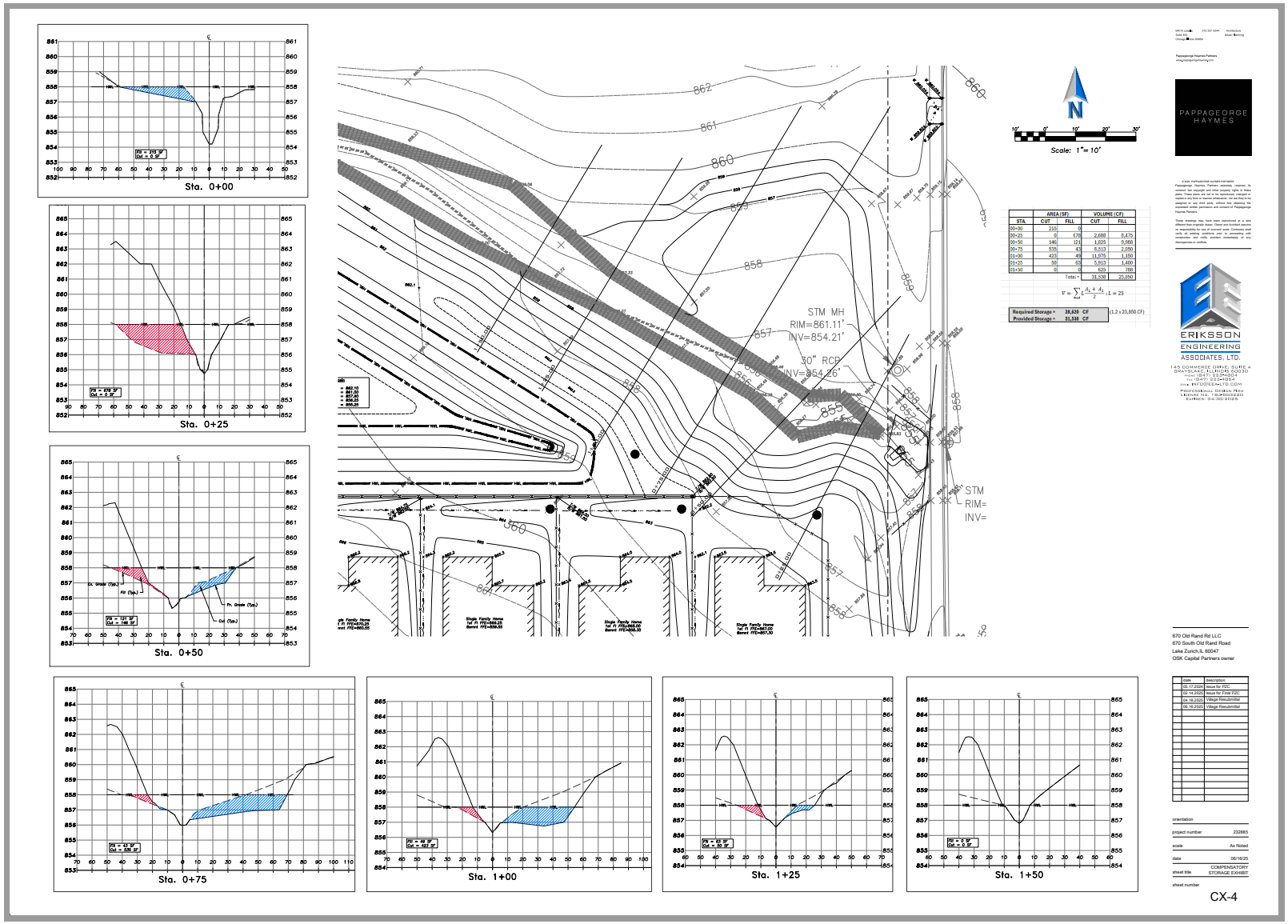
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SIGNAGE DETAILS
sheet number C705

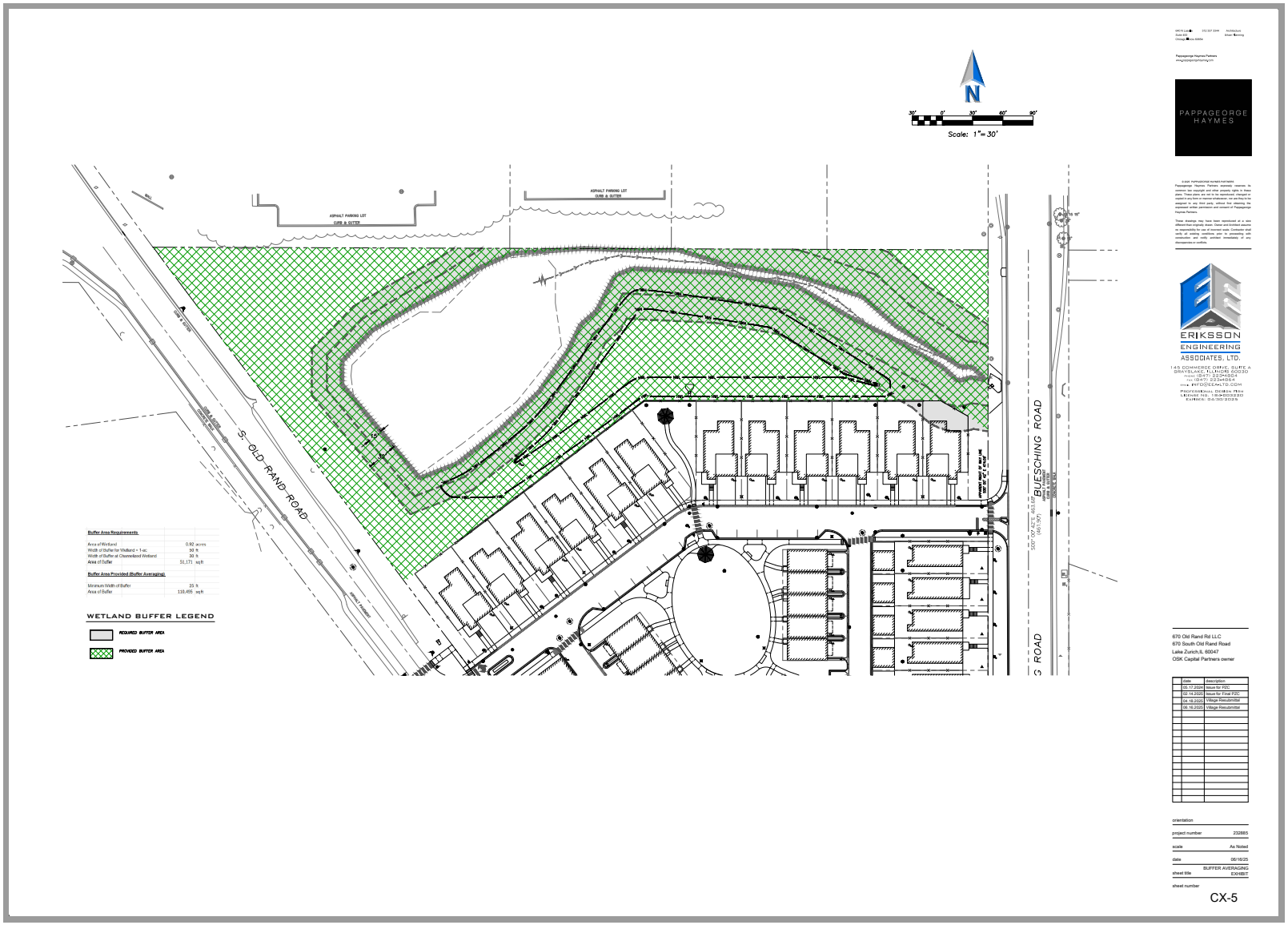

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
STANDARD 701501-06
SIDEWALK DIVERSION
SIDEWALK CLOSURE
SIDEWALK, CORNER OR CROSSWALK CLOSURE
STANDARD 701801-05
TRAFFIC CONTROL DEVICES
STANDARD 701901-04
POST MOUNTED SIGNS
SIGNS ON TEMPORARY SUPPORTS
HIGH LEVEL WARNING DEVICE
WORK LIMIT SIGNING
FLAGGER TRAFFIC CONTROL SIGN
CONE
REFLECTORIZED CONE
FLEXIBLE DELINEATOR
VERTICAL PANEL
DRUM
TYPE I BARRICADE
TYPE II BARRICADE
TYPE III BARRICADE
DIRECTION INDICATOR BARRICADE
VERTICAL BARRICADE
DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE
NOTE: FINAL TRAFFIC CONTROL PLAN FOR WORK IN ROW TO BE SUBMITTED BY CONTRACTOR FOR VILLAGE APPROVAL. INSTALL FLAGGERS AS NECESSARY.
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title TRAFFIC CONTROL DETAILS
sheet number C706

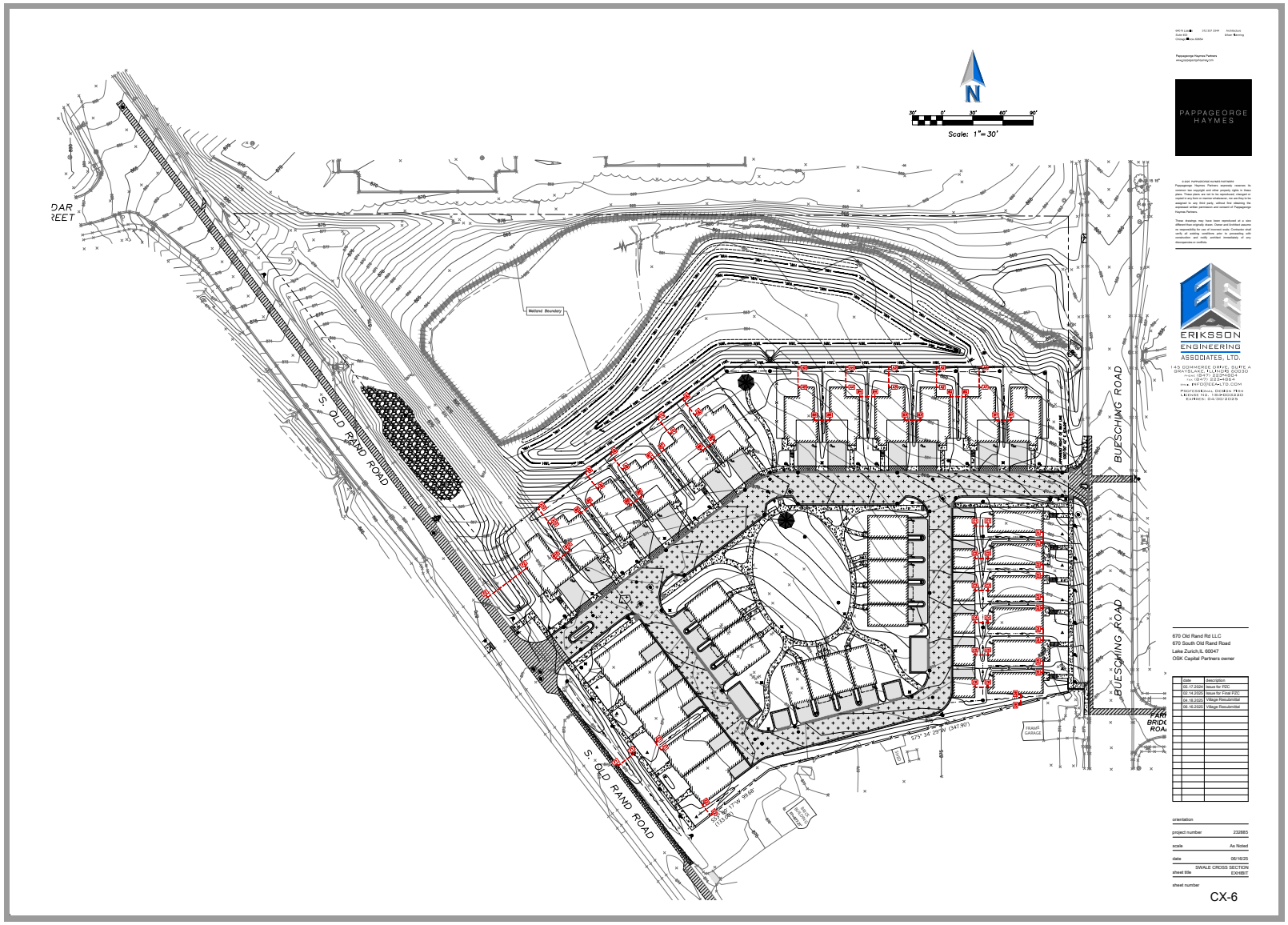

5.52-Ac Development Area
4.91 Acres Tributary to Wetland/Creek
0.61 Acres Tributary to Old Rand ROW
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
DRAINAGE EXHIBIT LEGEND
DISTURBANCE 5.52 Acres
CATCHMENT AREA
IMPERVIOUS AREA 0.17 Acres
N
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title EXISTING CONDITIONS
sheet number
CX-1

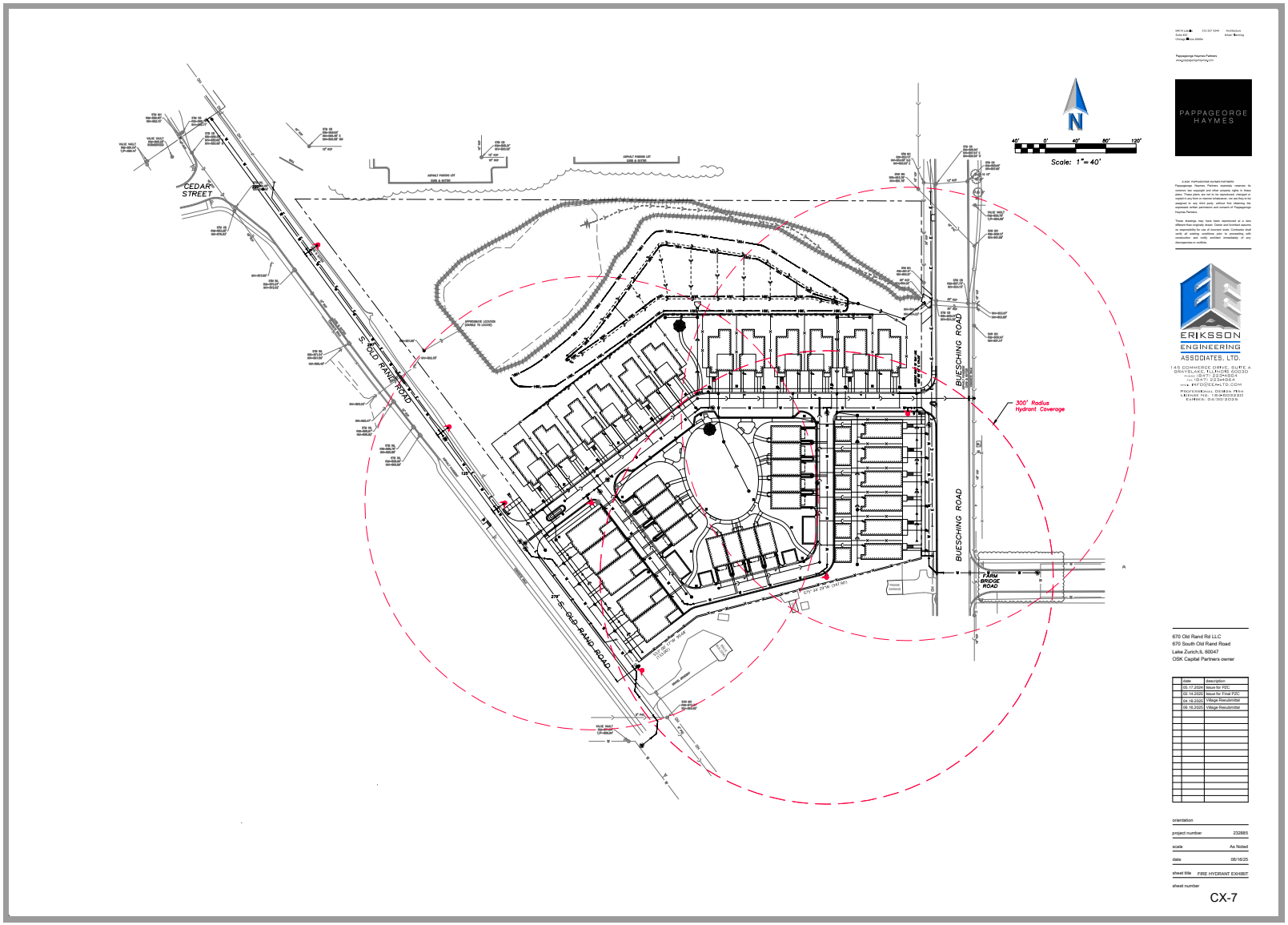

S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
DRAINAGE EXHIBIT LEGEND
DISTURBANCE AREA
IMPERVIOUS AREA
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title PROPOSED CONDITIONS
sheet number
CX-2

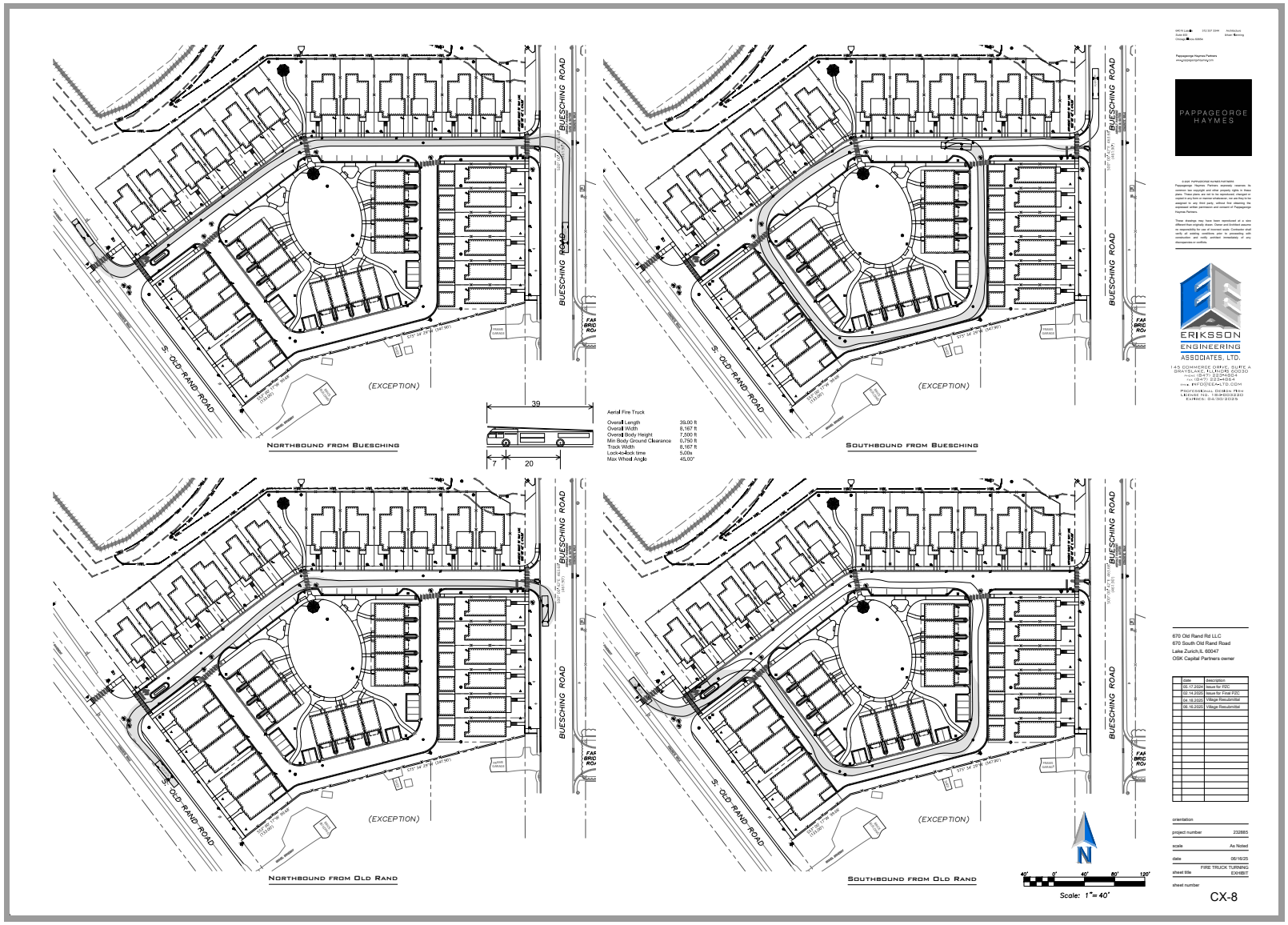

Emergency Overflow Spillway
Scale: 1"= 30'
DRAINAGE EXHIBIT LEGEND
TRIBUTARY AREA
CATCHMENT AREA
IMPERVIOUS AREA
Time of Concentration Path
S. OLD RAND ROAD
BUESCHING ROAD
EMERGENCY OVERFLOW SPILLWAY
NOT TO SCALE
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
CX-3

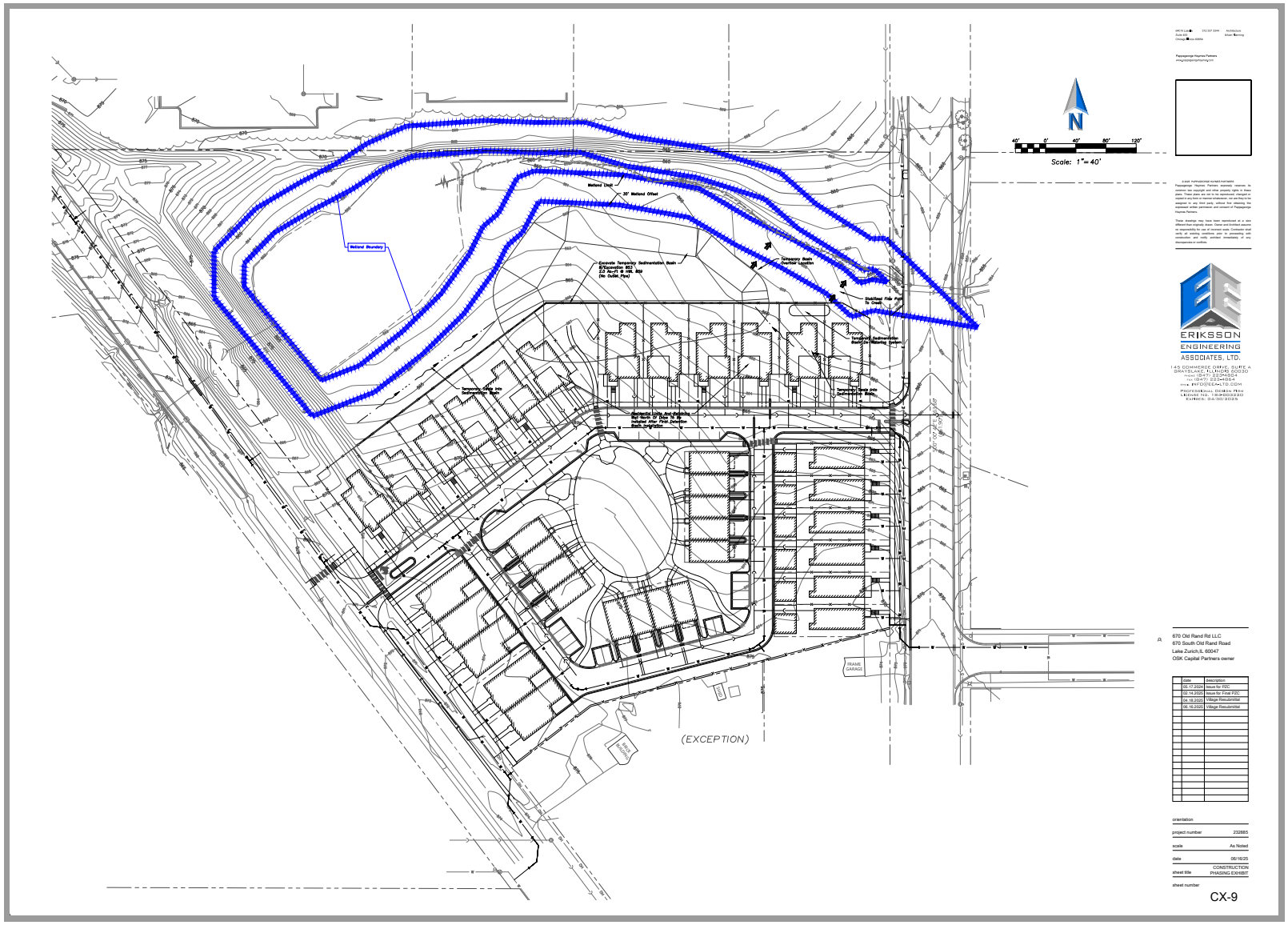

Sta. 0+00
Sta. 0+25
Sta. 0+50
Sta. 0+75
Sta. 1+00
Sta. 1+25
Sta. 1+50
STM MH
RIM=861.11'
INV=854.21'
30" RCP
INV=854.26'
Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
CX-4


N
Scale: 1"= 30'
ASPHALT PARKING LOT
CURB & GUTTER
S. OLD RAND ROAD
BUESCHING ROAD
Buffer Area Requirements
Area of Wetland 0.92 acres
Width of Buffer for Wetland = 1 ac. 30 ft
Width of Buffer at Channelized Wetland 30 ft
Area of Buffer 51,171 sq.ft
Buffer Area Provided (Buffer Averaging)
Minimum Width of Buffer 25 ft
Area of Buffer 118,495 sq.ft
WETLAND BUFFER LEGEND
REQUIRED BUFFER AREA
PROVIDED BUFFER AREA
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@EEA-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title BUFFER AVERAGING EXHIBIT
sheet number
CX-5


N
Scale: 1"= 30'
S. OLD RAND ROAD
S. OLD RAND ROAD
BUESCHING ROAD
BUESCHING ROAD
Wetland Boundary
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SWALE CROSS SECTION EXHIBIT
sheet number
CX-6


N
Scale: 1" = 40'
CEDAR STREET
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
300' Radius Hydrant Coverage
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title FIRE HYDRANT EXHIBIT
sheet number
CX-7


BUESCHING ROAD
S. OLD RAND ROAD
(EXCEPTION)
NORTHBOUND FROM BUESCHING
SOUTHBOUND FROM BUESCHING
NORTHBOUND FROM OLD RAND
SOUTHBOUND FROM OLD RAND
39
7
20
Aerial Fire Truck
Overall Length 39.00 ft
Overall Width 8.167 ft
Overall Body Height 7.200 ft
Min Body Ground Clearance 0.750 ft
Track Width 8.167 ft
Lock-to-lock time 5.00s
Max Wheel Angle 45.00°
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
Scale: 1"= 40'
CX-8


N
Scale: 1" = 40'
Wetland Boundary
Wetland Limit
30' Wetland Offset
Temporary Sediment Trap Outlet Location
Stabilized Flow Path To Creek
Temporary Sediment Basin
Temporary Sediment Trap
(EXCEPTION)
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@ESE-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title CONSTRUCTION PHASING EXHIBIT
sheet number
CX-9

VIRGILIO &
ASSOCIATES, LTD.
STRUCTURAL ENGINEERS

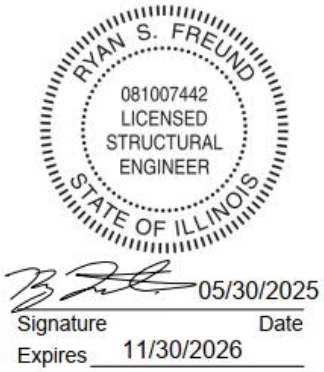
STRUCTURAL CALCULATIONS FOR:

SEGMENTAL RETAINING WALL AT

670 S. OLD RAND RD.
LAKE ZURICH, ILLINOIS 60047

May 30th, 2025

Drawings (dated): 05/30/2025
SRW0.1, SRW1.1,
SRW1.2, SRW2.1A,
SRW2.1B



CLIENT: Pappageorge Haymes Partners
640 North LaSalle Street, Suite 400
Chicago, IL 60654

PROJECT NUMBER: 2025.098

24069 North Echo Lake Road, Lake Zurich, IL 60047 · www.virgilioassoc.com · Office: 847.550.8411 · Fax: 847.307.8324

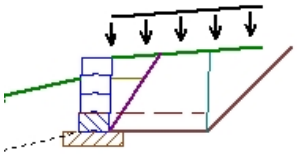
Project: 2025.098 - 670 S Old Rand Rd

Site: Lake Zurich, IL

Date: 5/30/2025

Wall: Wall No 1

Section	#1 at Station 0.00
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	2.36	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	2.36 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.72 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

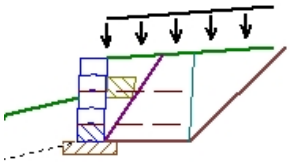
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	11.60	Bearing Pressure	338.76	lb/ft²
Overturning	16.09	Max Eccentricity	0.04	ft
Base Sliding	3.93			
Crest Toppling	2.19			
Internal Sliding	24.99			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
1	861.37	SGU60	4.00	24.99	7.10	20.34

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	861.37	SGU60	4.00	6.12

Section	#2 at Station 6.56
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	2.95	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	2.95 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.57 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

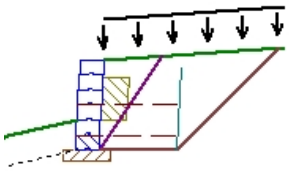
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	9.13	Bearing Pressure	420.46	lb/ft²
Overturning	11.45	Max Eccentricity	0.09	ft
Base Sliding	3.37			
Crest Toppling	3.96			
Internal Sliding	17.05			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
2	862.55	SGU60	4.00	41.84	5.96	33.26
1	861.37	SGU60	4.00	17.05	10.70	23.39

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
2	862.55	SGU60	4.00	9.29
1	861.37	SGU60	4.00	7.54

Section	#3 at Station 24.61
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	3.54	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	3.54 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.19 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

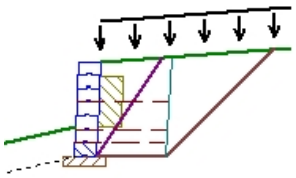
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	7.35	Bearing Pressure	507.90	lb/ft²
Overturning	8.59	Max Eccentricity	0.14	ft
Base Sliding	2.95			
Crest Toppling	2.19			
Internal Sliding	12.61			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
2	862.55	SGU60	4.00	24.99	5.26	20.34
1	861.37	SGU60	4.00	12.61	10.92	19.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
2	862.55	SGU60	4.00	6.12
1	861.37	SGU60	4.00	6.63

Section	#4 at Station 27.89
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.13	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.13 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

External		Value	Reinforced Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

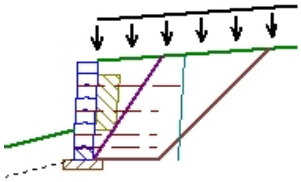
External Static	FS			
Bearing Capacity	6.00	Bearing Pressure	602.84	lb/ft²
Overturning	6.70	Max Eccentricity	0.20	ft
Base Sliding	2.62			
Crest Toppling	2.19			
Internal Sliding	9.84			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
3	862.55	SGU60	4.00	24.99	4.33	20.34
2	861.37	SGU60	4.00	12.61	13.25	26.89
1	860.78	SGU60	4.00	9.84	14.24	21.09

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	862.55	SGU60	4.00	6.12
2	861.37	SGU60	4.00	9.25

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	860.78	SGU60	4.00	7.71

Section	#5 at Station 54.13
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.72	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.72 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.40 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

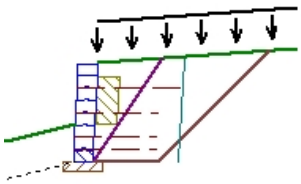
External Static	FS			
Bearing Capacity	4.92	Bearing Pressure	707.51	lb/ft²
Overturning	5.38	Max Eccentricity	0.27	ft
Base Sliding	2.36			
Crest Toppling	3.96			
Internal Sliding	7.98			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
4	863.73	SGU60	5.00	43.37	6.04	33.26
3	862.55	SGU60	4.00	17.05	6.50	23.39
2	861.37	SGU60	4.00	9.84	13.34	22.73
1	860.78	SGU60	4.00	7.98	14.46	18.44

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
4	863.73	SGU60	5.00	9.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	862.55	SGU60	4.00	7.54
2	861.37	SGU60	4.00	8.30
1	860.78	SGU60	4.00	7.14

Section	#6 at Station 88.58
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.72	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.72 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.78 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

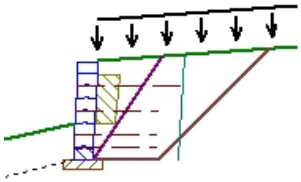
External Static	FS			
Bearing Capacity	4.92	Bearing Pressure	707.51	lb/ft²
Overturning	5.38	Max Eccentricity	0.27	ft
Base Sliding	2.36			
Crest Toppling	3.96			
Internal Sliding	7.98			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
4	863.73	SGU60	5.00	43.37	6.04	33.26
3	862.55	SGU60	4.00	17.05	6.50	23.39
2	861.37	SGU60	4.00	9.84	13.34	22.73
1	860.78	SGU60	4.00	7.98	14.46	18.44

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
4	863.73	SGU60	5.00	9.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	862.55	SGU60	4.00	7.54
2	861.37	SGU60	4.00	8.30
1	860.78	SGU60	4.00	7.14

Section	#7 at Station 93.50
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.72	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.72 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.75 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

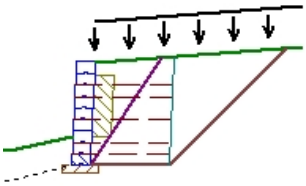
External Static	FS			
Bearing Capacity	4.92	Bearing Pressure	707.51	lb/ft²
Overturning	5.38	Max Eccentricity	0.27	ft
Base Sliding	2.36			
Crest Toppling	3.96			
Internal Sliding	7.98			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
4	863.73	SGU60	5.00	43.37	6.04	33.26
3	862.55	SGU60	4.00	17.05	6.50	23.39
2	861.37	SGU60	4.00	9.84	13.34	22.73
1	860.78	SGU60	4.00	7.98	14.46	18.44

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
4	863.73	SGU60	5.00	9.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	862.55	SGU60	4.00	7.54
2	861.37	SGU60	4.00	8.30
1	860.78	SGU60	4.00	7.14

Section	#8 at Station 96.78
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	5.31	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	5.31 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.51 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

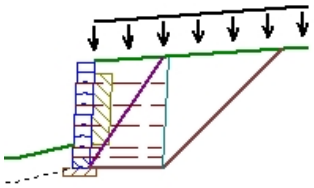
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	5.91	Bearing Pressure	766.56	lb/ft²
Overturning	6.65	Max Eccentricity	0.24	ft
Base Sliding	2.64			
Crest Toppling	3.96			
Internal Sliding	7.17			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
5	864.32	SGU60	5.00	40.27	6.67	45.02
4	863.73	SGU60	5.00	24.89	9.57	37.09
3	862.55	SGU60	5.00	13.09	10.85	19.29
2	861.37	SGU60	5.00	8.50	19.32	19.68
1	860.78	SGU60	5.00	7.17	20.22	16.38

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
5	864.32	SGU60	5.00	12.57
4	863.73	SGU60	5.00	11.16
3	862.55	SGU60	5.00	6.63
2	861.37	SGU60	5.00	7.61
1	860.78	SGU60	5.00	6.69

Section	#9 at Station 118.11
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	5.91	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	5.91 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

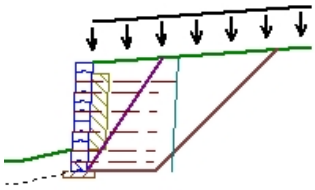
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	5.05	Bearing Pressure	870.47	lb/ft²
Overturning	5.57	Max Eccentricity	0.31	ft
Base Sliding	2.42			
Crest Toppling	3.96			
Internal Sliding	6.17			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
5	864.91	SGU60	5.00	40.27	3.80	33.26
4	863.73	SGU60	5.00	17.39	7.82	23.39
3	862.55	SGU60	5.00	10.37	10.97	16.41
2	861.37	SGU60	5.00	7.17	19.37	17.35
1	860.78	SGU60	5.00	6.17	20.38	14.74

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
5	864.91	SGU60	5.00	9.29
4	863.73	SGU60	5.00	7.54
3	862.55	SGU60	5.00	6.00
2	861.37	SGU60	5.00	7.09
1	860.78	SGU60	5.00	6.34

Section	#10 at Station 139.44
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	6.50	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	6.50 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

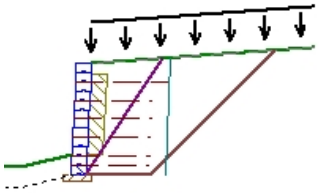
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	4.32	Bearing Pressure	984.00	lb/ft²
Overturning	4.74	Max Eccentricity	0.38	ft
Base Sliding	2.24			
Crest Toppling	3.96			
Internal Sliding	5.40			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
6	865.50	SGU60	6.00	41.68	8.24	45.02
5	864.91	SGU60	5.00	24.89	5.99	37.09
4	863.73	SGU60	5.00	13.09	7.92	19.29
3	862.55	SGU60	5.00	8.50	11.05	14.28
2	861.37	SGU60	5.00	6.17	19.41	15.52
1	860.78	SGU60	5.00	5.40	20.52	13.39

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
6	865.50	SGU60	6.00	12.57
5	864.91	SGU60	5.00	11.16
4	863.73	SGU60	5.00	6.63
3	862.55	SGU60	5.00	5.53
2	861.37	SGU60	5.00	6.67
1	860.78	SGU60	5.00	6.05

Section	#11 at Station 165.68
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	7.09	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	7.09 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

External		Value	Reinforced Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

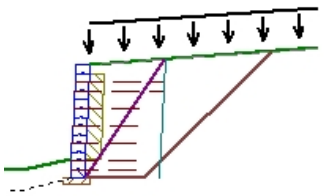
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.68	Bearing Pressure	1109.36	lb/ft²
Overturning	4.09	Max Eccentricity	0.46	ft
Base Sliding	2.08			
Crest Toppling	3.96			
Internal Sliding	4.79			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
6	866.09	SGU60	6.00	41.68	4.93	33.29
5	864.91	SGU60	5.00	17.39	4.89	23.41
4	863.73	SGU60	5.00	10.37	8.00	16.43
3	862.55	SGU60	5.00	7.17	11.13	12.65
2	861.37	SGU60	5.00	5.40	19.46	14.05
1	860.78	SGU60	5.00	4.79	20.66	12.28

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
6	866.09	SGU60	6.00	9.29
5	864.91	SGU60	5.00	7.54
4	863.73	SGU60	5.00	6.00
3	862.55	SGU60	5.00	5.17
2	861.37	SGU60	5.00	6.34
1	860.78	SGU60	5.00	5.81

Section	#12 at Station 278.87
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	7.68	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	7.68 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

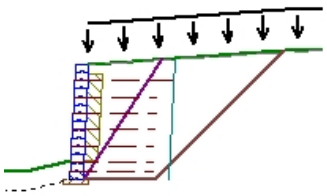
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.13	Bearing Pressure	1249.37	lb/ft²
Overturning	3.56	Max Eccentricity	0.55	ft
Base Sliding	1.94			
Crest Toppling	3.96			
Internal Sliding	4.29			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	866.69	SGU60	6.00	41.68	5.12	45.21
6	866.09	SGU60	6.00	26.09	7.74	37.26
5	864.91	SGU60	5.00	13.09	4.99	19.37
4	863.73	SGU60	5.00	8.50	8.11	14.34
3	862.55	SGU60	5.00	6.17	11.23	11.39
2	861.37	SGU60	5.00	4.79	19.57	12.86
1	860.78	SGU60	5.00	4.29	20.83	11.37

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	866.69	SGU60	6.00	12.62
6	866.09	SGU60	6.00	11.20
5	864.91	SGU60	5.00	6.66
4	863.73	SGU60	5.00	5.55
3	862.55	SGU60	5.00	4.90
2	861.37	SGU60	5.00	6.09
1	860.78	SGU60	5.00	5.63

Section	#13 at Station 313.32
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	8.27	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	8.27 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

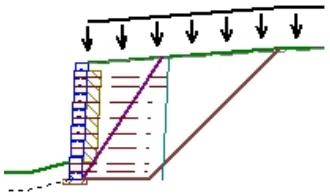
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.96	Bearing Pressure	1264.38	lb/ft²
Overturning	4.38	Max Eccentricity	0.50	ft
Base Sliding	2.16			
Crest Toppling	3.96			
Internal Sliding	4.27			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	867.28	SGU60	7.00	40.22	6.23	33.51
6	866.09	SGU60	6.00	17.72	6.32	23.56
5	864.91	SGU60	6.00	10.86	9.46	16.53
4	863.73	SGU60	6.00	7.66	12.60	12.73
3	862.55	SGU60	6.00	5.84	15.74	10.35
2	861.37	SGU60	6.00	4.69	25.69	11.87
1	860.78	SGU60	6.00	4.27	26.79	10.59

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	867.28	SGU60	7.00	9.35
6	866.09	SGU60	6.00	7.59
5	864.91	SGU60	6.00	6.04
4	863.73	SGU60	6.00	5.20
3	862.55	SGU60	6.00	4.68
2	861.37	SGU60	6.00	5.87
1	860.78	SGU60	6.00	5.47

Section	#14 at Station 334.65
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	8.86	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	8.86 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.31 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

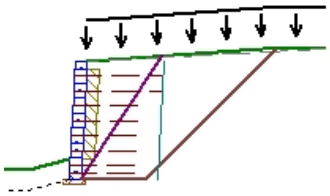
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.47	Bearing Pressure	1394.58	lb/ft²
Overturning	3.90	Max Eccentricity	0.58	ft
Base Sliding	2.04			
Crest Toppling	3.96			
Internal Sliding	3.92			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
8	867.87	SGU60	7.00	40.31	6.82	45.46
7	867.28	SGU60	7.00	26.01	9.66	37.46
6	866.09	SGU60	6.00	13.59	6.40	19.48
5	864.91	SGU60	6.00	9.03	9.54	14.42
4	863.73	SGU60	6.00	6.65	12.69	11.45
3	862.55	SGU60	6.00	5.22	15.83	9.49
2	861.37	SGU60	6.00	4.28	25.78	11.01
1	860.78	SGU60	6.00	3.92	26.94	9.91

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
8	867.87	SGU60	7.00	12.69
7	867.28	SGU60	7.00	11.27
6	866.09	SGU60	6.00	6.70
5	864.91	SGU60	6.00	5.58
4	863.73	SGU60	6.00	4.92
3	862.55	SGU60	6.00	4.49
2	861.37	SGU60	6.00	5.69
1	860.78	SGU60	6.00	5.33

Section	#15 at Station 359.25
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	9.45	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	9.45 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.61 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

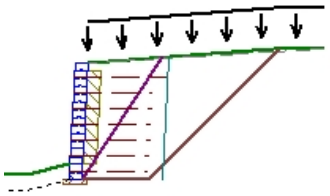
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.04	Bearing Pressure	1536.75	lb/ft²
Overturning	3.50	Max Eccentricity	0.67	ft
Base Sliding	1.93			
Crest Toppling	3.96			
Internal Sliding	3.62			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
8	868.46	SGU60	7.00	40.45	3.81	33.67
7	867.28	SGU60	7.00	18.80	7.81	23.67
6	866.09	SGU60	6.00	10.93	6.47	16.61
5	864.91	SGU60	6.00	7.70	9.62	12.79
4	863.73	SGU60	6.00	5.88	12.76	10.40
3	862.55	SGU60	6.00	4.72	15.91	8.77
2	861.37	SGU60	6.00	3.93	25.85	10.27
1	860.78	SGU60	6.00	3.62	27.08	9.31

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
8	868.46	SGU60	7.00	9.40
7	867.28	SGU60	7.00	7.63
6	866.09	SGU60	6.00	6.07
5	864.91	SGU60	6.00	5.23
4	863.73	SGU60	6.00	4.70
3	862.55	SGU60	6.00	4.34
2	861.37	SGU60	6.00	5.53
1	860.78	SGU60	6.00	5.21

Section	#16 at Station 372.38
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	8.86	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	8.86 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.19 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

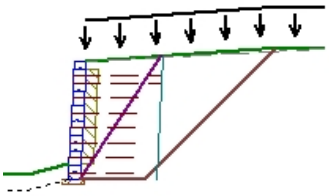
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.47	Bearing Pressure	1394.58	lb/ft²
Overturning	3.90	Max Eccentricity	0.58	ft
Base Sliding	2.04			
Crest Toppling	3.96			
Internal Sliding	3.92			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	868.46	SGU60	7.00	40.31	5.04	33.59
6	867.28	SGU60	6.00	17.76	4.83	23.62
5	866.09	SGU60	6.00	10.89	7.97	16.57
4	864.91	SGU60	6.00	7.67	11.12	12.77
3	863.73	SGU60	6.00	5.86	14.26	10.38
2	862.55	SGU60	6.00	4.71	17.41	8.75
1	861.37	SGU60	6.00	3.92	20.55	7.56

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	868.46	SGU60	7.00	9.38
6	867.28	SGU60	6.00	7.61
5	866.09	SGU60	6.00	6.06
4	864.91	SGU60	6.00	5.21
3	863.73	SGU60	6.00	4.69
2	862.55	SGU60	6.00	4.33
1	861.37	SGU60	6.00	4.06

Section	#17 at Station 387.14
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	9.45	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	9.45 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.26 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

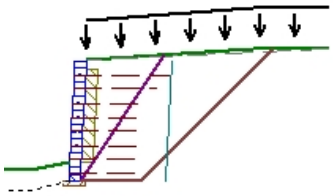
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.04	Bearing Pressure	1536.75	lb/ft²
Overturning	3.50	Max Eccentricity	0.67	ft
Base Sliding	1.93			
Crest Toppling	3.96			
Internal Sliding	3.62			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
8	869.05	SGU60	7.00	40.45	5.16	45.56
7	868.46	SGU60	7.00	26.10	7.79	37.54
6	867.28	SGU60	6.00	13.63	4.90	19.52
5	866.09	SGU60	6.00	9.06	8.04	14.46
4	864.91	SGU60	6.00	6.67	11.19	11.48
3	863.73	SGU60	6.00	5.24	14.34	9.52
2	862.55	SGU60	6.00	4.29	17.49	8.13
1	861.37	SGU60	6.00	3.62	20.63	7.09

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
8	869.05	SGU60	7.00	12.72
7	868.46	SGU60	7.00	11.29
6	867.28	SGU60	6.00	6.71
5	866.09	SGU60	6.00	5.59
4	864.91	SGU60	6.00	4.94
3	863.73	SGU60	6.00	4.50
2	862.55	SGU60	6.00	4.20
1	861.37	SGU60	6.00	3.97

Section	#18 at Station 418.31
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	10.04	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	10.04 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.61 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

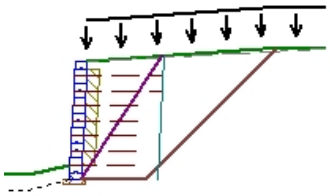
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	2.65	Bearing Pressure	1693.90	lb/ft²
Overturning	3.16	Max Eccentricity	0.76	ft
Base Sliding	1.84			
Crest Toppling	3.96			
Internal Sliding	3.37			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
8	869.64	SGU60	8.00	41.88	6.39	33.73
7	868.46	SGU60	7.00	18.86	6.30	23.72
6	867.28	SGU60	6.00	10.96	4.96	16.64
5	866.09	SGU60	6.00	7.72	8.10	12.82
4	864.91	SGU60	6.00	5.89	11.25	10.42
3	863.73	SGU60	6.00	4.74	14.41	8.78
2	862.55	SGU60	6.00	3.94	17.56	7.59
1	861.37	SGU60	6.00	3.37	20.71	6.68

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
8	869.64	SGU60	8.00	9.42
7	868.46	SGU60	7.00	7.64
6	867.28	SGU60	6.00	6.08
5	866.09	SGU60	6.00	5.24
4	864.91	SGU60	6.00	4.71
3	863.73	SGU60	6.00	4.35
2	862.55	SGU60	6.00	4.08
1	861.37	SGU60	6.00	3.88

Section	#19 at Station 429.79
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	9.45	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	9.45 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.21 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

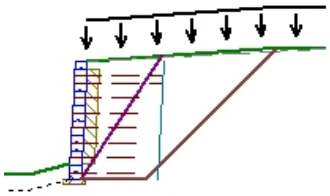
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.04	Bearing Pressure	1536.75	lb/ft²
Overturning	3.50	Max Eccentricity	0.67	ft
Base Sliding	1.93			
Crest Toppling	3.96			
Internal Sliding	3.93			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	869.64	SGU60	7.00	40.45	3.81	33.67
6	868.46	SGU60	7.00	18.80	7.81	23.67
5	867.28	SGU60	6.00	10.93	6.47	16.61
4	866.09	SGU60	6.00	7.70	9.62	12.79
3	864.91	SGU60	6.00	5.88	12.76	10.40
2	863.73	SGU60	6.00	4.72	15.91	8.77
1	862.55	SGU60	6.00	3.93	12.29	4.88

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	869.64	SGU60	7.00	9.40
6	868.46	SGU60	7.00	7.63
5	867.28	SGU60	6.00	6.07
4	866.09	SGU60	6.00	5.23
3	864.91	SGU60	6.00	4.70
2	863.73	SGU60	6.00	4.34
1	862.55	SGU60	6.00	2.63

Section	#20 at Station 442.91
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	9.45	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	9.45 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.26 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

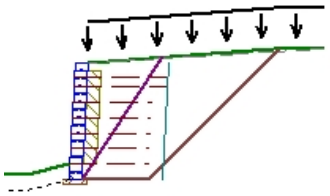
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.04	Bearing Pressure	1536.75	lb/ft²
Overturning	3.50	Max Eccentricity	0.67	ft
Base Sliding	1.93			
Crest Toppling	3.96			
Internal Sliding	3.62			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
8	870.23	SGU60	7.00	40.45	5.16	45.56
7	869.64	SGU60	7.00	26.10	7.79	37.54
6	868.46	SGU60	6.00	13.63	4.90	19.52
5	867.28	SGU60	6.00	9.06	8.04	14.46
4	866.09	SGU60	6.00	6.67	11.19	11.48
3	864.91	SGU60	6.00	5.24	14.34	9.52
2	863.73	SGU60	6.00	4.29	17.49	8.13
1	862.55	SGU60	6.00	3.62	20.63	7.09

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
8	870.23	SGU60	7.00	12.72
7	869.64	SGU60	7.00	11.29
6	868.46	SGU60	6.00	6.71
5	867.28	SGU60	6.00	5.59
4	866.09	SGU60	6.00	4.94
3	864.91	SGU60	6.00	4.50
2	863.73	SGU60	6.00	4.20
1	862.55	SGU60	6.00	3.97

Section	#21 at Station 452.76
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	8.86	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	8.86 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.21 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

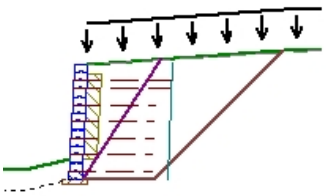
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.47	Bearing Pressure	1394.58	lb/ft²
Overturning	3.90	Max Eccentricity	0.58	ft
Base Sliding	2.04			
Crest Toppling	3.96			
Internal Sliding	4.28			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	870.23	SGU60	7.00	40.31	6.82	45.46
6	869.64	SGU60	7.00	26.01	9.66	37.46
5	868.46	SGU60	6.00	13.59	6.40	19.48
4	867.28	SGU60	6.00	9.03	9.54	14.42
3	866.09	SGU60	6.00	6.65	12.69	11.45
2	864.91	SGU60	6.00	5.22	15.83	9.49
1	863.73	SGU60	6.00	4.28	12.21	5.22

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	870.23	SGU60	7.00	12.69
6	869.64	SGU60	7.00	11.27
5	868.46	SGU60	6.00	6.70
4	867.28	SGU60	6.00	5.58
3	866.09	SGU60	6.00	4.92
2	864.91	SGU60	6.00	4.49
1	863.73	SGU60	6.00	2.69

Section	#22 at Station 460.96
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	8.27	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	8.27 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.41 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

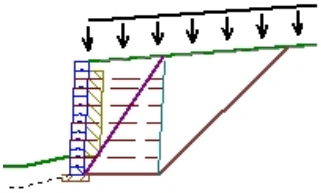
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.96	Bearing Pressure	1264.38	lb/ft²
Overturning	4.38	Max Eccentricity	0.50	ft
Base Sliding	2.16			
Crest Toppling	3.96			
Internal Sliding	4.27			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
7	870.23	SGU60	7.00	40.22	8.44	45.35
6	869.64	SGU60	7.00	25.95	11.49	37.37
5	868.46	SGU60	6.00	13.55	7.89	19.43
4	867.28	SGU60	6.00	9.01	11.03	14.39
3	866.09	SGU60	6.00	6.64	14.17	11.42
2	864.91	SGU60	6.00	5.21	17.31	9.47
1	863.73	SGU60	6.00	4.27	20.46	8.09

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
7	870.23	SGU60	7.00	12.66
6	869.64	SGU60	7.00	11.24
5	868.46	SGU60	6.00	6.68
4	867.28	SGU60	6.00	5.57
3	866.09	SGU60	6.00	4.91
2	864.91	SGU60	6.00	4.48
1	863.73	SGU60	6.00	4.18

Section	#23 at Station 464.24
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	7.68	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	7.68 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.30 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

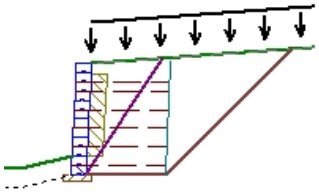
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	4.51	Bearing Pressure	1143.99	lb/ft²
Overturning	4.98	Max Eccentricity	0.43	ft
Base Sliding	2.30			
Crest Toppling	3.96			
Internal Sliding	5.21			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
6	870.23	SGU60	6.00	38.91	5.12	45.21
5	869.64	SGU60	6.00	24.82	7.74	37.26
4	868.46	SGU60	6.00	13.55	9.35	19.37
3	867.28	SGU60	6.00	9.01	12.49	14.34
2	866.09	SGU60	6.00	6.64	15.63	11.39
1	864.91	SGU60	6.00	5.21	12.01	6.04

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
6	870.23	SGU60	6.00	12.62
5	869.64	SGU60	6.00	11.20
4	868.46	SGU60	6.00	6.66
3	867.28	SGU60	6.00	5.55
2	866.09	SGU60	6.00	4.90
1	864.91	SGU60	6.00	2.86

Section	#24 at Station 467.52
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	7.09	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	7.09 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.20 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

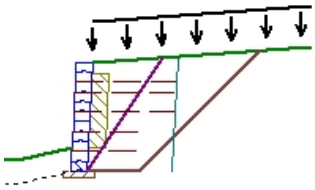
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	5.14	Bearing Pressure	1032.83	lb/ft²
Overturning	5.71	Max Eccentricity	0.35	ft
Base Sliding	2.46			
Crest Toppling	3.96			
Internal Sliding	5.21			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
6	870.23	SGU60	6.00	38.91	6.67	45.06
5	869.64	SGU60	6.00	24.82	9.52	37.13
4	868.46	SGU60	6.00	13.55	10.78	19.30
3	867.28	SGU60	6.00	9.01	13.93	14.29
2	866.09	SGU60	6.00	6.64	17.08	11.35
1	864.91	SGU60	6.00	5.21	20.22	9.41

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
6	870.23	SGU60	6.00	12.58
5	869.64	SGU60	6.00	11.17
4	868.46	SGU60	6.00	6.64
3	867.28	SGU60	6.00	5.53
2	866.09	SGU60	6.00	4.88
1	864.91	SGU60	6.00	4.45

Section	#25 at Station 472.44
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	6.50	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	6.50 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.41 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

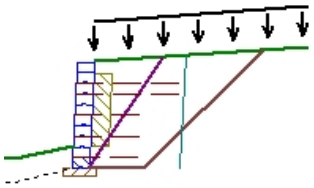
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	2.67	Bearing Pressure	1113.49	lb/ft²
Overturning	3.15	Max Eccentricity	0.52	ft
Base Sliding	1.81			
Crest Toppling	3.96			
Internal Sliding	5.69			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
5	870.23	SGU60	6.00	44.90	8.24	45.02
4	869.64	SGU60	6.00	27.53	11.33	37.09
3	868.46	SGU60	6.00	14.48	12.25	19.29
2	867.28	SGU60	4.00	7.98	6.75	14.28
1	866.09	SGU60	4.00	5.69	6.25	7.19

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
5	870.23	SGU60	6.00	12.57
4	869.64	SGU60	6.00	11.16
3	868.46	SGU60	6.00	6.63
2	867.28	SGU60	4.00	5.53
1	866.09	SGU60	4.00	3.09

Section	#26 at Station 475.72
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	5.91	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	5.91 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.28 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

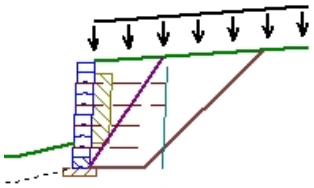
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	3.30	Bearing Pressure	958.35	lb/ft²
Overturning	3.70	Max Eccentricity	0.43	ft
Base Sliding	1.97			
Crest Toppling	3.96			
Internal Sliding	5.69			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
5	870.23	SGU60	6.00	44.90	9.80	45.02
4	869.64	SGU60	6.00	27.53	13.13	37.09
3	868.46	SGU60	4.00	12.61	5.15	19.29
2	867.28	SGU60	4.00	7.98	8.24	14.28
1	866.09	SGU60	4.00	5.69	11.35	11.34

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
5	870.23	SGU60	6.00	12.57
4	869.64	SGU60	6.00	11.16
3	868.46	SGU60	4.00	6.63
2	867.28	SGU60	4.00	5.53
1	866.09	SGU60	4.00	4.88

Section	#27 at Station 480.64
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	5.91	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	5.91 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.37 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

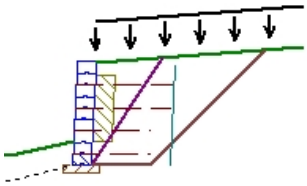
External Static	FS			
Bearing Capacity	3.30	Bearing Pressure	958.35	lb/ft²
Overturning	3.70	Max Eccentricity	0.43	ft
Base Sliding	1.97			
Crest Toppling	3.96			
Internal Sliding	6.66			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
4	870.82	SGU60	5.00	43.37	3.80	33.26
3	869.64	SGU60	5.00	18.13	7.82	23.39
2	868.46	SGU60	4.00	9.84	6.69	16.41
1	867.28	SGU60	4.00	6.66	6.18	7.97

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
4	870.82	SGU60	5.00	9.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	869.64	SGU60	5.00	7.54
2	868.46	SGU60	4.00	6.00
1	867.28	SGU60	4.00	3.26

Section	#28 at Station 483.92
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	5.31	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	5.31 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.27 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

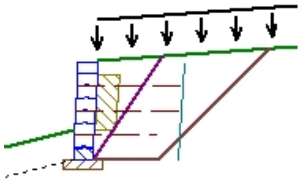
External Static	FS			
Bearing Capacity	4.04	Bearing Pressure	824.75	lb/ft²
Overturning	4.42	Max Eccentricity	0.34	ft
Base Sliding	2.15			
Crest Toppling	3.96			
Internal Sliding	6.66			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
4	870.82	SGU60	5.00	43.37	4.93	33.26
3	869.64	SGU60	5.00	18.13	9.26	23.39
2	868.46	SGU60	4.00	9.84	8.17	16.41
1	867.28	SGU60	4.00	6.66	11.28	12.64

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
4	870.82	SGU60	5.00	9.29

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	869.64	SGU60	5.00	7.54
2	868.46	SGU60	4.00	6.00
1	867.28	SGU60	4.00	5.16

Section	#29 at Station 488.85
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.72	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.72 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.42 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

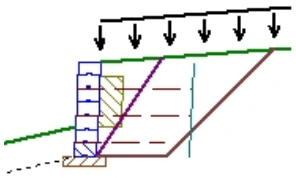
External Static	FS			
Bearing Capacity	4.92	Bearing Pressure	707.51	lb/ft²
Overturning	5.38	Max Eccentricity	0.27	ft
Base Sliding	2.36			
Crest Toppling	3.96			
Internal Sliding	9.84			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
3	870.82	SGU60	5.00	43.37	6.04	33.26
2	869.64	SGU60	5.00	18.13	10.69	23.39
1	868.46	SGU60	4.00	9.84	5.97	10.18

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	870.82	SGU60	5.00	9.29
2	869.64	SGU60	5.00	7.54

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	868.46	SGU60	4.00	3.72

Section	#30 at Station 492.13
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	4.13	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	4.13 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.32 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

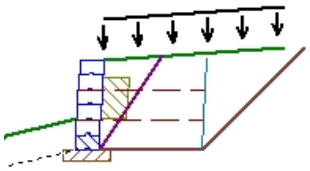
External Static	FS			
Bearing Capacity	6.00	Bearing Pressure	602.84	lb/ft²
Overturning	6.70	Max Eccentricity	0.20	ft
Base Sliding	2.62			
Crest Toppling	3.96			
Internal Sliding	9.84			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
3	870.82	SGU60	5.00	43.37	7.13	33.26
2	869.64	SGU60	5.00	18.13	12.11	23.39
1	868.46	SGU60	4.00	9.84	11.08	16.41

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
3	870.82	SGU60	5.00	9.29
2	869.64	SGU60	5.00	7.54

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	868.46	SGU60	4.00	6.00

Section	#31 at Station 495.41
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	3.54	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	3.54 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.21 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

External		Value	Reinforced Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

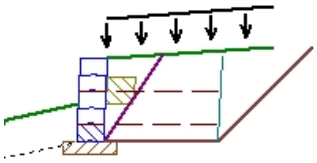
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	9.78	Bearing Pressure	496.27	lb/ft²
Overturning	12.84	Max Eccentricity	0.08	ft
Base Sliding	3.60			
Crest Toppling	3.96			
Internal Sliding	17.39			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
2	870.82	SGU60	5.00	40.27	8.19	33.26
1	869.64	SGU60	5.00	17.39	8.14	14.09

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
2	870.82	SGU60	5.00	9.29
1	869.64	SGU60	5.00	4.54

Section	#32 at Station 500.33
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	2.95	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	2.95 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.35 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

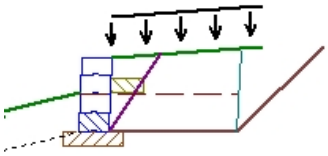
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	11.88	Bearing Pressure	415.89	lb/ft²
Overturning	17.03	Max Eccentricity	0.04	ft
Base Sliding	4.10			
Crest Toppling	3.96			
Internal Sliding	17.39			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
2	870.82	SGU60	5.00	40.27	9.24	33.26
1	869.64	SGU60	5.00	17.39	14.90	23.39

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
2	870.82	SGU60	5.00	9.29
1	869.64	SGU60	5.00	7.54

Section	#33 at Station 503.61
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	2.36	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	2.36 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.25 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

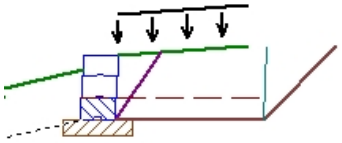
*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	14.78	Bearing Pressure	339.31	lb/ft²
Overturning	23.75	Max Eccentricity	0.00	ft
Base Sliding	4.75			
Crest Toppling	3.96			
Internal Sliding	40.27			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
1	870.82	SGU60	5.00	40.27	6.27	20.34

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	870.82	SGU60	5.00	5.68

Section	#34 at Station 508.53
Report Date	May 30, 2025
Designer	mK
Design Standard	National Concrete Masonry Association 3rd Edition
Design	Static
Unit of Measure	U.S./Imperial
Selected Facing Unit	
Licensor/Product Line:	Risi Stone Systems
Name:	Siena Edge
Seismic As	N/A



Soil Parameters

Soil Zone	Soil Type	Friction Angle φ	In Situ Density γ [lb/ft³]	Cohesion Cf [lb/ft²]
Infill (i)	GRA	34°	120.00	n/a
Retained (r)	SSR	28°	130.00	n/a
Foundation (f)	SSF	28°	120.00	0.00
Base (b)	GW	39°	140.02	n/a
Drainage (d)	GP	38°	125.02	n/a

Section Details

Section Height	1.77	Back Slope	4.12°	LL Surcharge	50	DL Surcharge	0
Design Height	1.77 ft	Crest Offset	13.90 ft	LL Offset	0.00 ft	DL Offset	0.00 ft
Embedment	1.38 ft	Wall Batter	3.00°	Toe Slope	13.22°	Toe Offset	13.40 ft

Minimum Factors of Safety

Reinforced

External		Value	Internal		Value	Facing		Value
FSsl	Base Sliding	1.50	FSsl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpo	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

Reinforcements

SGU60 - SGU60 **Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate**

Tult	4,111.31 lb/ft	RFcr	1.47	RFd	1.10	LTDS	2,118.80 lb/ft
RFid	1.20	Cds	0.90	Ci	0.90		

Connection/Shear Properties

αcs1	500.21 lb/ft	IP-1	2,128.29 lb/ft	αcs2	1,706.19 lb/ft	IP-2	2,660.01 lb/ft
αcs max	1,756.21 lb/ft	au	1,945.33 lb/ft	λu	35.00 lb/ft	Vu(max)	4,577.25 lb/ft

Analysis Results

*** Analysis does not include Vertical Forces**

*** Embedment is not included in Bearing Capacity**

External Static	FS			
Bearing Capacity	18.66	Bearing Pressure	268.75	lb/ft²
Overturning	35.57	Max Eccentricity	0.00	ft
Base Sliding	5.64			
Crest Toppling	3.96			
Internal Sliding	40.27			

Internal Static Layer	Elevation [ft]	Rein.	Length [ft]	Internal Sliding FS	Pullout FS	Tensile Overstress FS
1	870.82	SGU60	5.00	40.27	11.27	33.26

Facing Static Layer	Elevation [ft]	Rein.	Length [ft]	Connection Strength FS
1	870.82	SGU60	5.00	9.29

Client unilock

Name 670 S Old Rand Rd **Number** 2025.098

Site Lake Zurich, IL **Designer** mK

Revision 1 **Created** 5/23/2025 **Modified** 5/30/2025

Standard National Concrete Masonry Association 3rd Edition

Note †: **Total Facing quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.**

Note ‡: **Infill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.**

Note Δ: **Face drain values do not include the drainage stone within block. Drainage stone within block is calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the drainage stone within block will not be calculated.**

Note §: **Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.**

Note: **The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.**

Quantities

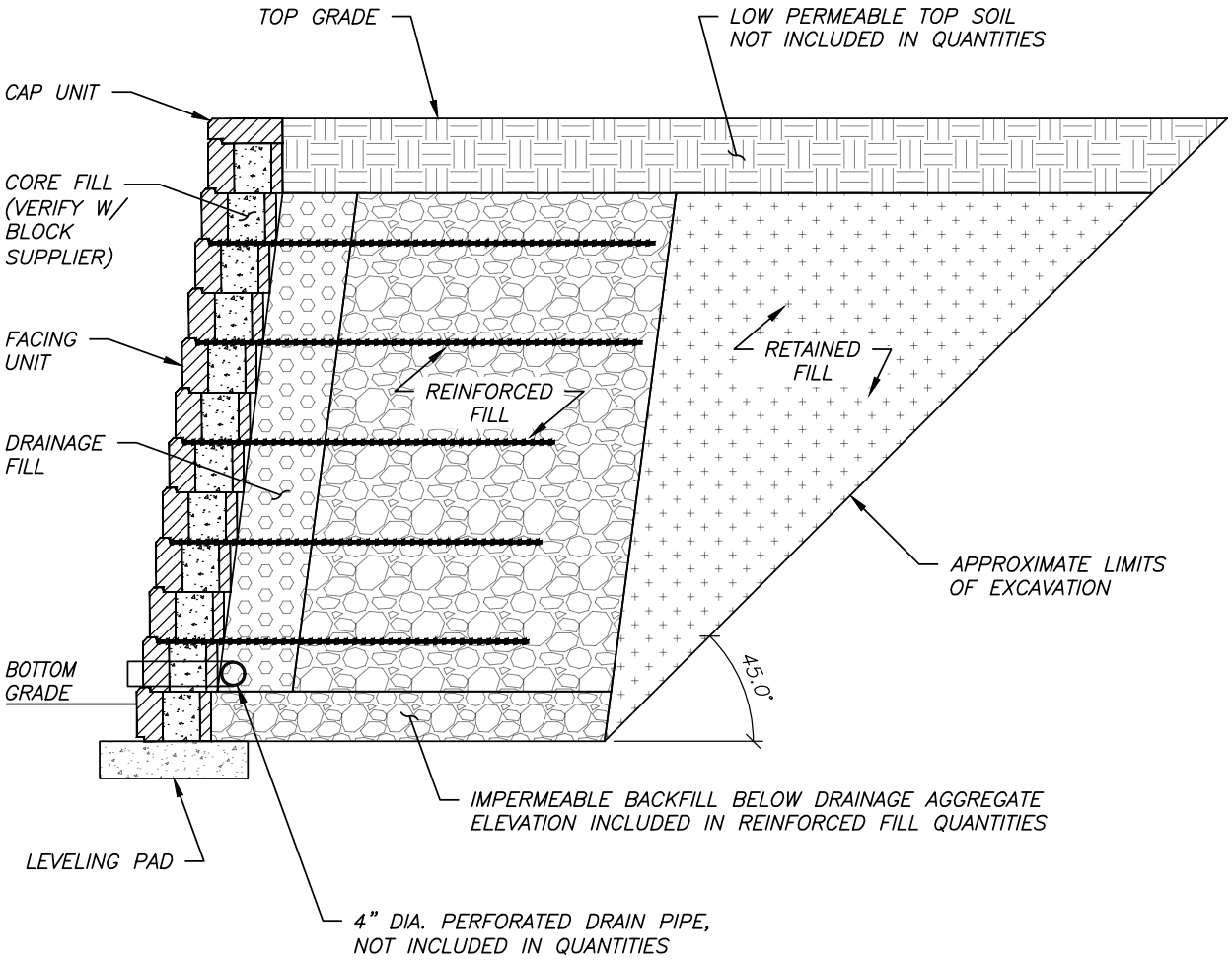
Wall	Facing	Wall/Cap Length [ft]	TOW Steps [#]	BOW Steps [#]	Facing Area [ft²]	Total Wall Area [ft²]
Wall No 1	Siena Edge	512	15	18	3170	3472
		512	**15**	**18**	**3170**	**3472**

Wall Unit	Wall No 1
Siena Edge	1,636

Wall	Leveling Pad [yd³]	Reinforced Fill [yd³]	Drainage Fill [yd³]	Core Fill [yd³]	Retained Fill [yd³]
Wall No 1	18	486	90	0	475
Totals:	**18**	**486**	**90**	**0**	**475**

Reinforcements

Wall	SGU60 [yd²]	Geogrid Connectors
Wall No 1	1,769	0
Totals:	**1,769**	**0**



SEGMENTAL RETAINING WALL QUANTITIES LEGEND

SCALE: 1/2" = 1'-0"

NOTE:

FACING AREA = AREA OF WALL NOT INCLUDING CAPS
TOTAL WALL AREA = INCLUDES CAPS

Project: 2025.098 - 670 S Old Rand Rd

Site: Lake Zurich, IL

Date: 5/30/2025

Wall: Wall No 1

Project Summary

Quantities

Wall Length	511.81 ft
Steps in Top of Wall	15
Steps in Bottom of Wall	18
Total Wall Area	3,472 ft²
Exposed Area (includes cap)	2,782 ft²
Embedded Area	690 ft²
Tallest Panel Height	10.04 ft
Longest reinforcement length	8.00 ft
Base soil volume	18 yd³
Infill soil volume ‡	486 yd³
Retained soil volume §	475 yd³
Gravity Face Drain	0 yd³
Face Drain	90 yd³

Reinforcement

SGU60 - SGU60	1,769 yd²

Note †: Total Facing Unit quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.

Note ‡: Reinforced fill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.

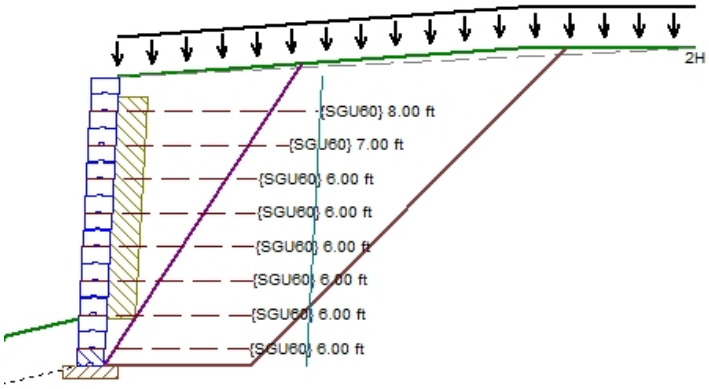
Note Δ: Drainage fill does not include the drainage stone within block. Core fill are calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the Core fill value within block will not be calculated.

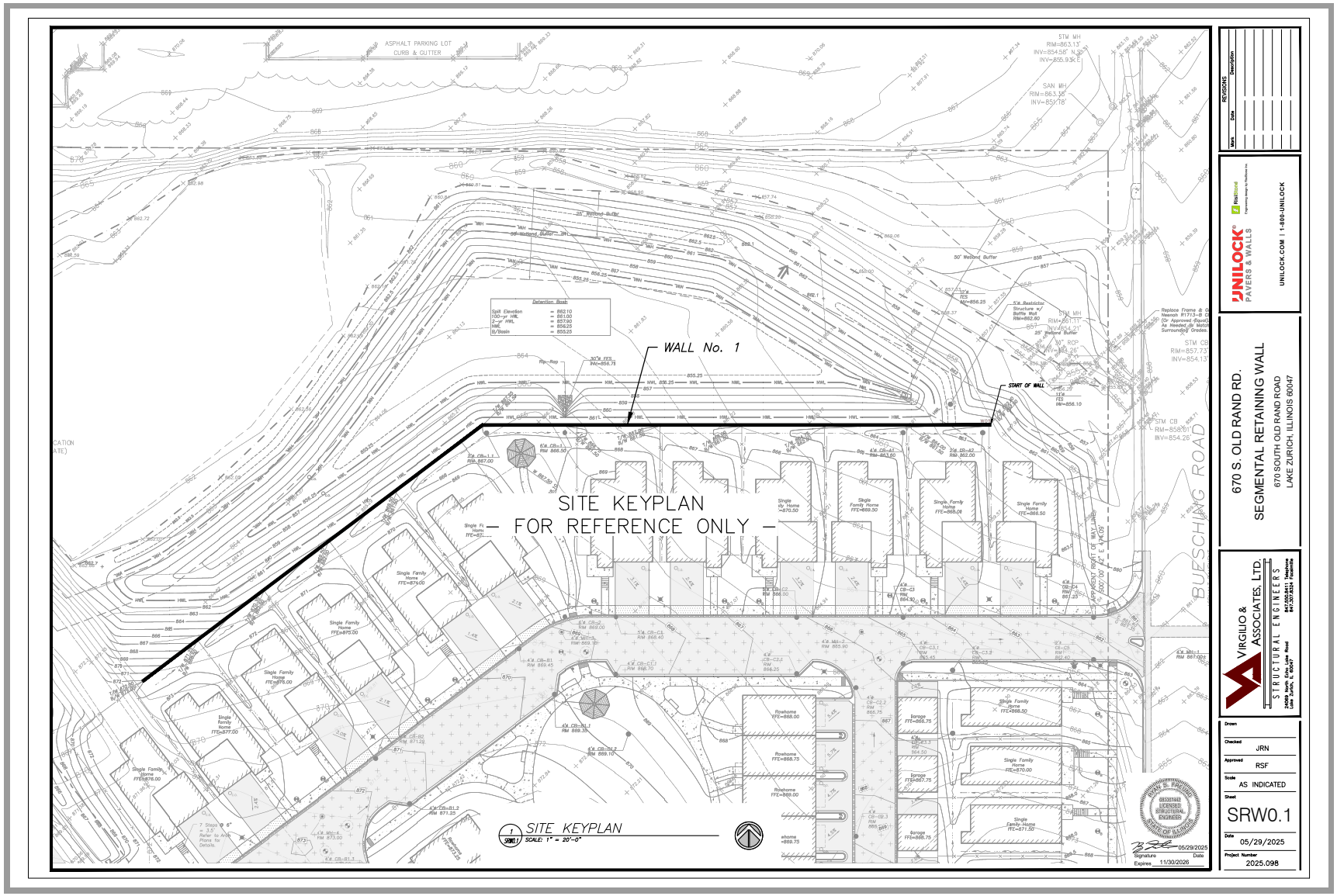
Note §: Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.

Note: The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.

Tallest Section

Section Height 10.04 ft




WALL No. 1
START OF WALL
SITE KEYPLAN
— FOR REFERENCE ONLY —
BUESCHING ROAD
SITE KEYPLAN
SCALE: 1" = 20'-0"
REVISIONS
No. Date Description
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PAVERS & WALLS
UNILOCK.COM | 1-800-UNILOCK
670 S. OLD RAND RD.
SEGMENTAL RETAINING WALL
670 SOUTH OLD RAND ROAD
LAKE ZURICH, ILLINOIS 60047
VIRGILIO & ASSOCIATES, LTD.
STRUCTURAL ENGINEERS
Drawn
Checked JRN
Approved RSF
Scale AS INDICATED
Sheet SRW0.1
Date 05/29/2025
Project Number 2025.098
Signature Date 05/29/2025
Expires 11/30/2026

GENERAL STRUCTURAL NOTES

1. CODES AND STANDARDS
   - 1.1. "DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS", LATEST EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
   - 1.2. "SEGMENTAL RETAINING WALL INSTALLATION GUIDE", LATEST EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
   - 1.3. TECHNICAL GUIDES & DETAILED INSTALLATION MANUALS FOR LANDSCAPE PROFESSIONALS BY UNILOCK
   - 1.4. UNILOCK SIENA EDGE INSTALLATION GUIDE

2. LIVE LOADS

2.1.	DEAD LOAD SURCHARGE	0 PSF
2.2.	LIVE LOAD SURCHARGE	100 PSF
2.3.	OPEN FENCE/HANDRAIL	NONE

3. DESIGN CRITERIA
   - 3.1. INTERNAL STABILITY FACTORS

3.1.1.	FACTOR OF SAFETY AGAINST PULLOUT:	1.5
3.1.2.	SOIL–GEOGRID INTERACTION COEFFICIENT:	0.90
3.1.3.	PERCENT OF GEOGRID COVERAGE:	100%

   - 3.2. EXTERNAL STABILITY FACTORS – REINFORCED WALL

3.2.1.	FACTOR OF SAFETY AGAINST BASE SLIDING:	1.5
3.2.2.	FACTOR OF SAFETY AGAINST OVERTURNING:	2.0
3.2.3.	FACTOR OF SAFETY FOR UNCERTAINTIES:	1.5

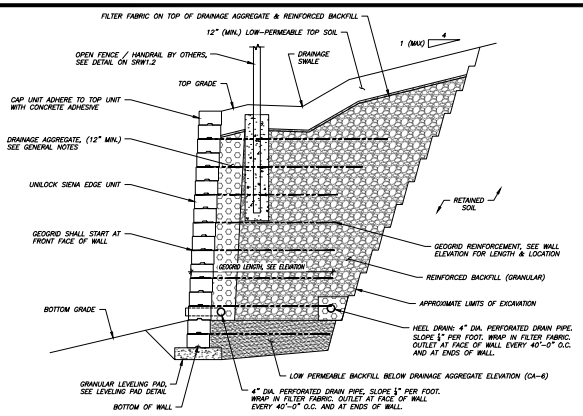
4. MATERIALS
   - 4.1. SOIL PARAMETERS – SEE TABLE BELOW
   - 4.2. GRADATION OF FILL MATERIALS
     - 4.2.1. UNIT FILL / DRAINAGE AGGREGATE SHALL CONSIST OF COURSE GRAINED AGGREGATES, SEE TABLE BELOW
     - 4.2.2. REINFORCED BACKFILL
       - 4.2.2.1. REINFORCED BACKFILL SHALL CONSIST OF CA6 OR CA7, pH SHALL BE 4.5 TO 9.0 PER AASHTO T289.
     - 4.2.3. LEVELING PAD
       - 4.2.3.1. THE LEVELING PAD SHALL BE SUITABLE GRANULAR MATERIAL (CA–6).
   - 4.3. MODULAR CONCRETE UNITS
     - 4.3.1. THE SEGMENTAL RETAINING WALL UNITS ARE UNILOCK SIENA EDGE UNITS.
   - 4.4. GEOGRID REINFORCEMENT
     - 4.4.1. GEOGRID REINFORCEMENT SHALL BE STRATAGRID SG200 OR STRATAGRID SGU60 AS MANUFACTURED BY STRATA SYSTEMS INC.
   - 4.5. FILTER FABRIC
     - 4.5.1. FILTER FABRIC SHALL MEET OR EXCEED THE REQUIREMENTS OF AASHTO M288–06 FOR A GEOTEXTILE CLASS 3, WITH 50% OR GREATER ELONGATION ALLOWED. THE APPARENT OPENING SIZE SHALL BE 70 US SIEVE (0.212 MM). THE RETAINED STRENGTH AFTER 500 HRS OF UV EXPOSURE SHALL BE GREATER THAN 50%.

5. CONSTRUCTION
   - 5.1. GENERAL
     - 5.1.1. THE SHOP / DESIGN DRAWINGS ARE BASED ON CIVIL SHEET C402 – GRADING & PAVING PLAN – NORTHEAST AS PREPARED BY ERIKSSON ENGINEERING ASSOCIATES, LTD, DATED 04/18/2025
     - 5.1.2. THE SOILS DATA NOTED IN THE TABLE BELOW ARE ASSUMED FOR DESIGN PURPOSES. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE TO CONFIRM THE DATA NOTED ABOVE IS CORRECT PRIOR TO AND DURING CONSTRUCTION. VIRGILIO & ASSOCIATES SHALL BE NOTIFIED IF DIFFERING SOIL CONDITIONS ARE ENCOUNTERED.
     - 5.1.3. THE PROJECT GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR INTERPRETATION OF SUBSURFACE CONDITIONS, SUITABILITY OF DESIGN PARAMETERS OR INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS.
     - 5.1.4. THE RETAINING WALL DESIGN ONLY CONSIDERS EXTERNAL STABILITY FOR BASE SLIDING AND OVERTURNING. THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW OTHER EXTERNAL STABILITY CONSIDERATIONS, INCLUDING BUT NOT LIMITED TO SETTLEMENT, BEARING CAPACITY, PERMEABILITY AND GLOBAL STABILITY.
     - 5.1.5. THE CONTRACTOR SHALL VERIFY ALL WALL ELEVATIONS, WALL STEPS, DIMENSIONS AND REQUIRED CLEARANCES ARE ACCURATE AND OBTAINABLE PRIOR TO COMMENCEMENT OF THE WORK. THE CONTRACTOR SHALL COORDINATE EXISTING CONSTRUCTION AND/OR ADJACENT CONSTRUCTION WITH OTHER TRADE CONTRACTORS AND WITH DESIGN DRAWINGS PREPARED BY OTHERS.
     - 5.1.6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING THE EXCAVATION.
     - 5.1.7. VIRGILIO AND ASSOCIATES, LTD WILL NOT SUPERVISE, DIRECT, CONTROL OR HAVE AUTHORITY OVER OR BE RESPONSIBLE FOR CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO, OR FOR ANY FAILURE OF CONTRACTOR TO COMPLY WITH THE LAWS AND REGULATIONS APPLICABLE TO THE FURNISHING OR PERFORMANCE OF WORK.
     - 5.1.8. ALL LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND PROCEDURES REGARDING SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR.
   - 5.2. SOILS
     - 5.2.1. FILL MATERIALS SHALL BE FREE FROM ORGANIC OR DELETERIOUS MATERIALS.
     - 5.2.2. MATERIAL PASSING THE NO. 200 SIEVE SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN 20 UNLESS APPROVED IN WRITING BY THE ENGINEER.
     - 5.2.3. SOILS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN A MAXIMUM OF 8" LIFTS.
     - 5.2.4. OPEN GRADED FILL MATERIAL SHALL BE COMPACTED IN 8" LIFTS WITH A MINIMUM OF THREE (3) PASSES OF A VIBRATORY PLATE COMPACTOR AND TO A DENSITY THAT MEETS THE CRITERIA LISTED IN THE TABLE BELOW AND IS ACCEPTABLE TO THE SOILS TESTING TECHNICIAN.
     - 5.2.5. FOUNDATION SOILS SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2,000 PSF.
   - 5.3. MODULAR CONCRETE UNITS
     - 5.3.1. SUBSTITUTION OF THE SEGMENTAL RETAINING WALL UNITS IS PROHIBITED. WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
   - 5.4. GEOGRID REINFORCEMENT
     - 5.4.1. SUBSTITUTION OF THE GEOGRID REINFORCEMENT IS PROHIBITED. GEOGRID SHALL BE INSTALLED WITH THE STRONG DIRECTION OF THE GRID PERPENDICULAR TO THE WALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

SOIL PARAMETERS				
	SOIL TYPE	FRICTION ANGLE	COHESION	UNIT WEIGHT
REINFORCED BACKFILL	GRANULAR	34°	0 PSF	120 PCF
RETAINED SOILS	SITE SOILS (ASSUMED)	28°	0 PSF	130 PCF
FOUNDATION SOIL	SITE SOILS (ASSUMED)	28°	0 PSF	120 PCF

UNIT FILL / DRAINAGE AGGREGATE	
U.S. SIEVE NUMBER	PERCENT PASSING
1 INCH	100
¾ INCH	75–100
NO. 4	0–60
NO. 40	0–50
NO. 200	0–5

REINFORCED BACKFILL	
U.S. SIEVE NUMBER	PERCENT PASSING
1 INCH	100–75
NO. 4	100–20
NO. 40	0–60
NO. 200	0–35

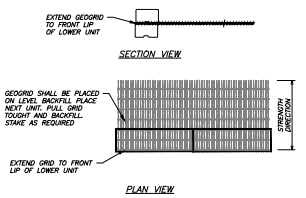


TYPICAL REINFORCED RETAINING WALL SECTION
SCALE: 1/2" = 1'-0"

UNIT: UNILOCK SIENA EDGE UNITS
WALL BATTER: 3.0°

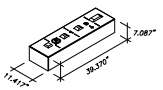
NOTE:
VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR RAIL REQUIREMENTS BY OTHERS.

SCALE: 1" 2" 4"
SCALE: 1/2" = 1'-0"

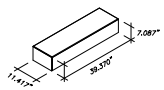


GRID CONNECTION DETAIL
SCALE: 1/2" = 1'-0"

SIENA EDGE UNITS	FACE WIDTH	BACK WIDTH	HEIGHT	DEPTH	WEIGHT
STANDARD UNIT No. 1 & LEFT CORNER	39.37"	39.37"	7.09"	11.42"	269 LBS
STANDARD UNIT No. 2 & RIGHT CORNER	39.37"	39.37"	7.09"	11.42"	269 LBS
COPING UNIT & LEFT CLOSE–END	39.37"	39.37"	7.09"	11.42"	269 LBS
COPING UNIT & RIGHT CLOSE–END	39.37"	39.37"	7.09"	11.42"	269 LBS



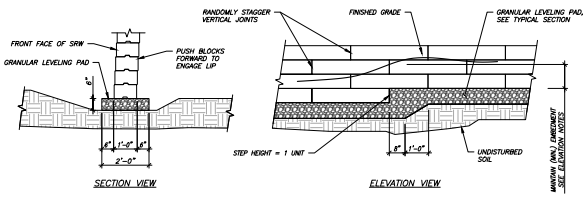
STANDARD UNIT ISOMETRIC VIEW



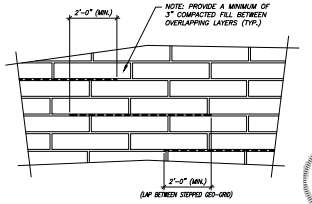
COPING UNIT ISOMETRIC VIEW

SIENA EDGE UNIT – DIMENSION DETAIL
SCALE: 1/3" = 1'-0"

ALL DIMENSIONS ARE NOMINAL. VERIFY ACTUAL DIMENSIONS WITH LOCAL PRODUCER



LEVELING PAD DETAIL
SCALE: 1/2" = 1'-0"



GEOGRID OVERLAP DETAIL
SCALE: 1/2" = 1'-0"

JONAS S. PACHECO
062037442
LICENSED
STRUCTURAL
ENGINEER
STATE OF ILLINOIS

05/29/2025
Signature Date
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670 S. OLD RAND RD.
SEGMENTAL RETAINING WALL
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LAKE ZURICH, ILLINOIS 60047

VIRGILIO & ASSOCIATES, LTD.
STRUCTURAL ENGINEERS
24400 North Estes Lake Road
Lake Zurich, IL 60047
847.550.6611 Telephone
847.550.6615 Telefax

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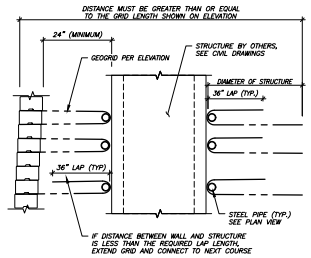
Checked	JRN
Approved	RSF
Scale	AS INDICATED
Sheet	SRW1.1
Date	05/29/2025
Project Number	2025.098

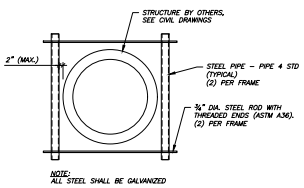
SCALE: 1/2" = 1'-0"



STEEL FRAME AT STRUCTURE – SECTION

SCALE: 1/2" = 1'-0"

NOTE:
STEEL FRAME DETAILS ONLY REQUIRED IF THE MANHOLE / DRAINAGE STRUCTURE IS LOCATED WITHIN THE REINFORCED ZONE

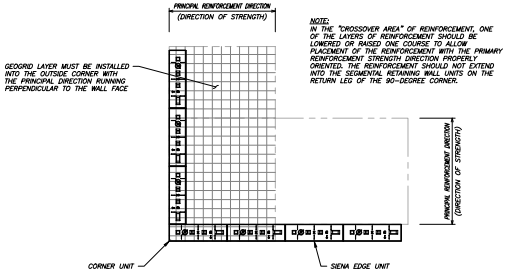


NOTE:
ALL STEEL SHALL BE GALVANIZED

STEEL FRAME AT STRUCTURE – PLAN

SCALE: 1/2" = 1'-0"

SCALE: 3/8" = 1'-0"



GEOGRID PLACEMENT – OUTSIDE CORNER

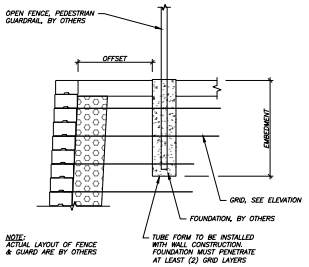
SCALE: 3/8" = 1'-0"

NOTES FOR GEOGRID REINFORCEMENT:

1. AT THE ELEVATIONS SHOWN ON THE ELEVATION, THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED SOIL FILL AND PLACED ON THE UNITS.
2. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GOEGRID SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S RECOMMENDATIONS.
3. THE GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL.

FOUNDATION MINIMUM SIZES AND SPACING

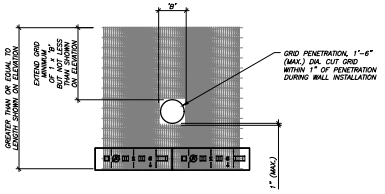
CASE	MINIMUM 'OFFSET'	MINIMUM DIAMETER	MINIMUM 'EMBEDMENT'	MAX SPACING (FT)
OPEN FENCE / GUARD	1'-0"	10"	48"	8'-0"
NOTE: ACTUAL LAYOUT OF FENCE/RAIL AND FOUNDATION IS BY OTHERS.				



GENERAL CONTRACTOR / APPROVER NOTE:
WALL DESIGN IS BASED ON THE FOUNDATION SIZES SHOWN IN THE FOUNDATION SIZE AND SPACING TABLE

BARRIER – SECTION

SCALE: 1/2" = 1'-0"

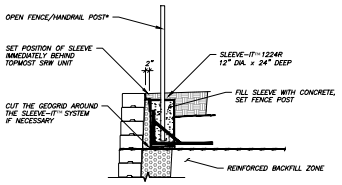


NOTE:
CUT SUCCESSIVE LAYERS OF GEOGRID AROUND PROPOSED POST INSTALLATION POINTS. BACKFILL AND COMPACT AROUND FORM TUBE. CHECK FENCE DESIGN FOR EMBEDMENT DEPTH OF FENCE FOUNDATION

BARRIER – PLAN

SCALE: 1/2" = 1'-0"

NOTE:
VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE, GUARDRAIL. DETERMINATION OF FENCE AND/OR GUARDRAIL REQUIREMENTS BY OTHERS.



*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE-IT™ 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK – UP TO 8FT, PRIVACY: UP TO 6FT (WOODEN, PVC, METAL). POST SIZE 4"x4" MAX.

SLEEVE-IT™
OPEN FENCE / PEDESTRIAN GUARD SECTION (ALTERNATE)
SLEEVE-IT

05/29/2025
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670 S. OLD RAND RD.
SEGMENTAL RETAINING WALL
670 SOUTH OLD RAND ROAD
LAKE ZURICH, ILLINOIS 60047

VIRGILIO & ASSOCIATES, LTD.
STRUCTURAL ENGINEERS
24400 North Ela Lake Road
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Lake Zurich, IL 60047
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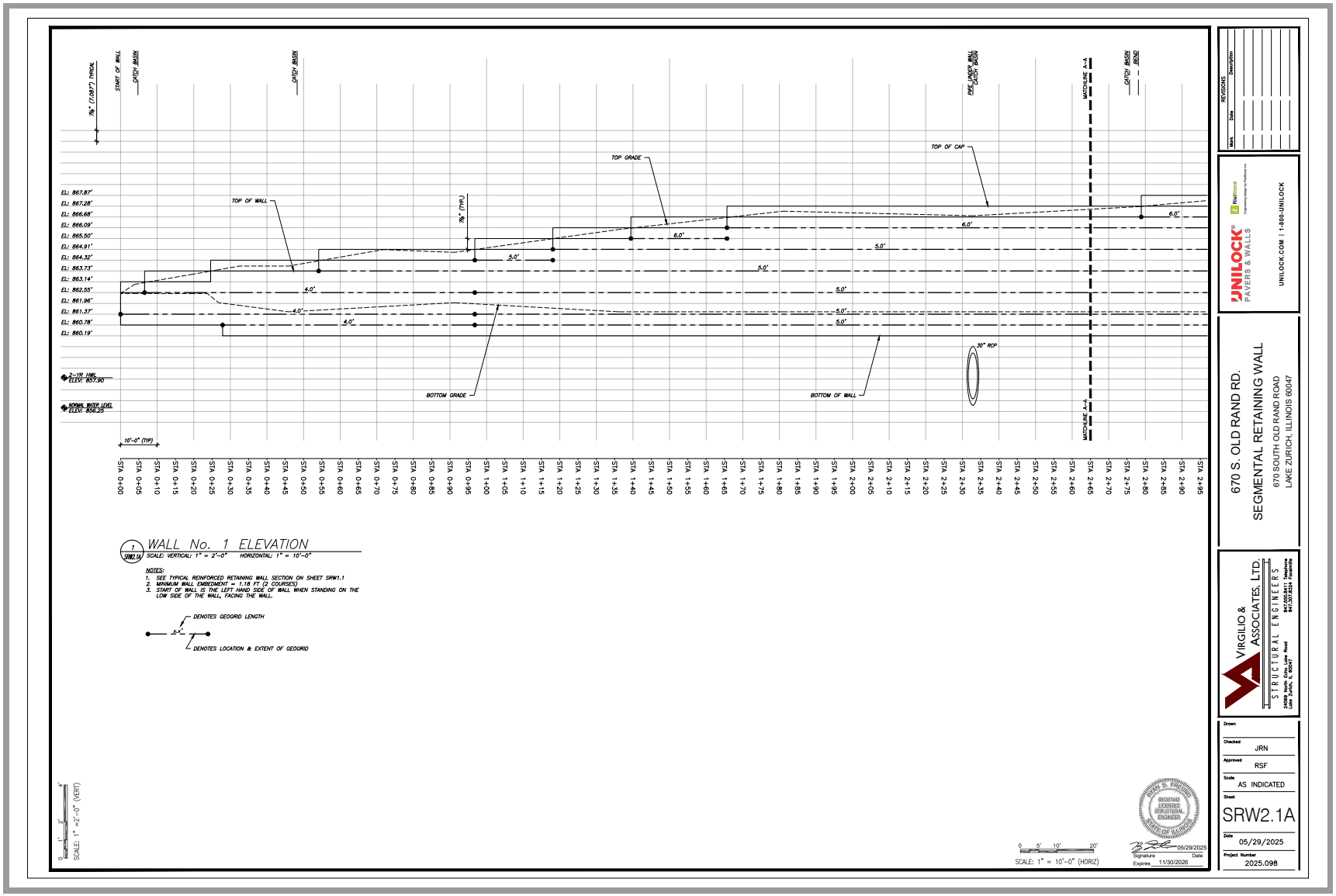
Scale AS INDICATED
Sheet SRW1.2
Date 05/29/2025
Project Number 2025.098


START OF WALL
CATCH BASIN
TOP OF WALL
TOP GRADE
TOP OF CAP
BOTTOM GRADE
BOTTOM OF WALL
MATCHLINE A-A
30" RCP
10'-0" (TYP)
WALL No. 1 ELEVATION
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"
NOTES:
1. SEE TYPICAL REINFORCED RETAINING WALL SECTION ON SHEET SRW1.1
2. MINIMUM WALL EMBEDMENT = 1.18 FT (2 COURSES)
3. START OF WALL IS THE LEFT HAND SIDE OF WALL WHEN STANDING ON THE LOW SIDE OF THE WALL, FACING THE WALL.
DENOTES GEOGRID LENGTH
DENOTES LOCATION & EXTENT OF GEOGRID
SCALE: 1" = 2'-0" (VERT)
SCALE: 1" = 10'-0" (HORIZ)
UNILOCK
PAVERS & WALLS
UNILOCK.COM | 1-800-UNILOCK
670 S. OLD RAND RD.
SEGMENTAL RETAINING WALL
670 SOUTH OLD RAND ROAD
LAKE ZURICH, ILLINOIS 60047
VIRGILIO & ASSOCIATES, LTD.
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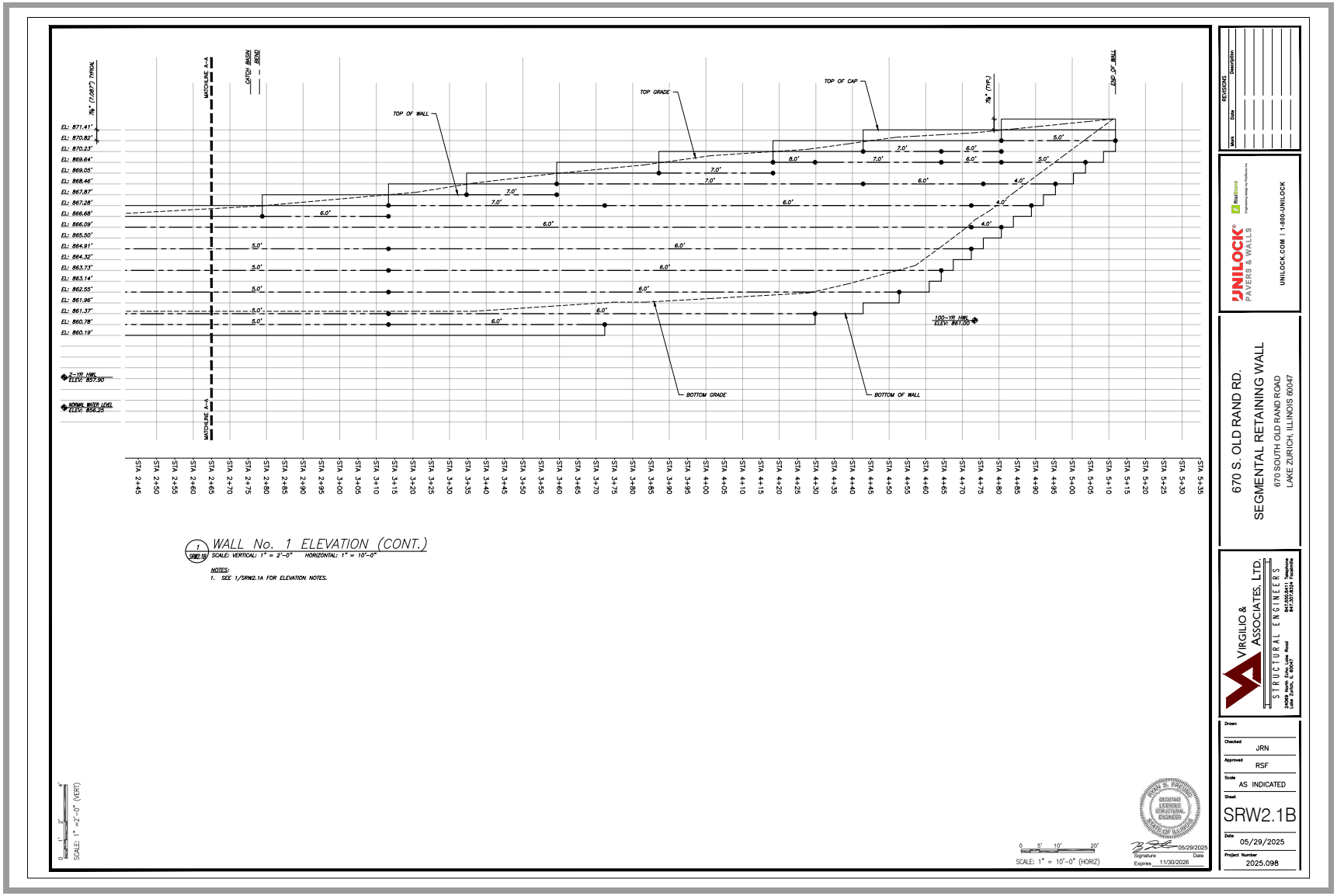
Sheet SRW2.1A
Date 05/29/2025
Project Number 2025.098
Signature Date 05/29/2025
Expires 11/30/2026


TOP OF WALL
TOP GRADE
TOP OF CAP
BOTTOM GRADE
BOTTOM OF WALL
MATCHLINE A-A
CATCH BASIN
BEND
END OF WALL
2-YR HWL
ELEV: 867.90
NORMAL WATER LEVEL
ELEV: 856.25
100-YR HWL
ELEV: 861.20
WALL No. 1 ELEVATION (CONT.)
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"
NOTES:
1. SEE 1/SRW2.1A FOR ELEVATION NOTES.
SCALE: 1" = 2'-0" (VERT)
SCALE: 1" = 10'-0" (HORIZ)
REVISIONS
No. Description Date
UNILOCK
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UNILOCK.COM | 1-800-UNILOCK
670 S. OLD RAND RD.
SEGMENTAL RETAINING WALL
670 SOUTH OLD RAND ROAD
LAKE ZURICH, ILLINOIS 60047
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Date 05/29/2025
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Expires 11/30/2026

Stormwater Management Report

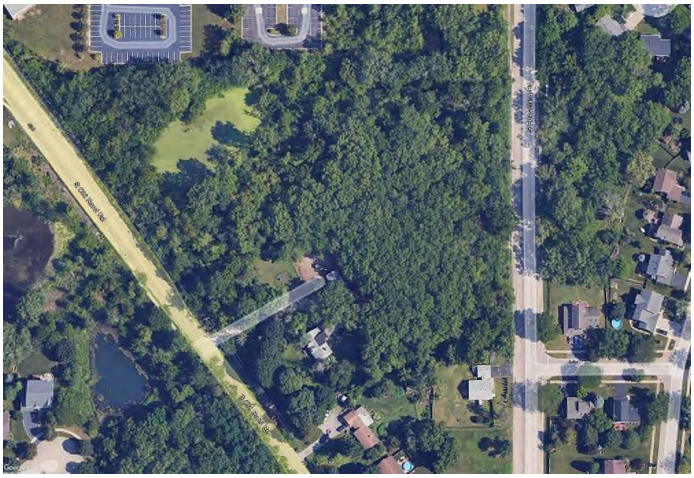
670 S Old Rand Road

Residential Development

Lake Zurich, IL

Prepared By: Laura Rosenbauer

Eriksson Engineering Associates, Ltd.



May 17, 2024

REV April 18, 2025

REV June 16, 2025

ERIKSSON ENGINEERING ASSOCIATES, LTD.

www.eea-ltd.com

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INTRODUCTION

The subject property is **7.80 acres** and is located in the Village of Lake Zurich in Lake County, Illinois. It is bounded on the east by Buesching Road and on the west by S Old Rand Rd. There are commercial parking lots to the north and single-family residential properties to the south.

A large wetland is situated in the northwest corner of the site. The remainder of the site is densely populated with trees, most of which are in poor/scrub condition. An existing conditions analysis of the wetland and its upstream tributary watershed is prepared under separate cover.

The purpose of this report is to demonstrate that stormwater management requirements have been met in accordance with the Lake County Watershed Development Ordinance (WDO), as enforced by the Village of Lake Zurich.

EXISTING CONDITIONS

A majority of the site currently drains from the south into the wetland and creek to the north, with a smaller area draining west to the S Old Rand ROW. The wetland is bounded on the west by a 9-ft tall berm. A 12” pipe runs west to east under this berm and into the wetland. The wetland drains east to a creek, then off-site via twin 30” concrete pipe culverts running under Buesching Road. The existing wetland & creek covers a total area of approximately **0.92 acres**, and is understood to be under USACOE jurisdiction.

The FEMA Flood Insurance Rate Map (FIRM) does not identify any special flood hazard areas on site.

PROPOSED CONDITIONS

The proposed 5.52-acre development will add 18 single-family homes and 18 townhouses at the southern half of the site. The residences will share an interior courtyard and private ring road. A new wet-bottom pond will provide detention and water quality treatment for the development. As part of site improvements, shore stabilization measures will be implemented at various points along the creek; otherwise the wetland area will not be disturbed.

WETLAND BUFFERS

Per section 505.01 of the WDO, water bodies with a total surface area greater than 1/3 acre but less than 1 acre, a minimum buffer width of **30-ft** shall be established. Linear buffers for channels require a **50-ft** buffer.

While there will be re-grading for the construction of the detention basin, no impervious structures are proposed within **25-ft** of the wetland. Buffer averaging is used to offset the portion of retaining wall and residential structure that encroach on the **50-ft** buffer.

COMPENSATORY STORAGE

Results from the existing conditions analysis of the creek indicate a 100-yr, 24-hr flood elevation of **858** at the creek just upstream of Buesching Road. The easternmost single-family residence requires fill below this elevation. Compensatory storage is provided north of the creek in accordance with WDO section 704.01, which states that compensatory storage for development in a riverine floodplain must

be at least 1.2 times the volume of storage lost or displaced. The re-graded area is included in the proposed stormwater easement boundaries.

STORMWATER RUNOFF CONTROL

Stormwater detention is provided in a surface basin located between the wetland and the residential development. The outfall pipe is set 1-ft above the bottom of the basin to provide runoff volume reduction (RVR). Native plantings cover the basin's bottom and side slopes.

The basin was sized to meet the maximum allowable release rates for the 2-yr and 100-yr 24-hr storm events, defined in section 502.01 of the WDO as **0.04 cfs/ac** and **0.15 cfs/ac**, respectively. The outlet control structure has an internal baffle wall with two restrictor orifices. A tailwater elevation of **855.75** (the crown elevation at the downstream end of the outlet pipe) was used to calculate the diameter of each orifice. The resulting diameter in both cases was under the minimum 4-in required, and therefore vortex restrictors are implemented to maintain the necessary release rate with a larger diameter.

WinTR-20 was used to model the designed detention system using Bulletin 75 rainfall data. Because WinTR-20 requires a consistently increasing release rate, the vortex restrictor 'kick-back' curve was conservatively modeled using a linear approximation. The model shows the basin meets both the 2-yr and 100-yr allowable release rates at elevations below the design HWL's.

UNRESTRICTED AREA

There are two areas where boundary conditions necessitate unrestricted runoff: the 0.12-ac grass area where grades tie back into the downstream wetland boundary just west of Buesching Road, and the 0.13-ac grass area where grades tie back into the berm & ditch on Old Rand Road. The basin and restrictor were both sized taking into account this 0.25-ac unrestricted area.

RUNOFF VOLUME REDUCTION (RVR)

Runoff Volume Reduction strategies are implemented to the maximum extent practicable as required by the WDO. Because the proposed improvements result in over 1 acre of hydrologic disturbance, a quantitative analysis of RVR credits is also needed. The Detention Facility Credit, Native Vegetation Cover Credit, and Water Quality Treatment Credit volumes are included in the attached calculations. They sum to a total volume of **12,395 CF**.

The following hierarchy of strategies was considered, per section 503 of the WDO:

A. Preservation and enhancement of the stormwater management benefits of the natural resource features of the development site (e.g., areas of Hydrologic Soil Groups A and B, floodplains, Waters of the United States, Isolated Waters of Lake County, channels, drainageways, prairies, savannas, and woodlands).
    - The existing wetland and creek on site are being preserved and enhanced through dredging and streambank restoration measures, as well as clearing out of invasive plant species in the surrounding areas. Because both water bodies are Waters of the United States, they cannot be counted towards the isolated wetland hydrology credit.

B. Minimization or disconnection of impervious surfaces.
   - The amount of impervious surface on site is limited to that necessary for serving the proposed residences. The open space in the interior courtyard is largely unpaved.

C. Enhancement of the infiltration and storage characteristics of the development site using appropriate best management practices.
   - The detention pond is designed to store water below the outlet pipe, in order to facilitate infiltration. The volume stored below the outlet pipe is counted towards the Detention Facility Credit at 50%.
   - Native vegetation will be planted along the bottom of the pond, as well as in green space north of the wetland. The Native Vegetation Cover Credit is counted for the 2-yr, 24-hr runoff volume stored in the basin.

D. The use of open channels with native vegetation to convey stormwater runoff.
   - Vegetated swales are utilized to direct surface runoff between houses and at the site perimeter.

E. Structural measures that provide water quality and volume reduction
   a. A BMP snout and Bio-Skirt are included at the outlet of the catch basin immediately upstream of the basin. The snout facilitates the reduction of floatable trash and debris, free oils, and other solids from stormwater discharges, while the Bio-Skirt helps filter out hydrocarbons.

F. Structural measures that provide only volume reduction or other rainwater harvesting practices
   - There are no structural measures being implemented that provide only volume reduction.

G. Measures that provide water quality and quantity control
   - There are no additional measures providing water quality and quantity control outside of those listed above.

H. Measures that provide only quantity control.
   - There are no measures providing only quantity control.

WATER QUALITY TREATMENT

The WDO requires water quality treatment equivalent to the first 0.01 inch of runoff for every 1% of impervious surface across the entire development area. This calculates to a volume of **8,081 CF**. Per section 504.01 of the WDO, the volume of runoff kept on-site to meet the RVR requirements may be deducted from the required water quality treatment volume. As described above, the RVR volume exceeds the water quality requirement.

EMERGENCY OVERFLOW

An emergency overflow route for the 100-yr storm event is provided via a 55-ft long grass spillway at the northeast corner of the detention basin. The spill elevation is 1.1-ft above the design HWL at **862.1**. The spillway will meet the required overflow capacity at an elevation of **862.34**, which is 1.16-ft below the lowest doorway.

APPENDIX I – EXISTING CONDITIONS INFORMATION

NRCS SOILS REPORT

FEMA FIRM

PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Hydrologic Soil Group—Lake County, Illinois
88° 5' 11" W
88° 4' 53" W
42° 11' 26" N
42° 11' 17" N
410320
410360
410400
410440
410480
410520
410560
410600
410640
410680
4671490
4671450
4671410
4671370
4671330
4671290
4671250
Cedar St
530D3
1103A
531C2
330A
Soil Map may not be valid at this scale.
Map Scale: 1:1,880 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 25 50 100 150
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
USDA
Natural Resources
Conservation Service
Web Soil Survey
National Cooperative Soil Survey
5/8/2024
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- 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 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Lake County, Illinois
Survey Area Data: Version 18, Aug 28, 2023

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

Date(s) aerial images were photographed: Aug 19, 2022—Sep 30, 2022

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
330A	Peotone silty clay loam, 0 to 2 percent slopes	C/D	0.0	0.1%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	C	0.6	6.8%
531C2	Markham silt loam, 4 to 6 percent slopes, eroded	C	7.5	80.8%
1103A	Houghton muck, undrained, 0 to 2 percent slopes	A/D	1.1	12.3%
Totals for Area of Interest			**9.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

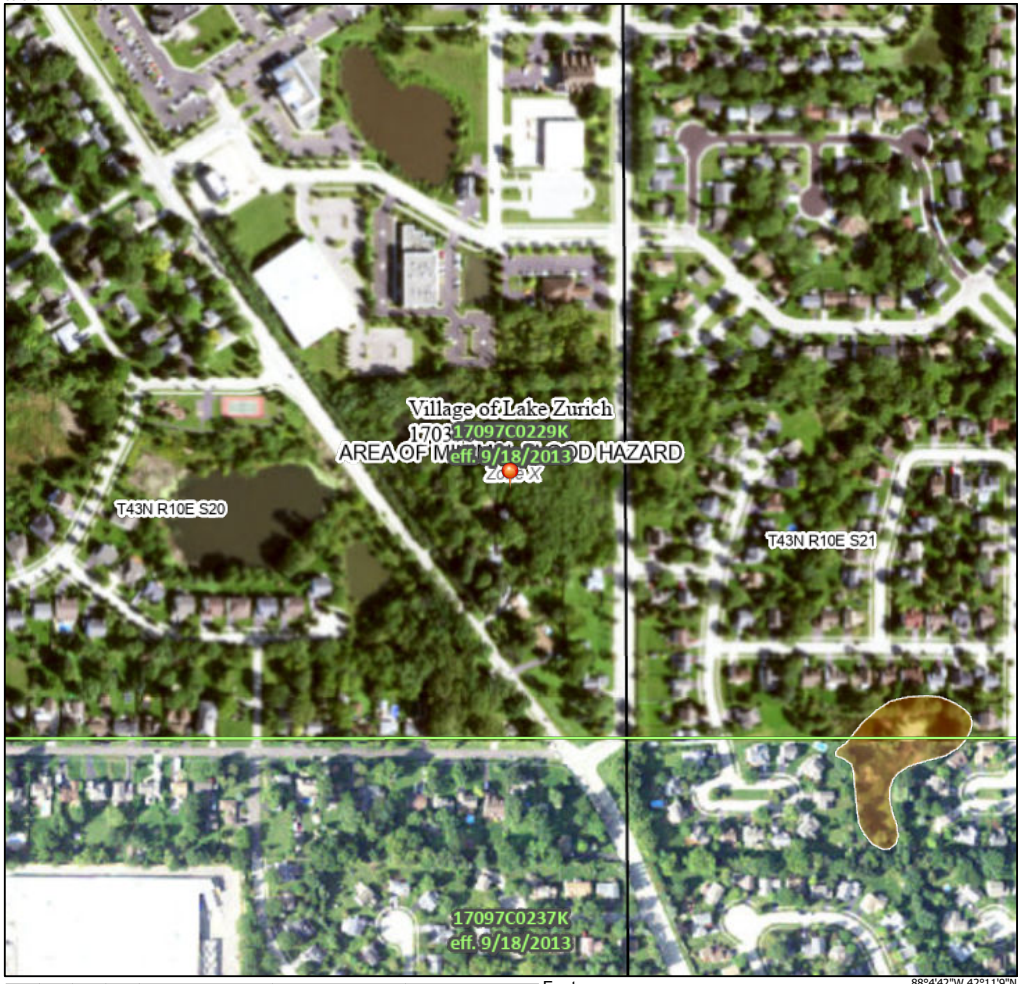
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

FEMA

88°5'19"W 42°11'35"N



88°4'42"W 42°11'9"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/8/2024 at 5:48 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

STORMWATER MANAGEMENT COMMISSION

September 16, 2022

Mr. Henry Joern
670 S. Old Rand Road
Lake Zurich, IL 60047

Subject: **SMC File #:** IWLC-22-593
USACE Ref. #: LRC-2022-547
670 S. Old Rand Road Property, Lake Zurich, Lake County, IL
PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Dear Mr. Joern:

This letter responds to the request for a preliminary wetland jurisdictional determination (PJD) and isolated wetland boundary verification (BV) for the above-referenced property, submitted on your behalf by Ms. Ellen Raimondi with Gary R. Weber Associates, Inc. (GRWA) and received by the Lake County Stormwater Management Commission (SMC) on August 8, 2022, with supplemental information received September 15, 2022. SMC reviewed available reference materials and performed a site reconnaissance in the company of Mr. Michael Machalek the U.S. Army Corps of Engineers (USACE) on August 25, 2022. Wetlands/waters referenced in this letter are shown on the enclosed *Exhibit A: Water Resources Summary,* by GRWA, not dated (digital copy received by SMC on September 15, 2022).

- Based on our findings, **"Tributary 1" and "Wetland 1" appear to be *Waters of the United States* (WOTUS)** subject to regulation by the USACE under Section 404 of the federal Clean Water Act. These feature have a clearly discernible hydrologic connection to the traditionally navigable Des Plaines River (via the Buffalo Creek subwatershed). "Tributary 1" is a relatively permanent waters, and Wetland 1 abuts that feature. The USACE did not verify WOTUIS boundaries during this determination (see enclosed PJD field report). If a WOTUS boundary verification is desired, please coordinate directly with the Corps to schedule a field visit once flagging has been refreshed.

This PJD has been approved by SMC's Chief Engineer and the findings are valid for a period of three (3) years from the date of this letter unless new information warrants a revision before the expiration date. If you disagree with the findings of this PJD, you may request an approved JD (AJD) from the USACE.

For your information, SMC performed this PJD in accordance with the *Interagency Coordination Agreement (ICA) Between the U.S. Army Corps of Engineers, Chicago District, Lake County Stormwater Management Commission, and Lake County Department of Planning, Building and Development*, dated June 4, 2002. We determined the jurisdiction of WOTUS on the subject project area based on the current definition in 33 U.S.C. 1344. Section 328.3(a); guidance provided in the EPA/USACE Memorandum entitled "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" dated June 5, 2007 (revised 12-02-08); and the USACE's *Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007. For areas not considered WOTUS, we determined jurisdiction using the definition of IWLC in Appendix A of the Lake County Watershed Development Ordinance (WDO, 10-13-2020).

Permitting Considerations

1. This letter satisfies the requirement for a written jurisdictional determination under WDO §1001 for the indicated wetlands/waters.

2. The surveyed boundaries of all existing wetlands/waters on the development site, including features constructed in dry land (e.g., stormwater management basins), need to be included on the engineering plans for permitting purposes.

3. **If proposed development will impact WOTUS, a wetland permit from the USACE will be required.** Please refer to the USACE-Chicago District's web site for the permit application submittal requirements: http://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/AppChecklist.aspx. The USACE may require SMC's technical review/approval of the proposed soil erosion and sediment control plan (SE/SC) for the development as a condition of the USACE permit. We will advise you if our SE/SC review/approval is required.

4. **A Watershed Development Permit (WDP) will be required from the Village of Lake Zurich for site development in accordance with the applicable provisions of the WDO.** Please contact Ms. Jodi McCarthy with Manhard Consulting, Ltd., the Village's WDO Enforcement Officer (EO, 847-634-5500 or jmccarthy@manhard.com), for the appropriate permit application form and procedures.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please contact Juli Crane at jcrane@lakecountyil.gov.

Sincerely,
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Brian Frank, P.E., CFM
Chief Engineer

Juli E. Crane, PWS, CWS, CFM
Principal Wetland Specialist

Enclosures: *Exhibit A: Water Resources Summary* (GRWA, not dated)
PJD Field Report

xc: Kathy Chernich/Mike Machalek – U.S. Army Corps of Engineers
Jodi McCarthy, Manhard, EO for Village of Lake Zurich
Michael Brown, Village of Lake Zurich Public Works
Ellen Raimondi, CWS, GRWA

This document was digitally transmitted. Please print out a copy of the document and retain for your records. If you are unable to print the document, or desire a hard copy mailed be to you, please notify SMC at your earliest convenience.

LEGEND

Study Area

Flagged Wetland Boundaries

Off-site Wetland Boundaries (not flagged)

Estimated Non-wetland Waters (Tributary)

Sample Points A-E

0 80' 160'

SCALE: 1"=160' **NORTH**

Provided by: Google Earth 2018 Aerial

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Lake County, Illinois 60047

AC2289

Advantage Consulting Engineers

WATER RESOURCES SUMMARY

EXHIBIT A

L:\Projects\AC2289\Eco-Con\Full Wetland Report\Maps\Old Rand Rd_WL Exhibits.dwg

STORMWATER MANAGEMENT COMMISSION

Preliminary Jurisdictional Determination Field Report

LakeCounty

Site Name: *670 S. Old Rand Rd Property*

Date: *August 25, 2022 4:00 PM*

SMC/PBD #: *IWLC-22-593*

USACOE #: *LRC-2022-593*

Attendees:

USACOE Representative(s): *Mike Machalek*
List Other Corp Representative(s): *N/A*
SMC/PBD Representative(s): *Juli Crane*
Other SMC/PBD Representative(s): *N/A*
Other attendee(s):

PJD Requestor:

Name/Contact Info: *Henry Joern, 670 S. Old Rand Rd, Lake Zurich, 847-417-8732, henryjoern@gmail.com*

Site Info:

Address/PIN#: *670 S. Old Rand Rd; PINs: 14-20-400-002 and 14-20-400-003*
Lat/Long: *42.189476 / -88.083492*
Description: *Single-family residence and out-buildings on wooded lot with creek bisecting the northern part of site from east to west.*
References: *No wetland report provided; Wetland Delineation Map (Exhibit A, Preliminary Water Resources Summary), FEMA Floodplain Map (2016), Aerial Photos (1939-2020, Lake County Online GIS Maps), Topographic Map - 1' contours (Lake County Online GIS Maps, 2007 & 2017), Lake County Soil Surveys (SCS 1970 & NRCS 2005), USGS Quadrangle Maps (1960, 1972, 1993), USGS Flood of Record Map, Lake County Storm Sewer Network Maps (SMC GIS, 2022); Lake County Wetland Restoration & Preservation Plan - Online Decision Support Tool (SMC, 2020)*

Disposition of Waters of the US:

Site appears to contain Waters of the U.S.: *Yes, site DOES appear to contain Waters of the U.S.*
List wetland/water IDs from delineation map and basis: *Tributary 1 is a relatively permanent water (RPW) and Wetland 1 = wetland abutting an RPW (i.e., Tributary 1)*
WOUS Exclusions: *N/a*
Corps representative concurs with staked/flagged WOUS boundaries: *No*
If Corp representative DOES NOT concur, please explain: *Flagging not present at time of PJD visit.*

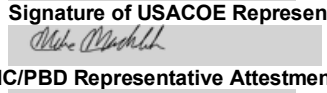
Disposition of Isolated Waters of Lake County:

Site appears to contain Isolated Waters of Lake County: *No, site DOES NOT appear to contain Isolated Waters of Lake County.*
List wetland/water IDs from delineation map: *N/A*
Potential IWLC Exclusions: *N/a*
SMC/PBD representative concurs with staked/flagged IWLC boundaries:
If SMC/PBD representative DOES NOT concur, please explain:

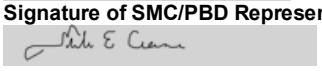
Comments: *The WOTUS boundary will be verified upon reflagging and consultant contacting the Army Corps to reschedule a field visit.*

Attests:

USACOE Representative Attestment: *Corp representative has reviewed the information herein and CONCURS with determination.*
Signature of USACOE Representative:



SMC/PBD Representative Attestment: *SMC/PBD representative has reviewed the information herein and CONCURS with determination.*
Signature of SMC/PBD Representative:



U:\Regulatory Program\Permits\22 Permits\IWLC\IWLC-22-593 670 S. Old Rand Rd PJD&BV, LZ\PERMITS\PJD_Field_Report_Form.docx

670 S Old Rand Rd
Residential Development
June 16, 2025

APPENDIX II – STORMWATER CALCULATIONS

DRAINAGE SUMMARY

RESTRICTOR SIZING CALCULATIONS

VORTEX RESTRICTOR CUT SHEETS

STAGE-STORAGE TABLE

COMPENSATORY STORAGE CALCULATIONS

RUNOFF VOLUME REDUCTION CALCULATIONS

EMERGENCY OVERFLOW CALCULATIONS

DEWATERING CALCULATIONS

SWALE SIZING CALCULATIONS

INLET CAPACITY CALCULATIONS

DRAINAGE SUMMARY

670 S Old Rand Rd 06.16.2025
LMR

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Site Info

Property Area =	7.80	acres	0.01219	sq mi
Total Disturbed Area =	5.52	acres	0.00863	sq mi
Area tributary to Detention Basin =	5.27	acres	0.00824	sq mi

Proposed Conditions

Impervious Area =	2.23	acres	CNimpervious =	98
Gravel Area =	0.00	acres	CNgravel =	89
Pervious Area =	3.29	acres	CNpervious =	80
% Impervious =	40	%	CN =	87.3

Release Rates

	2-yr (0.04 cfs/ac)	100-yr (0.15 cfs/ac)
Allowable Release Rate (cfs) =	0.22	0.83
Modeled Release Rate (cfs) =	0.20	0.79

Runoff Volume Reduction (RVR)

Detention Facility Credit =	3,128	CF
Native Vegetation Credit =	3,250	CF
Water Quality Treatment Credit =	3,259	CF
Total RVR Credits =	9,637	CF

Water Quality Treatment

Water Quality Requirement = 0.01-in per % of Impervious Area
= 8,081 CF
RVR Credits > Water Quality Requirement

Restrictor Sizing Calculations

670 S Old Rand Rd 06.16.2025
LMR

ERIKSSON ENGINEERING ASSOCIATES, LTD.

2-Year Restrictor

2-year high water elevation =	858.00	
C_D =	0.61	(constant)
G =	32.20	ft/sec^2
Inv. restrictor =	854.85	
Tailwater Elev =	855.75	
Drainage Area =	5.52	acre
$Q_{allowable}$ =	0.04	cfs/acre
$Q_{allowable}$ =	0.22	cfs

Δh = hwe - Tailwater Elev
= 2.25 ft.

$Q = C_D A(2gh)^{1/2}$
$A_{restrictor} = (Q_{allowable}) / (C_D(2gh)^{1/2})$

$A_{restrictor}$ =	4.33	in^2
$D_{restrictor}$ =	2.35	in
=> Restrictor diameter =	**2.350**	**inches**

Min. restrictor orifice = 4 inches. See vortex restrictor calcs.

100-Year Restrictor

100-year high water elevation =	861.00	
C_D =	0.61	(constant)
G =	32.20	ft/sec^2
Inv. restrictor =	858.00	
$Q_{allowable}$ =	0.15	cfs/acre
$Q_{allowable}$ =	0.83	cfs

Note: 100-year restrictor sizing calculations take into account the fact that some release will be provided through the 2-year restrictor. Q_{2year} is a calculation of the flow through the 2-year restrictor with a 100-year head acting on it.

Q_{2year} =	0.33	cfs
Therefore: $Q_{remaining}$ =	0.49	cfs

Δh = hwe - Inv. - 1/2 Dia.
= 2.86 ft.

$Q = C_D A(2gh)^{1/2}$
$A_{restrictor} = (Q_{allowable}) / (C_D(2gh)^{1/2})$

$A_{restrictor}$ =	8.59	in^2
$D_{restrictor}$ =	3.31	in
=> Restrictor diameter =	**3.300**	**inches**

Min. restrictor orifice = 4 inches. See vortex restrictor calcs.

Technical Specification		
Control Point	Head (ft)	Flow (cfs)
Primary Design	2.250	0.220
Flush-Flo™	0.543	0.220
Kick-Flo®	1.393	0.176
Mean Flow		0.181

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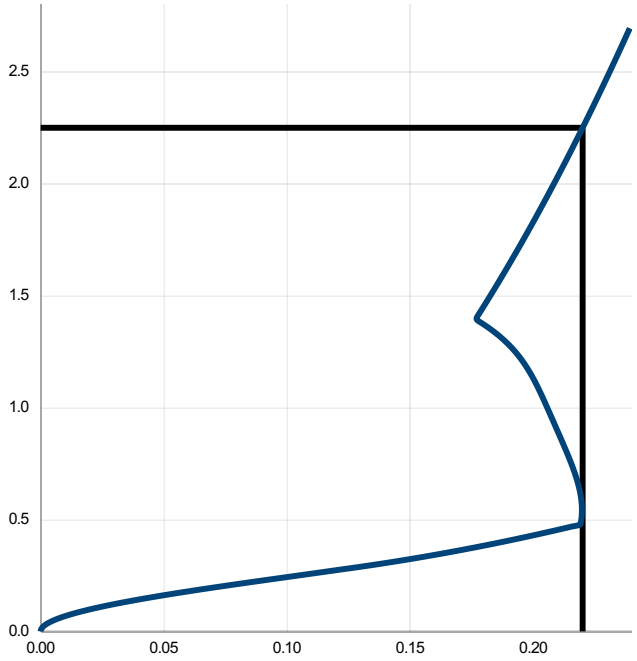

Head (ft)	Flow (cfs)
0.000	0.000
0.078	0.013
0.155	0.046
0.233	0.093
0.310	0.143
0.388	0.182
0.466	0.214
0.543	0.220
0.621	0.219
0.698	0.217
0.776	0.214
0.853	0.211
0.931	0.208
1.009	0.205
1.086	0.202
1.164	0.198
1.241	0.193
1.319	0.186
1.397	0.177
1.474	0.181
1.552	0.185
1.629	0.190
1.707	0.194
1.784	0.198
1.862	0.202
1.940	0.205
2.017	0.209
2.095	0.213
2.172	0.216
2.250	0.220

DESIGN ADVICE

! The head/flow characteristics of this SCL-0113-6230-0686-6230 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modeling evaluates the full head/flow characteristic curve.

The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

Hydro International
A CRH COMPANY

DATE	6/13/2025 5:25 PM
Site	670 Old Rand
DESIGNER	Laura Rosenbauer
Ref	

SCL-0113-6230-0686-6230

Hydro-Brake® Optimum

© 2024 Hydro International, 94 Hutchins Dr, Portland, ME 04102, USA. Tel: +1 (207) 756 6200 Fax: +1 (207) 756 6212 Web: hydro-int.com Email: designtools@hydro-int.com

Technical Specification		
Control Point	Head (ft)	Flow (cfs)
Primary Design	3.000	0.490
Flush-Flo™	0.749	0.490
Kick-Flo®	1.863	0.392
Mean Flow		0.403

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE No 08/4596

wrc approved
PT/503/0422

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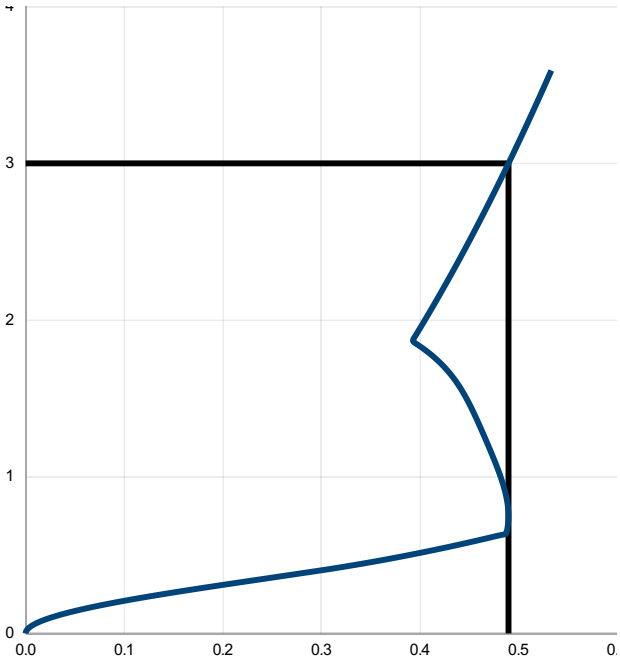

Head (ft)	Flow (cfs)
0.000	0.000
0.103	0.027
0.207	0.099
0.310	0.201
0.414	0.311
0.517	0.403
0.621	0.477
0.724	0.490
0.828	0.489
0.931	0.485
1.034	0.480
1.138	0.474
1.241	0.467
1.345	0.459
1.448	0.452
1.552	0.443
1.655	0.431
1.759	0.415
1.862	0.393
1.966	0.402
2.069	0.412
2.172	0.421
2.276	0.430
2.379	0.439
2.483	0.448
2.586	0.457
2.690	0.465
2.793	0.474
2.897	0.482
3.000	0.490

DESIGN ADVICE

The head/flow characteristics of this SCL-0157-1387-0914-1387 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modeling evaluates the full head/flow characteristic curve.

! **The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

Hydro International
A CRH COMPANY

DATE	6/13/2025 5:29 PM
Site	670 Old Rand
DESIGNER	Laura Rosenbauer
Ref	

SCL-0157-1387-0914-1387

Hydro-Brake® Optimum

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Required Storage

670 S Old Rand Rd 06.16.2025
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Q values per vortex restrictor tables

	Elev	Area (sq. ft.)	Increm. Volume (cu ft.)	Increm. Volume (ac-ft)	Total Volume (ac-ft)		Q(2yr) (cfs)		Q(100yr) (cfs)		Q(Total) (cfs)
	855.25	10,290					0.00		0.00		**0.00**
Tailwater Elevation	855.75	11,770	5,515	0.13	**0.13**		0.00		0.00		**0.00**
NWL	856.25	13,250	6,255	0.14	**0.27**		0.00		0.00		**0.00**
	857.00	15,820	10,901	0.25	**0.52**		0.17		0.00		**0.17**
Model 1-Yr HWL	857.70	18,368	11,966	0.27	**0.80**		0.20		0.00		**0.20**
Design 2-Yr HWL	858.00	19,460	5,674	0.130	**0.93**		0.22		0.00		**0.22**
	859.00	23,340	21,400	0.491	**1.42**		0.30		0.38		**0.68**
	860.00	27,400	25,370	0.582	**2.00**		0.31		0.40		**0.71**
Model 100-Yr HWL	860.78	30,645	22,637	0.520	**2.52**		0.32		0.47		**0.79**
Design 100-Yr HWL	861.00	31,560	6,843	0.157	**2.68**		0.33		0.49		**0.82**

Design 2-yr HWL =	**858.00**	
Model 2-yr HWL =	**857.70**	
Storage at Model 2-yr HWL =	**0.80**	**ac-ft**
Release Rate at Model 2-yr HWL =	**0.20**	**cfs**

Design 100-yr HWL =	**861.00**	
Model 100-yr HWL =	**860.78**	
Storage at Model 100-yr HWL =	**2.52**	**ac-ft**
Release Rate at Model 100-yr HWL =	**0.79**	**cfs**

Compensatory Storage Calculations

670 S Old Rand 06.16.2025

By: LMR

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Compensatory storage to be provided at 1:1.2 ratio for existing depression to be filled at eastern-most single family home

	AREA (SF)		VOLUME (CF)	
STA.	CUT	FILL	CUT	FILL
00+00	215	0		
00+25	0	678	2,688	8,475
00+50	146	121	1,825	9,988
00+75	535	43	8,513	2,050
01+00	423	49	11,975	1,150
01+25	50	63	5,913	1,400
01+50	0	0	625	788
		Total =	31,538	23,850

$$V = \sum L \frac{A_1 + A_2}{2} ; L = 25$$

Required Storage =	**28,620 CF**	(1.2 x 23,850 CF)
Provided Storage =	**31,538 CF**	

RUNOFF VOLUME REDUCTION CREDITS

670 S Old Rand Rd 06.16.2025

LMR

DETENTION FACILITY CREDIT

11770	CF	x	50%	=		
11770	CF	x	50%	=	5,885	CF

NATIVE VEGETATION CREDIT

1.58	Acres	Native Area				
2.85	in	2 yr x 24 hr depth				
0.12	in/hr	2 yr x 24 hr intensity				
0.45		Grass C Value				
0.25		Native Grass C Value				
7313	CF	Total Grass Runoff				
4063	CF	Total Native Runoff				
3250	CF	x	100%	=	3250	CF

ISOLATED WETLAND HYDROLOGY CREDIT

0	CF	x	100%	=	0	CF

WATER QUALITY TREATEMENT CREDIT

40.3	% Imp.	x	0.01	=	0.40	in/ac imp
2.23	Ac Imp			=	0.90	in
3259	CF	x	100%	=	3,259	CF

OFF-SITE RVR CREDIT

0	CF	x	100%	=	0	CF

BMP AND GREEN INFRASTRUCTURE CREDIT

GREEN ROOF

0	SF	Green Roof Area	
0.00	Acres		
2.85	in	2 yr x 24 hr depth	
0.12	in/hr	2 yr x 24 hr - 1 hour intensity	
0.90		Roof C Value	
0.50		Green Roof C Value	(Per City of Chicago)
0	CF	Total Roof Runoff	Q=CIA x 24 hours
0	CF	Total Green Roof Runoff	
0	CF	Total Green Roof Reduction	

INFILTRATION

0	CF	Infiltration Area
36	%	Void Space
0	CF	Total Infiltration Volume

0	CF	x	100%	=	-	CF

TOTAL	12,395	CF

Emergency Overflow Spillway Calculations

670 S Old Rand Rd 06.16.2025
LMR

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Peak Runoff Equation: Q = C i A

Where:	Development Area (A) =	5.52	acres
	Impervious Area =	2.23	acres
	Composite Runoff Coefficient (C) =	0.63	
	Time Of Conentration =	30	min
	100 Year Rainfall Depth (Bulletin 75) =	3.17	inches
	100-Year Rainfall Intensity (i) =	6.34	inches/hour

100-yr Peak Runoff (Q) = 22.10 cfs

Pond Overflow Type = Grass Spillway

Weir Equation: $Q = 2.60\ L\ H^{(3/2)}$ (Broad Crested Weir)

Where:	L (length) =	55.00	ft.
	Spillway Elevation =	862.10	
	Crest Elevation =	862.50	
	Head (h) =	0.40	ft.

Spillway Capacity (Q) = 36.18 cfs

Elevation At 100-yr Peak Runoff = 862.34
Lowest FFE = 863.50

BASIN DEWATERING CALCULATIONS

670 S Old Rand Rd 06.16.2025

ERIKSSON ENGINEERING ASSOCIATES, LTD.

PCBMP STORAGE

BASIN

PCBMP HWL	**856.25**		
FES Invert	**856.25**		
Bottom Pond	**855.25**		
Pipe Invert	**855.15**	**855.15**	Pipe Invert

Water Depth Above Ground Traveling Through Soil	1.00	Ft
Soil Properties — Soil Depth	0.10	Ft
Soil Properties — Topsoil Void Space	36	%
Soil Properties — Equivelent Water Depth	0.04	Ft
Soil Properties — NRCE Hydraulic Conductivity Rate	2.3116	μm/s
	0.33	in/hr
PCBMP Drain-Down Time	**37.95**	**Hr**
Detention Volume	116,741	cu-ft
Release Rate	0.83	cu-ft/sec
Detention Drain-Down Time	**39.07**	**hrs**
Total Dewatering Time	**77.02**	**hrs**

Swale Capacity Calculations

670 S Old Rand Rd
LMR

06.16.2025

ERIKSSON ENGINEERING ASSOCIATES, LTD.

					Swale Geometry											
Swale ID	Nearest Door Elev	Flow Elev	HGL Elev	Freeboard	Flow Depth	Swale Flat Bottom Width	Side Slope 1	Side Slope 2	Total Flow Width	Manning's Number	Slope	Swale Capacity	C Value	10-yr Storm Intensity	Tributary Area	Required Swale Capacity
					d	b	s1	s2	t	n	s	Q	C	i	A	Q
				ft	ft	ft	ft/ft	ft/ft	ft		(ft/ft)	cfs		in/hr	ft^2	cfs
A1	864.00	862.75	863.00	1.00	0.25	1.0	0.10	0.10	5	0.025	0.037	2.14	0.45	5.56	0.20	0.50
A2	865.75	864.00	864.25	1.50	0.25	1.0	0.10	0.10	5	0.025	0.020	1.58	0.45	5.56	0.17	0.43
A3	866.75	865.10	865.35	1.40	0.25	1.0	0.10	0.10	5	0.025	0.025	1.76	0.45	5.56	0.13	0.33
A4	868.00	866.25	866.50	1.50	0.25	1.0	0.10	0.10	5	0.025	0.025	1.76	0.45	5.56	0.09	0.23
A5	869.00	867.30	867.55	1.45	0.25	1.0	0.10	0.10	5	0.025	0.025	1.76	0.45	5.56	0.05	0.13
A6	870.00	868.00	868.25	1.75	0.25	1.0	0.10	0.20	5	0.025	0.020	1.84	0.45	5.56	0.22	0.55
A7	870.50	868.75	869.00	1.50	0.25	1.0	0.10	0.10	5	0.025	0.020	1.58	0.45	5.56	0.20	0.50
A8	871.50	870.00	870.25	1.25	0.25	1.0	0.10	0.10	5	0.025	0.020	1.58	0.45	5.56	0.16	0.40
A9	872.50	870.70	870.95	1.55	0.25	1.0	0.10	0.10	5	0.025	0.020	1.58	0.45	5.56	0.11	0.28
A10	873.50	871.80	872.05	1.45	0.25	1.0	0.10	0.10	5	0.025	0.020	1.58	0.45	5.56	0.08	0.20
B1	863.50	862.30	862.40	1.10	0.10	1.0	0.25	0.10	5	0.025	0.007	0.37	0.45	5.56	0.02	0.05
B2	864.50	863.40	863.50	1.00	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B3	865.75	864.60	864.70	1.05	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B4	866.75	865.60	865.70	1.05	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B5	868.00	866.90	867.00	1.00	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B6	870.00	868.70	868.80	1.20	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B7	870.50	869.30	869.40	1.10	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B8	871.50	870.40	870.50	1.00	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B9	872.50	871.40	871.50	1.00	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
B10	873.00	871.90	872.00	1.00	0.10	1.0	0.25	0.10	5	0.025	0.005	0.31	0.45	5.56	0.02	0.05
C1	866.75	864.60	864.85	1.90	0.25	1.0	0.25	0.04	13	0.025	0.015	4.53	0.45	5.56	0.17	0.43
C2	867.75	865.70	865.95	1.80	0.25	1.0	0.25	0.16	13	0.025	0.045	13.64	0.45	5.56	0.16	0.40
C3	868.75	867.00	867.25	1.50	0.25	1.0	0.25	0.18	13	0.025	0.045	14.09	0.45	5.56	0.14	0.35
C4	869.75	868.40	868.65	1.10	0.25	1.0	0.10	0.24	13	0.025	0.045	11.64	0.45	5.56	0.11	0.28
C5	871.00	869.75	870.00	1.00	0.25	1.0	0.13	0.25	13	0.025	0.045	12.81	0.45	5.56	0.08	0.20
C6	872.00	871.25	871.50	0.50	0.25	1.0	0.10	0.25	13	0.025	0.045	11.71	0.45	5.56	0.06	0.15
D1	868.50	864.90	865.00	3.50	0.10	1.0	0.25	0.02	11	0.025	0.005	0.52	0.45	5.56	0.02	0.05
D2	870.00	866.40	866.50	3.50	0.10	1.0	0.25	0.02	11	0.025	0.005	0.52	0.45	5.56	0.02	0.05
D3	871.50	867.90	868.00	3.50	0.10	1.0	0.25	0.02	11	0.025	0.005	0.52	0.45	5.56	0.02	0.05
D4	873.00	869.40	869.50	3.50	0.10	1.0	0.25	0.02	11	0.025	0.005	0.52	0.45	5.56	0.02	0.05
D5	874.50	870.90	871.00	3.50	0.10	1.0	0.25	0.02	11	0.025	0.005	0.52	0.45	5.56	0.02	0.05
D6	876.50	873.70	874.00	2.50	0.30	1.0	0.25	0.02	11	0.025	0.005	1.68	0.45	5.56	0.02	0.05
E1	875.00	874.20	874.30	0.70	0.10	1.0	0.16	0.25	10	0.025	0.010	1.37	0.45	5.56	0.03	0.08
E2	875.50	874.40	874.50	1.00	0.10	1.0	0.15	0.05	13	0.025	0.010	1.38	0.45	5.56	0.03	0.08
F1	875.00	872.75	873.00	2.00	0.25	1.0	0.25	0.25	14	0.025	0.014	9.53	0.70	5.56	0.23	0.90
F2	873.00	866.40	869.00	4.00	2.60	1.0	0.25	0.25	23	0.025	0.028	387.55	0.55	5.56	0.86	2.63

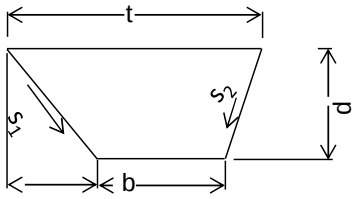
Example Swale Capacity Calculations

670 S Old Rand Rd 06.16.2025
LMR

Typical Swale Geometry: Trapezoidal Cross Section

Swale Geometric Elements:

d = 0.25	ft	Flow Depth	
b = 1.00	ft	Swale Flat Bottom Width	
s_1 = 0.100	ft/ft	Side Slope 1	
s_2 = 0.100	ft/ft	Side Slope 2	
t = 5.00	ft	Total Flow Width	
e = 2.00	ft	(t-b)/2	



Cross Sectional Area:	**a =** bd+de	=	0.75	ft^2
Wetted Perimeter:	**p =** $b+Ls_1+Ls_2$	=	6.02	ft
Hydraulic Radius:	**R =** a/p	=	0.12	ft

Swale Flow Capacity: **Q =** $(1.49/n)*a*R^{2/3}*s^{1/2}$
n = 0.025
s = 0.037 ft/ft

CAPACITY OF SWALE = 2.14 cfs

Grate Capacity Calculations

670 S Old Rand Rd 06.16.2025
LMR

ERIKSSON ENGINEERING ASSOCIATES, LTD.

$C_{impervious}$ = 0.90
$C_{pervious}$ = 0.45

24-Hour Maximum Rainfall (P_{24}) = 8.57 inches

Structure	Catchment Area			Runoff	Tc	Rainfall	Total	Grate					
	Total	Impervious	Pervious	Coeff.	To Struc.	Intensity	Runoff (Q)		Neenah	Open Area	Perimeter	Head	Capacity
	(acres)	(acres)	(acres)	C	(min.)	i (10yr)	(cfs)		#	(SF)	(FT)	(FT)	(cfs)
CB1	0.36	0.02	0.35	0.47	10.00	6.48	1.09	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB2	0.08	0.07	0.01	0.84	10.00	6.48	0.44	**Pavement**	**R-2504-D**	1.00	6.00	0.25	1.95
CB-A1	0.11	0.00	0.11	0.45	10.00	6.48	0.32	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-A2	0.07	0.00	0.07	0.45	10.00	6.48	0.20	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-B1	0.18	0.15	0.03	0.83	10.00	6.48	0.96	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B1.1	0.11	0.07	0.04	0.74	10.00	6.48	0.52	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B1.2	0.10	0.08	0.02	0.81	10.00	6.48	0.52	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B1.3	0.22	0.21	0.01	0.88	10.00	6.48	1.25	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B1.4	0.14	0.13	0.01	0.87	10.00	6.48	0.79	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B1.5	0.09	0.08	0.01	0.85	10.00	6.48	0.50	**Pavement**	**R-2504-D**	1.00	6.00	0.25	1.95
CB-B2	0.10	0.09	0.01	0.86	10.00	6.48	0.55	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B3	0.16	0.09	0.07	0.70	10.00	6.48	0.73	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B4	0.05	0.03	0.02	0.72	10.00	6.48	0.23	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-B5	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-B6	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-B7	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-B8	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-B9	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-B10	0.01	0.00	0.01	0.50	10.00	6.48	0.03	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C1	0.08	0.07	0.01	0.84	10.00	6.48	0.44	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C1.1	0.02	0.02	0.01	0.79	10.00	6.48	0.10	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C1.2	0.14	0.03	0.11	0.55	10.00	6.48	0.50	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C1.3	0.11	0.04	0.07	0.61	10.00	6.48	0.44	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C2	0.16	0.14	0.02	0.84	10.00	6.48	0.87	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C2.1	0.24	0.16	0.08	0.75	10.00	6.48	1.17	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C2.2	0.14	0.13	0.01	0.87	10.00	6.48	0.79	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C2.3	0.16	0.12	0.04	0.79	10.00	6.48	0.82	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C2.4	0.06	0.04	0.02	0.75	10.00	6.48	0.29	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77

Structure	Catchment Area			Runoff	Tc	Rainfall	Total	Grate					
	Total	Impervious	Pervious	Coeff.	To Struc.	Intensity	Runoff (Q)		Neenah	Open Area	Perimeter	Head	Capacity
	(acres)	(acres)	(acres)	C	(min.)	i (10yr)	(cfs)		#	(SF)	(FT)	(FT)	(cfs)
CB-C2.5	0.22	0.17	0.05	0.80	10.00	6.48	1.14	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C2.6	0.04	0.03	0.01	0.79	10.00	6.48	0.20	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C3	0.13	0.11	0.02	0.83	10.00	6.48	0.70	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C3.1	0.04	0.03	0.01	0.79	10.00	6.48	0.20	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C3.2	0.01	0.00	0.01	0.65	10.00	6.48	0.04	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C3.3	0.24	0.14	0.10	0.71	10.00	6.48	1.11	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C3.4	0.14	0.08	0.06	0.70	10.00	6.48	0.64	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C3.5	0.03	0.00	0.03	0.45	10.00	6.48	0.09	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
CB-C4	0.18	0.15	0.03	0.82	10.00	6.48	0.96	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
CB-C5	0.06	0.03	0.03	0.70	10.00	6.48	0.27	**Curb**	**R-3281-A**	1.00	4.30	0.25	1.77
AD-C6	0.02	0.01	0.01	0.60	10.00	6.48	0.08	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-C7	0.02	0.01	0.01	0.60	10.00	6.48	0.08	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-C8	0.02	0.01	0.01	0.60	10.00	6.48	0.08	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-C9	0.02	0.01	0.01	0.60	10.00	6.48	0.08	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05
AD-C10	0.02	0.01	0.01	0.60	10.00	6.48	0.08	**Landscape**	**R-4340-B**	1.10	6.00	0.25	2.05

$$I = \frac{(P_{24} * R)}{T_c \text{ (hours)}}$$

Where R is ratio of x-hour to 24-hour rainfall depth
as given in Bulletin 75

670 S Old Rand Rd
Residential Development
June 16, 2025

APPENDIX III – STORMWATER EXHIBITS

CX-1 EXISTING CONDITIONS

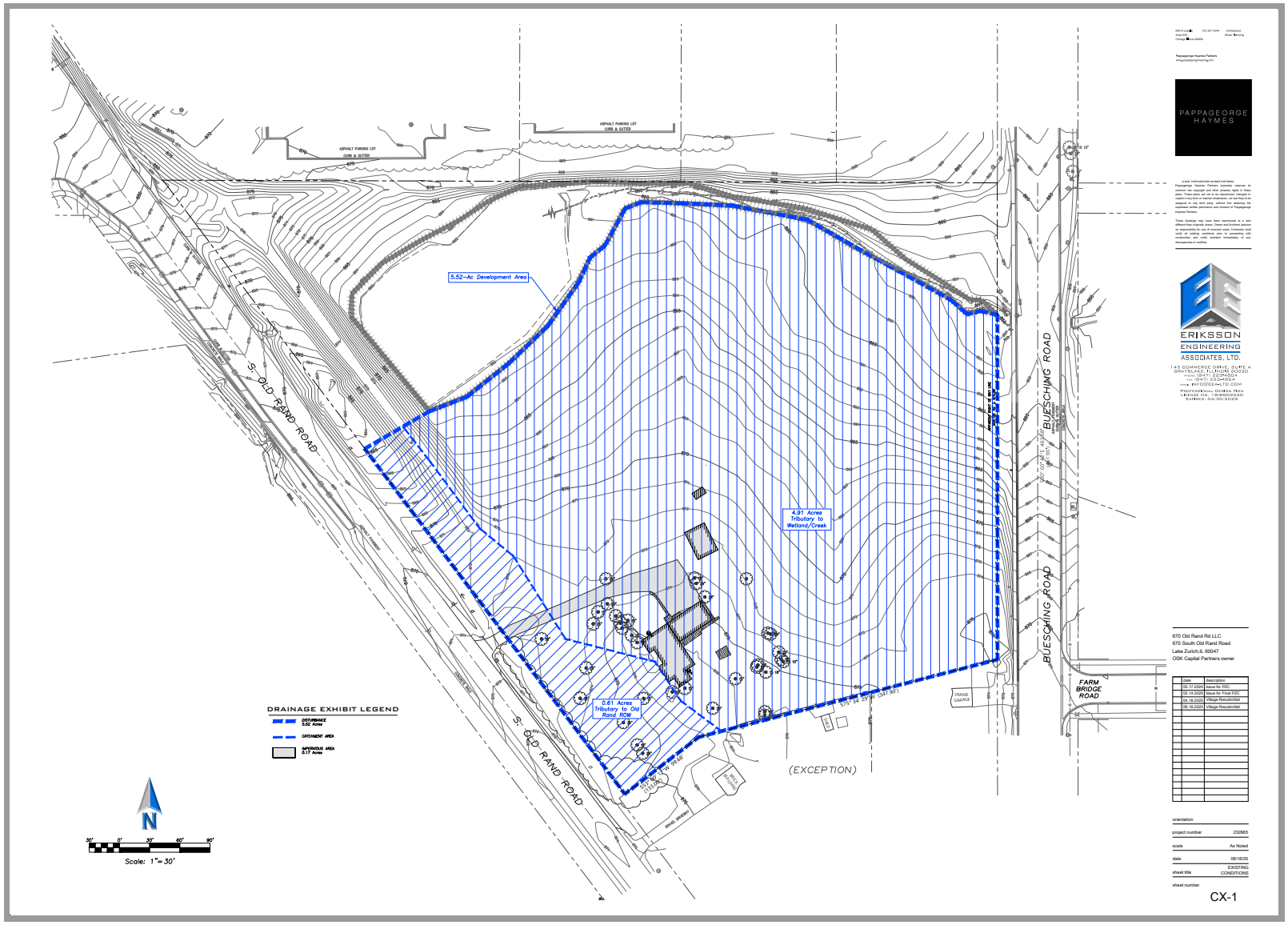
CX-2 PROPOSED CONDITIONS

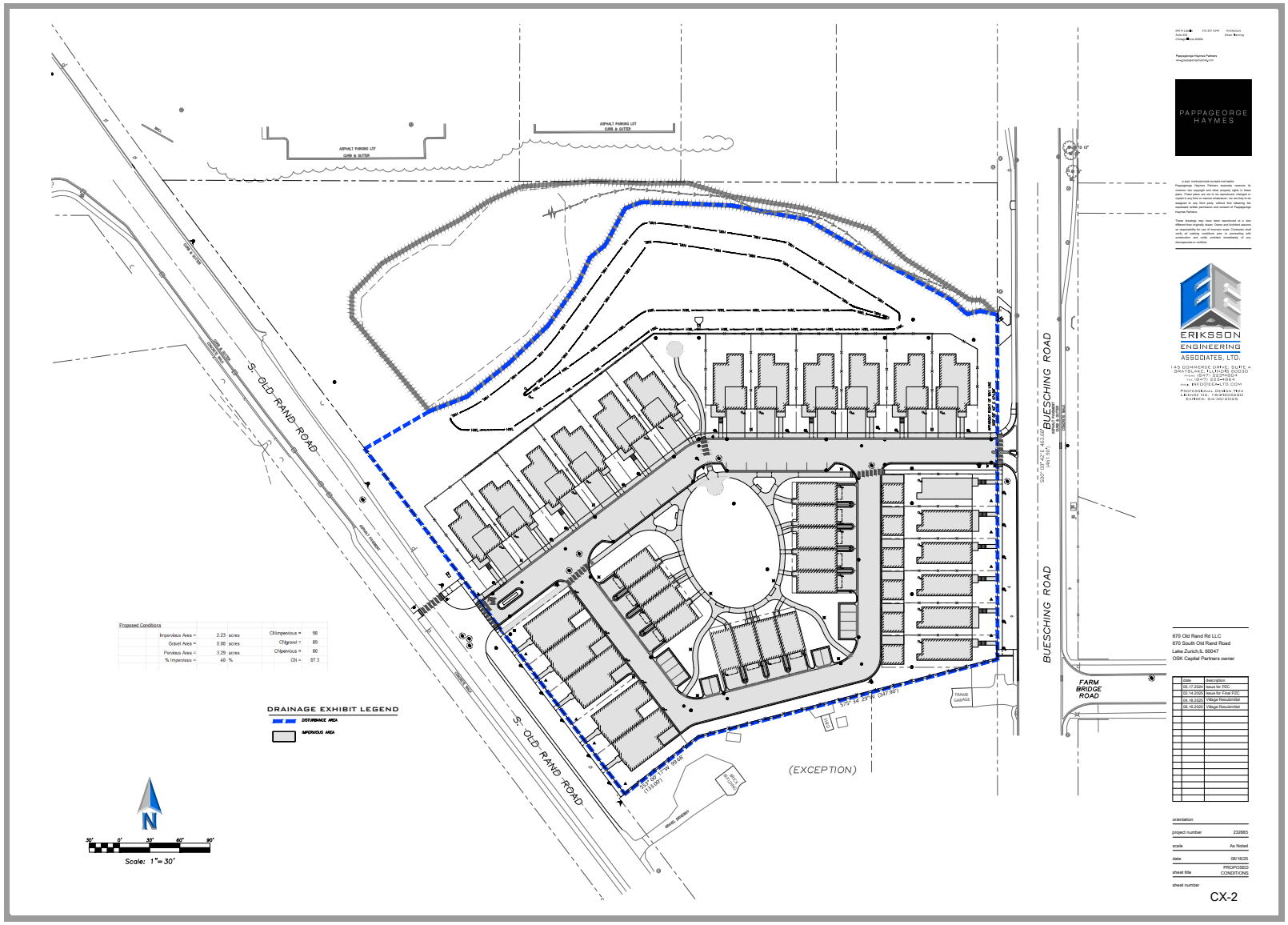
CX-3 TRIBUTARY AREA EXHIBIT

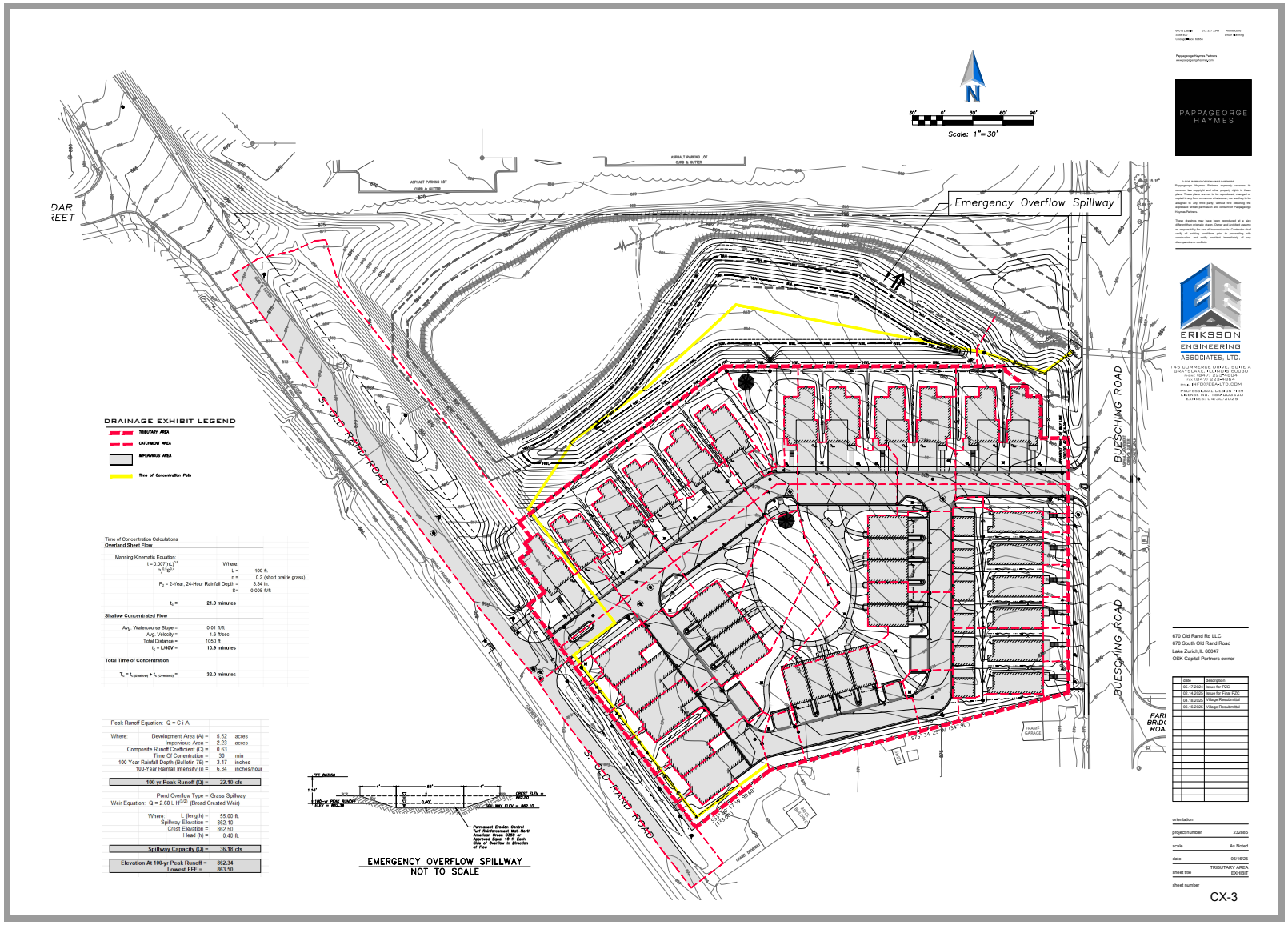
CX-4 COMPENSATORY STORAGE EXHIBIT

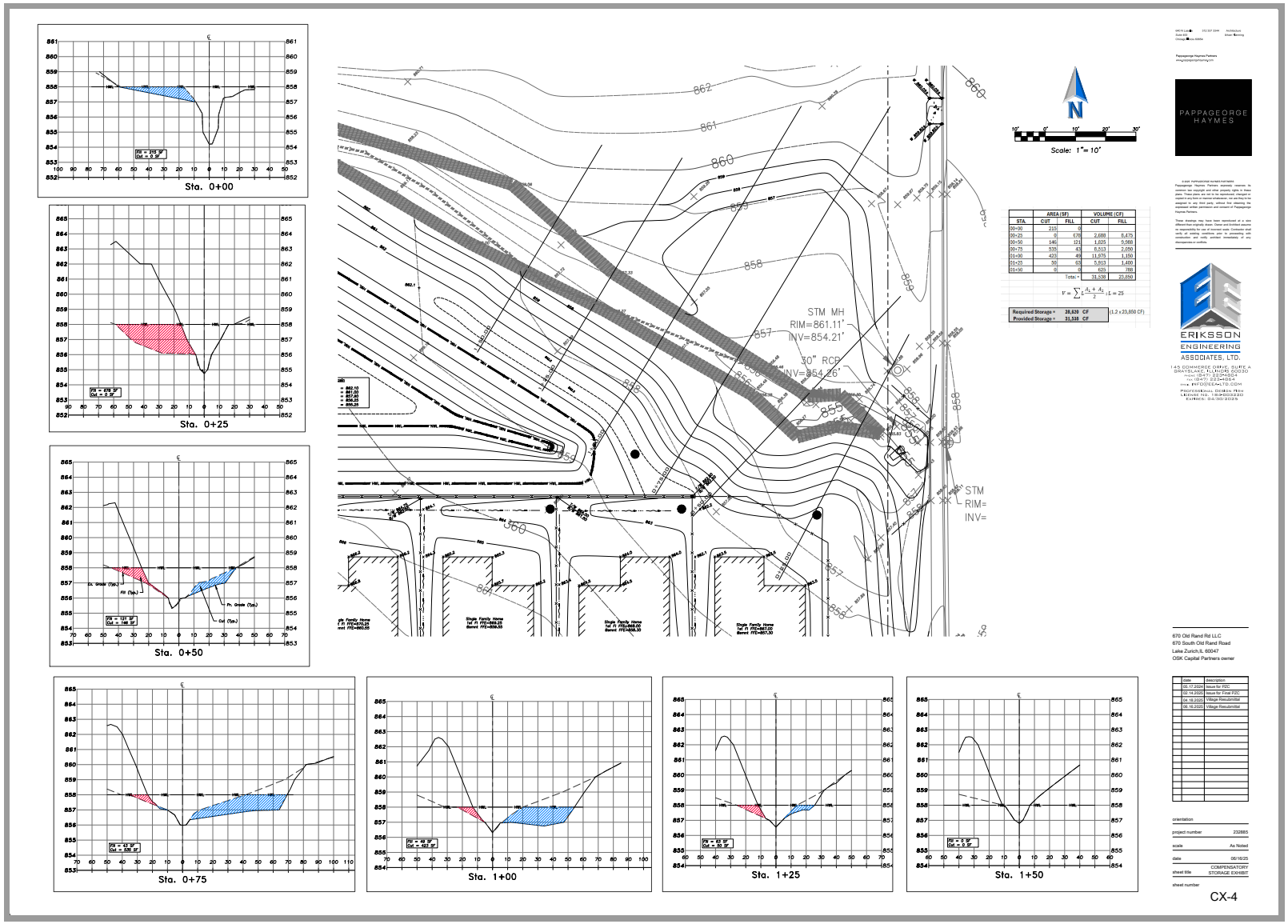
CX-5 BUFFER AVERAGING EXHIBIT

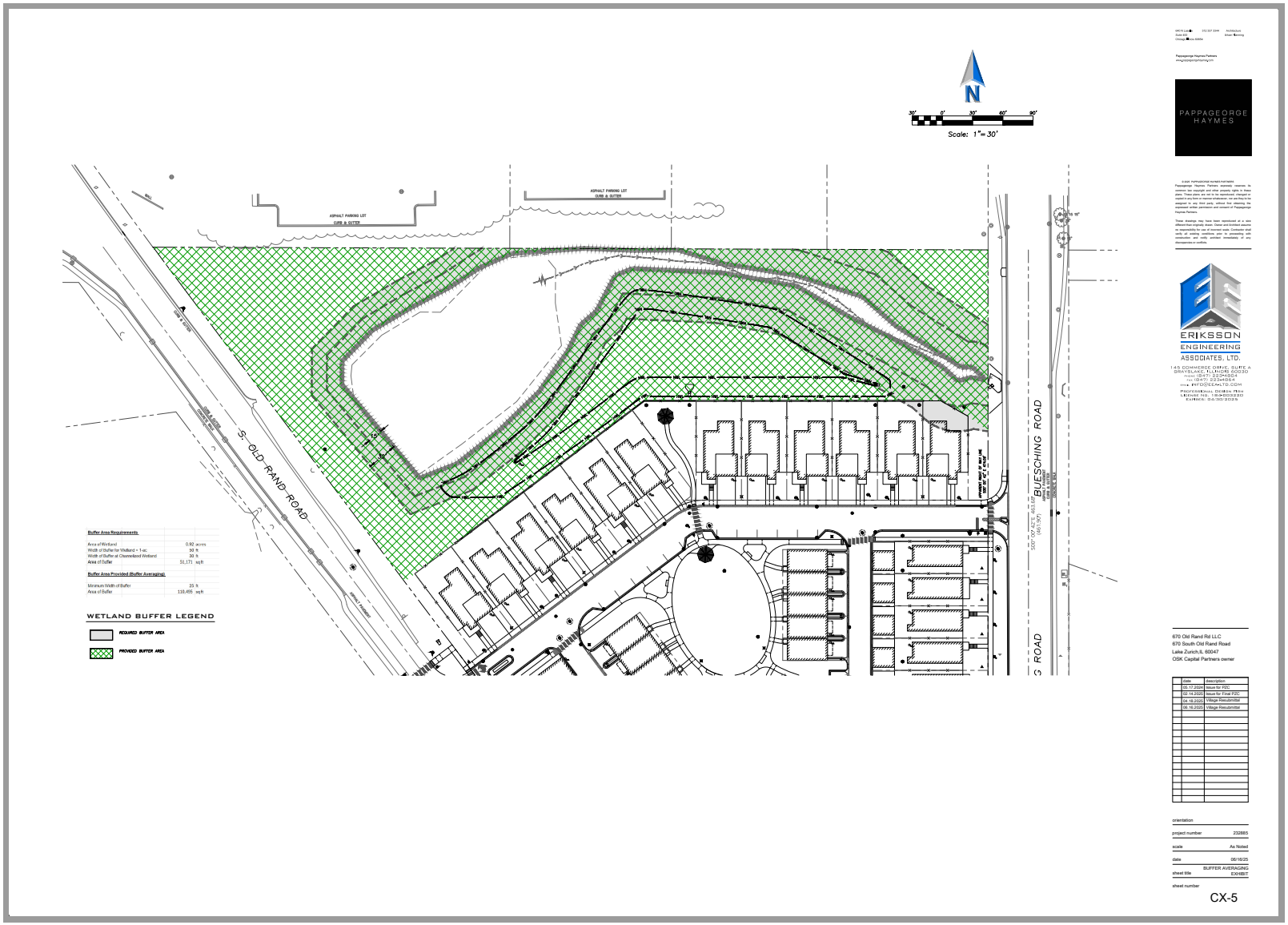
CX-6 SWALE CROSS SECTIONS


5.52-Ac Development Area
4.91 Acres Tributary to Wetland/Creek
0.61 Acres Tributary to Old Rand ROW
S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
DRAINAGE EXHIBIT LEGEND
DISTURBANCE 5.52 Acres
CATCHMENT AREA
IMPERVIOUS AREA 0.17 Acres
N
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title EXISTING CONDITIONS
sheet number
CX-1


S. OLD RAND ROAD
BUESCHING ROAD
FARM BRIDGE ROAD
(EXCEPTION)
DRAINAGE EXHIBIT LEGEND
DISTURBANCE AREA
IMPERVIOUS AREA
Scale: 1"= 30'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title PROPOSED CONDITIONS
sheet number
CX-2


Emergency Overflow Spillway
Scale: 1"= 30'
DRAINAGE EXHIBIT LEGEND
TRIBUTARY AREA
CATCHMENT AREA
IMPERVIOUS AREA
Time of Concentration Path
S. OLD RAND ROAD
BUESCHING ROAD
EMERGENCY OVERFLOW SPILLWAY
NOT TO SCALE
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
CX-3


Sta. 0+00
Sta. 0+25
Sta. 0+50
Sta. 0+75
Sta. 1+00
Sta. 1+25
Sta. 1+50
STM MH
RIM=861.11'
INV=854.21'
30" RCP
INV=854.26'
Scale: 1"= 10'
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
CX-4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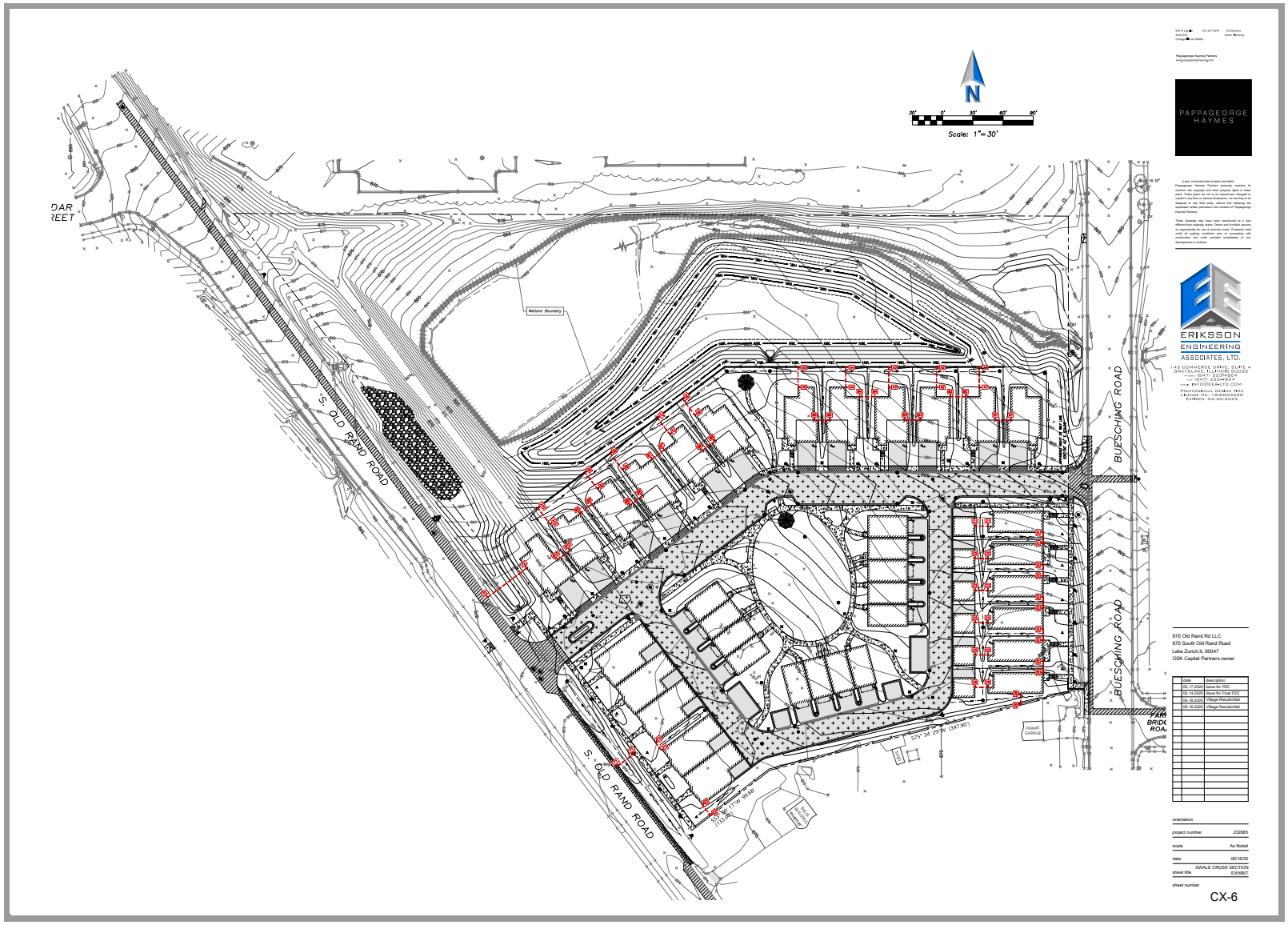
Scale: 1"= 30'
ASPHALT PARKING LOT
CURB & GUTTER
S. OLD RAND ROAD
BUESCHING ROAD
Buffer Area Requirements
Area of Wetland 0.92 acres
Width of Buffer for Wetland = 1 ac. 30 ft
Width of Buffer at Channelized Wetland 30 ft
Area of Buffer 51,171 sq.ft
Buffer Area Provided (Buffer Averaging)
Minimum Width of Buffer 25 ft
Area of Buffer 118,495 sq.ft
WETLAND BUFFER LEGEND
REQUIRED BUFFER AREA
PROVIDED BUFFER AREA
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
(847) 223-4804
INFO@EEA-LTD.COM
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
date description
05.17.2024 Issue for PZC
07.14.2025 Issue for Final PZC
04.18.2025 Village Resubmittal
06.16.2025 Village Resubmittal
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title BUFFER AVERAGING EXHIBIT
sheet number
CX-5


N
Scale: 1"=30'
S. OLD RAND ROAD
BUESCHING ROAD
Wetland Boundary
PAPPAGEORGE HAYMES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
orientation
project number 232885
scale As Noted
date 06/16/25
sheet title SWALE CROSS SECTION EXHIBIT
sheet number
CX-6

APPENDIX IV – WinTR-20 MODEL

```
WinTR-20 Printed Page File      Beginning of Input Data List
C:\WInTR20\670 old rand_moch basin.inp

WinTR-20: Version 3.30                  0         0         0.01      0         ,
670 S Old Rand Road
Proposed Detention

SUB-AREA:
          Proposed  Basin               0.00863   87.3      0.75      YY  Y


STREAM REACH:
          Basin     Outlet              Rest                          YY  Y


STORM ANALYSIS:
          100Yr24Hr                     8.57      H3Q24Hr   2
          2Yr24Hr                       3.34      H3Q24Hr   2



STRUCTURE RATING:
          Rest      855.25
                    855.25    0.        0.
                    855.75    0.0001    .13
                    856.25    0.0002    0.27
                    857.00    0.17      0.52
                    858.00    0.20      0.93
                    859.00    0.68      1.42
                    860.00    0.71      2.00
                    861.00    0.82      2.68



RAINFALL DISTRIBUTION:
          H3Q24Hr             1.0
                    0.        0.0205    0.0431    0.0667    0.0912
                    0.1171    0.1436    0.1691    0.1964    0.2278
                    0.2633    0.3093    0.3635    0.4392    0.5211
                    0.6102    0.6989    0.7819    0.8492    0.8974
                    0.9311    0.9534    0.9706    0.9856    1.00



GLOBAL OUTPUT:
          2         0.01      0.1       YY  Y     YY  Y



WinTR-20 Printed Page File      End of Input Data List
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670 S Old Rand Road
Proposed Detention

Name of printed page file:
C:\WInTR20\670 old rand_moch basin.out

STORM 100Yr24Hr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Proposed	0.009		7.041		16.09	4.04	467.68

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
2.000	0.661E-02	0.02	0.04	0.05	0.07	0.10	0.12
2.700	0.14	0.17	0.19	0.21	0.23	0.26	0.28
3.400	0.30	0.32	0.34	0.36	0.38	0.40	0.42
4.100	0.44	0.46	0.47	0.49	0.51	0.53	0.55
4.800	0.57	0.59	0.60	0.62	0.63	0.64	0.66
5.500	0.67	0.69	0.70	0.71	0.73	0.74	0.75
6.200	0.76	0.76	0.77	0.77	0.78	0.78	0.79
6.900	0.80	0.80	0.81	0.82	0.83	0.85	0.86
7.600	0.88	0.89	0.90	0.91	0.92	0.93	0.94
8.300	0.97	0.99	1.02	1.05	1.07	1.09	1.11
9.000	1.12	1.13	1.15	1.17	1.20	1.23	1.26
9.700	1.29	1.31	1.32	1.34	1.35	1.38	1.43
10.400	1.50	1.57	1.64	1.69	1.74	1.77	1.79
11.100	1.82	1.85	1.89	1.95	2.02	2.07	2.12
11.800	2.16	2.19	2.21	2.24	2.29	2.39	2.54
12.500	2.69	2.83	2.95	3.04	3.10	3.15	3.19
13.200	3.23	3.28	3.34	3.40	3.45	3.49	3.53
13.900	3.55	3.58	3.60	3.62	3.67	3.72	3.78
14.600	3.84	3.88	3.92	3.94	3.96	3.98	3.99
15.300	4.00	4.01	4.01	4.02	4.02	4.03	4.03
16.000	4.03	4.04	4.03	4.01	3.97	3.94	3.90
16.700	3.87	3.86	3.84	3.84	3.82	3.79	3.72
17.400	3.61	3.50	3.39	3.31	3.25	3.21	3.18
18.100	3.15	3.10	3.00	2.87	2.73	2.59	2.49
18.800	2.41	2.36	2.32	2.29	2.24	2.16	2.06
19.500	1.95	1.85	1.76	1.70	1.66	1.63	1.61
20.200	1.57	1.51	1.43	1.34	1.26	1.19	1.15
20.900	1.11	1.09	1.07	1.05	1.02	0.98	0.94
21.600	0.90	0.87	0.85	0.84	0.83	0.82	0.81
22.300	0.79	0.78	0.76	0.74	0.73	0.72	0.71
23.000	0.71	0.71	0.70	0.70	0.69	0.69	0.68
23.700	0.68	0.68	0.68	0.67	0.67	0.64	0.57
24.400	0.47	0.37	0.27	0.19	0.13	0.09	0.07
25.100	0.05	0.03	0.02	0.02	0.01	0.0	

670 S Old Rand Road
Proposed Detention

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Upstream	7.041		16.09	4.04	467.68

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
2.000	0.661E-02	0.02	0.04	0.05	0.07	0.10	0.12
2.700	0.14	0.17	0.19	0.21	0.23	0.26	0.28
3.400	0.30	0.32	0.34	0.36	0.38	0.40	0.42
4.100	0.44	0.46	0.47	0.49	0.51	0.53	0.55
4.800	0.57	0.59	0.60	0.62	0.63	0.64	0.66
5.500	0.67	0.69	0.70	0.71	0.73	0.74	0.75
6.200	0.76	0.76	0.77	0.77	0.78	0.78	0.79
6.900	0.80	0.80	0.81	0.82	0.83	0.85	0.86
7.600	0.88	0.89	0.90	0.91	0.92	0.93	0.94
8.300	0.97	0.99	1.02	1.05	1.07	1.09	1.11
9.000	1.12	1.13	1.15	1.17	1.20	1.23	1.26
9.700	1.29	1.31	1.32	1.34	1.35	1.38	1.43
10.400	1.50	1.57	1.64	1.69	1.74	1.77	1.79
11.100	1.82	1.85	1.89	1.95	2.02	2.07	2.12
11.800	2.16	2.19	2.21	2.24	2.29	2.39	2.54
12.500	2.69	2.83	2.95	3.04	3.10	3.15	3.19
13.200	3.23	3.28	3.34	3.40	3.45	3.49	3.53
13.900	3.55	3.58	3.60	3.62	3.67	3.72	3.78
14.600	3.84	3.88	3.92	3.94	3.96	3.98	3.99
15.300	4.00	4.01	4.01	4.02	4.02	4.03	4.03
16.000	4.03	4.04	4.03	4.01	3.97	3.94	3.90
16.700	3.87	3.86	3.84	3.84	3.82	3.79	3.72
17.400	3.61	3.50	3.39	3.31	3.25	3.21	3.18
18.100	3.15	3.10	3.00	2.87	2.73	2.59	2.49
18.800	2.41	2.36	2.32	2.29	2.24	2.16	2.06
19.500	1.95	1.85	1.76	1.70	1.66	1.63	1.61
20.200	1.57	1.51	1.43	1.34	1.26	1.19	1.15
20.900	1.11	1.09	1.07	1.05	1.02	0.98	0.94
21.600	0.90	0.87	0.85	0.84	0.83	0.82	0.81
22.300	0.79	0.78	0.76	0.74	0.73	0.72	0.71
23.000	0.71	0.71	0.70	0.70	0.69	0.69	0.68
23.700	0.68	0.68	0.68	0.67	0.67	0.64	0.57
24.400	0.47	0.37	0.27	0.19	0.13	0.09	0.07
25.100	0.05	0.03	0.02	0.02	0.01	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Downstream	6.423	860.78	22.30	0.80	92.22

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
8.200	0.456E-02	0.01	0.02	0.03	0.03	0.04	0.04
8.900	0.05	0.05	0.06	0.07	0.07	0.08	0.09
9.600	0.09	0.10	0.11	0.11	0.12	0.13	0.13
10.300	0.14	0.15	0.15	0.16	0.17	0.17	0.17
11.000	0.17	0.17	0.17	0.18	0.18	0.18	0.18
11.700	0.18	0.18	0.18	0.18	0.19	0.19	0.19
12.400	0.19	0.19	0.19	0.19	0.20	0.20	0.20
13.100	0.21	0.24	0.26	0.29	0.31	0.34	0.36
13.800	0.39	0.41	0.44	0.46	0.49	0.51	0.54
14.500	0.56	0.59	0.62	0.64	0.67	0.68	0.68
15.200	0.68	0.69	0.69	0.69	0.69	0.69	0.69
15.900	0.69	0.70	0.70	0.70	0.70	0.70	0.70
16.600	0.70	0.70	0.71	0.71	0.71	0.71	0.71
17.300	0.72	0.72	0.73	0.73	0.73	0.74	0.74
18.000	0.74	0.75	0.75	0.75	0.76	0.76	0.76
18.700	0.76	0.77	0.77	0.77	0.77	0.77	0.78
19.400	0.78	0.78	0.78	0.78	0.78	0.79	0.79
20.100	0.79	0.79	0.79	0.79	0.79	0.79	0.79
20.800	0.79	0.79	0.79	0.79	0.79	0.79	0.80
21.500	0.80	0.80	0.80	0.80	0.80	0.80	0.80
22.200	0.80	0.80	0.80	0.80	0.80	0.80	0.80
22.900	0.80	0.80	0.80	0.80	0.80	0.79	0.79
23.600	0.79	0.79	0.79	0.79	0.79	0.79	0.79
24.300	0.79	0.79	0.79	0.79	0.79	0.79	0.79
25.000	0.79	0.79	0.79	0.79	0.78	0.78	0.78
25.700	0.78	0.78	0.78	0.78	0.78	0.78	0.78
26.400	0.77	0.77	0.77	0.77	0.77	0.77	0.77
27.100	0.77	0.77	0.76	0.76	0.76	0.76	0.76
27.800	0.76	0.76	0.76	0.76	0.76	0.75	0.75
28.500	0.75	0.75	0.75	0.75	0.75	0.75	0.75
29.200	0.75	0.74	0.74	0.74	0.74	0.74	0.74
29.900	0.74	0.74	0.74	0.74	0.73	0.73	0.73
30.600	0.73	0.73	0.73	0.73	0.73	0.73	0.73
31.300	0.72	0.72	0.72	0.72	0.72	0.72	0.72
32.000	0.72	0.72	0.72	0.72	0.71	0.71	0.71
32.700	0.71	0.71	0.71	0.71	0.71	0.71	0.71
33.400	0.71	0.71	0.71	0.71	0.71	0.71	0.71
34.100	0.71	0.71	0.71	0.71	0.71	0.70	0.70
34.800	0.70	0.70	0.70	0.70	0.70	0.70	0.70
35.500	0.70	0.70	0.70	0.70	0.70	0.70	0.70
36.200	0.70	0.70	0.70	0.70	0.70	0.70	0.70
36.900	0.70	0.70	0.70	0.70	0.70	0.70	0.70
37.600	0.70	0.70	0.70	0.69	0.69	0.69	0.69
38.300	0.69	0.69	0.69	0.69	0.69	0.69	0.69
39.000	0.69	0.69	0.69	0.69	0.69	0.69	0.69
39.700	0.69	0.69	0.69	0.69	0.69	0.69	0.69
40.400	0.69	0.69	0.69	0.69	0.69	0.69	0.69
41.100	0.69	0.69	0.68	0.68	0.68	0.68	0.68
41.800	0.68	0.68	0.68	0.68	0.68	0.68	0.68
42.500	0.68	0.68	0.68	0.68	0.68	0.68	0.67
43.200	0.67	0.66	0.66	0.65	0.65	0.64	0.64

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
43.900	0.63	0.62	0.62	0.61	0.61	0.61	0.60
44.600	0.60	0.59	0.59	0.58	0.58	0.57	0.57
45.300	0.56	0.56	0.55	0.55	0.54	0.54	0.54
46.000	0.53	0.53	0.52	0.52	0.51	0.51	0.51
46.700	0.50	0.50	0.49	0.49	0.49	0.48	0.48
47.400	0.47	0.47	0.47	0.46	0.46	0.46	0.45
48.100	0.45	0.44	0.44	0.44	0.43	0.43	0.43
48.800	0.42	0.42	0.42	0.41	0.41	0.41	0.40
49.500	0.40	0.40	0.39	0.39	0.39	0.38	0.38
50.200	0.38	0.38	0.37	0.37	0.37	0.36	0.36
50.900	0.36	0.35	0.35	0.35	0.35	0.34	0.34
51.600	0.34	0.34	0.33	0.33	0.33	0.32	0.32
52.300	0.32	0.32	0.31	0.31	0.31	0.31	0.30
53.000	0.30	0.30	0.30	0.29	0.29	0.29	0.29
53.700	0.28	0.28	0.28	0.28	0.28	0.27	0.27
54.400	0.27	0.27	0.26	0.26	0.26	0.26	0.26
55.100	0.25	0.25	0.25	0.25	0.25	0.24	0.24
55.800	0.24	0.24	0.24	0.23	0.23	0.23	0.23
56.500	0.23	0.23	0.22	0.22	0.22	0.22	0.22
57.200	0.21	0.21	0.21	0.21	0.21	0.21	0.20
57.900	0.20	0.20	0.20	0.20	0.20	0.20	0.20
58.600	0.20	0.20	0.20	0.20	0.20	0.20	0.20
59.300	0.20	0.20	0.20	0.20	0.20	0.20	0.20
60.000	0.20	0.20	0.20	0.20	0.20	0.20	0.20
60.700	0.20	0.20	0.20	0.20	0.20	0.20	0.20
61.400	0.20	0.20	0.20	0.20	0.20	0.20	0.20
62.100	0.20	0.20	0.19	0.19	0.19	0.19	0.19
62.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
63.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
64.200	0.19	0.19	0.19	0.19	0.19	0.19	0.19
64.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
65.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
66.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
67.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
67.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
68.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
69.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
69.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
70.500	0.19	0.19	0.19	0.19	0.19	0.18	0.18
71.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
71.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
72.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
73.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
74.000	0.18	0.18	0.18	0.18	0.18	0.18	0.18
74.700	0.18	0.18	0.18	0.18	0.18	0.18	0.18
75.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18
76.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
76.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
77.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
78.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
78.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
79.600	0.18	0.18	0.18	0.18	0.18	0.18	0.17
80.300	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.000	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
82.400	0.17	0.17	0.17	0.17	0.17	0.17	0.17
83.100	0.17	0.17	0.17	0.17	0.17	0.17	0.17
83.800	0.17	0.17	0.17	0.17	0.17	0.17	0.17
84.500	0.17	0.17	0.17	0.17	0.17	0.17	0.17
85.200	0.17	0.17	0.17	0.16	0.16	0.16	0.16
85.900	0.16	0.16	0.16	0.16	0.16	0.16	0.16
86.600	0.15	0.15	0.15	0.15	0.15	0.15	0.15
87.300	0.15	0.15	0.15	0.15	0.15	0.14	0.14
88.000	0.14	0.14	0.14	0.14	0.14	0.14	0.14
88.700	0.14	0.14	0.14	0.14	0.13	0.13	0.13
89.400	0.13	0.13	0.13	0.13	0.13	0.13	0.13
90.100	0.13	0.13	0.13	0.13	0.12	0.12	0.12
90.800	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.500	0.12	0.12	0.12	0.12	0.12	0.11	0.11
92.200	0.11	0.11	0.11	0.11	0.11	0.11	0.11
92.900	0.11	0.11	0.11	0.11	0.11	0.11	0.11
93.600	0.10	0.10	0.10	0.10	0.10	0.10	0.10
94.300	0.10	0.10	0.10	0.10	0.10	0.10	0.10
95.000	0.10	0.10	0.10	0.10	0.09	0.09	0.09
95.700	0.09	0.09	0.09	0.09	0.09	0.09	0.09
96.400	0.09	0.09	0.09	0.09	0.09	0.09	0.09
97.100	0.09	0.09	0.08	0.08	0.08	0.08	0.08
97.800	0.08	0.08	0.08	0.08	0.08	0.08	0.08
98.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
99.200	0.08	0.08	0.08	0.08	0.07	0.07	0.07
99.900	0.07	0.07	0.07	0.07	0.07	0.07	0.07
100.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
101.300	0.07	0.07	0.07	0.07	0.07	0.07	0.07
102.000	0.07	0.06	0.06	0.06	0.06	0.06	0.06
102.700	0.06	0.06	0.06	0.06	0.06	0.06	0.06
103.400	0.06	0.06	0.06	0.06	0.06	0.06	0.06
104.100	0.06	0.06	0.06	0.06	0.06	0.06	0.06
104.800	0.06	0.06	0.06	0.05	0.05	0.05	0.05
105.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
106.200	0.05	0.05	0.05	0.05	0.05	0.05	0.05
106.900	0.05	0.05	0.05	0.05	0.05	0.05	0.05
107.600	0.05	0.05	0.05	0.05	0.05	0.05	0.05
108.300	0.05	0.05	0.05	0.05	0.04	0.04	0.04
109.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
109.700	0.04	0.04	0.04	0.04	0.04	0.04	0.04
110.400	0.04	0.04	0.04	0.04	0.04	0.04	0.04
111.100	0.04	0.04	0.04	0.04	0.04	0.04	0.04
111.800	0.04	0.04	0.04	0.04	0.04	0.04	0.04
112.500	0.04	0.04	0.04	0.04	0.04	0.04	0.04
113.200	0.03	0.03	0.03	0.03	0.03	0.03	0.03
113.900	0.03	0.03	0.03	0.03	0.03	0.03	0.03
114.600	0.03	0.03	0.03	0.03	0.03	0.03	0.03

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
115.300	0.03	0.03	0.03	0.03	0.03	0.03	0.03
116.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
116.700	0.03	0.03	0.03	0.03	0.03	0.03	0.03
117.400	0.03	0.03	0.03	0.03	0.03	0.03	0.03
118.100	0.03	0.03	0.03	0.03	0.03	0.03	0.03
118.800	0.03	0.03	0.03	0.02	0.02	0.02	0.02
119.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.900	0.02	0.02	0.02	0.02	0.02	0.02	0.02
121.600	0.02	0.02	0.02	0.02	0.02	0.02	0.02
122.300	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.700	0.02	0.02	0.02	0.02	0.02	0.02	0.02
124.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.800	0.02	0.02	0.02	0.02	0.02	0.02	0.02
126.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
127.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
127.900	0.02	0.02	0.02	0.01	0.01	0.01	0.01
128.600	0.01	0.01	0.01	0.01	0.01	0.01	0.01
129.300	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.700	0.01	0.01	0.01	0.01	0.01	0.01	0.01
131.400	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.100	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.800	0.01	0.01	0.01	0.01	0.01	0.01	0.01
133.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.200	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.900	0.01	0.01	0.01	0.01	0.01	0.01	0.0

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
OUTLET	0.009		6.423		22.30	0.80	92.22

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
8.200	0.456E-02	0.01	0.02	0.03	0.03	0.04	0.04
8.900	0.05	0.05	0.06	0.07	0.07	0.08	0.09
9.600	0.09	0.10	0.11	0.11	0.12	0.13	0.13
10.300	0.14	0.15	0.15	0.16	0.17	0.17	0.17
11.000	0.17	0.17	0.17	0.18	0.18	0.18	0.18
11.700	0.18	0.18	0.18	0.18	0.19	0.19	0.19
12.400	0.19	0.19	0.19	0.19	0.20	0.20	0.20
13.100	0.21	0.24	0.26	0.29	0.31	0.34	0.36
13.800	0.39	0.41	0.44	0.46	0.49	0.51	0.54
14.500	0.56	0.59	0.62	0.64	0.67	0.68	0.68

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
15.200	0.68	0.69	0.69	0.69	0.69	0.69	0.69
15.900	0.69	0.70	0.70	0.70	0.70	0.70	0.70
16.600	0.70	0.70	0.71	0.71	0.71	0.71	0.71
17.300	0.72	0.72	0.73	0.73	0.73	0.74	0.74
18.000	0.74	0.75	0.75	0.75	0.76	0.76	0.76
18.700	0.76	0.77	0.77	0.77	0.77	0.77	0.78
19.400	0.78	0.78	0.78	0.78	0.78	0.79	0.79
20.100	0.79	0.79	0.79	0.79	0.79	0.79	0.79
20.800	0.79	0.79	0.79	0.79	0.79	0.79	0.80
21.500	0.80	0.80	0.80	0.80	0.80	0.80	0.80
22.200	0.80	0.80	0.80	0.80	0.80	0.80	0.80
22.900	0.80	0.80	0.80	0.80	0.80	0.79	0.79
23.600	0.79	0.79	0.79	0.79	0.79	0.79	0.79
24.300	0.79	0.79	0.79	0.79	0.79	0.79	0.79
25.000	0.79	0.79	0.79	0.79	0.78	0.78	0.78
25.700	0.78	0.78	0.78	0.78	0.78	0.78	0.78
26.400	0.77	0.77	0.77	0.77	0.77	0.77	0.77
27.100	0.77	0.77	0.76	0.76	0.76	0.76	0.76
27.800	0.76	0.76	0.76	0.76	0.76	0.75	0.75
28.500	0.75	0.75	0.75	0.75	0.75	0.75	0.75
29.200	0.75	0.74	0.74	0.74	0.74	0.74	0.74
29.900	0.74	0.74	0.74	0.74	0.73	0.73	0.73
30.600	0.73	0.73	0.73	0.73	0.73	0.73	0.73
31.300	0.72	0.72	0.72	0.72	0.72	0.72	0.72
32.000	0.72	0.72	0.72	0.72	0.71	0.71	0.71
32.700	0.71	0.71	0.71	0.71	0.71	0.71	0.71
33.400	0.71	0.71	0.71	0.71	0.71	0.71	0.71
34.100	0.71	0.71	0.71	0.71	0.71	0.70	0.70
34.800	0.70	0.70	0.70	0.70	0.70	0.70	0.70
35.500	0.70	0.70	0.70	0.70	0.70	0.70	0.70
36.200	0.70	0.70	0.70	0.70	0.70	0.70	0.70
36.900	0.70	0.70	0.70	0.70	0.70	0.70	0.70
37.600	0.70	0.70	0.70	0.69	0.69	0.69	0.69
38.300	0.69	0.69	0.69	0.69	0.69	0.69	0.69
39.000	0.69	0.69	0.69	0.69	0.69	0.69	0.69
39.700	0.69	0.69	0.69	0.69	0.69	0.69	0.69
40.400	0.69	0.69	0.69	0.69	0.69	0.69	0.69
41.100	0.69	0.69	0.68	0.68	0.68	0.68	0.68
41.800	0.68	0.68	0.68	0.68	0.68	0.68	0.68
42.500	0.68	0.68	0.68	0.68	0.68	0.68	0.67
43.200	0.67	0.66	0.66	0.65	0.65	0.64	0.64
43.900	0.63	0.62	0.62	0.61	0.61	0.61	0.60
44.600	0.60	0.59	0.59	0.58	0.58	0.57	0.57
45.300	0.56	0.56	0.55	0.55	0.54	0.54	0.54
46.000	0.53	0.53	0.52	0.52	0.51	0.51	0.51
46.700	0.50	0.50	0.49	0.49	0.49	0.48	0.48
47.400	0.47	0.47	0.47	0.46	0.46	0.46	0.45
48.100	0.45	0.44	0.44	0.44	0.43	0.43	0.43
48.800	0.42	0.42	0.42	0.41	0.41	0.41	0.40
49.500	0.40	0.40	0.39	0.39	0.39	0.38	0.38
50.200	0.38	0.38	0.37	0.37	0.37	0.36	0.36

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
50.900	0.36	0.35	0.35	0.35	0.35	0.34	0.34
51.600	0.34	0.34	0.33	0.33	0.33	0.32	0.32
52.300	0.32	0.32	0.31	0.31	0.31	0.31	0.30
53.000	0.30	0.30	0.30	0.29	0.29	0.29	0.29
53.700	0.28	0.28	0.28	0.28	0.28	0.27	0.27
54.400	0.27	0.27	0.26	0.26	0.26	0.26	0.26
55.100	0.25	0.25	0.25	0.25	0.25	0.24	0.24
55.800	0.24	0.24	0.24	0.23	0.23	0.23	0.23
56.500	0.23	0.23	0.22	0.22	0.22	0.22	0.22
57.200	0.21	0.21	0.21	0.21	0.21	0.21	0.20
57.900	0.20	0.20	0.20	0.20	0.20	0.20	0.20
58.600	0.20	0.20	0.20	0.20	0.20	0.20	0.20
59.300	0.20	0.20	0.20	0.20	0.20	0.20	0.20
60.000	0.20	0.20	0.20	0.20	0.20	0.20	0.20
60.700	0.20	0.20	0.20	0.20	0.20	0.20	0.20
61.400	0.20	0.20	0.20	0.20	0.20	0.20	0.20
62.100	0.20	0.20	0.19	0.19	0.19	0.19	0.19
62.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
63.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
64.200	0.19	0.19	0.19	0.19	0.19	0.19	0.19
64.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
65.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
66.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
67.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
67.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
68.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
69.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
69.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
70.500	0.19	0.19	0.19	0.19	0.19	0.18	0.18
71.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
71.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
72.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
73.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
74.000	0.18	0.18	0.18	0.18	0.18	0.18	0.18
74.700	0.18	0.18	0.18	0.18	0.18	0.18	0.18
75.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18
76.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
76.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
77.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
78.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
78.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
79.600	0.18	0.18	0.18	0.18	0.18	0.18	0.17
80.300	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.000	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
82.400	0.17	0.17	0.17	0.17	0.17	0.17	0.17
83.100	0.17	0.17	0.17	0.17	0.17	0.17	0.17
83.800	0.17	0.17	0.17	0.17	0.17	0.17	0.17
84.500	0.17	0.17	0.17	0.17	0.17	0.17	0.17
85.200	0.17	0.17	0.17	0.16	0.16	0.16	0.16
85.900	0.16	0.16	0.16	0.16	0.16	0.16	0.16

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
86.600	0.15	0.15	0.15	0.15	0.15	0.15	0.15
87.300	0.15	0.15	0.15	0.15	0.15	0.14	0.14
88.000	0.14	0.14	0.14	0.14	0.14	0.14	0.14
88.700	0.14	0.14	0.14	0.14	0.13	0.13	0.13
89.400	0.13	0.13	0.13	0.13	0.13	0.13	0.13
90.100	0.13	0.13	0.13	0.13	0.12	0.12	0.12
90.800	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.500	0.12	0.12	0.12	0.12	0.12	0.11	0.11
92.200	0.11	0.11	0.11	0.11	0.11	0.11	0.11
92.900	0.11	0.11	0.11	0.11	0.11	0.11	0.11
93.600	0.10	0.10	0.10	0.10	0.10	0.10	0.10
94.300	0.10	0.10	0.10	0.10	0.10	0.10	0.10
95.000	0.10	0.10	0.10	0.10	0.09	0.09	0.09
95.700	0.09	0.09	0.09	0.09	0.09	0.09	0.09
96.400	0.09	0.09	0.09	0.09	0.09	0.09	0.09
97.100	0.09	0.09	0.08	0.08	0.08	0.08	0.08
97.800	0.08	0.08	0.08	0.08	0.08	0.08	0.08
98.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
99.200	0.08	0.08	0.08	0.08	0.07	0.07	0.07
99.900	0.07	0.07	0.07	0.07	0.07	0.07	0.07
100.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
101.300	0.07	0.07	0.07	0.07	0.07	0.07	0.07
102.000	0.07	0.06	0.06	0.06	0.06	0.06	0.06
102.700	0.06	0.06	0.06	0.06	0.06	0.06	0.06
103.400	0.06	0.06	0.06	0.06	0.06	0.06	0.06
104.100	0.06	0.06	0.06	0.06	0.06	0.06	0.06
104.800	0.06	0.06	0.06	0.05	0.05	0.05	0.05
105.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
106.200	0.05	0.05	0.05	0.05	0.05	0.05	0.05
106.900	0.05	0.05	0.05	0.05	0.05	0.05	0.05
107.600	0.05	0.05	0.05	0.05	0.05	0.05	0.05
108.300	0.05	0.05	0.05	0.05	0.04	0.04	0.04
109.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
109.700	0.04	0.04	0.04	0.04	0.04	0.04	0.04
110.400	0.04	0.04	0.04	0.04	0.04	0.04	0.04
111.100	0.04	0.04	0.04	0.04	0.04	0.04	0.04
111.800	0.04	0.04	0.04	0.04	0.04	0.04	0.04
112.500	0.04	0.04	0.04	0.04	0.04	0.04	0.04
113.200	0.03	0.03	0.03	0.03	0.03	0.03	0.03
113.900	0.03	0.03	0.03	0.03	0.03	0.03	0.03
114.600	0.03	0.03	0.03	0.03	0.03	0.03	0.03
115.300	0.03	0.03	0.03	0.03	0.03	0.03	0.03
116.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
116.700	0.03	0.03	0.03	0.03	0.03	0.03	0.03
117.400	0.03	0.03	0.03	0.03	0.03	0.03	0.03
118.100	0.03	0.03	0.03	0.03	0.03	0.03	0.03
118.800	0.03	0.03	0.03	0.02	0.02	0.02	0.02
119.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.900	0.02	0.02	0.02	0.02	0.02	0.02	0.02
121.600	0.02	0.02	0.02	0.02	0.02	0.02	0.02

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
122.300	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.700	0.02	0.02	0.02	0.02	0.02	0.02	0.02
124.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.800	0.02	0.02	0.02	0.02	0.02	0.02	0.02
126.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
127.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
127.900	0.02	0.02	0.02	0.01	0.01	0.01	0.01
128.600	0.01	0.01	0.01	0.01	0.01	0.01	0.01
129.300	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.700	0.01	0.01	0.01	0.01	0.01	0.01	0.01
131.400	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.100	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.800	0.01	0.01	0.01	0.01	0.01	0.01	0.01
133.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.200	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.900	0.01	0.01	0.01	0.01	0.01	0.01	0.0

STORM 2Yr24Hr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
Proposed	0.009		2.064		16.20	1.34	155.22

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
4.500	0.845E-03	0.01	0.02	0.02	0.03	0.03	0.04
5.200	0.04	0.05	0.05	0.06	0.06	0.07	0.07
5.900	0.08	0.08	0.09	0.09	0.09	0.10	0.10
6.600	0.10	0.11	0.11	0.11	0.12	0.12	0.13
7.300	0.13	0.13	0.14	0.15	0.15	0.15	0.16
8.000	0.16	0.17	0.17	0.18	0.19	0.19	0.20
8.700	0.21	0.21	0.22	0.23	0.23	0.24	0.24
9.400	0.25	0.26	0.27	0.28	0.29	0.29	0.30
10.100	0.30	0.31	0.33	0.35	0.37	0.39	0.40
10.800	0.42	0.43	0.44	0.45	0.46	0.47	0.49
11.500	0.51	0.53	0.55	0.56	0.58	0.59	0.60
12.200	0.62	0.65	0.69	0.74	0.79	0.83	0.86
12.900	0.88	0.90	0.92	0.94	0.96	0.98	1.00
13.600	1.02	1.04	1.06	1.07	1.09	1.10	1.11
14.300	1.13	1.15	1.18	1.20	1.22	1.24	1.25
15.000	1.26	1.27	1.28	1.29	1.30	1.30	1.31
15.700	1.32	1.32	1.33	1.33	1.34	1.34	1.34
16.400	1.33	1.32	1.31	1.31	1.30	1.30	1.30

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
17.100	1.30	1.29	1.27	1.24	1.20	1.17	1.14
17.800	1.12	1.11	1.10	1.09	1.07	1.04	1.00
18.500	0.95	0.90	0.87	0.84	0.82	0.81	0.80
19.200	0.79	0.76	0.72	0.68	0.65	0.62	0.60
19.900	0.59	0.58	0.57	0.55	0.53	0.50	0.47
20.600	0.44	0.42	0.41	0.39	0.39	0.38	0.37
21.300	0.36	0.35	0.33	0.32	0.31	0.30	0.30
22.000	0.29	0.29	0.29	0.28	0.28	0.27	0.26
22.700	0.26	0.26	0.25	0.25	0.25	0.25	0.25
23.400	0.25	0.25	0.24	0.24	0.24	0.24	0.24
24.100	0.24	0.23	0.20	0.17	0.13	0.10	0.07
24.800	0.05	0.03	0.02	0.02	0.01	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Upstream	2.063		16.20	1.34	155.22

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
4.500	0.845E-03	0.01	0.02	0.02	0.03	0.03	0.04
5.200	0.04	0.05	0.05	0.06	0.06	0.07	0.07
5.900	0.08	0.08	0.09	0.09	0.09	0.10	0.10
6.600	0.10	0.11	0.11	0.11	0.12	0.12	0.13
7.300	0.13	0.13	0.14	0.15	0.15	0.15	0.16
8.000	0.16	0.17	0.17	0.18	0.19	0.19	0.20
8.700	0.21	0.21	0.22	0.23	0.23	0.24	0.24
9.400	0.25	0.26	0.27	0.28	0.29	0.29	0.30
10.100	0.30	0.31	0.33	0.35	0.37	0.39	0.40
10.800	0.42	0.43	0.44	0.45	0.46	0.47	0.49
11.500	0.51	0.53	0.55	0.56	0.58	0.59	0.60
12.200	0.62	0.65	0.69	0.74	0.79	0.83	0.86
12.900	0.88	0.90	0.92	0.94	0.96	0.98	1.00
13.600	1.02	1.04	1.06	1.07	1.09	1.10	1.11
14.300	1.13	1.15	1.18	1.20	1.22	1.24	1.25
15.000	1.26	1.27	1.28	1.29	1.30	1.30	1.31
15.700	1.32	1.32	1.33	1.33	1.34	1.34	1.34
16.400	1.33	1.32	1.31	1.31	1.30	1.30	1.30
17.100	1.30	1.29	1.27	1.24	1.20	1.17	1.14
17.800	1.12	1.11	1.10	1.09	1.07	1.04	1.00
18.500	0.95	0.90	0.87	0.84	0.82	0.81	0.80
19.200	0.79	0.76	0.72	0.68	0.65	0.62	0.60
19.900	0.59	0.58	0.57	0.55	0.53	0.50	0.47
20.600	0.44	0.42	0.41	0.39	0.39	0.38	0.37
21.300	0.36	0.35	0.33	0.32	0.31	0.30	0.30
22.000	0.29	0.29	0.29	0.28	0.28	0.27	0.26
22.700	0.26	0.26	0.25	0.25	0.25	0.25	0.25

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
23.400	0.25	0.25	0.24	0.24	0.24	0.24	0.24
24.100	0.24	0.23	0.20	0.17	0.13	0.10	0.07
24.800	0.05	0.03	0.02	0.02	0.01	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
Basin	0.009	Downstream	1.445	857.70	24.34	0.19	22.13

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
14.000	0.0	0.01	0.02	0.02	0.03	0.04	0.04
14.700	0.05	0.06	0.06	0.07	0.08	0.08	0.09
15.400	0.10	0.10	0.11	0.12	0.12	0.13	0.14
16.100	0.14	0.15	0.16	0.16	0.17	0.17	0.17
16.800	0.17	0.17	0.17	0.17	0.17	0.18	0.18
17.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
18.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
18.900	0.18	0.18	0.18	0.19	0.19	0.19	0.19
19.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
22.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
23.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
23.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
24.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
25.200	0.19	0.19	0.19	0.19	0.19	0.19	0.19
25.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
26.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
27.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
28.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
28.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
29.400	0.19	0.19	0.19	0.19	0.19	0.18	0.18
30.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
30.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
31.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
32.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
32.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
33.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
34.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
35.000	0.18	0.18	0.18	0.18	0.18	0.18	0.18
35.700	0.18	0.18	0.18	0.18	0.18	0.18	0.18
36.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18
37.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
37.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
38.500	0.18	0.18	0.18	0.18	0.18	0.18	0.17

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
39.200	0.17	0.17	0.17	0.17	0.17	0.17	0.17
39.900	0.17	0.17	0.17	0.17	0.17	0.17	0.17
40.600	0.17	0.17	0.17	0.17	0.17	0.17	0.17
41.300	0.17	0.17	0.17	0.17	0.17	0.17	0.17
42.000	0.17	0.17	0.17	0.17	0.17	0.17	0.17
42.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
43.400	0.17	0.17	0.17	0.17	0.17	0.17	0.17
44.100	0.17	0.17	0.17	0.17	0.16	0.16	0.16
44.800	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45.500	0.16	0.15	0.15	0.15	0.15	0.15	0.15
46.200	0.15	0.15	0.15	0.15	0.15	0.15	0.14
46.900	0.14	0.14	0.14	0.14	0.14	0.14	0.14
47.600	0.14	0.14	0.14	0.14	0.13	0.13	0.13
48.300	0.13	0.13	0.13	0.13	0.13	0.13	0.13
49.000	0.13	0.13	0.13	0.13	0.12	0.12	0.12
49.700	0.12	0.12	0.12	0.12	0.12	0.12	0.12
50.400	0.12	0.12	0.12	0.12	0.12	0.11	0.11
51.100	0.11	0.11	0.11	0.11	0.11	0.11	0.11
51.800	0.11	0.11	0.11	0.11	0.11	0.11	0.11
52.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53.200	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53.900	0.10	0.10	0.10	0.10	0.09	0.09	0.09
54.600	0.09	0.09	0.09	0.09	0.09	0.09	0.09
55.300	0.09	0.09	0.09	0.09	0.09	0.09	0.09
56.000	0.09	0.09	0.09	0.08	0.08	0.08	0.08
56.700	0.08	0.08	0.08	0.08	0.08	0.08	0.08
57.400	0.08	0.08	0.08	0.08	0.08	0.08	0.08
58.100	0.08	0.08	0.08	0.08	0.07	0.07	0.07
58.800	0.07	0.07	0.07	0.07	0.07	0.07	0.07
59.500	0.07	0.07	0.07	0.07	0.07	0.07	0.07
60.200	0.07	0.07	0.07	0.07	0.07	0.07	0.07
60.900	0.07	0.07	0.06	0.06	0.06	0.06	0.06
61.600	0.06	0.06	0.06	0.06	0.06	0.06	0.06
62.300	0.06	0.06	0.06	0.06	0.06	0.06	0.06
63.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
63.700	0.06	0.06	0.06	0.05	0.05	0.05	0.05
64.400	0.05	0.05	0.05	0.05	0.05	0.05	0.05
65.100	0.05	0.05	0.05	0.05	0.05	0.05	0.05
65.800	0.05	0.05	0.05	0.05	0.05	0.05	0.05
66.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
67.200	0.05	0.05	0.05	0.05	0.04	0.04	0.04
67.900	0.04	0.04	0.04	0.04	0.04	0.04	0.04
68.600	0.04	0.04	0.04	0.04	0.04	0.04	0.04
69.300	0.04	0.04	0.04	0.04	0.04	0.04	0.04
70.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
70.700	0.04	0.04	0.04	0.04	0.04	0.04	0.04
71.400	0.04	0.04	0.04	0.04	0.04	0.04	0.04
72.100	0.03	0.03	0.03	0.03	0.03	0.03	0.03
72.800	0.03	0.03	0.03	0.03	0.03	0.03	0.03
73.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
74.200	0.03	0.03	0.03	0.03	0.03	0.03	0.03

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
74.900	0.03	0.03	0.03	0.03	0.03	0.03	0.03
75.600	0.03	0.03	0.03	0.03	0.03	0.03	0.03
76.300	0.03	0.03	0.03	0.03	0.03	0.03	0.03
77.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
77.700	0.03	0.03	0.03	0.03	0.02	0.02	0.02
78.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
79.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
79.800	0.02	0.02	0.02	0.02	0.02	0.02	0.02
80.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
81.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
81.900	0.02	0.02	0.02	0.02	0.02	0.02	0.02
82.600	0.02	0.02	0.02	0.02	0.02	0.02	0.02
83.300	0.02	0.02	0.02	0.02	0.02	0.02	0.02
84.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
84.700	0.02	0.02	0.02	0.02	0.02	0.02	0.02
85.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
86.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
86.800	0.02	0.02	0.02	0.02	0.01	0.01	0.01
87.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88.200	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88.900	0.01	0.01	0.01	0.01	0.01	0.01	0.01
89.600	0.01	0.01	0.01	0.01	0.01	0.01	0.01
90.300	0.01	0.01	0.01	0.01	0.01	0.01	0.01
91.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
91.700	0.01	0.01	0.01	0.01	0.01	0.01	0.01
92.400	0.01	0.01	0.01	0.01	0.01	0.01	0.01
93.100	0.01	0.01	0.01	0.01	0.01	0.01	0.01
93.800	0.01	0.01	0.01	0.01	0.01	0.01	0.0

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.009		1.445		24.34	0.19	22.13

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
14.000	0.0	0.01	0.02	0.02	0.03	0.04	0.04
14.700	0.05	0.06	0.06	0.07	0.08	0.08	0.09
15.400	0.10	0.10	0.11	0.12	0.12	0.13	0.14
16.100	0.14	0.15	0.16	0.16	0.17	0.17	0.17
16.800	0.17	0.17	0.17	0.17	0.17	0.18	0.18
17.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
18.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
18.900	0.18	0.18	0.18	0.19	0.19	0.19	0.19
19.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19

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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
21.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
22.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
23.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
23.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
24.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
25.200	0.19	0.19	0.19	0.19	0.19	0.19	0.19
25.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
26.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
27.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
28.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
28.700	0.19	0.19	0.19	0.19	0.19	0.19	0.19
29.400	0.19	0.19	0.19	0.19	0.19	0.18	0.18
30.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
30.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
31.500	0.18	0.18	0.18	0.18	0.18	0.18	0.18
32.200	0.18	0.18	0.18	0.18	0.18	0.18	0.18
32.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
33.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
34.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
35.000	0.18	0.18	0.18	0.18	0.18	0.18	0.18
35.700	0.18	0.18	0.18	0.18	0.18	0.18	0.18
36.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18
37.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
37.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
38.500	0.18	0.18	0.18	0.18	0.18	0.18	0.17
39.200	0.17	0.17	0.17	0.17	0.17	0.17	0.17
39.900	0.17	0.17	0.17	0.17	0.17	0.17	0.17
40.600	0.17	0.17	0.17	0.17	0.17	0.17	0.17
41.300	0.17	0.17	0.17	0.17	0.17	0.17	0.17
42.000	0.17	0.17	0.17	0.17	0.17	0.17	0.17
42.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
43.400	0.17	0.17	0.17	0.17	0.17	0.17	0.17
44.100	0.17	0.17	0.17	0.17	0.16	0.16	0.16
44.800	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45.500	0.16	0.15	0.15	0.15	0.15	0.15	0.15
46.200	0.15	0.15	0.15	0.15	0.15	0.15	0.14
46.900	0.14	0.14	0.14	0.14	0.14	0.14	0.14
47.600	0.14	0.14	0.14	0.14	0.13	0.13	0.13
48.300	0.13	0.13	0.13	0.13	0.13	0.13	0.13
49.000	0.13	0.13	0.13	0.13	0.12	0.12	0.12
49.700	0.12	0.12	0.12	0.12	0.12	0.12	0.12
50.400	0.12	0.12	0.12	0.12	0.12	0.11	0.11
51.100	0.11	0.11	0.11	0.11	0.11	0.11	0.11
51.800	0.11	0.11	0.11	0.11	0.11	0.11	0.11
52.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53.200	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53.900	0.10	0.10	0.10	0.10	0.09	0.09	0.09
54.600	0.09	0.09	0.09	0.09	0.09	0.09	0.09
55.300	0.09	0.09	0.09	0.09	0.09	0.09	0.09
56.000	0.09	0.09	0.09	0.08	0.08	0.08	0.08
56.700	0.08	0.08	0.08	0.08	0.08	0.08	0.08

670 S Old Rand Road
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Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
57.400	0.08	0.08	0.08	0.08	0.08	0.08	0.08
58.100	0.08	0.08	0.08	0.08	0.07	0.07	0.07
58.800	0.07	0.07	0.07	0.07	0.07	0.07	0.07
59.500	0.07	0.07	0.07	0.07	0.07	0.07	0.07
60.200	0.07	0.07	0.07	0.07	0.07	0.07	0.07
60.900	0.07	0.07	0.06	0.06	0.06	0.06	0.06
61.600	0.06	0.06	0.06	0.06	0.06	0.06	0.06
62.300	0.06	0.06	0.06	0.06	0.06	0.06	0.06
63.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
63.700	0.06	0.06	0.06	0.05	0.05	0.05	0.05
64.400	0.05	0.05	0.05	0.05	0.05	0.05	0.05
65.100	0.05	0.05	0.05	0.05	0.05	0.05	0.05
65.800	0.05	0.05	0.05	0.05	0.05	0.05	0.05
66.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
67.200	0.05	0.05	0.05	0.05	0.04	0.04	0.04
67.900	0.04	0.04	0.04	0.04	0.04	0.04	0.04
68.600	0.04	0.04	0.04	0.04	0.04	0.04	0.04
69.300	0.04	0.04	0.04	0.04	0.04	0.04	0.04
70.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
70.700	0.04	0.04	0.04	0.04	0.04	0.04	0.04
71.400	0.04	0.04	0.04	0.04	0.04	0.04	0.04
72.100	0.03	0.03	0.03	0.03	0.03	0.03	0.03
72.800	0.03	0.03	0.03	0.03	0.03	0.03	0.03
73.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
74.200	0.03	0.03	0.03	0.03	0.03	0.03	0.03
74.900	0.03	0.03	0.03	0.03	0.03	0.03	0.03
75.600	0.03	0.03	0.03	0.03	0.03	0.03	0.03
76.300	0.03	0.03	0.03	0.03	0.03	0.03	0.03
77.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
77.700	0.03	0.03	0.03	0.03	0.02	0.02	0.02
78.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
79.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
79.800	0.02	0.02	0.02	0.02	0.02	0.02	0.02
80.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
81.200	0.02	0.02	0.02	0.02	0.02	0.02	0.02
81.900	0.02	0.02	0.02	0.02	0.02	0.02	0.02
82.600	0.02	0.02	0.02	0.02	0.02	0.02	0.02
83.300	0.02	0.02	0.02	0.02	0.02	0.02	0.02
84.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
84.700	0.02	0.02	0.02	0.02	0.02	0.02	0.02
85.400	0.02	0.02	0.02	0.02	0.02	0.02	0.02
86.100	0.02	0.02	0.02	0.02	0.02	0.02	0.02
86.800	0.02	0.02	0.02	0.02	0.01	0.01	0.01
87.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88.200	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88.900	0.01	0.01	0.01	0.01	0.01	0.01	0.01
89.600	0.01	0.01	0.01	0.01	0.01	0.01	0.01
90.300	0.01	0.01	0.01	0.01	0.01	0.01	0.01
91.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
91.700	0.01	0.01	0.01	0.01	0.01	0.01	0.01
92.400	0.01	0.01	0.01	0.01	0.01	0.01	0.01

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
93.100	0.01	0.01	0.01	0.01	0.01	0.01	0.01
93.800	0.01	0.01	0.01	0.01	0.01	0.01	0.0

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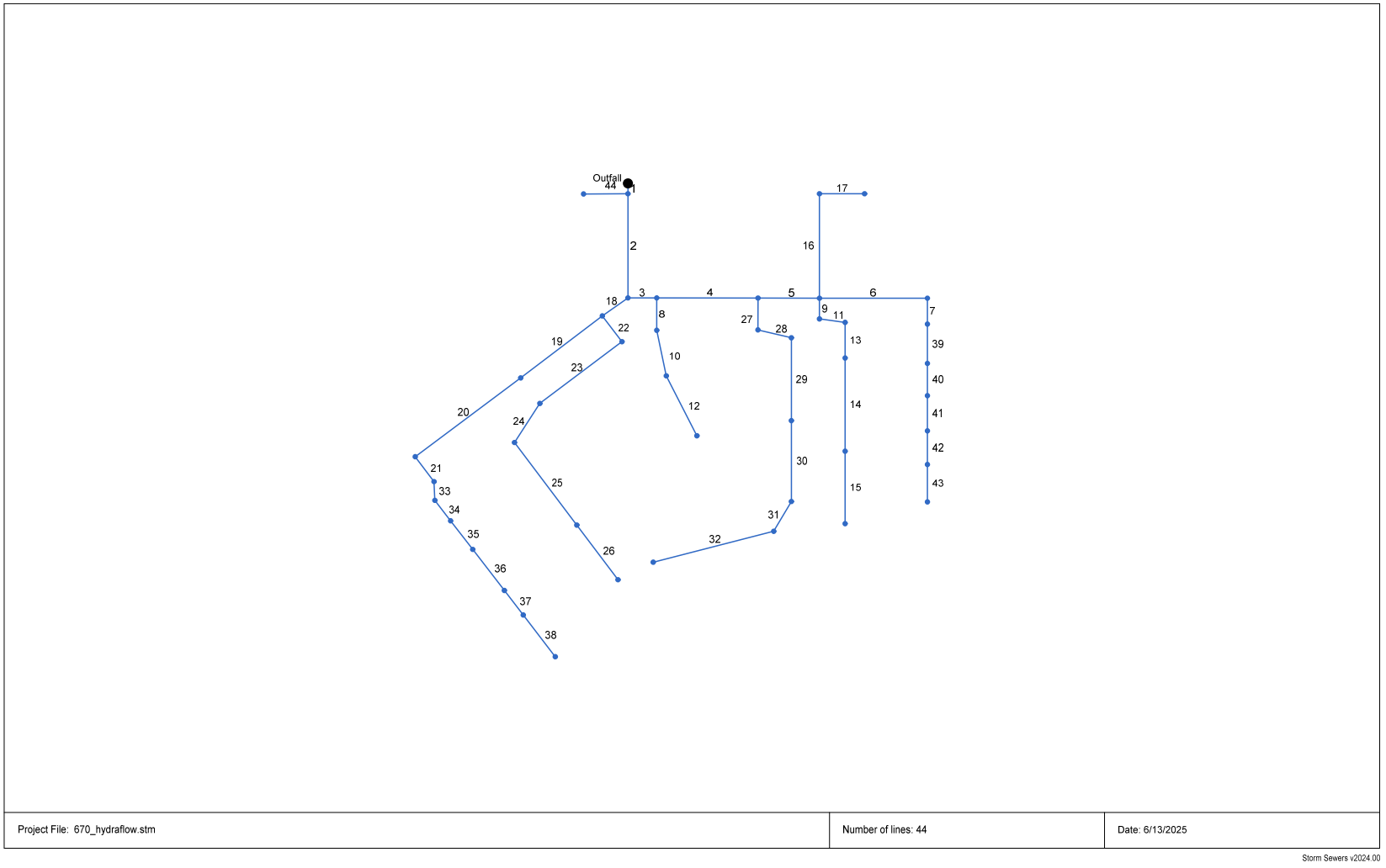
Area or Reach Identifier	Drainage Area (sq mi)	Peak Flow by Storm 100Yr24Hr (cfs)	2Yr24Hr (cfs)	(cfs)	(cfs)	(cfs)
Proposed	0.009	4.04	1.34			
Basin	0.009	4.04	1.34			
DOWNSTREAM		0.80	0.19			
OUTLET	0.009	0.80	0.19			

APPENDIX V – STORM SEWER SIZING

ON-SITE SEWERS

OLD RAND CULVERT

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: 670_hydraflow.stm	Number of lines: 44	Date: 6/13/2025

Storm Sewers v2024.00

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	10.000	0.08	4.10	0.50	0.04	2.97	10.0	29.0	3.9	11.56	47.15	1.64	36	0.50	856.75	856.80	859.75	859.75	861.00	866.50	CB-1--FES
2	1	100.625	0.01	3.77	0.75	0.01	2.81	10.0	28.2	4.0	11.13	25.75	1.59	36	0.15	856.80	856.95	859.79	859.82	866.50	869.00	CB-2--CB-1
3	2	27.750	0.08	2.48	0.84	0.07	1.81	10.0	26.6	4.1	7.39	9.60	2.35	24	0.18	856.95	857.00	859.86	859.89	869.00	868.40	CB-C1--CB2
4	3	97.751	0.16	2.13	0.85	0.14	1.58	10.0	26.0	4.1	6.54	8.86	2.08	24	0.15	857.05	857.20	859.97	860.06	868.40	865.97	CB-C2--CB-C1
5	4	59.249	0.13	1.11	0.83	0.11	0.76	10.0	25.3	4.2	3.19	6.57	1.02	24	0.08	857.30	857.35	860.12	860.14	865.97	864.50	CB-C3--CB-C2
6	5	104.125	0.18	0.34	0.83	0.15	0.25	10.0	24.4	4.3	1.08	1.56	1.37	12	0.19	857.45	857.65	860.15	860.25	864.50	861.25	CB-C4--CB-C3
7	6	25.000	0.06	0.16	0.70	0.04	0.10	10.0	23.9	4.3	0.44	3.19	0.56	12	0.80	857.70	857.90	860.28	860.28	861.25	862.40	CB-C5--CB-C4
8	3	31.250	0.02	0.27	0.79	0.02	0.16	10.0	12.7	5.7	0.91	3.49	3.42	12	0.96	863.50	863.80	863.85	864.20	868.40	868.70	CB-C1.1--CB-C1
9	5	20.000	0.04	0.46	0.79	0.03	0.32	10.0	23.0	4.4	1.41	3.56	3.84	12	1.00	859.70	859.90	860.15	860.40	864.50	865.45	CB-C3.1--CB-C3
10	8	45.000	0.14	0.25	0.55	0.08	0.14	10.0	12.1	5.9	0.84	5.82	2.94	12	2.67	863.80	865.00	864.20	865.38	868.70	869.10	CB-C1.2--CB-C1.1
11	9	25.000	0.01	0.42	0.65	0.01	0.29	10.0	22.8	4.4	1.28	3.56	3.35	12	1.00	859.90	860.15	860.40	860.63	865.45	865.25	CB-C3.2--CB-C3.1
12	10	65.000	0.11	0.11	0.60	0.07	0.07	10.0	10.0	6.2	0.41	4.42	1.98	12	1.54	865.00	866.00	865.38	866.27	869.10	870.40	CB-C1.3--CB-C1.2
13	11	34.375	0.24	0.41	0.71	0.17	0.28	10.0	22.6	4.5	1.26	3.59	3.42	12	1.02	860.15	860.50	860.63	860.97	865.25	864.50	CB-C3.3--CB-C3.2
14	13	90.000	0.14	0.17	0.70	0.10	0.11	10.0	20.9	4.6	0.52	7.65	2.02	12	4.61	860.50	864.65	860.97	864.95	864.50	869.00	CB-C3.4--CB-C3.3
15	14	70.000	0.03	0.03	0.45	0.01	0.01	10.0	10.0	6.2	0.08	6.17	1.02	12	3.00	864.65	866.75	864.95	866.87	869.00	871.40	CB-C3.5--CB-C3.4
16	5	100.875	0.11	0.18	0.45	0.05	0.08	10.0	12.9	5.7	0.46	2.75	0.59	12	0.59	857.45	858.05	860.15	860.17	864.50	863.60	CB-A1--CB-C3
17	16	43.500	0.07	0.07	0.45	0.03	0.03	10.0	10.0	6.2	0.20	3.62	0.25	12	1.03	858.05	858.50	860.17	860.18	863.60	862.00	CB-A2--CB-A1
18	2	30.240	0.18	1.28	0.82	0.15	1.00	10.0	28.0	4.0	3.98	22.53	4.74	24	0.99	863.50	863.80	864.07	864.50	869.00	870.40	CB-B1--CB-2
19	18	99.000	0.10	0.44	0.86	0.09	0.30	10.0	27.2	4.0	1.21	3.58	3.75	12	1.01	864.75	865.75	865.15	866.21	870.40	871.20	CB-B2--CB-B1
20	19	127.000	0.16	0.34	0.70	0.11	0.21	10.0	25.9	4.1	0.88	3.60	2.78	12	1.02	865.75	867.05	866.21	867.44	871.20	871.75	CB-B3--CB-B2
21	20	30.000	0.05	0.18	0.72	0.04	0.10	10.0	25.3	4.2	0.42	3.56	1.99	12	1.00	867.05	867.35	867.44	867.62	871.75	871.85	CB-B4--CB-B3
22	18	31.301	0.11	0.66	0.74	0.08	0.55	10.0	13.6	5.6	3.11	3.49	4.95	12	0.96	863.80	864.10	864.54	864.86	870.40	869.35	CB-B1.1--CB-B1
23	22	99.175	0.10	0.55	0.81	0.08	0.47	10.0	13.1	5.7	2.69	4.66	5.35	12	1.71	865.05	866.75	865.59	867.45	869.35	871.25	CB-B1.2--CB-B1.1
24	23	45.000	0.22	0.45	0.88	0.19	0.39	10.0	12.9	5.7	2.24	5.04	4.02	12	2.00	866.75	867.65	867.45	868.29	871.25	871.85	CB-B1.3--CB-B1.2
25	24	99.875	0.14	0.23	0.87	0.12	0.20	10.0	11.8	5.9	1.17	5.04	2.78	12	2.00	867.65	869.65	868.29	870.11	871.85	874.40	CB-B1.4--CB-B1.3
26	25	66.050	0.09	0.09	0.85	0.08	0.08	10.0	10.0	6.2	0.48	3.53	1.97	12	0.98	869.65	870.30	870.11	870.59	874.40	874.80	CB-B1.5--CB-B1.4
27	4	30.750	0.24	0.86	0.75	0.18	0.68	10.0	19.5	4.8	3.28	3.52	5.05	12	0.98	861.45	861.75	862.21	862.52	865.97	866.25	CB-C2.1--CB-C2
28	27	33.139	0.14	0.62	0.87	0.12	0.50	10.0	19.3	4.8	2.42	3.66	4.04	12	1.06	861.75	862.10	862.52	862.77	866.25	866.75	CB-C2.2--CB-C2.1

Project File: 670_hydraflow.stm

Number of lines: 44

Run Date: 6/13/2025

NOTES:Intensity = 181.97 / (Inlet time + 20.80) ^ 0.98; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewers v2024.00

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
29	28	80.000	0.16	0.48	0.80	0.13	0.38	10.0	18.9	4.9	1.86	5.63	4.55	12	2.50	862.30	864.30	862.77	864.88	866.75	868.90	CB-C2.3--CB-C2.2
30	29	78.125	0.06	0.32	0.75	0.05	0.25	10.0	18.2	5.0	1.25	5.70	3.04	12	2.56	864.30	866.30	864.88	866.77	868.90	870.75	CB-C2.4--CB-C2.3
31	30	33.400	0.22	0.26	0.80	0.18	0.21	10.0	17.9	5.0	1.04	5.16	3.04	12	2.10	866.30	867.00	866.77	867.43	870.75	871.50	CB-C2.5--CB-C2.4
32	31	120.027	0.04	0.04	0.80	0.03	0.03	10.0	10.0	6.2	0.20	4.71	1.33	12	1.75	867.00	869.10	867.43	869.28	871.50	873.60	CB-C2.6--CB-C2.5
33	21	18.146	0.01	0.13	0.50	0.01	0.07	10.0	24.7	4.3	0.28	5.61	1.92	12	2.48	867.35	867.80	867.62	868.02	871.85	872.50	CB-B5--CB-B4
34	33	24.876	0.02	0.12	0.50	0.01	0.06	10.0	23.8	4.3	0.26	5.05	2.13	12	2.01	867.80	868.30	868.02	868.51	872.50	872.75	AD-B6--CB-B5
35	34	35.000	0.02	0.10	0.50	0.01	0.05	10.0	22.3	4.5	0.22	3.56	1.98	12	1.00	868.30	868.65	868.51	868.84	872.75	873.60	AD-B7--AD-B6
36	35	50.000	0.03	0.08	0.50	0.02	0.04	10.0	19.6	4.8	0.19	4.36	1.89	12	1.50	868.65	869.40	868.84	869.58	873.60	873.80	AD-B8--AD-B7
37	36	30.000	0.02	0.05	0.50	0.01	0.03	10.0	17.1	5.1	0.13	3.56	1.57	12	1.00	869.40	869.70	869.58	869.85	873.80	874.85	AD-B9--AD-B8
38	37	50.728	0.03	0.03	0.50	0.02	0.02	10.0	10.0	6.2	0.09	3.54	1.49	12	0.99	869.70	870.20	869.85	870.32	874.85	874.25	AD-B10--AD-B9
39	7	38.000	0.02	0.10	0.60	0.01	0.06	10.0	22.5	4.5	0.27	7.96	0.53	12	5.00	857.90	859.80	860.28	860.28	862.40	864.75	AD-C6--CB-C5
40	39	31.125	0.02	0.08	0.60	0.01	0.05	10.0	21.2	4.6	0.22	8.07	1.34	12	5.14	859.80	861.40	860.28	861.59	864.75	866.30	AD-C7--AD-C6
41	40	34.000	0.02	0.06	0.60	0.01	0.04	10.0	19.2	4.8	0.17	7.73	1.80	12	4.71	861.40	863.00	861.59	863.17	866.30	867.75	AD-C8--AD-C7
42	41	32.500	0.02	0.04	0.60	0.01	0.02	10.0	16.3	5.2	0.12	7.90	1.60	12	4.92	863.00	864.60	863.17	864.74	867.75	869.30	AD-C9--AD-C8
43	42	36.125	0.02	0.02	0.60	0.01	0.01	10.0	10.0	6.2	0.07	7.49	1.32	12	4.43	864.60	866.20	864.74	866.31	869.30	871.35	AD-C10--AD-C9
44	1	42.876	0.25	0.25	0.45	0.11	0.11	10.0	10.0	6.2	0.70	3.85	3.30	12	1.17	862.50	863.00	862.79	863.35	866.50	867.00	CB-1.1-CB-1

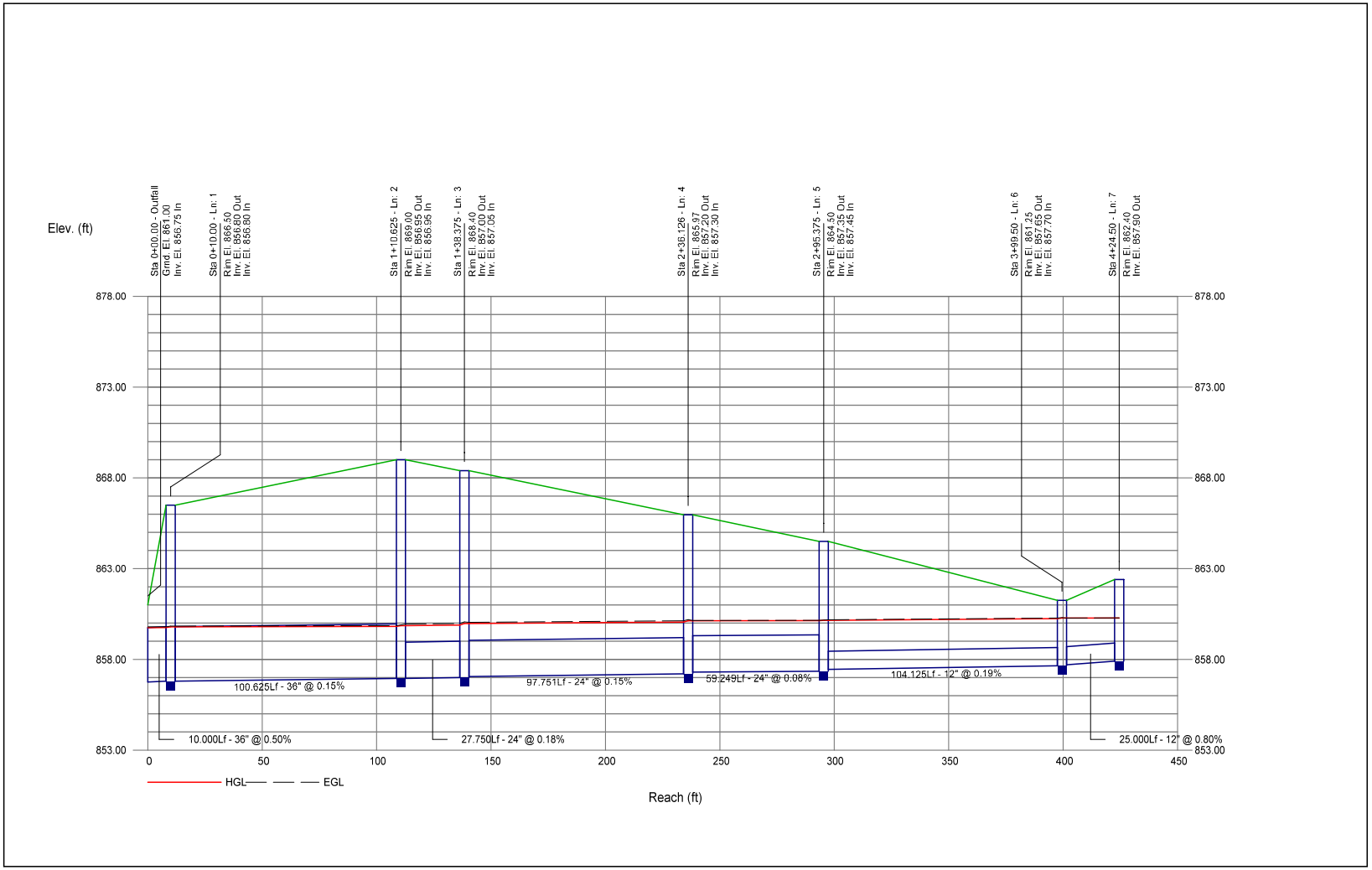
Project File: 670_hydraflow.stm | Number of lines: 44 | Run Date: 6/13/2025

NOTES:Intensity = 181.97 / (Inlet time + 20.80) ^ 0.98; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewers v2024.00

Storm Sewer Profile

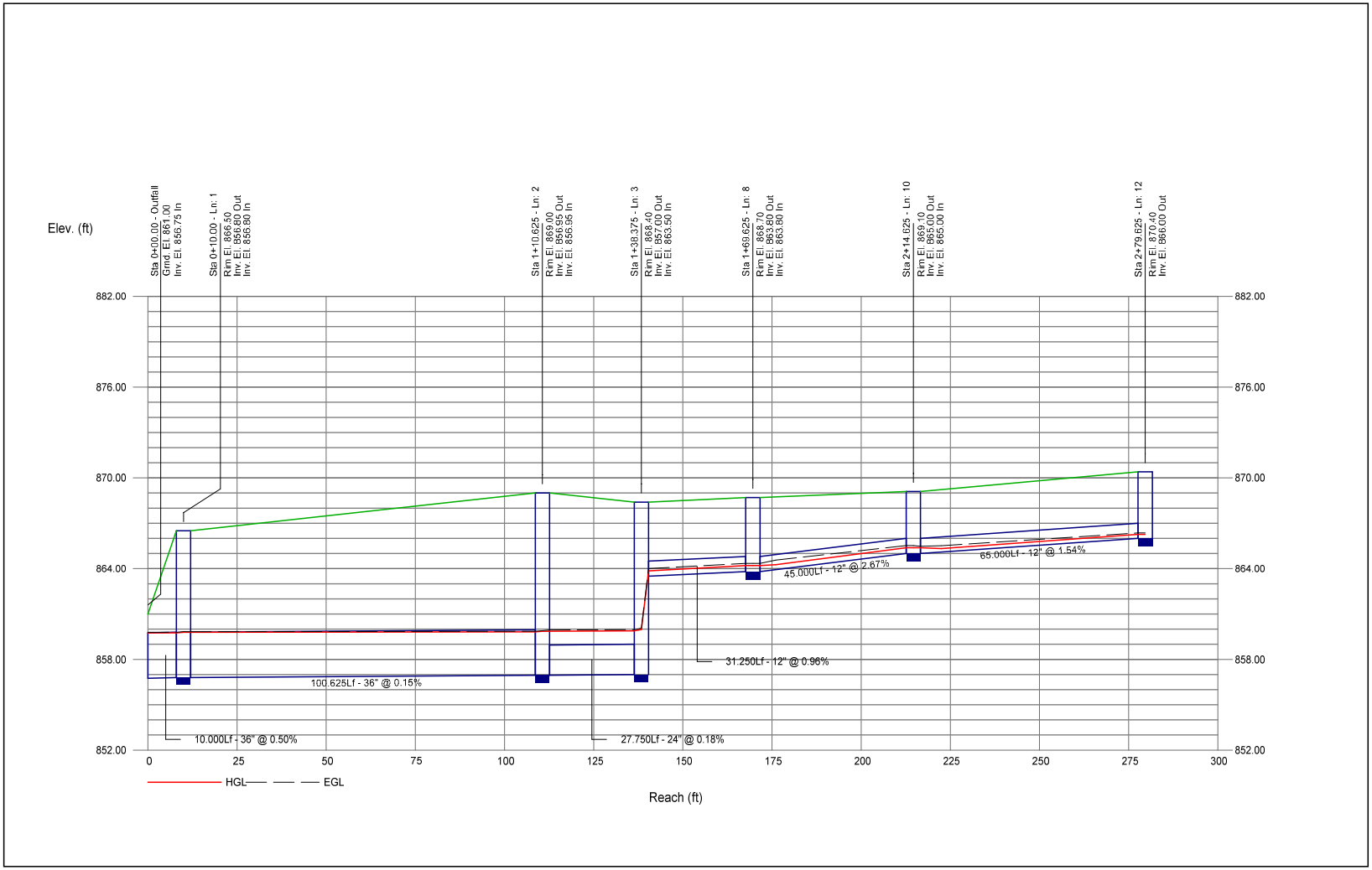
Proj. file: 670_hydraflow.stm



Storm Sewers

Storm Sewer Profile

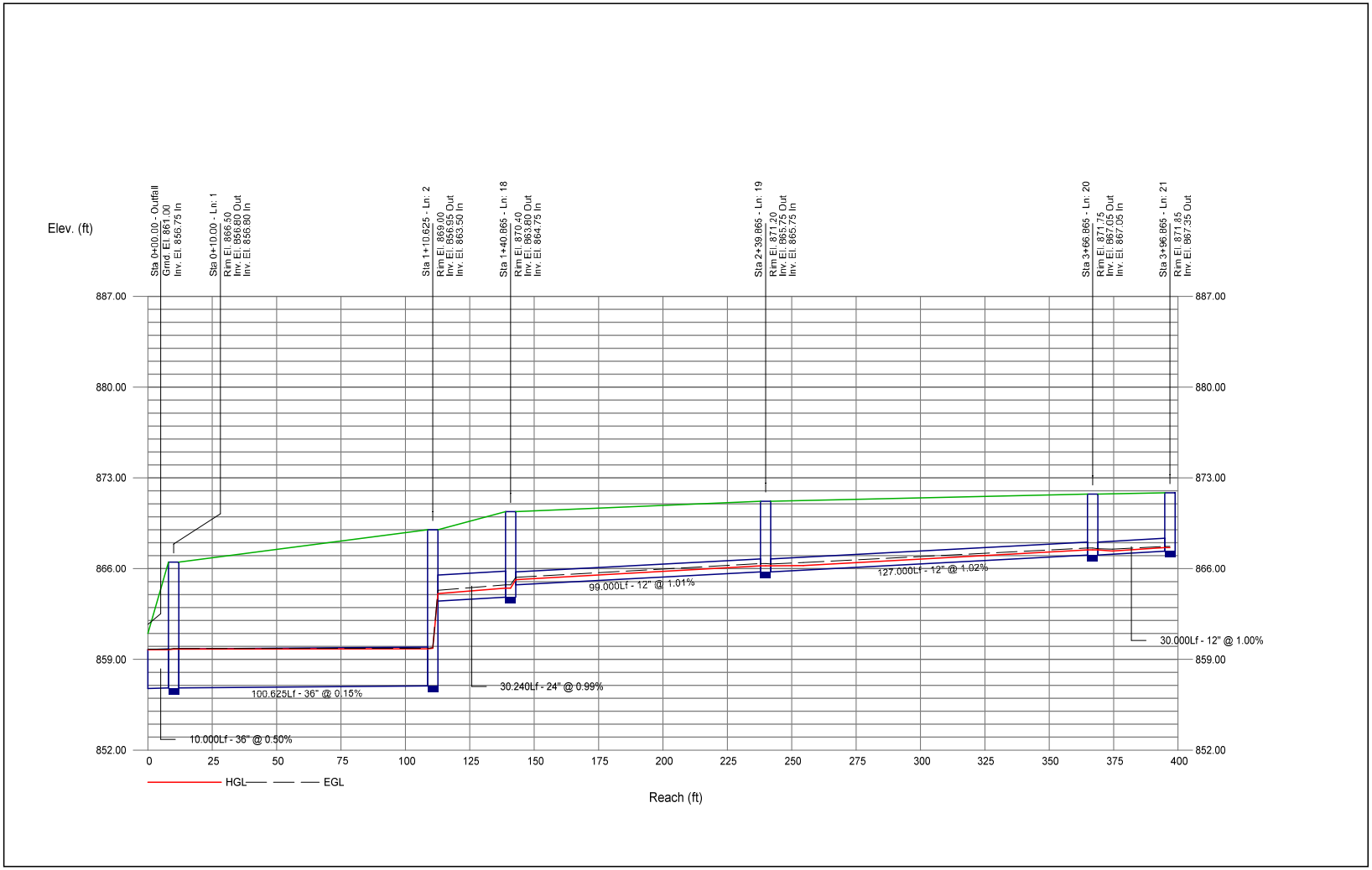
Proj. file: 670_hydraflow.stm



Storm Sewers

Storm Sewer Profile

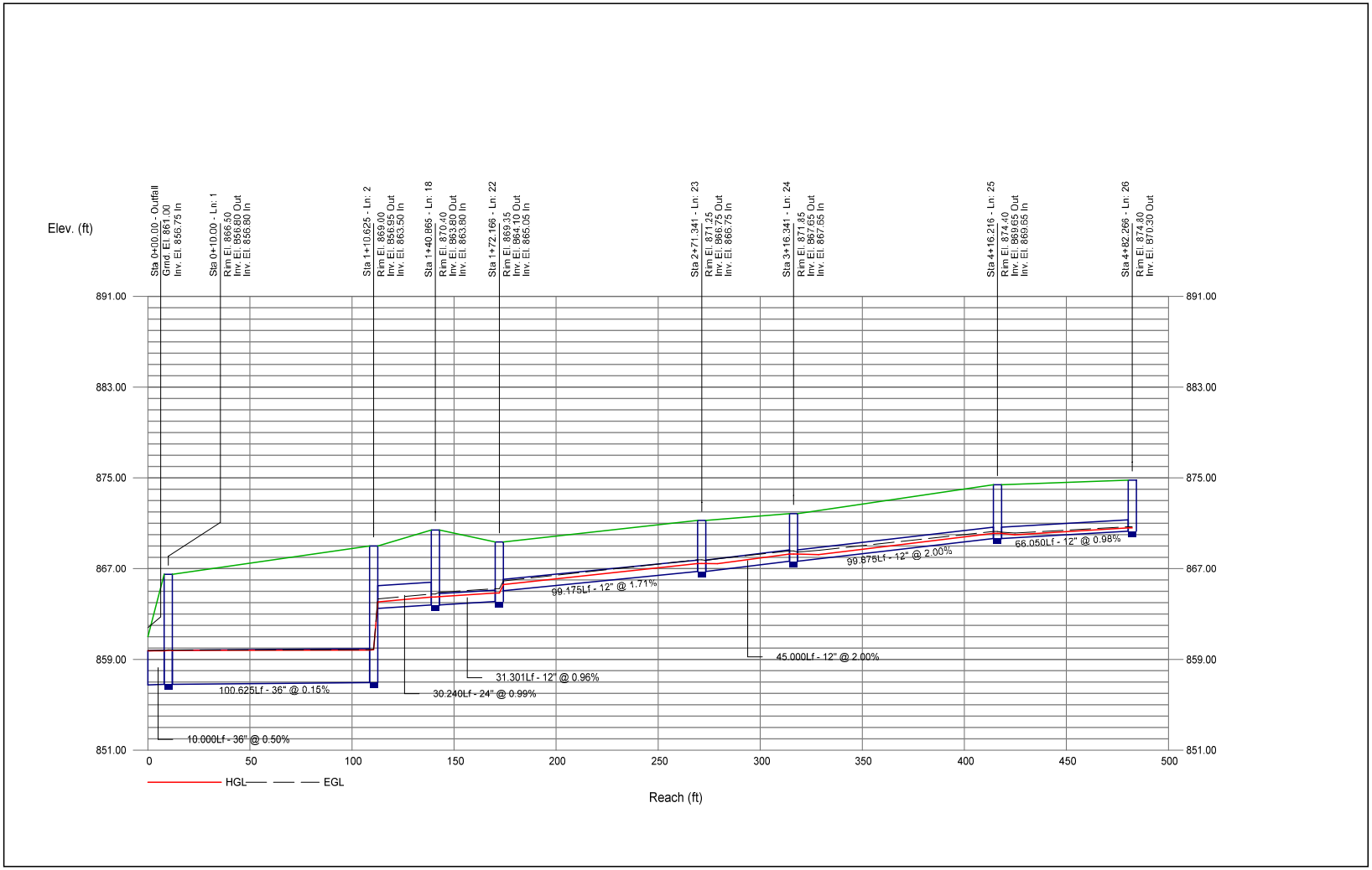
Proj. file: 670_hydraflow.stm



Storm Sewers

Storm Sewer Profile

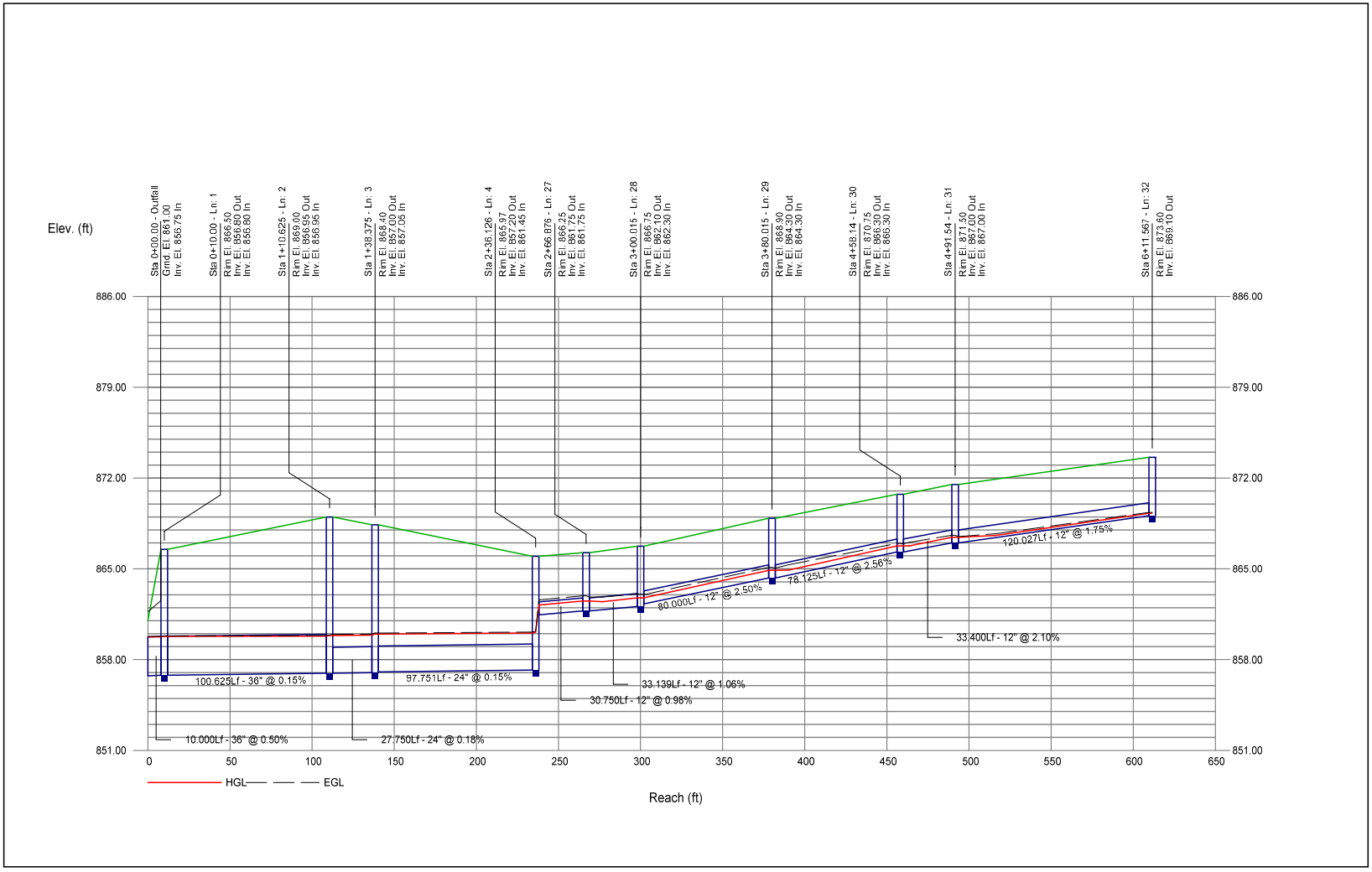
Proj. file: 670_hydraflow.stm



Storm Sewers

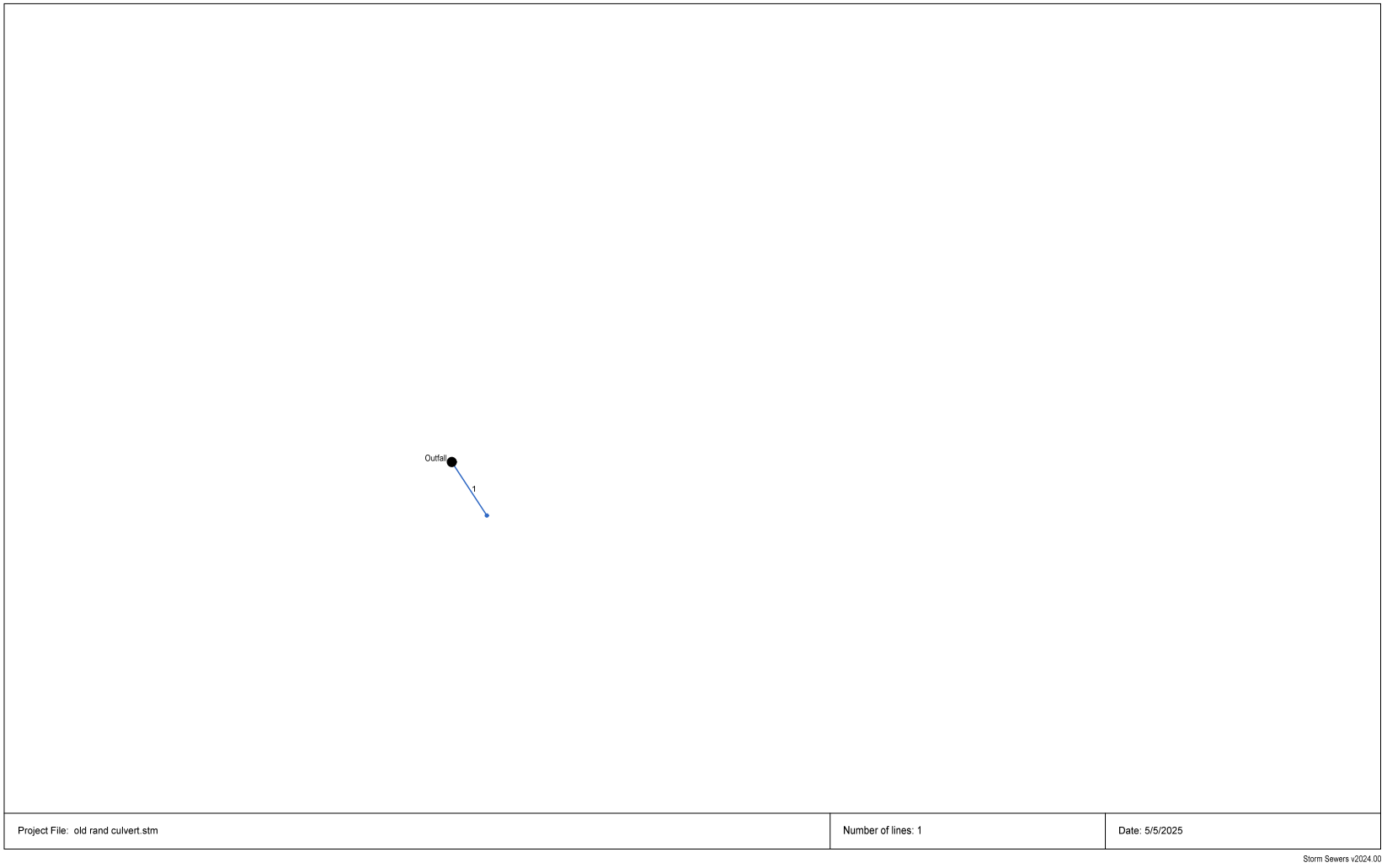
Storm Sewer Profile

Proj. file: 670_hydraflow.stm



Storm Sewers

Old Rand Ditch



Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	84.248	0.23	0.23	0.65	0.15	0.15	15.0	15.0	5.4	0.81	4.97	0.84	15	0.59	866.75	867.25	868.00	868.01	870.00	871.25	

Old Rand Ditch

Number of lines: 1

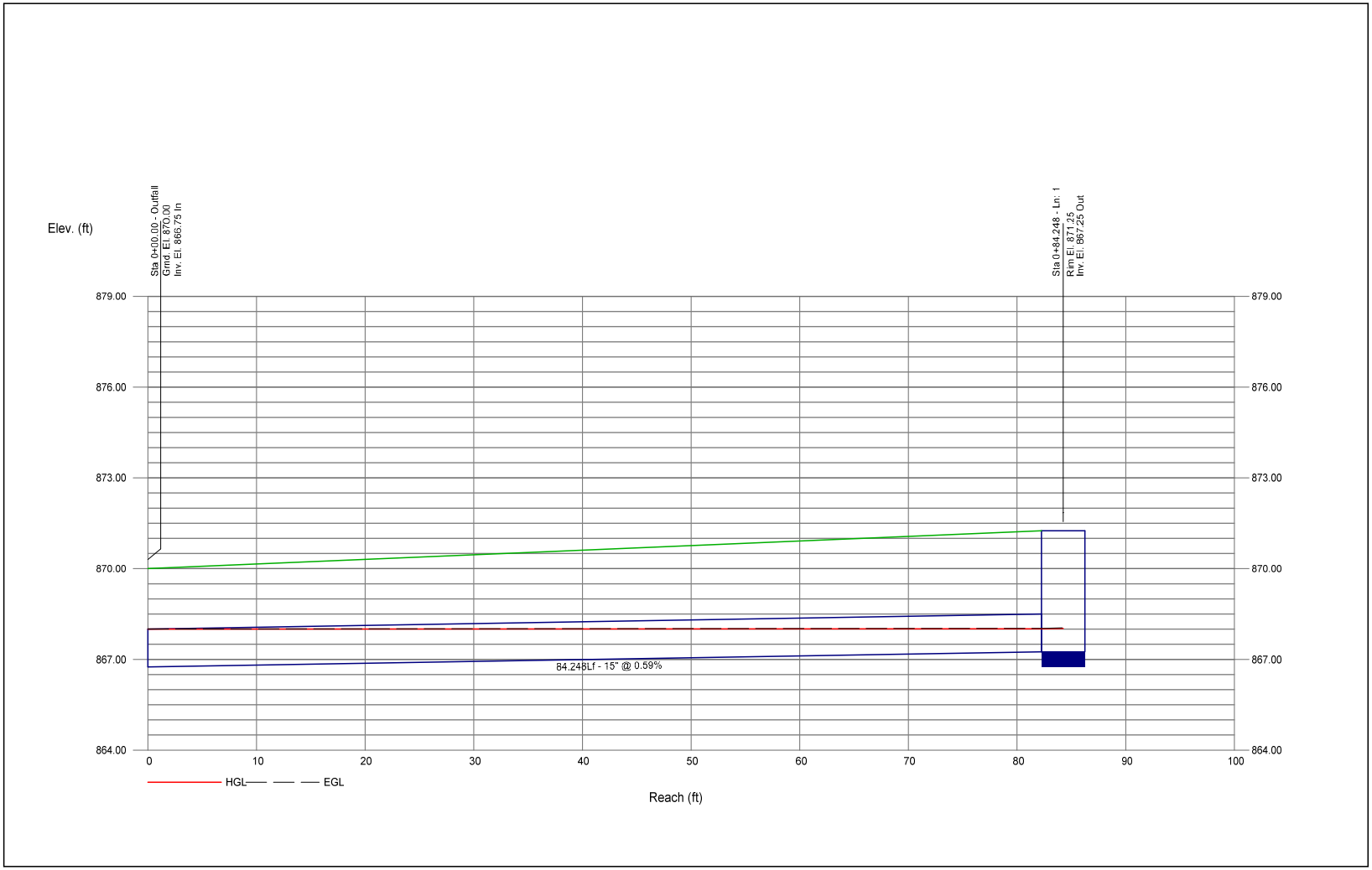
Run Date: 5/5/2025

NOTES:Intensity = 181.97 / (Inlet time + 20.80) ^ 0.98; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewers v2024.00

Storm Sewer Profile

Proj. file: old rand culvert.stm



Storm Sewers

Stormwater Management System Maintenance Plan

Residential Development

670 S Old Rand Road

Lake Zurich, IL

June 16, 2025

Prepared by:

Laura Rosenbauer

Eriksson Engineering Associates, Ltd.

ERIKSSON ENGINEERING ASSOCIATES, LTD.

www.eea-ltd.com

PURPOSE AND OBJECTIVE

Storm water management facilities are designed to manage runoff from rain events to aid in the minimization of site impacts due to flooding and also to provide water quality benefits for downstream water ways. Trash and other natural debris (leaves and sediment) can build up in the storm water systems and impact its functionality. These facilities require periodic maintenance activities to ensure proper function, similar to maintaining mechanical systems. Often times, cheaper and more frequent general maintenance efforts can be utilized to efficiently maintain the storm water systems and aid in avoiding or prolonging more expensive and intrusive maintenance or replacement of the system or its components.

This Storm Water System Maintenance Plan is intended to be used as a guideline for recommended maintenance activities for the designed storm water system. Any maintenance intervals included in this document are estimated based on typical site conditions. These maintenance intervals should be adjusted as necessary for actual conditions experienced at this particular site.

RESPONSIBILITIES

Provisions for the maintenance of the designed storm water system is the responsibility of the Owner of the system. For this project, the current Owner of the on-site storm water management system, including on-site storm sewers, swales and surface drainage paths, detention facilities, and outlet control structures, is Neil Ornoff of OSK Capital Partners. Over the long term, ownership will be passed on to a home owner's association.

RECORD KEEPING

It is recommended that the Owner maintain records of maintenance activities completed on the site storm water management systems. This may include records of work orders, receipts for materials and costs incurred. Keeping these records can serve both as documentation of maintenance as well as being used to aid in establishing budgetary costs for less frequent activities.

LIST OF MANAGEMENT SYSTEMS INCLUDED

- Storm Drainage System - Includes Catch Basins and Storm Sewers and Pipe Outlets
- Storm Water Drainage Swales
- Underdrainage System
- Storm Water Detention Facilities
- Turf Grass
- Native Vegetation
- Trees and Plantings

Storm Drainage System

Purpose and Considerations

The storm drainage system collects storm water to prevent undesirable puddling of water. The storm water is then conveyed downstream using a series of underground pipes to negate the need for large drainage ditches and open channels. The key to adequate function is maintaining a clear flow for the storm water to enter the system. Leaves, trash, and other debris can cover the drainage grates of the receiving structures preventing adequate drainage of surface waters. Accumulated sediment within the pipes can also settle out of the storm water clogging the pipes.

Regular Maintenance Recommendations

- Monthly
  - Inspect drainage grates for accumulated sediment. Remove accumulated leaves, trash and other debris and dispose.
  - Inspect grassed areas around drainage grates for settlement. If "holes" in the soils surrounding the structure appear, sediment may be entering the drainage system. Repair, using mortar, the joints within the structure and around the pipes.
  - Inspect outlet pipes for erosion around the pipe. Repair, re-seed, and blanket any areas of erosion around the pipe opening.

Less Frequent Maintenance

- Every 3 – 5 Years
  - Vacuum catch basin sumps to remove accumulated sediment
  - Jet and clean storm sewers to remove any minor clogging within the pipes.
- Every 5 – 10 Years
  - Televise storm sewers to determine pipe condition. This will help determine if additional maintenance measures are needed by viewing any pipe cracks, faulty joints, or tree root intrusion within the pipe.

Storm Water Drainage Swales

Purpose and Considerations

Storm water drainage swales aid in the surface drainage of storm water by conveying the storm water towards detention facilities and storm water collection systems. Because of the channelized flow within grassed areas, these can be susceptible to erosion.

Regular Maintenance Recommendations

- Monthly
  - Inspect drainage swales for erosion. Repair, re-seed and install temporary erosion control blanket at areas of erosion.
  - Maintain vegetation per Native Vegetation or Turf Grass sections.

Less Frequent Maintenance

- Yearly
  - Maintain vegetation per Native Vegetation or Turf Grass sections.
  - Inspect swales for areas of ponding caused by settlement. Repair drainage swale to re-establish positive drainage and re-seed and blanket. Consider the addition of underdrainage pipes in portions of swales that frequently experience poor drainage.

Underdrainage System

Purpose and Considerations

Underdrainage systems are used for the sub-surface collection of groundwaters and to aid in the drainage of surface waters. Common problems with underdrainage pipes is the potential for clogging of the filter media surrounding the pipe, particularly within landscape areas.

Less Frequent Maintenance

- Yearly
  - Inspect drainage swales containing underdrainage systems for ponding. If ponding existing for extended periods of time, consider replacement of the perforated pipe.

Storm Water Detention Facilities

Purpose and Considerations

Storm water detention facilities hold excess storm water from significant rain events to negate impacts to natural waterways caused by the increase in runoff from developed areas. They also relive burden from public storm conveyance systems by slowly release the excess flows. The function by means of a control structure used to choke the flow of water. This is often through the use of an opening significantly smaller than the upstream storm sewers. Common failures within storm water detention facilities occurs when the small opening is clogged by debris entering the storm water conveyance system. The storm water detention facilities at this site have been designed to include a naturalized basin bottom.

Regular Maintenance Recommendations

- Monthly
  - Inspect Control Structures for debris. Remove any accumulated sediment within the structure.
  - Inspect inlets for erosion around the pipes. Repair, re-seed, and blanket any areas of erosion around the pipe opening.
  - Inspect Rip Rap and remove any accumulated debris
  - Inspect edges of Rip Rap for erosion. Repair, seed, and blanket any areas of erosion around the edges of the rip rap.
  - Refer to Native Vegetation Section for maintenance of the basin plantings.
  - Inspect overflows for erosion. Repair eroded areas and revegetate using seed and turf reinforcement mat.

Less Frequent Maintenance

- Yearly
  - Refer to Native Vegetation section for maintenance of basin plantings including high-mowing.
- Every 3 – 5 Years
  - Vacuum control structure sumps to remove accumulated sediment
  - Inspect basin bottom for areas of extended ponding exceeding 2” in depth. If the excess ponding appears to be caused by sedimentation within the basin, remove the accumulated sediment and re-seed. If ponding appears to be caused by erosion within the basin, add topsoil and over-seed as necessary to minimize the extended ponding of these areas.
- Every 10 Years
  - Survey basin to verify volume. If storage loss exceeds 10%, remove sediment from basin bottom and re-vegetate the basin.

Turf Grass

Purpose and Considerations

Turf grass provides a vegetative cover over the ground surface to aid the reduction of erosion of the underlying soils. Grass also aids in the reduction of runoff from the site by absorbing water. Common issues with grass growth is thinning and areas of poor growth. These areas will result in soil being eroded downstream and can be a cause of sedimentation within the storm water conveyance and detention systems.

Regular Maintenance Recommendations

- As Needed
  - Mow turf grass. Maintaining a consistent grass height will promote growth and maintain a healthy vegetative cover.
- Every two months
  - Evaluate the need for fertilizer. Excessive use of fertilizers is a cause of algae blooms in receiving waters. Limiting the use of fertilizers is a significant benefit to downstream ecosystems. However, the use of fertilizer is also a benefit to the turf grass as it assists maintaining a healthy vegetative cover, helping to minimize erosion
  - Inspect the turf grass for thinning. Apply over-seed as necessary to maintain a dense vegetative covering. The need for over-seeding is common particularly for athletic and high-use areas.

Less Frequent Maintenance

- Yearly
  - Aeration. Regular aeration will reduce the impact of athletic use. Heavy usage areas will experience high compaction and can result in deteriorated grass growth.

Native Vegetation

Purpose and Considerations

Native vegetation is a low-maintenance ground covering. The deep-rooted system of native vegetation prevents erosion, particularly on sloped surfaces. The vegetation also provides a quality habitat for wildlife and provides filtration of runoff to remove debris and contaminants. Native vegetation is tolerant of both wet and dry conditions. Because of this, native vegetation is capable of withstanding more of the prolonged ponding conditions within the storm water management facilities, while also being capable of surviving moderate summer droughts without the need for regular irrigation.

Less Frequent Maintenance

- Yearly
  - Cut grass using a high-mow to a height of approximately 6” – 9”. This is typically performed in the late fall. Avoid mowing of naturalized areas shortly after rain events, particularly within the storm water detention facilities, to avoid rutting of the soils.
  - Spot-check vegetation for invasive species. Use a localized herbicide treatment to kill invasive vegetation. If invasive species population are dense, consider removal and replacement of larger areas of vegetation. It is recommended to employ a specialist in native vegetation to ensure proper identification and removal of undesirable vegetation.
  - Inspect soils for erosion. Add topsoil in areas of rutting or channelized erosion.
  - Remove accumulated trash and debris

Trees and Plantings

Purpose and Considerations

Trees not only provide aesthetic benefits, but they are also important environmentally. Trees provide shade to cool pavement and soil surfaces to minimize heat island effects of urban areas. They also absorb large quantities of water to aid in the reduction of storm water from developed sites.

Regular Maintenance Recommendations

- As Needed
  - Prune low branches as necessary for accessibility around the tree
  - Provide irrigation during excessive periods of drought

Less Frequent Maintenance

- Yearly
  - Top-dress mulch around trees and plantings.
  - Replace dead plantings

- Every 2-3 Years
  - Prune dead branches or replace diseased or dead trees.

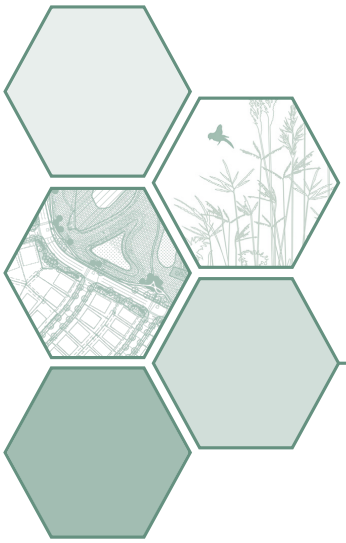
USACE Nationwide 13
Pre-Construction Notification

670 Old Rand Rd Development

Lake Zurich, Lake County, IL

Prepared for:
Pappageorge Haymes Partners

June 9, 2025



GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

USACE NATIONWIDE PERMIT REVIEW
Old Rand Road
PRE-CONSTRUCTION NOTICE

Applicant:	Pappageorge Haymes	**Date:**	5/29/2025
GRWA #	PHP2501	**Permit #:**	LRC-2022-547
Location:	670 S. Old Rand Road, Lake Zurich, IL	**Permit Type:**	Nationwide Permit 13

1.0 PROJECT OVERVIEW

1.1 EXISTING CONDITIONS:

The study area (approximately 8.8 acres in size) consists of a wetland and associated drainageway on the north side, and a single-family home with access drive and accessory structures on the south side. The study area, located near the intersection of South Old Rand Road and South Buesching Road, is generally bounded by commercial buildings to the north, a residential subdivision to the east, and a wetland pond to the west. The site is within the Des Plaines River Watershed.

One (1) wetland and associated drainageway were identified on-site.

1.2 PROPOSED CONDITIONS:

The project proposes a residential development with all associated utilities, infrastructure, and stormwater on the southern portion of the study area. The Village of Lake Zurich has requested bank stabilization along the channel and dredging of the pond. Please see concept plan attached for details (Attachment 1.0). The overall development plan does not require impacts to waters of the U.S. Preliminary grading is attached herein (Attachment 2.0).

Gabion baskets will be installed along the northern boundary of the channel where erosion is significant. Baskets will be consistent with standard practices (see attachment 1.1). Gabion baskets are appropriate along portions of the channel where high flow events cause considerable erosion during flood events. Where possible vegetative stabilization measures will be placed where necessary to prevent continued erosion. Vegetative measures include live staking and deep rooted native vegetation. Means and methods of these measures are attached herein (Attachment 3.0)

1.3 COMPENSATORY MITIGATION

The project proposes to impact less than 500 linear feet of the stream bank. No mitigation is proposed.

1.4 SUMMARY OF REGULATED WATERS:

One (1) wetland and associated drainageway was identified on-site. This wetland is primarily an open water pond with a wet meadow and scrub-shrub fringe. The tributary consists of a narrow channel with shrub banks.

Please see the wetland report for more information (Attachment 4.0). These waters are assumed to be under USACE jurisdiction at this time.

2.0 NATIONWIDE PERMIT COMPLIANCE

2.1 USACE NATIONWIDE Permit (NWP 13):
This NWP authorizes activities necessary for erosion control or prevention, such as vegetative stabilization, bioengineering, sills, rip rap, revetment, gabion baskets, stream barbs, and bulkheads, or combinations of bank stabilization techniques.

(a) No material is placed in excess of the minimum needed for erosion protection; (b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects (an exception is for bulkheads—the district engineer cannot issue a waiver for a bulkhead that is greater than 1,000 feet in length along the bank); (c) The activity will not exceed an average of one cubic yard per running foot, as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; (d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; (e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States; (f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas); (g) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization; (h) The activity is not a stream channelization activity; and (i) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This NWP authorizes those maintenance and repair activities if they require authorization. This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated as appropriate.

The applicant is proposing the use of gabion baskets to stabilize a small portion of a highly eroded stream channel. Where necessary, the remaining portions will be stabilized with vegetative stabilization measures. The proposed activity will not impede flow events or modify the channelization of the existing wetland and stream. No temporary fills are proposed. Minor dredging may be required where an existing outfall is buried and an additional NWP review may be required for this work.

2.2 NWP 13 GENERAL CONDITIONS: Pre-Construction Notification

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation. 2

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Traditionally navigable waterways are not present within the project area

2. *Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.*

No activities are proposed that would affect aquatic life.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

No activities are proposed that would affect spawning areas.

4. *Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breed areas for migratory birds must be avoided to the maximum extent practicable.*

The waters do not appear to provide migratory birds feeding habitat.

5. *Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.*

Shellfish beds are not present within the proposed project workspace.

6. *Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).*

Unsuitable material and/or toxic material will not be used or discharged for the proposed project. Only clean earthen fill is proposed for use.

7. *Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.*

No known water supply intakes are in proximity to the activity.

8. *Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable*.

The proposed project will not create or modify an impoundment.

9. *Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).*

The channel associated with the wetland appears to be intermittent in nature and the bank modifications will not affect high water flows.

10. *Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA approved state or local floodplain management requirements.*

Floodplain is not located within the limits of the development area

11. *Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.*

Yes protective measures will be taken to protect wetland areas during work. Soil erosion and sediment control plans will be provided for review

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

Yes, all work will comply with an approved SESC plan.

13. *Removal of Temporary Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.*

No temporary fills are proposed.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

Yes, all fill areas will be property maintained.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

The project is represented in its entirety.

16. Wild and Scenic Rivers.

> *(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.*
>
> *(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.*
>
> *(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.*

A wild and scenic river is not present within or adjacent to the project area.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

The proposed project will not impair reserved tribal rights.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical 5 habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 6 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete preconstruction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

The project will comply with the ESA requirements

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

Bald eagles are not known to nest within or adjacent to the development area.

20. Historic Properties.

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, 7 or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties 8 of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

A Section 106 is not provided at this time. The property contains one structure build after 1946.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

Yes discovery of remains and artifacts will be reported.

22. Designated Critical Resource Waters. Critical resource waters include, NOAAmanaged marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

The proposed project does not occur within a designated critical resource water.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless 9 the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332. 10 (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation. (2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).) (3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation. (4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement. (5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)). (6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2- acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is 11 provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

Impacts are below the threshold for mitigation

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

No impoundments are proposed.

25. Water Quality.

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver. 12

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

An individual water quality permit is not required.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

The proposed project is not located within a coastal zone.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

The development will comply with the conditions of this permit and any other local permits.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

The development proposes repairs to an existing outfall and a NWP 3 may be required.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification 13 must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

The applicant will be responsible for the permit until it is closed.

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

Upon completion of the project, the required signed certification will be provided to the Corps.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the 14 prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

The proposed project will not alter or temporarily or permanently occupy or use a USACE federally-authorized Civil Works project.

32. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a preconstruction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete.

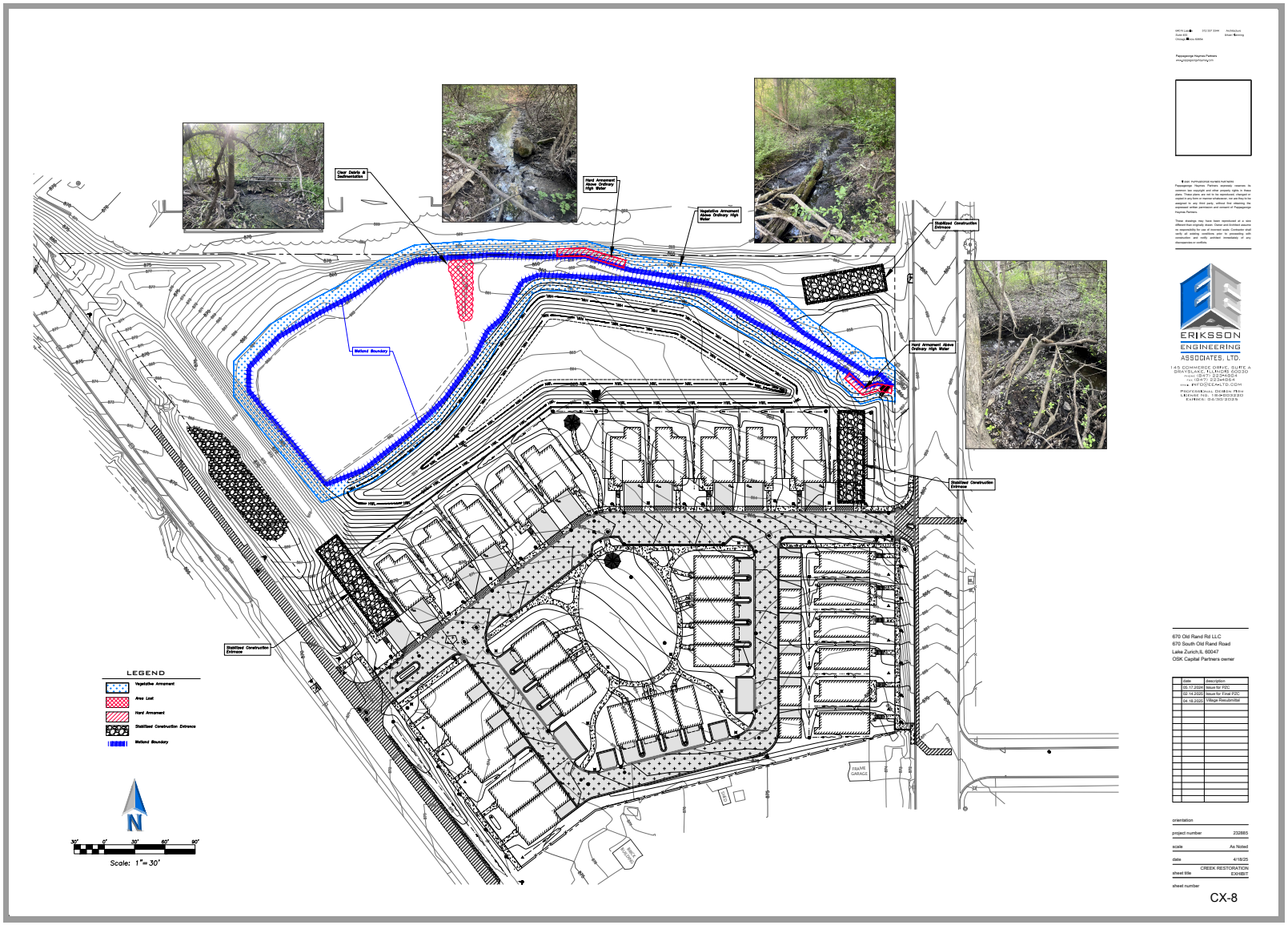
This document and its attachments serve as a PCN for the proposed activities.

USACE Nationwide Permit

Old Rand Road
Lake Zurich, IL
Permit #: LRC-2022-547

1.0: CONCEPT PLAN

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

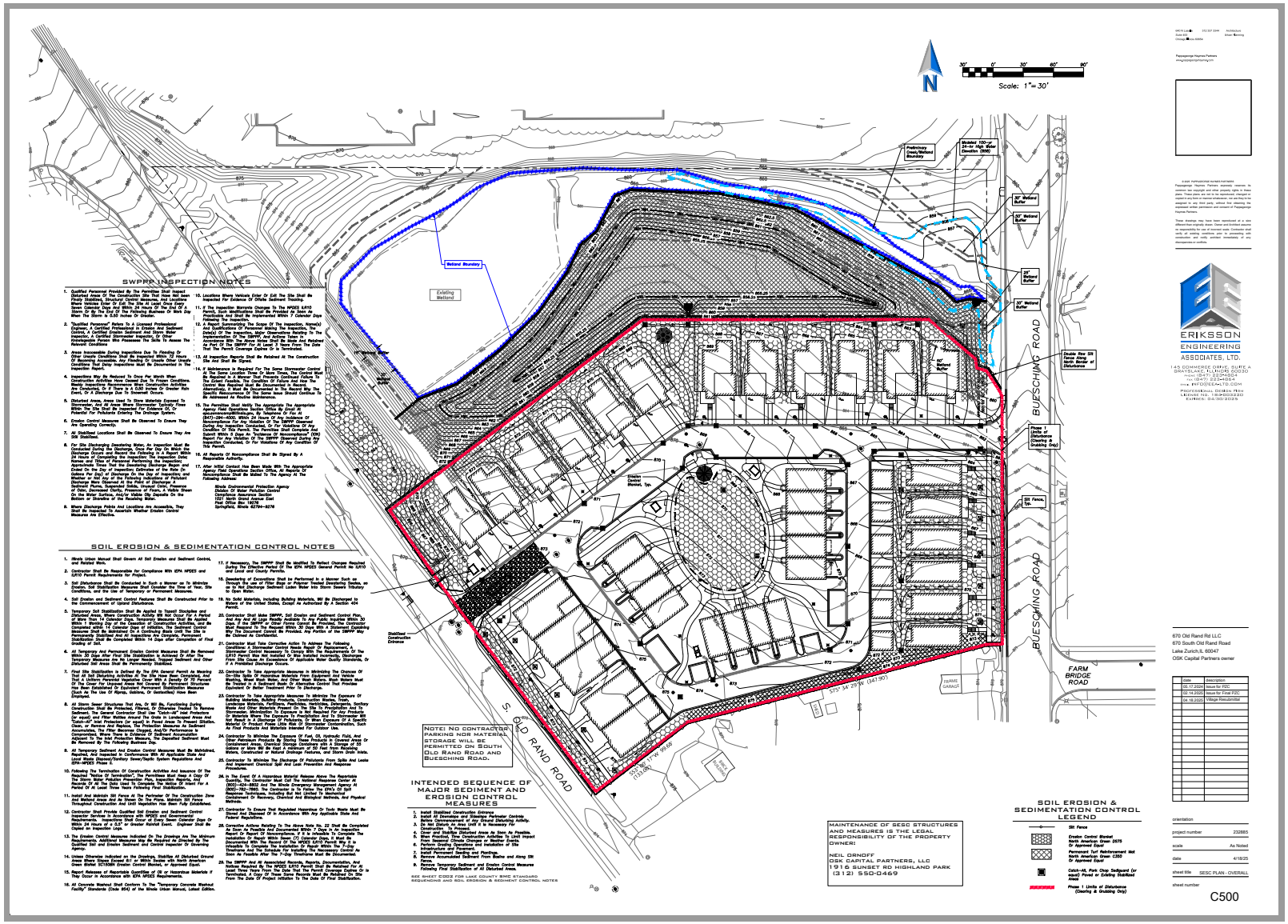

Clear Debris & Sediment/Silt
Hard Armament Above Ordinary High Water
Vegetative Armament Above Ordinary High Water
Stabilized Construction Entrance
Wetland Boundary
LEGEND
Vegetative Armament
Area Lost
Hard Armament
Stabilized Construction Entrance
Wetland Boundary
N
Scale: 1"= 30'
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
CREEK RESTORATION EXHIBIT
CX-8

USACE Nationwide Permit

Old Rand Road
Lake Zurich, IL
Permit #: LRC-2022-547

2.0 DEVELOPMENT PLAN

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE


SWPPP INSPECTION NOTES
SOIL EROSION & SEDIMENTATION CONTROL NOTES
INTENDED SEQUENCE OF MAJOR SEDIMENT AND EROSION CONTROL MEASURES
SOIL EROSION & SEDIMENTATION CONTROL LEGEND
Scale: 1"= 30'
BUESCHING ROAD
OLD RAND ROAD
FARM BRIDGE ROAD
NOTE! NO CONTRACTOR PARKING NOR MATERIAL STORAGE WILL BE PERMITTED ON SOUTH OLD RAND ROAD AND BUESCHING ROAD.
MAINTENANCE OF SESC STRUCTURES AND MEASURES IS THE LEGAL RESPONSIBILITY OF THE PROPERTY OWNER:
NEIL ORNOFF
OSK CAPITAL PARTNERS, LLC
1916 SUNSET RD HIGHLAND PARK
(312) 550-0469
ERIKSSON ENGINEERING ASSOCIATES, LTD.
670 Old Rand Rd LLC
670 South Old Rand Road
Lake Zurich,IL 60047
OSK Capital Partners owner
C500

USACE Nationwide Permit

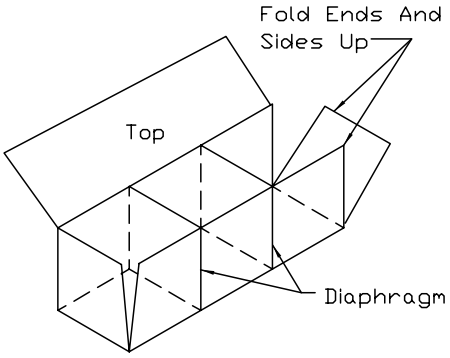
Old Rand Road
Lake Zurich, IL
Permit #: LRC-2022-547

3.0 STABILZATION MEASURES DETAILS

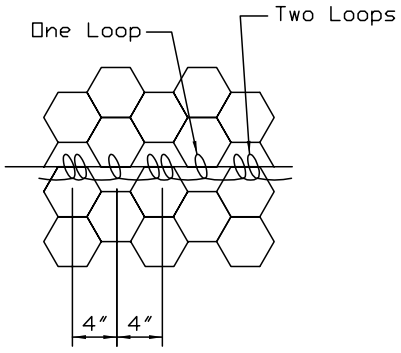
GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

STRUCTURAL STREAMBANK STABILIZATION - GABIONS

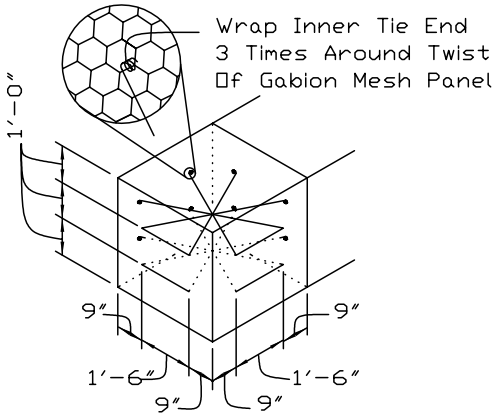
ASSEMBLEY AND LACING DETAILS



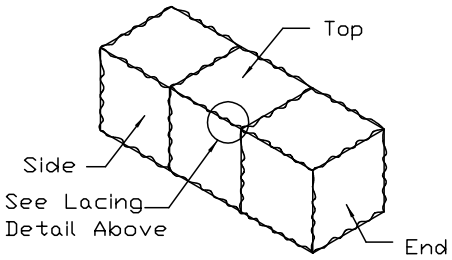
ASSEMBLY DETAIL



LACING DETAIL



INNER TIE WIRE DETAILS



WIRE LACING DETAIL

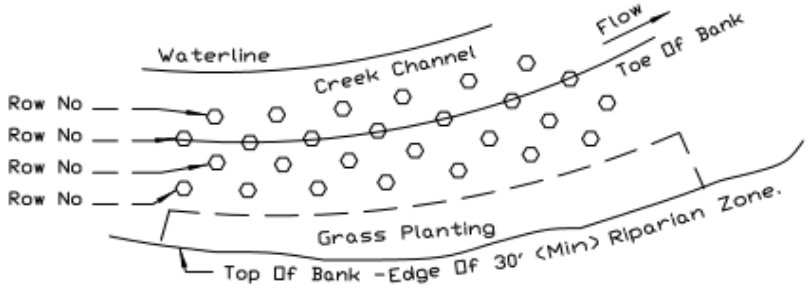
NOTES

1. The ends of a lacing wire will be secured by looping it thru the mesh and twisting. Proceed to lace with alternate two loops and one loop at approximately 4 inch intervals.
2. Other lacing methods may be used if recommended by the manfuacturer and approved by the engineer/inspector.
3. The "X" shaped inner tie may be twisted at the "X" to tighten, if placed too loosely.

REFERENCE Project Designed _____ Date _____ Checked _____ Date _____ Approved _____ Date _____	NRCS Natural Resources Conservation Service	STANDARD DWG. NO. IL-645 SHEET 1 OF 1 DATE 5-18-94

VEGETATIVE STREAMBANK STABILIZATION

SAMPLE SITE PLAN



• — Dormant Cutting
○ — Dormant Posts Or STakes
○ — Shrub Or Tree

SITE PLAN

GRASSES					
Reach No.	Length	Area (Sq.Ft.)	Species To Be Seeded	Lbs. Of PLS Per 1000 Sq. Ft.	Total Lbs.

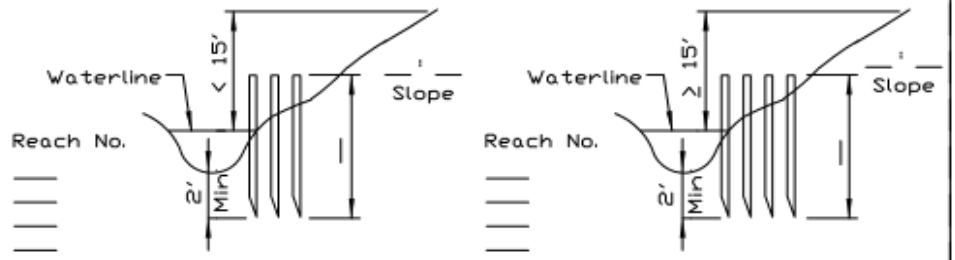
REFERENCE
Project _____
Designed _____ Date _____
Checked _____ Date _____
Approved _____ Date _____

NRCS
Natural Resources Conservation Service

STANDARD DWG. NO.
IL-695
SHEET 1 OF 3
DATE 9-29-93

VEGETATIVE STREAMBANK STABILIZATION

SITE PLAN



WOODY PLANTS

Reach No.	Length (Feet)	Row No.	Species To Plant	Between Row Spacing (Ft.)	In Row Spacing (Ft.)	Number Plants Per Row	Total Plants

REFERENCE
Project
Designed Date
Checked Date
Approved Date

NRCS
Natural Resources Conservation Service

STANDARD DWG. NO.
IL-695
SHEET 2 OF 3
DATE 3-3-95

Table 1.
Recommended Woody Species for Streambank and Shoreline Protection

Plant Zone	Common Name	Genus Species	Growth Form
1	∗Black Willow	Salix nigra	Tree
1	∗Bankers Willow	Salix cottettii	Shrub
1	∗Purple-osier Willow	Salix purpurea	Shrub
1	∗Sandbar Willow	Salix interior	Tree
1	∗Carolina Willow	Salix caroliniana	Tree
1	∗Peach-leaved Willow	Salix amygdaloides	Tree
1	∗Buttonbush	Cephalanthis occidetalis	Shrub
1,2,3	∗Red-osier Dogwood	Cornus stolonifera	Shrub
2,3	∗Silky Dogwood	Cornus amomum	Shrub
2,3	Flowering Dogwood	Cornus florida	Tree
2,3	Green Ash	Fraxinus pennsylvanica	Tree
2,3	∗Sycamore	Platanus occidentalis	Tree
1,2,3	Baldcypress	Taxodium distichum	Tree
1,2	River Birch	Betula nigra	Tree
1,2,3	∗Eastern Cottonwood	Populus deltoides	Tree
1,2,3	∗Swamp Cottonwood	Populus heterophylla	Tree

* These species are suitable for use as dormant woody cuttings, stakes or posts. All species of willow and cottonwood do not require hormone treatment for rooting.

Any deciduous hardwood species listed in the corresponding Woodland Planting Group in the NRCS Field Office Technical Guide for the applicable soil type is suitable for planting as bareroot stock in zones 2 and 3.

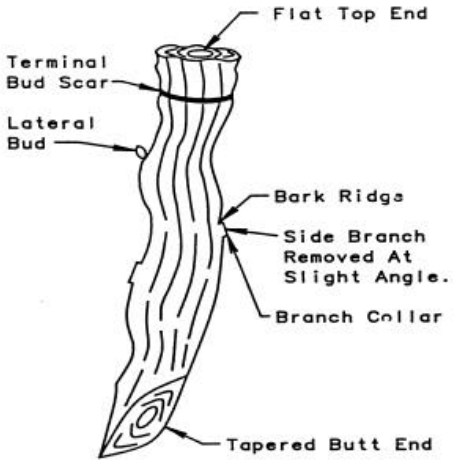


Figure 1
Planting Material Preparation

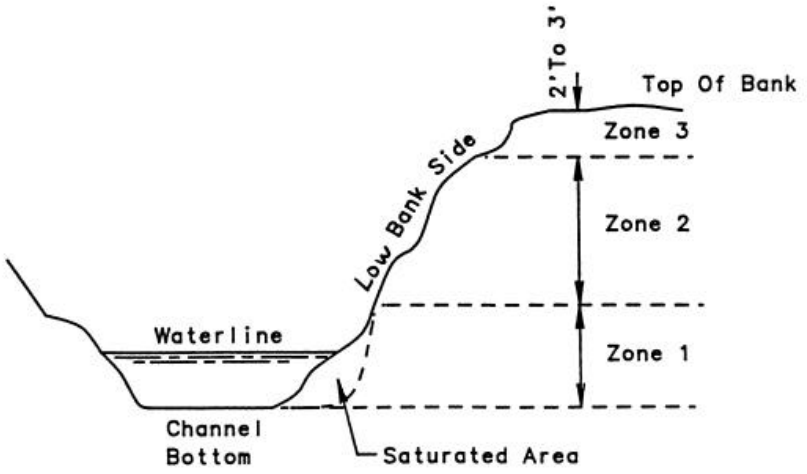


Figure 2
Plant Zones

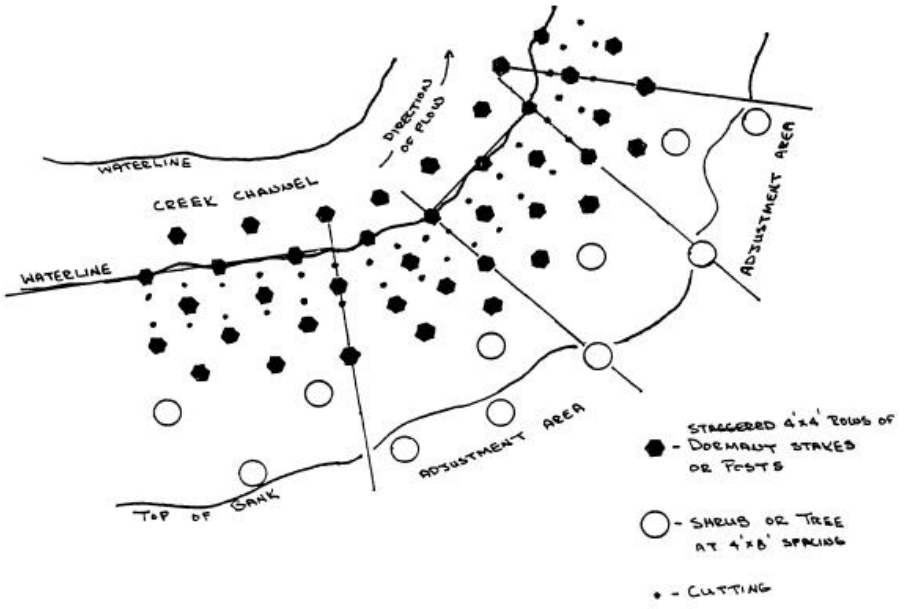


Figure 3
Sample Layout

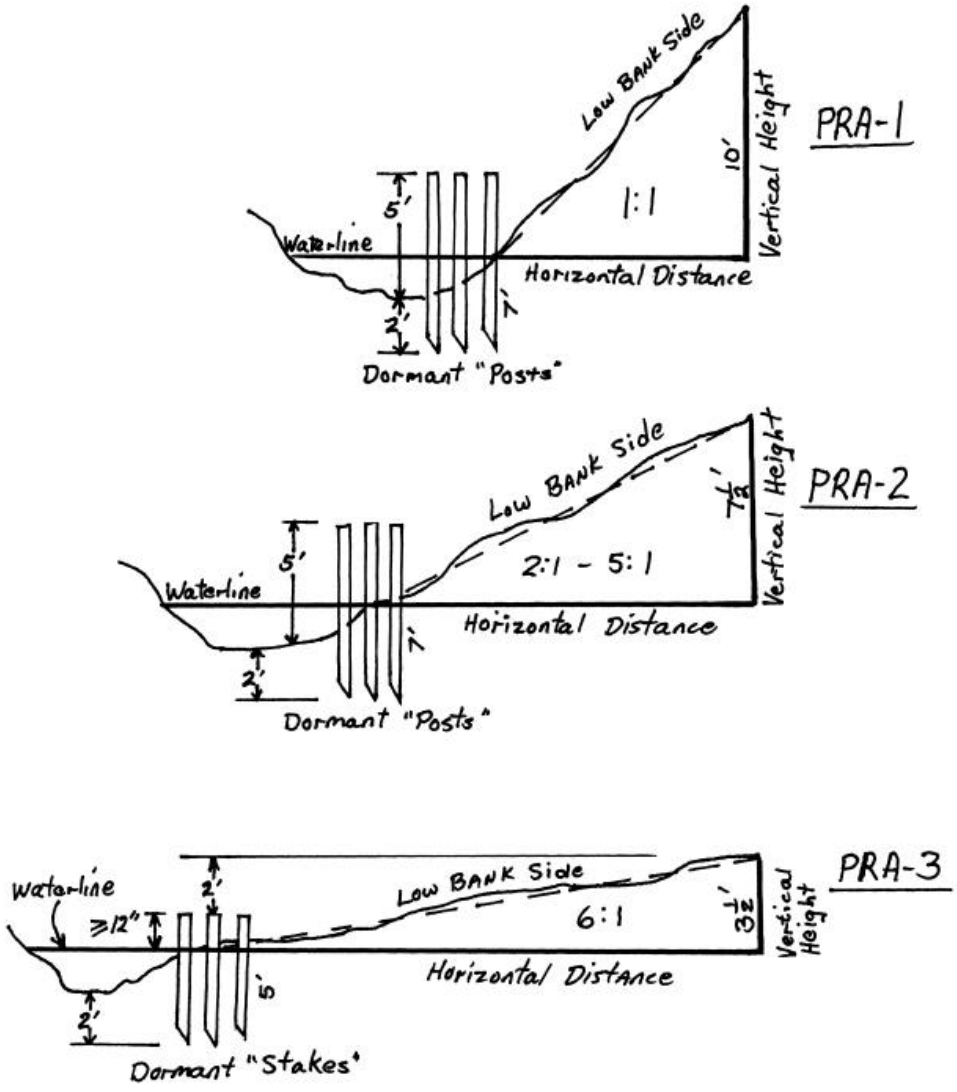


Figure 4
Minimum Planting Row Arrangements (PRA)

USACE Nationwide Permit

Old Rand Road
Lake Zurich, IL
Permit #: LRC-2022-547

4.0 WETLAND REPORT

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

STORMWATER MANAGEMENT COMMISSION

September 16, 2022

Mr. Henry Joern
670 S. Old Rand Road
Lake Zurich, IL 60047

Subject: **SMC File #:** IWLC-22-593
USACE Ref. #: LRC-2022-547
670 S. Old Rand Road Property, Lake Zurich, Lake County, IL
PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Dear Mr. Joern:

This letter responds to the request for a preliminary wetland jurisdictional determination (PJD) and isolated wetland boundary verification (BV) for the above-referenced property, submitted on your behalf by Ms. Ellen Raimondi with Gary R. Weber Associates, Inc. (GRWA) and received by the Lake County Stormwater Management Commission (SMC) on August 8, 2022, with supplemental information received September 15, 2022. SMC reviewed available reference materials and performed a site reconnaissance in the company of Mr. Michael Machalek the U.S. Army Corps of Engineers (USACE) on August 25, 2022. Wetlands/waters referenced in this letter are shown on the enclosed *Exhibit A: Water Resources Summary,* by GRWA, not dated (digital copy received by SMC on September 15, 2022).

- Based on our findings, **"Tributary 1" and "Wetland 1" appear to be *Waters of the United States* (WOTUS)** subject to regulation by the USACE under Section 404 of the federal Clean Water Act. These feature have a clearly discernible hydrologic connection to the traditionally navigable Des Plaines River (via the Buffalo Creek subwatershed). "Tributary 1" is a relatively permanent waters, and Wetland 1 abuts that feature. The USACE did not verify WOTUIS boundaries during this determination (see enclosed PJD field report). If a WOTUS boundary verification is desired, please coordinate directly with the Corps to schedule a field visit once flagging has been refreshed.

This PJD has been approved by SMC's Chief Engineer and the findings are valid for a period of three (3) years from the date of this letter unless new information warrants a revision before the expiration date. If you disagree with the findings of this PJD, you may request an approved JD (AJD) from the USACE.

For your information, SMC performed this PJD in accordance with the *Interagency Coordination Agreement (ICA) Between the U.S. Army Corps of Engineers, Chicago District, Lake County Stormwater Management Commission, and Lake County Department of Planning, Building and Development*, dated June 4, 2002. We determined the jurisdiction of WOTUS on the subject project area based on the current definition in 33 U.S.C. 1344. Section 328.3(a); guidance provided in the EPA/USACE Memorandum entitled "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" dated June 5, 2007 (revised 12-02-08); and the USACE's *Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007. For areas not considered WOTUS, we determined jurisdiction using the definition of IWLC in Appendix A of the Lake County Watershed Development Ordinance (WDO, 10-13-2020).

Permitting Considerations

1. This letter satisfies the requirement for a written jurisdictional determination under WDO §1001 for the indicated wetlands/waters.

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
500 W. Winchester Road, Suite 201 • Libertyville, Illinois 60048 • 847/377-7700 • FAX 847/984-5747
www.lakecountyil.gov/StormwaterManagement/default.htm

2. The surveyed boundaries of all existing wetlands/waters on the development site, including features constructed in dry land (e.g., stormwater management basins), need to be included on the engineering plans for permitting purposes.

3. **If proposed development will impact WOTUS, a wetland permit from the USACE will be required.** Please refer to the USACE-Chicago District's web site for the permit application submittal requirements: http://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/AppChecklist.aspx. The USACE may require SMC's technical review/approval of the proposed soil erosion and sediment control plan (SE/SC) for the development as a condition of the USACE permit. We will advise you if our SE/SC review/approval is required.

4. **A Watershed Development Permit (WDP) will be required from the Village of Lake Zurich for site development in accordance with the applicable provisions of the WDO.** Please contact Ms. Jodi McCarthy with Manhard Consulting, Ltd., the Village's WDO Enforcement Officer (EO, 847-634-5500 or jmccarthy@manhard.com), for the appropriate permit application form and procedures.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please contact Juli Crane at jcrane@lakecountyil.gov.

Sincerely,
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Brian Frank, P.E., CFM
Chief Engineer

Juli E. Crane, PWS, CWS, CFM
Principal Wetland Specialist

Enclosures: *Exhibit A: Water Resources Summary* (GRWA, not dated)
PJD Field Report

xc: Kathy Chernich/Mike Machalek – U.S. Army Corps of Engineers
Jodi McCarthy, Manhard, EO for Village of Lake Zurich
Michael Brown, Village of Lake Zurich Public Works
Ellen Raimondi, CWS, GRWA

This document was digitally transmitted. Please print out a copy of the document and retain for your records. If you are unable to print the document, or desire a hard copy mailed be to you, please notify SMC at your earliest convenience.

U:\Regulatory Program\Permits\22 Permits\IWLC\IWLC-22-593 670 S. Old Rand Rd PJD&BV, LZ\PERMITS\PJD Ltr.doc

LEGEND

Study Area

Flagged Wetland Boundaries

Off-site Wetland Boundaries (not flagged)

Estimated Non-wetland Waters (Tributary)

Sample Points A-E

0 80' 160'

SCALE: 1"=160' **NORTH**

Provided by: Google Earth 2018 Aerial

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Lake County, Illinois 60047

AC2289

Advantage Consulting Engineers

WATER RESOURCES SUMMARY

EXHIBIT A

L:\Projects\AC2289\Eco-Con\Full Wetland Report\Maps\Old Rand Rd_WL Exhibits.dwg

STORMWATER MANAGEMENT COMMISSION

Preliminary Jurisdictional Determination Field Report

LakeCounty

Site Name: *670 S. Old Rand Rd Property*

Date: *August 25, 2022 4:00 PM*

SMC/PBD #: *IWLC-22-593*

USACOE #: *LRC-2022-593*

Attendees:

USACOE Representative(s): *Mike Machalek*
List Other Corp Representative(s): *N/A*
SMC/PBD Representative(s): *Juli Crane*
Other SMC/PBD Representative(s): *N/A*
Other attendee(s):

PJD Requestor:

Name/Contact Info: *Henry Joern, 670 S. Old Rand Rd, Lake Zurich, 847-417-8732, henryjoern@gmail.com*

Site Info:

Address/PIN#: *670 S. Old Rand Rd; PINs: 14-20-400-002 and 14-20-400-003*
Lat/Long: *42.189476 / -88.083492*
Description: *Single-family residence and out-buildings on wooded lot with creek bisecting the northern part of site from east to west.*
References: *No wetland report provided; Wetland Delineation Map (Exhibit A, Preliminary Water Resources Summary), FEMA Floodplain Map (2016), Aerial Photos (1939-2020, Lake County Online GIS Maps), Topographic Map - 1' contours (Lake County Online GIS Maps, 2007 & 2017), Lake County Soil Surveys (SCS 1970 & NRCS 2005), USGS Quadrangle Maps (1960, 1972, 1993), USGS Flood of Record Map, Lake County Storm Sewer Network Maps (SMC GIS, 2022); Lake County Wetland Restoration & Preservation Plan - Online Decision Support Tool (SMC, 2020)*

Disposition of Waters of the US:

Site appears to contain Waters of the U.S.: *Yes, site DOES appear to contain Waters of the U.S.*
List wetland/water IDs from delineation map and basis: *Tributary 1 is a relatively permanent water (RPW) and Wetland 1 = wetland abutting an RPW (i.e., Tributary 1)*
WOUS Exclusions: *N/a*
Corps representative concurs with staked/flagged WOUS boundaries: *No*
If Corp representative DOES NOT concur, please explain: *Flagging not present at time of PJD visit.*

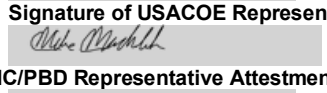
Disposition of Isolated Waters of Lake County:

Site appears to contain Isolated Waters of Lake County: *No, site DOES NOT appear to contain Isolated Waters of Lake County.*
List wetland/water IDs from delineation map: *N/A*
Potential IWLC Exclusions: *N/a*
SMC/PBD representative concurs with staked/flagged IWLC boundaries:
If SMC/PBD representative DOES NOT concur, please explain:

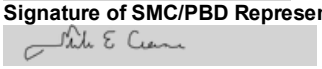
Comments: *The WOTUS boundary will be verified upon reflagging and consultant contacting the Army Corps to reschedule a field visit.*

Attests:

USACOE Representative Attestment: *Corp representative has reviewed the information herein and CONCURS with determination.*
Signature of USACOE Representative:



SMC/PBD Representative Attestment: *SMC/PBD representative has reviewed the information herein and CONCURS with determination.*
Signature of SMC/PBD Representative:



U:\Regulatory Program\Permits\22 Permits\IWLC\IWLC-22-593 670 S. Old Rand Rd PJD&BV, LZ\PERMITS\PJD_Field_Report_Form.docx

WETLAND DELINEATION REPORT

670 South Old Rand Road

Lake Zurich, Lake County, Illinois

Advantage Consulting Engineers

AC2289

December 9, 2022

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

WETLAND DELINEATION REPORT

670 S Old Rand Road

Pin #1420400003

Lake Zurich, Lake County, Illinois

Prepared for:

Advantage Consulting Engineers
80 Main Street, Ste 17
Lemont, IL 60439

Attn: Bill Zalewski

Prepared by:

Gary R. Weber Associates, Inc.
402 W. Liberty Drive
Wheaton, IL 60187
(630)668-7197

Project Reference Information

Project #: AC2289

December 9, 2022

Carl M. Peterson, CPESC, LEED AP
GRWA - Managing Principal

Ellen L. Raimondi, CWS, DECI
GRWA - Senior Ecologist

Project Staff

Lisa Pajon
GRWA - Natural Resource Consultant

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APPENDIX A – WATER RESOURCES MAPS: EXHIBIT A-H
APPENDIX B – SITE PHOTOS: EXHIBIT I
APPENDIX C – PRELIMINARY JURISDICTIONAL DETERMINATION
APPENDIX D – WETLAND DETERMINATION FORMS
APPENDIX E – FLORISTIC QUALITY ANALYSIS
APPENDIX F – THREATENED AND ENDANGERED SPECIES CONSULTATION

WETLAND DELINEATION REPORT

Project Name:	670 S Old Rand Road AC2289	**Client:**	Advantage Consulting Engineers
Location:	Lake Zurich, Ela Township, Lake County, Illinois 60047		
Parcel PIN #	1420400002 & 1420400003		
PLSS	SE S20 T43N R10E		
Coordinates	Latitude: 42.189692 Longitude: -88.083625		
Field Ecologist:	Lisa Pajon		
Supervised by:	Ellen Raimondi-Schwartz, CWS, DECI		
Date of site visit:	May 17, 2022		

1.0 INTRODUCTION

Gary R Weber Associates performed a formal wetland delineation within the study area located on South Old Rand Road, Lake Zurich, Lake County, Illinois (Exhibit A: Location), hereafter referred to as the study area. It is generally bounded by commercial buildings to the north and residential buildings to the east, west, and south. The study area, as presented in this report, represents the property limits investigated by GRWA for the presence of regulated surface water resources. These limits do not necessarily reflect the boundaries of any proposed development activities. It is within the Wheeling Drainage Ditch sub-watershed and the Des Plaines River watershed.

1.1 DELINEATION SUMMARY

The study area (approximately 7.5 acres) consists of a wooded parcel with a single family home and wetland with associated tributary. A steep slope is located along the northern boundary that is associated with off-site building pads. The southern portion of the study area slopes northward to the tributary. The site is primarily vegetated with a shrub dominated community and mature trees (see Photos 1 and 2). The southern portion of the site was recently cleared of shrubs.

One (1) wetland with an associated tributary is located within the study area. The wetland is primarily an open water pond with a wet meadow and scrub-shrub fringe. The tributary consists of a narrow channel with shrub banks. Two (2) wetland are located off-site.

Wetland acreages provided in this report are estimations; a survey of staked boundaries must be performed to obtain exact size and location information.

1.2 REGULATION SUMMARY

Basic information regarding wetland regulations may be found in the Regulatory Statement portion of this report. Briefly, the U.S. Army Corps of Engineers (USACE) regulates all Waters of the United States that are currently or historically navigable and all wetlands that are connected to or associated with these waterways. The Lake Zurich Stormwater Management Ordinance regulates the development of all areas within the village.

A Preliminary Jurisdictional Determination was completed on September 16, 2022 and has identified Wetland 1 and the associated Tributary 1 as a Waters of the United States (WOUS) due to connection with the Des Plaines River via Buffalo Creek (See Appendix C).

The USACE must make a final determination regarding jurisdictional status.

At the time of this wetland delineation report, current regulations state that this delineation is valid for 3 years from the date of site verification.

1.3 THREATENED AND ENDANGERED SPECIES

Based on a 12-9-2022 review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website, sensitive (federally threatened or endangered) plant or animal species habitat may be located on the study area (see USFWS Review Summary). Habitat for the Northern Long-eared bat may be present. Tree removal should be limited to winter months (Nov 1-Mar 31). Further coordination with the USFWS may be required prior to permitting with Lake County.

According to the Illinois Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT), sensitive (threatened or endangered) plant or animal species are not known to exist within the vicinity of the study area (see attached IDNR EcoCAT Results Report).

2.0 PROJECT PURPOSE

The purpose of the site visit was to identify regulated surface wetland, non-wetland water resources or Waters of the United States (WOUS) on, or within 100 feet, of the study area. A floodplain determination was not included as part of our investigation.

On-site wetland areas encountered were delineated using standard methods sanctioned by the United States Army Corps of Engineers in the Corps of Engineers Wetlands Delineation Manual (1987) and 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region and the United States Department of Agriculture National Food Security Act Manual (1994 and 1996). Plant observations were made for calculating the Coefficient of Conservatism (ĉ) and Floristic Quality Index (FQI) for each wetland plant community using the Wilhelm method (Swink and Wilhelm, 1994).

Observations also were made to determine if wetlands present within the study area were high-quality aquatic resources based on the **Lake County** Watershed Development Ordinance. Observed wildlife and evaluation of resource quality are also reported as required by the Chicago District USACE.

On-site non-wetland water resources encountered were given established Ordinary High Water Mark (OHWM) boundaries using the definitions described in Section 404 of the Clean Water Act (CWA Section 404(b).(1) Guidelines (40CFR230)

3.0 EXHIBIT REVIEW

- The **Location Map** identifies approximate location of study area and nearby major roadways (Exhibit A)
- The **National Wetlands Inventory** identifies one wetland within the study area (Exhibit B).

  One (1) PUBF: palustrine, unconsolidated bottom, semi permanently flooded.
- The **Lake County Wetland Inventory** identifies a **Wetland** within the central portion of the study area (Exhibit C).
- The **Soil Map** identifies the following soils within the study area:

  1103A Houghton Muck - Hydric
  531C2 Markham Silt Loam – Predominantly Non-hydric
  530D3 Ozaukee Silt Loam – Non-hydric

  Field evaluations are made to determine if a hydric inclusion may be present (Exhibit D).
- The **United States Geologic Survey (USGS) Topographic Map** identifies a perennial pond within the study area (Exhibit E).
- The **Flood Insurance Rate Map** identifies the study area outside the 500-year floodplain (Exhibit F).
- The **Lake County USGS Flood of Record Map** identifies record flood limits within the study area (Exhibit G).
- The **Water Resources Summary** identifies approximately locations and boundaries of water resources within the study area. Locations of Wetland 1 and the two off site wetlands are denoted (Exhibit H).
- The **Site Photographs** show conditions exhibited within the study area at the time of the site visit (Exhibit I – Appendix B).

4.0 METHODS

Prior to the site visit, a preliminary site evaluation is performed using aerial photography and natural resource mapping. Potential wetland areas and non-wetland waters units identified by these resources are evaluated in the field.

1987 USACE Wetland Delineation Manual and 2010 Regional Supplement.

Potential wetland areas were investigated to determine if they meet the requirements for a wetland based on the USACE parameters of vegetation, hydrology, and soils. In general, positive indication of each of the three parameters must be demonstrated to classify an area as wetland. Each of these parameters is discussed below.

Vegetation – Three vegetative indicators are applied to plant communities in order to determine if the hydrophytic vegetation criterion is met.

1. More than 50% of the dominant plant species across all strata must be hydrophytic (water tolerant). Wetland plants fall into three indicator classes based on differing tolerances to water level and soil saturation. These indicators are rated obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC).

2. The prevalence index is 3.0 or less. The prevalence index is a weighted-average wetland indicator status of all plant species in a sampling plot. The index is used to determine whether hydrophytic vegetation is present on sites where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test.

3. Over 50% of non-wetland plants in a sample area exhibit morphological adaptations for life in wetlands. To apply this indicator, adapted plants must occur in areas where indicators of hydric soil and wetland hydrology are present.

Hydrology – To be considered a wetland, an area must have 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10. Wetland hydrology indicators are divided into four groups as described below:

Group A – Observation of Surface Water or Saturated Soils
Group B – Evidence of Recent Inundation
Group C – Evidence of Recent Soil Saturation
Group D –Evidence from Other Site Conditions or Data

Soils - To be considered a wetland, an area must contain hydric soil. Hydric soils are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic (lacking oxygen) conditions in the upper part. Soils generally, but not always, will develop indicators that are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. The most current edition of the United States Department of Agriculture, Natural Resource Conservation Service *Field Indicators of Hydric Soils in the United States* is used for identification of hydric soils. Field indicators of hydric soils include but are not limited to the presence of any of the following: histic epipedon, sulfidic odor, at least 2 centimeters of muck, depleted matrix, and/or redoximorphic features. Field indicators are usually examined in the top 20 inches of the soil. Soil colors are determined using *Munsell Soil Color Charts*.

Areas meeting these three criteria are staked in the field for surveying purposes. Boundaries are demarcated in the field with pink flagged pin stakes labeled "WETLAND DELINEATION." Staked boundaries are mapped on an aerial photograph included in this report. Approximate off-site wetland boundaries are

identified on the aerial photograph and were determined using available aerial photographs, wetland maps, and field observation.

The Ordinary High Water Mark (OHWM)

Potential non-wetland water resources were investigated to determine if they meet requirements for a regulated WOUS or isolated waters unit based on USACE parameters.

Ordinary High Water Mark (OHWM) boundaries were established using the definition provided in 33 CFT Part 328.3 of the Clean Water Act. The OHWM is defined as the line on the shore established by the fluctuations of water. This line can be identified by physical characteristics such as a clear, natural line on the bank, changes in the character of the soil, shelving, vegetation matted down, bent, or absent, leaf litter disturbed or washed away, sediment deposition, water staining, the presence of litter and debris, destruction of terrestrial vegetation, sediment sorting, scour, multiple observed or predicted flow events, and abrupt change in plant community.

5.0 REVIEWED ON-SITE CONDITIONS

Wetland 1. This wetland (approximately 1.12 acres in total size) is located within the northern portion of the study area. The wetland originates from a culvert under Old Rand Road and directs water via Tributary 1 to a culvert under Buesching Road. It is characterized as an open water pond with wetland fringe dominated by a scrub-shrub and pockets of wet meadow community. An artificial berm divides the western section of Wetland 1 and contains a culvert. See Photos 3-7 for reference.

Tributary 1. The tributary consists of a natural channel containing intermittent flow. It is approximately 350 linear feet within the study area boundaries. The tributary not identified on the NWI or USGS Topographic map. It does not have an associated floodplain. The Lake County Wetland Inventory identifies the area of Tributary 1 as a wetland.

The channel of the tributary averages 3 feet in width with shallow, sloping banks. The banks are primarily vegetated by invasive shrubs and a shady woodland herbaceous community. Portions of the bank are artificially stabilized with concrete debris. At the time of the field investigation, water depth within the channel was less than 1 foot. See Photos 8-10 for reference.

The boundaries of Tributary 1 were marked with pink pin stakes and flagging ribbon at the Ordinary High Water Mark (OHWM). The OHWM was identified by a clear, natural line on the bank and drift deposits.

Sample points were established within and adjacent to Wetland 1 to characterize the vegetation, soils, and hydrology (Exhibit H: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 1 and Tributary 1 was primarily vegetated by European Buckthorn (*Rhamnus cathartica*), and Silver Maple (*Acer saccharinum*). The mapped soil series is Houghton Muck, a hydric soil, and Ozaukee Silt Loam, a predominantly non-hydric soil. USDA field indicators A10: 2cm Muck, A11: Depleted Below Dark Surface; evidence of hydric soil. Surface water and saturation provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 1 was 2.08, and the Floristic Quality Index (FQI) was 7.22 (see attached Floristic Quality Data). These values indicate a low quality plant community.

Off-site Wetland 2. This wetland is located north of the study area and is a depressional feature fully vegetated with invasive wet meadow species (*Phragmites*). The wetland does not appear to have connection with Wetland 1.

Off-site Wetland 3. This wetland is located west of the study area boundaries. It connects to Wetland 1 via a culvert under Old Rand Road. The wetland is an open water pond with scrub-shrub and wet meadow fringe.

6.0 REGULATORY STATEMENT

6.1 Federal Regulations

The deposition of dredge or fill materials into federally jurisdictional wetlands or Waters of the United States is regulated by the USACE under Section 404 of the Clean Water Act.

The Nationwide Permit authorizes 0.1 acre or less of low quality wetlands to be filled without mitigation. If over 0.1 acre is proposed for filling or is subject to secondary impacts, in-kind mitigation may be required at a ratio of 1.5:1, or greater. The aggregate total loss of waters of the U.S. authorized by NWP cannot exceed 0.5 acre or 300 linear feet of streambed.

Under the existing regulations, secondary impacts (both on-site and off-site) from filling also must be evaluated. Mitigation may be required at a higher rate if a project will significantly alter wetland functions such as stormwater detention, water filtration, sediment trapping, and/or wildlife habitat.

Before mitigation will be approved, reasonable proof that avoidance or minimization of wetland impacts has been attempted must be provided to the Corps.

A USACE permit is not required if the wetlands are avoided and construction erosion near a wetland is controlled.

6.2 Municipal and State Regulations

Lake Zurich Stormwater Management Regulations: The Village of Lake Zurich Stormwater Management Ordinance regulates the development of all areas within the Village. A Watershed Development Permit is required for the development of any site which:

1) creates a wetland impact within any area defined as Waters of the United States or Isolated Waters of Lake County;
2) occurs in buffer areas adjoining to waters of the U.S. or Isolated waters of Lake County;
3) is located in a regulatory floodplain;
4) is located in a flood-prone area with 100 or more acres of tributary drainage;
5) is located in any depressional storage area with a storage volume of 0.75 acre-feet or more for the base flood;
6) modifies the flood-prone area of a channel where the tributary drainage area is 20 or more acres;
7) includes the total land area of an ownership parcel that results in:
    a) more than 0.5 acre of new impervious area; or
    b) more than 1.0 acre of hydrologically disturbed area, unless the total new impervious surface area is less than 0.5 acre; or
    c) an impervious surface area ratio of 50 percent or greater, unless the total new impervious surface area is less than 0.5 acre;
8) results in 1.5 acres or more of additional impervious surface per mile for linear or nonlinear public road projects; or
9) hydrologically disturbs 5,000 square feet or more.

Provisions for impacts to wetlands in the Village of Lake Zurich are similar to those outlined in the Lake County Watershed Development Ordinance. Mitigation at a minimum of 1.5:1 is required for all wetland impacts greater than or equal to 0.25 acre of Isolated waters of Lake County, and mitigation must occur in Lake County. In addition, hydric soils must be avoided or used elsewhere on-site. The Conservancy Soils Ordinance should be reviewed prior to site development.

Plans for site development must utilize Best Management Practices that include structural provisions for stormwater conveyance, conservation of floodplains, streams and channels, lakes, ponds, waters of the U.S., wetlands including Isolated Waters of Lake County, prairies, and woodlands that exist on the site. Delineated wetlands and their buffers must be indicated on site plans. All natural areas including avoided wetlands, stormwater management systems, and buffers are required to be protected through 1) placement into a deed or plat restriction and 2) implementation of a long-term maintenance plan.

Buffer widths for avoided waters of the U.S. and Isolated Waters of Lake County are as follows:

- When a channel has a watershed greater than 20 acres but less than 1.0 square mile, or a wetland has an area greater than 2.5 acres, the minimum buffer width is 50 feet;
- When a wetland has an area greater than 1.0 acre but less than 2.5 acres, the minimum buffer width is 40 feet;
- When a channel has a watershed greater than 1.0 square mile, or a wetland has an area greater than 1/3 acre but less than 1.0 acre, the minimum buffer width is 30 feet;
- Exceptional functional value wetlands (ADID) and streams with an Index of Biotic Integrity greater than 40 have a minimum buffer width of 100 feet;
- Buffer averaging to a minimum of ½ the designated buffer width is allowed upon approval of the Enforcement Officer;
- Buffer widths are subject to modification by the Enforcement Officer for areas that contain state or federal threatened and endangered species.

The design of stormwater storage to replace existing depressional storage must minimize any increase in runoff volumes and rates from development and preserve natural features. Stormwater detention facilities may be placed in wetlands provided that:

1) the impacted wetland is determined by the NRCS to be farmed wetland; or
2) the impacted wetland is 85% covered by low-quality species identified in the ordinance.

Stormwater detention may be placed in the buffer to an avoided wetland. The ordinance discourages placement of detention in Regulatory Floodplain, but will allow for such placement as long as compensatory storage in addition to the required detention storage is provided.

Illinois Department of Natural Resources Agency Action Plans for Interagency Wetlands Policy Act of 1989: The Illinois Interagency Wetlands Policy Act of 1989 is intended to ensure that there is no overall net loss of the State's existing wetland acres or their functional values resulting from State-supported activities. The Act charges State agencies with a further duty to "preserve, enhance and create wetlands where necessary to increase the quality and quantity of the State's wetland resource base."

The Interagency Wetlands Policy Act of 1989 states that any construction, land management or other activity performed by, or for which financial assistance is administered or provided by, a State agency that will result in an adverse impact to a wetland shall be subject to compliance. This includes, but is not limited to the following:

- The alteration, removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, vegetation, or naturally occurring minerals of any kind from a wetland;
- The discharge or deposit of fill material or dredged material in a wetland;
- The alteration of existing drainage characteristics, sedimentation patterns, or flood retention characteristics of a wetland;
- The disturbance of water level or water table of a wetland;

- The destruction or removal of plant life that would alter the character of a wetland, except for activities undertaken in accordance with the Illinois Noxious Weed Act;
- The transfer of State owned wetlands to any entity other than another state agency; and
- Other actions that cause or may cause adverse wetland impacts.

The Act is to be implemented through a State Wetland Mitigation Policy. The State Wetland Mitigation Policy requires preservation of wetlands as the primary objective. Where adverse wetland impacts are unavoidable, progressive levels of compensation based upon the level of impact to the existing wetland and the location of compensation wetlands are required.

Archaeological Survey Requirements: An archaeological survey may be required before a Section 404 permit will be issued for wetland impacts. The U.S. Army Corps of Engineers will make this determination as part of the permit application review. The archaeological survey must cover all areas of the study area, not wetlands only. If you already have a letter from the Illinois Historic Preservation Agency (IHPA) stating an archaeological survey is required, you should act on it because the USACE will support this notification.

7.0 RECOMMENDATIONS

One wetland with one associated tributary were identified within the study area boundaries. Lake Zurich requires a minimum **40-ft buffer** around all wetlands greater than 2.5 acres.

The wetland and tributary were determined to be Waters of the State by a Preliminary Jurisdictional Determination.

The U.S. Army Corps of Engineers has the final authority in determining the jurisdictional status of the wetlands identified on site. GRWA recommends that a request for jurisdictional determination be sent to the U.S. Army Corps of Engineers as soon as possible.

Any impacts to jurisdictional wetland, Waters of the U.S., or associated buffers will require U.S. Army Corps of Engineers and Lake County notification. GRWA can assist you with the request for jurisdictional determination, permit applications, agency negotiations, wetland design plans, and mitigation plans which may be applicable to your project. The wetland consultant should be involved during the planning and design stages of the project to avoid complications with the agencies after the plan has been drafted. Proper planning regarding wetlands can reduce delays caused by the permitting process and costly changes in site plans.

The Corps of Engineers will not perform wetland boundary verifications during the winter season. If an application for a wetland permit will be submitted to the Corps of Engineers during the winter months, we recommend that a request for concurrence of jurisdictional boundaries be sent to the Corps during the growing season. This will prevent a delay in the permitting process. GRWA is available to assist you with obtaining Corps concurrence.

8.0 REFERENCES

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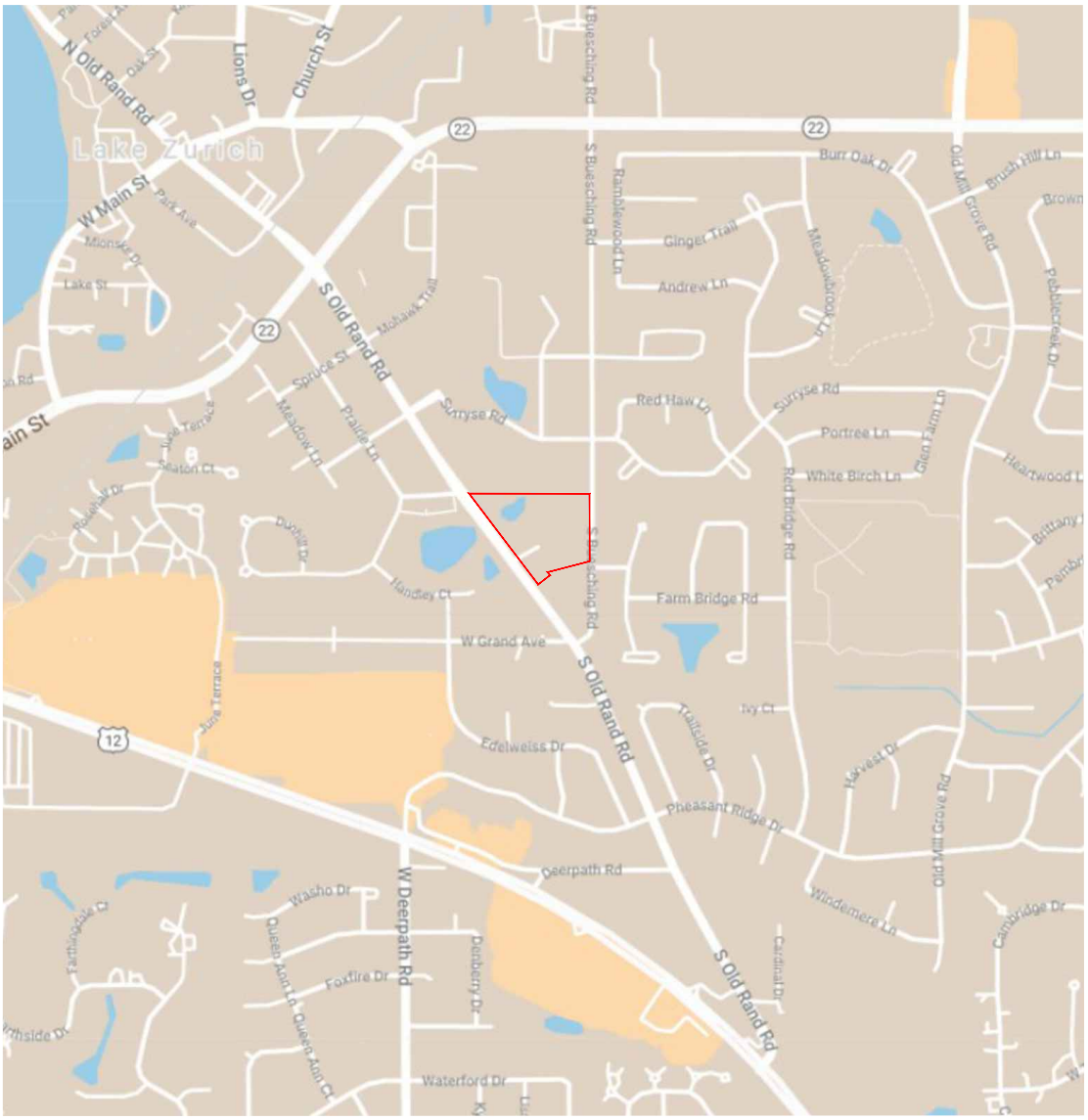
Appendix A: Water Resource Maps (Exhibits A-H)

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE



LEGEND

PLSS: SE S20 T43N R10E

Latitude: 42.189692

Longitude: -88.083625

Study Area

0 500' 1000'

SCALE: 1"=1000'

NORTH

Provided by: Google Maps

GARY R. WEBER ASSOCIATES, INC.

670 S Old Rand Road

Lake Zurich, Illinois

AC2289

Advantage Consulting Engineers

LOCATION MAP

EXHIBIT A

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LEGEND

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Study Area

Provided by: U.S. Fish and Wildlife Service

0 80' 160'

SCALE: 1"=160' NORTH

GARY R. WEBER ASSOCIATES, INC.

670 S Old Rand Road

Lake Zurich, Illinois

AC2289

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NATIONAL WETLANDS INVENTORY MAP

EXHIBIT B

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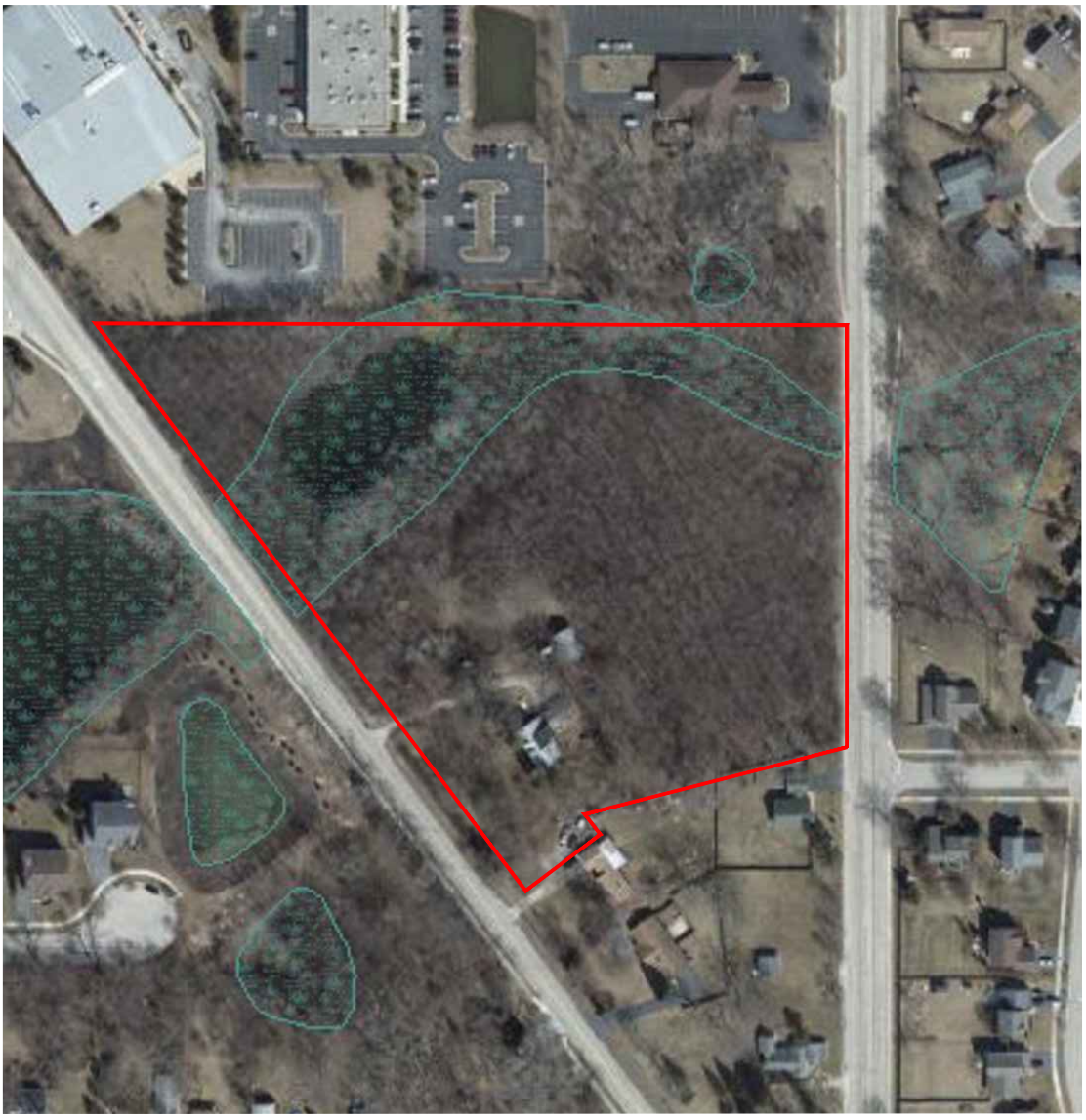

LEGEND

- Study Area
- Lake County Wetland
- ADvanced IDentification Wetlands

0 80' 160'

SCALE: 1"=160' NORTH

Provided by: Lake County GIS Parcel Viewer

GARY R. WEBER ASSOCIATES, INC.

670 S Old Rand Road

Lake Zurich, Illinois

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LAKE CO. WETLAND INVENTORY MAP

EXHIBIT C

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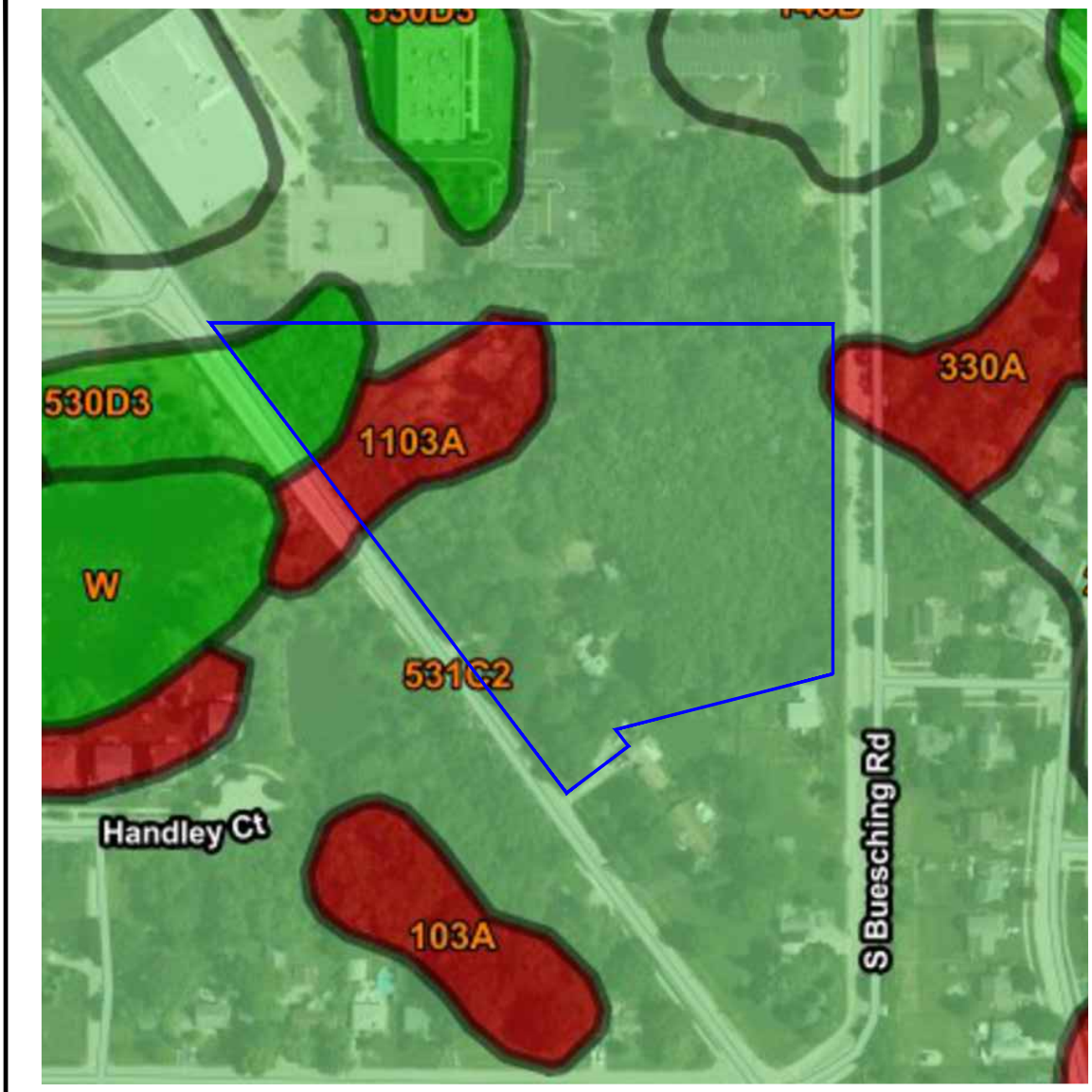

LEGEND

- Hydric Soil (100%)
- Predominantly Hydric (66-99%)
- Partially Hydric (33-65%)
- Predominantly Non-hydric (1-32%)
- Non-hydric (0%)
- Study Area

Provided by: U.S. Department of Agriculture Natural Resources Conservation Service

0 100' 200'

SCALE: 1"=200' NORTH

GARY R. WEBER ASSOCIATES, INC.

670 S Old Rand Road

Lake Zurich, Illinois

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SOIL SURVEY MAP

Web Soil Survey 3.0 (Lake County)

EXHIBIT D

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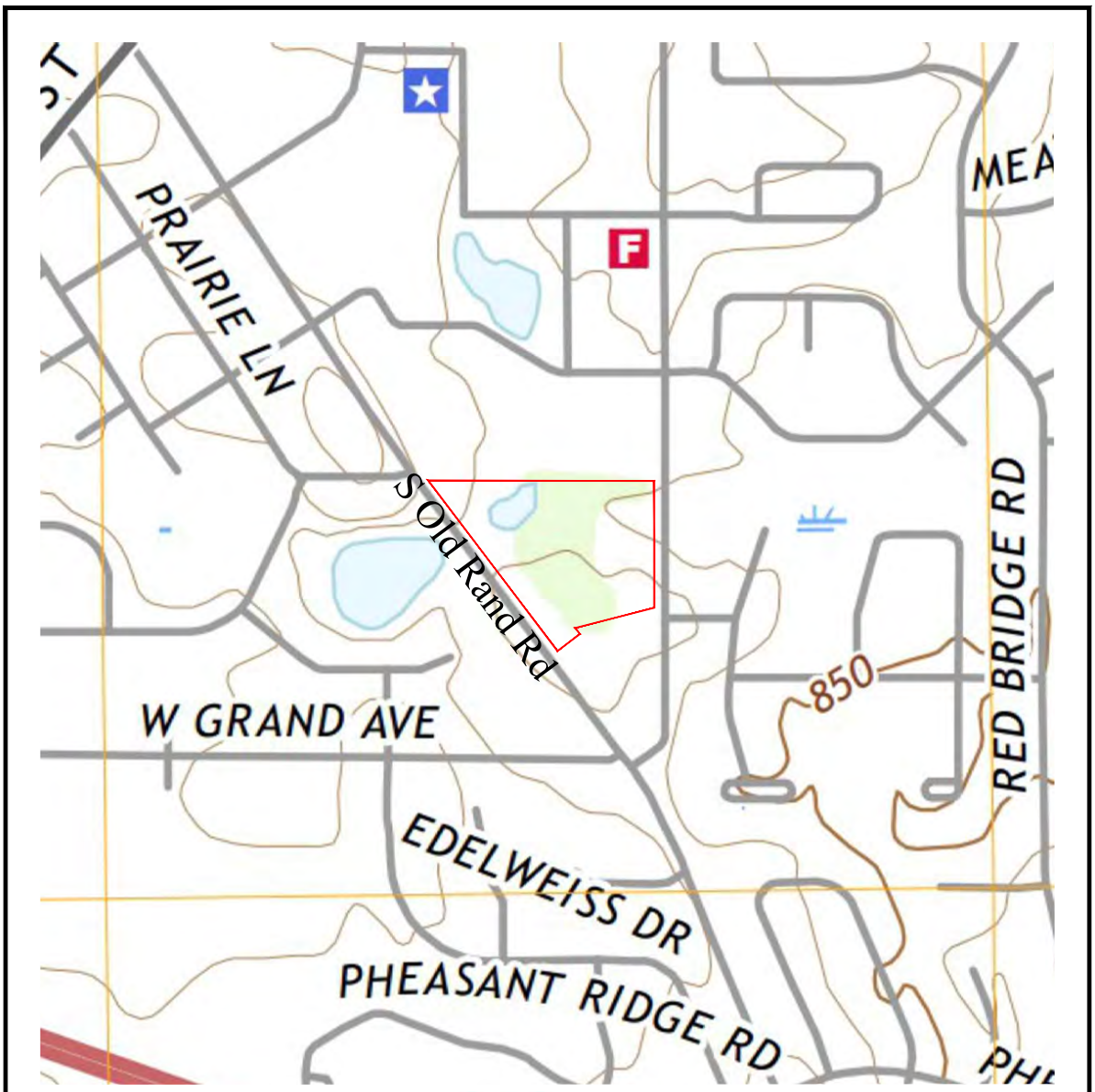

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670 S Old Rand Road
Lake Zurich, Illinois

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USGS TOPOGRAPHIC MAP

EXHIBIT E

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LEGEND

Regulatory Floodway	Special Floodway	1% Annual Chance Flood Hazard	0.2% Annual Chance Flood Hazard
Area of Undetermined Flood Hazard	Future Conditions 1% Annual Chance Flood Hazard	Area with Reduced Risk Due to Levee	Study Area

Provided by: Federal Emergency Management Agency

0 250' 500'

SCALE: 1"=500' **NORTH**

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670 S Old Rand Road

Lake Zurich, Illinois

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FLOOD INSURANCE MAP

EXHIBIT F

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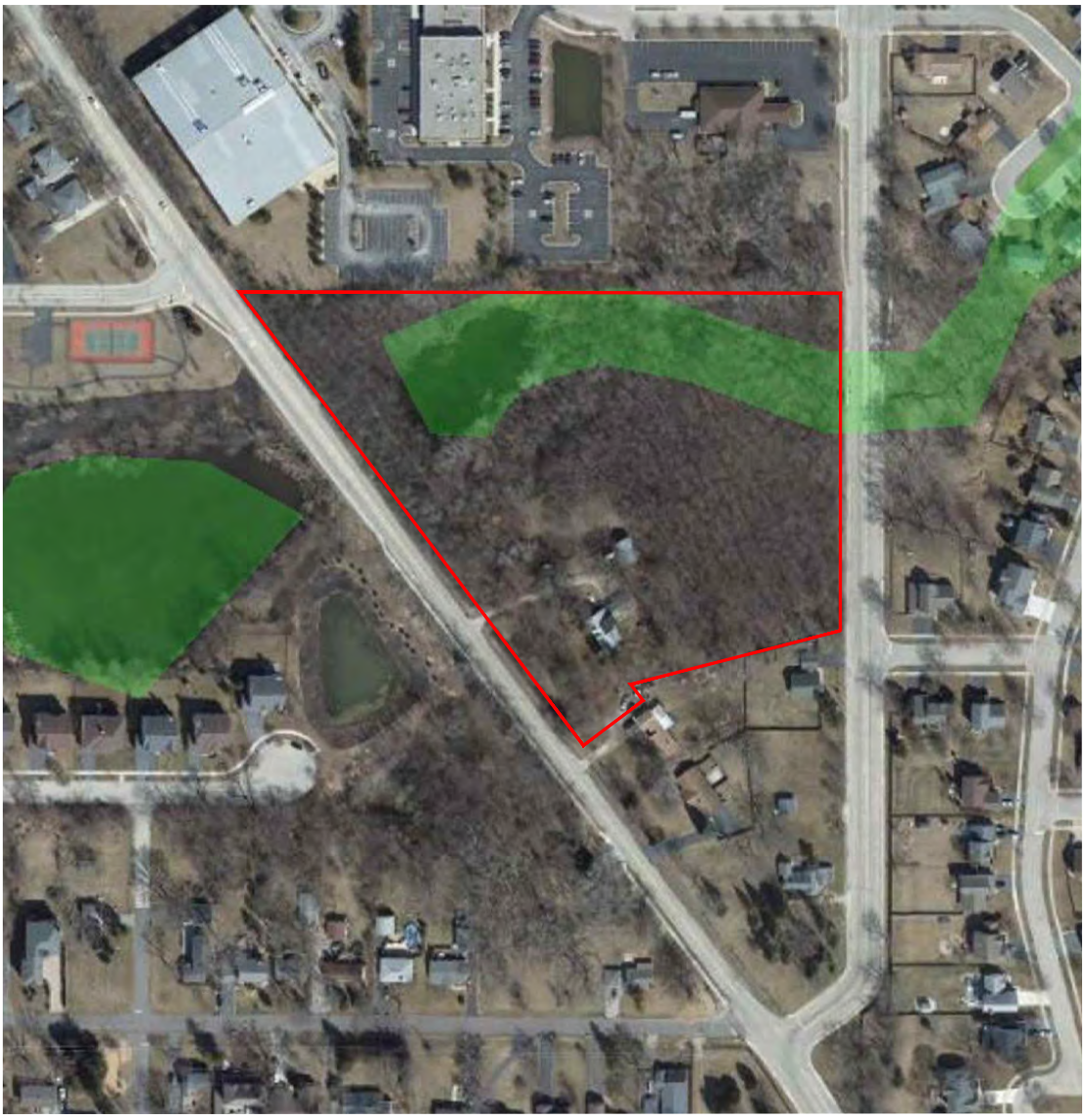

LEGEND

USGS Flood of Record

Study Area

0 100' 200'

SCALE: 1"=200' NORTH

Provided by: Lake County Parcel Viewer

GARY R. WEBER ASSOCIATES, INC.

670 S Old Rand Road

Lake Zurich, Illinois

AC2289

Advantage Consulting Engineers

LAKE COUNTY
USGS FLOOD OF RECORD

EXHIBIT G

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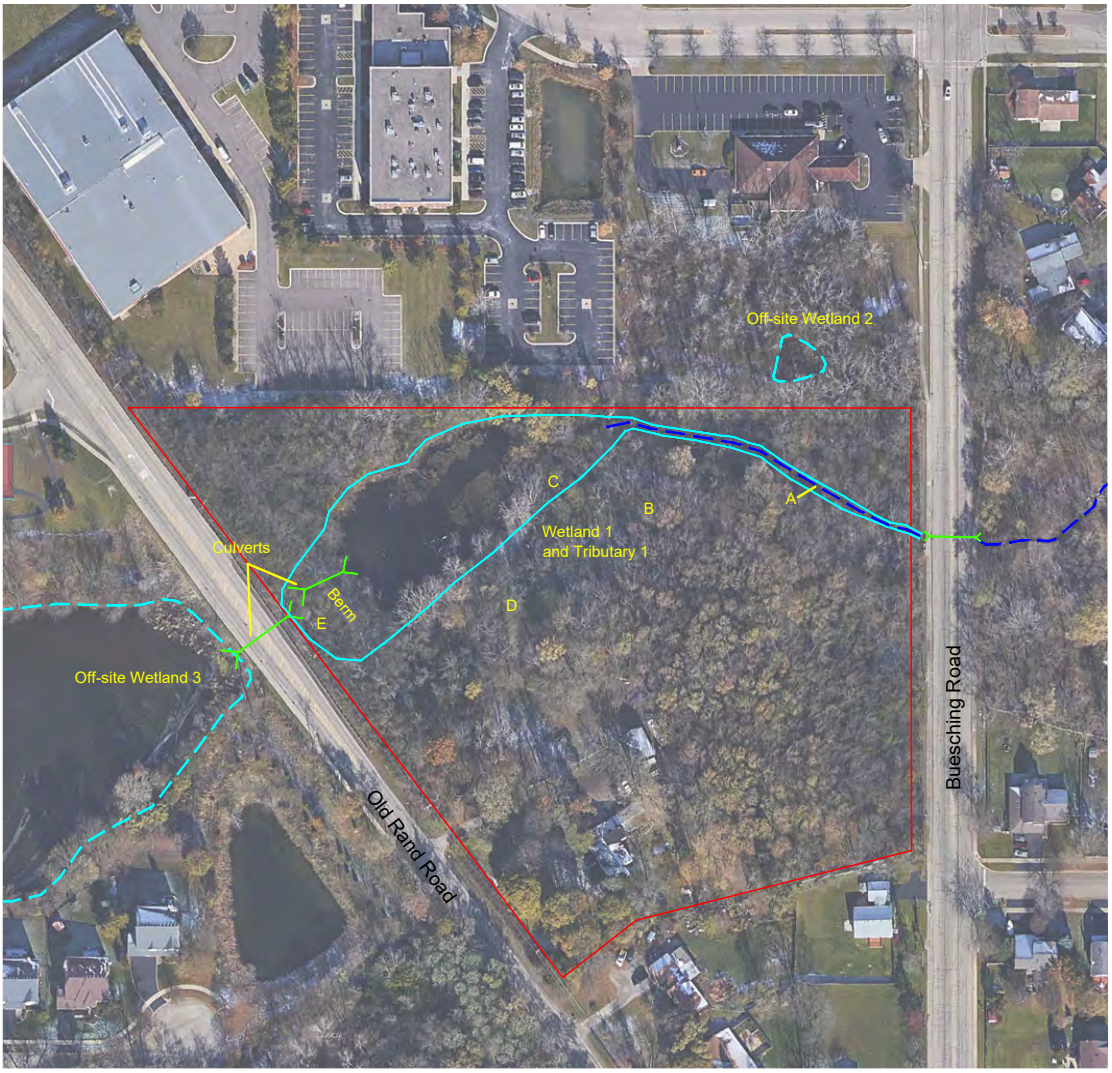

LEGEND

Study Area - est. 7.6 acres

Flagged Wetland Boundaries

Off-site Wetland Boundaries (not flagged)

Estimated Non-wetland Waters (Tributary)

Stormwater Structures

Sample Points A-E

0 80' 160'

SCALE: 1"=160'

NORTH

Provided by: Google Earth 2018 Aerial

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Illinois

AC2289

Advantage Consulting Engineers

WATER RESOURCES SUMMARY

EXHIBIT H

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Appendix B: Site Photographs (Exhibit H)

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

Photo 1. Southern portion of study area containing woodland and single-family home. Facing south.

Photo 2. Wooded area adjacent to single-family home. Facing east.

GARY R. WEBER ASSOCIATES, INC.	670 South Old Rand Road Lake Zurich, Illinois, 60047 AC2289 Advantage Consulting Engineers	SITE PHOTOGRAPHS 5/17/2022 EXHIBIT I

Photo 3. Open water portion of Wetland 1. Facing north.

Photo 4. Scrub-shrub fringe of Wetland 1. Facing northeast.

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Photo 5. Portion of Wetland 1 along Old Rand Road. Facing southwest.

Photo 6. Culvert under old rand road connecting Wetland 1 to Off-site Wetland 3.

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Photo 7. Culvert under berm. Facing east.

Photo 8. Culvert under Buesching Road. Facing east.

GRWA GARY R. WEBER ASSOCIATES, INC.	670 South Old Rand Road Lake Zurich, Illinois, 60047 AC2289 Advantage Consulting Engineers	SITE PHOTOGRAPHS 5/17/2022 EXHIBIT I

Photo 9. Eastern portion of Tributary 1. Facing west.

Photo 10. Central portion of Tributary 1. Facing west.

GRWA GARY R. WEBER ASSOCIATES, INC.	670 South Old Rand Road Lake Zurich, Illinois, 60047 AC2289 Advantage Consulting Engineers	SITE PHOTOGRAPHS 5/17/2022 EXHIBIT I

Appendix C: Preliminary Jurisdictional Determination

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

STORMWATER MANAGEMENT COMMISSION

September 16, 2022

Mr. Henry Joern
670 S. Old Rand Road
Lake Zurich, IL 60047

Subject: **SMC File #:** IWLC-22-593
USACE Ref. #: LRC-2022-547
670 S. Old Rand Road Property, Lake Zurich, Lake County, IL
PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Dear Mr. Joern:

This letter responds to the request for a preliminary wetland jurisdictional determination (PJD) and isolated wetland boundary verification (BV) for the above-referenced property, submitted on your behalf by Ms. Ellen Raimondi with Gary R. Weber Associates, Inc. (GRWA) and received by the Lake County Stormwater Management Commission (SMC) on August 8, 2022, with supplemental information received September 15, 2022. SMC reviewed available reference materials and performed a site reconnaissance in the company of Mr. Michael Machalek the U.S. Army Corps of Engineers (USACE) on August 25, 2022. Wetlands/waters referenced in this letter are shown on the enclosed *Exhibit A: Water Resources Summary,* by GRWA, not dated (digital copy received by SMC on September 15, 2022).

- Based on our findings, **"Tributary 1" and "Wetland 1" appear to be *Waters of the United States* (WOTUS)** subject to regulation by the USACE under Section 404 of the federal Clean Water Act. These feature have a clearly discernible hydrologic connection to the traditionally navigable Des Plaines River (via the Buffalo Creek subwatershed). "Tributary 1" is a relatively permanent waters, and Wetland 1 abuts that feature. The USACE did not verify WOTUIS boundaries during this determination (see enclosed PJD field report). If a WOTUS boundary verification is desired, please coordinate directly with the Corps to schedule a field visit once flagging has been refreshed.

This PJD has been approved by SMC's Chief Engineer and the findings are valid for a period of three (3) years from the date of this letter unless new information warrants a revision before the expiration date. If you disagree with the findings of this PJD, you may request an approved JD (AJD) from the USACE.

For your information, SMC performed this PJD in accordance with the *Interagency Coordination Agreement (ICA) Between the U.S. Army Corps of Engineers, Chicago District, Lake County Stormwater Management Commission, and Lake County Department of Planning, Building and Development*, dated June 4, 2002. We determined the jurisdiction of WOTUS on the subject project area based on the current definition in 33 U.S.C. 1344. Section 328.3(a); guidance provided in the EPA/USACE Memorandum entitled "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" dated June 5, 2007 (revised 12-02-08); and the USACE's *Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007. For areas not considered WOTUS, we determined jurisdiction using the definition of IWLC in Appendix A of the Lake County Watershed Development Ordinance (WDO, 10-13-2020).

Permitting Considerations

1. This letter satisfies the requirement for a written jurisdictional determination under WDO §1001 for the indicated wetlands/waters.

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
500 W. Winchester Road, Suite 201 • Libertyville, Illinois 60048 • 847/377-7700 • FAX 847/984-5747
www.lakecountyil.gov/StormwaterManagement/default.htm

2. The surveyed boundaries of all existing wetlands/waters on the development site, including features constructed in dry land (e.g., stormwater management basins), need to be included on the engineering plans for permitting purposes.

3. **If proposed development will impact WOTUS, a wetland permit from the USACE will be required.** Please refer to the USACE-Chicago District's web site for the permit application submittal requirements: http://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/AppChecklist.aspx. The USACE may require SMC's technical review/approval of the proposed soil erosion and sediment control plan (SE/SC) for the development as a condition of the USACE permit. We will advise you if our SE/SC review/approval is required.

4. **A Watershed Development Permit (WDP) will be required from the Village of Lake Zurich for site development in accordance with the applicable provisions of the WDO.** Please contact Ms. Jodi McCarthy with Manhard Consulting, Ltd., the Village's WDO Enforcement Officer (EO, 847-634-5500 or jmccarthy@manhard.com), for the appropriate permit application form and procedures.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please contact Juli Crane at jcrane@lakecountyil.gov.

Sincerely,
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Brian Frank, P.E., CFM
Chief Engineer

Juli E. Crane, PWS, CWS, CFM
Principal Wetland Specialist

Enclosures: *Exhibit A: Water Resources Summary* (GRWA, not dated)
PJD Field Report

xc: Kathy Chernich/Mike Machalek – U.S. Army Corps of Engineers
Jodi McCarthy, Manhard, EO for Village of Lake Zurich
Michael Brown, Village of Lake Zurich Public Works
Ellen Raimondi, CWS, GRWA

This document was digitally transmitted. Please print out a copy of the document and retain for your records. If you are unable to print the document, or desire a hard copy mailed be to you, please notify SMC at your earliest convenience.

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LEGEND

Study Area

Flagged Wetland Boundaries

Off-site Wetland Boundaries (not flagged)

Estimated Non-wetland Waters (Tributary)

Sample Points A-E

0 80' 160'

SCALE: 1"=160' **NORTH**

Provided by: Google Earth 2018 Aerial

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Lake County, Illinois 60047

AC2289

Advantage Consulting Engineers

WATER RESOURCES SUMMARY

EXHIBIT A

L:\Projects\AC2289\Eco-Con\Full Wetland Report\Maps\Old Rand Rd_WL Exhibits.dwg

STORMWATER MANAGEMENT COMMISSION

Preliminary Jurisdictional Determination Field Report

LakeCounty

Site Name: *670 S. Old Rand Rd Property*

Date: *August 25, 2022 4:00 PM*

SMC/PBD #: *IWLC-22-593*

USACOE #: *LRC-2022-593*

Attendees:

USACOE Representative(s): *Mike Machalek*
List Other Corp Representative(s): *N/A*
SMC/PBD Representative(s): *Juli Crane*
Other SMC/PBD Representative(s): *N/A*
Other attendee(s):

PJD Requestor:

Name/Contact Info: *Henry Joern, 670 S. Old Rand Rd, Lake Zurich, 847-417-8732, henryjoern@gmail.com*

Site Info:

Address/PIN#: *670 S. Old Rand Rd; PINs: 14-20-400-002 and 14-20-400-003*
Lat/Long: *42.189476 / -88.083492*
Description: *Single-family residence and out-buildings on wooded lot with creek bisecting the northern part of site from east to west.*
References: *No wetland report provided; Wetland Delineation Map (Exhibit A, Preliminary Water Resources Summary), FEMA Floodplain Map (2016), Aerial Photos (1939-2020, Lake County Online GIS Maps), Topographic Map - 1' contours (Lake County Online GIS Maps, 2007 & 2017), Lake County Soil Surveys (SCS 1970 & NRCS 2005), USGS Quadrangle Maps (1960, 1972, 1993), USGS Flood of Record Map, Lake County Storm Sewer Network Maps (SMC GIS, 2022); Lake County Wetland Restoration & Preservation Plan - Online Decision Support Tool (SMC, 2020)*

Disposition of Waters of the US:

Site appears to contain Waters of the U.S.: *Yes, site DOES appear to contain Waters of the U.S.*
List wetland/water IDs from delineation map and basis: *Tributary 1 is a relatively permanent water (RPW) and Wetland 1 = wetland abutting an RPW (i.e., Tributary 1)*
WOUS Exclusions: *N/a*
Corps representative concurs with staked/flagged WOUS boundaries: *No*
If Corp representative DOES NOT concur, please explain: *Flagging not present at time of PJD visit.*

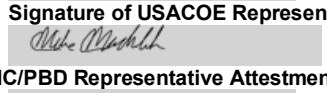
Disposition of Isolated Waters of Lake County:

Site appears to contain Isolated Waters of Lake County: *No, site DOES NOT appear to contain Isolated Waters of Lake County.*
List wetland/water IDs from delineation map: *N/A*
Potential IWLC Exclusions: *N/a*
SMC/PBD representative concurs with staked/flagged IWLC boundaries:
If SMC/PBD representative DOES NOT concur, please explain:

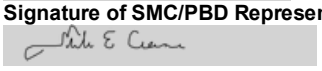
Comments: *The WOTUS boundary will be verified upon reflagging and consultant contacting the Army Corps to reschedule a field visit.*

Attests:

USACOE Representative Attestment: *Corp representative has reviewed the information herein and CONCURS with determination.*
Signature of USACOE Representative:



SMC/PBD Representative Attestment: *SMC/PBD representative has reviewed the information herein and CONCURS with determination.*
Signature of SMC/PBD Representative:



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Appendix D: Wetland Determination Data Forms

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 670 S Old Rand Road AC2289 City/County: Lake Zurich, Lake Co. Sampling Date: 5-17-2022

Applicant/Owner: Advantage Consulting Engineers State: IL Sampling Point: A

Investigator(s): L Pajon Section, Township, Range: SE S20 T43N R10E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 42.189692 Long: -88.083625 Datum:

Soil Map Unit Name: Markham Silt Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** **Yes** **No X**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	60	Yes	FAC
2. *Fraxinus pennsylvanica*	10	No	FACW
3.			
4.			
5.			
	70 =Total Cover		
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
Woody Vine Stratum (Plot size: 30)			
1. *Hedera helix*	30	Yes	UPL
2.			
	30 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	30	x 5 =	150
Column Totals:	100 (A)		350 (B)

Prevalence Index = B/A = 3.50

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.

Hydrophytic Vegetation Present? **Yes** **No X**

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

ENG FORM 6116-7, JUL 2018 Midwest – Version 2.0

SOIL

Sampling Point: A

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					Loamy/Clayey	
10-16	10YR 4/1	70	10YR 5/6	10	C	M		Prominent redox concentrations
			10YR 2/1	10		M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	X	No	____	Depth (inches): 4
Water Table Present?	Yes	____	No	____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes	____	No	____	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 670 S Old Rand Road AC2289 City/County: Lake Zurich, Lake Co. Sampling Date: 5-17-2022

Applicant/Owner: Advantage Consulting Engineers State: IL Sampling Point: B

Investigator(s): L Pajon Section, Township, Range: SE S20 T43N R10E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 42.189692 Long: -88.083625 Datum:

Soil Map Unit Name: Markham Silt Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** **Yes** **No X**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	60	Yes	FACW
2.			
3.			
4.			
5.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lonicera maackii*	40	Yes	UPL
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3.			
4.			
5.			
	50	=Total Cover	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Hedera helix*	30	Yes	UPL
2.			
	30	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	70	x 5 =	350
Column Totals:	140 (A)		490 (B)

Prevalence Index = B/A = 3.50

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.

Hydrophytic Vegetation Present? **Yes** **No X**

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

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SOIL

Sampling Point: B

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					Loamy/Clayey	
10-16	10YR 4/1	70	10YR 5/6	10	C	M		Prominent redox concentrations
			10YR 2/1	10		M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ENG FORM 6116-7, JUL 2018 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 670 S Old Rand Road AC2289 City/County: Lake Zurich, Lake Co. Sampling Date: 5-17-2022

Applicant/Owner: Advantage Consulting Engineers State: IL Sampling Point: C

Investigator(s): L Pajon Section, Township, Range: SE S20 T43N R10E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 42.189692 Long: -88.083625 Datum:

Soil Map Unit Name: Markham Silt Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? **Yes** X **No**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	40	Yes	FAC
2.			
3.			
4.			
5.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	40	Yes	FAC
2. *Lonicera maackii*	10	Yes	UPL
3.			
4.			
5.			
	50	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Echinochloa crus-galli*	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Hedera helix*	30	Yes	UPL
2.			
	30	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	140 (A)		480 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 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.

Hydrophytic Vegetation Present? **Yes** X **No**

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

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SOIL Sampling Point: C

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 6
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 670 S Old Rand Road AC2289 City/County: Lake Zurich, Lake Co. Sampling Date: 5-17-2022

Applicant/Owner: Advantage Consulting Engineers State: IL Sampling Point: D

Investigator(s): L Pajon Section, Township, Range: SE S20 T43N R10E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 42.189692 Long: -88.083625 Datum:

Soil Map Unit Name: Markham Silt Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes No X

Is the Sampled Area within a Wetland? **Yes** **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	40	Yes	FACU
2.			
3.			
4.			
5.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lonicera maackii*	20	Yes	UPL
2. *Cornus racemosa*	10	Yes	FAC
3.			
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	110	x 3 =	330
FACU species	40	x 4 =	160
UPL species	20	x 5 =	100
Column Totals:	170 (A)		590 (B)

Prevalence Index = B/A = 3.47

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.

Hydrophytic Vegetation Present? **Yes** **No** X

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

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SOIL

Sampling Point: D

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: compact

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 670 S Old Rand Road AC2289 City/County: Lake Zurich, Lake Co. Sampling Date: 5-17-2022

Applicant/Owner: Advantage Consulting Engineers State: IL Sampling Point: E

Investigator(s): L Pajon Section, Township, Range: SE S20 T43N R10E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 42.189692 Long: -88.083625 Datum:

Soil Map Unit Name: Markham Silt Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	30	Yes	FACW
2.			
3.			
4.			
5.			
	30 =Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20 =Total Cover		
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		120 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 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.

Hydrophytic Vegetation Present? **Yes** X **No**

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

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SOIL

Sampling Point: E

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 4

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ___	No ___	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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Appendix E: Floristic Quality Index

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

SITE: Old Rand Rd_WL 1
LOCALE: Lake Zurich IL
BY: L Pajon
NOTES: May 17 2022

CONSERVATISM-BASED METRICS			ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	2.08		SPECIES RICHNESS (ALL)	14
MEAN C (ALL SPECIES)	1.79		SPECIES RICHNESS (NATIVE)	12
MEAN C (NATIVE TREES)	1.67		% NON-NATIVE	0.14
MEAN C (NATIVE SHRUBS)	2.50		WET INDICATOR (ALL)	-0.79
MEAN C (NATIVE HERBACEOUS)	2.14		WET INDICATOR (NATIVE)	-0.83
FQAI (NATIVE SPECIES)	7.22		% HYDROPHYTE (MIDWEST)	1.00
FQAI (ALL SPECIES)	6.68		% NATIVE PERENNIAL	0.64
ADJUSTED FQAI	19.29		% NATIVE ANNUAL	0.21
% C VALUE 0	0.36		% ANNUAL	0.21
% C VALUE 1-3	0.43		% PERENNIAL	0.79
% C VALUE 4-6	0.21			
% C VALUE 7-10	0.00			

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
ACESAI	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native
CXBLAN	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima; Fraxinus lanceolata	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native
GEULAC	Geum laciniatum	Geum laciniatum	Rough Avens	3	FACW	FACW	-1	Forb	Perennial	Native
IMPCAP	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
ONOSEN	Onoclea sensibilis	Onoclea sensibilis	Sensitive Fern	5	FACW	FACW	-1	Fern	Perennial	Native
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
RIBAME	Ribes americanum	Ribes americanum	Wild Black Currant	4	FACW	FACW	-1	Shrub	Perennial	Native

Appendix F: Threatened and Endangered Species Consultation

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	Gary R. Weber Associates, Inc.	*IDNR Project Number:*	2301031
Contact:	Lisa Pajon	*Date:*	07/15/2022
Address:	402 W. Liberty Drive Wheaton, IL 60187		
Project:	Old Rand Road		
Address:	Old Rand Road and Grand Ave , Lake Zurich		

Description: Proposed residential development with associated stormwater and utiltiies.

Natural Resource Review Results

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Consultation is terminated. This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Lake

Township, Range, Section:
43N, 10E, 20

IL Department of Natural Resources Contact
Bradley Hayes
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
U.S. Army Corps of Engineers

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

IDNR Project Number: 2301031

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

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December 9, 2022

Bill Zalewski
Advantage Consulting Engineers
80 Main Street, Ste 17
Lemont, IL 60439

RE: USFWS Threatened and Endangered Species IPaC Review Summary
670 South Old Rand Road, Lake Zurich, Lake County, Illinois

Dear Mr. Zalewski,

Gary R. Weber Associates Inc. reviewed the U.S, Fish and Wildlife Information for Planning and Consultation (IPaC) website on December 9, 2022 for federally listed threatened and endangered species. The IPaC program utilizes known or expected range of species, as well as additional areas outside of the range in which activities may indirectly affect a species. This review represents an informal consultation and further coordination with USFWS may be required for a formal consultation.

According to the IPaC consultation, seven (7) species are thought to be present in this location of Lake County. The study area as reviewed during the 5/17/2022 identified potential habitat for the Long-eared Bat. It Is recommended that tree removal occur during winter months (Nov 1 – March 31) to avoid impacts to roosting bats.

Site Summary:

The study area (approximately 7.6 acres) consists of a single-family home with an access drive and accessory structures. The central and northern portions are fully vegetated by woodland and contain an wetland and associated tributary. There are two additional wetlands located off-site to the north and west.

The woodland is primarily vegetated by an invasive shrub community (European Buckthorn) and mature trees consisting of Eastern Cottonwood and Silver maple.

Habitat and Requirements:

Threatened – Northern long-eared bat (*Myotis septentrionalis*): **May affect, Not likely to adversely Affect.**

According to the USFWS guidance, conditions suitable for the Northern long-eared bat (NLEB) includes wooded areas characterized by the presence of roosting trees and an herbaceous understory community. The bats will spend the summer foraging and roosting before overwintering in caves and mines from late October to April. Summer roosting trees required by the bats are characterized by mature trees containing potential roosting features (PRF) such as peeling and crevice forming bark, cavities, and dead snags. Foraging can occur in a variety of habitats including upland forests, edge habitats, wetlands, riparian buffers, and floodplain forests. An open, herbaceous understory is beneficial to supporting insect abundance for the bats to feed on.

Roosting features are present in the mature trees located within the site, however the understory is a closed shrub community that lacks the herbaceous community required for foraging. Tree removal should be limited to winter months (Nov 1-March 31) to prevent impact to individual bats.

Endangered – Piping Plover (*Charadrius melodus*) **No Effect**

According to USFWS guidance, the piping plover is a summer resident that inhabits shoreline and coastal areas of the Great Lakes during the summer breeding season. The plover is a shorebird that prefers breeding habitat consisting of open, sparsely vegetated areas with alkali or unconsolidated substrates. Foraging habitat consist of mud flats or ephemeral pools with abundant vertebrate populations. Critical habitat has been designated for this species along the Great Lakes shoreline.

Current site conditions are not suitable for the Piping Plover.

Threatened – Red Knot (*Calidris canutus rufa*): **No Effect**

According to USFWS guidance, the red knot is primarily occurs in Illinois during migration in the spring and fall. Spring migrants arrive in May and fall migrants arrive in July. The red knot is a shorebird that typically uses sandy, open shoreline along Lake Michigan for foraging, but has also been observed at water reservoirs.

Current site conditions are not suitable for the Red Knot.

Endangered – Karner Blue Butterfly (*Lycaeides melissa samuelis*): **No Effect**

According to USFWS guidance, the karner blue butterfly require environments characterized by dry, sandy areas with open woodlands capable of supporting Wild Blue Lupine populations. The lupine is the only food source for larval butterflies as well as required for adult oviposition. Foraging adults require diverse blooming nectar resources.

Current site conditions are not suitable for the Karner Blue Butterfly due to lack of lupine presence.

Endangered – Monarch Butterfly (*Danaus plexippus*): **No Effect**

According to USFWS Species Status Assessment Report, Monarch Butterflies require environments containing both diverse blooming nectar resources for foraging during breeding and migration, and sufficient milkweed (*Asclepias spp.*) populations for oviposition and larval feeding.

Due to mowing activity and lack of wildflower presence, current site conditions are not suitable for the Monarch Butterfly.

Threatened – Eastern Prairie Fringed Orchid (*Platanthera leucophaea*): **No Effect**

According to USFWS guidance, the eastern prairie fringed orchid (EPFO) occurs in a wide variety of habitats. It requires full sun for optimum growth and can occur in tall grass silt-loam or sand prairies, sedge meadows, and fens. It is adaptive to natural patch disturbance and other dynamic disturbance regimes. It is occasionally found in successional environments.

Current site conditions are not suitable for the EPFO as there are no fens, sedge meadows, or sand prairies.

Endangered – Pitcher's Thistle (*Cirsium pitcheri*): **No Effect**
According to USFWS guidance, the Pitcher's Thistle occurs in open sand dunes and beach ridges along Lake Michigan. This species was once extirpated in Illinois but has been reintroduced in Lake County.

Current site conditions are not suitable for the Pitcher's thistle.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
Phone: (312) 485-9337

In Reply Refer To:
Project Code: 2023-0023545
Project Name: Old Rand Road

December 09, 2022

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:

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/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (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. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please 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. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-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 ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing

determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and

recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

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:

Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
(312) 485-9337

Project Summary

Project Code: 2023-0023545
Project Name: Old Rand Road
Project Type: New Constr - Above Ground
Project Description: Proposed multi-family residential development with associated utilities, infrastructure, and stormwater management.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.18944275,-88.08358446506975,14z

Counties: Lake County, Illinois

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. Note that 1 of these species should be considered only under certain conditions.

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

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

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

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Insects

NAME	STATUS
Karner Blue Butterfly *Lycaeides melissa samuelis*	Endangered
There is **proposed** critical habitat for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6656	
Monarch Butterfly *Danaus plexippus*	Candidate
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/9743	

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened
No critical habitat has been designated for this species.	
This species only needs to be considered under the following conditions:	
▪ Follow the guidance provided at https://www.fws.gov/midwest/endangered/section7/s7process/plants/epfos7guide.html	
Species profile: https://ecos.fws.gov/ecp/species/601	
Pitcher's Thistle *Cirsium pitcheri*	Threatened
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/8153	

Critical habitats

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

IPaC User Contact Information

Agency: Gary R Weber Associates, Inc.
Name: Lisa Pajon
Address: 402 W. Liberty Drive
City: Wheaton
State: IL
Zip: 60187
Email lpajon@grwainc.com
Phone: 6306687197

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LAND PLANNING ECOLOGICAL CONSULTING
LANDSCAPE ARCHITECTURE

402 W. LIBERTY DRIVE WHEATON, ILLINOIS 60187
TELEPHONE: 630-668-7197 FACSIMILE: 630-668-9693

Engineer's Opinion of Probable Costs for Site Work

670 S Old Rand Road

Lake Zurich, Illinois
June 16, 2025

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Erosion Control

Item	Description	Unit	Quantity	Unit Price	Extended Price
	Concrete Washout	Ea	1	$1,200.00	$1,200.00
	Temporary Construction Entrance	Ea	1	$2,500.00	$2,500.00
	Inlet Protection	Ea	46	$125.00	$5,750.00
	Silt Fence	LF	3820	$3.50	$13,370.00
	Erosion Control Blanket	SY	5500	$1.50	$8,250.00
	Turf Reinforcement Mat	SY	6445	$10.00	$64,450.00
	Rip Rap	SY	465	$150.00	$69,750.00
	Subtotal				**$165,270.00**

Storm Drainage Facilities

Item	Description	Unit	Quantity	Unit Price	Extended Price
	Outlet Control Structure	Ea	1	$12,000.00	$12,000.00
	Catch Basin, 2' Dia.	Ea	5	$750.00	$3,750.00
	Catch Basin, 4' Dia.	Ea	26	$1,350.00	$35,100.00
	Catch Basin, 5' Dia.	Ea	2	$1,650.00	$3,300.00
	Catch Basin, 6' Dia.	Ea	2	$2,000.00	$4,000.00
	12" Area Drain	Ea	10	$500.00	$5,000.00
	36" Flared End Section	Ea	1	$1,800.00	$1,800.00
	15" Flared End Section	Ea	1	$600.00	$600.00
	12" Flared End Section	Ea	1	$500.00	$500.00
	36" RCP	LF	110	$70.00	$7,700.00
	24" RCP	LF	218	$46.00	$10,028.00
	12" RCP	LF	798	$25.00	$19,950.00
	12" PVC C900	LF	841	$42.00	$35,322.00
	4" PVC C900	LF	115	$28.00	$3,220.00
	4" PVC	LF	614	$20.00	$12,280.00
	4" Underdrain	LF	1905	$20.00	$38,100.00
	Aggregate Backfill	CY	1800	$30.00	$54,000.00
	Subtotal				**$246,650.00**

Sanitary Sewer Facilities

Item	Description	Unit	Quantity	Unit Price	Extended Price
	12" PVC	LF	380	$32.00	$12,160.00
	8" PVC	LF	555	$23.00	$12,765.00
	4" PVC	LF	1273	$20.00	$25,460.00
	12" PVC C900	LF	205	$42.00	$8,610.00
	Manhole, 4' Dia.	Ea	8	$3,000.00	$24,000.00
	Cleanout	Ea	31	$250.00	$7,750.00
	Subtotal				**$90,745.00**

Water Distribution Facilities					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	12" PVC C900	LF	590	$42.00	$24,780.00
	8" PVC C900	LF	629	$34.00	$21,386.00
	1-1/2" Copper Water Service	LF	1341	$20.00	$26,820.00
	1-1/2" Corporation Stop & B-Box	Ea	32	$880.00	$28,160.00
	Fire Hydrant & Aux. Valve	Ea	3	$2,200.00	$6,600.00
	Water Valve Vault (8" Valve)	Ea	2	$2,300.00	$4,600.00
	Water Valve Vault (12" Valve)	Ea	2	$2,900.00	$5,800.00
	Subtotal				**$118,146.00**

Pavement					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	Curb & Gutter	LF	2990	$15.00	$44,850.00
	Concrete Sidewalk	SY	1415	$40.00	$56,600.00
	Asphalt Pavement - Standard Section	SY	1522	$38.00	$57,836.00
	Asphalt Pavement - Heavy Duty Section	SY	3100	$46.00	$142,600.00
	Subtotal				**$301,886.00**

Miscellaneous					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	Earthwork Haul Off	CY	10000	$50.00	$500,000.00
	Basin Vegetation	SY	3500	$5.00	$17,500.00
	12" Topsoil Re-spread	SY	1890	$10.00	$18,900.00
	Unit Block Retaining Wall	LS	1	$100,000.00	$100,000.00
	4' Ornamental Metal Fence	LF	2280	$100.00	$228,000.00
	6' Solid Wood Fence	LF	400	$160.00	$64,000.00
	Sign & Post Assembly	Ea	4	$250.00	$1,000.00
	Light Poles	Ea	15	$5,000.00	$75,000.00
	Subtotal				**$1,004,400.00**

	Total Costs from Above	$1,927,097.00
	10% Contingency	$192,709.70
	Opinion of Total Construction Costs	**$2,119,806.70**

Note: This opinion of probable construction costs is based on quantities and unit prices assumed by the engineer based on data from previous construction projects, and will not necessarily reflect actual bid prices.

Engineer's Opinion of Probable Costs for Work in Public Way

670 S Old Rand Road

Lake Zurich, Illinois
June 16, 2025

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Erosion Control					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	Inlet Protection	Ea	8	$125.00	$1,000.00
	Subtotal				**$1,000.00**

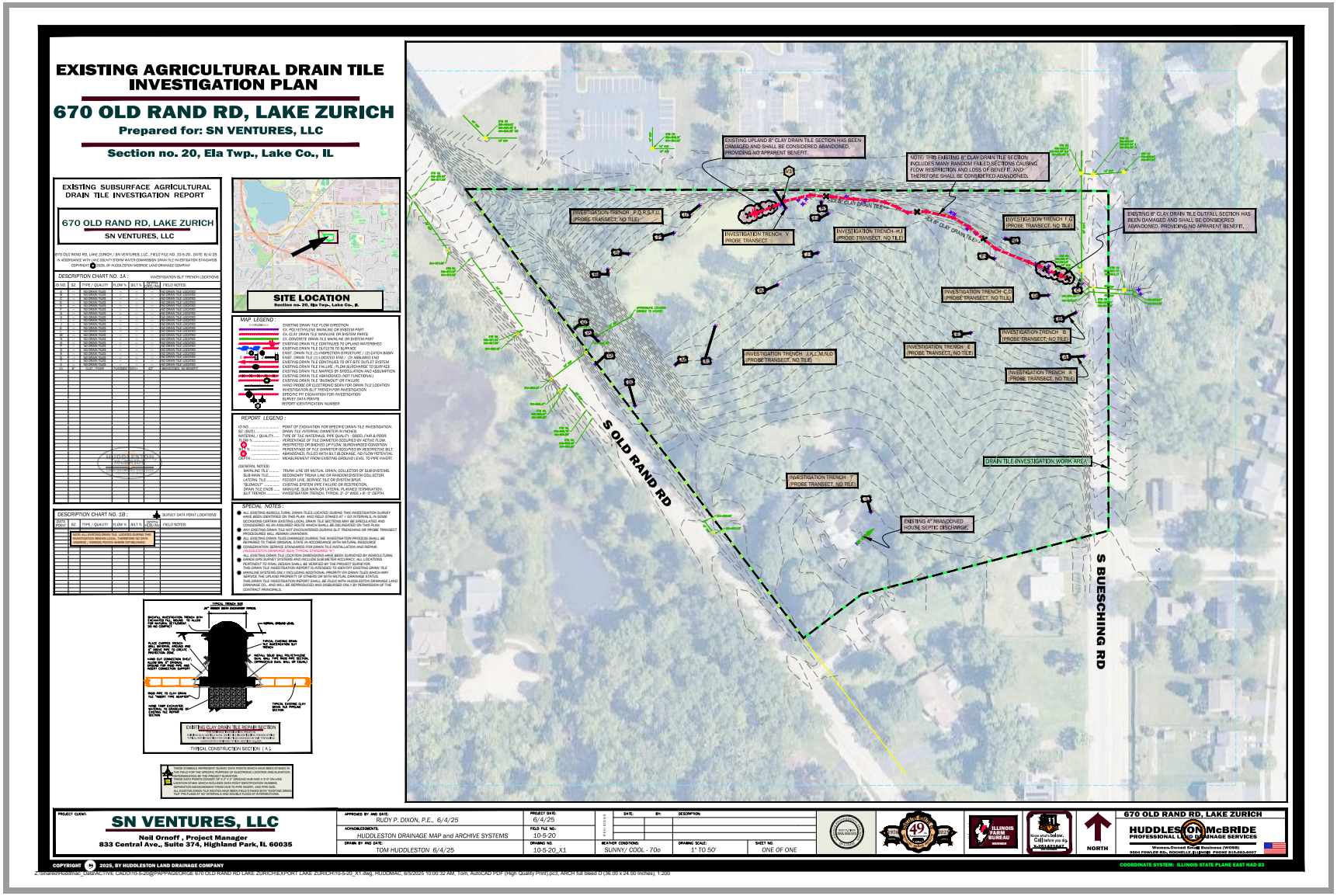
Water Distribution Facilities					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	12" PVC C900	LF	1447	$42.00	$60,774.00
	Fire Hydrant & Aux. Valve	Ea		$2,200.00	$0.00
	Water Valve Vault (12" Valve)	Ea		$2,900.00	$0.00
	Pressure Connection in Vault	Ea		$10,000.00	$0.00
	Auger, Case & Jack 12" Water Main	LF		$350.00	$0.00
	Subtotal				**$60,774.00**

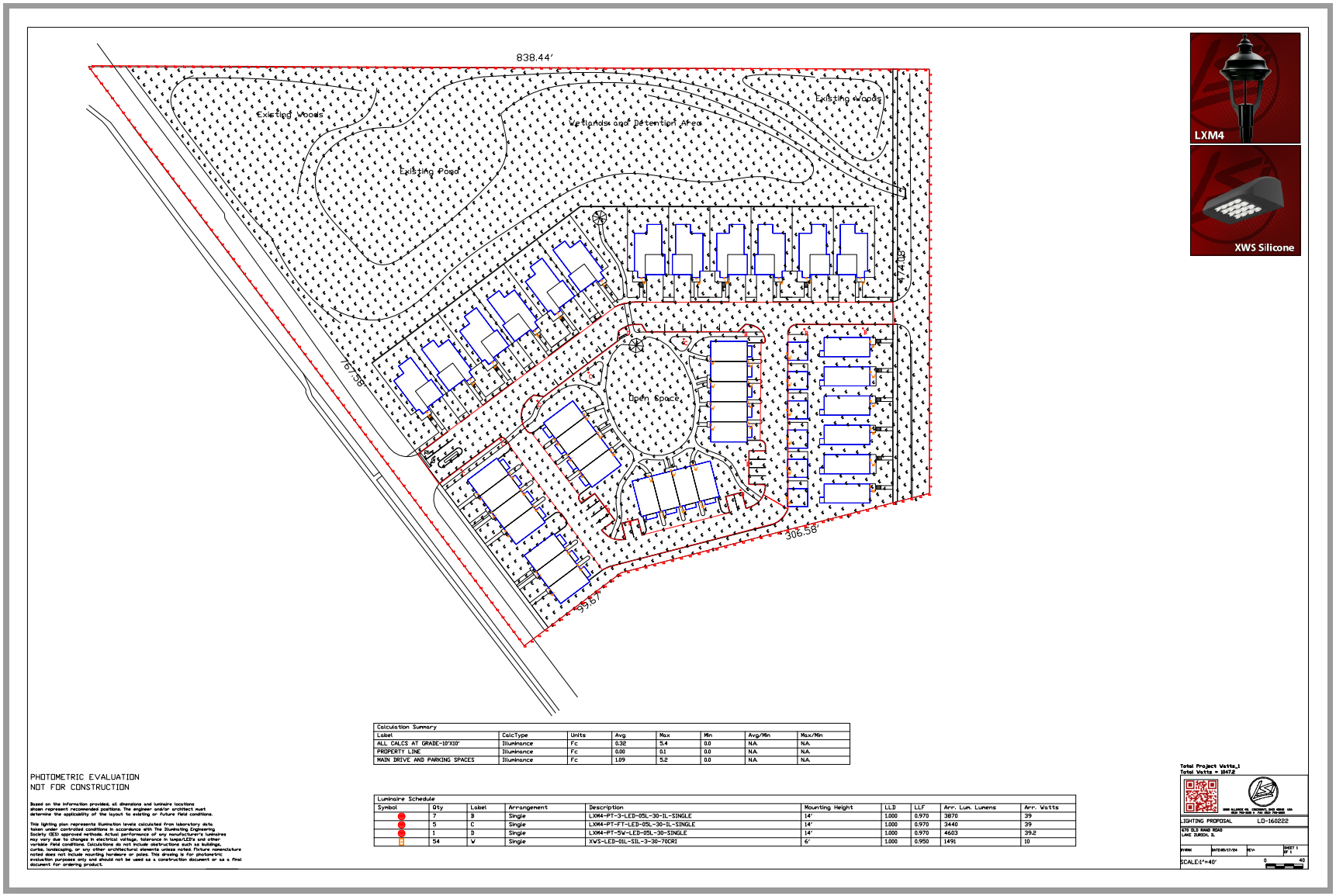
Pavement					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	Curb & Gutter	LF	370	$23.00	$8,510.00
	Concrete Sidewalk	SY	300	$40.00	$12,000.00
	Asphalt Pavement	SY	1060	$38.00	$40,280.00
	Subtotal				**$60,790.00**

Miscellaneous					
Item	Description	Unit	Quantity	Unit Price	Extended Price
	Rectangular Rapid Flashing Beacon Signs	Ea	2	$2,850.00	$5,700.00
	Overhead Wire Burial	LF	1215	$150.00	$182,250.00
	Subtotal				**$187,950.00**

	Total Costs from Above	$310,514.00
	10% Contingency	$31,051.40
	Opinion of Total Construction Costs	**$341,565.40**

Note: This opinion of probable construction costs is based on quantities and unit prices assumed by the engineer based on data from previous construction projects, and will not necessarily reflect actual bid prices.


EXISTING AGRICULTURAL DRAIN TILE INVESTIGATION PLAN
670 OLD RAND RD, LAKE ZURICH
Prepared for: SN VENTURES, LLC
Section no. 20, Ela Twp., Lake Co., IL
EXISTING SUBSURFACE AGRICULTURAL DRAIN TILE INVESTIGATION REPORT
670 OLD RAND RD, LAKE ZURICH
SN VENTURES, LLC
SITE LOCATION
Section no. 20, Ela Twp., Lake Co., IL
MAP LEGEND :
REPORT LEGEND :
SPECIAL NOTES :
EXISTING UPLAND 8" CLAY DRAIN TILE SECTION HAS BEEN DAMAGED AND SHALL BE CONSIDERED ABANDONED, PROVIDING NO APPARENT BENEFIT.
NOTE: THIS EXISTING 8" CLAY DRAIN TILE SECTION INCLUDES MANY RANDOM FAILED SECTIONS CAUSING FLOW RESTRICTION AND LOSS OF BENEFIT, AND THEREFORE SHALL BE CONSIDERED ABANDONED.
EXISTING 8" CLAY DRAIN TILE OUTFALL SECTION HAS BEEN DAMAGED AND SHALL BE CONSIDERED ABANDONED, PROVIDING NO APPARENT BENEFIT.
INVESTIGATION TRENCH P,Q,R,S,T,U (PROBE-TRANSECT, NO TILE)
INVESTIGATION TRENCH V PROBE TRANSECT
INVESTIGATION TRENCH -H,I (PROBE-TRANSECT, NO TILE)
INVESTIGATION TRENCH F,G (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH -C,D (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH B (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH E (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH A (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH J,K,L,M,N,O (PROBE TRANSECT, NO TILE)
INVESTIGATION TRENCH C (PROBE TRANSECT, NO TILE)
DRAIN TILE INVESTIGATION WORK AREA
EXISTING 4" ABANDONED HOUSE SEPTIC DISCHARGE
S OLD RAND RD
S BUESCHING RD
EXISTING CLAY DRAIN TILE REPAIR SECTION
TYPICAL CONSTRUCTION SECTION (A)
SN VENTURES, LLC
Neil Ornoff , Project Manager
833 Central Ave., Suite 374, Highland Park, IL 60035
RUDY P. DIXON, P.E., 6/4/25
HUDDLESTON DRAINAGE MAP and ARCHIVE SYSTEMS
TOM HUDDLESTON 6/4/25
6/4/25
10-5-20
10-5-20_X1
SUNNY/ COOL - 70o
1" TO 50'
ONE OF ONE
NORTH
670 OLD RAND RD, LAKE ZURICH
HUDDLESTON McBRIDE
PROFESSIONAL LAND DRAINAGE SERVICES
COPYRIGHT 2025, BY HUDDLESTON LAND DRAINAGE COMPANY
COORDINATE SYSTEM: ILLINOIS STATE PLANE EAST NAD 83

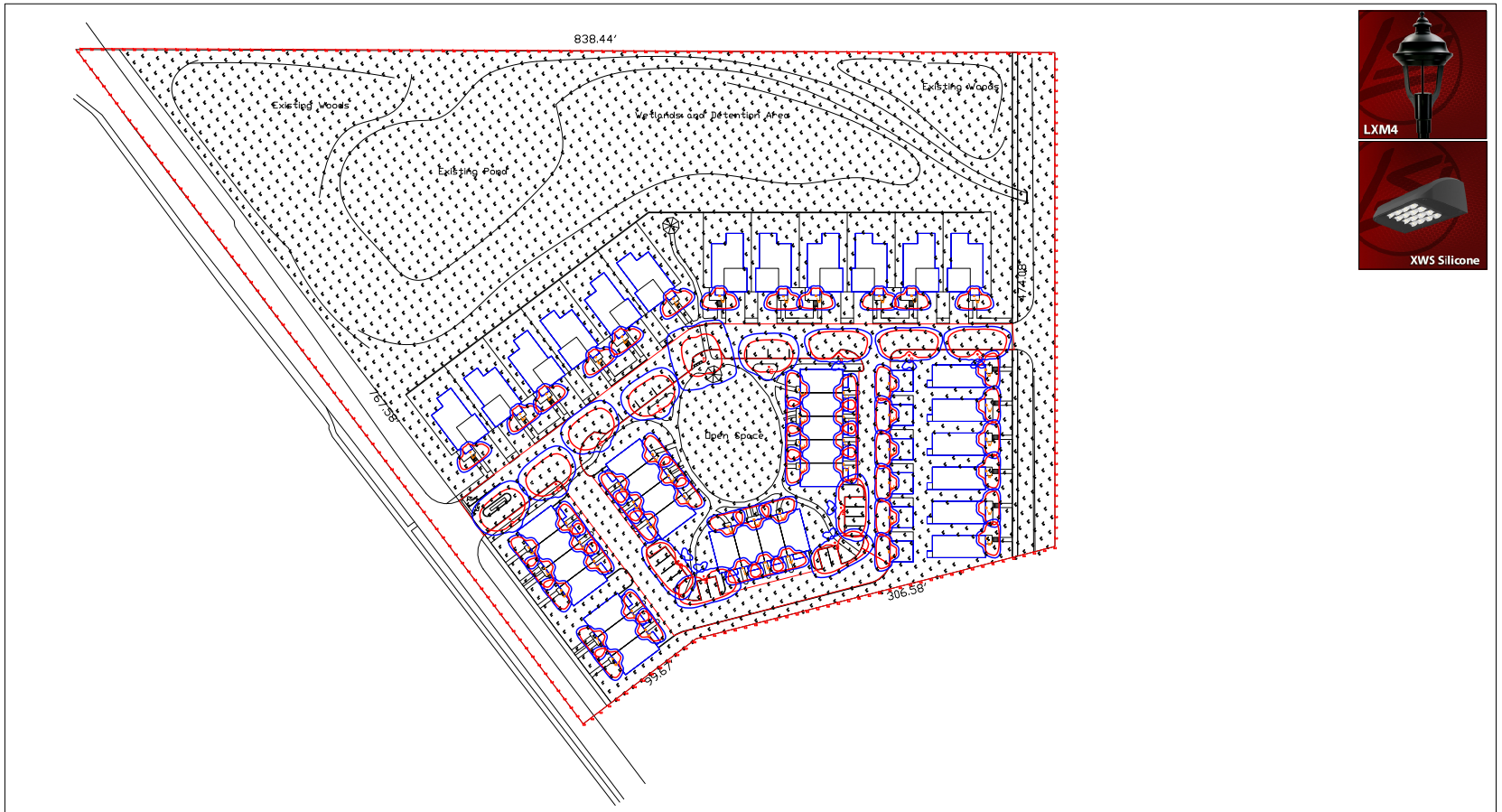


Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS AT GRADE-10'X10'	Illuminance	Fc	0.32	5.4	0.0	N.A.	N.A.
PROPERTY LINE	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
MAIN DRIVE AND PARKING SPACES	Illuminance	Fc	1.09	5.2	0.0	N.A.	N.A.

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
	7	B	Single	LXM4-PT-3-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3870	39
	5	C	Single	LXM4-PT-FT-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3440	39
	1	D	Single	LXM4-PT-5W-LED-05L-30-SINGLE	14'	1.000	0.970	4603	39.2
	54	W	Single	XWS-LED-01L-SIL-3-30-70CRI	6'	1.000	0.950	1491	10



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS AT GRADE-10'X10'	Illuminance	Fc	0.32	5.4	0.0	N.A.	N.A.
PROPERTY LINE	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
MAIN DRIVE AND PARKING SPACES	Illuminance	Fc	1.09	5.2	0.0	N.A.	N.A.

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
	7	B	Single	LXM4-PT-3-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3870	39
	5	C	Single	LXM4-PT-FT-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3440	39
	1	D	Single	LXM4-PT-SW-LED-05L-30-SINGLE	14'	1.000	0.970	4603	39.2
	54	W	Single	XWS-LED-01L-SIL-3-30-70CRI	6'	1.000	0.950	1491	10

PHOTOMETRIC EVALUATION
NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LEDs and other variable field conditions. Calculations do not include obstructions such as buildings, trees, shrubs, and landscaping unless noted otherwise. It is the responsibility of the owner and/or his representative to determine the effect of any obstructions or proposed or future construction. Fixture quantities noted does not include existing luminaires or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Total Project Watts_1
Total Watts = 1947.2

LIGHTING PROPOSAL LD-160222
470 OLD HAND ROAD
LAKE ZURICH, IL

SCALE:1"=40'

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Lexington (LXM4)

LED Decorative Post Top & Area Light

OVERVIEW	
Lumen Package (lm)	4,000 - 27,000
Wattage Range (W)	39 - 228
Efficacy Range (LPW)	100 - 140
Weight lbs (kg)	64 (29)

QUICK LINKS

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing.
- Cast aluminum wiring access door located in lower hub/fitter.
- Rigid die-cast aluminum arms for consistency and strength.
- Precision die cast aluminum heatsink and optical frame.
- Removable spun aluminum cap/driver enclosure is retained by captive stainless steel fasteners and safety cables. Housing and top cap interface is sealed with a one-piece extruded silicone gasket. Tool-less entry option is available.
- All exposed fasteners are black oxide coated stainless steel. Internal fasteners are stainless steel or zinc electroplated steel.
- IP65 rated luminaire protects integral components from harsh environments.
- 1.5G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W and FT.
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 93%.
- Optical distributions are field rotatable (in 90° increments).
- Available in 5000K, 4000K, and 3000K (+/- 275K) color temperatures.
- Minimum CRI of 70. Consult Factory for Higher CRI requirements.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: - -40°C to +50°C (-40°F to +122°F)
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire, however the luminaire is supplied with a 32' 3 conductor wire harness.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via iOS or Android configuration app (See controls page for more detail).

Installation

- Mounts to 4" O.D. pole or tenon.
- Secures to pole with 6 stainless steel set screws.
- 32' wire leads are provided bundled in the slip fitter hub for ease of wiring.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750
- State of California Title 24
- IDA compliant; with 3000K color temperature selection.
- Meets Buy American Act requirements
- Suitable For wet Locations
- IP65 rated Luminaire. IP66 rated optical chamber.
- 1.5G rated for ANSI C136.31 high vibration applications

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Lexington (LXM4)

Type : _____

Have questions? Call us at (800) 436-7800

ORDERING GUIDE

TYPICAL ORDER EXAMPLE: LXM4 PT LED 3 18L 50 UNV BLK IMSBT1L

Prefix	Mounting	Distribution	Light Source	Lumen Package	Color Temperature	Voltage	Finish	Option Controls	Options
LXM4 - Lexington	**PT** - Post Top	**2** - Type II **3** - Type III **5W** - Type 5 Wide **FT** - Forward Throw (Type IV)	**LED**	**5L** - 5,000 Lumens **10L** - 10,000 Lumens **18L** - 18,000 Lumens **25L** - 25,000 Lumens	**30** - 3000K **40** - 4000K **50** - 5000K	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**BRZ** - Bronze **BLK** - Black **GPT** - Graphite **MSV** - Metallic Silver **WHT** - White **PLP** - Platinum Plus **SVG** - Satin Verde Green	**Stand-Alone Control** (Blank) - None **IMSBT1L** - Integral Bluetooth™ Motion and Photocell Sensor (8 - 24' mounting height)[3] **IMSBT2L** - Integral Bluetooth™ Motion and Photocell Sensor (25 - 40' mounting height)[3] **ALBCS1** - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' MH) **ALBCS2** - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' MH)	**IL** - Integral Louver Shield[4]

Need more information?
Click here for our glossary

Have additional questions?
Call us at (800) 436-7800

ACCESSORY ORDERING INFORMATION

Part Number	Description
490025CLR[2]	BK MPT B04 - Bolt on Bracket (for PT 180) For 4" O.D. Round Poles
490035CLR[2]	BK MPT B05 - Bolt on Bracket (for PT 180) For 5" O.D. Round Poles
654939	IL - Integral Louver Shield (Black only)
356044	WM - Post top wall mount bracket (bronze) C/F for additional finish options

Part Number	Description
FK120[1]	FK120 Single Fusing (120V)
FK277[1]	FK277 Single Fusing (277V)
DFK208, 240[1]	DFK208,240 Double Fusing (208V, 240V)
DFK480[1]	DFK480 Double Fusing (480V)
FK347[1]	FK347 Single Fusing (347V)
661409	ALSC UNV TL5 - AirLink 5 Pin Twist Lock Controller
661410	ALSC UNV TL7 - AirLink 7 Pin Twist Lock Controller

1. Fusing must be located in hand hole of pole.
2. Order poles with 3" reduced drilling pattern. For PT mounting configurations other than D180,consult factory. Order one bracket per fixture
3. Consists of a daylight & motion dual sensor. Field configurable via the LSI app that can be downloaded from your smartphone's native app store.
4. Not available with type 5W distribution.

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Lexington (LXM4)

Type : _____

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PERFORMANCE

Delivered Lumens*

Lumen Package	Distribution	3000K CCT			4000K CCT			5000K CCT			Wattage
		Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
5L	2	4568	117	B2-U1-G1	5047	129	B2-U1-G1	5297	136	B2-U1-G1	39
	3	4697	120	B1-U1-G2	5189	132	B1-U1-G2	5447	140	B1-U1-G2	
	FT	4575	117	B1-U1-G2	5054	129	B1-U1-G2	5305	136	B1-U1-G2	
	5W	4602	118	B3-U1-G1	5084	130	B3-U1-G1	5336	137	B3-U1-G1	
10L	2	9100	117	B2-U2-G2	10054	130	B2-U2-G2	10553	135	B2-U2-G2	78
	3	9360	120	B2-U2-G2	10341	134	B2-U2-G2	10854	139	B2-U2-G2	
	FT	9107	117	B2-U2-G2	10061	130	B2-U2-G2	10560	135	B2-U2-G2	
	5W	9152	120	B4-U2-G2	10020	130	B4-U2-G2	10517	135	B4-U2-G2	
18L	2	16650	112	B3-U2-G3	18113	122	B3-U2-G3	19012	128	B3-U2-G3	149
	3	17108	115	B3-U2-G3	18756	126	B3-U2-G3	19687	132	B3-U2-G3	
	FT	16725	112	B3-U2-G3	18336	123	B3-U2-G3	19246	129	B3-U2-G3	
	5W	16810	113	B4-U2-G2	18429	124	B4-U2-G2	19344	130	B4-U2-G2	
25L	2	22952	102	B4-U2-G3	25057	110	B4-U2-G3	26301	115	B4-U2-G3	228
	3	23544	103	B3-U2-G3	25921	114	B3-U2-G3	27208	119	B3-U2-G3	
	FT	22902	100	B3-U2-G4	25215	111	B3-U2-G4	26466	116	B3-U2-G4	
	5W	23612	104	B5-U2-G3	25996	114	B5-U2-G3	27286	120	B5-U2-G3	

*LEDs are frequently updated therefore values are nominal.

Electrical Data (Amps)*

Lumen Package	Wattage	120V	208V	240V	277V	347V	480V
5L	39	0.33	0.19	0.16	0.14	0.11	0.08
10L	78	0.65	0.38	0.33	0.28	0.22	0.16
18L	149	1.24	0.72	0.62	0.54	0.43	0.31
25L	228	1.90	1.10	0.95	0.82	0.66	0.48

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

Recommended Lumen Maintenance[1]

Ambient Temp C	Initial [2]	25k hr [2]	50k hr [2]	75k hr [3]	100k hr [3]
0 C	99%	97%	96%	95%	94%
10 C	99%	97%	96%	95%	93%
20 C	99%	97%	95%	94%	92%
25 C	98%	97%	95%	93%	92%
30 C	98%	97%	95%	93%	92%
40 C	98%	97%	95%	93%	91%

1 Lumen maintenance values at 40C are calculated per TM-21 based on LM-80 data and in-situ testing.
2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

1 Lumen maintenance values at 40C are calculated per TM-21 based on LM-80 data and in-situ testing.
2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

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Lexington (LXM4)

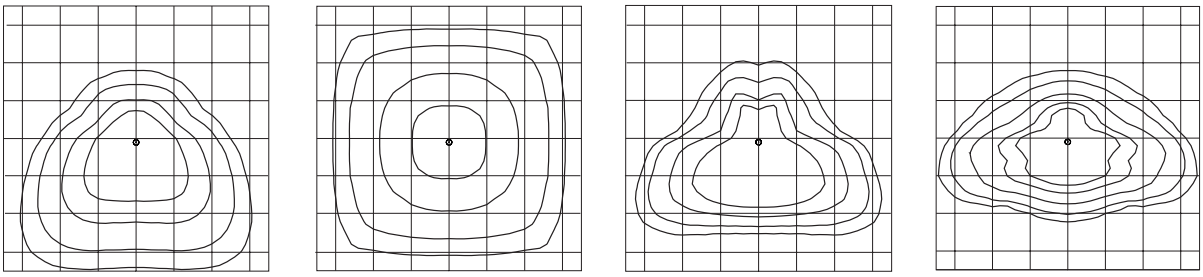
Type : _____

Have questions? Call us at (800) 436-7800

PHOTOMETRICS

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See the individual product page on https://www.lsicorp.com/ for detailed photometric data.



FT | 5W | Type 3 | Type 2

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Lexington (LXM4)

Type : _____

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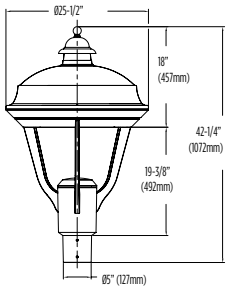
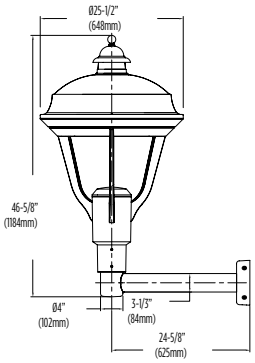
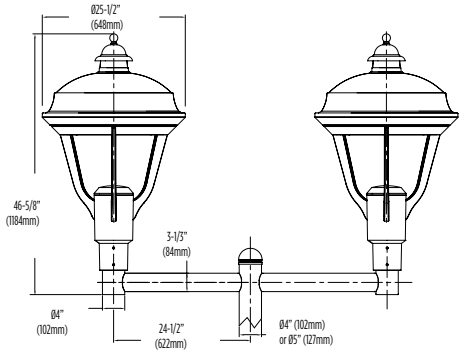
PRODUCT DIMENSIONS



Post Top Single
Slipfits 4" Dia. Tenon (4N) or Pole



Post Top with WM Accessory



Luminaire EPA Chart

	Mounting Style		
PT Single	■	PT	1.4
PT D180° with BK MPT BO (2)	■-■	PT	2.7

Shipping Weights

Catalog Number	Est. Weight (kg/lbs.)
LXM4 (PT)	29/64

POLES & BRACKETS

LSI offers a full line of poles and mounting accessories to complete your lighting assembly. Aluminum and steel in both square and round shafts. In addition, LSI offers round tapered, fluted and hinge based poles. Designed and engineered for durability and protected with our oven baked DuraGrip Protection System. Also available with our DuraGrip+ Protection system for unmatched corrosion resistance and an extended warranty. American made in our Ohio facility with industry leading lead times.

Click here to learn more details about poles & brackets

BKA UMB CLR

The 3G rated UMB allows for seamless integration of LSI luminaires onto existing/ retrofit or new construction poles. The UMB was designed for square or round (tapered or straight) poles with two mounting hole spacings between 3.5" – 5".

BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a onto a 2" iron pipe , 2 3/8 OD tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's B3 or B5 standard pole bolt patterns.

Square Pole
14'-39'

Round Pole
10'-30'

Tapered Pole
20'-39'

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Lexington (LXM4)

Type : _____

Have questions? Call us at (800) 436-7800

CONTROLS

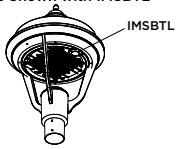
Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT

LEVITON App Apple Android

Fixture Shown with IMSBTL



AirLink Blue (ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue

AirLink Blue App Apple

Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
OMSBTxL/IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High
OMS	Motion	No Motion	N/A	N/A	N/A	30 seconds	Auto

Operation	Description
On Event	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
Off Event	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
On Light Level	The light level that the fixtures will turn on to when ON EVENT occurs.
Dim Light Level	The light level that the fixtures will dim down to when no motion is detected.
Delay to Dim	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
Delay to Off	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
Sensitivity	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.

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Urban Forest Management, Inc.

June 24, 2022

Mr. Dennis Kulak, NCARB
KLLM, Inc.
2357 N. Damen Ave.
Chicago, IL 60647

RE: Tree Inventory and Report
670 Old Rand Road
Lake Zurich, IL

Dear Mr. Kulak,

The following is the tree inventory listing and report for the property located at 670 Old Rand Road in Lake Zurich, IL.

All trees measuring 4" d.b.h. (diameter at breast height) and larger were tagged and included in the inventory.

A total of eight hundred and seventy eight (878) trees were included within this inventory, using tag #'s 2001 – 2500 and 4001 - 4378. There were seven (7) trees considered Heritage trees by Lake Zurich ordinance, fifty three (53) trees considered Landmark trees, four hundred thirty nine, (439) trees considered Desireable species, three hundred twenty one (321) trees considered Undesireable species and fifty eight eight (58) trees that were not classified within the Lake Zurich ordinance. The Species Quality Rating is found in the far right column of the tree inventory listing.

The following inventory listing and report will describe each tree in detail by tag number and the site in general.

Sincerely,
URBAN FOREST MANAGEMENT, INC.

Todd R. Sinn
Senior Forester

960 Route 22, Suite 207 Fox River Grove, Illinois 60021 847-516-9708 FAX 847-516-9716

TREE INVENTORY & REPORT
670 OLD RAND ROAD
LAKE ZURICH, IL

June 24, 2022

Prepared by:

URBAN FOREST MANAGEMENT, INC.
960 Route 22, Suite 207
Fox River Grove, IL 60021
(847) 516-9708

CONTENTS

Item		Page No.
I.	Background and Methodology	1
II.	General Comments	2
III.	Tree Inventory	

I. Background and Methodology

A tree inventory was conducted on the property located at 670 Old Rand Road in Lake Zurich, IL. All trees measuring 4" d.b.h. (diameter at breast height—4.5' above the ground) and larger were tagged and included in this inventory. Buckthorn was not tagged or included in the inventory, nor were dead trees measuring less than 10" in diameter. Tags were nailed on the north face of the tree at eye level.

Trees were evaluated for species, size, condition, form and any observed problems were also noted. The following is a key for interpreting the condition and form data found on the tree inventory listing:

Condition Rating - The condition of the trees shall be based on a six (6) point scale with one (1) being the best and six (6) being the worst.

Rating	Description	General Criteria
1	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and required no remedial action.
2	Good to Fair	The tree is typical of the species and/or has less than 20% deadwood in the crown, only one or two minor problems that are easily corrected with normal care.
3	Fair (average)	The tree is typical of the species and/or has less than 30% deadwood in the crown, one or two minor problems that are not eminently lethal to the tree, and no significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to insure continued health.
4	Fair to Poor	The tree is not typical of the species and/or has significant problems such as 30-50% deadwood in the crown, serious decay or structural defect, insects, disease or other problems that can be eminently lethal to the tree or create a hazardous tree if not corrected in a short period of time of if the tree is subjected to additional stress.
5	Poor	The tree is not typical of the species and/or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corrected would not result in the long term survival of the tree.
6	Dead	Less than 10% of the tree shows signs of life.

Form Rating – Subjective evaluation comparing tree with specimen tree of the same species. Form classes are the same as those listed above under condition, with the exception of number 6, which translates to 'very poor form'. Typical form defects might include multiple leaders, no leader, lean, one sided crown, trunk crook, etc.

II. General Comments

A total of eight hundred and seventy eight (878) trees were inventoried using tree numbers 2001 – 2500 and 4001 - 4378.

Species inventoried included boxelder maple, Norway maple, silver maple, green ash, black walnut, crabapple, white mulberry, black cherry, black locust, American elm and other species in smaller quantities.

The most common species inventoried was silver maple with 44% of all species inventoried, followed by boxelder maple with 16% and black cherry with 11%. Buckthorn is the primary understory species with honeysuckle, ash, Virginia creeper, Chinese privet, viburnum, silver maple and black cherry found as additional understory species.

There are seven (7) trees (.7%) considered Heritage trees by Lake Zurich ordinance, fifty three (53) trees (6%) considered Landmark trees, four hundred thirty nine (439) trees (50%) considered Desirable, three hundred twenty one (321) trees (36%) are Undesirable trees and fifty eight (58) trees (6%) not included in the Lake Zurich categories.

The property is primarily wooded with lower quality species of trees throughout the site. There are some planted trees as well as some maintained turf adjacent to the residence. A single family residence, barn and livestock corrals are located in the southcentral part of the site. A pond and creek are located in the north quarter of the site. Piles of fallen trees and brush are located within the fenced livestock corrals.

Most of the inventoried trees have not been maintained in the past and they contain varying degrees of deadwood, decay or structural issues. Approximately 33% of the inventoried trees were in fair/poor or worse condition at the time of the inventory. Thirty one (31) of the trees were dead at the time of the inventory.

The boxelder maple, black locust, silver maple, and mulberry are fast growing, weak wooded and relatively short lived species.

Most of the ash trees on this site are dead as a result of emerald ash borer.

Many of the trees within the horse corrals have bark damage from the horses gnawing on the bark and the brush/trees being pushed into piles.

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2001	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	10	4	5	damaged leader, one-sided, pruned for overhead wires		Overhead wires.		DESIRABLE
2002	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	8	3	4	one-sided, damaged leader, pruned for overhead wires, multiple leaders		Overhead wires.		DESIRABLE
2003	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	11	3	4	weak crotch, trunk scar, multiple leaders				DESIRABLE
2004	Southwest property corner	Cornus florida	Flowering Dogwood	3	3	4	sweep, minor deadwood, suckering, metal in trunk			Forked at base with 3", 3", 3", 2", 1", 1" co-leaders.	LANDMARK
2005	South property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, slight sweep, excessive lean, minor deadwood				UNDESIRABLE
2006	South property line	Acer platanoides	Norway Maple	25	3	4	one-sided, multiple leaders, minor deadwood				DESIRABLE
2007	South property line	Acer platanoides	Norway Maple	21	4	5	one-sided, weak crotch, decay, broken limbs, over-topped		2 main co-leaders broken off at 13'.		DESIRABLE
2008	South property line	Acer platanoides	Norway Maple	11	3	4	minor deadwood, twist in trunk				DESIRABLE
2009	Southwest house corner	Picea glauca	White Spruce	16	6	5			Dead.		LANDMARK
2010	Southwest house corner	Juniperus virginiana	Eastern Red-cedar	11	3	4	damaged leader, twist in trunk, minor deadwood				DESIRABLE
2011	South property line	Morus alba	White Mulberry (Common Mulberry)	29	4	3	basal decay, weak crotch, multiple leaders, minor deadwood, suckering, hollow		Main crotch splitting		UNDESIRABLE
2012	Southeast of house	Malus spp.	Crabapple	10	5	4	top broken out, damaged leader, suckering, decay, hollow, basal decay				DESIRABLE
2013	Southeast of house	Picea abies	Norway Spruce	18	3	4	over-topped, one-sided				LANDMARK
2014	Southeast of house	Acer platanoides	Norway Maple	14	3	3	weak crotch, double leader, minor deadwood			Forked at 4' with a 13" co-leader.	DESIRABLE
2015	South property line	Acer saccharinum	Silver Maple	15	3	4	one-sided, double leader, damaged leader				DESIRABLE
2016	South property line	Morus alba	White Mulberry (Common Mulberry)	15	4	4	slight sweep, suckering, sweep, sparse foliage				UNDESIRABLE
2017	South property line	Acer negundo	Boxelder Maple	11	4	4	slight lean, one-sided, suckering, minor deadwood				UNDESIRABLE
2018	South property line	Acer negundo	Boxelder Maple	14	3	4	one-sided, multiple leaders, slight lean				UNDESIRABLE
2019	South property line	Ulmus americana	American Elm	8	3	4	basal scar, dead tree caught in crown, suckering, double leader		Uprooted 12" green ash caught in crown.		N/A
2020	South property line	Acer negundo	Boxelder Maple	4	4	4	minor deadwood, over-topped, suckering				UNDESIRABLE
2021	South property line	Acer negundo	Boxelder Maple	5	4	4	minor deadwood, suckering, over-topped				UNDESIRABLE
2022	South property line	Acer negundo	Boxelder Maple	8	3	4	slight lean, twist in trunk, thin crown, suckering				UNDESIRABLE
2023	South property line	Acer negundo	Boxelder Maple	8	3	4	over-topped, double leader, slight sweep, twist in trunk				UNDESIRABLE
2024	South property line	Acer negundo	Boxelder Maple	10	3	4	slight sweep, multiple leaders, suckering				UNDESIRABLE
2025	South property line	Acer negundo	Boxelder Maple	9	3	4	one-sided, suckering, minor deadwood, over-topped				UNDESIRABLE
2026	South property line	Acer negundo	Boxelder Maple	6	4	4	excessive lean, one-sided, suckering				UNDESIRABLE
2027	South property line	Acer negundo	Boxelder Maple	19	5	4	heavy deadwood, one-sided, multiple leaders, basal decay, basal scar				UNDESIRABLE
2028	South property line	Acer negundo	Boxelder Maple	14	5	5	slight sweep, damaged leader, suckering				UNDESIRABLE
2029	South property line	Acer negundo	Boxelder Maple	8	3	4	slight lean, suckering				UNDESIRABLE
2030	South property line	Acer negundo	Boxelder Maple	12	4	5	excessive lean, sweep, trunk scar, decay				UNDESIRABLE
2031	South property line	Ulmus americana	American Elm	11	3	4	minor deadwood				N/A
2032	South property line	Acer negundo	Boxelder Maple	7	4	5	damaged leader, slight sweep, suckering				UNDESIRABLE
2033	South property line	Acer negundo	Boxelder Maple	9	5	5	damaged leader, slight lean, sparse foliage, over-topped				UNDESIRABLE
2034	South property line	Juglans nigra	Black Walnut	16	2	3	twist in trunk				LANDMARK
2035	South property line	Juglans nigra	Black Walnut	17	2	3	slight lean, minor deadwood, multiple leaders, minor deadwood				LANDMARK
2036	South property line	Maclura pomifera	Osage-orange (Hedge-apple)	4	3	4	sweep, minor deadwood, weak crotch, suckering			Forked at base with a 2" co-leader.	UNDESIRABLE
2037	South property line	Juglans nigra	Black Walnut	7	3	4	basal scar, over-topped, suckering, double leader				LANDMARK
2038	South property line	Juglans nigra	Black Walnut	14	3	3	one-sided, double leader, vine infested				LANDMARK
2039	Southeast property corner	Acer saccharinum	Silver Maple	9	5	4	thin crown, minor deadwood, sparse foliage, suckering, overhead wires			Forked at base with 9"(dead), 9"(dead), 10"(dead), 4" co-leaders	DESIRABLE
2040	East property line	Malus spp.	Crabapple	4	4	3	minor deadwood, damaged leader, suckering, overhead wires				DESIRABLE

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2041	East property line	Malus spp.	Crabapple	4	3	3	over-topped, suckering, overhead wires				DESIRABLE
2042	East of homestead	Prunus serotina	Black Cherry	9	4	3	dieback, thin crown, double leader, minor deadwood				UNDESIRABLE
2043	East of homestead	Ulmus americana	American Elm	11	4	3	dieback, minor deadwood, multiple leaders				N/A
2044	East of homestead	Juglans nigra	Black Walnut	5	2	4	over-topped, twist in trunk, minor deadwood				LANDMARK
2045	East of homestead	Prunus serotina	Black Cherry	11	3	4	one-sided, thin crown, slight sweep, minor deadwood				UNDESIRABLE
2046	East of homestead	Catalpa speciosa	Northern Catalpa	7	3	4	twist in trunk, thin crown, minor deadwood				LANDMARK
2047	East of homestead	Malus spp.	Crabapple	5	4	4	over-topped, damaged leader			Forked at base with a 5" co-leader.	DESIRABLE
2048	East of homestead	Acer saccharinum	Silver Maple	9	5	4	one-sided, double leader, sparse foliage, dieback, minor deadwood			Forked at 2' with a 5" (dead) co-leader.	DESIRABLE
2049	East of homestead	Ulmus americana	American Elm	5	3	4	over-topped, minor deadwood, double leader				N/A
2050	East of homestead	Acer saccharinum	Silver Maple	15	4	3	weak crotch, multiple leaders, thin crown			Forked at 3' with an 11" co-leader.	DESIRABLE
2051	East of homestead	Acer saccharinum	Silver Maple	7	2	4	over-topped, one-sided, weak crotch, slight sweep			Forked at 1' with a 6" co-leader.	DESIRABLE
2052	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, minor deadwood, basal scar				DESIRABLE
2053	East of homestead	Acer saccharinum	Silver Maple	9	2	4	over-topped, slight sweep, one-sided				DESIRABLE
2054	East of homestead	Acer saccharinum	Silver Maple	8	2	4	over-topped, slight sweep, double leader				DESIRABLE
2055	East of homestead	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2056	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, trunk scar, suckering, minor deadwood				DESIRABLE
2057	Homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, dead tree caught in crown		Dead 10" green ash caught in crown (snapped off at base)		DESIRABLE
2058	Homestead	Ulmus americana	American Elm	8	3	4	twist in trunk, one-sided				N/A
2059	Homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, multiple leaders, slight sweep				DESIRABLE
2060	Homestead	Acer saccharinum	Silver Maple	24	3	4	over-topped, weak crotch, sweep, multiple leaders		Forked at 5'.		DESIRABLE
2061	Homestead	Acer saccharinum	Silver Maple	16	3	4	slight sweep, one-sided, suckering				DESIRABLE
2062	Homestead	Acer saccharinum	Silver Maple	30	3	4	weak crotch, slight sweep, multiple leaders, metal in trunk		Forked at 5'.		DESIRABLE
2063	Homestead	Acer saccharinum	Silver Maple	32	4	3	trunk scar, decay, multiple leaders, minor deadwood, trunk swell				DESIRABLE
2064	Homestead	Acer saccharinum	Silver Maple	29	3	4	one-sided, multiple leaders, weak crotch, minor deadwood, metal in trunk, sparse foliage		Electric service wire embedded in trunk.		DESIRABLE
2065	Homestead	Acer saccharinum	Silver Maple	32	3	3	weak crotch, multiple leaders				DESIRABLE
2066	Homestead	Acer saccharinum	Silver Maple	23	3	4	over-topped, one-sided, multiple leaders, broken limbs, metal in trunk		Electric service wire embedded in trunk.		DESIRABLE
2067	Homestead	Quercus rubra	Northern Red Oak	28	6	4		hypoxylon canker	Dead.		HERITAGE
2068	Homestead	Picea pungens	Colorado Blue Spruce	13	4	4	lower branches shaded out, minor deadwood, sparse foliage				LANDMARK
2069	Homestead	Picea pungens	Colorado Blue Spruce	15	4	4	lower branches shaded out, minor deadwood, sparse foliage				LANDMARK
2070	Homestead	Picea pungens	Colorado Blue Spruce	11	6	4			Dead.		LANDMARK
2071	Homestead	Carya ovata	Shagbark Hickory	14	3	3	minor deadwood, weak crotch, multiple leaders				HERITAGE
2072	Homestead	Picea pungens	Colorado Blue Spruce	9	6	3			Dead.		LANDMARK
2073	Homestead	Picea pungens	Colorado Blue Spruce	15	6	4			Dead.		LANDMARK
2074	Homestead	Pseudotsuga menziesii	Douglas-fir	17	3	4	one-sided, lower branches shaded out, minor deadwood, vine infested				LANDMARK
2075	Homestead	Malus spp.	Crabapple	10	4	4	decay, minor deadwood, suckering, broken limbs				DESIRABLE
2076	Homestead	Acer platanoides	Norway Maple	34	3	3	weak crotch, multiple leaders, broken limbs, minor deadwood, trunk scar				DESIRABLE
2077	Homestead	Fraxinus pennsylvanica	Green Ash	13	6	5	vine infested		Dead. Overhead wires.		N/A
2078	Homestead	Acer platanoides	Norway Maple	39	3	3	weak crotch, multiple leaders, heavy deadwood, surface roots, lawnmower damage				DESIRABLE
2079	Homestead	Acer platanoides	Norway Maple	26	3	3	weak crotch, multiple leaders, minor deadwood				DESIRABLE

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2080	Homestead	Salix nigra	Black Willow	37	5	4	heavy deadwood, suckering, sparse foliage, minor deadwood, surface roots, lawnmower damage				DESIRABLE
2081	Homestead	Acer platanoides	Norway Maple	24	4	3	weak crotch, multiple leaders, trunk scar				DESIRABLE
2082	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, multiple leaders				DESIRABLE
2083	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, thin crown, over-topped				DESIRABLE
2084	East of homestead	Acer saccharinum	Silver Maple	16	3	4	double leader, slight sweep, thin crown				DESIRABLE
2085	East of homestead	Fraxinus pennsylvanica	Green Ash	11	6	5	top broken off		Snag.		N/A
2086	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, one-sided, thin crown				DESIRABLE
2087	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight sweep, one-sided				DESIRABLE
2088	East of homestead	Acer saccharinum	Silver Maple	18	3	4	one-sided, multiple leaders				DESIRABLE
2089	East of homestead	Ulmus americana	American Elm	8	3	4	over-topped, one-sided, suckering				N/A
2090	East of homestead	Acer saccharinum	Silver Maple	12	3	4	slight sweep, minor deadwood, basal swell				DESIRABLE
2091	East of homestead	Acer saccharinum	Silver Maple	14	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2092	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, twist in trunk, thin crown				DESIRABLE
2093	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, thin crown				DESIRABLE
2094	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, double leader, dead tree caught in crown				DESIRABLE
2095	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2096	East of homestead	Acer saccharinum	Silver Maple	7	3	4	thin crown, one-sided, slight sweep, weak crotch			Forked at 2' with a 5" co-leader.	DESIRABLE
2097	East of homestead	Acer saccharinum	Silver Maple	8	4	4	minor deadwood, double leader, slight sweep				DESIRABLE
2098	East of homestead	Acer saccharinum	Silver Maple	6	3	4	one-sided, thin crown, minor deadwood			Forked at 1.5' with a 3" co-leader.	DESIRABLE
2099	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, multiple leaders, minor deadwood				DESIRABLE
2100	East of homestead	Juglans nigra	Black Walnut	11	2	3	multiple leaders, minor deadwood				LANDMARK
2101	East of homestead	Prunus serotina	Black Cherry	7	5	4	sparse foliage, minor deadwood, thin crown			Forked at 2.5' with a 5" co-leader.	UNDESIRABLE
2102	East of homestead	Juglans nigra	Black Walnut	8	2	4	over-topped, twist in trunk, one-sided				LANDMARK
2103	East of homestead	Prunus serotina	Black Cherry	9	4	4	trunk scar, decay, thin crown, sparse foliage, vine infested				UNDESIRABLE
2104	East property line	Juglans nigra	Black Walnut	6	3	4	damaged leader, multiple leaders, pruned for overhead wires		Overhead wires.		LANDMARK
2105	East property line	Malus spp.	Crabapple	4	3	4	over-topped, slight sweep, multiple leaders, pruned for overhead wires		Overhead wires.		DESIRABLE
2106	East property line	Malus spp.	Crabapple	5	3	4	over-topped, slight sweep, weak crotch, suckering		Overhead wires.	Forked at 1' with 4", 3", 3" co-leaders.	DESIRABLE
2107	East property line	Ulmus americana	American Elm	6	3	3					N/A
2108	East property line	Malus spp.	Crabapple	4	3	3	weak crotch, minor deadwood, decay			Forked at .5' with 4", 3", 3", 4" co-leaders.	DESIRABLE
2109	East property line	Ulmus pumila	Siberian Elm	4	3	4	over-topped, multiple leaders, weak crotch		Overhead wires.		UNDESIRABLE
2110	East of homestead	Malus spp.	Crabapple	4	4	4	over-topped, slight sweep, minor deadwood			Forked at .5' with a 3" co-leader.	DESIRABLE
2111	East of homestead	Acer saccharinum	Silver Maple	8	3	4	weak crotch, minor deadwood, one-sided, thin crown			Forked at base with 7", 7" co-leaders.	DESIRABLE
2112	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, one-sided, thin crown				DESIRABLE
2113	East of homestead	Acer saccharinum	Silver Maple	10	5	4	dieback, heavy deadwood, sparse foliage			Forked at 2' with a 9" co-leader.	DESIRABLE
2114	East of homestead	Acer saccharinum	Silver Maple	12	3	4	weak crotch, one-sided, slight sweep, multiple leaders			Forked at 4' with an 11" co-leader.	DESIRABLE
2115	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, one-sided, one-sided			Forked at 2.5' with an 8" co-leader.	DESIRABLE
2116	East of homestead	Prunus serotina	Black Cherry	4	4	4	slight sweep, suckering, minor deadwood, double leader				UNDESIRABLE
2117	East of homestead	Acer saccharinum	Silver Maple	5	3	4	slight sweep, thin crown, over-topped				DESIRABLE
2118	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, one-sided, thin crown				DESIRABLE

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2119	East of homestead	Acer saccharinum	Silver Maple	11	3	4	one-sided, thin crown, double leader				DESIRABLE
2120	East of homestead	Prunus serotina	Black Cherry	8	3	4	slight sweep, one-sided, thin crown, minor deadwood				UNDESIRABLE
2121	East of homestead	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, trunk scar				DESIRABLE
2122	East of homestead	Acer saccharinum	Silver Maple	12	3	4	slight lean, one-sided, multiple leaders				DESIRABLE
2123	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight lean, over-topped, one-sided, double leader, basal scar				DESIRABLE
2124	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight lean, double leader, over-topped, basal scar				DESIRABLE
2125	East of homestead	Acer saccharinum	Silver Maple	9	3	4	weak crotch, one-sided, suckering			Forked at 3.5' with an 8" co-leader.	DESIRABLE
2126	East of homestead	Acer saccharinum	Silver Maple	14	3	3	twist in trunk, thin crown				DESIRABLE
2127	East of homestead	Acer saccharinum	Silver Maple	9	3	5	over-topped, sweep, thin crown				DESIRABLE
2128	East of homestead	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, one-sided, thin crown				DESIRABLE
2129	East of homestead	Acer saccharinum	Silver Maple	5	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2130	East of homestead	Acer saccharinum	Silver Maple	7	4	4	over-topped, slight sweep, trunk scar, dead tree caught in crown				DESIRABLE
2131	East of homestead	Acer saccharinum	Silver Maple	24	3	3	multiple leaders				DESIRABLE
2132	East of homestead	Acer saccharinum	Silver Maple	8	3	3	metal in trunk, one-sided, thin crown		Barbed wire attached to trunk.		DESIRABLE
2133	East of homestead	Acer saccharinum	Silver Maple	10	3	4	sweep, one-sided				DESIRABLE
2134	East of homestead	Acer saccharinum	Silver Maple	12	3	3	thin crown, one-sided, double leader				DESIRABLE
2135	East of homestead	Acer saccharinum	Silver Maple	8	4	4	basal decay, hollow, one-sided, thin crown				DESIRABLE
2136	East of homestead	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, trunk scar, over-topped				DESIRABLE
2137	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown, trunk scar, decay		Old co-leader rotted off at 3'.		DESIRABLE
2138	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, multiple leaders				DESIRABLE
2139	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2140	East of homestead	Acer saccharinum	Silver Maple	5	4	4	thin crown, minor deadwood, suckering, slight sweep				DESIRABLE
2141	East of homestead	Acer saccharinum	Silver Maple	9	3	4	one-sided, thin crown, slight sweep			Forked at 1.5' with a 6" co-leader.	DESIRABLE
2142	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown, multiple leaders				DESIRABLE
2143	East of homestead	Prunus serotina	Black Cherry	4	3	4	twist in trunk, minor deadwood, suckering, over-topped				UNDESIRABLE
2144	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, thin crown, decay		Old co-leader rotted off at 1'.		DESIRABLE
2145	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, double leader, thin crown				DESIRABLE
2146	East of homestead	Acer saccharinum	Silver Maple	5	4	3	basal decay, thin crown, over-topped				DESIRABLE
2147	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, multiple leaders, weak crotch, minor deadwood			Forked at 4' with a 6" co-leader.	DESIRABLE
2148	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, slight lean, thin crown				DESIRABLE
2149	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown				DESIRABLE
2150	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, trunk scar, double leader		Old co-leader rotted off at 2'.		DESIRABLE
2151	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, double leader				DESIRABLE
2152	East of homestead	Acer saccharinum	Silver Maple	5	4	4	damaged leader, one-sided, minor deadwood, sparse foliage				DESIRABLE
2153	East of homestead	Acer saccharinum	Silver Maple	7	3	4	thin crown, slight sweep, minor deadwood		Old co-leader broken off at 2'.		DESIRABLE
2154	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, one-sided, multiple leaders				DESIRABLE
2155	East of homestead	Prunus serotina	Black Cherry	7	3	4	slight sweep, one-sided				UNDESIRABLE
2156	East of homestead	Prunus serotina	Black Cherry	7	4	4	slight sweep, over-topped, sparse foliage, minor deadwood, basal decay, girdling root				UNDESIRABLE
2157	East of homestead	Prunus serotina	Black Cherry	6	3	5	over-topped, sweep				UNDESIRABLE
2158	East of homestead	Malus spp.	Crabapple	6	3	4	over-topped, slight lean, suckering, decay, minor deadwood			Forked at base with 5", 4", 3" co-leaders.	DESIRABLE
2159	East property line	Malus spp.	Crabapple	4	4	4	trunk scar, minor deadwood, suckering	scab			DESIRABLE
2160	East property line	Acer saccharinum	Silver Maple	9	5	4	sparse foliage, minor deadwood, pruned for overhead wires		Overhead wires, stunted growth.		DESIRABLE
2161	East property line	Prunus serotina	Black Cherry	6	3	4	sweep, thin crown, sparse foliage				UNDESIRABLE
2162	East property line	Acer saccharinum	Silver Maple	4	3	4	over-topped, slight sweep, thin crown, sparse foliage				DESIRABLE
2163	East property line	Prunus serotina	Black Cherry	6	4	4	over-topped, sweep, vine infested, sparse foliage				UNDESIRABLE

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2164	East property line	Morus alba	White Mulberry (Common Mulberry)	4	4	4	over-topped, minor deadwood, slight lean				UNDESIRABLE
2165	East property line	Prunus serotina	Black Cherry	5	4	4	trunk scar, decay, slight sweep, thin crown				UNDESIRABLE
2166	East of homestead	Prunus serotina	Black Cherry	7	3	4	over-topped, slight sweep, twist in trunk, trunk scar				UNDESIRABLE
2167	East of homestead	Prunus serotina	Black Cherry	6	3	4	vine infested, thin crown, minor deadwood				UNDESIRABLE
2168	East of homestead	Prunus serotina	Black Cherry	10	4	4	excessive lean, trunk scar, broken limbs				UNDESIRABLE
2169	East of homestead	Acer saccharinum	Silver Maple	7	3	3	trunk scar, double leader, thin crown				DESIRABLE
2170	East of homestead	Acer saccharinum	Silver Maple	5	3	3	trunk scar				DESIRABLE
2171	East of homestead	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, minor deadwood, slight sweep			Forked at base with a 4" co-leader.	UNDESIRABLE
2172	East of homestead	Acer saccharinum	Silver Maple	13	3	3	twist in trunk, double leader, minor deadwood				DESIRABLE
2173	East of homestead	Ulmus americana	American Elm	6	3	3	over-topped, one-sided				N/A
2174	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, weak crotch, double leader			Forked at 3' with a 4" co-leader.	DESIRABLE
2175	East of homestead	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
2176	East of homestead	Acer saccharinum	Silver Maple	10	4	3	multiple leaders, thin crown, one-sided, trunk scar				DESIRABLE
2177	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight lean, one-sided, thin crown, weak crotch			Forked at 1.5' with an 8" co-leader.	DESIRABLE
2178	East of homestead	Acer saccharinum	Silver Maple	8	2	4	twist in trunk, one-sided, thin crown				DESIRABLE
2179	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, minor deadwood, suckering, thin crown, weak crotch			Forked at 2' with a 7" co-leader.	DESIRABLE
2180	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, double leader				DESIRABLE
2181	East of homestead	Acer saccharinum	Silver Maple	12	3	4	over-topped, slight sweep, one-sided, multiple leaders				DESIRABLE
2182	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight sweep, thin crown			Forked at 3' with a 12" co-leader.	DESIRABLE
2183	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight lean, one-sided, multiple leaders, trunk scar				DESIRABLE
2184	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight lean, thin crown, suckering, trunk scar				DESIRABLE
2185	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, metal in trunk		Barbed wire embedded in trunk.		DESIRABLE
2186	East of homestead	Acer saccharinum	Silver Maple	17	3	4	over-topped, sweep, multiple leaders				DESIRABLE
2187	East of homestead	Acer saccharinum	Silver Maple	16	3	4	over-topped, one-sided, multiple leaders				DESIRABLE
2188	East of homestead	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, suckering, basal scar				DESIRABLE
2189	East of homestead	Acer saccharinum	Silver Maple	12	3	3	twist in trunk, one-sided, thin crown, suckering				DESIRABLE
2190	East of homestead	Acer saccharinum	Silver Maple	9	4	3	one-sided, thin crown, suckering, twist in trunk				DESIRABLE
2191	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, suckering, twist in trunk				DESIRABLE
2192	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, metal in trunk		Barbed wire embedded in trunk.		DESIRABLE
2193	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
2194	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, minor deadwood				DESIRABLE
2195	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep				DESIRABLE
2196	East of homestead	Acer saccharinum	Silver Maple	14	3	4	one-sided, thin crown			Forked at 2.5' with a 10" co-leader.	DESIRABLE
2197	East of homestead	Acer saccharinum	Silver Maple	12	3	4	weak crotch, one-sided, thin crown			forked at 3.5' with a 9" co-leader.	DESIRABLE
2198	East of homestead	Acer saccharinum	Silver Maple	10	4	4	slight lean, trunk scar, damaged leader, one-sided, over-topped				DESIRABLE
2199	East of homestead	Acer saccharinum	Silver Maple	18	3	4	one-sided, multiple leaders, minor deadwood, basal scar				DESIRABLE
2200	East of homestead	Acer saccharinum	Silver Maple	12	2	4	slight lean, multiple leaders, minor deadwood				DESIRABLE
2201	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2202	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, trunk scar, over-topped		Old co-leader rotted off at 2'.		DESIRABLE
2203	East of homestead	Prunus serotina	Black Cherry	4	3	4	over-topped, slight sweep				UNDESIRABLE
2204	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, minor deadwood, slight sweep				DESIRABLE
2205	East of homestead	Acer saccharinum	Silver Maple	4	3	4	minor deadwood, one-sided, thin crown, sweep, over-topped				DESIRABLE
2206	East of homestead	Fraxinus pennsylvanica	Green Ash	16	6	4			Dead.		N/A
2207	East of homestead	Morus alba	White Mulberry (Common Mulberry)	5	3	3	over-topped, one-sided, minor deadwood				UNDESIRABLE
2208	East of homestead	Acer saccharinum	Silver Maple	5	3	4	twist in trunk, thin crown, slight sweep				DESIRABLE
2209	East property line	Juglans nigra	Black Walnut	20	3	4	multiple leaders, vine infested, broken limbs, suckering, pruned for side wires		Overhead wires.		LANDMARK

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2210	East property line	Acer negundo	Boxelder Maple	7	4	5	damaged leader, vine infested, pruned for overhead wires, sparse foliage		Overhead wires.		UNDESIRABLE
2211	East property line	Acer negundo	Boxelder Maple	9	5	5	dieback, heavy deadwood, girdling root				UNDESIRABLE
2212	East property line	Acer saccharinum	Silver Maple	15	4	4	broken limbs, minor deadwood, one-sided, vine infested, multiple leaders, decay				DESIRABLE
2213	East of homestead	Morus alba	White Mulberry (Common Mulberry)	16	4	4	one-sided, dieback, minor deadwood, multiple leaders				UNDESIRABLE
2214	East of homestead	Acer saccharinum	Silver Maple	13	6	4			Dead.		DESIRABLE
2215	East of homestead	Acer saccharinum	Silver Maple	9	4	4	dieback, heavy deadwood, double leader			Forked at 3.5' with an 8" co-leader.	DESIRABLE
2216	East of homestead	Prunus serotina	Black Cherry	9	4	4	dieback, slight sweep, thin crown, minor deadwood			Forked at 1' with an 8" co-leader.	UNDESIRABLE
2217	East of homestead	Prunus serotina	Black Cherry	13	6	4			Dead.		UNDESIRABLE
2218	East of homestead	Acer saccharinum	Silver Maple	5	3	4	slight sweep, one-sided, thin crown, erosion				DESIRABLE
2219	East of homestead	Acer saccharinum	Silver Maple	9	4	4	slight sweep, thin crown, heavy deadwood			Forked at 1.5' with 7"(dead), 6"(dead) co-leaders.	DESIRABLE
2220	East of homestead	Juglans nigra	Black Walnut	8	2	4	over-topped, twist in trunk, minor deadwood, one-sided				LANDMARK
2221	East of homestead	Acer saccharinum	Silver Maple	14	6	4			Dead.		DESIRABLE
2222	East of homestead	Acer saccharinum	Silver Maple	6	3	4	slight sweep, one-sided, thin crown, over-topped				DESIRABLE
2223	East of homestead	Malus spp.	Crabapple	5	4	4	over-topped, sweep, minor deadwood, suckering			Forked at 3" with a 4" co-leader.	DESIRABLE
2224	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, weak crotch, slight sweep		In contact with tree #2225.	Forked at 3' with a5" co-leader.	DESIRABLE
2225	East of homestead	Prunus serotina	Black Cherry	8	3	5	over-topped, sweep		In contact with tree #2224.		UNDESIRABLE
2226	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2227	East of homestead	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, multiple leaders, trunk scar			Forked at 2' with an 11" co-leader.	DESIRABLE
2228	East of homestead	Acer saccharinum	Silver Maple	6	3	4	one-sided, trunk scar, thin crown, minor deadwood			Forked at 3.5' with a 6" co-leader.	DESIRABLE
2229	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, double leader				DESIRABLE
2230	East of homestead	Acer saccharinum	Silver Maple	11	4	4	heavy deadwood, thin crown, weak crotch, trunk scar			Forked at 3.5' with a 10" (dead) co-leader.	DESIRABLE
2231	East of homestead	Acer saccharinum	Silver Maple	10	3	3	thin crown, trunk scar, minor deadwood			Forked at 2' with a 7"(dead) co-leader.	DESIRABLE
2232	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight lean, multiple leaders				DESIRABLE
2233	East of homestead	Juglans nigra	Black Walnut	4	2	3	over-topped				LANDMARK
2234	East of homestead	Acer saccharinum	Silver Maple	16	3	4	over-topped, one-sided, multiple leaders, basal decay, trunk scar				DESIRABLE
2235	East of homestead	Acer saccharinum	Silver Maple	13	3	4	trunk scar, over-topped, one-sided, double leader				DESIRABLE
2236	East of homestead	Acer saccharinum	Silver Maple	16	3	4	slight lean, thin crown, minor deadwood				DESIRABLE
2237	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, multiple leaders, suckering, trunk scar				DESIRABLE
2238	East of homestead	Acer saccharinum	Silver Maple	10	3	4	thin crown, twist in trunk				DESIRABLE
2239	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, suckering				DESIRABLE
2240	East of homestead	Acer saccharinum	Silver Maple	11	3	3	thin crown, twist in trunk, basal scar				DESIRABLE
2241	East of homestead	Acer saccharinum	Silver Maple	12	3	3	weak crotch, suckering, metal in trunk			Forked at 2.5' with an 11" co-leader.	DESIRABLE
2242	East of homestead	Acer saccharinum	Silver Maple	19	3	4	one-sided, suckering, metal in trunk, double leader, basal scar				DESIRABLE
2243	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, basal scar, slight sweep				DESIRABLE
2244	East of homestead	Acer saccharinum	Silver Maple	10	3	4	sweep, thin crown, basal scar, suckering				DESIRABLE
2245	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, basal scar, suckering				DESIRABLE
2246	East of homestead	Acer saccharinum	Silver Maple	17	3	3	multiple leaders, suckering				DESIRABLE
2247	East of homestead	Acer saccharinum	Silver Maple	11	4	4	over-topped, slight sweep, trunk scar, basal decay, basal scar		Hollow at base.		DESIRABLE
2248	East of homestead	Acer saccharinum	Silver Maple	10	4	4	trunk scar, over-topped, slight sweep, suckering				DESIRABLE

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2249	East of homestead	Acer saccharinum	Silver Maple	13	3	3	trunk scar, twist in trunk, thin crown, double leader				DESIRABLE
2250	East of homestead	Acer saccharinum	Silver Maple	14	3	4	over-topped, slight sweep, double leader, suckering				DESIRABLE
2251	East of homestead	Acer saccharinum	Silver Maple	13	4	4	trunk scar, over-topped, thin crown, basal scar, suckering, hollow				DESIRABLE
2252	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, basal scar, trunk scar				DESIRABLE
2253	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, thin crown				DESIRABLE
2254	East of homestead	Acer saccharinum	Silver Maple	28	3	4	slight lean, weak crotch, minor deadwood		Forked at 5'.		DESIRABLE
2255	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown, suckering, trunk scar				DESIRABLE
2256	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight sweep, multiple leaders, trunk scar				DESIRABLE
2257	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, one-sided, trunk scar				DESIRABLE
2258	East of homestead	Ulmus americana	American Elm	7	3	4	over-topped, slight sweep, suckering, multiple leaders				N/A
2259	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, slight sweep			Forked at 2.5' with a 6" co-leader.	DESIRABLE
2260	East of homestead	Acer saccharinum	Silver Maple	10	3	4	weak crotch, damaged leader, thin crown, trunk scar			Forked at 3' with a 6" co-leader.	DESIRABLE
2261	East of homestead	Ulmus americana	American Elm	7	3	4	sweep, over-topped, one-sided, suckering				N/A
2262	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2263	East of homestead	Acer saccharinum	Silver Maple	13	4	4	trunk scar, decay, over-topped, one-sided, multiple leaders			Forked at 3.5' with a 7" co-leader.	DESIRABLE
2264	East of homestead	Acer saccharinum	Silver Maple	10	4	4	over-topped, sweep, weak crotch, basal decay, trunk scar		Old co-leader rotted off at 2'.	Forked at 2.5' with a 9" co-leader.	DESIRABLE
2265	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, damaged leader, suckering				DESIRABLE
2266	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, basal scar, double leader, over-topped				DESIRABLE
2267	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, suckering				DESIRABLE
2268	East of homestead	Acer saccharinum	Silver Maple	8	3	3	weak crotch, metal in trunk			Forked at 3' with 7", 3" co-leaders.	DESIRABLE
2269	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown			Forked at 1' with a 4" co-leader.	DESIRABLE
2270	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, thin crown				DESIRABLE
2271	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, one-sided, double leader, basal scar		Old co-leader rotted off at 2'.		DESIRABLE
2272	East of homestead	Prunus serotina	Black Cherry	8	3	4	slight lean, one-sided, thin crown				UNDESIRABLE
2273	East of homestead	Acer negundo	Boxelder Maple	4	4	4	damaged leader, over-topped				UNDESIRABLE
2274	East property line	Acer negundo	Boxelder Maple	8	3	4	over-topped, sweep, minor deadwood, multiple leaders				UNDESIRABLE
2275	East property line	Acer saccharinum	Silver Maple	12	3	4	over-topped, slight sweep, pruned for side wires, suckering		Overhead wires.	Forked at 3' with a 5" co-leader.	DESIRABLE
2276	East property line	Acer saccharinum	Silver Maple	22	3	4	slight sweep, multiple leaders, pruned for side wires, minor deadwood		Overhead wires.		DESIRABLE
2277	East property line	Acer negundo	Boxelder Maple	5	4	4	excessive lean, basal swell, suckering, vine infested		Overhead wires.		UNDESIRABLE
2278	East of homestead	Acer saccharinum	Silver Maple	11	3	4	one-sided, thin crown, over-topped, slight sweep				DESIRABLE
2279	East of homestead	Morus alba	White Mulberry (Common Mulberry)	16	3	4	basal scar, over-topped, slight sweep, minor deadwood, multiple leaders				UNDESIRABLE
2280	East of homestead	Acer saccharinum	Silver Maple	23	3	3	weak crotch, multiple leaders, one-sided				DESIRABLE
2281	East of homestead	Ulmus americana	American Elm	6	3	3	suckering, minor deadwood				N/A
2282	East of homestead	Acer saccharinum	Silver Maple	12	3	3	heavy deadwood, weak crotch, multiple leaders, metal in trunk, basal decay, basal scar			Forked at 3.5' with 10", 6"(dead) co-leaders.	DESIRABLE
2283	East of homestead	Malus spp.	Crabapple	6	3	4	minor deadwood, suckering, over-topped				DESIRABLE
2284	East of homestead	Acer saccharinum	Silver Maple	23	3	3	multiple leaders			Forked at 3.5' with a 12" co-leader.	DESIRABLE
2285	East of homestead	Acer saccharinum	Silver Maple	10	3	3					DESIRABLE
2286	East of homestead	Acer saccharinum	Silver Maple	6	4	4	basal decay, slight sweep, thin crown				DESIRABLE
2287	East of homestead	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, metal in trunk				DESIRABLE
2288	East of homestead	Acer saccharinum	Silver Maple	10	4	4	weak crotch, trunk scar, one-sided, thin crown			Forked at 3' with an 8"(dead) co-leader.	DESIRABLE

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2289	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, double leader, over-topped, minor deadwood				DESIRABLE
2290	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, one-sided, double leader, basal scar				DESIRABLE
2291	East of homestead	Acer saccharinum	Silver Maple	26	4	4	weak crotch, double leader, slight sweep, trunk scar, decay, metal in trunk				DESIRABLE
2292	East of homestead	Acer saccharinum	Silver Maple	8	4	4	over-topped, double leader, trunk scar, basal scar				DESIRABLE
2293	East of homestead	Acer saccharinum	Silver Maple	10	3	3	twist in trunk, thin crown, trunk scar				DESIRABLE
2294	East of homestead	Ulmus americana	American Elm	5	3	4	trunk scar, suckering, over-topped				N/A
2295	East of homestead	Acer negundo	Boxelder Maple	13	4	4	damaged leader, trunk scar, decay, double leader, suckering, minor deadwood		Electric fence attached to trunk.		UNDESIRABLE
2296	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, damaged leader, basal decay, basal scar		Electric fence attached to trunk.		DESIRABLE
2297	East of homestead	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, one-sided, over-topped				DESIRABLE
2298	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, weak crotch, suckering			Forked at 3' with 11" co-leader.	DESIRABLE
2299	East of homestead	Acer saccharinum	Silver Maple	13	3	3	double leader, one-sided, basal scar				DESIRABLE
2300	East of homestead	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, poison ivy				DESIRABLE
2301	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight lean, twist in trunk, suckering				DESIRABLE
2302	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
2303	East of homestead	Acer saccharinum	Silver Maple	8	3	4	heavy deadwood, thin crown, twist in trunk, trunk scar		(1) co-leader is dead at 15'.		DESIRABLE
2304	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, suckering, thin crown, trunk scar				DESIRABLE
2305	East of homestead	Acer saccharinum	Silver Maple	10	3	4	trunk scar, slight sweep, thin crown, over-topped		Old co-leader rotted off at 1.5'.		DESIRABLE
2306	East of homestead	Acer saccharinum	Silver Maple	9	3	4	trunk scar, twist in trunk, thin crown, double leader				DESIRABLE
2307	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, thin crown, suckering				DESIRABLE
2308	East of homestead	Acer saccharinum	Silver Maple	16	3	4	slight sweep, one-sided				DESIRABLE
2309	East of homestead	Acer saccharinum	Silver Maple	14	3	4	one-sided, heavy deadwood, twist in trunk				DESIRABLE
2310	East of homestead	Acer saccharinum	Silver Maple	10	4	4	minor deadwood, one-sided, twist in trunk, thin crown, suckering				DESIRABLE
2311	East of homestead	Acer saccharinum	Silver Maple	18	4	4	slight sweep, one-sided, multiple leaders, minor deadwood, trunk scar		Bark eaten off by horses, electric fence attached to trunk.		DESIRABLE
2312	East of homestead	Acer saccharinum	Silver Maple	14	3	3	multiple leaders, twist in trunk				DESIRABLE
2313	East of homestead	Acer negundo	Boxelder Maple	4	3	4	sweep, over-topped, suckering				UNDESIRABLE
2314	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, one-sided, basal scar				DESIRABLE
2315	East of homestead	Acer saccharinum	Silver Maple	8	4	4	over-topped, slight sweep, trunk scar, suckering				DESIRABLE
2316	East of homestead	Acer negundo	Boxelder Maple	9	4	4	over-topped, slight lean, damaged leader			Forked at 1.5' with a 7" co-leader.	UNDESIRABLE
2317	East of homestead	Acer saccharinum	Silver Maple	10	6	4			Dead. electric fence attached to trunk.		DESIRABLE
2318	East of homestead	Acer negundo	Boxelder Maple	9	4	4	over-topped, slight lean, suckering, broken limbs, minor deadwood				UNDESIRABLE
2319	East of homestead	Acer saccharinum	Silver Maple	17	3	4	double leader, slight sweep, minor deadwood, metal in trunk		Electric fence attached to trunk.		DESIRABLE
2320	East of homestead	Acer saccharinum	Silver Maple	10	4	4	basal decay, slight sweep, thin crown, metal in trunk		Hollow at base. Electric fence attached to trunk.		DESIRABLE
2321	East of homestead	Acer saccharinum	Silver Maple	15	3	4	double leader, slight sweep				DESIRABLE
2322	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, thin crown, one-sided, minor deadwood, sparse foliage				DESIRABLE
2323	East of homestead	Acer saccharinum	Silver Maple	17	3	4	weak crotch, slight sweep, one-sided		Electric fence attached to trunk.	Forked at 1.5' with a 12" co-leader.	DESIRABLE
2324	East of homestead	Acer saccharinum	Silver Maple	10	4	4	trunk scar, over-topped, one-sided, thin crown				DESIRABLE
2325	East of homestead	Acer saccharinum	Silver Maple	12	3	4	over-topped, twist in trunk, thin crown, minor deadwood, suckering			Forked at base with a 7" co-leader.	DESIRABLE
2326	East of homestead	Acer saccharinum	Silver Maple	11	3	4	trunk scar, twist in trunk, thin crown, over-topped				DESIRABLE
2327	East of homestead	Acer saccharinum	Silver Maple	6	4	4	over-topped, basal decay, slight lean, suckering				DESIRABLE
2328	East of homestead	Acer saccharinum	Silver Maple	13	3	4	weak crotch, slight sweep, thin crown, minor deadwood			Forked at 3' with a 10" co-leader.	DESIRABLE

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2329	East of homestead	Acer saccharinum	Silver Maple	15	3	4	damaged leader, slight sweep, basal scar, suckering, trunk scar, surface roots, animal damage			Forked at 1.5' and 3' with 12", 11" co-leaders.	DESIRABLE
2330	East of homestead	Acer saccharinum	Silver Maple	13	3	4	minor deadwood, double leader, twist in trunk, thin crown, trunk scar		Old co-leader rotted off at 1'.		DESIRABLE
2331	North of barn	Acer saccharinum	Silver Maple	17	4	4	trunk scar, animal damage, weak crotch, slight sweep, minor deadwood, metal in trunk		Bark chewed off by horses, electric fence attached to trunk.	Forked at 1' and 1.5' with 15", 14", 11", 5" co-leaders.	DESIRABLE
2332	North of barn	Acer saccharinum	Silver Maple	15	4	4	slight lean, weak crotch, trunk scar, animal damage, minor deadwood		Bark chewed off by horses, electric fence attached to trunk.		DESIRABLE
2333	North of barn	Acer saccharinum	Silver Maple	13	3	4	slight sweep, one-sided, thin crown, basal scar, trunk scar				DESIRABLE
2334	North of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, twist in trunk, basal scar, suckering				DESIRABLE
2335	North of barn	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2336	North of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2337	North of barn	Acer negundo	Boxelder Maple	11	3	5	excessive lean, sweep, over-topped				UNDESIRABLE
2338	North of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, twist in trunk, minor deadwood, basal scar				DESIRABLE
2339	North of barn	Acer saccharinum	Silver Maple	4	4	4	over-topped, one-sided, slight lean, basal scar				DESIRABLE
2340	North of barn	Acer saccharinum	Silver Maple	18	3	4	twist in trunk, one-sided, multiple leaders				DESIRABLE
2341	North of barn	Acer saccharinum	Silver Maple	16	3	4	over-topped, slight sweep, basal scar				DESIRABLE
2342	North of barn	Acer negundo	Boxelder Maple	10	4	4	over-topped, slight sweep, suckering, minor deadwood, damaged leader				UNDESIRABLE
2343	North of barn	Acer negundo	Boxelder Maple	10	3	4	over-topped, excessive lean, multiple leaders, minor deadwood				UNDESIRABLE
2344	North of barn	Acer negundo	Boxelder Maple	14	3	4	slight lean, one-sided, multiple leaders, trunk scar				UNDESIRABLE
2345	North of barn	Acer saccharinum	Silver Maple	13	3	4	excessive lean, sweep, multiple leaders, basal scar				DESIRABLE
2346	North of barn	Acer saccharinum	Silver Maple	9	4	4	slight lean, suckering, minor deadwood, over-topped				DESIRABLE
2347	North of barn	Acer negundo	Boxelder Maple	15	4	4	excessive lean, suckering, minor deadwood, twist in trunk, broken limbs				UNDESIRABLE
2348	North of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, sweep, thin crown		In contact with tree #2349.		DESIRABLE
2349	North of barn	Acer saccharinum	Silver Maple	15	3	4	over-topped, slight sweep, weak crotch		In contact with tree #2348.	Forked at base and 4' with 13", 9" co-leaders.	DESIRABLE
2350	North of barn	Catalpa speciosa	Northern Catalpa	15	4	4	weak crotch, trunk scar, minor deadwood, basal decay, animal damage, suckering				LANDMARK
2351	North of barn	Acer platanoides	Norway Maple	4	2	4	slight lean, twist in trunk, multiple leaders, trunk scar				DESIRABLE
2352	North of barn	Acer saccharinum	Silver Maple	7	4	4	over-topped, sweep, trunk scar, suckering				DESIRABLE
2353	North of barn	Acer saccharinum	Silver Maple	17	3	4	over-topped, one-sided, multiple leaders, minor deadwood, vine infested			Forked at 3.5' with a 4"(dead) co-leader.	DESIRABLE
2354	North of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one-sided, trunk scar				DESIRABLE
2355	Northwest of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one-sided, minor deadwood				DESIRABLE
2356	Northwest of barn	Morus alba	White Mulberry (Common Mulberry)	21	5	3	dieback, decay, heavy deadwood, sparse foliage, metal in trunk, weak crotch				UNDESIRABLE
2357	Northwest of barn	Acer saccharinum	Silver Maple	11	3	3	weak crotch, slight sweep, suckering			Forked at 1' with 10", 10", 3", 3" co-leaders.	DESIRABLE
2358	Northwest of barn	Ulmus americana	American Elm	9	3	4	over-topped, slight sweep, one-sided, suckering				N/A
2359	Northwest of barn	Acer saccharinum	Silver Maple	6	4	4	over-topped, trunk scar, slight sweep, suckering				DESIRABLE
2360	Northwest of barn	Populus tremuloides	Quaking Aspen	10	3	3	slight lean, twist in trunk, thin crown, minor deadwood				DESIRABLE
2361	Northwest of barn	Populus tremuloides	Quaking Aspen	11	4	4	slight lean, twist in trunk, thin crown, heavy deadwood, decay			Forked at base with a 9"(dead) co-leader.	DESIRABLE
2362	North of driveway	Catalpa speciosa	Northern Catalpa	22	4	3	basal swell, dieback, minor deadwood, weak crotch, trunk scar				LANDMARK

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2363	North of driveway	Catalpa speciosa	Northern Catalpa	26	3	4	trunk scar, slight sweep, multiple leaders, minor deadwood				LANDMARK
2364	North of driveway	Morus alba	White Mulberry (Common Mulberry)	12	3	4	slight lean, thin crown, minor deadwood				UNDESIRABLE
2365	North of driveway	Acer saccharinum	Silver Maple	14	3	4	slight sweep, multiple leaders, heavy deadwood, one-sided				DESIRABLE
2366	North of driveway	Acer saccharinum	Silver Maple	29	3	3	minor deadwood			Forked at 4' with a 6" co-leader.	DESIRABLE
2367	North of driveway	Acer negundo	Boxelder Maple	7	3	4	slight lean, over-topped, crossing branches, suckering		In contact with tree #2368.		UNDESIRABLE
2368	North of driveway	Morus alba	White Mulberry (Common Mulberry)	9	3	4	trunk scar, crossing branches, one-sided		In contact with tree #2367.		UNDESIRABLE
2369	North of driveway	Acer negundo	Boxelder Maple	9	4	4	dead tree caught in crown, vine infested, minor deadwood, suckering				UNDESIRABLE
2370	North of driveway	Acer negundo	Boxelder Maple	10	4	4	trunk scar, suckering, over-topped, vine infested				UNDESIRABLE
2371	North of driveway	Acer negundo	Boxelder Maple	6	4	4	slight lean, damaged leader, suckering, vine infested		Overhead wires.	Forked at. 5' with a 6" co-leader.	UNDESIRABLE
2372	North of driveway	Acer negundo	Boxelder Maple	7	4	5	damaged leader, suckering, excessive lean, vine infested		Overhead wires.		UNDESIRABLE
2373	North of driveway	Rhus glabra	Smooth Sumac	7	4	4	damaged leader, decay, multiple leaders, pruned for overhead wires		Overhead wires.		N/A
2374	North of driveway	Ulmus americana	American Elm	4	3	4	damaged leader, pruned for overhead wires, suckering		Overhead wires.		N/A
2375	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		LANDMARK
2376	North of driveway	Acer negundo	Boxelder Maple	15	5	4	excessive lean, suckering, decay, damaged leader, basal decay		Overhead wires.	Forked at base with a 7" co-leader.	UNDESIRABLE
2377	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering, weak crotch		Overhead wires.	Forked at 2.5' with an 8" co-leader.	LANDMARK
2378	North of driveway	Juglans nigra	Black Walnut	5	3	4	over-topped, slight lean, twist in trunk, double leader, vine infested, weak crotch				LANDMARK
2379	North of driveway	Ulmus americana	American Elm	10	4	3	multiple leaders, suckering, minor deadwood				N/A
2380	North of driveway	Ulmus americana	American Elm	5	3	3	thin crown, suckering				N/A
2381	North of driveway	Acer negundo	Boxelder Maple	4	4	5	excessive lean, over-topped, growing horizontally				UNDESIRABLE
2382	North of driveway	Acer negundo	Boxelder Maple	6	4	4	over-topped, slight lean, suckering, broken limbs				UNDESIRABLE
2383	North of driveway	Ulmus americana	American Elm	12	3	4	one-sided, multiple leaders, suckering, trunk scar				N/A
2384	North of driveway	Ulmus americana	American Elm	4	4	4	over-topped, slight sweep				N/A
2385	North of driveway	Ulmus americana	American Elm	6	3	4	over-topped, slight sweep, multiple leaders				N/A
2386	North of driveway	Acer negundo	Boxelder Maple	5	3	4	over-topped, minor deadwood, twist in trunk, trunk scar				UNDESIRABLE
2387	North of driveway	Acer negundo	Boxelder Maple	7	4	4	over-topped, trunk scar, twist in trunk, suckering				UNDESIRABLE
2388	North of driveway	Acer negundo	Boxelder Maple	4	3	4	over-topped, twist in trunk				UNDESIRABLE
2389	North of driveway	Acer platanoides	Norway Maple	11	3	4	over-topped, twist in trunk, vine infested				DESIRABLE
2390	North of driveway	Populus tremuloides	Quaking Aspen	10	4	3	minor deadwood, trunk scar, thin crown				DESIRABLE
2391	North of driveway	Populus tremuloides	Quaking Aspen	10	6	4			Dead.		DESIRABLE
2392	North of driveway	Populus tremuloides	Quaking Aspen	11	3	3	thin crown, minor deadwood				DESIRABLE
2393	North of driveway	Acer negundo	Boxelder Maple	6	3	4	over-topped, twist in trunk, thin crown, suckering, minor deadwood				UNDESIRABLE
2394	North of driveway	Acer saccharinum	Silver Maple	4	4	4	trunk scar, over-topped, slight sweep, thin crown				DESIRABLE
2395	North of driveway	Acer saccharinum	Silver Maple	5	3	4	over-topped, sweep, basal scar, suckering				DESIRABLE
2396	North of driveway	Acer saccharinum	Silver Maple	11	4	4	damaged leader, double leader, suckering, dieback				DESIRABLE
2397	North of driveway	Acer platanoides	Norway Maple	10	4	4	over-topped, weak crotch, double leader, slight sweep, trunk scar, decay, hollow		Hollow at 4'.		DESIRABLE
2398	North of driveway	Juglans nigra	Black Walnut	8	3	3	trunk scar, twist in trunk, multiple leaders, minor deadwood				LANDMARK
2399	North of driveway	Malus spp.	Crabapple	6	5	3	sparse foliage, decay, vine infested	scab			DESIRABLE
2400	North of driveway	Ulmus americana	American Elm	7	3	4	over-topped, sweep, dead tree caught in crown, trunk scar				N/A
2401	North of driveway	Juglans nigra	Black Walnut	10	3	4	over-topped, slight sweep, trunk scar				LANDMARK
2402	North of driveway	Salix nigra	Black Willow	15	5	5	top broken off, heavy deadwood, decay, metal in trunk, trunk scar				DESIRABLE

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2403	North of driveway	Juglans nigra	Black Walnut	20	3	3	weak crotch, multiple leaders, minor deadwood, suckering				LANDMARK
2404	North of driveway	Acer negundo	Boxelder Maple	4	4	5	damaged leader, slight lean, minor deadwood, vine infested				UNDESIRABLE
2405	North of driveway	Ulmus americana	American Elm	6	3	4	over-topped, slight sweep, suckering, minor deadwood				N/A
2406	North of driveway	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight lean, multiple leaders, vine infested				DESIRABLE
2407	North of driveway	Quercus ellipsoidalis	Hill's Oak	8	3	4	over-topped, one-sided, vine infested, minor deadwood				HERITAGE
2408	North of driveway	Juglans nigra	Black Walnut	13	3	5	damaged leader, pruned for overhead wires, suckering, vine infested		Overhead wires.		LANDMARK
2409	North of driveway	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, multiple leaders, minor deadwood, vine infested		Overhead wires.		UNDESIRABLE
2410	North of driveway	Ulmus americana	American Elm	4	3	4	damaged leader, slight sweep, double leader, vine infested		Overhead wires.		N/A
2411	North of driveway	Acer negundo	Boxelder Maple	10	6	4			Dead.		UNDESIRABLE
2412	North of driveway	Catalpa speciosa	Northern Catalpa	7	3	4	over-topped, slight sweep, multiple leaders, pruned for overhead wires		Overhead wires.		LANDMARK
2413	North of driveway	Malus spp.	Crabapple	5	4	4	suckering, minor deadwood, over-topped, basal scar				DESIRABLE
2414	North of driveway	Ulmus americana	American Elm	5	3	4	over-topped, one-sided				N/A
2415	North of driveway	Ulmus americana	American Elm	11	4	3	over-topped, multiple leaders, suckering, minor deadwood				N/A
2416	North of driveway	Tilia americana	Basswood (American Linden)	11	3	3	over-topped, trunk scar				LANDMARK
2417	North of driveway	Quercus ellipsoidalis	Hill's Oak	23	3	4	slight lean, multiple leaders, minor deadwood, vine infested				HERITAGE
2418	North of driveway	Prunus serotina	Black Cherry	22	5	4	dieback, heavy deadwood, decay, sparse foliage			Forked at base with an 8" co-leader.	UNDESIRABLE
2419	North of driveway	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight sweep, twist in trunk, one-sided				UNDESIRABLE
2420	North of driveway	Ulmus americana	American Elm	5	3	4	over-topped, slight sweep, one-sided			Forked at base with a 5" co-leader.	N/A
2421	North of driveway	Acer saccharinum	Silver Maple	4	3	5	damaged leader, pruned for overhead wires		Overhead wires.	Forked at base with 2", 1" co-leaders.	DESIRABLE
2422	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		LANDMARK
2423	North of driveway	Acer negundo	Boxelder Maple	6	4	4	damaged leader, decay, vine infested, minor deadwood				UNDESIRABLE
2424	North of driveway	Ulmus americana	American Elm	10	3	3	multiple leaders, vine infested, minor deadwood				N/A
2425	North of driveway	Prunus serotina	Black Cherry	12	6	4			Dead.	Forked at base with a 9" co-leader.	UNDESIRABLE
2426	North of driveway	Ulmus americana	American Elm	7	3	4	weak crotch, double leader, dead tree caught in crown				N/A
2427	North of driveway	Ulmus americana	American Elm	7	3	4	one-sided, thin crown, minor deadwood				N/A
2428	North of driveway	Acer saccharinum	Silver Maple	8	4	4	trunk scar, dieback, minor deadwood				DESIRABLE
2429	North of driveway	Fraxinus pennsylvanica	Green Ash	12	6	4			Dead	Forked at 2' with 8", 5" co-leaders.	N/A
2430	North of driveway	Acer negundo	Boxelder Maple	7	4	4	over-topped, slight sweep, damaged leader				UNDESIRABLE
2431	North of driveway	Acer negundo	Boxelder Maple	7	4	4	damaged leader, suckering, decay				UNDESIRABLE
2432	North of house	Acer negundo	Boxelder Maple	5	4	4	over-topped, slight sweep, suckering, trunk scar			Forked at 1' with a 5" co-leader.	UNDESIRABLE
2433	North of house	Prunus serotina	Black Cherry	8	4	4	sweep, minor deadwood, thin crown, sparse foliage, trunk scar				UNDESIRABLE
2434	North of house	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, suckering			Forked at. 5' with an 8" co-leader.	DESIRABLE
2435	North of house	Fraxinus pennsylvanica	Green Ash	17	6	4			Dead.		N/A
2436	North of house	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, double leader, trunk scar				DESIRABLE
2437	North of house	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, minor deadwood				DESIRABLE
2438	North of house	Acer saccharinum	Silver Maple	15	3	3	over-topped, multiple leaders, basal scar				DESIRABLE
2439	North of house	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, heavy deadwood			Forked at 2' with a 6" (dead) co-leader.	DESIRABLE
2440	North of barn	Acer saccharinum	Silver Maple	19	3	3	multiple leaders, one-sided, weak crotch				DESIRABLE

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2441	North of barn	Acer saccharinum	Silver Maple	29	4	4	slight sweep, multiple leaders, minor deadwood, trunk scar, broken limbs, upper cavity				DESIRABLE
2442	North of barn	Ulmus americana	American Elm	7	3	4	suckering, double leader, trunk scar				N/A
2443	North of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, one-sided, thin crown, twist in trunk, trunk scar, suckering				DESIRABLE
2444	North of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2445	North of barn	Acer saccharinum	Silver Maple	14	3	4	one-sided, multiple leaders				DESIRABLE
2446	North of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, suckering, trunk scar, basal scar				DESIRABLE
2447	North of barn	Acer saccharinum	Silver Maple	11	4	3	trunk scar, minor deadwood, thin crown, suckering		Old co-leader rotted off at 14'.		DESIRABLE
2448	North of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, suckering, trunk scar				DESIRABLE
2449	Northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight lean, thin crown, suckering, heavy deadwood			Forked at 2' with a 9" (dead) co-leader.	DESIRABLE
2450	Northeast of barn	Acer saccharinum	Silver Maple	13	3	3	one-sided, thin crown				DESIRABLE
2451	Northeast of barn	Acer saccharinum	Silver Maple	27	3	4	slight lean, multiple leaders, minor deadwood, trunk scar				DESIRABLE
2452	Northeast of barn	Acer saccharinum	Silver Maple	6	3	4	twist in trunk, over-topped, suckering, basal scar				DESIRABLE
2453	Northeast of barn	Acer saccharinum	Silver Maple	14	3	4	slight sweep, one-sided, minor deadwood			Forked at 2.5' with a 12" (snapped off at 12').	DESIRABLE
2454	Northeast of barn	Acer saccharinum	Silver Maple	12	3	4	one-sided, heavy deadwood, trunk scar				DESIRABLE
2455	Northeast of barn	Acer saccharinum	Silver Maple	11	4	4	over-topped, slight sweep, trunk scar, suckering, animal damage		Bark chewed off by horse.	Forked at 1.5' with an 11" co-leader.	DESIRABLE
2456	Northeast of barn	Acer saccharinum	Silver Maple	17	3	4	over-topped, slight sweep, trunk scar				DESIRABLE
2457	Northeast of barn	Acer saccharinum	Silver Maple	15	3	4	over-topped, slight sweep, thin crown, basal scar				DESIRABLE
2458	Northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight sweep, thin crown, slight lean			Forked at 1' with 11", 8" co-leaders.	DESIRABLE
2459	Northeast of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, minor deadwood, multiple leaders, slight sweep, trunk scar				DESIRABLE
2460	Northeast of barn	Acer saccharinum	Silver Maple	22	3	4	one-sided, minor deadwood, slight lean, basal scar		Tree stand at 10'.	Forked at 2.5' with a 13" co-leader.	DESIRABLE
2461	Northeast of barn	Ulmus americana	American Elm	7	3	4	over-topped, suckering, basal scar				N/A
2462	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	10	3	3	weak crotch, thin crown, minor deadwood, metal in trunk			Forked at 3' with 9", 9" co-leaders.	DESIRABLE
2463	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	15	3	4	slight sweep, minor deadwood, one-sided				UNDESIRABLE
2464	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	over-topped, slight sweep, minor deadwood, suckering				UNDESIRABLE
2465	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	8	4	4	trunk scar, hollow, multiple leaders, slight lean				UNDESIRABLE
2466	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	5	5	5	basal decay, split trunk, excessive lean				UNDESIRABLE
2467	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	6	5	5	damaged leader, slight lean, sparse foliage, trunk scar, decay				UNDESIRABLE
2468	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	10	6	4			Dead.		UNDESIRABLE
2469	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	5	3	4	damaged leader, pruned for overhead wires, thin crown, one-sided		Overhead wires.		UNDESIRABLE
2470	Between horse corral and Buesching Road	Ulmus americana	American Elm	9	3	4	damaged leader, pruned for overhead wires, multiple leaders, suckering, vine infested		Overhead wires.		N/A
2471	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	17	4	3	heavy deadwood, vine infested, weak crotch, dieback, slight sweep			Forked at 1' and 2' with 12", 10" (dead), 7" co-leaders.	DESIRABLE
2472	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	4	one-sided, pruned for side wires, vine infested, twist in trunk		Overhead wires. Old co-leaders rotted off at 2.5'.		DESIRABLE

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2473	Between horse corral and Buesching Road	Juglans nigra	Black Walnut	5	2	4	over-topped, twist in trunk				LANDMARK
2474	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	9	4	4	thin crown, minor deadwood, weak crotch, twist in trunk			Forked at 2' with a 9" co-leader.	DESIRABLE
2475	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	10	4	4	slight sweep, dieback, one-sided, multiple leaders, minor deadwood				UNDESIRABLE
2476	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	15	3	3	double leader, minor deadwood				DESIRABLE
2477	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	15	4	4	excessive lean, suckering, multiple leaders, minor deadwood				UNDESIRABLE
2478	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	16	3	4	multiple leaders, minor deadwood, slight lean				UNDESIRABLE
2479	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	14	4	4	slight sweep, suckering, minor deadwood, one-sided				UNDESIRABLE
2480	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	19	3	3	twist in trunk, thin crown, minor deadwood				DESIRABLE
2481	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	14	4	4	trunk scar, decay, one-sided, thin crown, double leader, minor deadwood, basal decay, basal scar				UNDESIRABLE
2482	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, metal in trunk		Electric fence attached to trunk.		DESIRABLE
2483	Horse corral northeast of barn	Acer saccharinum	Silver Maple	22	3	4	slight lean, twist in trunk, double leader, trunk scar			Forked at. 5' and 5' with a 14" co-leader.	DESIRABLE
2484	Horse corral northeast of barn	Acer negundo	Boxelder Maple	10	5	5	top broken off, decay, trunk scar, sparse foliage				UNDESIRABLE
2485	Horse corral northeast of barn	Ulmus americana	American Elm	10	3	4	over-topped, twist in trunk, one-sided				N/A
2486	Horse corral northeast of barn	Acer saccharinum	Silver Maple	12	4	4	one-sided, basal scar, slight sweep, thin crown				DESIRABLE
2487	Horse corral northeast of barn	Acer saccharinum	Silver Maple	20	3	4	slight lean, one-sided, multiple leaders, minor deadwood				DESIRABLE
2488	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	4	one-sided, weak crotch, multiple leaders, minor deadwood, trunk scar			Forked at 4' with a 12" co-leader.	DESIRABLE
2489	Horse corral northeast of barn	Prunus serotina	Black Cherry	4	4	4	over-topped, slight sweep, trunk scar, suckering, thin crown				UNDESIRABLE
2490	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	3	4	slight lean, slight sweep, thin crown, trunk scar				DESIRABLE
2491	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	4	4	over-topped, twist in trunk, thin crown, suckering, trunk scar				DESIRABLE
2492	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight lean, weak crotch, double leader, damaged leader, minor deadwood				DESIRABLE
2493	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, trunk swell				DESIRABLE
2494	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	5	sweep, one-sided, suckering				DESIRABLE
2495	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	4	4	over-topped, trunk swell, thin crown, suckering				DESIRABLE
2496	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight lean, thin crown, twist in trunk, weak crotch, basal scar			Forked at 2' with a 12" co-leader.	DESIRABLE
2497	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2498	Horse corral northeast of barn	Acer saccharinum	Silver Maple	6	3	4	twist in trunk, thin crown, suckering				DESIRABLE
2499	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	thin crown, slight sweep, weak crotch, minor deadwood			Forked at 2.5' with an 8", 6" (snapped off) co-leader.	DESIRABLE
2500	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	slight lean, thin crown, sparse foliage, trunk scar			Forked at base with a 7" co-leader.	DESIRABLE
4001	Horse corral northeast of barn	Acer saccharinum	Silver Maple	16	3	4	twist in trunk, one-sided, multiple leaders				DESIRABLE
4002	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, over-topped				DESIRABLE
4003	Horse corral northeast of barn	Acer saccharinum	Silver Maple	5	3	3	over-topped, trunk scar, thin crown				DESIRABLE
4004	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, minor deadwood, trunk scar			Forked at base and 3.5' with 9", 7", 4"(snapped off) co-leaders.	DESIRABLE
4005	Horse corral northeast of barn	Acer saccharinum	Silver Maple	17	3	4	one-sided, broken limbs, heavy deadwood, thin crown				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4006	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, twist in trunk			Forked at 2' with a 10" co-leader.	DESIRABLE
4007	Horse corral north of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, trunk scar, thin crown			Forked at 3' with an 11" co-leader.	DESIRABLE
4008	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, minor deadwood, trunk scar				DESIRABLE
4009	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown				DESIRABLE
4010	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	one-sided, thin crown, basal scar				DESIRABLE
4011	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
4012	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, trunk scar				DESIRABLE
4013	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	slight lean, twist in trunk, thin crown				DESIRABLE
4014	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight lean, twist in trunk, one-sided				DESIRABLE
4015	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, double leader				DESIRABLE
4016	Horse corral north of barn	Acer saccharinum	Silver Maple	26	3	3	multiple leaders, minor deadwood				DESIRABLE
4017	Horse corral north of barn	Acer saccharinum	Silver Maple	21	3	4	one-sided, broken limbs, slight sweep, heavy deadwood			Forked at 2.5' with 15", 12" co-leaders.	DESIRABLE
4018	Horse corral north of barn	Ulmus americana	American Elm	7	3	4	slight sweep, suckering, multiple leaders				N/A
4019	Horse corral north of barn	Acer negundo	Boxelder Maple	11	4	4	excessive lean, damaged leader, trunk scar, suckering				UNDESIRABLE
4020	Horse corral north of barn	Acer saccharinum	Silver Maple	20	3	3	multiple leaders, one-sided, trunk scar				DESIRABLE
4021	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	basal scar, animal damage, minor deadwood, slight lean, suckering				UNDESIRABLE
4022	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	over-topped, one-sided				DESIRABLE
4023	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	suckering, damaged leader, metal in trunk				UNDESIRABLE
4024	North of driveway, West of house	Acer platanoides	Norway Maple	16	3	4	over-topped, slight sweep, one-sided, trunk scar				DESIRABLE
4025	North of driveway, West of house	Acer negundo	Boxelder Maple	7	5	5	excessive lean, split trunk, damaged leader, sparse foliage, suckering				UNDESIRABLE
4026	North of driveway, West of house	Morus alba	White Mulberry (Common Mulberry)	20	5	4	one-sided, sparse foliage, multiple leaders, dieback, girdling root		Girdled by buckthorn root.		UNDESIRABLE
4027	North of driveway, West of house	Prunus serotina	Black Cherry	18	4	4	basal decay, slight lean, multiple leaders, decay, minor deadwood			Forked at 2' with a 16" co-leader.	UNDESIRABLE
4028	North of driveway, West of house	Acer negundo	Boxelder Maple	14	5	5	top broken off, decay, suckering, sparse foliage				UNDESIRABLE
4029	North of driveway, West of house	Acer negundo	Boxelder Maple	20	4	4	damaged leader, decay, trunk scar, suckering			Forked at 3' with an 18" (top broken off) co-leader.	UNDESIRABLE
4030	North of driveway, West of house	Fraxinus pennsylvanica	Green Ash	11	6	4			Dead.		N/A
4031	North of driveway, West of house	Acer negundo	Boxelder Maple	7	4	4	damaged leader, twist in trunk, thin crown, minor deadwood				UNDESIRABLE
4032	North of driveway, West of house	Acer negundo	Boxelder Maple	7	4	5	split trunk, sweep, growing horizontally				UNDESIRABLE
4033	North of driveway, West of house	Acer saccharinum	Silver Maple	5	3	5	damaged leader, slight sweep, pruned for overhead wires		Overhead wires.		DESIRABLE
4034	North of driveway, West of house	Acer negundo	Boxelder Maple	5	4	5	slight sweep, over-topped, suckering, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4035	North of driveway, West of house	Celtis occidentalis	Common Hackberry	4	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		HERITAGE
4036	North of driveway, West of house	Celtis occidentalis	Common Hackberry	7	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		HERITAGE
4037	North of driveway, West of house	Acer negundo	Boxelder Maple	19	5	5	top broken off, sparse foliage, trunk scar, decay				UNDESIRABLE
4038	B/W pond and Old Rand Rd.	Prunus serotina	Black Cherry	10	3	3	minor deadwood, twist in trunk				UNDESIRABLE
4039	B/W pond and Old Rand Rd.	Prunus serotina	Black Cherry	10	4	3	damaged leader, minor deadwood				UNDESIRABLE
4040	South of pond	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4041	South of pond	Prunus serotina	Black Cherry	16	4	4	over-topped, sweep, weak crotch, multiple leaders, minor deadwood, trunk scar				UNDESIRABLE
4042	South of pond	Populus deltoides	Eastern Cottonwood	28	3	3	multiple leaders, minor deadwood				DESIRABLE
4043	South of pond	Quercus ellipsoidalis	Hill's Oak	6	3	4	over-topped, slight lean, vine infested, epicormics, minor deadwood				HERITAGE
4044	South of pond	Populus deltoides	Eastern Cottonwood	21	3	4	one-sided, minor deadwood				DESIRABLE
4045	South of pond	Acer saccharinum	Silver Maple	12	2	4	over-topped, slight sweep, one-sided, vine infested				DESIRABLE
4046	Horse corral north of barn	Acer saccharinum	Silver Maple	19	2	4	slight lean, weak crotch, twist in trunk, double leader		Forked at 5'.		DESIRABLE
4047	Horse corral north of barn	Acer saccharinum	Silver Maple	14	3	4	slight sweep, multiple leaders		Old co-leader rotted off at 1'.		DESIRABLE

Tree Inventory Listing
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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4048	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	slight lean, one-sided, damaged leader, minor deadwood				UNDESIRABLE
4049	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	over-topped, one-sided, double leader				UNDESIRABLE
4050	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	twist in trunk, suckering, minor deadwood, trunk scar			Forked at 2' with a 5" co-leader.	UNDESIRABLE
4051	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	slight sweep, over-topped, suckering			Forked at 1.5' with 3", 3" co-leaders.	UNDESIRABLE
4052	Horse corral north of barn	Prunus serotina	Black Cherry	9	3	4	slight lean, double leader, minor deadwood				UNDESIRABLE
4053	Horse corral north of barn	Acer saccharinum	Silver Maple	6	4	4	basal decay, over-topped, twist in trunk			Forked at 2' with a 3" co-leader.	DESIRABLE
4054	Horse corral north of barn	Acer negundo	Boxelder Maple	7	5	4	damaged leader, minor deadwood, sparse foliage, suckering, trunk scar				UNDESIRABLE
4055	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	3	thin crown, minor deadwood, suckering, trunk scar				UNDESIRABLE
4056	Horse corral north of barn	Acer negundo	Boxelder Maple	11	3	4	excessive lean, multiple leaders, minor deadwood, suckering				UNDESIRABLE
4057	Horse corral north of barn	Acer negundo	Boxelder Maple	8	4	4	twist in trunk, suckering, broken limbs				UNDESIRABLE
4058	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	twist in trunk, double leader, trunk scar				UNDESIRABLE
4059	Horse corral north of barn	Juglans nigra	Black Walnut	7	4	4	over-topped, basal scar, one-sided				LANDMARK
4060	Horse corral north of barn	Juglans nigra	Black Walnut	12	3	3	687, exposed roots, root damage				LANDMARK
4061	Horse corral north of barn	Juglans nigra	Black Walnut	12	4	4	one-sided, split trunk, multiple leaders				LANDMARK
4062	Horse corral north of barn	Acer saccharinum	Silver Maple	18	3	4	slight lean, multiple leaders, one-sided			Forked at. 5' with a 7" co-leader.	DESIRABLE
4063	Horse corral north of barn	Acer negundo	Boxelder Maple	16	5	5	sparse foliage, decay, suckering, trunk scar		Dead co-leader, bark separating from trunk.		UNDESIRABLE
4064	Horse corral north of barn	Acer negundo	Boxelder Maple	11	3	4	over-topped, slight sweep, multiple leaders				UNDESIRABLE
4065	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, weak crotch			Forked at 2' with a 6" co-leader.	DESIRABLE
4066	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown				DESIRABLE
4067	Horse corral north of barn	Acer saccharinum	Silver Maple	5	3	4	slight sweep, one-sided, trunk scar				DESIRABLE
4068	Horse corral north of barn	Acer saccharinum	Silver Maple	8	3	4	one-sided, minor deadwood, trunk scar				DESIRABLE
4069	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	one-sided, thin crown, suckering				DESIRABLE
4070	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep		Forked at 2' with an 8"(dead) co-leader.		DESIRABLE
4071	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, minor deadwood				DESIRABLE
4072	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, slight sweep, double leader, trunk scar				DESIRABLE
4073	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown, suckering, trunk scar				DESIRABLE
4074	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	sweep, one-sided, thin crown, trunk scar				DESIRABLE
4075	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	slight lean, twist in trunk, thin crown, trunk scar				DESIRABLE
4076	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, thin crown, suckering, trunk scar				DESIRABLE
4077	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	4	4	basal decay, thin crown, slight sweep, suckering			Forked at 3' with an 8" co-leader.	DESIRABLE
4078	Horse corral northeast of barn	Acer saccharinum	Silver Maple	17	3	4	double leader, slight sweep, thin crown		Forked at 5'.		DESIRABLE
4079	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight sweep, heavy deadwood, thin crown		Dead co-leader.		DESIRABLE
4080	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, double leader, thin crown				DESIRABLE
4081	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, one-sided, minor deadwood				DESIRABLE
4082	Horse corral northeast of barn	Acer negundo	Boxelder Maple	9	3	4	slight sweep, twist in trunk, over-topped, minor deadwood				UNDESIRABLE
4083	Horse corral northeast of barn	Acer negundo	Boxelder Maple	6	4	5	damaged leader, suckering				UNDESIRABLE
4084	Horse corral northeast of barn	Acer saccharinum	Silver Maple	21	3	3	slight lean, multiple leaders, heavy deadwood				DESIRABLE
4085	B/W corral and Buesching Road	Prunus serotina	Black Cherry	12	5	4	dieback, heavy deadwood, vine infested			Forked at 1.5' with an 8" co-leader.	UNDESIRABLE
4086	B/W corral and Buesching Road	Prunus serotina	Black Cherry	14	3	4	629, twist in trunk, minor deadwood, multiple leaders				UNDESIRABLE
4087	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	17	4	4	one-sided, dieback, multiple leaders				UNDESIRABLE
4088	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	4	over-topped, one-sided, suckering, minor deadwood				UNDESIRABLE
4089	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	twist in trunk, thin crown, minor deadwood, basal decay				UNDESIRABLE

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4090	B/W corral and Buesching Road	Prunus serotina	Black Cherry	8	3	4	one-sided, double leader				UNDESIRABLE
4091	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	5	excessive lean, damaged leader, heavy deadwood, sparse foliage				UNDESIRABLE
4092	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, thin crown				DESIRABLE
4093	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	10	3	3	thin crown, double leader				DESIRABLE
4094	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	11	3	4	excessive lean, sweep, double leader. exposed roots		Along creek.		DESIRABLE
4095	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	12	3	4	minor deadwood, slight sweep, one-sided			Forked at 2' with a 7" co-leader.	DESIRABLE
4096	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	9	3	4	over-topped, one-sided			Forked at 1' with a 6" co-leader.	DESIRABLE
4097	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	6	4	4	slight lean, twist in trunk, vine infested				UNDESIRABLE
4098	B/W corral and Buesching Road	Ulmus americana	American Elm	6	3	4	slight lean, vine infested, over-topped				N/A
4099	B/W corral and Buesching Road	Salix nigra	Black Willow	5	4	4	damaged leader, pruned for overhead wires, trunk scar, suckering		Overhead wires, next to sewer inlet.		DESIRABLE
4100	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	6	3	4	over-topped, twist in trunk, double leader				UNDESIRABLE
4101	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	20	3	3	weak crotch, slight sweep, surface roots, erosion		Along creek.	Forked at 1' with a 16" co-leader.	DESIRABLE
4102	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	13	3	4	slight sweep, suckering				UNDESIRABLE
4103	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	15	4	4	basal decay, trunk scar, slight lean, multiple leaders, minor deadwood, suckering				UNDESIRABLE
4104	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	12	4	4	heavy deadwood, excessive lean, suckering, trunk scar				UNDESIRABLE
4105	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	4	4	slight lean, multiple leaders, one-sided, trunk scar, decay				UNDESIRABLE
4106	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	slight lean, suckering, damaged leader, broken limbs				UNDESIRABLE
4107	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	3	4	over-topped, slight sweep				UNDESIRABLE
4108	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	3	weak crotch, multiple leaders			Forked at 3' with 13", 10" co-leaders.	DESIRABLE
4109	B/W corral and Buesching Road	Ulmus americana	American Elm	21	3	3	weak crotch, multiple leaders, suckering				N/A
4110	Horse corral northeast of homestead	Ulmus americana	American Elm	8	4	3	trunk scar, minor deadwood, suckering				N/A
4111	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	18	3	4	slight sweep, weak crotch, double leader, minor deadwood				DESIRABLE
4112	Horse corral northeast of homestead	Acer negundo	Boxelder Maple	6	3	4	over-topped, slight sweep, suckering				UNDESIRABLE
4113	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, double leader				DESIRABLE
4114	Horse corral northeast of homestead	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk, dead tree caught in crown				UNDESIRABLE
4115	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	21	3	3	multiple leaders, minor deadwood				DESIRABLE
4116	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	4	3	4	over-topped, one-sided, twist in trunk, trunk scar				DESIRABLE
4117	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	13	3	3	thin crown, double leader				DESIRABLE
4118	Horse corral northeast of homestead	Prunus serotina	Black Cherry	4	3	4	over-topped, one-sided. trunk scar				UNDESIRABLE
4119	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	17	3	3	weak crotch, multiple leaders				DESIRABLE
4120	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	13	3	4	slight lean, one-sided, trunk scar				DESIRABLE
4121	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	12	3	4	twist in trunk, one-sided, double leader, thin crown				DESIRABLE
4122	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	3	over-topped, thin crown, minor deadwood				DESIRABLE
4123	Horse corral north of barn	Acer saccharinum	Silver Maple	8	3	4	one-sided, double leader, trunk scar, suckering				DESIRABLE
4124	Horse corral north of barn	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, thin crown, minor deadwood				DESIRABLE
4125	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, multiple leaders, weak crotch			Forked at 3' with a 9" co-leader.	DESIRABLE

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4126	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown, trunk scar, basal scar				DESIRABLE
4127	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, over-topped, trunk scar				DESIRABLE
4128	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	3	weak crotch, thin crown			Forked at 3.5' with an 11" co-leader.	DESIRABLE
4129	Horse corral north of barn	Acer saccharinum	Silver Maple	6	4	4	over-topped, crossing branches		In contact with tree #4130.		DESIRABLE
4130	Horse corral north of barn	Acer saccharinum	Silver Maple	21	4	3	dieback, heavy deadwood, multiple leaders, weak crotch, crossing branches		In contact with tree #4129. Half of 21" leader is crown dead.	forked at base and 2.5' with 9", 7" co-leaders.	DESIRABLE
4131	Horse corral north of barn	Juglans nigra	Black Walnut	14	3	4	twist in trunk, one-sided, minor deadwood				LANDMARK
4132	Horse corral north of barn	Acer negundo	Boxelder Maple	12	4	4	slight lean, dieback, heavy deadwood, multiple leaders				UNDESIRABLE
4133	Horse corral north of barn	Fraxinus pennsylvanica	Green Ash	15	6	3			Dead.		N/A
4134	Horse corral north of barn	Acer negundo	Boxelder Maple	11	4	4	dieback, minor deadwood, over-topped, trunk scar				UNDESIRABLE
4135	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	slight lean, one-sided, dieback, minor deadwood, suckering				UNDESIRABLE
4136	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	slight lean, twist in trunk, suckering, minor deadwood			Forked at 2.5' with a 6" co-leader.	UNDESIRABLE
4137	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	over-topped, twist in trunk, one-sided				UNDESIRABLE
4138	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	thin crown, minor deadwood				UNDESIRABLE
4139	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	damaged leader, double leader				UNDESIRABLE
4140	Horse corral north of barn	Acer negundo	Boxelder Maple	9	3	4	slight lean, trunk scar, multiple leaders, suckering				UNDESIRABLE
4141	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, multiple leaders, basal scar				DESIRABLE
4142	Horse corral north of barn	Acer negundo	Boxelder Maple	6	3	4	twist in trunk, slight lean, thin crown, minor deadwood				UNDESIRABLE
4143	Horse corral north of barn	Salix nigra	Black Willow	50	6	5	sparse foliage, dieback, heavy deadwood, multiple leaders, decay		(1) collapsed 9" co-leader is alive.		DESIRABLE
4144	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4145	Horse corral north of barn - along pond	Populus deltoides	Eastern Cottonwood	19	2	3	one-sided				DESIRABLE
4146	Horse corral north of barn - along pond	Acer saccharinum	Silver Maple	15	3	4	slight lean, multiple leaders, minor deadwood				DESIRABLE
4147	Horse corral north of barn - along pond	Ulmus americana	American Elm	9	3	4	slight lean, over-topped, one-sided				N/A
4148	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	one-sided, damaged leader, over-topped, suckering				UNDESIRABLE
4149	Horse corral north of barn	Acer negundo	Boxelder Maple	6	5	4	damaged leader, minor deadwood				UNDESIRABLE
4150	Horse corral north of barn	Juglans nigra	Black Walnut	11	3	4	one-sided, multiple leaders, minor deadwood				LANDMARK
4151	Horse corral north of barn - along pond	Populus deltoides	Eastern Cottonwood	26	3	3	multiple leaders, metal in trunk		Electric fence attached to trunk.		DESIRABLE
4152	Horse corral north of barn	Ulmus americana	American Elm	20	6	4			Dead.		N/A
4153	Horse corral north of barn	Morus alba	White Mulberry (Common Mulberry)	6	3	4	one-sided, multiple leaders, metal in trunk		Electric fence attached to trunk.		UNDESIRABLE
4154	Horse corral north of barn	Prunus serotina	Black Cherry	8	5	3	sparse foliage, decay, trunk scar				UNDESIRABLE
4155	Horse corral north of barn	Fraxinus pennsylvanica	Green Ash	19	6	4			Dead.		N/A
4156	Horse corral north of barn	Acer saccharinum	Silver Maple	15	3	3	weak crotch, multiple leaders, minor deadwood			Forked at 2' with 12", 11", 10", 6" co-leaders.	DESIRABLE
4157	Horse corral north of barn	Acer negundo	Boxelder Maple	8	5	4	twist in trunk, one-sided, over-topped, minor deadwood, suckering				UNDESIRABLE
4158	Horse corral north of barn	Juglans nigra	Black Walnut	11	3	3	trunk scar, broken limbs				LANDMARK
4159	Horse corral north of barn	Juglans nigra	Black Walnut	4	2	4	over-topped, slight lean, twist in trunk				LANDMARK
4160	Horse corral northeast of barn	Acer negundo	Boxelder Maple	6	5	4	over-topped, damaged leader, suckering, minor deadwood, decay				UNDESIRABLE
4161	Horse corral northeast of barn	Acer saccharinum	Silver Maple	16	3	4	one-sided, weak crotch, slight sweep, heavy deadwood, surface roots, lawnmower damage			Forked at 2' with 15", 11" co-leaders.	DESIRABLE
4162	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	4	3	thin crown, suckering				DESIRABLE
4163	Horse corral northeast of barn	Acer saccharinum	Silver Maple	14	3	3	weak crotch, multiple leaders, one-sided			Forked at 4' with a 12" co-leader.	DESIRABLE
4164	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	4	4	basal decay, twist in trunk, thin crown, minor deadwood				DESIRABLE
4165	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, thin crown				DESIRABLE

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4166	Horse corral northeast of barn	Acer saccharinum	Silver Maple	18	3	3	multiple leaders, minor deadwood, basal scar				DESIRABLE
4167	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, trunk scar				DESIRABLE
4168	Horse corral northeast of barn	Acer saccharinum	Silver Maple	18	3	3	multiple leaders, heavy deadwood				DESIRABLE
4169	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	3	weak crotch, trunk scar, multiple leaders				DESIRABLE
4170	Horse corral northeast of barn	Ulmus americana	American Elm	12	3	3	multiple leaders, suckering, minor deadwood				N/A
4171	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	one-sided, multiple leaders, minor deadwood, weak crotch				DESIRABLE
4172	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	one-sided, thin crown, weak crotch				DESIRABLE
4173	Horse corral northeast of barn	Acer saccharinum	Silver Maple	22	3	4	weak crotch, minor deadwood, one-sided			Forked at 2' and 4' with 8", 7", 7" co-leaders.	DESIRABLE
4174	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	thin crown, slight sweep, minor deadwood, weak crotch			Forked at 1.5' with a 10" co-leader.	DESIRABLE
4175	Horse corral northeast of barn	Ulmus americana	American Elm	11	3	4	suckering, one-sided, thin crown, weak crotch			Forked at 3' with a 7" co-leader.	N/A
4176	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	4	trunk swell, basal scar, weak crotch, multiple leaders				DESIRABLE
4177	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	10	3	4	over-topped, twist in trunk				UNDESIRABLE
4178	B/W corral and Buesching Road	Prunus serotina	Black Cherry	8	4	4	trunk scar, decay, over-topped, slight sweep				UNDESIRABLE
4179	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4180	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	18	3	3	trunk scar, multiple leaders, minor deadwood			Forked at 3' with 14", 13", 9" co-leaders.	DESIRABLE
4181	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	11	3	4	over-topped, one-sided				DESIRABLE
4182	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	8	4	4	slight lean, over-topped, trunk scar, one-sided, basal decay				UNDESIRABLE
4183	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	4	4	excessive lean, one-sided, minor deadwood, suckering				UNDESIRABLE
4184	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	10	4	5	sweep, damaged leader, vine infested, basal decay		Along creek.		UNDESIRABLE
4185	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	5	3	4	slight lean, suckering, minor deadwood				UNDESIRABLE
4186	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	4	excessive lean, sweep, weak crotch, minor deadwood				UNDESIRABLE
4187	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	12	4	3	weak crotch, suckering, minor deadwood				UNDESIRABLE
4188	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	4	4	4	over-topped, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4189	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	3	4	sweep, twist in trunk, one-sided				UNDESIRABLE
4190	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	10	5	4	trunk scar, decay, double leader, one-sided, suckering				UNDESIRABLE
4191	Northeast corner	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, thin crown, sparse foliage, vine infested				DESIRABLE
4192	Northeast corner	Juglans nigra	Black Walnut	13	2	3	twist in trunk, minor deadwood				LANDMARK
4193	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	pruned for overhead wires, suckering, damaged leader				UNDESIRABLE
4194	Northeast corner	Prunus serotina	Black Cherry	10	3	4	sweep, pruned for overhead wires, minor deadwood				UNDESIRABLE
4195	Northeast corner	Acer negundo	Boxelder Maple	14	6	4			Dead.		UNDESIRABLE
4196	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	12	3	4	over-topped, one-sided, twist in trunk, top broken off, vine infested				UNDESIRABLE
4197	Northeast corner	Prunus serotina	Black Cherry	10	3	4	one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4198	Northeast corner	Acer negundo	Boxelder Maple	11	5	5	damaged leader, suckering, decay				UNDESIRABLE
4199	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	12	3	3	thin crown, vine infested				UNDESIRABLE
4200	Northeast corner	Prunus serotina	Black Cherry	16	4	4	one-sided, double leader, heavy deadwood, sparse foliage				UNDESIRABLE
4201	Northeast corner	Juglans nigra	Black Walnut	13	2	3	twist in trunk, minor deadwood				LANDMARK
4202	Northeast corner	Prunus serotina	Black Cherry	6	4	4	excessive lean, one-sided, minor deadwood, trunk scar, decay				UNDESIRABLE
4203	Northeast corner	Acer negundo	Boxelder Maple	11	4	4	slight lean, slight sweep, suckering, minor deadwood				UNDESIRABLE
4204	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	11	3	4	double leader, one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4205	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	slight lean, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4206	Northeast corner	Prunus serotina	Black Cherry	7	5	4	thin crown, minor deadwood, sparse foliage		Twin leader dead at 1'.		UNDESIRABLE
4207	Northeast corner	Acer negundo	Boxelder Maple	7	5	5	damaged leader, suckering, minor deadwood				UNDESIRABLE
4208	Northeast corner	Unidentifiable	Unidentifiable	13	6	5			Dead. No bark.		N/A

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4209	Northeast corner	Prunus serotina	Black Cherry	8	5	4	excessive lean, damaged leader, sweep, sparse foliage, minor deadwood				UNDESIRABLE
4210	Northeast corner	Prunus serotina	Black Cherry	14	5	3	dieback, heavy deadwood, sparse foliage				UNDESIRABLE
4211	Northeast corner	Acer negundo	Boxelder Maple	6	3	4	one-sided, slight sweep, minor deadwood				UNDESIRABLE
4212	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	over-topped, one-sided, minor deadwood				UNDESIRABLE
4213	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	11	3	4	one-sided, twist in trunk, trunk scar, minor deadwood				UNDESIRABLE
4214	Northeast corner	Juglans nigra	Black Walnut	9	2	3	double leader, erosion, exposed roots		Along creek.		LANDMARK
4215	Northeast corner	Acer negundo	Boxelder Maple	9	5	5	damaged leader, heavy deadwood, suckering				UNDESIRABLE
4216	Northeast corner	Ulmus rubra	Slippery Elm (Red Elm)	15	3	3	multiple leaders, suckering, minor deadwood				N/A
4217	Northeast corner	Prunus serotina	Black Cherry	8	4	4	one-sided, over-topped, vine infested, minor deadwood				UNDESIRABLE
4218	Northeast corner	Prunus serotina	Black Cherry	5	4	4	excessive lean, one-sided, minor deadwood				UNDESIRABLE
4219	Northeast corner	Fraxinus pennsylvanica	Green Ash	13	6	5			Dead.		N/A
4220	Northeast corner	Acer saccharinum	Silver Maple	10	4	4	minor deadwood, slight sweep, one-sided, thin crown				DESIRABLE
4221	Northeast corner	Catalpa speciosa	Northern Catalpa	6	3	4	over-topped, double leader, vine infested, one-sided				LANDMARK
4222	Northeast corner	Prunus serotina	Black Cherry	6	4	4	over-topped, slight sweep, sparse foliage, one-sided				UNDESIRABLE
4223	Northeast corner	Prunus serotina	Black Cherry	8	3	4	excessive lean, thin crown, twist in trunk				UNDESIRABLE
4224	Northeast corner	Prunus serotina	Black Cherry	4	4	4	excessive lean, damaged leader, thin crown, minor deadwood				UNDESIRABLE
4225	Northeast corner	Prunus serotina	Black Cherry	6	4	4	excessive lean, vine infested, one-sided, decay				UNDESIRABLE
4226	Northeast corner	Prunus serotina	Black Cherry	6	3	4	twist in trunk, thin crown, sparse foliage				UNDESIRABLE
4227	Northeast corner	Acer negundo	Boxelder Maple	9	4	4	damaged leader, thin crown, twist in trunk, suckering			Forked at 1.5' with a 6" co-leader.	UNDESIRABLE
4228	Northeast corner	Acer negundo	Boxelder Maple	6	4	4	slight lean, over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4229	Northeast corner	Acer negundo	Boxelder Maple	10	3	4	slight sweep, one-sided, suckering				UNDESIRABLE
4230	Northeast corner	Acer negundo	Boxelder Maple	5	3	4	over-topped, slight sweep, suckering			Forked at base with 14" co-leader (lying on ground).	UNDESIRABLE
4231	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	slight lean, twist in trunk, vine infested, minor deadwood				UNDESIRABLE
4232	Northeast corner	Juglans nigra	Black Walnut	10	3	3	double leader, twist in trunk, suckering, minor deadwood, vine infested				LANDMARK
4233	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	one-sided, suckering, minor deadwood				UNDESIRABLE
4234	Northeast corner	Prunus serotina	Black Cherry	7	5	4	dieback, damaged leader, slight lean, sparse foliage, minor deadwood				UNDESIRABLE
4235	Northeast corner	Juglans nigra	Black Walnut	9	2	4	one-sided, twist in trunk, minor deadwood				LANDMARK
4236	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4237	Northeast corner	Acer saccharinum	Silver Maple	13	5	4	double leader, sparse foliage				DESIRABLE
4238	Northeast corner	Juglans nigra	Black Walnut	11	2	3	twist in trunk				LANDMARK
4239	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	6	3	4	over-topped, twist in trunk, trunk scar				UNDESIRABLE
4240	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	4	4	4	over-topped, twist in trunk, suckering				UNDESIRABLE
4241	Northeast corner	Prunus serotina	Black Cherry	7	4	4	sweep, sparse foliage, one-sided				UNDESIRABLE
4242	Northeast corner	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4243	Northeast corner	Acer negundo	Boxelder Maple	4	4	4	damaged leader, pruned for overhead wires, vine infested				UNDESIRABLE
4244	Northeast corner	Juglans nigra	Black Walnut	9	3	5	decay, pruned for overhead wires, suckering, vine infested				LANDMARK
4245	Northeast corner	Acer negundo	Boxelder Maple	7	4	4	damaged leader, multiple leaders, suckering, minor deadwood				UNDESIRABLE
4246	Northeast corner	Acer negundo	Boxelder Maple	4	5	5	damaged leader, vine infested, sparse foliage, suckering				UNDESIRABLE
4247	Northeast corner	Malus spp.	Crabapple	5	3	4	over-topped, slight sweep, double leader			Forked at 1' with a 3" co-leader.	DESIRABLE

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Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4248	North property line	Acer negundo	Boxelder Maple	12	3	4	twist in trunk, suckering, multiple leaders		Broken and hanging limb in crown. Old 12" co-leader rotted off at 2'.		UNDESIRABLE
4249	North property line	Prunus serotina	Black Cherry	6	4	4	slight lean, slight sweep, thin crown, minor deadwood, decay				UNDESIRABLE
4250	North property line	Ulmus rubra	Slippery Elm (Red Elm)	16	3	3	suckering				N/A
4251	North property line	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown			Forked at 2' with a 4" co-leader.	DESIRABLE
4252	North property line	Prunus serotina	Black Cherry	9	3	4	one sided, vine infested, thin crown, trunk scar				UNDESIRABLE
4253	North property line	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4254	North property line	Prunus serotina	Black Cherry	5	4	4	minor deadwood, vine infested, sparse foliage				UNDESIRABLE
4255	North property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, one sided, multiple leaders				UNDESIRABLE
4256	North property line	Prunus serotina	Black Cherry	9	5	4	damaged leader, basal decay, sparse foliage, thin crown				UNDESIRABLE
4257	North property line	Acer saccharinum	Silver Maple	10	2	3	thin crown, twist in trunk				DESIRABLE
4258	North property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, slight sweep, suckering, minor deadwood				UNDESIRABLE
4259	North property line	Morus alba	White Mulberry (Common Mulberry)	20	3	4	trunk scar, double leader, slight sweep, minor deadwood				UNDESIRABLE
4260	North property line	Acer negundo	Boxelder Maple	4	4	3	basal decay, vine infested, minor deadwood			Forked at base with 3", 3", 3" co-leaders.	UNDESIRABLE
4261	North property line	Acer negundo	Boxelder Maple	7	3	4	over-topped, one sided, twist in trunk				UNDESIRABLE
4262	North property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, excessive lean, suckering, one sided		Uprooting and lying on tree #4264.		UNDESIRABLE
4263	North property line	Prunus serotina	Black Cherry	9	4	4	slight lean, vine infested, sparse foliage, minor deadwood				UNDESIRABLE
4264	North property line	Acer negundo	Boxelder Maple	5	5	5	damaged leader, top broken off, sparse foliage, over-topped		Leader damaged by tree #4264.		UNDESIRABLE
4265	North property line	Acer saccharinum	Silver Maple	14	2	4	slight lean, multiple leaders				DESIRABLE
4266	North property line	Prunus serotina	Black Cherry	7	5	4	slight lean, sparse foliage, suckering				UNDESIRABLE
4267	North property line	Morus alba	White Mulberry (Common Mulberry)	5	5	5	excessive lean, decay, minor deadwood, sparse foliage				UNDESIRABLE
4268	North property line	Acer negundo	Boxelder Maple	6	4	4	slight lean, twist in trunk, thin crown, minor deadwood				UNDESIRABLE
4269	North property line - east of pond	Acer negundo	Boxelder Maple	6	4	4	slight lean, double leader, minor deadwood				UNDESIRABLE
4270	North property line - east of pond	Salix nigra	Black Willow	21	4	4	trunk scar, suckering, decay, slight sweep		Old co-leader rotted off at 5'.		DESIRABLE
4271	North property line - east of pond	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, minor deadwood				DESIRABLE
4272	North property line - east of pond	Morus alba	White Mulberry (Common Mulberry)	7	3	3	slight lean, minor deadwood			Forked at 2' with a 2" co-leader.	UNDESIRABLE
4273	West of pond	Prunus serotina	Black Cherry	15	4	4	double leader, twist in trunk, decay				UNDESIRABLE
4274	West of pond	Fraxinus pennsylvanica	Green Ash	11	6	4			Dead.		N/A
4275	West of pond	Prunus serotina	Black Cherry	12	6	4			Dead.		UNDESIRABLE
4276	West property line	Acer negundo	Boxelder Maple	10	4	3	suckering, decay, minor deadwood				UNDESIRABLE
4277	West property line	Acer negundo	Boxelder Maple	5	4	4	excessive lean, suckering, minor deadwood		Overhead wires.		UNDESIRABLE
4278	West property line	Acer saccharinum	Silver Maple	9	4	4	dieback, damaged leader, pruned for overhead wires, multiple leaders, suckering		Overhead wires.	Forked at base with a 7" co-leader.	DESIRABLE
4279	West of pond	Juglans nigra	Black Walnut	8	2	3	multiple leaders				LANDMARK
4280	West of pond on edge of water	Ulmus americana	American Elm	15	3	4	slight lean, weak crotch, multiple leaders				N/A
4281	West of pond	Morus alba	White Mulberry (Common Mulberry)	10	3	4	over-topped, slight sweep, multiple leaders				UNDESIRABLE
4282	West property line	Robinia pseudoacacia	Black Locust	8	3	3	multiple leaders, minor deadwood				UNDESIRABLE
4283	West property line	Acer saccharinum	Silver Maple	7	3	4	one sided, multiple leaders, suckering, pruned for side wires		Overhead wires.		DESIRABLE
4284	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight lean, multiple leaders, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4285	West property line	Morus alba	White Mulberry (Common Mulberry)	5	3	5	over-topped, slight sweep, damaged leader, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4286	West property line	Acer saccharinum	Silver Maple	10	3	4	one sided, pruned for side wires, twist in trunk		Overhead wires.		DESIRABLE
4287	West property line	Prunus serotina	Black Cherry	9	3	3	multiple leaders, minor deadwood				UNDESIRABLE
4288	West property line	Prunus serotina	Black Cherry	9	3	4	one sided, minor deadwood				UNDESIRABLE

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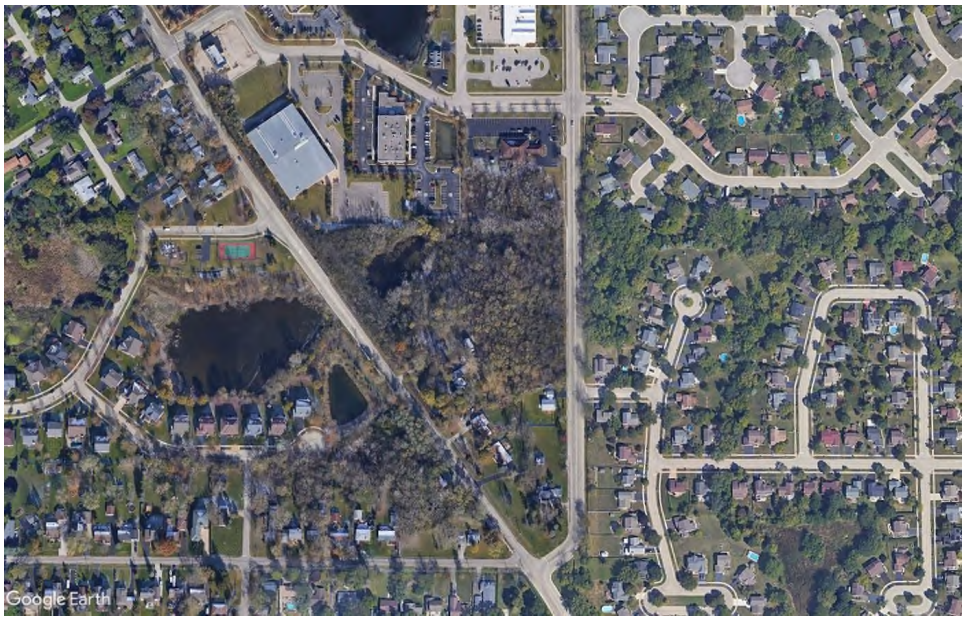
Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4289	West property line	Prunus serotina	Black Cherry	6	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4290	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	twist in trunk, multiple leaders, minor deadwood				UNDESIRABLE
4291	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight lean, one sided				UNDESIRABLE
4292	West property line	Prunus serotina	Black Cherry	11	3	4					UNDESIRABLE
4293	West property line	Prunus serotina	Black Cherry	4	3	4	minor deadwood, sweep				UNDESIRABLE
4294	West property line	Prunus serotina	Black Cherry	7	3	4	over-topped, slight sweep, one sided, vine infested				UNDESIRABLE
4295	West property line	Prunus serotina	Black Cherry	8	3	4	over-topped, slight sweep				UNDESIRABLE
4296	West property line	Robinia pseudoacacia	Black Locust	6	3	4	twist in trunk, minor deadwood, one sided				UNDESIRABLE
4297	West property line	Robinia pseudoacacia	Black Locust	12	3	3	twist in trunk, multiple leaders, minor deadwood			Forked at base with a 6" co-leader.	UNDESIRABLE
4298	West property line	Robinia pseudoacacia	Black Locust	9	3	4	pruned for overhead wires, one sided		Overhead wires.		UNDESIRABLE
4299	West property line	Robinia pseudoacacia	Black Locust	8	3	3	twist in trunk, thin crown				UNDESIRABLE
4300	Northwest of pond	Robinia pseudoacacia	Black Locust	7	3	4	twist in trunk, over-topped, double leader, thin crown				UNDESIRABLE
4301	Northwest property corner	Robinia pseudoacacia	Black Locust	11	4	4	one sided, trunk scar, decay, minor deadwood		Overhead wires.		UNDESIRABLE
4302	Northwest property corner	Robinia pseudoacacia	Black Locust	10	4	4	twist in trunk, trunk scar, minor deadwood, decay				UNDESIRABLE
4303	Northwest property corner	Robinia pseudoacacia	Black Locust	7	4	4	over-topped, basal decay, decay, minor deadwood				UNDESIRABLE
4304	North property line	Prunus serotina	Black Cherry	11	3	4	over-topped, basal scar, slight sweep, metal in trunk			Forked at 1' with a 10" co-leader.	UNDESIRABLE
4305	Northwest of pond	Robinia pseudoacacia	Black Locust	16	3	3	trunk scar, multiple leaders, minor deadwood				UNDESIRABLE
4306	Northwest of pond	Robinia pseudoacacia	Black Locust	5	3	3	thin crown				UNDESIRABLE
4307	Northwest of pond	Robinia pseudoacacia	Black Locust	6	3	3	one sided, double leader				UNDESIRABLE
4308	Northwest of pond	Prunus serotina	Black Cherry	5	3	4	thin crown, minor deadwood, twist in trunk				UNDESIRABLE
4309	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	slight sweep, thin crown				UNDESIRABLE
4310	Northwest of pond	Prunus serotina	Black Cherry	8	4	4	dieback, minor deadwood, one sided, basal decay				UNDESIRABLE
4311	Northwest of pond	Prunus serotina	Black Cherry	10	3	4	one sided, thin crown				UNDESIRABLE
4312	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	over-topped, slight lean, twist in trunk				UNDESIRABLE
4313	Northwest of pond	Prunus serotina	Black Cherry	7	3	4	excessive lean, over-topped, twist in trunk				UNDESIRABLE
4314	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, multiple leaders				UNDESIRABLE
4315	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, suckering, minor deadwood				UNDESIRABLE
4316	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	twist in trunk, thin crown, slight lean				UNDESIRABLE
4317	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	twist in trunk, thin crown, one sided				UNDESIRABLE
4318	Northwest of pond	Prunus serotina	Black Cherry	11	4	4	over-topped, slight lean, one sided, dieback, minor deadwood			Forked at base with a 7" co-leader.	UNDESIRABLE
4319	Northwest of pond	Prunus serotina	Black Cherry	9	3	3	double leader, vine infested, metal in trunk				UNDESIRABLE
4320	Northwest of pond	Prunus serotina	Black Cherry	7	4	4	slight lean, dieback, minor deadwood, 670, sparse foliage				UNDESIRABLE
4321	Northwest of pond	Prunus serotina	Black Cherry	4	4	4	damaged leader, dead tree caught in crown				UNDESIRABLE
4322	Northwest of pond	Prunus serotina	Black Cherry	9	4	4	vine infested, minor deadwood, decay		Saprophytic fungi present, 1/2 of trunk is decayed.		UNDESIRABLE
4323	Northwest of pond	Prunus serotina	Black Cherry	7	4	3	double leader, one sided, suckering, over-topped				UNDESIRABLE
4324	Northwest of pond	Juglans nigra	Black Walnut	9	3	3	minor deadwood				LANDMARK
4325	Northwest of pond	Robinia pseudoacacia	Black Locust	6	3	4	over-topped, suckering, slight sweep, minor deadwood				UNDESIRABLE
4326	Northwest of pond	Robinia pseudoacacia	Black Locust	12	3	4	one sided, double leader, minor deadwood, suckering				UNDESIRABLE
4327	Northwest of pond	Juglans nigra	Black Walnut	8	2	4	minor deadwood, twist in trunk, multiple leaders				LANDMARK
4328	Northwest of pond	Prunus serotina	Black Cherry	7	3	5	excessive lean, sweep, over-topped, suckering				UNDESIRABLE
4329	Northwest of pond	Prunus serotina	Black Cherry	6	3	4	over-topped, slight lean, minor deadwood				UNDESIRABLE
4330	Northwest of pond	Acer saccharinum	Silver Maple	23	3	3	multiple leaders, one sided, minor deadwood				DESIRABLE
4331	Northwest of pond - along edge of water	Salix nigra	Black Willow	24	4	5	damaged leader, suckering, decay		Twin leader snapped off at 5'.		DESIRABLE
4332	Northwest of pond	Acer saccharinum	Silver Maple	17	3	4	over-topped, multiple leaders, weak crotch, slight sweep		Forked at 5'.		DESIRABLE
4333	Northwest of pond	Populus deltoides	Eastern Cottonwood	14	3	4	one sided, twist in trunk, slight over-topped, double leader				DESIRABLE
4334	Northwest of pond	Populus deltoides	Eastern Cottonwood	16	2	3	twist in trunk, multiple leaders				DESIRABLE
4335	Northwest of pond	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, sparse foliage, thin crown				DESIRABLE
4336	Northwest of pond	Acer saccharinum	Silver Maple	4	3	4	over-topped, twist in trunk, one sided				DESIRABLE
4337	Northwest of pond	Robinia pseudoacacia	Black Locust	5	4	4	one sided, thin crown, minor deadwood, over-topped				UNDESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4338	Northwest of pond	Robinia pseudoacacia	Black Locust	7	3	4	thin crown, minor deadwood, suckering, hollow				UNDESIRABLE
4339	Northwest of pond	Robinia pseudoacacia	Black Locust	8	4	3	one sided, thin crown, minor deadwood				UNDESIRABLE
4340	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, thin crown, minor deadwood, sparse foliage				UNDESIRABLE
4341	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	3	thin crown, dieback, minor deadwood, suckering				UNDESIRABLE
4342	Northwest of pond	Robinia pseudoacacia	Black Locust	10	4	3	dieback, minor deadwood, thin crown				UNDESIRABLE
4343	Northwest of pond	Robinia pseudoacacia	Black Locust	11	4	3	dieback, minor deadwood, thin crown, vine infested				UNDESIRABLE
4344	Northwest of pond	Prunus serotina	Black Cherry	7	3	4	slight lean, multiple leaders, one sided				UNDESIRABLE
4345	Northwest of pond	Prunus serotina	Black Cherry	10	3	4	one sided, thin crown				UNDESIRABLE
4346	Northwest of pond	Prunus serotina	Black Cherry	8	4	4	over-topped, slight lean, minor deadwood, sparse foliage				UNDESIRABLE
4347	Northwest of pond	Robinia pseudoacacia	Black Locust	11	3	3	thin crown, minor deadwood				UNDESIRABLE
4348	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk				UNDESIRABLE
4349	Northwest of pond	Robinia pseudoacacia	Black Locust	9	3	4	twist in trunk, one sided, thin crown, minor deadwood				UNDESIRABLE
4350	Northwest of pond	Robinia pseudoacacia	Black Locust	8	3	4	one sided, thin crown				UNDESIRABLE
4351	Northwest of pond	Robinia pseudoacacia	Black Locust	7	4	4	one sided, thin crown, minor deadwood, sparse foliage				UNDESIRABLE
4352	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, thin crown, minor deadwood				UNDESIRABLE
4353	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, dieback, minor deadwood				UNDESIRABLE
4354	Northwest of pond	Robinia pseudoacacia	Black Locust	10	3	4	over-topped, one sided, thin crown				UNDESIRABLE
4355	Northwest of pond	Acer saccharinum	Silver Maple	9	3	4	over-topped, twist in trunk, multiple leaders				DESIRABLE
4356	Northwest of pond	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one sided, double leader, over-topped				DESIRABLE
4357	North property line	Robinia pseudoacacia	Black Locust	9	3	4	over-topped, one sided, weak crotch			Forked at 3' with an 8" co-leader.	UNDESIRABLE
4358	North property line	Populus deltoides	Eastern Cottonwood	18	3	3	broken limbs, weak crotch, one sided,			Forked at 1.5' with a 16" co-leader.	DESIRABLE
4359	North property line	Robinia pseudoacacia	Black Locust	5	3	4	over-topped, twist in trunk, multiple leaders				UNDESIRABLE
4360	North property line	Populus deltoides	Eastern Cottonwood	5	3	5	sweep, over-topped, damaged leader				DESIRABLE
4361	North property line	Robinia pseudoacacia	Black Locust	14	3	4	one sided, double leader, minor deadwood				UNDESIRABLE
4362	North property line	Prunus serotina	Black Cherry	11	3	4	slight sweep, multiple leaders				UNDESIRABLE
4363	North property line	Prunus serotina	Black Cherry	5	4	4	double leader, one sided, slight sweep				UNDESIRABLE
4364	North property line	Robinia pseudoacacia	Black Locust	5	3	4	over-topped, double leader, slight sweep				UNDESIRABLE
4365	North property line	Robinia pseudoacacia	Black Locust	10	3	3	double leader, minor deadwood				UNDESIRABLE
4366	North property line	Robinia pseudoacacia	Black Locust	8	4	4	trunk scar, one sided, thin crown, minor deadwood, dieback, loose bark				UNDESIRABLE
4367	North property line	Prunus serotina	Black Cherry	6	4	4	over-topped, slight sweep, suckering				UNDESIRABLE
4368	North property line	Prunus serotina	Black Cherry	5	3	4	over-topped, minor deadwood				UNDESIRABLE
4369	North property line	Prunus serotina	Black Cherry	6	4	4	slight lean, dieback, minor deadwood				UNDESIRABLE
4370	North property line	Robinia pseudoacacia	Black Locust	14	3	4	one sided, minor deadwood				UNDESIRABLE
4371	North property line	Robinia pseudoacacia	Black Locust	10	3	3	thin crown, minor deadwood				UNDESIRABLE
4372	North property line	Robinia pseudoacacia	Black Locust	14	3	3	minor deadwood, one sided				UNDESIRABLE
4373	North property line	Robinia pseudoacacia	Black Locust	12	3	4	weak crotch, multiple leaders, minor deadwood				UNDESIRABLE
4374	North property line	Robinia pseudoacacia	Black Locust	17	4	4	one sided, weak crotch, multiple leaders, minor deadwood, 679				UNDESIRABLE
4375	North property line	Prunus serotina	Black Cherry	5	4	4	over-topped, slight sweep, minor deadwood				UNDESIRABLE
4376	North property line	Prunus serotina	Black Cherry	4	3	4	sweep, double leader, over-topped				UNDESIRABLE
4377	North property line	Prunus serotina	Black Cherry	6	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4378	North property line	Populus deltoides	Eastern Cottonwood	13	2	3	twist in trunk, minor deadwood				DESIRABLE

Residential Development
Traffic and Parking Study
670 Old Rand Road
Lake Zurich, Illinois



Prepared For:

Pappageorge Haymes Partners

Prepared by:

Eriksson Engineering Associates, Ltd.

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ERIKSSON ENGINEERING ASSOCIATES, LTD.

1 – INTRODUCTION

This report summarizes the results of a traffic and parking study for a proposed residential project located at 670 Old Rand Road in Lake Zurich, Illinois. The site will have a combination of single-family detached and attached residences. Access to the site will be provided by driveways on Old Rand Road and Buesching Road. **Figure 1** illustrates the site location and the area roadways. Please note that all figures are located at the end of the report.

Methodology

The purpose of this study was to identify the transportation system serving the site, to determine its characteristics, and to evaluate the impact of the proposed development. An evaluation of the transportation access for a development includes the network serving pedestrians, public transportation, bicycle, vehicles, and service trucks around the site.

Data was collected on existing pedestrian, bicycle, and vehicular traffic volumes along with an inventory of traffic control devices, sidewalks, bike lanes, parking, and traffic lanes. Projections were made of future traffic volumes by the proposed development and combined with the existing traffic volumes. Analyses were conducted and recommendations developed for the transportation needs to accommodate the development.

Conclusions

With the additional traffic generated by the proposed development, the following conclusions and recommendations were developed:

1. The street network can accommodate the additional traffic from the proposed project.
2. Development of the site with 38 residential units will generate 26 to 31 peak-hour trips during the morning and evening commuter periods.
3. All intersections within the study area work at acceptable levels of service and delay. There is a slight increase in delays from the projected traffic growth.
4. One full access point is proposed on Old Rand Road with one inbound lane and one outbound lane under stop sign control.
5. A second full access point is proposed on Buesching Road with one inbound lane and one outbound lane under stop sign control.
6. A sidewalk will be provided across the Old Rand Road frontage with a crosswalk to the existing sidewalk on the west side of the road. Pedestrian crosswalk signing should be provided.
7. Along the Buesching Road frontage, a sidewalk with a parkway is proposed across the southern two thirds of the site frontage. North of the driveway, the existing carriage walk will be used.
8. Twelve of the single-family homes will have four parking spaces with a two-vehicle garage and two driveway spaces. Six single-family homes will have two-car garages. Ten on-street parallel parking spaces will be available for visitors.
9. The single-family attached homes will have a two-vehicle garage and two driveway spaces with twelve off-street visitor parking spaces.

2 – EXISTING TRANSPORTATION NETWORK

Site Location

The site is located between Old Rand Road and Buesching Road. Vehicular access to it is provided by a single residential driveway on Old Rand Road. Land-uses around the site consist of single-family homes to the east, south, and west. North of the site, there are three buildings containing a funeral home, office space, and an indoor soccer center.

Existing Roadway Characteristics

A description of the study area roadways providing access to the site is provided below:

Old Rand Road is a north-south collector extending north from Rand Road (US 12) thru downtown Lake Zurich, around Lake Zurich, back to Rand Road (US 12). Along the site frontage, it has one through lane in each direction. It is under the jurisdiction of the Village of Lake Zurich with a 30-mph speed limit and has a 5-ton weight limit.

Buesching Road is a two-lane north-south collector extending north of Old Rand Road across IL 22 to Rose Road. It is under the jurisdiction of the Village of Lake Zurich with a 30-mph speed limit. There is a 10-mph curve just north of Old Rand Road. It is a Class 2 truck route.

Grand Avenue is an east-west residential roadway with one lane in each direction. On-street parking is not permitted on the road overnight or after two inches of rain. It is under stop sign control at Old Rand Road. The speed limit is 20 mph and has a 5-ton weight limit. It is under the jurisdiction of the Village of Lake Zurich.

Figure 2 illustrates the existing roadway geometrics and traffic control.

Pedestrians

Grand Avenue does not have any sidewalks along its length. Buesching Road has five-foot wide carriage walk on both sides. Old Rand Road has a five-foot sidewalk with a small parkway on the west side of the road. A painted crosswalk is provided across Buesching Road at Old Rand Road.

Existing Vehicular, Pedestrian and Bicycle Volumes

Weekday morning (7:00 to 8:00 AM) and afternoon (4:00 to 6:00 PM) manual counts of pedestrians and vehicles were conducted at the study area intersection of Old Rand Road/Buesching Road/Grand Avenue. These counts showed the peak hours of traffic occurring from 7:30 to 8:30 AM and 4:15 to 5:15 PM on a weekday. **Figure 3** illustrates the existing vehicular volumes. Copies of the counts can be found in the **Appendix**.

3 - DEVELOPMENT CHARACTERISTICS

Site Trip Generation

A single-family detached and attached development is proposed with 18 detached and 20 attached units. Vehicular volumes generated by the residences were estimated from the Institute of Transportation Engineer's Trip Generation Manual, 11th Edition for similar projects. **Table 1** summarizes the estimated site generated traffic volumes.

Table 1
Site Trip Generation Estimates

Use	Size	ITE Land Use Code	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single-family	18 units	210(1)	4	12	16	12	8	20
Townhomes	20 units	215(2)	2	8	10	7	4	11
Total Site Volumes			**6**	**20**	**26**	**19**	**12**	**31**

(1) Single Family Homes – Detached
(2) Single Family Homes - Attached

Directional Distribution

The trip distribution for the development is based on a combination of the existing traffic volumes, the existing road system, nearby attractions for residents, and the proposed site access. The trip distribution for the site is shown on **Table 2** and **Figure 4**.

Table 2
Directional Distribution

Direction	Percentage
North on Buesching Road	20%
North on Old Rand Road	40%
South on Old Rand Road	40%
Total	**100%**

Total Traffic Volumes

Based on trip generation and directional distribution estimates, the site generated traffic was assigned to the proposed access drives and area roadways. **Figure 5** illustrates the resulting site traffic assignments to the proposed access system. Total traffic volumes are a combination of the existing traffic volumes, projected non-site growth in those volumes, and the site traffic. Construction of the development is planned to be completed in the year 2025. The total traffic volumes were estimated for a period of five years after the projected opening which is the Year 2030. Data provided by the Chicago Metropolitan Agency for Planning (CMAP) shows a growth rate on Old Road and Buesching Roads of 0.2% per year. A copy of the CMAP letter is included in the **Appendix**. This growth rate was applied to the existing traffic volumes to obtain the base 2030 volumes (**Figure 6**) without the development. The base volumes were then combined with site traffic for the Year 2030 total traffic volumes are shown on **Figure 7**.

4 – ANALYSES

Intersection Capacity Analyses

To determine the operation of the study area intersections and the access drives, intersection capacity analyses were conducted for the existing and projected traffic volumes. An intersection's ability to accommodate traffic flow is based on the average control delay experienced by vehicles passing through the intersection. The intersection and individual traffic movements are assigned a level of service (LOS), ranging from A to F based on the control delay created by a traffic signal or stop sign. Control delay consists of the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS A has the best traffic flow and least delay. LOS E represents saturated or at capacity conditions. LOS F experiences oversaturated conditions and extensive delays. The Highway Capacity Manual definitions for levels of service and the corresponding control delay for both signalized and unsignalized intersections are shown in **Table 3**.

Table 3
Level of Service Criteria for Intersections

Level of Service	Description	Control Delay (seconds/vehicle)		
		Signals	Roundabouts	Stop Signs
A	Minimal delay and few stops	<10	<10	<10
B	Low delay with more stops	>10-20	>10-15	>10-15
C	Light congestion	>20-35	>15-25	>15-25
D	Congestion is more noticeable with longer delays	>35-55	>25-35	>25-35
E	High delays and number of stops	>55-80	>35-50	>35-50
F	Unacceptable delays and over capacity	>80	>50	>50

Source: Highway Capacity Manual

Capacity analyses were conducted for each intersection area using the SYNCHRO software to determine the existing and future operations of the transportation system. These analyses were performed for the weekday peak-hours. Copies of the capacity analysis summaries are included in the **Appendix**.

Table 4 shows the existing and future level of service and delay results for the study area traffic conditions. All the intersections within the study are currently operating at a satisfactory level of service. Overall, with the low volume of site generated traffic, there is a nominal impact on existing traffic conditions. The conclusion of the analyses is that the road system can accommodate the projected traffic volumes.

Old Rand Road Access

One full access point is proposed on Old rand Road with one inbound lane and one outbound lane under stop sign control. The projected vehicular delays are low. A sidewalk is proposed across the site frontage. Crosswalks are proposed across the site driveway and Old Rand Road to connect to the sidewalk on the west side of the road. Pedestrian warning signs should be posted for approaching Old Rand Road traffic.

Buesching Road Access

Another full access point is proposed on Buesching Road with one inbound lane and one outbound lane under stop sign control. The projected vehicular delays are low. A sidewalk with a parkway is proposed across the southern two thirds of the site frontage. North of the driveway, the existing carriage walk will be used.

Old Rand Road at Grand Avenue and Buesching Road

Under current and future traffic conditions, this intersection works well with minimal delays today and in the future. No additional roadway improvements are proposed.

Table 4
Intersection Level of Service and Total Delay (seconds)

Intersection	Movement	Morning Peak		Afternoon Peak	
		2024 Existing	2030 Total	2024 Existing	2030 Total
Old Rand Road at Buesching Road And Grand Avenue	Eb Rt/Th/Lt	B-12.7	B-12.9	B-13.9	B-14.1
	Wb Rt/Th/Lt	B-13.8	B-14.2	C-17.2	C-17.8
	Nb Lt	A-7.6	A-7.6	A-7.8	A-7.8
	Sb /Lt	A-8.0	A-8.0	A-8.2	A-8.3
Site Access on Old Rand Road	Sb Left		A-7.8		A-8.0
	Wb Lt/Rt		B-10.4		B-10.8
Site Access on Buesching Road	Nb Lt		A-7.4		A-7.5
	Eb Lt/Rt		A-9.4		A-9.5

Lake Zurich Zoning Requirements

The parking requirements were calculated for the development based on the Village of Lake Zurich Zoning Code (see **Table 5**). A total of 120 spaces are required and 162 spaces are provided. Each single-family home will have two spaces in a parking garage and twelve units will have two spaces in the driveway. Each townhome will have two spaces in a garage and two spaces in their driveway. A total of 22 visitor spaces are provided.

Table 5
Zoning Code Parking Requirements

Use	Size	Zoning Code Requirement	Required Parking	Parking Provided
Detached	18 units	3 spaces for each dwelling unit	**54 spaces**	**70**[(1)]
Attached	20 units	1 1/2 for each efficiency dwelling unit plus 2 for each 1- or 2-bedroom dwelling unit plus 3 for each 3 or more bedroom dwelling unit plus 1 for each 10 spaces required by this paragraph	**66 spaces**	**92**[(2)]
		Total	**120 spaces**	**162 spaces**

(1) 36 spaces in 2-vehicle garages, 24 driveways spaces, and 10 visitor spaces
(2) 40 spaces in 2-vehicle garages, 40 driveway spaces, and 12 visitor spaces

5 - RECOMMENDATIONS

With the additional traffic generated by the proposed development, the following conclusions and recommendations were developed:

1. The street network can accommodate the additional traffic from the proposed project.
2. Development of the site with 38 residential units will generate 26 to 31 peak-hour trips during the morning and evening commuter periods.
3. All intersections within the study area work at acceptable levels of service and delay. There is a slight increase in delays from the projected traffic growth.
4. One full access point is proposed on Old Rand Road with one inbound lane and one outbound lane under stop sign control.
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8. Twelve of the single-family homes will have four parking spaces with a two-vehicle garage and two driveway spaces. Six single-family homes will have two-car garages. Ten on-street parallel parking spaces will be available for visitors.
9. The single-family attached homes will have a two-vehicle garage and two driveway spaces with twelve off-street visitor parking spaces.

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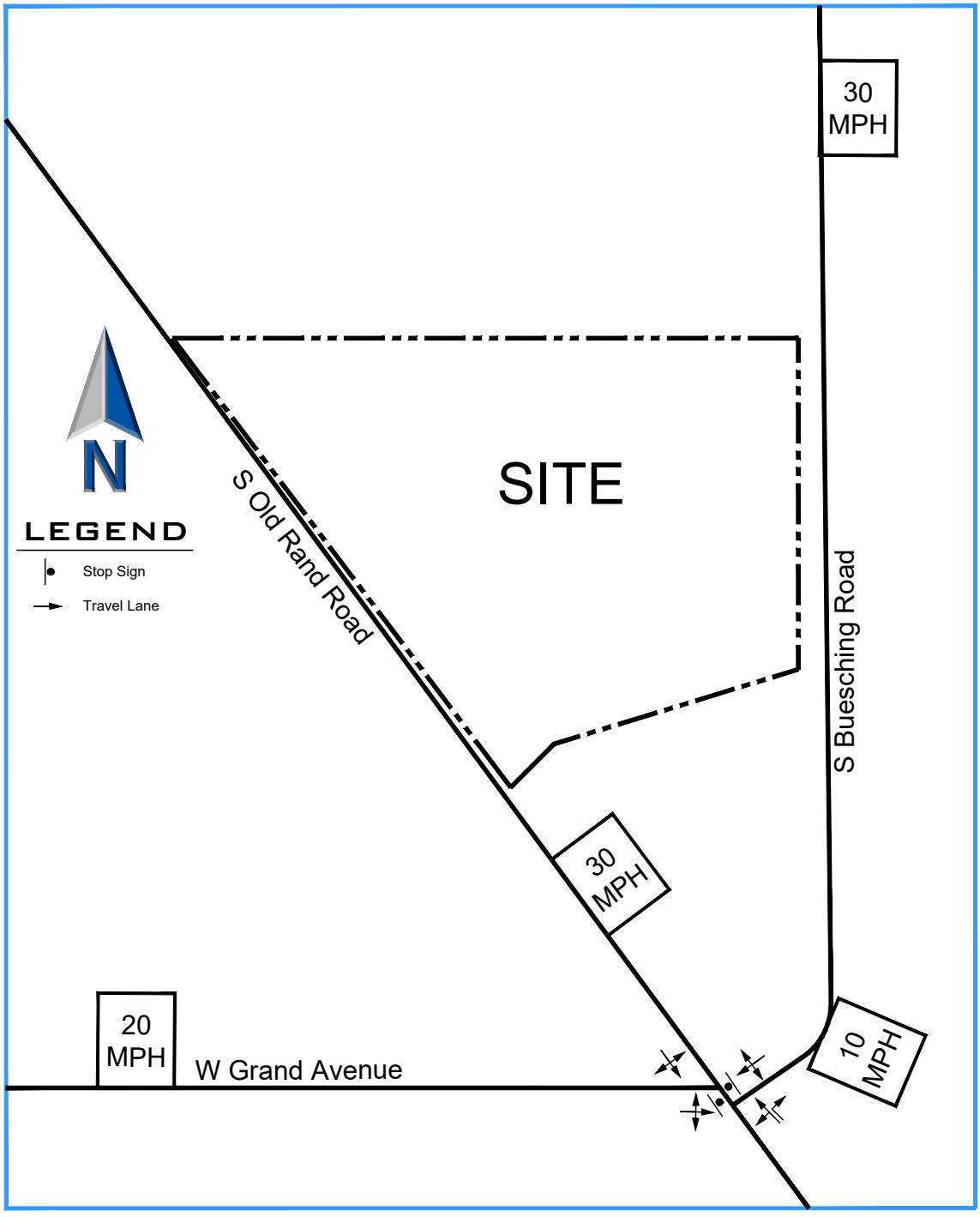
Site Location & Area Roadways

Figure 1



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Existing Roadway Geometrics

Figure 2

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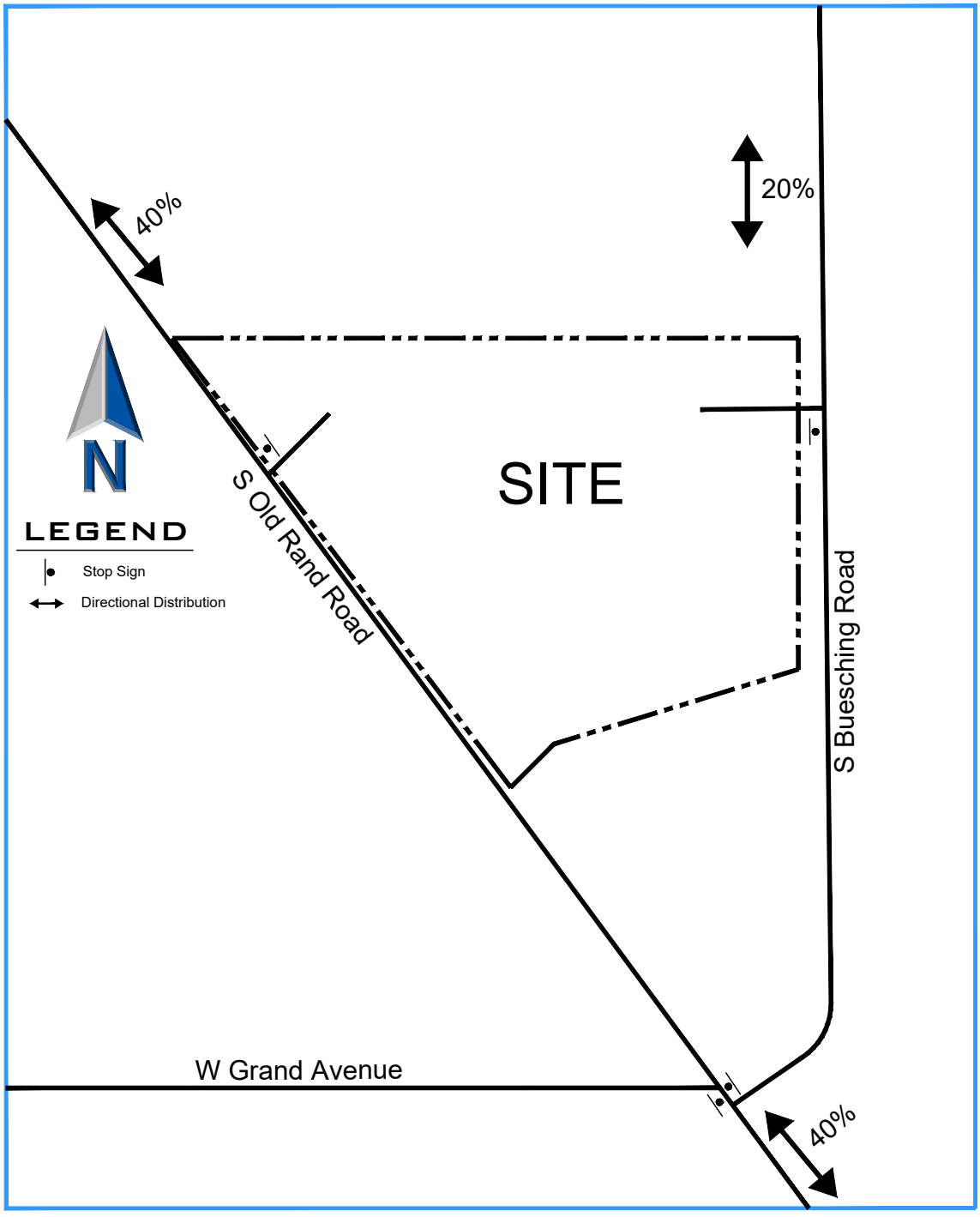
2024 Existing Traffic Volumes

Figure 3



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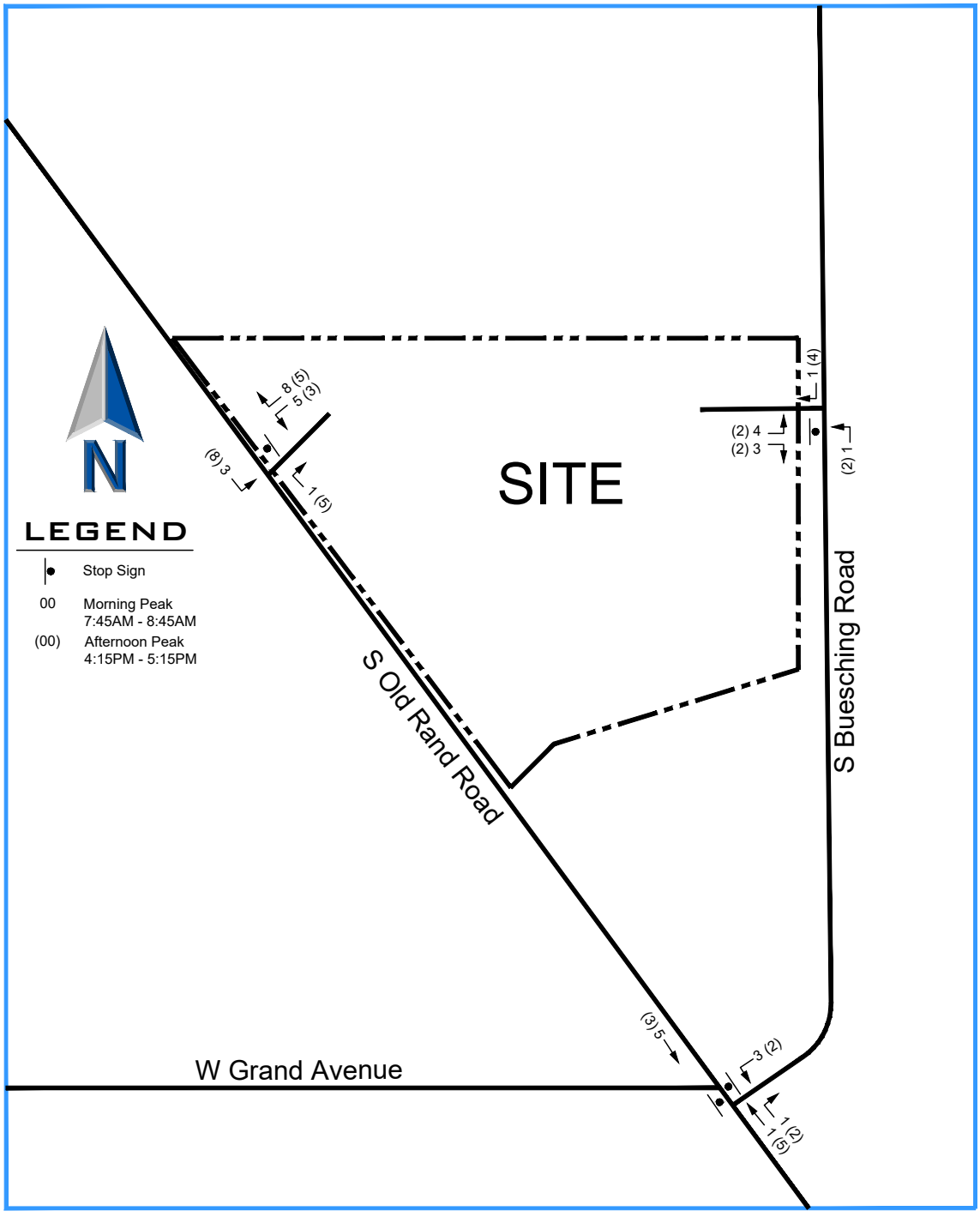
Directional Distribution

Figure 4



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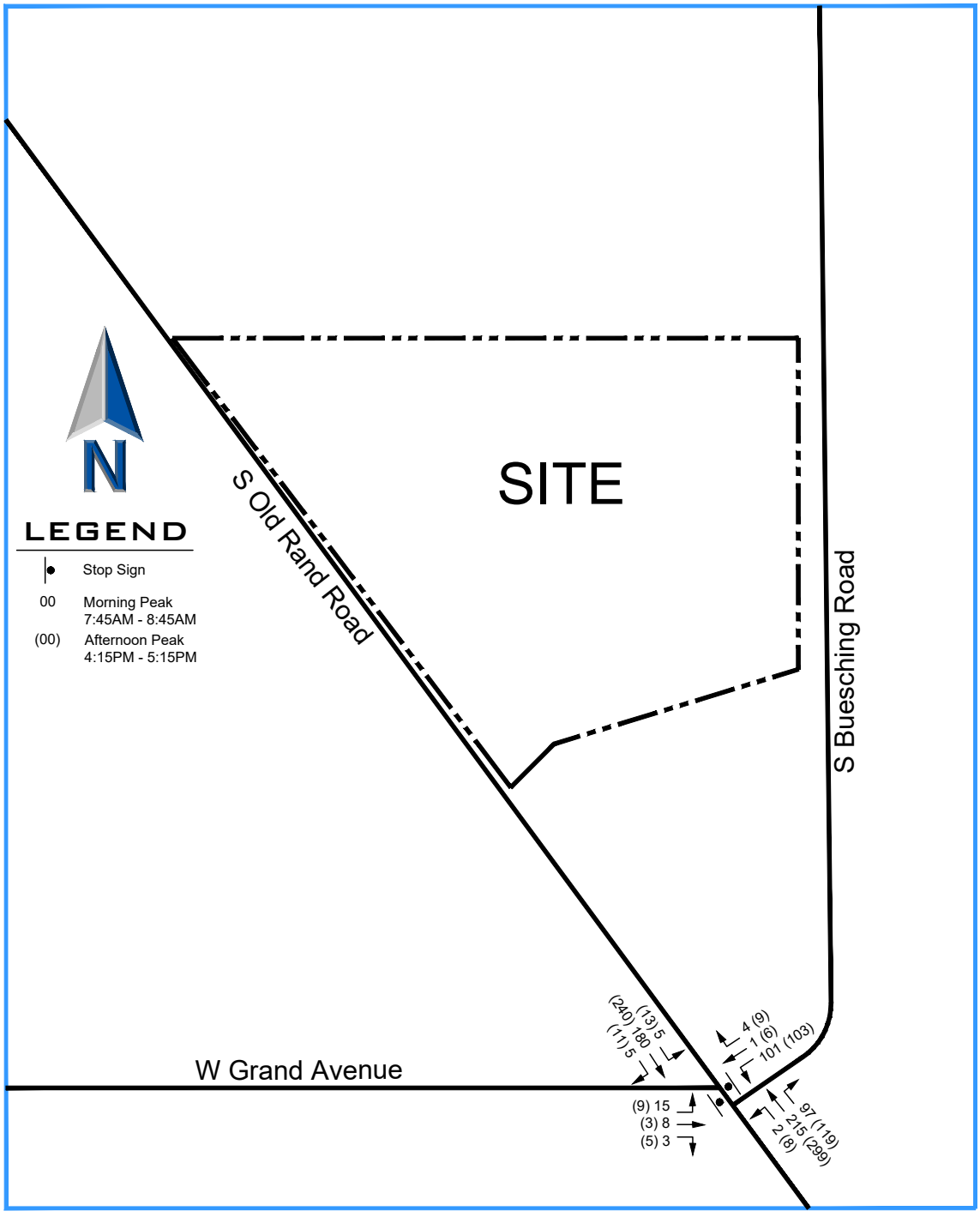
Site Traffic Assignment

Figure 5



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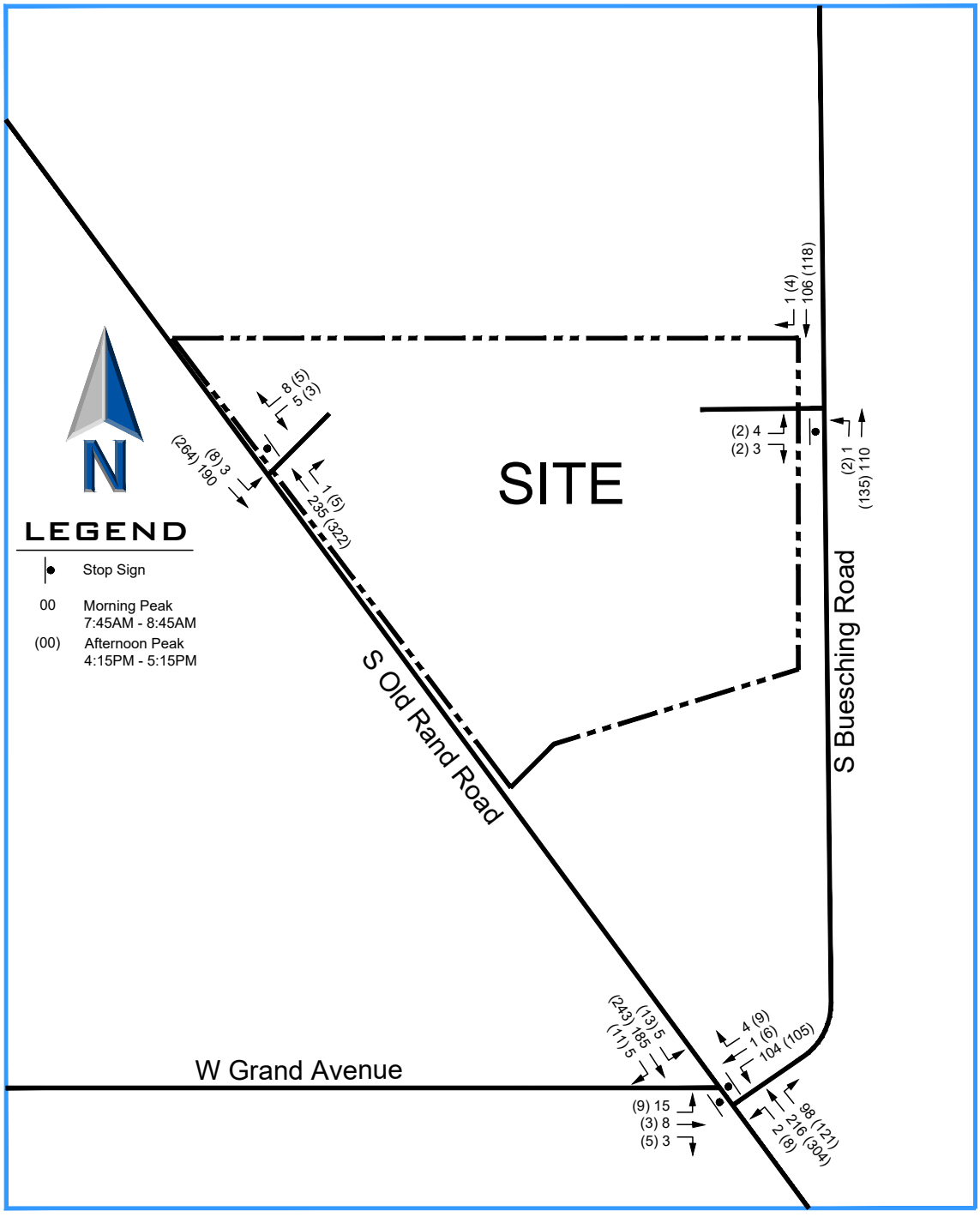
Year 2030 Volumes Without Site

Figure 6



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Year 2030 Total Traffic Volumes

Figure 7

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Appendix

- **Existing 2024 Traffic Counts**
- **CMAP Projection Letter**
- **ITE Trip Generation Calculations**
- **Intersection Capacity Analyses**
  - **2024 Existing Conditions**
  - **2030 Total Traffic Conditions**

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Old Rand Road at Grand Avenue/Buesching Road

Lake Zurich, Illinois															
	Old Rand Road Southbound			Buesching Road Westbound			Old Rand Road Northbound			Grand Avenue Eastbound			15 Minute Totals	60 Minute Totals	Peak Hour Factor
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn			
	Tuesday April 16, 2024														
7:00 AM	1	35	0	0	0	28	25	33	0	1	2	1	126	552	0.86
7:15 AM	0	39	2	1	2	34	33	26	1	2	1	2	143	594	0.88
7:30 AM	2	29	0	0	0	30	14	40	0	3	1	4	123	619	0.92
7:45 AM	1	44	3	0	1	22	21	55	1	1	4	7	160	**627**	**0.93**
8:00 AM	2	43	1	0	0	25	22	67	0	2	2	4	168	581	0.86
8:15 AM	0	46	0	1	0	26	34	56	1	0	1	3	168		
8:30 AM	2	45	0	2	0	27	19	34	0	0	1	1	131		
8:45 AM	2	28	2	0	1	17	24	30	2	2	2	4	114		
Total	10	309	8	4	4	209	192	341	5	11	14	26			
7:45-8:45 AM	**5**	**178**	**4**	**3**	**1**	**100**	**96**	**212**	**2**	**3**	**8**	**15**	**627**		
	Tuesday April 16, 2024														
4:00 PM	6	55	3	0	1	34	33	46	3	2	2	3	188	792	0.97
4:15 PM	2	58	4	1	1	24	32	70	3	2	0	5	202	**815**	**0.97**
4:30 PM	1	65	4	2	2	27	21	76	2	2	0	2	204	802	0.95
4:45 PM	5	55	4	4	0	22	34	68	3	1	1	1	198	794	0.94
5:00 PM	3	59	0	1	3	29	31	82	0	0	2	1	211	793	0.94
5:15 PM	3	52	3	2	1	20	38	63	3	1	0	3	189		
5:30 PM	3	48	4	1	0	31	25	71	7	2	0	4	196		
5:45 PM	4	55	4	0	1	24	27	78	2	0	1	1	197		
Total	27	447	26	11	9	211	241	554	23	10	6	20			
4:15-5:15 PM	**11**	**237**	**12**	**8**	**6**	**102**	**118**	**296**	**8**	**5**	**3**	**9**	**815**		

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
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April 10, 2024

Stephen B. Corcoran, PE, PTOE
Director of Traffic Engineering
Eriksson Engineering Associates
145 Commerce Drive
Suite A
Grayslake, IL 60030

Subject: Old Rand Road - Grand Avenue / Buesching Road
IDOT

Dear Mr. Corcoran:

In response to a request made on your behalf and dated 4/10/2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT (2019)	Year 2050 ADT
Old Rand Rd north of Buesching Road	8,900	9,450
Old Rand Rd south of Buesching Road	8,900	9,450
Buesching Road north of Old Rand Rd	2,550	2,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
s\2024_TrafficForecasts\LakeZurich\la-13-24\la-13-24.docx

TRAFFIC FORECAST RECORD

Record Number: la-13-24
Type of Report: Projection
Year Sought: 2050
Analyst: JAR
Organization Requestion Forecast: Eriksson Engineering Associates
Contact: Stephen B. Corcoran, PE, PTOE
Email or Phone: scorcoran@eea-ltd.com
Sponsor: IDOT
Date request was received: 4/10/2024
Date that response was emailed: 4/10/2024
Facility Location: Old Rand Road - Grand Avenue / Buesching Road
Municipality: Lake Zurich

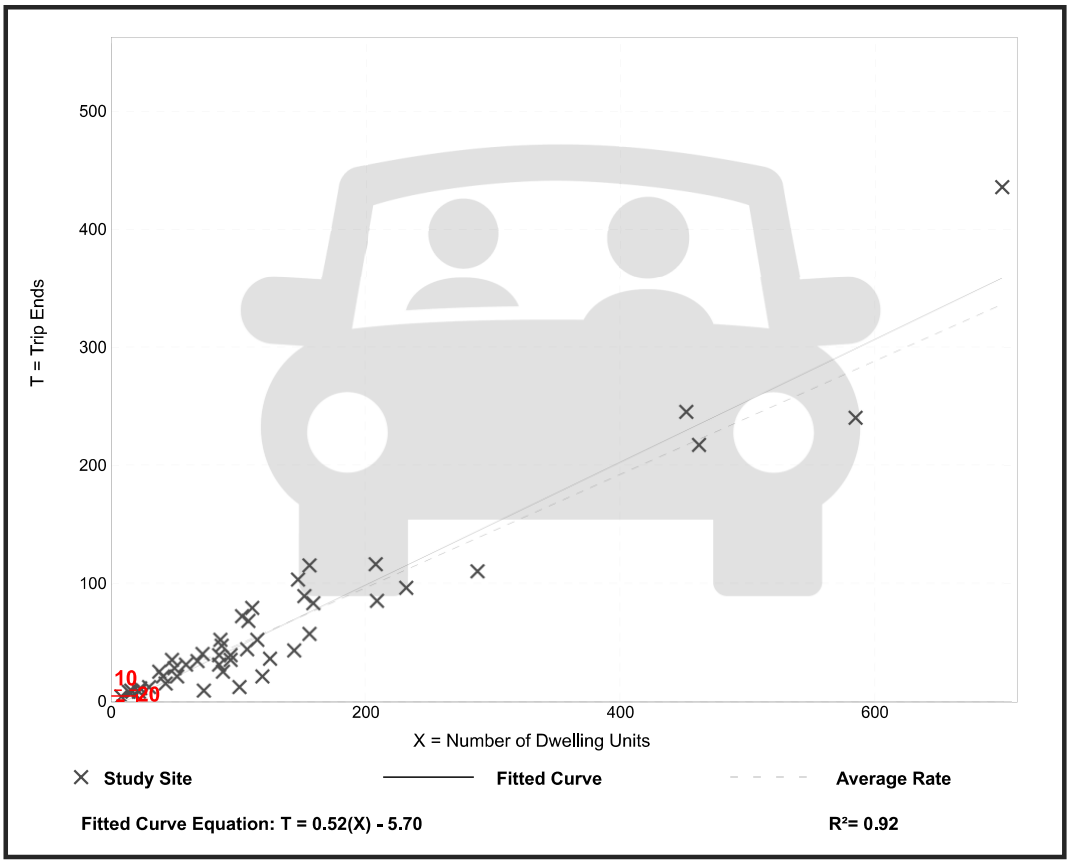
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Dwelling Units: 135
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



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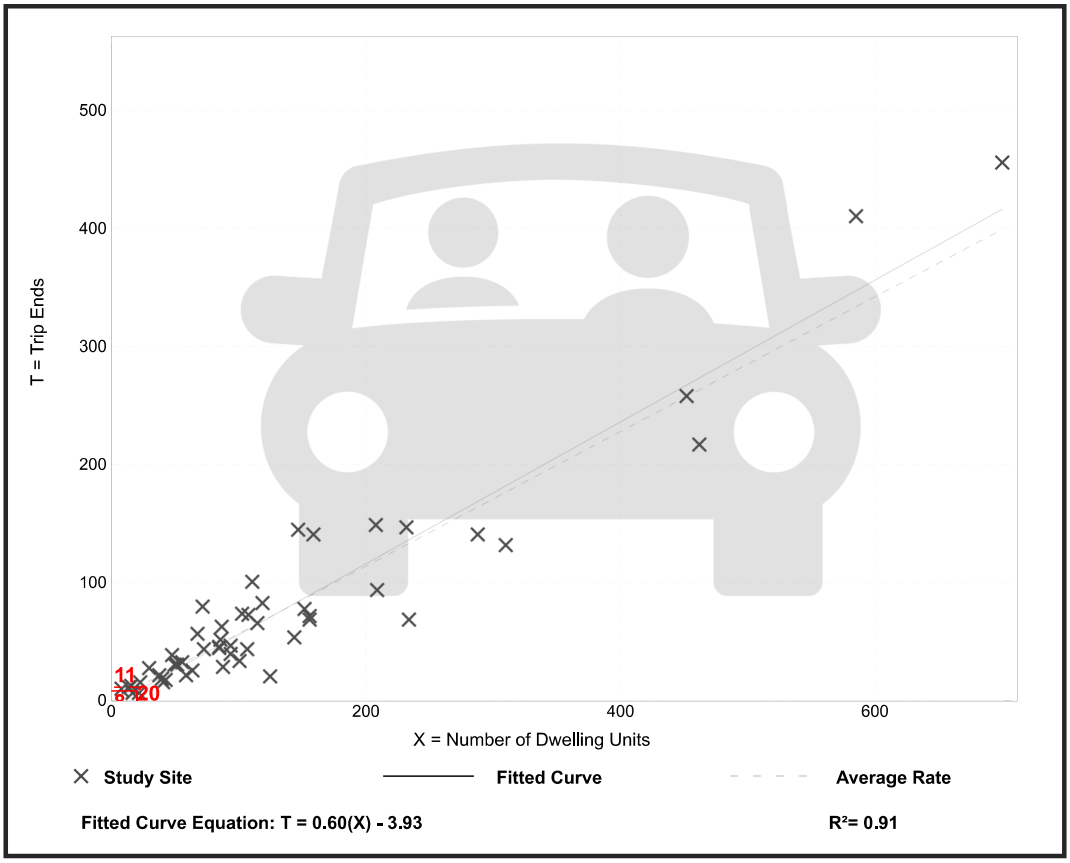
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



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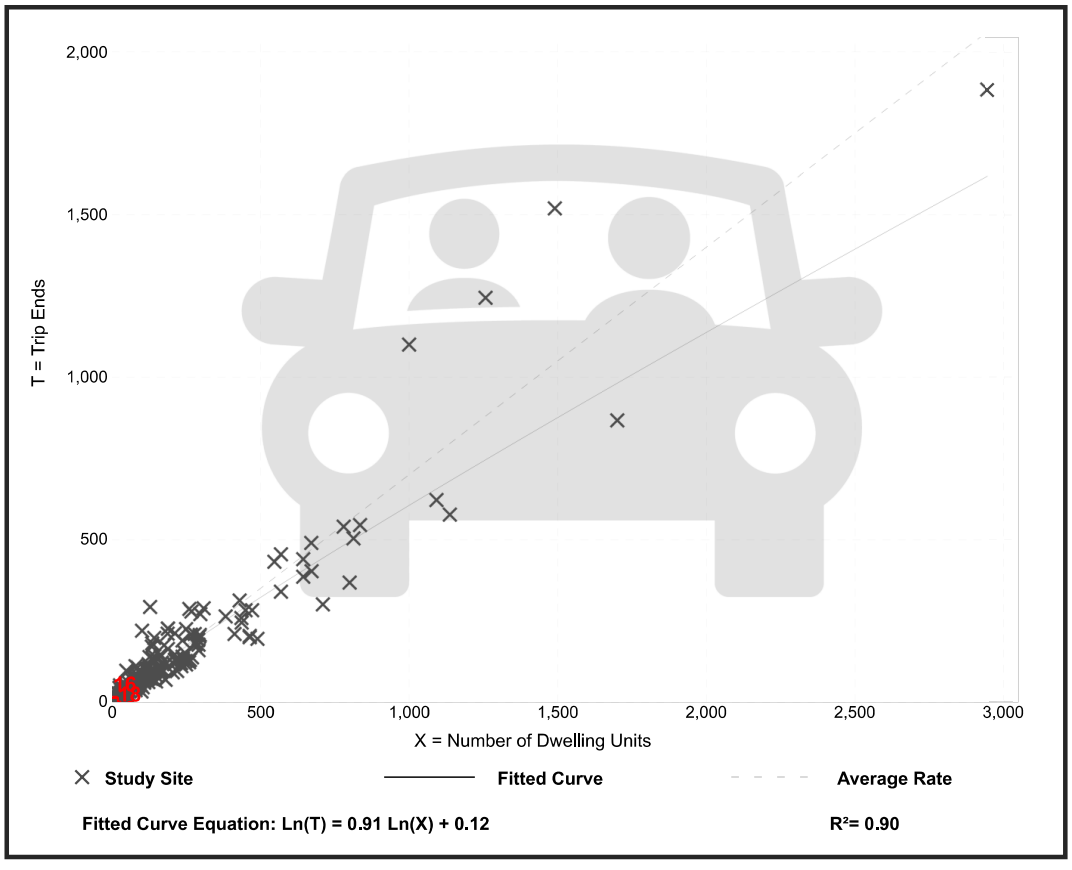
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	192
Avg. Num. of Dwelling Units:	226
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



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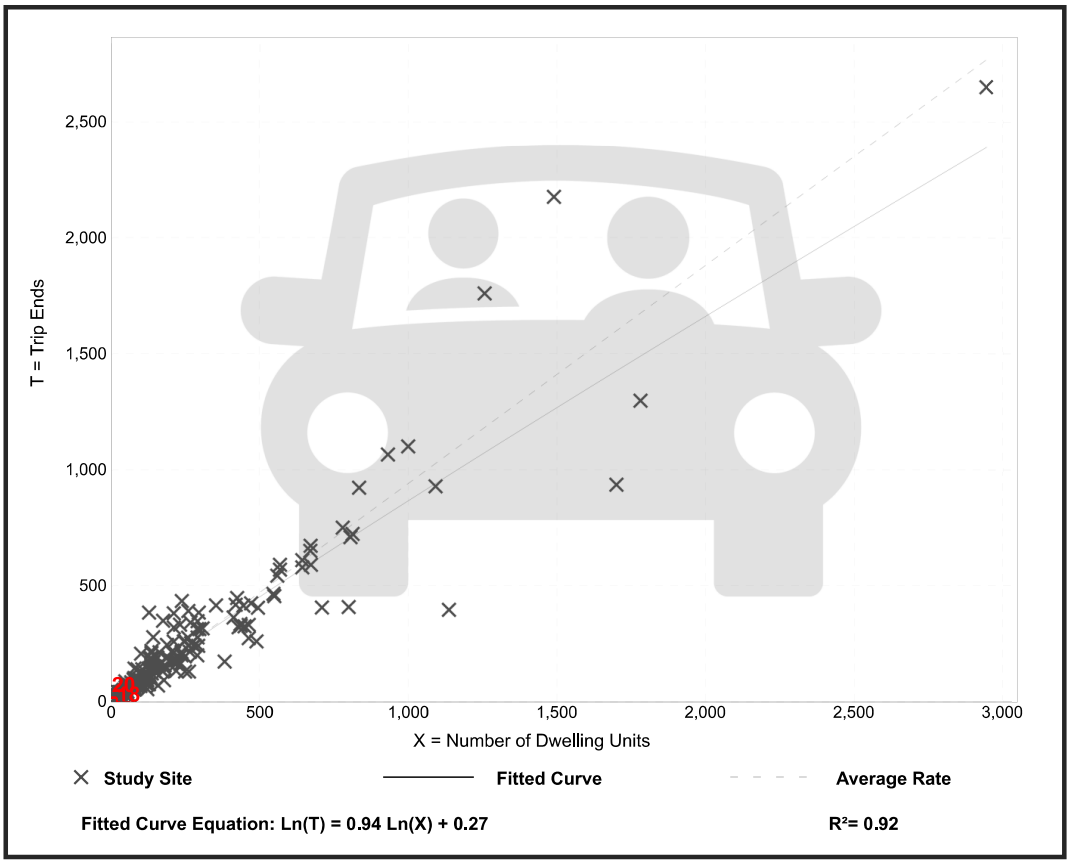
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



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HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/22/2024

Intersection												
Int Delay, s/veh	2.9											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	8	3	100	1	3	2	212	96	4	178	5
Future Vol, veh/h	15	8	3	100	1	3	2	212	96	4	178	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	9	3	108	1	3	2	228	103	4	191	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	488	537	194	440	436	228	196	0	0	331	0	0
Stage 1	202	202	-	232	232	-	-	-	-	-	-	-
Stage 2	286	335	-	208	204	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	488	449	845	526	512	809	1371	-	-	1223	-	-
Stage 1	798	732	-	769	711	-	-	-	-	-	-	-
Stage 2	719	641	-	792	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	483	446	845	514	509	809	1371	-	-	1223	-	-
Mov Cap-2 Maneuver	483	446	-	514	509	-	-	-	-	-	-	-
Stage 1	796	729	-	767	710	-	-	-	-	-	-	-
Stage 2	714	640	-	777	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	13.8	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	495	519	1223	-	-
HCM Lane V/C Ratio	0.002	-	-	0.056	0.215	0.004	-	-
HCM Control Delay (s)	7.6	0	-	12.7	13.8	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.8	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/22/2024

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	3	5	102	6	8	8	296	118	12	237	11
Future Vol, veh/h	9	3	5	102	6	8	8	296	118	12	237	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	3	5	105	6	8	8	305	122	12	244	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	663	717	250	599	600	305	255	0	0	427	0	0
Stage 1	274	274	-	321	321	-	-	-	-	-	-	-
Stage 2	389	443	-	278	279	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	373	354	786	412	413	732	1304	-	-	1127	-	-
Stage 1	730	681	-	689	650	-	-	-	-	-	-	-
Stage 2	633	574	-	726	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	359	347	786	400	405	732	1304	-	-	1127	-	-
Mov Cap-2 Maneuver	359	347	-	400	405	-	-	-	-	-	-	-
Stage 1	724	673	-	683	645	-	-	-	-	-	-	-
Stage 2	615	569	-	709	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	17.2	0.1	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1304	-	-	424	413	1127	-	-
HCM Lane V/C Ratio	0.006	-	-	0.041	0.29	0.011	-	-
HCM Control Delay (s)	7.8	0	-	13.9	17.2	8.2	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.2	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/23/2024

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	8	3	104	1	4	2	216	98	5	185	5
Future Vol, veh/h	15	8	3	104	1	4	2	216	98	5	185	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	9	3	112	1	4	2	232	105	5	199	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	503	553	202	454	450	232	204	0	0	337	0	0
Stage 1	212	212	-	236	236	-	-	-	-	-	-	-
Stage 2	291	341	-	218	214	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	477	440	836	515	503	805	1362	-	-	1217	-	-
Stage 1	788	725	-	765	708	-	-	-	-	-	-	-
Stage 2	715	637	-	782	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	471	437	836	503	499	805	1362	-	-	1217	-	-
Mov Cap-2 Maneuver	471	437	-	503	499	-	-	-	-	-	-	-
Stage 1	786	721	-	763	707	-	-	-	-	-	-	-
Stage 2	709	636	-	766	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	14.2	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1362	-	-	484	510	1217	-	-
HCM Lane V/C Ratio	0.002	-	-	0.058	0.23	0.004	-	-
HCM Control Delay (s)	7.6	0	-	12.9	14.2	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.9	0	-	-

HCM 6th TWSC
6: Old Rand Road & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	8	234	1	3	190
Future Vol, veh/h	5	8	234	1	3	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	9	252	1	3	204

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	463	253	0	0	253	0
Stage 1	253	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	555	783	-	-	1306	-
Stage 1	787	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	553	783	-	-	1306	-
Mov Cap-2 Maneuver	553	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1306	-
HCM Lane V/C Ratio	-	-	0.021	0.002	-
HCM Control Delay (s)	-	-	10.4	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM 6th TWSC
9: Buesching Rd & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	1	110	106	1
Future Vol, veh/h	4	3	1	110	106	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	3	1	120	115	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	238	116	116	0	-	0
Stage 1	116	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	750	936	1473	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	749	936	1473	-	-	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1473	-	819	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/23/2024

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	9	3	5	105	6	9	8	304	121	13	243	11
Future Vol, veh/h	9	3	5	105	6	9	8	304	121	13	243	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	3	5	108	6	9	8	313	125	13	251	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	682	737	257	616	617	313	262	0	0	438	0	0
Stage 1	283	283	-	329	329	-	-	-	-	-	-	-
Stage 2	399	454	-	287	288	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	363	345	779	401	404	725	1296	-	-	1117	-	-
Stage 1	722	675	-	682	645	-	-	-	-	-	-	-
Stage 2	625	568	-	718	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	348	337	779	389	395	725	1296	-	-	1117	-	-
Mov Cap-2 Maneuver	348	337	-	389	395	-	-	-	-	-	-	-
Stage 1	716	666	-	677	640	-	-	-	-	-	-	-
Stage 2	606	563	-	700	663	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	17.8	0.1	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1296	-	-	413	403	1117	-	-
HCM Lane V/C Ratio	0.006	-	-	0.042	0.307	0.012	-	-
HCM Control Delay (s)	7.8	0	-	14.1	17.8	8.3	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.3	0	-	-

HCM 6th TWSC
6: Old Rand Road & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	5	317	5	8	264
Future Vol, veh/h	3	5	317	5	8	264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	5	327	5	8	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	618	330	0	0	332	0
Stage 1	330	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	451	709	-	-	1222	-
Stage 1	726	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	447	709	-	-	1222	-
Mov Cap-2 Maneuver	447	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1222	-
HCM Lane V/C Ratio	-	-	0.011	0.007	-
HCM Control Delay (s)	-	-	10.8	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 6th TWSC
9: Buesching Rd & Site Access 04/23/2024

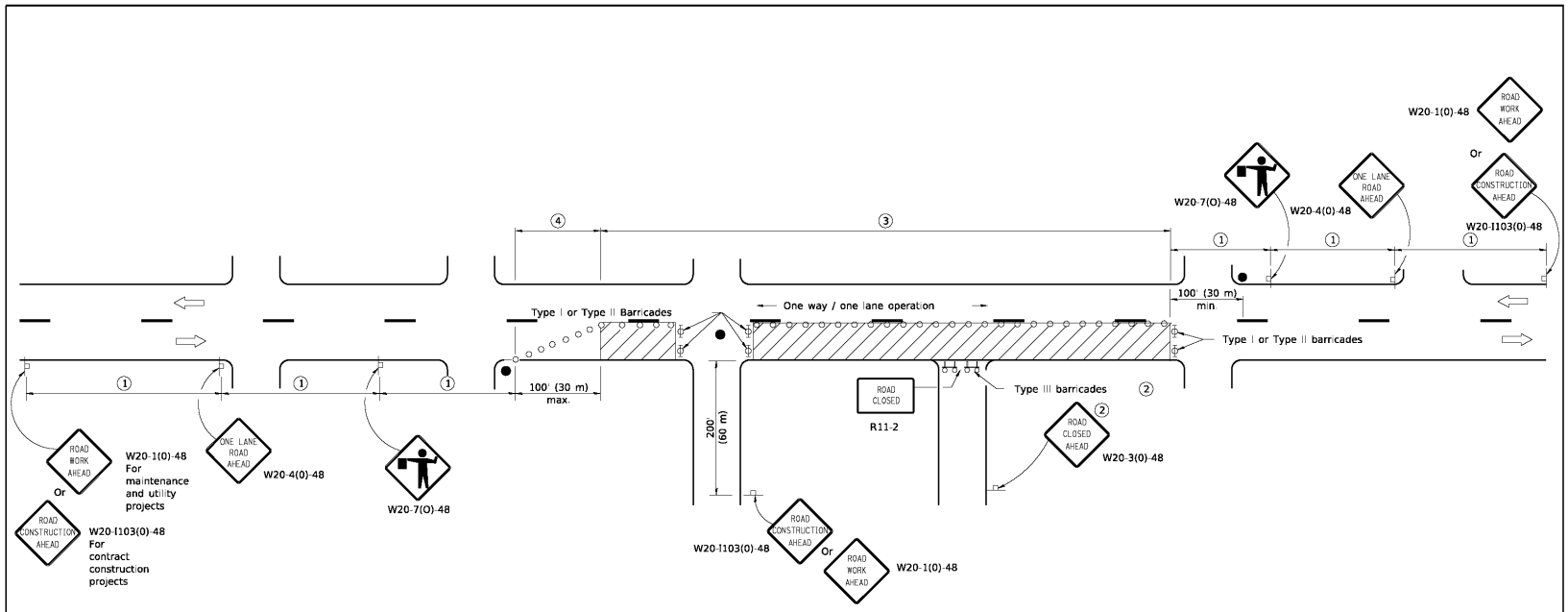
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	135	118	4
Future Vol, veh/h	2	2	2	135	118	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	2	2	139	122	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	267	124	126	0	-	0
Stage 1	124	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	720	924	1454	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	719	924	1454	-	-	-
Mov Cap-2 Maneuver	719	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	882	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1454	-	809	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

- Work area
- Cone, drum or barricade (not required for moving operations)
- Sign on portable or permanent support
- Flagger with traffic control sign
- Barricade or drum with flashing light
- Type III barricade with flashing lights

1. Refer to SIGN SPACING TABLE for distances.
2. For approved sideroad closures.
3. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
4. Cones, drums or barricades at 20' (6 m) centers.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2011
ENGINEER OF SAFETY ENGINEERING

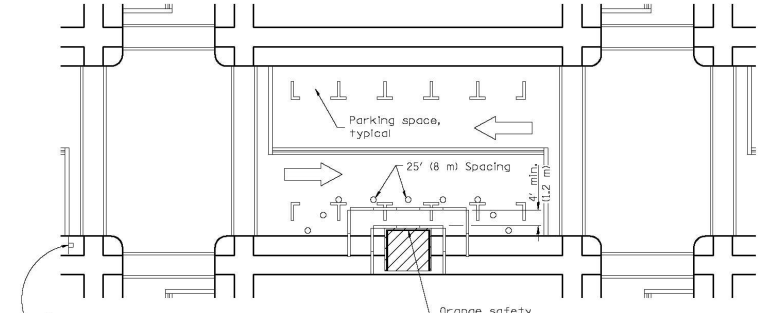
APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to
	English (metric).
	Corrected sign No.'s.

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

STANDARD 701501-06



① ROAD CONSTRUCTION AHEAD — W20-1103(0)-48 for contract construction projects

Or

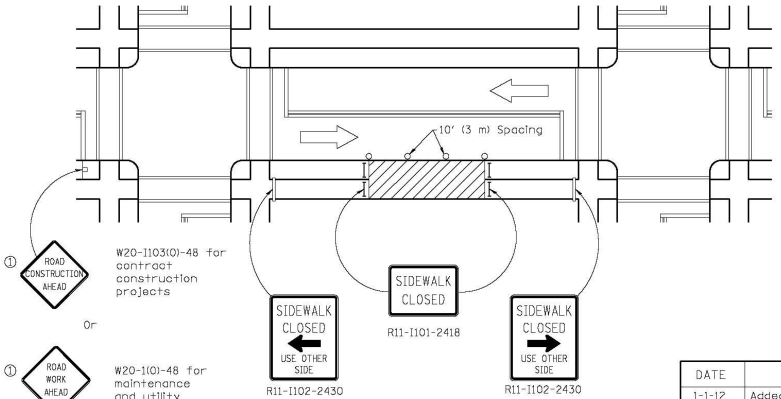
① ROAD WORK AHEAD — W20-1(0)-48 for maintenance and utility projects

SIDEWALK DIVERSION

① Omit whenever duplicated by road work traffic control.

SYMBOLS

- Work area
- Sign on portable or permanent support
- Barricade or drum
- Cone, drum or barricade
- Type III barricade
- Detectable pedestrian channelizing barricade



① ROAD CONSTRUCTION AHEAD — W20-1103(0)-48 for contract construction projects

Or

① ROAD WORK AHEAD — W20-1(0)-48 for maintenance and utility projects

SIDEWALK CLOSURE

GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2012
ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2012
ENGINEER OF DESIGN AND ENVIRONMENT

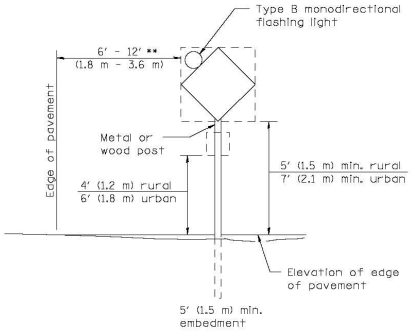
ISSUED 1-1-12

DATE	REVISIONS
1-1-12	Added SIDEWALK DIVERSION.
	Modified appearance of
	plan views. Renamed Std.
1-1-09	Switched units to
	English (metric),
	702001 to 701901.

SIDEWALK, CORNER OR CROSSWALK CLOSURE

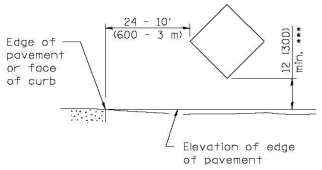
(Sheet 1 of 2)

STANDARD 701801-05



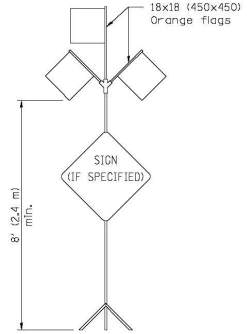
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



HIGH LEVEL WARNING DEVICE

G20-1104(0)-6036 G20-1105(0)-6024

This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

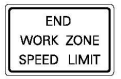
END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING

W21-1115(0)-3618
R2-1-3648
R10-1108p-3618 ****
R2-1106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

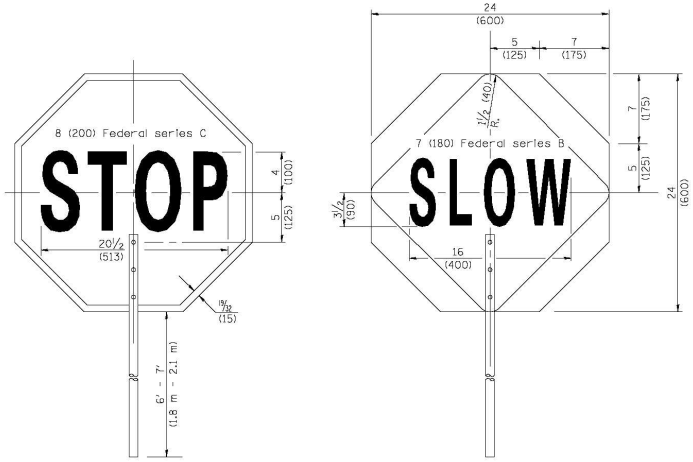


G20-1103(0)-6036

This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

**** R10-1108p shall only be used along roadways under the jurisdiction of the State.



FLAGGER TRAFFIC CONTROL SIGN

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF OPERATIONS

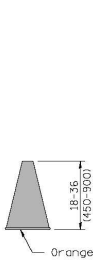
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

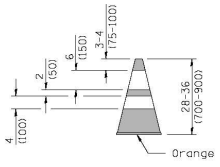
TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

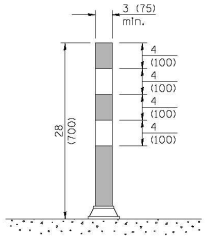
STANDARD 701901-04



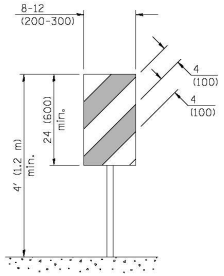
CONE



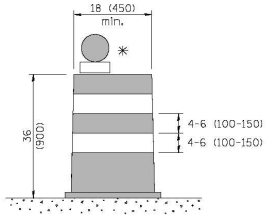
REFLECTORIZED CONE



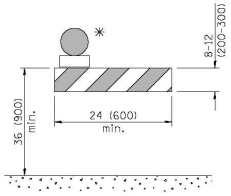
FLEXIBLE DELINEATOR



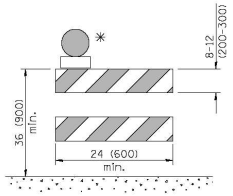
VERTICAL PANEL
POST MOUNTED



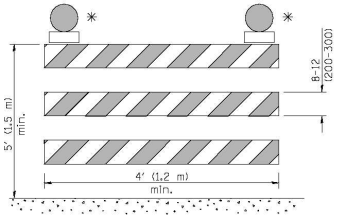
DRUM



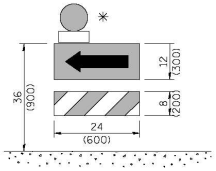
TYPE I BARRICADE



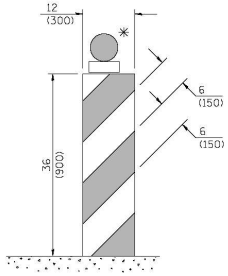
TYPE II BARRICADE



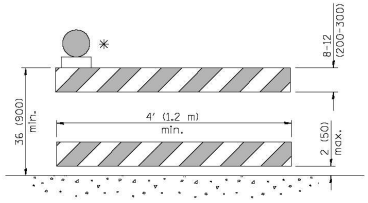
TYPE III BARRICADE



DIRECTION INDICATOR BARRICADE



VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

* Warning lights (if required)

GENERAL NOTES

All heights shown shall be measured above the pavement surface.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-15	Revised two sign numbers on sheet 2. Added note reg. PHOTO ENFORCED plaque.
1-1-14	Modified flagger sign height. Added highway construction speed zone signs.

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF OPERATIONS

APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-87

TRAFFIC CONTROL DEVICES

(Sheet 1 of 3)

STANDARD 701901-04

PARKS AND RECREATION DEPARTMENT

200 South Rand Road
Lake Zurich, Illinois 60047

(847) 438-5146
LakeZurich.org

At the Heart of Community

AGENDA ITEM 6g

MEMORANDUM

Date: July 7, 2025

To: Ray Keller, Village Manager RK

From: Bonnie Caputo, Recreation Director

Subject: Revised Special Event Road Closures for Lake Zurich Triathlon

Issue:

The annual Lake Zurich Triathlon has been approved by the Village Board and is scheduled to take place on Sunday, July 13, 2025 at Paulus Park. The revision on proposed resolution authorizes a request to the Illinois Department of Transportation to temporarily close the northbound right turn lane of Route 12 and the Southbound left turn lane of Route 12 onto eastbound Old McHenry Road from the hours of 6am – 1pm on July 13, 2025.

Analysis:

The Illinois Highway Code authorizes the Illinois Department of Transportation to issue permits to local authorities to temporarily close portions of State highways for such public purposes or needs as races, parades and local celebrations. During closure, the Village assumes full responsibility for direction, protection and regulation of the traffic and all liabilities for damages due by the closing.

Although the northbound and southbound turn lanes of Route 12 (onto eastbound Old McHenry Road) have historically been temporarily closed for the event, the new Director of the Lake County Department of Transportation is now requesting that this closure be formally included in the resolution approved by IDOT moving forward, as a requirement for issuing their permit.

Recommendation:

Approval of the attached resolution.

w/Attachments: Resolution for the Lake Zurich Triathlon

VILLAGE OF LAKE ZURICH

RESOLUTION No. 2025-07-103

LAKE ZURICH TRIATHLON ROUTE – 2025

WHEREAS, 10xEM,LLC is coordinating a Triathlon to be held on July 13, 2025 in the Village of Lake Zurich; and

WHEREAS, the triathlon will require the temporary closing of the following Highways in the Village of Lake Zurich;

A. Right northbound Lane of Route 12 (from Route 22 to Old McHenry Rd),
B. Northbound right turn lane of Route 12 onto eastbound Old McHenry Rd,
C. Southbound left turn lane of Route 12 onto eastbound Old McHenry Rd,
D. Southbound lane on Old Rand Road (from Route 12 to Main St),
E. Eastbound Milton Road (from Old McHenry Road to Fairfield Road),
F. Northbound lane on Fairfield Road (from Milton Road to Schwerman Road),
G. Eastbound lane on Schwerman Road (from Fairfield Road to Milton Road),
H. Westbound lane on Milton Road (from Schwerman Road to Fairfield Road),
I. Southbound lane on Fairfield (from Milton Road to Old McHenry Road),
D. Westbound lane of Old McHenry Road (from Fairfield Road to Echo Lake Road),
E. Right southbound lane of Echo Lake Rd (from Old McHenry Rd to Midlothian Rd),
F. Right southbound lane of Midlothian Rd (from Echo Lake Rd to Main St),
G. Right westbound lane of Main St (from Church St. to Route 22),
H. Right westbound lane of Route 22 (from West Main Street to Whitney Road)

WHEREAS, Section 4-408 of the Illinois Highway Code authorizes the Illinois Department of Transportation to issue permits to local authorities to temporarily close portions of State Highways for such public purposes or needs as parades and local celebrations;

NOW, THEREFORE, BE IT RESOLVED, by the President and Board of Trustees of the Village of Lake Zurich that permission to close the above routes between the hours of 6:00 am to 1 pm on Sunday, July 13, 2025 be requested of the Illinois Department of Transportation.

BE IT FURTHER RESOLVED, that if such permission is granted by the Illinois Department of Transportation, all highway traffic during the periods of time specified shall be re-routed over the following routes:

A. Traffic wishing to travel southbound on North Old Rand Road will continue southbound Route 12 to Route 22, traffic wishing to travel northbound on North Old Rand Road will continue westbound on Route 22 to Route 12,

B. Traffic wishing to travel eastbound on Old McHenry Road from northbound Route 12 will continue to Old Rand Road to Route 176 to Fairfield Road to Schwerman Road to Gilmer Road to Midlothian Road,

C. Traffic wishing to travel eastbound on Old McHenry Road from southbound Route 12 will continue Miller Road to Echo Lake Road

D. Traffic traveling northbound on Route 12 will merge at Route 22 to the left lane up to Old McHenry Road,

E. Traffic wishing to travel westbound on Old McHenry Road from Fairfield Road will continue northbound on Fairfield to Milton Road,

F. Traffic wishing to travel westbound on Route 22 will merge to the left lane at West Main Street and continue to Route 12.

BE IT FURTHER RESOLVED, that if such permission is granted by the Illinois Department of Transportation, to the extent required by Section 4-408 of the Illinois Highway Code, and without waiving its rights under other statutes, the Village of Lake Zurich assumes full responsibility for the direction, protection and regulation of the traffic affected by the detours during is in effect, as well as all liabilities arising from damages proximately caused by the closing of the State Highway, and if it is further agreed that efficient all weather detours will be maintained to the satisfaction of the Department and conspicuously marked for the benefit of traffic diverted from the State Highway.

BE IT FURTHER RESOLVED, that a copy of this resolution be forwarded to the Illinois Department of Transportation Traffic/Permit Section to serve as a formal request for the permission sought in the resolution.

ADOPTED by the President Board of Trustees of the Village of Lake Zurich, Illinois, this ___day of July, 2025, pursuant to a roll call vote as follows:

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of July, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

PUBLIC WORKS DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

(847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

AGENDA ITEM 6h

MEMORANDUM

Date: June 18, 2025

To: Ray Keller, Village Manager RK

From: Steven J. Paulus, Assistant Director of Public Works

Copy: Michael J. Brown, Director of Public Works

Subject: **Public Works Fleet Services Garage Floor Repairs**

Issue: The FY 2025 budget includes $50,000 for the repair and refinishing of the Public Works Department Fleet Services garage floors.

Background: The Lake Zurich Public Works Facility was opened in 1997 and contains two garage areas, the Vehicle Storage garage and the Fleet Services garage, which are used for repairing and maintaining the Village's fleet of vehicles and equipment. Based on the age and deteriorating condition of both garage floors, repairs and refinishing have been recommended in the Village's 2024 Community Investment Plan, beginning with the smaller area of Fleet Services.

Analysis: Requests for proposal were sent to seven qualified companies and posted on the Village website. Nine contractors surveyed the floors during on-site visits. Five contractors returned proposals.

Name of Contractor	Total Proposal
Garage Store	$31,290.00
American Garage Floor	$36,200.00
Industrious Garage	$54,000.00
Artlow Systems	$68,598.33
Tiles in Style	$80,364.00

Public Works staff has thoroughly reviewed all submitted proposals and is recommending accepting the second-lowest proposal from American Garage Floor Systems for $36,200.00. American Garage Floor provides a 15-year warranty on the floors versus a 5-year warranty that is being proposed with the low quote.

The Village has used American Garage Floor Systems on several projects, including repairing and refinishing the garage floors at the Police Department in 2024, and has found the company to be a competent and reputable contractor that has performed exceptional work.

Recommendation: Award a contract to American Garage Floor Systems for repair and refinishing of the Public Works Department Fleet Services garage floors in the amount not to exceed $39,800.00, including contingency.

W/Attachments:

1. Request for Proposal
2. Submitted Proposal

Request for Proposals

Public Works Department
Garage Floor Repairs and Coatings

Dated: May 14, 2025

Notice for Proposals
Village of Lake Zurich
2025 Public Works Garage Floors

Intent:

It is the intent of the Village of Lake Zurich ("Lake Zurich") to request proposals for garage floor repairs and coatings at the Lake Zurich Public Works Facility and award a contract to a primary contractor ("Contractor"), as further provided herein.

Proposal Due Date:

Proposals for the Work and related procedures described in Exhibit "A" will be received at the offices of:

Lake Zurich Public Works
Attention: Steve Paulus, Assistant Director
505 Telser Road Lake Zurich, IL. 60047

no later than 10:00 am on **Wednesday, May 1, 2024.** Proposals arriving after that time will not be accepted. Mailed proposals, which are delivered after the specified hour, will not be accepted regardless of postmarked time on the envelope. Electronic mail (email) proposals will be accepted.

Affidavit of Experience:

Bidders will submit a resume of similar projects performed, enumerated as to location, type of work, approximate completion date, together with a list of equipment owned by or available to the, for efficient pursuance of this project.

Waiver of Technical Deficiency/Rejection of Proposals:

The Village of Lake Zurich reserves the right to reject any or all proposals, or any part of a proposal, and/or to accept any proposal or any part of a proposal, or to waive any information or technical problems with or failure to strictly comply with the submittal requirements herein, when, in its discretion, the best interests of the Village will be served by such decision.

Location of the Work:

Lake Zurich Public Works Facility, 505 Telser Rd. within the boundaries of the Village of Lake Zurich, Il. 60047

Description of Work:

Furnish all necessary labor, materials, and equipment necessary for the repair and installation of a Polyaspartic floor coating listed with this document (the "Work") set forth in Exhibit "A" attached hereto.

Bid Security:

A Bidder's bond will not be required.

Entry into Contract:

The successful Contractor shall be bound by and within 15 calendar days of notification of selection as the successful contractor shall execute the Contract attached hereto as Exhibit "C" with the Village, including completion of those forms and certifications included herewith for the performance of the Work awarded the Contractor (the "Contract") and shall simultaneously provide the appropriate payment and performance bonds, indemnities, and insurance.

Work Schedule:

The Work shall be substantially completed by **October 31, 2025.**

INSTRUCTIONS TO CONTRACTORS

Contractors' Representations:

The Contractor has examined and carefully studied the proposal documents, and all other related data identified in these proposal documents. Submission of a proposal constitutes representation by the Contractor that these documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work described herein and which is the subject of this proposal and to formulate an appropriate and accurate proposal amount to complete the work. The Contractor is not allowed to withdraw any proposal due to any failure to request additional information, review these provisions or alleged misunderstanding of the terms and conditions herein.

Review of Proposal Notice:

Contractors shall be responsible for their prompt and complete review of this invitation to submit a proposal, and to notify the Village promptly of any ambiguity, inconsistency or error which they may discover upon examination of the proposal documents no later than **Monday, April 29, 2024.** Following any such notice, any needed interpretations, corrections and changes will be made by the Village by written addendum as may be deemed necessary.

Site Inspection:

There will be a site inspection on **Thursday, April 18, 2024** at 10:00 a.m. at the Lake Zurich Public Works Facility – Fleet Services, 505 Telser Rd, Lake Zurich, Illinois 60047.

Complete Proposal Submittal:

Any addenda or contract interpretations or clarifications made by the Village subsequent to the issuance of this Notice to Contractors will be provided to all Contractors that have registered in writing with the Village as an interested Contractor. Each Contractor shall then ascertain from the Village, prior to submitting a proposal, that the Contractor has checked with the Village for any and all addenda or written interpretations which may have been issued by the Village up to **Monday, April 29, 2024** and acknowledge that there were none or that if any were issued, they have been received and reviewed by the Contractor and are included and acknowledged in the bid being submitted.

The bid proposal must be typewritten or legibly completed in ink. Any erasures or revisions in the proposal must be initialed by the person signing the proposal. It will be the sole responsibility of the Contractor to ensure that his or her proposal is properly delivered at the address above on or before the deadline for proposal submissions set forth above.

Proposal Withdrawal:

Contractors may withdraw or cancel their proposal, by submitting a written withdrawal.

Proposal Price:

The Contractor shall provide pricing on the Proposal Form included in this Notice to Contractors per the specifications identified herein. The Contractors shall offer pricing for all of the items included on the Proposal Form. The Proposal Form includes base bid items and supplemental items for which the Village is requesting supplemental unit prices. As of this date, the Village cannot offer estimated quantities for the supplemental items. The supplemental unit prices will be utilized if the Village later determines items are needed.

CONTRACT AWARD

Base Proposal is the sum stated in the Proposal for which the Contractor offers to perform the work described in the proposal documents as the base, to which work may be added or from which work may be deleted for sums stated in Option Proposal/Alternate Proposals or Unit prices.

Contract Award shall mean the successful Contractor is bound by all of the terms and conditions of the Contract attached hereto as Exhibit "C" and includes the provisions herein of the Notice to Contractors, Instruction to Contractors, Contractors Award, General Conditions and certifications and forms referenced therein.

The Village of Lake Zurich will be the sole interpreter of all proposal documents, and reserves the right to make its own assessment of proposals received; to reject any and all proposals; to waive irregularities and technicalities in the proposals; to further negotiate details of the contract with the successful Contractor after award of the contract; and to award the contract to the lowest, responsive and responsible bidder for the performance of the work as set forth herein. The lowest responsive and responsible contractor shall mean that Contractor who best meets the requirements herein, including, but not limited to, financial capacity to perform, the experience, qualifications and reliability performing similar work that will reasonably assure good faith performance, and scheduling based upon the evaluation criteria specified herein.
Contractors are hereby notified that any exceptions to or variations from the requirements of this bid may be cause for rejection of a bid.

Contract:

The specifications and terms for award of this contract include all of those set forth in this Notice to Contractors, the Instructions to Contractors, the Contract Award and Terms, the Proposal Form, the Proposal Security Form and the contract attached hereto as Exhibit "C" (the "Contract"). The successful Contractor will be required to execute the Contract for the term specified in that contract and the successful bidder's submitted Bid Proposal Form will be attached to and incorporated into that Contract.

Discrepancies:

In all cases of discrepancies between the drawings and specifications, the Village of Lake Zurich's Public Works Department shall be immediately notified by the Contractor. The specifications shall govern over the drawings. If work proceeds without obtaining proper interpretations of the conflicting drawings and specifications by the Contractor, from the Village the installed work that is not in accordance with the design and best practices must be replaced at no additional cost. This obligation shall continue at all times leading up to the bid, as provided hereinabove and thereafter during the performance of the Work.

Deviations from Bid Terms:

If a proposal deviates in any respect from the terms and conditions herein, then each such deviation shall be stated and the substitution (including technical data when applicable) described in a letter attached to the proposal. The Village reserves the right to determine whether such substitutions or deviations are within the intent of the specifications and will reasonably meet the service requirements of the Village.

Competency of Contractor:

The Contractor, and its employees and its subcontractors, shall be fully qualified, licensed, trained and capable within their respective disciplines in accordance with applicable laws, regulations and industry standards. That equipment being utilized in the performance of the work, the Contractor, and its employees and its subcontractors, shall be their own equipment and tools of the trade, or under their control and Contractor and its employees and subcontractors shall be qualified and authorized to operate same.
If requested in writing by the Village, the Contractor must present within three (3) working days, satisfactory evidence of its ability and possession of the necessary facilities, experience, financial resources and adequate insurance to comply with the terms of its bid and this Notice to Contractor.

Additional Information:

Should the Contractor require additional information about this proposal, please submit questions via email, (with delivery & read receipt), to:

steve.paulus@lakezurich.org

Questions should be submitted no later than 3:00pm on April 29, 2024

Any and all changes to these specifications are valid only if they are included by written addendum from the Village of Lake Zurich to all Contractors. No interpretation of the meaning of the plans, specifications or other contract documents will be made orally. Failure of any Contractor to receive any such addendum or interpretation shall not relive the Contractor from obligation under this bid as submitted. As indicated above, prior to submitting its bid, any Contractor must check with Village, up to the timeline set forth above, to determine if any addenda of interpretation have been issued.

All addenda or interpretation so issued shall become part of these proposal documents. Failure to request an interpretation from the Village constitutes a waiver to any later claim that ambiguities or misunderstandings caused a Contractor to improperly submit a proposal.

Contact with Village personnel:

All Contractors are prohibited from making any contact with the Village Mayor, Trustees, or any other official or employee of the Municipality (collectively, "Village Personnel") with regard to the project, other than in the manner and to the person(s) designated herein. The Village Manager reserves the right to disqualify any Contractor found to have contacted Village Personnel in any manner with regard to the project. Additionally, if the Village Manager determines that the contact with Village Personnel was in violation of any provision of 720 ILCS 5/33EE, the matter will be turned over to the Lake County State's Attorney for review and prosecution.

GENERAL CONDITIONS

Performance:

Upon the Village's receipt of the executed contract, required bonds and certificate of insurance, the Village will issue and send to the contractor a Notice to Proceed, that will start the performance period.

Certifications:

All proposal submittals must include a signed Proposal Certification Form (**copy attached, page 8**) certifying non-collusion in the proposal, and that the contractor is in compliance with Sections 33E-3 and 33E-4 of the Illinois Criminal Code regarding bid rotating and bid rigging (720 ILCS 5/33E-3 and 5/33E-4); compliance with the Illinois Drug Free Workplace Act (30 ILCS 580/1 *et seq.*; that it is not delinquent in the payment of taxes (65 ILCS 5/11-42.1); and that it has a written sexual harassment policy in place in full with the Illinois Human Rights Act (775 ILCS 5/2-105, as amended).

References:

Contractors shall provide references that demonstrate their ability to perform services identified herein. Please include on the reference sheet current and/or previous municipalities you have provided services for within the last five (5)years. Submissions shall include, at a minimum, three (3) references that indicate the contractor's ability to successfully perform similar work within the last five (5) years.

EXHIBIT A
DESCRIPTION OF WOR AND WORK PROCEDURES

Scope of work:

Three areas within the Police Facility to be completed. The submitted proposal shall be broken down by the following locations:

1. Fleet Services Garage, approximately 5000 square feet.
2. Two work areas attached to the main garage floor, approximately 550 square feet.
3. Two offices attached to the main garage floor, approximately 100 square feet each.

1. Removal existing floor coatings, overlay, or any other materials that may exist.
2. Diamond grind entire floor surface a minimum of 1/16".
3. Any and all measures must be taken to guarantee proper bonding.
4. Prepare, clean and fill any existing cracks, chips or divots in the concrete.
5. Install polyaspartic flooring technologies only.
6. Apply tinted primer.
7. Apply base coat.
8. Apply chip blend into base quote.
9. Apply clear coat.
10. Apply anti-slip into top coat.

Contractor Submittals:

Prior to beginning the Work, the Contractor shall provide a list of contacts including the name and phone number of the Project Manager, each crew leader, and an emergency contact who shall be available 24-hours a day, 7 days a week. Following the award of this contract and prior to starting work, the Contractor shall furnish to the Village a progress schedule or critical path schedule satisfactory to the Assistant Director of Public Works which shall show the proposed sequence of work and how the Contractor proposes to complete the work prior to the completion date(s) specified herein.

Field Modifications:

A field modification is written by the Village to the Contractor for purposes of clarification of the specifications or plans.
A field modification is limited to items that do not change the scope of the Work.
Field modifications do not affect either the project cost or completion date.
Field modifications become part of the contract agreement and become binding upon the Contractor if he fails to object within three (3) working days after receiving the modification. A field modification may be used as the basis of a project cost change or contract extension if all parties agree on the field modification form to a potential future claim of either party, or that the field modification will be compiled with, butunder protest.

Protection of Work:

The Contractor shall be responsible to provide personnel to protect their work from third party damage. Should any of the new work be damaged, it shall be removed and replaced at the Contractor's expense.

Restoration:

Restoration of areas adjacent to the proposed improvements, not identified for additional work, shall be incidental to all pay Items.
Restoration includes all the landscape, driveway pavements, sidewalk, or pavement restoration within 2 feet of improved areas, unless otherwise determined by the Village. Any damage due to negligence of the Contractor or deemed necessary by the Village will be restored at no additional cost to the Village. Restoration must be completed to the satisfaction of the Assistant Director of Public Works. The Assistant Director of Public Works may request restoration not satisfactorily completed to be removed and replaced at no additional cost to the Village.

Work Schedule:

The Contractor shall coordinate directly with the Assistant Director of Public Works (or his/her designee) for the Village to schedule the work. The Contractor shall notify the Village no less than 72 hours prior to the start of any work.

Work Site Precautions and Safety:

Contractor shall be responsible for and take all necessary and proper safety precautions to protect from accident or injury, all persons, including its employees and its subcontractors' employees, who may be at or on the premises where the work is being performed.

PROPOSAL FORM

To: Lake Zurich Public Works
Attention: Steve Paulus, Assistant Director
505 Telser Road Lake Zurich, IL. 60047

From:

Contractor	Address (City, State, Zip)
Phone Number	Email
Contractor's Contact for Bid	Additional Contact information

Having carefully examined the terms set forth in the Notice to Contractor, Instructions to Contractors, Contract Award, General Conditions, Contract and Description of the Work and Procedures and having thoroughly examined the probable work conditions at the work sites/locations and pertinent areas adjacent thereto, the undersigned Contractor acknowledges the same to be accurate and complete insofar as the Work to be performed and related work details are concerned, the undersigned Contractor agrees to furnish all labor, materials, equipment, tools and services or whatever else is required for the Work as set forth in the **2025 Contract Documents for Public Works Facility Garage Floor Repair and Coatings**

The undersigned Contractor further agrees to execute a Contract for this Work and present the same to the Village within ten (10) calendar days after the date of written notice of the award of the Contract to the Contractor.

Upon award of the Contract, the Village will send a Notice of Award to the successful Contractor and the Contractor must then execute the Contract and provide the required bonds or letter of credit and certificate of insurance to the Village within ten (10) business days. The Village will then issue a written Notice to Proceed and Contractor will thereafter shall commence Work not later than ten (10) calendar days thereafter and, unless otherwise provided, will diligently prosecute the Work in such manner and with such materials, equipment, and labor as will ensure its completion within the time limit specified herein, it being understood and agreed that the completion within the time limit is an essential part of the Contract. In case of failure to complete the Work within the time stated herein, the undersigned agrees that the Village shall withhold from such sums as may be due him under the terms of this Contract the costs of additional engineering and observation, maintenance of detours, interest, and other items incurred by the Village resulting from the failure of the Contractor to complete the Work within the time specified in the Contract.

The undersigned Contractor agrees to complete the Work by **October 31, 2025** unless granted additional time in writing by the Village.

It is hereby agreed that, should Contractor be awarded the Contract for services contemplated under this bid and fail or refuse to execute a Contract for the performance of said Work, or to provide the required payment and performance bonds, or letter of credit, and certificate of insurance, then this security, in the amount stipulated above, shall be forfeited and may be retained by the Village of Lake Zurich as liquidated damages and not as a penalty. All proposals are to remain firm for a period of ninety (90) days after the submission date.

If this Proposal is accepted and the undersigned Contractor fails to execute a Contract as required herein, it is herebyagreed that the amount of the check or draft shall become the property of the Village and shall be considered as payment of damages due to delay and other causes suffered by the Village because of failure to execute said Contract or Contract Bond; upon the undersigned Contractor properly executing a Contract and furnishing a Contract Bond, said check or draft shall be returned to the undersigned.

The undersigned Contractor submits herewith his schedule of prices covering the work to be performed under the Contract; The Contractor understands that it must show in the schedule the unit prices, where applicable, for which the Contractor proposes to perform each item of work; that the extension must be made by Contractor and that if not so done, his Proposal may be rejected as irregular.

The Contractor hereby submits a proposal on all items and has provided a price for all requested services. The Bidder acknowledges it understands all the requested services for which it has submitted a bid. The undersigned proposes to furnish all labor, materials, tools, equipment and perform all necessary requirements for the work for repair and coating of polyaspartic floor with the attached conditions and specifications, and at the terms and schedule prices herein given:

Base proposal for furnishing all labor, materials, floor leveling, equipment, and other incidentals necessary for the preparation, repair and installation of a polyaspartic coating on the Public Works Facility garage floors. As per the attached plan.

$_____

_____	_____
Company Name	Address (City, State, Zip)
_____	_____
Phone Number	Business Address
_____	
Email	

Submitted	**Bidder**
_____	_____
Date	Corporate Name
_____	_____
Business Address	Corporate Seal
_____	_____
Phone Number	Signed By
_____	_____
Attest: Secretary	President

EXHIBIT C

CONTRACT

THIS AGREEMENT (the "Contract") is hereby entered into by and between the Village of Lake Zurich, an Illinois municipality (the "Village"), and _____, an _____, located at _____ Illinois, (the "Contractor").

1. **Contract**
   - **a.** The Agreement between the Village and the Contractor shall include all of the following shall be bound by the terms and conditions of this Contract, the bid documents and exhibits:

     i. This Contract documents
     ii. The Notice to Bidders
     iii. The Instructions to Bidders
     iv. The Bid Award
     v. The General Conditions
     vi. The Description of Work and Procedures (**Exhibit A** hereto)
     vii. The Bid Proposal Form (**Exhibit B** hereto)

2. **Performance of the Work**
   - **a.** A description of the work to be performed, and related procedures, are attached hereto as Exhibit A (the "Work").
   - **b.** The Contractor is solely responsible for safety at its Work sites and shall exercise every precaution at all times for the protection and safety of persons and properties, including its employees and subcontractors. The safety provisions of all applicable laws and regulations shall be strictly observed. Any hazardous practice, in the opinion of the Assistant Director of Public Works or his authorized representative, shall be immediately discontinued by the Contractor upon receipt of instructions from the Assistant Director of Public works or an authorized representative to discontinue such practice.
   - **c.** The performance of services under the Contract includes the furnishing of all supervision, labor, materials, tools, equipment and incidentals of every kind and description necessary to fulfill the Contract.
   - **d.** The performance of services shall be subject at all times to inspection by the Village or its inspectors, and the Contractor will be held strictly to the diligent execution of the Contract. The Village or its inspectors shall be furnished with such information and assistance by the Contractor as may be required to make a complete and detailed inspection. Work, services or materials not in compliance with the Contract may be rejected by the Village, and even if the Contractor deems them complete, shall be performed again by the Contractor at no expense to the Village.
   - **e.** The Contractor shall provide an adequate number of competently trained personnel with sufficient supervision to perform the services required, and the Contractor shall provide identification of its personnel if requested by the Village. Any Contractor's employee or representative whose employment is reasonably detrimental or objectionable to the Village shall be transferred immediately from the work site upon the Village's request. The exercise of this option shall not be construed as placing the Village in charge of the performance of the services required under the Contract, or as making the Village responsible for safety. All tools or equipment required to carry out the operations within the scope of the Contract shall be provided by the Contractor, and shall meet the standards of OSHA and the State of Illinois safety codes as may be applicable and required by law. The Village reserves the right to inspect the equipment that will be used prior to the award of the contract or during the execution of the Work.

f. The Contractor shall, prior to commencement of services, provide in writing to the Village, the names of all job supervisors. At least one such supervisor to whom the Village representative may issue directives shall, at all times, be at the job site. Such person shall be fluent in the English language.

3. Quality of Work

a. The Contractor represents and certifies that the Work shall be performed in accordance with the generally accepted industry standards and standards of professional practice, care and diligence practiced by recognized firms in performing services of a similar nature in existence at the time of performance. All Work shall be performed in a reasonably prompt manner.

b. The Contractor represents that its employees, agents and subcontractors currently hold, and shall maintain throughout the term of this Contract, all required licenses, permits and certificates, and have duly registered and otherwise complied in all respects with any applicable federal, state and local laws, regulations and ordinances applicable to their performance of the Work required by the Contract.

c. The Contractor shall provide adequate personnel necessary to complete the Work. The Contractor shall have no claim for damages and shall not bill the Village for additional time and materials charges as the result of any portion of the Work which must be duplicated or redone due to staff or employee termination or loss or for any delay or extension of time in performing the Work as a result of any such termination or loss.

d. All Work performed under any subcontract shall be subject to all terms of this Agreement in the same manner as if performed by employees of the Contractor. Every subcontract that the Contractor enters into in regard to the performance of the work under this Agreement shall include a provision binding the subcontractor to all of the terms of this Agreement.

e. Contractor warrants to the Village that all materials furnished under this Contract shall be new and of the most suitable grade for the purpose intended and that all work shall be of good quality, free from faults and defects and in conformance with the Contract and bid documents. Prior to final completion, Contractor shall deliver to the Village all warranties required under the Contract and proposal documents, or to which Contractor is entitled from manufacturers, suppliers, and Subcontractors. Unless otherwise provided, all warranties for products and materials incorporated into the work shall begin on the date of substantial completion and remain in effect for a period of one (1) year. No payment under this Contract by the Village shall constitute an acceptance of work not done in accordance with contract documents or relieve the Contractor or its sureties of liability with respect to any warranties or responsibilities for faulty or defective materials and workmanship.

f. Contractor warrants that the work shall be done in a workmanlike manner in strict accordance with the Contract documents and guarantees that the labor and material will be free of defects for the period stated in the Contract documents, but in no event less than one (1) year from the date of substantial completion.

4. Quantity of Work

a. The quantities identified herein are estimated quantities. The Village does not guarantee any specific amount and shall not be held responsible for any deviation. This Contract shall cover the Village's requirements whether more or less than the estimated amount.

b. The Village reserves the right to increase and/or decrease quantities, whatever is deemed to be in the best interest of the Village.

c. The Contractor shall maintain books, records, documents and other evidence directly pertinent to performance of the Work under this Contract. The Contractor shall also maintain the financial information and data used by the contractor in the preparation or support of any cost submissions required under this subsection. In the case of all other subcontracts, the Contractor also agrees to include access to records as specified above in all his contracts. In addition, those records which relate to any dispute or litigation or the settlement of claims arising out of the performance of the work, costs or items to which an audit exception has been taken, shall be maintained and made available for three years after the date of resolution of such dispute, appeal, litigation or claim. Contractor shall allow the Village to inspect and audit all data and records of the Contractor for work done pursuant to this Contract. The records shall be maintained and made available to the Village at reasonable times.

5. Correction of Work

a. If any errors, omissions or acts, intentional or negligent, are made by the Contractor, and its employees and its subcontractors, in performing the Work, the correction of which requires additional Work, the Contractor shall be required to perform such additional Work as may be necessary to remedy same without undue delay and without any cost to the Village.

b. In case of default by the Contractor, the Village may procure the services from other sources and may collect against the bond or surety for excess costs so paid or take any other action at law or equity in order to be made whole.

6. Contractor Representative

a. The Contractor shall designate a person who shall be available during normal business hours (Monday through Friday from 8:00 a.m. to 5:00 p.m.) and who shall serve as the Contractor's primary authorized representative during the performance of the Work. This "Representative" shall be readily available to respond to communications from the Village and shall be primarily responsible for performing the work under the Contract.

b. The Representative shall receive requests from the Village to perform the work and shall have full authority to execute the directions of the Village, without delay, and promptly supply any necessary labor, equipment or incidentals to do so.

c. The Contractor also shall provide the Village with the name and phone number of the Representative who, in the case of an off-hour's emergency, shall be readily accessible and available for quick response to perform an inspection request or a plan review. The Contractor shall immediately notify the Village in writing of any change in the identity and telephone number of the Representative. If the Representative fails to perform the Services to the satisfaction of the assistant Director of Public Works, or his/her designee, then the Contractor shall immediately replace the Representative with a new person with comparable experience and knowledge.

7. Compensation and Method of Payment

a. The Village agrees to pay for any requested, fully completed and accepted Work rendered by Contractor in accordance with this Agreement.

i. The Contractor shall submit invoices to the Village upon project completion.

ii. The Village agrees to make payments to Contractor in compliance with the Local Government Prompt Payment Act (50 ILCS 505).

iii. The Schedule of Prices shall remain firm/fixed throughout the term of the Contract.

b. Contractor shall, at its sole cost, pay all other expenses related to the performance of this Contract and the Work, including, but not limited to, out-of-pocket expenses such as travel, printing, reproduction, mailing, insurance premiums, licensing fees, fuel, overhead, administrative costs, delivery charges, and all costs associated with the acquisition and maintenance of vehicles and equipment.

c. The amounts set forth in the Fee Schedule include all applicable federal, state and Village taxes of every kind and nature applicable to the work, as well as all taxes, contributions and premiums for unemployment insurance, employment benefits or similar benefits, and all costs, royalties and fees arising from the use on, or the incorporation into, the work, of patented or copyrighted equipment, materials, supplies, tools, appliances, devices, processes or inventions. All claims or rights to claim additional compensation by reason of the payment by Contractor of any such tax, contribution, premium, cost, royalty or fee are the sole responsibility of the Contractor, and any claim or demand from any person that the Village pay such taxes, contributions, premiums, costs, royalties or fees are waived and released and shall be indemnified by the Contractor.

8. Claims in Addition to Contract Amount

a. The Contractor is required to provide written notice to the Village of any claim for additional compensation as a result of action taken by the Village, within fifteen (15) calendar days after the occurrence of such action.

i. The Contractor acknowledges and agrees that such written notice shall not be deemed or interpreted as entitling the Contractor to any additional compensation. Any changes to the compensation fixed in this Contract shall be valid only upon written amendment signed by both the Village and Contractor.

b. Regardless of the decision of the Village relative to a claim submitted by the Contractor, the Contractor shall proceed with all of the work required to complete the work under the Contract, as determined by the Village, without interruption or delay.

c. The Contractor acknowledges and agrees that in no event shall the Village be liable for any fees or costs incurred by the Contractor in connection with any work provided by the Contractor that are outside of, or exceed, the scope of this Contract, regardless of whether such fees or costs are requested or directed by the Village, except upon the prior written consent of the Village.

d. When a change order is required, such an order must be approved by the Village prior to execution and comply with the requirements of Illinois law, including Section 33E-9 of the Criminal Code regulating change orders. 720 ILCS 5/33E-9 A written change order must be formally issued by the Village prior to commencing any additional work covered by such order. Work performed without proper authorization shall be at the Contractor's sole risk and expense.

9. Insurance Requirements

a. Contractor shall provide, for the duration of the Contract, insurance against claims for injuries to persons or property damage which may arise from or related to the performance of the Work by the Contractor, his agents, representatives, employees, or subcontractors.

b. The Contractor shall not commence work until the Contractor has provided all insurance required by the Contract. The Contractor shall purchase and maintain, throughout the duration of the contract, insurance as is appropriate for the work being performed and furnished and shall provide protection from claims which may arise out of or result from the Contractor's performance and furnishing of the Work and the Contractor's other obligations under the Contract documents, whether it is to be performed or furnished by the Contractor, by any subcontractor, by anyone directly or indirectly employed by them or by anyone for whose acts any of them may be liable.

c. Insurance required by this Section shall be written with a company having at least an "A" Property-Casualty Rating, as listed in the most recent published A. M. Best's Insurance Guide.

d. The Village shall be named as additional insured except for Workmen's Compensation insurance. The coverage afforded shall be primary and non-contributory for the additional insured with respect to claims arising out of operations performed by or on behalf on the Contractor. If the additional insured has other insurance which is applicable to the loss, such as other insurance shall be on an excess or contingent basis. The amount of the Contractor's insurance company's liability under this insurance policy shall not be reduced by the existence of such other insurance.

e. As a minimum, the Contractor shall secure and maintain the types of insurance as specified and herein, and shall submit evidence to the Village on an annual basis that the insurance coverages are in force. The form and limits of such insurance, together with the underwriter thereof in each case, shall be acceptable to the Village, but regardless of such acceptance it shall be the responsibility of the Contractor to maintain adequate insurance coverage until final payment and at all times thereafter when the Contractor may be correcting, removing, or replacing defective work in accordance with this Contract. Failure of the Contractor to maintain adequate coverage shall not relieve him of any contractual responsibility or obligation.

f. The Contractor shall include with its proposal, copies of the Certificates of Insurance with the coverages and limits specified.

g. Insurance certificates and policies delivered to the Village shall recite that 45 days prior written notice will be given to the Village by certified mail, return receipt required, or by verified personal delivery, before any policy is materially changed, canceled, or not renewed.

h. The Contractor shall include all subcontractors as a covered insured party under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

i. Any deductible amounts/requirements or any self-insured retention amounts of any of Contractor's policies or insurance must be disclosed to and approved by the Village in order to meet the insurance requirements

herein. At the Village's direction, the Contractor's insurer must either reduce or eliminate the deductible or self-insured retention or Contractor must provide an appropriate bond securing payment of losses and related investigation, claim administration, and defense expenses of the Village.

10. Insurance Coverages

a. This insurance shall be written in Commercial General Liability form and shall protect the Contractor against all claims arising from injuries to persons or damages to property caused by any act or omission of the Contractor or his agents, employees or subcontractors. The Broad Form General Liability Endorsement shall be included.

b. Satisfactory certificates of insurance shall be filed with the Village upon execution of the contract. The certificates shall state that thirty (30) days advance written notice will be given to the Village before any policy is changed or canceled.

Insurance coverage shall be in the following minimum amounts:

Type of Insurance	Limit/ Ea. Occurrence	Limit/ Aggregate
General Liability		
Bodily Injury	$1,000,000	$3,000,000
Property Damage	$1,000,000	$3,000,000
Contractual Ins.	$1,000,000	$3,000,000
Automobile Liability		
Bodily Injury	$1,000,000	$2,000,000
Property Damage	$1,000,000	$2,000,000
Workers Compensation		
Employee Claims	Statutory for Illinois	
Employers Liability	$1,000,000 per accident	

c. To the fullest extent permitted by law, the Contractor shall indemnify and save harmless the Village, its officers, employees and agents from any and all liability, losses or damages, including attorneys' fees and costs of defense, the Village may suffer as a result of claims, demands, suits, actions or proceedings of any kind or nature, including workers' compensation claims, in any way resulting from or arising out of the operations of the contractor under the contract. This shall include operations of subcontractors. The Contractor shall, at its own expense, appear, defend and pay all attorneys' fees and all costs and other expenses arising from or incurred in connection with such defense. If any judgments shall be rendered against the Village in any such action, the Contractor shall, at its own expense, satisfy and discharge same. The Contractor expressly understands and agrees that any bonds, letters of credit or insurance protection required by the Contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village. This indemnification does not apply to liability caused by the Village's own negligence, provided this does not serve to waive or adversely impact any of the Village's available protections or immunities under Illinois common or statutorylaw.

d. The Contractor agrees to assume the entire liability for all personal injury claims suffered by its own employees and waives any limitation of liability defense based upon the Worker's Compensation Act and cases decided there under. The Contractor agrees to indemnify and defend the Village and its Affiliates from and against all such loss, expense, damage or injury, including reasonable attorney fees, which the Village may sustain as a result of personal injury claims by the Contractor's employees, except to the extent those claims arise as a result of the Village's own negligence.

e. The Contractor agrees to defend and hold harmless the Village from and against all demands, claims, suits, costs, expenses, damages and adjustments based upon any infringement of any patent relating to goods specified

in the contract, and on account of the Village's use of any copyrighted or uncopyrighted, composition, trade secrets, secret process, proprietary rights, patented or unpatented invention, article or appliance furnished or used in the performance of the work.

11. Payment and Performance Bonds

a. Contractors shall furnish a performance bond and a payment bond, (or a non-diminishing irrevocable bank letter of credit for contracts under $100,000) within ten (10) calendar days after being notified that they are the successful bidder. The payment and performance bond shall secure the successful contractor obligations to complete this Contract and pay its labor and material suppliers as provide at 30 ILCS 550/1 and 2,

b. A performance bond and payment bond satisfactory to the Village, executed by a surety company authorized to do business in the State of Illinois, in an amount equal to one-hundred percent (100%) of the contract price as security for the faithful performance of the contract;

c. The surety on the bond shall be a company that is licensed by the Department of Insurance authorizing it to execute surety bonds and the company shall have a financial strength rating of at least A- as rated by A.M. Best Company, Inc., Moody's Investors Service, Standard & Poor's Corporation, or a similar rating agency. The bond shall be in that full amount to cover the cost of the completion of the Work, for the payment of material, apparatus, fixtures, and machinery used in the Work and for all labor performed in the Work, whether by subcontractor or otherwise.

d. Documents required by this section must be received and approved by the Village before a written contract will be issued.

12. Prevailing Wage

a. The Contractor shall pay prevailing wages to all workers, laborers and mechanics performing services required by the Contract, as required and in accordance with the Illinois Prevailing Wage Act, as amended, including any changes in the prevailing wage during the term of the Contract. The Village has adopted the prevailing wages as determined by the Illinois Department of Labor ("IDOL") for Lake County, effective during this Contract, as revised. The prevailing rate of wages are revised by the IDOL and are available on the IDOL website, www.state.il.us/agency/idol. In the event that the

IDOL should revise the prevailing rate of wages, then the revised rates shall apply to the Contract. In no case shall any revision in the rates of prevailing wages result in an increase in the total contract price. The Contractor shall also be fully responsible for meeting all requirements under the Prevailing Wage Act, including the requirement to provide a certified payroll. ***It is the obligation of the bidder to confirm with IDOL if the work to be performed requires the payment of prevailing wages.***

13. Independent Contractor Status

a. The Contractor's duties, role and responsibilities, and those of its employees or subcontractors, shall be solely those of an independent contractor for all purposes and no employee or agent of the Contractor shall be deemed for any reason to be an employee or agent of the Village. The Contractor is responsible for directing and controlling the performance and completion of the work in a timely manner that meets the Village's requested schedule or completion date. No provision of this Bid Notice or subsequent conduct between the Village and Contractor shall be construed to create an "employer-employee," "principal and agent," "partners" or "participants in a joint venture" relationship or status. The Contractor, and its employees and its subcontractors, are responsible, pursuant to applicable law, for their own business operations, and for payment of any benefits, retirement plans, insurance, health plans, income and employment taxes or any other taxes of any kind arising from their receipt of compensation under this Contract.

14. Contract Termination

a. The term of this Contract shall be for one (1) year from the date of award.

b. In the event that this Contract is terminated, and provided that there is no dispute over the performance of any of the work, the Contractor shall be paid for work actually performed, if any, prior to the date of the notice of termination, not exceeding the value of the work completed, which shall be determined on the basis of the rates set forth in the Fee Schedule.

c. Costs incurred by the Contractor subsequent to the receipt of any notice of termination and before the termination date will be reimbursed by the Village only if, prior to the effective termination date, the Village receives from the Contractor a list of actions that are necessary to perform and the Village agrees in writing that those actions be taken. The Contractor shall not be entitled to any claim for lost profits due to the termination of the work by the Village.

15. **Termination/Default**

a. Any immediate threat to the public health or safety, or any repeated or multiple failures to complete the duties required by the Contract, or for violations of the Contract, whether for similar or differing issues, shall constitute the basis for immediate termination of the Contract.

b. If it should appear at any time that the Contractor has failed or refused to timely perform, or has delayed in the performance of the Work with diligence at a rate that assures completion of the Work in

full compliance with the requirements of this Contract, or has otherwise failed, refused or delayed to

perform the Work or any other requirement of this Contract ("Event of Default"), and fails to cure any such Event of Default within ten (10) business days after the Contractor's (and if required, the Surety) receipt of written notice of such Event of Default from the Village, then the Village shall have the right, without prejudice to any other remedies provided by law or equity, to pursue any one or more of the following remedies:

i. The Village may require the Contractor, within a reasonable time, to complete or correct all or any part of the Work that are the subject of the Event of Default; and to take any or all other action necessary to bring the Contractor and the Work into compliance with this Contract. Any costs and charges incurred by the Village, together with the cost of performing the required services shall be deducted from any monies due or which may become due to the Contractor under the Contract. When such Contractor default costs incurred by the Village exceeds the sum paid to the Village for the performance of the required Work under the Contract, the Contractor and the surety shall be jointly and severally liable and shall pay to the Village the full cost of such additional expenses.

ii. The Village may terminate this Contract without liability for further payment of amounts due or to become due under this Contract after the effective date of termination.

iii. The Village may withhold from any payment of, whether or not previously approved, or may recover from the Contractor, any and all costs, including attorney fees and administrative expenses, incurred by the Village as the result of any Event of Default by the Contractor or as a result of actions taken by the Village in response to any Event of Default by the Contractor.

16. Contractor Representations and Commitments

a. The Contractor will comply with all applicable federal, state and local laws, promulgated by any federal, state, local, or other governmental authority or regulatory body pertaining to all aspects of the Work, now in effect, or which may become in effect during the performance of the Work.

b. The Contractor will comply with the Preference to Veterans Act, 330 ILCS 55, *et seq*.

c. The Contractor will comply with the Illinois Human Rights Act, 775 ILCS 5/1.101, et seq including, but not limited to establishment of sexual harassment policies and program and with the Fair Employment Commission's Rules and Regulations for Public Contracts, including requiring the provisions in any subcontracts. Contractor will comply with the provisions of the Equal Employment Opportunity Clause of the Illinois Department of Human Rights at Appendix A of Title 44, Part 750, Section 750 of the Illinois Administrative Code and the applicable Rules and Regulations for Public Contracts, and will include the provisions of this clause in every subcontract it awards as part of this Contract.

d. The Contractor will comply with the requirements of the Drug Free Workplace Act if the Contract is $5,000 or more, and it has more than 24 employees at the time of entering into the Contract pursuant to 30 ILCS 580, *et seq*. and applicable provisions of the Substance Abuse Prevention on Public Works Projects Act (820 ILCS 265).

e. The Contractor will comply with the Illinois Public Works Employment Discrimination Act, 775 ILCS 10/1, *et seq*.

f. The Contractor acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village for public records (as that term is defined by Section 2(c) of FOIA) in the Contractor's possession.

17. Contractor Certifications

a. By executing this Contract, the Contractor certifies neither it, nor any owner or officer, is barred from contracting with a unit of State or local government as a result of: (1) a delinquency in the payment of any tax administered by the Illinois Department of Revenue or any fee required by the Village, (unless lawfully contesting), 65 ILCS 5/11-42.1-1; or (2) a violation of either Section 33E-3 (bid rigging) or Section 33E-4 (bid rotating) of Article 33E of the Criminal Code of 1961, 720 ILCS 5/33E-1. The Contractor represents this Agreement is made without collusion with any other person, firm or corporation.

b. ADA Certification

The Contractor shall comply with the applicable provisions of the American Disabilities Act and its accompanying regulations (28 CFR 35.130) which prohibit discrimination against qualified individuals with disabilities by a local government, whether directly or through contractual arrangements, in the provision of any benefit, service, program or activity of the public entity. The Contractor certifies that by signing this Contract, that any services, programs and activities provided under this Contract are now and will continue to be in compliance with the Americans with Disabilities Act.

c. Sexual Harassment Certificate

Contractor hereby certifies that it has a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105(A)(4) including the following information: 1. An acknowledgment of the illegality of sexual harassment. 2. The definition of sexual harassment under State law. 3. A description of sexual harassment, utilizing examples. 4. The Contractor's internal complaint process including penalties. 5. The legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission. 6. Directions on how to contact the Department of the Commission. 7. An acknowledgment of protection of a complaint against retaliation as provided in Section 6-101 of the Human Rights Act. The Contractor must provide a copy of such written policy to the Illinois Department of Human Rights upon request.

Contractor

By: _____
Authorized Agent

18. General Provisions

a. No amendment or modification to this Agreement shall be effective until it is reduced to writing and approved and executed by both the Village and the Contractor.

b. The Contractor shall give all notices, pay all fees and take all other action that may be necessary to ensure that the Work is provided, performed and completed in accordance with all required governmental permits, licenses, or other approvals and authorizations that may be required in connection with providing, performing and completing the Work.

c. The Contractor shall not assign or transfer this Contract or any portion thereof without the prior approval of the Village.

d. The terms of this Contract shall bind and inure to the benefit of the Village, the Contractor, and their agents, successors and assigns.

e. No claim as a third-party beneficiary under this Contract by any person, firm or corporation shall be made or be valid against the Village.

f. If any term, covenant, condition or provision of this Contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

g. For any legal action between the Parties concerning the interpretation, construction and enforcement of this Contract, or subject matter thereof, venue shall be in Lake County, Illinois and the laws of the State of Illinois shall govern the cause of action.

h. The Contractor warrants and represents to the Village that the persons executing this Contract on its behalf have the full and complete right, power and authority to enter into this Contract and to agree to the terms, provisions and conditions set forth in this Contract, and that all legal actions needed to authorize the execution, delivery and performance of this Contract have been taken.

i. The failure of the Village to enforce any term, condition or covenant (herein referred to as "provision") of this Contract shall not be deemed a waiver or limitation of the Village's right to subsequently enforce such provision.

j. This Contract may be executed in counterparts, each of which, when executed, shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Village and Contractor have made and executed this Contract on the dates and year written below, and this Contract shall be valid as of the date of the last signatory.

Village of Lake Zurich	**Contractor**
By: _____ Mayor	By: _____ Authorized Agent
Date: _____	Date: _____

ESTIMATE

American Garage Floor Systems
1160 N Dato Ln
Wauconda, IL 60084, USA
sales@agschicago.com
(847) 382-3567

Estimate # 3964-1
Date Thu May 29, 2025
Total $36,200.00

Prepared For:
Steve Paulis VILLAGE OF LAKE ZURICH
321 S Buesching Rd
Lake Zurich, Illinois 60047
(847) 540-1696
steve.paulus@lakezurich.org

Service Address:
505 Telser Rd
Lake Zurich, Illinois 60047

Description	QTY	Price	Amount
FLOORING / Poly MAIN AREA INCLUDING 2 OFFICES - POLYASPARTIC FLOOR COATING WITH FULL CHIP SYSTEM /ONE DAY FLOOR / WALK ON IT IN 8-12 HOURS DRIVE ON IT IN 24-26 HOURS FROM FINISH TIME - 4X STRONGER THEN EPOXY	5200	$6.00	$31,200.00
PATCH ALL FLOOR PATCHING & REPAIRS & REMOVAL OF OLD COATING	1	$5,000.00	$5,000.00
		Sub total	$36,200.00
		Total	$36,200.00

Notes:

Thank You For Your Business

-PURCHASE AGREEMENT-

Detailed estimate attached for floor coating and necessary repairs or additional costs. Your signiture will indicate approval of cost breakdown. Estimates are an approximation of charges to you, and they are based on the anticipated details of the work to be done. It is possible for unexpected complications to cause some deviation from the estimate. If additional parts or labor are required you will be contacted immediately. Installers are not responsible for personal items in the service area. Please remove all items prior to installation until 24 hrs after floor is completed.

-FLOOR COATING PROCESS-

American Garage Floor Systems uses a polyaspartic rapid set, roller grade material that allows us to apply a three coat system in hours. This process gives you durability, strength, anti slip, and the longevity needed for a high traffic area. AGS uses the same polyaspartic technology for the top coat to lock the chips in, and to give it extra strength. Our polyaspartic is a non-yellowing, durable, protective finish that lasts. You will be able to walk on your floor just hours after we leave, and drive on it the next day.

Floor Preparation

Our diamond-bit grinder features three grinding wheels that work in unison to open the pores of your concrete. Hand grinders are also used to prepare detailed areas and vertical surfaces. We also use shot blasting where necessary to ensure the proper bond of any patching materials.

AGS utilizes the latest technology to prepare your floor for our revolutionary 2 coat system

Premium Installation

1. Diamond grind off 1/16 of an inch of the surface with a low dust process
2. Clean and fill cracks larger than 1/8 of an inch
3. Apply base coat
4. Broadcast the chosen chip blend into the base coat
5. Apply a clear coat over the top
6. Apply anti-slip into top coat (Unless a request is made by customer for no slip resistance to be used in top coat)

****DISCLAIMER****

All hard floor surfaces can be slippery when wet even with anti slip texture. ALWAYS USE CAUTION WHEN SURFACE IS WET!

A 15% Non refundable deposit is due before scheduling appointment for installation. Balance will be due upon completion.

RESIDENTIAL FLOOR - LIMITED LIFETIME WARRANTY

American Garage Systems residential floor coating systems, when installed by certified installer, are warranted for the lifetime of the original purchaser against any abnormal yellowing, fading or color change of the clear sealer due to effects of UV sunlight or overhead lighting and for fifteen (15) years after the installation against failure to bond to the concrete, peeling , flaking, chipping or excessive wear and excessive loss of gloss of the clear sealer.

WARRANTY CLAIM PROCEDURES A claim under this warranty may be made by calling AGS at (847)382-FLOR. The original purchaser must retain original sales order and receipt to make valid claim. Any claim under this warranty shall be deemed waived, unless the original purchaser gives notice (30) days following the discovery of a potential warranty claim. Customers shall allow AGS up to (60) sixty days to inspect and make repairs under this warranty.

REMEDIES AGS sole responsibility under this warranty shall be the cost of replacement materials to fix or repair the failed areas only, using AGS materials. a representative of AGS must be present to assess the failed area to judge the cause and mode of failure prior to any fix or repair. The duty to fix or repair only damaged areas shall be the sole and exclusive remedy granted under this warranty.

LIMITATIONS This warranty is limited to the materials applied to the garage floor and does not include the floor or substrate itself. Where waterproofing is the intent, this warranty is limited to the replacement of materials under the conditions outlined above. AGS only responsibility will be to furnish replacement materials free of charge for any faulty material. The cost of investigating leaks is not included in this warranty. Should a leak occur, AGS shall not be responsible for the repair or replacement of any interior furnishings or building material. Failures by external causes such as acts of God, fire, welding, or other burns, mechanical impact damage, hydrostatic pressure,
chemical spills or abnormal use of the garage and its floor are not covered by this warranty. This warranty excludes building or structure settling, substrate cracking, moisture below the coating material. efflorescence, hydrostatic pressure, or mechanical and external physical abuses that constitute abuse other than normal wear and tear. AGS is not responsible for concrete cracking due to substrate movement or existing cracks in substrate (concrete/ substrate are not warranty regardless of whether same was repaired during original installation or not. There is no warranty on cracks or crack repair. Areas repaired under this warranty may vary in color and texture from areas originally installed which are not repaired. This warranty shall not apply in the case of improper substrate construction, exposure of the products to solvents and/or higher concentrations of acids other than that moisture from within, under or adjacent to the concrete surface.

PRO-RATED REPLACEMENT The 15 year warranty against failures to bond to the concrete, peeling, flaking, chipping or excess wear and excessive loss of gloss of the clear sealer will be pro-rated based on the remaining useful life.

In no event shall AGS liability under this warranty exceed the cost of replacement materials, or return of the original purchase price., for the products which may prove to be defective under normal use and service, provided such a claim is made within the time frame set forth above. This warranty shall be void if in the sole good faith judgement of AGS any such failures or damages are caused by structural movement, unforeseen moisture in concrete, natural disasters, the wrongful conduct of any other person,subsequent alterations or additions and failure to exercise reasonable care in maintaining surfaces coated by AGS products.

Note: Below grade and moisture treatment work has a warranty of only one (1) year. AGS IS NOT RESPONSIBLE FOR DEFECTIVE DRAINAGE. IT IS UNDERSTOOD THAT WHERE GRADING OR ABRASION REPAIR IS DONE THERE MAY BE MINIMAL PUDDLING.

Slip Resistance Additives Any surface can be slippery. AGS recommends use of a slip resistant additive on all garage floor systems that may be exposed to wet, oily, or greasy conditions. In no event shall AGS be responsible for injury incurred in a slip and fall situation. It is the purchaser's sole responsibility to provide for their own safety and the safety of guests and invitees. While AGS coatings may help provide a slip and skid resistant surface when dry, there is no guarantee that someone will not slip while walking on areas coated with our material. AGS therefore assumes no responsibility for slip-fall accidents. If added, the slip-resistant additive only improves slip resistance by approximately 50%.

THIS WARRANTY IS NOT TRANSFERABLE

AGS LABOR WARRANTY IS FOR 1 YEAR ONLY AND DOES NOT COVER CONCRETE FAILURE

DISCLAIMER AGS SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES (SUCH AS BUT NOT LIMITED TO LOSS OF USE OF THE GARAGE OR ITS
CONTENTS OR SURROUNDINGS OR LOSS OF USE OR TIME AND INCONVIENIENCE) OR ANY INC ED ENT AL EXPENSE RESULTING FROM THE ABOVE EXPRESSED WARRANTY OR ANY IMPLIED WARRANTY. AGS LIABILITY HEREUNDER IS EXPRESSLY LIMITED TO THE COST OF MATERIAL FOR REPAIR OR REPLACEMENT OF DEFECTIVE MATERIALS AND SHALL NOT EXTEND TO OR INCLUDE ANY CONSEQUENTIAL OR INCIDENTAL OTHER DAMAGES OF ANY KIND OR CHARACTER. AGS shall not be liable for damage to or destruction of any real or personal property resulting from defects in the work performed by or materials provided pursuant to this contract. AGS makes no expressed or implied warranties of merchantability or fitness for a particular purpose which warranties are hereby expressly disclaimed and excluded. The original purchaser hereby expressly waives any claim to additional charges. This LimitedWarranty supersedes any other warranty or other representation, whether written, oral or implied, here fore made between parties.

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6i

Date: July 7, 2025

To: Ray Keller, Village Manager

From: Sarosh Saher, Community Development Director

CC: Mike Brown, Public Works Director
David Modrzejewski, Building Services Supervisor

Re: Release of Surety – Site Improvements Guarantee
Geremarie New Building – 550 Enterprise Parkway

Issue: Village staff received a request to release the site work guarantee in the form of LOC #220199 dated September 14, 2022 from Mr. Jim Schultz of JGS, LLC, d/b/a Geremarie, the owner of the project for a new building at 550 Enterprise Parkway.

Background: A guarantee of site improvements in the form of a Letter of Credit (LOC) in the amount of $152,631.02 was provided by ByLine Bank as surety for site work at the development. This included earthwork, sanitary, water and stormwater utilities. All work has been completed. The surety was further maintained at its full amount through the required maintenance period.

Analysis: The proposed release is based on completion of the items denoted in the Engineer's Opinion of Probable Cost dated July 25, 2022 (EOPC) approved at the time of issuance of permits for the development. Village Engineer Manhard and Staff have inspected the property, reviewed the request and concur that the surety can be released.

Recommendation: Staff recommends the release of the LOC issued by ByLine Bank in the full amount of $152,631.02.

Attachments:

- Original LOC dated September 14, 2022
- Engineers Opinion of Probable Cost (EOPC) dated July 25, 2022

JGS LAKE ZURICH WEST, LLC

1275 Ensel Road
Lake Zurich, IL 60047

July 10, 2024

Mr. Ray Keller
Village of Lake Zurich
70 E. Main Street
Lake Zurich, IL 60047

RE: Letter of Credit No. 220199
JGS Lake Zurich West, LLC
550 Enterprise Parkway, Lake Zurich, IL

Dear Mr. Keller,

Please accept this as our formal request to release letter of credit no. 220199 issued by Byline Bank in the amount of $152,631.02.

Thank you for your cooperation. If you should have any questions or comments, please do not hesitate call.

Sincerely,

Jim Schultz
JGS Lake Zurich West, LLC
kas/JGS – VILLAGE.LOC REDUCTION REQUEST.LTR

CC: Kelly O'Keeffe, ByLine Bank

Attachment: Copy of Original Letter of Credit

Irrevocable Standby Letter of Credit

Letter of Credit No. 220199

ISSUER:
Byline Bank
180 N. LaSalle St., Suite 300
Chicago, IL 60601

BENEFICIARY:
Village of Lake Zurich
70 East Main Street
Lake Zurich, IL 60047

APPLICANT:
JGS Lake Zurich West, LLC
1275 Ensell Rd
Lake Zurich, IL 60047

Letter of Credit No:	220199
Issue Date:	September 14, 2022
Expiration Date:	September 14, 2023
Expiration Place:	Byline Bank
Amount:	$152,631.02 USD (One Hundred Fifty-Two Thousand Six Hundred Thirty-One and 02/100)

We hereby issue our Irrevocable Non-Transferable Standby Letter of Credit Number 220199 (this "Letter of Credit") in favor Village of Lake Zurich, (Hereinafter referred to as ("BENEFICIARY")) for the account, and at the request, of JGS Lake Zurich LLC ("Applicant") in the amount equal to U.S One Hundred Fifty-Two Thousand Six Hundred Thirty-One and 02/100. Drafts on this Letter of Credit shall be presented only at our counters at Byline Bank, 180 N. LaSalle St., Ste 300, Chicago, IL 60601.

1) A Statement signed by Village Manager or Director of Public Works (signed as such) stating that:

Either:

(A) We have received notice from Byline Bank, that Letter of Credit number 220199 is about to expire, and Applicant has failed to provide us with an extension to said Letter of Credit or an acceptable replacement Letter of Credit; OR

(B) The amount drawn under Byline Bank, Letter of Credit number 220199 in accordance with the terms of a revised development application by JGS Lake Zurich West, LLC and submitted to the Village of Lake Zurich, with architectural plans originally submitted to the Village as relates to Village of Lake Zurich Permit Number PB22-1075 and engineering plans originally submitted to The Village as also relates to said ordinance, and that JGS Lake Zurich West, LLC is in default thereunder, or that JGS Lake Zurich West, LLC is in default of their required public improvements obligations or any other agreement or agreements between the Village and JGS Lake Zurich West, LLC as are entered into or amended from time to time, or that JGS Lake Zurich West, LLC is in violation of any Village ordinance.

2) Original of this Letter of Credit and any amendments thereto.

3) A sight draft specifying that it is presented under this Letter of Credit and stating, "Drawn under Byline Bank, Letter of Credit Number 220199 dated September 14, 2022."

If the foregoing documents are presented in strict compliance with the terms and conditions of this Letter of Credit, our obligation under this Letter or Credit is unconditional and independent of any obligations, payment or reimbursement by beneficiary or the applicant.

Partial drawings are permitted, but must still be accompanied by the original of this Letter of Credit. We reserve the right to substitute a replacement Letter of Credit with the stated amount reduced by the amount of such draw.

This Letter of Credit shall remain in full force for a period of one (1) year from the effective date hereof and shall automatically extend itself from year to year thereafter unless and until Byline Bank, shall give at least Ninety (90) days prior written notice to The Village of Lake Zurich, Illinois, by certified mail, return receipt requested, of its intent to terminate the same at the then-current expiration date. During the last thirty (30) days during which the Letter of Credit is in full force and effect, The Village of Lake Zurich may draw up to the full amount available under the Letter of Credit with a draft accompanied by a document stating that the beneficiary/JGS Lake Zurich West, LLC or its agent has not complied with the development agreement, and has not provided an acceptable substitute Irrevocable Letter of Credit, and that the drawing is for the explicit purpose of guaranteeing and/or providing for the completion.

This Letter of Credit may not be transferred in whole or in part.

This Letter of Credit shall not be amended, except by writing signed by us and the beneficiary stating expressly that it is intended to be an amendment. This Letter of Credit shall not be amended by any action (other than signing such an amendment) or by any inaction by either us or the Beneficiary, except as expressly provided in the immediately succeeding paragraph.

This Letter of Credit shall be governed by the International Standby Practices 1998 ("ISP98"), International Chamber of Commerce Publication No. 590 (The "ISP 98"), or any later revision which may be in effect at the time. This Letter of Credit shall be governed by the internal laws of the State of Illinois to the extent that the terms of the ISP 98 are not applicable; provided that, in the event of any conflict between the ISP 98 and such Illinois laws, the ISP98 shall control.

Sincerely,

Byline Bank

By: _____
Name: Kelly O'Keeffe
Title: Senior Vice President, Commercial Banking Group Head

Byline Bank 300 Park Blvd., #105 Itasca, IL 60143 630 250 3510 bylinebank.com Member FDIC

FLEX
CONSTRUCTION CORPORATION

PO BOX 518
Lake Zurich, IL 60047
P:(847)-540-0200 F:(847) 540-9810

September 7, 2022

Mr. Sarosh Saher, Director Community Development
Village of Lake Zurich
505 Telser Road
Lake Zurich, IL 60047

RE: Proposed New Building
505 Enterprise Parkway
Lake Zurich, IL 60047

Dear Mr. Saher,

Your office has requested a Letter of Credit in the amount of $553,583.25 ($503,257.50 x 110%). We, of course, understand that the required Engineer's Cost Estimate must contain all site costs for the project for the Engineering Fee to be calculated, in this instance at 4% or $20,130.30.

However, we would respectfully request that your office reconsider the amount requested for the Letter of Credit to reflect only the items that are related to the site development that would affect Village of Lake Zurich utility lines and an amount necessary to bring the site to a graded and stabilized state should there be some need to do so. We have attached a copy of the Engineer's Cost Estimate marked up in yellow with the activities that are directly site related. These items total to $138,775.50 utilizing this number and applying the 110% would be a Letter of Credit in the amount of $152,631.05.

Your consideration and approval of a Letter of Credit in the amount of $152,631.05 for 550 Enterprise Parkway, Lake Zurich, IL. would be appreciated.

Respectfully,

Kelly Sheehan
FLEX CONSTRUCTION CORPORATION

Cc: Jim Schultz, JGS Lake Zurich West, LLC.

Engineer's Opinion of Estimate of Cost

Schmitt Engineering
215 West Calhaun
Woodstock, Illinois 60098
7/25/2022
550 ENTERPRISE PARKWAY LAKE ZURICH IL, 60047

CODE	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
20200100	EARTH EXCAVATION, INCLUDES 6" OF TOPSOIL CUT	CY	3864	$ 5.00	$ 19,320.00
20500130	TRENCH BACKFILL	CY	217	$ 35.00	$ 7,595.00
25101615	TOPSOIL FURNISH AND PLACE, 4"	SY	1791	$ 4.00	$ 7,164.00
25000110	SEEDING	AC	0.37	$ 5,500.00	$ 2,035.00
25100630	EROSION CONTROL BLANKET	SY	1791	$ 1.50	$ 2,686.50
28000400	PERIMETER EROSION BARRIER	FT	330	$ 2.00	$ 660.00
28000510	INLET AND PIPE PROTECTION	EA	8	$ 100.00	$ 800.00
28100107	STONE RIP RAP CLASS A4	SY	12	$ 75.00	$ 900.00
35100300	AGGREGATE BASE COURSE, TYPE A 4"	SY	234	$ 35.00	$ 8,190.00
35100600	AGGREGATE BASE COURSE, TYPE A 6"	SY	2494	$ 25.00	$ 62,350.00
35100810	AGGREGATE BASE COURSE, TYPE A 10"	SY	1550	$ 15.00	$ 23,250.00
40600275	BITUMINOUS MATERIALS PRIME COAT	LB	3486	$ 0.50	$ 1,743.00
40600290	BITUMINOUS MATERIALS TACK COAT	LB	698	$ 0.50	$ 349.00
40802546	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N50 - 2-1/2"	TN	223	$ 100.00	$ 22,300.00
40604000	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, MIX "C", N50 - 1-1/2"	TN	131	$ 150.00	$ 19,650.00
42000101	PORTLAND CEMENT CONCRETE PAVEMENT 6" (JOINTED)	SY	1941	$ 50.00	$ 97,050.00
42000201	PORTLAND CEMENT CONCRETE PAVEMENT 7" (JOINTED)	SY	554	$ 100.00	$ 55,400.00
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH (WITH COMBINATION SIDEWALK & CURB INCLUDED)	SF	2106	$ 8.50	$ 17,901.00
44000500	COMBINATION CURB AND GUTTER REMOVAL - CURB CUT	FT	107	$ 15.00	$ 1,605.00
52200900	CONCRETE STRUCTURES (RETAINING WALL)	CY	16	$ 1,500.00	$ 24,000.00
64213867	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EA	1	$ 850.00	$ 850.00
550A0080	STORM SEWERS, CLASS A, TYPE 1 12"	FT	489	$ 35.00	$ 17,115.00
550A0090	STORM SEWERS, CLASS A, TYPE 1 15"	FT	87	$ 25.00	$ 2,175.00
60400500	FIRE HYDRANT	EA	2	$ 5,000.00	$ 10,000.00
60703400	WATER MAIN SERVICE LINE 8"	FT	320	$ 130.00	$ 41,600.00
60706000	WATER VALVE& VALVE BOX 8"	EA	1	$ 2,200.00	$ 2,200.00
60206903	CATCH BASINS, TYPE C, TYPE 1 FRAME, OPEN LID	EA	5	$ 2,500.00	$ 12,500.00
60603400	COMBINATION CURB AND GUTTER, TYPE B-6.12	FT	785	$ 30.00	$ 23,550.00
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SF	54	$ 10.00	$ 540.00
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FT	886	$ 1.50	$ 1,329.00
X0000001	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 10"	EA	1	$ 750.00	$ 750.00
X0000002	CATCH BASINS, TYPE A, 3'-DIAMETER, TYPE 1 FRAME, OPEN LID	EA	1	$ 2,500.00	$ 2,500.00
X0326713	SANITARY SEWER CONNECTION	EA	1	$ 150.00	$ 150.00
X6620030	WATER SERVICE CONNECTION 8"	EA	1	$ 150.00	$ 150.00
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LS	1	$ 6,000.00	$ 6,000.00
Z0076800	SANITARY SEWER 6"	FT	92	$ 75.00	$ 6,900.00
				TOTAL PRICE:	$ 503,257.50

$ $138,755.50
10% $15263105

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046281
STATE OF ILLINOIS

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6j

Date: July 7, 2025

To: Ray Keller, Village Manager

From: Sarosh Saher, Community Development Director

CC: Mike Brown, Public Works Director
David Modrzejewski, Building Services Supervisor

Re: Release of Surety – Site Improvements Guarantee
Geremarie Addition – 1275 Ensell Road

Issue: Village staff received a request to release the site work guarantee in the form of LOC #220200 dated September 14, 2022 from Mr. Jim Schultz of JGS, LLC, d/b/a Geremarie, the owner of the project for a new addition to their building at 1275 Ensell Road.

Background: A guarantee of site improvements in the form of a Letter of Credit (LOC) in the amount of $140,744.17 was provided by ByLine Bank as surety for site work at the development. This included earthwork, sanitary, water and stormwater utilities. All work has been completed. The surety was further maintained at its full amount through the required maintenance period.

Analysis: The proposed release is based on completion of the items denoted in the Engineer's Opinion of Probable Cost dated July 3, 2022 (EOPC) approved at the time of issuance of permits for the development. Village Engineer Manhard and Staff have inspected the property, reviewed the request and concur that the surety can be released.

Recommendation: Staff recommends the release of the LOC issued by ByLine Bank in the full amount of $140,744.17.

Attachments:

- Original LOC dated September 14, 2022
- Engineers Opinion of Probable Cost (EOPC) dated July 3, 2022

JGS LAKE ZURICH, LLC

1275 Ensel Road
Lake Zurich, IL 60047

July 10, 2024

Mr. Ray Keller
Village of Lake Zurich
70 E. Main Street
Lake Zurich, IL 60047

RE: Letter of Credit No. 220200
JGS Lake Zurich, LLC
1275 Ensel Road, Lake Zurich, IL

Dear Mr. Keller,

Please accept this as our formal request to release letter of credit no. 220200 issued by Byline Bank in the amount of $140,744.17.

Thank you for your cooperation. If you should have any questions or comments, please do not hesitate call.

Sincerely,

Jim Schultz
JGS Lake Zurich, LLC
kas/JGS – VILLAGE.LOC REDUCTION REQUEST.LTR

CC: Kelly O'Keeffe, ByLine Bank

Attachment: Copy Original Letter of Credit

Irrevocable Standby Letter of Credit

Letter of Credit No. 220200

ISSUER:
Byline Bank
180 N. LaSalle St., Suite 300
Chicago, IL 60601

BENEFICIARY:
Village of Lake Zurich
70 East Main Street
Lake Zurich, IL 60047

APPLICANT:
JGS Lake Zurich, LLC
1275 Ensell Rd
Lake Zurich, IL 60047

Letter of Credit No:	220200
Issue Date:	September 14, 2022
Expiration Date:	September 14, 2023
Expiration Place:	Byline Bank
Amount:	$140,744.17 USD (One Hundred Forty Thousand Seven Hundred Forty-Four and 17/100)

We hereby issue our Irrevocable Non-Transferable Standby Letter of Credit Number 220200 (this "Letter of Credit") in favor Village of Lake Zurich, (Hereinafter referred to as ("BENEFICIARY")) for the account, and at the request, of JGS Lake Zurich LLC ("Applicant") in the amount equal to U.S One Hundred Forty Thousand Seven Hundred Forty-Four and 17/100. Drafts on this Letter of Credit shall be presented only at our counters at Byline Bank, 180 N. LaSalle St., Ste 300, Chicago, IL 60601.

1) A Statement signed by Village Manager or Director of Public Works (signed as such) stating that:

Either:

(A) We have received notice from Byline Bank, that Letter of Credit number 220200 is about to expire, and Applicant has failed to provide us with an extension to said Letter of Credit or an acceptable replacement Letter of Credit; OR

(B) The amount drawn under Byline Bank, Letter of Credit number 220200 in accordance with the terms of a revised development application by JGS Lake Zurich, LLC and submitted to the Village of Lake Zurich, with architectural plans originally submitted to the Village as relates to Village of Lake Zurich Ordinance No. 2022-09-474 and engineering plans originally submitted to The Village as also relates to said ordinance, and that JGS Lake Zurich, LLC is in default thereunder, or that JGS Lake Zurich, LLC is in default of their required public improvements obligations or any other agreement or agreements between the Village and JGS Lake Zurich, LLC as are entered into or amended from time to time, or that JGS Lake Zurich, LLC is in violation of any Village ordinance.

Byline Bank 300 Park Blvd., #105 Itasca, IL 60143 630 250 3510 bylinebank.com Member FDIC

2) Original of this Letter of Credit and any amendments thereto.

3) A sight draft specifying that it is presented under this Letter of Credit and stating, "Drawn under Byline Bank, Letter of Credit Number 220200 dated September 14, 2022."

If the foregoing documents are presented in strict compliance with the terms and conditions of this Letter of Credit, our obligation under this Letter or Credit is unconditional and independent of any obligations, payment or reimbursement by beneficiary or the applicant.

Partial drawings are permitted, but must still be accompanied by the original of this Letter of Credit. We reserve the right to substitute a replacement Letter of Credit with the stated amount reduced by the amount of such draw.

This Letter of Credit shall remain in full force for a period of one (1) year from the effective date hereof and shall automatically extend itself from year to year thereafter unless and until Byline Bank, shall give at least Ninety (90) days prior written notice to The Village of Lake Zurich, Illinois, by certified mail, return receipt requested, of its intent to terminate the same at the then-current expiration date. During the last thirty (30) days during which the Letter of Credit is in full force and effect, The Village of Lake Zurich may draw up to the full amount available under the Letter of Credit with a draft accompanied by a document stating that the beneficiary/JGS Lake Zurich, LLC or its agent has not complied with the development agreement, and has not provided an acceptable substitute Irrevocable Letter of Credit, and that the drawing is for the explicit purpose of guaranteeing and/or providing for the completion.

This Letter of Credit may not be transferred in whole or in part.

This Letter of Credit shall not be amended, except by writing signed by us and the beneficiary stating expressly that it is intended to be an amendment. This Letter of Credit shall not be amended by any action (other than signing such an amendment) or by any inaction by either us or the Beneficiary, except as expressly provided in the immediately succeeding paragraph.

This Letter of Credit shall be governed by the International Standby Practices 1998 ("ISP98"), International Chamber of Commerce Publication No. 590 (The "ISP 98"), or any later revision which may be in effect at the time. This Letter of Credit shall be governed by the internal laws of the State of Illinois to the extent that the terms of the ISP 98 are not applicable; provided that, in the event of any conflict between the ISP 98 and such Illinois laws, the ISP98 shall control.

Sincerely,

Byline Bank

By: _____
Name: Kelly O'Keeffe
Title: Senior Vice President, Commercial Banking Group Head

Byline Bank 300 Park Blvd., #105 Itasca, IL 60143 630 250 3510 bylinebank.com Member FDIC Equal Housing Lender

WM0180	6" VALVE IN VALVE BOX	1	EACH	$	1,500.00	$ 1,500.00
WM0195	8" VALVE IN 48" VAULT	1	EACH	$	3,500.00	$ 3,500.00
WM0155	FIRE HYD. W/AUX. VALVE & VALVE BOX	1	EACH	$	8,500.00	$ 8,500.00
WM0360	CONNECT TO EXIST. WATERMAIN	2	EACH	$	450.00	$ 900.00
WM0365	TRENCH BACKFILL	55	C.Y.	$	75.00	$ 4,125.00
			SUBTOTAL			$ 86,075.00
STRIPING						
ST0070	PARKING STALLS	74	EACH	$	15.00	$ 1,110.00
			SUBTOTAL			$ 1,110.00
			TOTAL			**$ 266,262.25**

ENGINEER'S ESTIMATE OF PROBABLE COST

GEREMARIE
1275 ENSELL ROAD
LAKE ZURICH, ILLINOIS

PREPARED BY CRAIG R. KNOCHE & ASSOCIATES CIVIL ENGINEERS, P.C.
DATE: 7/3/2022

Job: 22-029

ENGINEERS ESTIMATE OF PROBABLE COST IS BASED ON
THE ENGINEERING PLANS DATED JULY 3, 2022
ALL QUANTITIES AND UNIT PRICES ARE SUBJECT
TO CHANGE UNTIL FINAL APPROVAL OF ENGINEERING PLANS
AND SUBMITTAL OF COST ESTIMATE FOR THE LETTER OF CREDIT.

File:QTY - Prelim

CODE	ITEM	QUANTITY	UNITS		UNIT COST		TOTAL COST
EARTHWORK							
EW0015	TOPSOIL RESPREAD (6")	2255	S.Y	$	1.25	$	2,818.75
EW0035	FINE GRADING	2000	S.Y	$	3.50	$	7,000.00
EW0067	CURB GRADING & BACKFILL	1001	L.F.	$	1.50	$	1,501.50
			SUBTOTAL.			$	11,320.25
DEMOLITION							
DM0005	SAWCUT FULL DEPTH	255	L.F.	$	7.50	$	1,912.50
DM0010	REMOVE EXISTING BIT PAVEMENT	410	S.Y.	$	25.00	$	10,250.00
DM0035	REMOVE EXISTING LIGHT POLE AND BASE	1	EACH	$	250.00	$	250.00
DM0040	COLD MILLED 1 1/2" OF ASPHALT	695	S.Y.	$	7.50	$	5,212.50
DM0050	CONCRETE PAD REMOVAL	64	S.F.	$	3.50	$	224.00
DM0055	REMOVE EXISTING WATERMAIN	392	L.F.	$	7.50	$	2,940.00
DO0050	TREE REMOVAL	27	EACH	$	200.00	$	5,400.00
DM0015	REMOVE EXISTING CURB & GUTTER	1603	L.F.	$	5.50	$	8,816.50
WM0160	REMOVE EXIST. FIRE HYDRANT	1	EACH	$	400.00	$	400.00
WM0350	REMOVE EXISTING STRUCTURE	2	EACH	$	500.00	$	1,000.00
			SUBTOTAL.			$	36,405.50
EROSION CONTROL							
EC0025	EXCELSIOR BLANKET	2255	S.Y.	$	2.00	$	4,510.00
EC0040	INLET EROSION CONTROL	7	EACH	$	300.00	$	2,100.00
EC0115	SILT FENCE	865	L.F.	$	4.00	$	3,460.00
			SUBTOTAL.			$	10,070.00
LANDSCAPING							
EC0006	SEEDING	2255	S.Y.	$	0.50	$	1,127.50
			SUBTOTAL			$	1,127.50
PAVEMENT							
PV0135	1.5" BIT. CONC. SURF. CSE., TY 2 MIX D. CL1	2310	S.Y.	$	7.50	$	17,325.00
PV0115	3.5" BIT. CONC. BINDER CSE., TY 2. CL1	1310	S.Y.	$	12.00	$	15,720.00
PV0080	12" CRUSHED AGG. BASE CSE., TYPE B	1310	S.Y	$	18.00	$	23,580.00
PV0270	COMB. CONC. CURB & GUTTER, TYPE M-6 12	1001	L.F.	$	35.00	$	35,035.00
PV0373	TRANSFORMER PAD	1	EACH	$	3,500.00	$	3,500.00
			SUBTOTAL.			$	95,160.00
STORM SEWER							
SS0130	15" STORM SEWER, RCP CL IV	20	L.F.	$	68.00	$	1,360.00
SS0135	6" STORM SEWER, HDPE	678	L.F.	$	28.00	$	18,984.00
SS0445	ADS YARD DRAIN	4	EACH	$	350.00	$	1,400.00
SS0765	CONNECT TO EXIST STRUCTURE	1	EACH	$	250.00	$	250.00
SS0805	TRENCH BACKFILL	40	C.Y.	$	75.00	$	3,000.00
			SUBTOTAL.			$	24,994.00
WATERMAIN							
WM0075	6" WATERMAIN, DIP CL 52	90	L.F.	$	60.00	$	5,400.00
WM0080	8" WATERMAIN, DIP CL 52	565	L.F.	$	110.00	$	62,150.00

06/30/2025 12:30 PM RECEIPT #: JOURNAL REPORT FOR VILLAGE OF LAKE ZURICH Page: 1/1
User: Colleen.McCaul
DB: LAKE ZURICH

Post Date	Journal	Description	GL Number	DR Amount	CR Amount
10/14/2024	CR	Receipt #: Summary			
CR Trx #: 97010					
		Building Dept. Invoice 10/14/2024	101-00000-10101	80,597.10	
		Building Dept. Invoice 10/14/2024	101-00000-21201		80,437.10
		Building Dept. Invoice 10/14/2024	101-28001-43801		100.00
		Building Dept. Invoice 10/14/2024	101-28001-43808		60.00
				80,597.10	80,597.10

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

MEMORANDUM

Date: July 7, 2025

To: Ray Keller, Village Manager

From: Sarosh Saher, Community Development Director

CC: Mike Brown, Public Works Director
David Modrzejewski, Building Services Supervisor

Re: Reduction in Surety – 7 Brew at 880 South Rand Road

Issue. Village staff received the attached request from Mr. Christopher George, of Who Brew IL I, LLC to reduce the cash surety provided on October 14, 2024, regarding the property at 880 South Rand Road.

Background. The original guarantee provided by the developer was $80,437.10 in the form of a cash deposit with the Village. The amount was provided to guarantee work related to grading, water, sanitary and stormwater utilities. The work has been complete and inspected.

A request to reduce the guarantee to a maintenance cash deposit in the amount of $8,043.71 has been requested by the developer and agreed to by the Village's Development Review Team (DRT). An itemized breakdown of the surety is attached. The surety is required to guarantee the improvements against faulty workmanship and/or materials for a period of two (2) years and cannot be less than 10% of the total initial cost of improvements attributed to the work being covered.

Analysis. The proposed reduction is based on substantial completion of the items denoted in the Engineer's Opinion of Probable Cost submitted in 2024 at the time of approval of the development. Village Engineer Manhard Consulting and Staff have inspected the property, reviewed the request and concur that the site improvements guarantee may be reduced.

Recommendation. Staff recommends a reduction of the surety to $8,043.71, to be held as a cash deposit with the Village.

Attachments:

- Developer's request for reduction dated June 6, 2025
- Engineer's Opinion of Probable Cost dated August 15, 2024

Ray Keller
Village Manager
70 E Main Street
Lake Zurich, IL 60047

RE: Request for Surety Cash Bond Reduction for Who Brew IL I, LLC

Mr. Keller,

Who Brew IL I, LLC kindly requests a reduction in the surety Cash Bond amount for $72,393.39.

Total current surety amount (90% of all applicable items based on the EOPC) is $80,437.10.

The following actions have been completed or submitted to the village as part of the completion process:

____ Inspections of improvements that have been completed. Inspections have been completed by the Village Engineer, Manhard Consulting.

____ Record Drawings (as-built plans) covering the improvements to be accepted have been submitted for review. (All as built drawings shall satisfy all standards of section 10-5-8-1 of this chapter and of the Lake Zurich stormwater management ordinance)

____ A revised surety Cash Bond in the amount of $80,437.10 has been submitted guaranteeing the improvements against faulty workmanship and/or materials for a period of two (2) years after acceptance.

We are requesting a reduction on all items to a 10% maintenance cash bond completed with some items remaining to be maintained at full surety (90%). Attached is a list of the items, amounts and completion status.

Who Brew IL I, LLC appreciates the cooperation of the Village of Lake Zurich during the improvement project.

Sincerely,

Christopher George

Chris George
Who Brew IL I, LLC
chrisgeorge@whobrewllc.com

6/6/2025

Date

7-Brew Coffee
Lake Zurich, IL
per Civil Drawings Dated 05.24.2024

Cost Estimate

08.15.2024

I.	Description - Misc	Quantity	Units	Unit Price	Total Cost
1	GRADING/CLEARING	1	SITE	$2,000	$2,000.00
2	TRASH ENCLOSURE	1	EACH	$17,000	$17,000.00
3	SITE PREPERATION	1	EACH	$10,000	$10,000.00
4	SITE DEMO	1	EACH	$20,000	$20,000.00
	Sub-Total - Misc				**$49,000.00**

II.	Description - Water Service	Quantity	Units	Unit Price	Total Cost
1	2" TYPE K COPPER PIPE	115	LF	$44	$5,752.50
	Sub-Total - Water Service				**$5,752.50**

III.	Description - Storm Sewers	Quantity	Units	Unit Price	Total Cost
1	12" HDPE PIPE	171	LF	$61	$10,362.60
2	6" HDPE PIPE	55	LF	$10	$550.00
3	12" CONCRETE FLARED END SECTION	1	EACH	$1,200	$1,200.00
	Sub-Total - Storm Sewers				**$12,112.60**

IV.	Description - Sanitary Sewers	Quantity	Units	Unit Price	Total Cost
1	6" SCH. 40 PVC PIPE	156	LF	$20	$3,120.00
2	GREASE INTERCEPTOR	1	EACH	$5,000	$5,000.00
3	SANITARY MONITORING MANHOLE	1	EACH	$5,000	$5,000.00
4	CLEANOUT	4	EACH	$113	$452.00
	Sub-Total - Sanitary Sewers				**$13,572**

V.	Description - Pavement Improvements	Quantity	Units	Unit Price	Total Cost
1	ASPHALT PAVEMENT	10008	SF	$7	$70,056.00
2	CONCRETE PAVEMENT	1296	SF	$12	$15,552.00
3	CURBS	955	LF	$35	$33,425.00
4	PAVEMENT MARKINGS	1	LS	$2,000	$2,000.00
5	SIDEWALKS	1005	SF	$10	$10,050.00
6	ACCESSIBLE SIDEWALK RAMPS	2	EACH	$2,000	$4,000.00
	Sub-Total - Pavement Improvements				**$135,083**

VI.	Description - Lighting and Signage	Quantity	Units	Unit Price	Total Cost
1	STREET/SITE LIGHTS	4	EACH	$2,000	$8,000.00
2	STREET SIGNS	1	EACH	$200	$200.00
	Sub-Total - Lighting and Signage				**$8,200.00**

VII.	Description - Landscape	Quantity	Units	Unit Price	Total Cost
1	LANDSCAPING (ROCK)	144	SY	$50	$7,200.00
2	WATERING SYSTEM	1	EACH	$5,000	$5,000.00
3	SHRUBS	90	EACH	$40	$3,600.00
3	TREES	24	EACH	$400	$9,600.00
4	BIOSWALE	162	SY	$60	$9,720.00
	Sub-Total - Landscape				**$35,120**

Summary

I.	Description - Misc	$49,000.00
II.	Description - Water Service	$5,752.50
III.	Description - Storm Sewers	$12,112.60
IV.	Description - Sanitary Sewers	$13,572
V.	Description - Pavement Improvements	$135,083
VI.	Description - Lighting and Signage	$8,200.00
VII.	Description - Landscape	$35,120

Construction Total	$258,840.10
10% Contingency	$25,884.01
Total	$284,724.11

~~$37,900~~

4% 11,388.96

80C $80,437.10