Planning & Zoning Commission

Wednesday, August 20, 2025, 7:00 p.m.
Village Hall, 70 East Main Street

AGENDA

1. CALL TO ORDER AND ROLL CALL: Chairperson Orlando Stratman, Vice-Chair Antonio Castillo, Joe Giannini, Sean Glowacz, Vladimir Kovacevic, Scott Morrison, Mike Muir and Ildiko Schultz.

2. CONSIDERATION OF MINUTES AND FINDINGS OF THE COMMISSION

   A. Minutes of the Planning and Zoning Commission Meeting, on July 16, 2025.
   Motion to approve the minutes.

3. PUBLIC MEETING
   (This agenda item includes items that do not require public testimony)

   A. 85 South Old Rand Road and 100 Park Ave – Plat of Consolidation (2025-14)
   Application for a Plat of Consolidation to consolidate various parcels and lots and to provide for a public utility easement.
   Applicant: Village of Lake Zurich
   Owners: Village of Lake Zurich and Jump Co LLC Park Ave Series

   B. 0 Manchester Road – Meadow Wood East Subdivision – Final Plan (2025-09)
   Application for Final Plan approval of a residential subdivision consisting of 15 single-family homes on approximately 8 acres.
   Applicant: Mike Naumowicz
   Owner: Mary Christine Misik

4. PUBLIC HEARING
   (This agenda item includes proposals presented to the Planning & Zoning Commission requiring public testimony, discussion and recommendation to the Village Board for final action.)

   Continued Items.
   The following item was continued from the July 16, 2025 meeting of the PZC.

   A. 173 West Main Street – Planned Unit Development (PUD) (2025-12)

Application for a Planned Unit Development (PUD) for the redevelopment of the vacant property with a new mixed-use development consisting of 19 single-family townhomes, an approximately 4,875 square-foot commercial building, associated parking areas and stormwater detention facilities, on the B-2 Central Business District and R-5 Single-Family Residential District to be known as the Waterfront of Lake Zurich.
Applicant: THG Holdings LLC – Series I
Owner: Village of Lake Zurich

New Items

B. 2500 North Rand Road – Annexation, Zoning, Subdivision and Planned Unit Development (PUD) (2025-13)
Application for Annexation, Zoning and Subdivision of the property through a Planned Unit Development (PUD) to redevelop the property with automobile condominiums and retail buildings.
Applicant: Luxe Corsa Partners LLC
Owner: Calabrese Family Living Trust

C. Miscellaneous Text Amendments (2025-16)
Application for various amendments to the text of the Lake Zurich Zoning and Land Development Code pertaining to extra jurisdictional streets.
Applicant: Village of Lake Zurich

5. OTHER BUSINESS

6. STAFF REPORTS
This is an opportunity for staff of the Community Development Department to report on matters of interest to the Planning & Zoning Commission

A. Upcoming projects.

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

8. ADJOURNMENT

The Village of Lake Zurich is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations so that they can observe or participate in this meeting, or who have questions regarding the accessibility of the meeting or the Village's facilities, should contact the Village's ADA coordinator, Kyle Kordell, (847) 438-5141 (TDB #438-2349) promptly to allow the Village to make reasonable accommodation.

VILLAGE OF LAKE ZURICH
Planning & Zoning Commission
70 East Main Street

Wednesday, July 16, 2025, 7:00 p.m.

1. **CALL TO ORDER** at 7.00pm by Chairperson Orlando Stratman
ROLL CALL: Chairperson Orlando Stratman, Commissioners Joe Giannini, Vladimir Kovacevic, and Ildiko Schultz. Commissioners Antonio Castillo, Sean Glowacz, Scott Morrison, and Mike Muir were absent. Also present: Community Development Director Sarosh Saher and Village Planner Colleen McCauley.

2. **CONSIDERATION OF MINUTES AND FINDINGS OF THE COMMISSION**

A. Minutes of the Planning and Zoning Commission Meeting on June 18, 2025.
Motion to approve the minutes was made by Commissioner Schultz, seconded by Commissioner Giannini.
AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

3. **PUBLIC MEETING**
No items received for consideration.

4. **PUBLIC HEARING**
Motion was made by Commissioner Schultz, seconded by Commissioner Giannini to open the public hearing for the following applications:
Application PZC 2025-10 for a Special Use Permit at 795 West Illinois Route 22.
Application PZC 2025-11 for a Special Use Permit at 909 South Rand Road.
Application PZC 2025-12 for a Planned Unit Development (PUD) at 173 West Main Street.
AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

Public Hearing started at 7.02pm

Chairperson Stratman gave the Oath to those who were going to give testimony.

A. 795 West Illinois Route 22 – Special Use Permit (2025-10):

Application for a Special Use Permit for the establishment of a used merchandise store, including the sale of used clothing in the B-3 Regional Shopping Business District to be operated as a Salvation Army Thrift Store.

Applicant: Mr. Jason A. Sfire on behalf of The Salvation Army

Owner: Village Square Retail Center LLC

Dir. Saher confirmed that proper notice was provided of this item and then he introduced Mr. Jason Sfire, who presented information regarding the requested Special Use Permit. The presentation included graphics and additional details explaining how The Salvation Army will receive donations and the designated location of the drop-off area.

Commissioner Schultz asked a question in regards to the donation ramp and Mr. Sfire clarified that the drive aisle is wide enough to accommodate through traffic as well as the donation area.

PUBLIC TESTIMONY.

There was none.

Motion to close the public hearing on Application PZC 2025-10 and move to deliberation was made by Commissioner Schultz, seconded by Commissioner Kovacevic.

AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

On Application PZC 2025-10: A Motion was made by Commissioner Schultz, seconded by Commissioner Giannini, to receive into the public record the staff review of compliance of this Application with the zoning standards as presented by staff; and to receive the testimony presented by the Applicant, by the PZC Members, and by Village Staff at tonight's Public Hearing; and make these standards and testimony a part of the official record for the Application and Findings of the PZC; and to recommend that the Village Board approve the application for the establishment of a used merchandise store, including the sale of used clothing, to be operated as The Salvation Army Thrift Store at 795 West Illinois Route 22.

AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

B. 909 South Rand Road – Map Amendment and Special Use Permit (2025-11):

Application for a Map Amendment from B-1 Local Community Business District to B-3 Regional Shopping Business District for the construction of a new Automobile Lubricating Services facility in the B-3 district to be operated as a Valvoline Instant Oil Change.

Applicant: Mr. Jason A. Sfire on behalf of Valvoline

Owner: JAS Management LLC

Dir. Saher confirmed that proper notice was provided of this item and then he introduced Mr. Jason Sfire once again to make a presentation on the proposed use. The site plan and operations of the business were explained in greater detail. The Real Estate Development

Manager noted that no appointments are allowed and that no cars will be parked on the site over night

PUBLIC TESTIMONY.

Ohla Yuzko of 203 Fescue Court and William Howarth of 328 Denberry Drive voiced concerns regarding the proposed rezoning to the B-3 Business District, specifically related to the capability of the fence for screening and the potential impact of lighting. Mr. Jason Sfire noted that if the land use were to shift from an oil change facility to another Special Use, the Planning and Zoning Commission would have the opportunity to review the proposal and impose any necessary conditions.

It was stated by the Real Estate Development Manager that the signage on the rear of the building, facing the residential properties, will be removed from the building plan.

Motion to close the public hearing on Application PZC 2025-11 and move to deliberation was made by Commissioner Schultz, seconded by Commissioner Kovacevic.

AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

On Application PZC 2025-11: A Motion was made by Commissioner Schultz, seconded by Commissioner Kovacevic, to receive into the public record the staff review of compliance of this Application with the zoning standards as presented by staff; and to receive the testimony presented by the Applicant, by members of the public, PZC Members, and by Village Staff at tonight's Public Hearing; and make these standards and testimony a part of the official record for the Application and Findings of the PZC; including the condition of the investigation of the relocation of the trash enclosure from the southwest corner to the southeast corner of the site and the installation of a 6-foot-tall fence at the rear of the property for privacy and to recommend the Village Board approve the application for a Map Amendment from B-1 Local Community Business District to B-3 Regional Shopping Business District for the construction of a new Automobile Lubricating Services facility in the B-3 district to be operated as a Valvoline Instant Oil Change at 909 South Rand Road.

AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

C. <u>173 West Main Street – Planned Unit Development (2025-12)</u>

Application for a Planned Unit Development (PUD) for the redevelopment of the vacant property with a new mixed-use development consisting of 19 single-family townhomes, an approximately 4,875 square-foot commercial building, associated parking areas and stormwater detention facilities, on the B-2 Central Business District and R-5 Single-Family Residential District to be known as the Waterfront of Lake Zurich.

Applicant: THG Holdings LLC – Series I
Owner: Village of Lake Zurich

This item is being continued to the August PZC Meeting to allow the Applicant time to address the comments provided by the Village Development Review Team.

5. OTHER BUSINESS

There was none.

6. STAFF REPORTS

The Block A proposal for 173 West Main Street is scheduled for review at the August meeting of the Planning and Zoning Commission.
Additionally, the Commission will review an annexation request, commonly known as the Calabrese Property, along with a development plan for luxury car condominiums.

7. PUBLIC COMMENT

There were none.

8. ADJOURNMENT

Motion to adjourn the meeting made by Commissioner Schultz, seconded by Commissioner Giannini.
AYES: 4 Commissioners Giannini, Kovacevic, Schultz, Chairperson Stratman.
NAYS: 0
ABSTAIN: 0
ABSENT: 4 Commissioners Castillo, Glowacz, Morrison, Muir.
MOTION CARRIED.

Meeting adjourned at 8.07 pm

Respectfully submitted:
Colleen McCauley, Village Planner

Approved by:

_____ _____

Chairperson Orlando Stratman. Date

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

APPLICATION PZC 2025-14 **AGENDA ITEM 3.A**
PZC Hearing Date: August 20, 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: Plat of Consolidation – 100 Park Avenue and 85 South Old Rand Road

SUBJECT

The Village of Lake Zurich (the "Applicant") in partnership with Mr. Alex Jump of Jumpco LLC Park Ave Series, is requesting approval for the plat of consolidation of two lots located in the Main Street Area to facilitate future development.

GENERAL INFORMATION

Requested Action: Plat of Consolidation

Applicant: Village of Lake Zurich

Staff Coordinator: Sarosh Saher, Community Development Director

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Site Photos
D. Development Review Comments

BACKGROUND

The Village of Lake Zurich (the "Applicant") is requesting approval of the proposed plat of consolidation. The Village has entered into an agreement with Mr. Alex Jump for the sale and transfer of the property located at 85 South Old Rand Road. This parcel was originally acquired by the Village in 2005 as part of its downtown redevelopment vision. The existing structure on the site was demolished in 2014, and the lot has remained vacant since then.

Mr. Alex Jump, recently purchased the adjacent property at 100 Park Avenue, the site of the train depot, in November of 2024. The intention is to consolidate the two parcels to support development. As a condition of the sale, the Village agreed to consolidate the two parcels and required that a 20-foot-wide public utility easement be included on the property, extending from South Old Rand Road to Park Avenue. This easement will provide access to the Village to implement ongoing maintenance and utility repairs.

The Village Board authorized the sale of the 85 South Old Rand Road property, along with the associated conditions, on April 7, 2025.

The video stream from the Village Board Meeting from April 7, 2025 can be viewed at the following link:
https://play.champds.com/lakezurichil/event/151

ANALYSIS

The property located at 100 Park Avenue consists of two parcels totaling approximately 67,972 square feet, or 1.56 acres. The Village-owned lot at 85 South Old Rand Road adds approximately 4,008 square feet, or 0.09 acres, bringing the total combined area to about 1.65 acres. The 100 Park Avenue property is long and narrow, with an approximate width of 91 feet and a depth exceeding 769 feet. These proportions create significant design constraints for any future development, particularly in terms of building layout, access, and parking.

By consolidating the Village-owned lot with the adjacent Park Avenue property under a single ownership, the development potential of the site is significantly improved.

The front of the consolidated property will face South Old Rand Road, while Park Avenue intersects the parcel at roughly its midpoint. The Elgin Joliet and Eastern Railway runs along the eastern edge of the site, adding another unique boundary condition. Notably, the parcel also contains a train depot structure, which is over 100 years old.

Staff has no objection to the proposed consolidation of the parcels within the Main Street Area, particularly given the inclusion of the 20-foot-wide public utility easement on the plat, which ensures continued access for the Village to perform maintenance and any necessary utility work. Additionally, the consolidation will relieve the Village of the responsibility for ownership and

ongoing maintenance of the parcel, while also creating an opportunity for productive redevelopment of the property.

RECOMMENDATION

Based on the review, staff recommends the approval of Application PZC 2025-14. Staff further finds that the Plat of Consolidation:

1. Will not interfere with the ongoing maintenance of public utilities on the site, as the plat includes a reserved 20-foot-wide public utility easement;
2. Will not hinder the Village Board's opportunity to guide and regulate the future development of the site;
3. Will not negatively impact the Village's efforts to promote the Main Street Area improvement plans;
4. Will not hinder the Village's ability to enforce applicable regulations, including those related to Building, Zoning, Land Development, or any other ordinances enacted to protect public health, safety, and welfare; and
5. Is not expected to result in any adverse impacts, as the consolidation will streamline ownership, reduce Village maintenance responsibilities, and support the redevelopment potential of a vacant property.

Respectfully Submitted,

Colleen McCauley
Village Planner

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

PLAT OF CONSOLIDATION
85 SOUTH OLD RAND ROAD AND 100 PARK AVENUE
August 20, 2025

The Planning & Zoning Commission recommends approval of Application PZC 2025-14, and the Planning & Zoning Commission agrees with the analysis as contained within the Staff Report dated August 20, 2025 for this Application for the following reasons:

1. Will not interfere with the ongoing maintenance of public utilities on the site, as the plat includes a reserved 20-foot-wide public utility easement;
2. Will not hinder the Village Board's opportunity to guide and regulate the future development of the site;
3. Will not negatively impact the Village's efforts to promote the Main Street Area improvement plans;
4. Will not hinder the Village's ability to enforce applicable regulations, including those related to Building, Zoning, Land Development, or any other ordinances enacted to protect public health, safety, and welfare; and
5. Is not expected to result in any adverse impacts, as the consolidation will streamline ownership, reduce Village maintenance responsibilities, and support the redevelopment potential of a vacant 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

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: 100 Park Ave and 85 S Old Rand Rd
2. **Please attach complete legal description**
3. Property Identification number(s): 1420200017; 1420100053; 1420206005
4. Owner of record is: Village of Lake Zurich; JUMP CO LLC PARK AVE SERIES Phone: 847-540-1696
   E-Mail _____ Address: 70 E Main St; 100 Park Ave
5. Applicant is (**if different from owner**): Village of Lake Zurich Phone: 847-540-1696
   E-Mail _____ Address: 70 E Main St, Lake Zurich, IL 60047
6. Applicant's interest in the property (owner, agent, realtor, etc.): Owner
7. All existing uses and improvements on the property are: N/A
8. The proposed uses on the property are: Commercial
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:
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property: Contract to Purchase
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 1st day of August, 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 Plat of Consolidation

Proposal: The Village of Lake Zurich (the "Applicant") is requesting approval of a plat of consolidation.

The Village has entered into an agreement with Mr. Alex Jump of Jumpco LLC Park Ave Series for the sale and transfer of the property located at 85 South Old Rand Road. This parcel was originally acquired by the Village in 2005 as part of its downtown redevelopment vision. The Village intends to convey the property to Mr. Alex Jump.

Mr. Alex Jump, recently purchased the adjacent property at 100 Park Avenue, the site of the train depot, in November of 2024. The intention is to consolidate the two parcels to support development. As a condition of the sale, the Village agreed to consolidate the two parcels and required that a 20-foot-wide public utility easement be included on the property, extending from South Old Rand Road to Park Avenue. This easement will provide access to the Village to implement ongoing maintenance and utility repairs.

Submitted by:

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

Dated: July 31, 2025

OLD RAND Consolidation
OF

THAT PART OF LOT 1 IN PROSPECT PARK, BEING E. R. CLARK'S SUBDIVISION OF PART OF THE NORTH 1/2 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JULY 18, 1891 AS DOCUMENT NO. 46156, IN BOOK "B" OF PLATS, PAGE 57, DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE MOST EASTERLY CORNER OF SAID LOT 1; THENCE NORTHWESTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 1, 46.6 FEET; THENCE SOUTHWESTERLY TO MOST SOUTHERLY CORNER OF A TRACT OF LAND CONVEYED BY ISABELLE LANDWER TO LAKE ZURICH FIRE DEPARTMENT, INC., DATED AUGUST 16, 1949 AND RECORDED AUGUST 19, 1949 AS DOCUMENT NO. 677466; THENCE SOUTHEASTERLY PARALLEL TO THE SOUTHWESTERLY LINE OF SAID LOT 1, 47.4 FEET, MORE OR LESS, TO THE SOUTHEASTERLY LINE OF SAID LOT 1; THENCE NORTHEASTERLY TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

AND

THAT PART OF THE NORTH 1/2 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF OLD RAND ROAD (S. B. ROUTE 60), 16.0 FEET NORTHWESTERLY OF THE CENTERLINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY COMPANY'S MAIN TRACK; THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 91.0 FEET THENCE SOUTHWESTERLY PARALLEL WITH AND 107.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.50 FEET; THENCE SOUTHEASTERLY PARALLEL WITH AND 243.50 FEET SOUTHWESTERLY OF SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 91.0 FEET; THENCE NORTHEASTERLY PARALLEL WITH AND 16.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.5 FEET TO THE POINT OF BEGINNING, ALL IN LAKE COUNTY, ILLINOIS.

UTILITY EASEMENT

THAT PART OF THE NORTH 1/2 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS: COMMENCING AT A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF OLD RAND ROAD (S. B. ROUTE 60), 16.0 FEET NORTHWESTERLY OF THE CENTERLINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY COMPANY'S MAIN TRACK; THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND, 71.0 FEET TO THE POINT OF BEGINNING; THENCE SOUTHWESTERLY PARALLEL WITH AND 87.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.50 FEET; THENCE NORTHWESTERLY PARALLEL WITH AND 243.50 FEET SOUTHWESTERLY OF SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 20.0 FEET; THENCE NORTHEASTERLY PARALLEL WITH AND 107.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.5 FEET TO THE NORTHEASTERLY CORNER OF LOT 1 IN PROSPECT PARK; THENCE SOUTHEASTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 20.0 FEET TO THE POINT OF BEGINNING, ALL IN LAKE COUNTY, ILLINOIS.

UTILITY EASEMENT PROVISIONS

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO ALL VILLAGE AND VILLAGE FRANCHISED UTILITIES, THEIR RESPECTIVE SUCCESSORS, AND ASSIGNS, JOINTLY AND SEVERALLY, IN, UNDER, UPON, ACROSS ALL PLATTED "PUBLIC UTILITY EASEMENT" AREAS. PUBLIC UTILITY EASEMENTS, STREET, ALLEYS, OTHER PUBLIC WAYS SHOWN ON THIS PLAT, SAID EASEMENT TO BE FOR INSTALLATION, CONSTRUCTION, MAINTENANCE, RELOCATION, RENEWAL, OPERATE, AND REMOVAL OF SAID UTILITIES FOR THE PURPOSE OF SERVING ALL AREAS SHOWN ON THIS PLAT AS WELL AS OTHER PROPERTIES, WHETHER OR NOT CONTIGUOUS THERE TO WITH SAID UTILITIES AND OTHER MUNICIPAL SERVICES. ALSO THERE IS HEREBY GRANTED THE RIGHT TO ENTER UPON SAID AREAS TO INSTALLATION, CONSTRUCTION, MAINTENANCE, RELOCATION, RENEWAL, OPERATE, AND REMOVE UTILITIES. THE RIGHT OF INGRESS AND EGRESS IS HEREBY GRANTED OVER, UPON, AND THROUGH SAID AREAS FOR EMERGENCY VEHICLES. TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS TO SERVE IMPROVEMENTS SHALL BE CONSTRUCTED, ERECTED, OR PLACED IN ANY SUCH "EASEMENT" AREAS, STREET, ALLEYS. OR OTHER PUBLIC WAYS NOR SHALL ANY OTHER USE BE MADE THEREOF WHICH WILL INTERFERE WITH EASEMENTS RESERVED AND GRANTED HEREBY. THE GRADE OF THE AREAS SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION, MAINTENANCE, AND ACCESS THEREOF.

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

_____, _____, DO HEREBY CERTIFY THAT _____ THE OWNER(S) OF THE PROPERTY DESCRIBED IN THE CAPTION TO THE PLAT HEREON DRAWN AND AS SUCH OWNER(S), _____ HAVE CAUSED SAID PROPERTY TO BE SURVEYED AND CONSOLIDATED AS HEREON SHOWN, AS _____ OWN FREE AND VOLUNTARY ACT AND DEED.
_____ HEREBY DEDICATE FOR PUBLIC USE THE LANDS SHOWN ON THIS PLAT, INCLUDING BUT NOT LIMITED TO, THOROUGHFARES, STREETS, ALLEYS, WALKWAYS AND PUBLIC SERVICES; GRANT THE TELEPHONE, GAS, ELECTRIC AND ANY OTHER PUBLIC OR PRIVATE UTILITY EASEMENTS AS STATED AND SHOWN ON THIS PLAT; AND GRANT AND DECLARE THE STORM WATER DRAINAGE AND DETENTION EASEMENTS AS STATED AND SHOWN ON THIS PLAT.

_____ FURTHER CERTIFY THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS CONSOLIDATION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE CONSOLIDATION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THIS SUBDIVISION PLAT.

DATED THIS _____DAY OF_____, 20___ .

OWNER(S): _____
(NAME / NAMES)

OWNER'S NOTARY CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

I, _____ , A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ , PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S) WHOSE NAME(S) _____ SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH _____ , APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT _____SIGNED THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL:

THIS DAY _____ OF _____, 20___.

BY: _____
NOTARY PUBLIC

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH CONSOLIDATION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR 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 PROPERTY BECAUSE OF THE CONSTRUCTION OF THE CONSOLIDATION.

DATED THIS _____DAY OF _____, 20___.

BY:_____
REGISTERED PROFESSIONAL ENGINEER

LICENSE NO.: _____

BY:_____
OWNER(S) / TRUSTEE / DULY AUTHORIZED ATTORNEY

COUNTY RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

THIS INSTRUMENT NUMBER _____WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF LAKE COUNTY, ILLINOIS:

DATED THIS _____DAY OF _____, 20___.

AT: _____O'CLOCK ___M.

BY: _____
COUNTY RECORDER

SCHOOL DISTRICT CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

THIS IS TO CERTIFY THAT TO THE BEST OF _____ KNOWLEDGE, _____ THE UNDERSIGNED AS _____ OF THE PROPERTY, WHICH WILL BE KNOWN AS _____ IS LOCATED WITHIN THE BOUNDARIES OF:

K-12 SCHOOL DISTRICT: LAKE ZURICH COMM UNIT SCHOOL DIST #95
COMMUNITY COLLEGE: COLLEGE OF LAKE COUNTY #532

IN LAKE COUNTY, ILLINOIS.

DATED THIS _____ DAY OF _____, 20___.

BY:_____
(OWNER(S) / TRUSTEE)

PLAN COMMISSION AND ZONING BOARD OF APPEAL'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) SS

THIS IS TO CERTIFY THAT THE MEMBERS OF THE PLAN COMMISSION – ZONING BOARD OF APPEALS HAVE REVIEWED AND APPROVED THE PLAT OF CONSOLIDATION IN CONFORMANCE WITH SUBDIVISION REGULATIONS.

DATED THIS _____ DAY OF _____, 20___.

BY:_____
CHAIRMAN

ATTEST:_____
SECRETARY

COUNTY CLERK'S CERTIFICATE

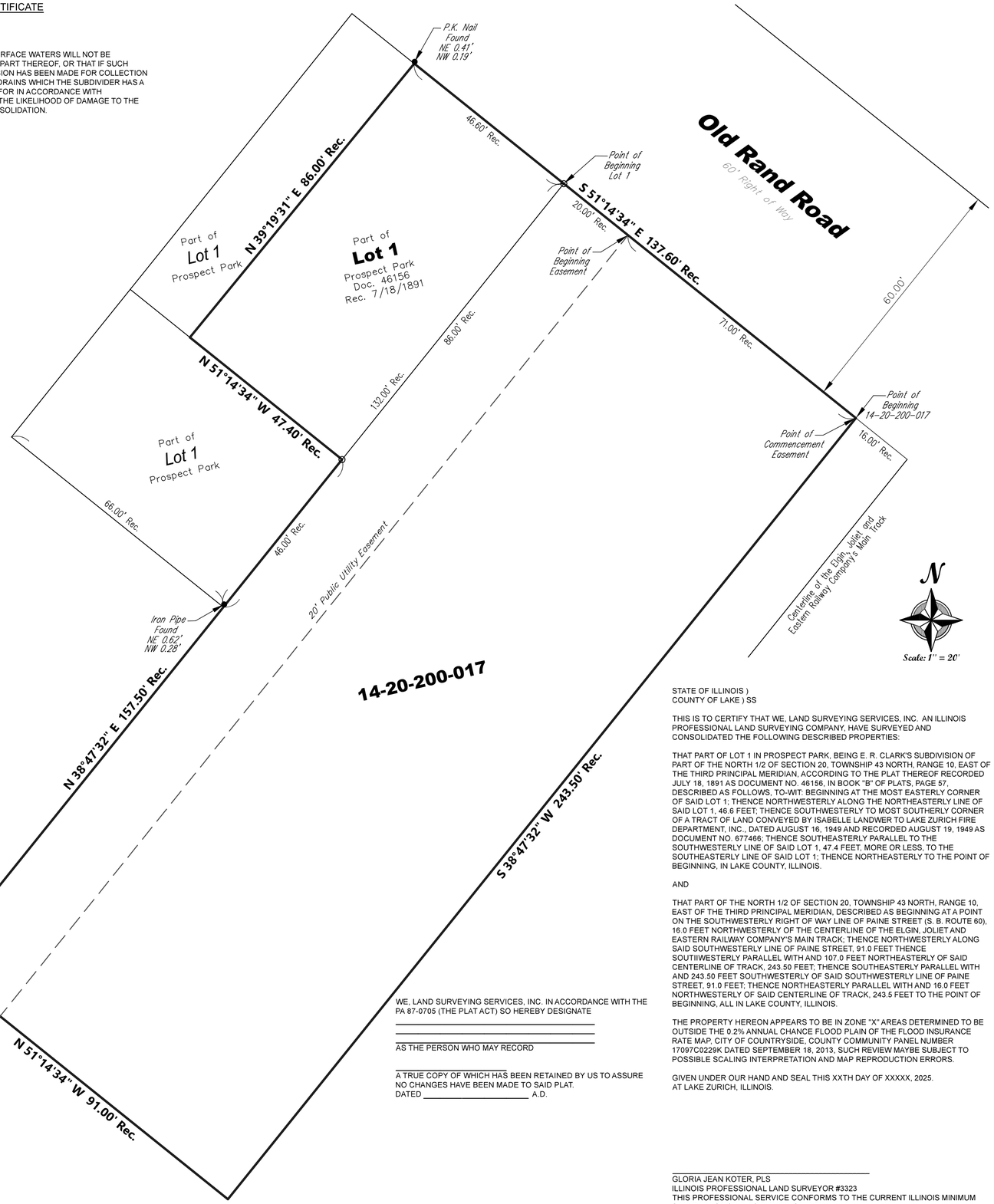
STATE OF ILLINOIS)
COUNTY OF LAKE) SS

I, _____, COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID CURRENT GENERAL TAXES, NO UNPAID FORFEITED TAXES, NO DELINQUENT OR UNPAID CURRENT SPECIAL ASSESSMENTS, AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND INCLUDED IN THE CONSOLIDATION PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK,

THIS DAY _____OF _____, 20___.

BY: _____
COUNTY CLERK



STATE OF ILLINOIS)
COUNTY OF LAKE) SS

THIS IS TO CERTIFY THAT WE, LAND SURVEYING SERVICES, INC. AN ILLINOIS PROFESSIONAL LAND SURVEYING COMPANY, HAVE SURVEYED AND CONSOLIDATED THE FOLLOWING DESCRIBED PROPERTIES:

THAT PART OF LOT 1 IN PROSPECT PARK, BEING E. R. CLARK'S SUBDIVISION OF PART OF THE NORTH 1/2 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JULY 18, 1891 AS DOCUMENT NO. 46156, IN BOOK "B" OF PLATS, PAGE 57, DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE MOST EASTERLY CORNER OF SAID LOT 1; THENCE NORTHWESTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 1, 46.6 FEET; THENCE SOUTHWESTERLY TO MOST SOUTHERLY CORNER OF A TRACT OF LAND CONVEYED BY ISABELLE LANDWER TO LAKE ZURICH FIRE DEPARTMENT, INC., DATED AUGUST 16, 1949 AND RECORDED AUGUST 19, 1949 AS DOCUMENT NO. 677466; THENCE SOUTHEASTERLY PARALLEL TO THE SOUTHWESTERLY LINE OF SAID LOT 1, 47.4 FEET, MORE OR LESS, TO THE SOUTHEASTERLY LINE OF SAID LOT 1; THENCE NORTHEASTERLY TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

AND

THAT PART OF THE NORTH 1/2 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF PAINE STREET (S. B. ROUTE 60), 16.0 FEET NORTHWESTERLY OF THE CENTERLINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY COMPANY'S MAIN TRACK; THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF PAINE STREET, 91.0 FEET THENCE SOUTIIWESTERLY PARALLEL WITH AND 107.0 FEET NORTHEASTERLY OF SAID CENTERLINE OF TRACK, 243.50 FEET; THENCE SOUTHEASTERLY PARALLEL WITH AND 243.50 FEET SOUTHWESTERLY OF SAID SOUTHWESTERLY LINE OF PAINE STREET, 91.0 FEET; THENCE NORTHEASTERLY PARALLEL WITH AND 16.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.5 FEET TO THE POINT OF BEGINNING, ALL IN LAKE COUNTY, ILLINOIS.

THE PROPERTY HEREON APPEARS TO BE IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN OF THE FLOOD INSURANCE RATE MAP, CITY OF COUNTRYSIDE, COUNTY COMMUNITY PANEL NUMBER 17097C0229K DATED SEPTEMBER 18, 2013, SUCH REVIEW MAYBE SUBJECT TO POSSIBLE SCALING INTERPRETATION AND MAP REPRODUCTION ERRORS.

GIVEN UNDER OUR HAND AND SEAL THIS XXTH DAY OF XXXXX, 2025.
AT LAKE ZURICH, ILLINOIS.

WE, LAND SURVEYING SERVICES, INC. IN ACCORDANCE WITH THE PA 87-0705 (THE PLAT ACT) SO HEREBY DESIGNATE

_____
_____
_____
AS THE PERSON WHO MAY RECORD

_____
A TRUE COPY OF WHICH HAS BEEN RETAINED BY US TO ASSURE NO CHANGES HAVE BEEN MADE TO SAID PLAT.
DATED _____ A.D.

_____
GLORIA JEAN KOTER, PLS
ILLINOIS PROFESSIONAL LAND SURVEYOR #3323
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

Drafted By: ER Field Work By: KJ	Date
Revision	Date

Land Surveying Services, Inc.
1182 Heather Drive Lake Zurich, Illinois 60047
Ph. (847)847-1079 Fax. (847)847-1279
Professional Design Firm License No. 184-003632

Field Work Completed: 2-26-2025	Scale: 1" = 20'	Date: XX-XX-2025
Site Address: 85-100 S. Old Rand Road Lake Zurich, Illinois		

Job Number	Sheet Name
LS250461	PLAT OF CONSOLIDATION
Sheet Number: CONSOLIDATION	

AGREEMENT AND GRANT OF PUBLIC UTILITY AND ACCESS EASEMENTS

This Agreement and Grant of Public Utility Easement ("**Agreement**") is made between the Village of Lake Zurich, an Illinois municipal corporation (the "Village" or "Grantee"), and JumpCo LLC Park Ave. Series, 24197 N Echo Lake Rd, Lake Zurich, IL 60047 (the "Grantor").

The Village and Grantor agree as follows:

RECITALS:

A. Grantor and Grantee have entered into a Real Estate Sales Contract (the "RE Contract") approved by the Village by Resolution 2025-04-099, on April 7, 2025,
B. Pursuant to the RE Contract, the Grantor agreed to purchase that lot owned by the Village, PIN 14-20-206-005-000 (the "Village Lot") and consolidate that lot with the adjoining property owned by Grantor, PIN 14-20-200-017-000, to the immediate south (the "Grantor's Lot"), (collectively both the Village Lot and Grantor Lot referred to as the "Subject Property").
C. Pursuant to the RE Contract, the Grantor agreed to grant to the Village a 20 foot wide sewer and water utility easement (the "Utility Easement") by appropriate instrument.
D. The RE Contract provides that the Utility Easement will extend from South Old Rand Road to Park Avenue over the Subject Property.
E. The RE Contract provides that the Utility Easement to the Village is over, under, upon and within the Subject Property for the operation of a sewer or water main and related facilities and appurtenances to provide for such operation, including rights to construct, replace, repair, maintain, inspect, remove and improve said sewer or water main, along with reasonable rights of access over the Subject Property to exercise the above easement rights.
F. The Village has reserved the right to approve the final description and location of the Utility Easement, prior to conveying the Village Lot to Grantor.
G. The final description and location of the Utility Easement is as depicted upon that Plat of Consolidation, attached hereto as **Exhibit A** and made a part hereof by this reference.

NOW, THEREFORE, in consideration of thirty-five thousand and no/100ths dollars, ($35,000) the payments, covenants, terms, and conditions to be made, performed, kept and observed by Grantee hereunder and other good and lawful consideration, Grantor and Grantee hereby agree as follows:

1. **RECITALS.** The above recitals are hereby agreed to and incorporated herein as material agreements of the Parties.

2. **GRANTOR'S PROPERTY.** Grantor's Property is legally described as follows:

THAT PART OF LOT 1 IN PROSPECT PARK, BEING E. R. CLARK'S SUBDIVISION OF PART OF THE NORTH ½ OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JULY 18, 1891 AS DOCUMENT NO. 46156, IN BOOK "B" OF PLATS, PAGE 57, DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE MOST EASTERLY CORNER OF SAID LOT 1; THENCE NORTHWESTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 1, 46.6 FEET; THENCE SOUTHWESTERLY TO MOST SOUTHERLY CORNER OF A TRACT OF LAND CONVEYED BY ISABELLE LANDWER TO LAKE ZURICH FIRE DEPARTMENT, INC., DATED AUGUST 16, 1949 AND RECORDED AUGUST 19, 1949 AS DOCUMENT NO. 677466; THENCE SOUTHEASTERLY PARALLEL TO THE SOUTHWESTERLY LINE OF SAID LOT 1, 47.4 FEET, MORE OR LESS, TO THE SOUTHEASTERLY LINE OF SAID LOT 1; THENCE NORTHEASTERLY TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.
AND
THAT PART OF THE NORTH ½ OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF OLD RAND ROAD (S. B. ROUTE 60), 16.0 FEET NORTHWESTERLY OF THE CENTERLINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY COMPANY'S MAIN TRACK; THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 91.0 FEET THENCE SOUTHWESTERLY PARALLEL WITH AND 107.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK 243.50 FEET; THENCE SOUTHEASTERLY PARALLEL WITH AND 243.50 FEET SOUTHWESTERLY OF SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 91.0 FEET; THENCE NORTHEASTERLY PARALLEL WITH AND 16.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.5 FEET TO THE POINT OF BEGINNING, ALL IN LAKE COUNTY, ILLINOIS.

Common Street Address: 85 S. Old Rand Road, Lake Zurich, Illinois
PIN 14-20-206-005-000 and PIN 14-20-200-017-000

3. **GRANT OF EASEMENT.**

   a. **EASEMENT RIGHTS**: Easement rights for public sewer and water services are hereby granted over that area, depicted and designated as "PUBLIC UTILITY EASEMENT" on that Plat of Consolidation attached hereto as **Exhibit A** and made a part hereof, as follows:

   A TWENTY (20) FOOT WIDE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND ANY VILLAGE OF LAKE ZURICH FRANCHISED UTILITIES, THEIR RESPECTIVE SUCCESSORS, AND ASSIGNS, JOINTLY AND SEVERALLY, FOR USE FOR WATER AND SEWER SERVICES, WITHIN, UNDER, UPON AND ACROSS ALL AREAS DESIGNATED "PUBLIC UTILITY EASEMENT" ON **EXHIBIT A**, PUBLIC UTILITY EASEMENTS, STREETS, ALLEYS, OTHER PUBLIC WAYS SHOWN ON **EXHIBIT A**, SAID

EASEMENT TO BE FOR INSTALLATION, CONSTRUCTION, MAINTENANCE, RELOCATION, RENEWAL, OPERATION, AND REMOVAL OF SAID UTILITIES FOR THE PURPOSE OF PROVIDING SAID UTILITY SERVICES. ALSO THE RIGHT OF INGRESS AND EGRESS IS HEREBY GRANTED OVER, UPON, AND THROUGH SAID PUBLIC UTILITY EASMENT AREAS FOR INSTALLATION, CONSTRUCTION, MAINTENANCE, RELOCATION, RENEWAL, OPERATION AND REMOVAL OF SAID UTILITIES, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS AND RELATED FACILITIES TO PROVIDE WATER AND SEWER SERVICES. NO IMPROVEMENTS SHALL BE CONSTRUCTED, ERECTED, OR PLACED IN ANY SUCH PUBLIC UTILITY EASEMENT AREAS, STREET, ALLEYS, OR OTHER PUBLIC WAYS NOR SHALL ANY OTHER USE BE MADE THEREOF WHICH WILL INTERFERE WITH THE EASEMENT RESERVED AND GRANTED HEREBY, THE CONDITION OR GRADE OF THE AREAS SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION, MAINTENANCE, AND ACCESS THEREOF BY THE VILLAGE OF LAKE ZURICH.

b. **LEGAL DESCRIPTION**. The above referenced easement rights are hereby granted over that area, depicted and designated as "PUBLIC UTILITY EASEMENT" on that Plat of Consolidation attached hereto as **Exhibit A** and made a part hereof, said easement area legally described as follows:

THAT PART OF THE NORTH ½ OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS: COMMENCING AT A POINT ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF OLD RAND ROAD (S. B. ROUTE 60), 16.0 FEET NORTHWESTERLY OF THE CENTERLINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY COMPANY'S MAIN TRACK; THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND, 71.0 FEET TO THE POINT OF BEGINNING; THENCE SOUTHWESTERLY PARALLEL WITH AND 87.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK 243.50 FEET; THENCE NORTHWESTERLY PARALLEL WITH AND 243.50 FEET SOUTHWESTERLY OF SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 20.0 FEET; THENCE NORTHEASTERLY PARALLEL WITH AND 107.0 FEET NORTHWESTERLY OF SAID CENTERLINE OF TRACK, 243.5 FEET TO THE NORTHEASTERLY CORNER OF LOT 1 IN PROSPECT PARK; THENCE SOUTHEASTERLY ALONG SAID SOUTHWESTERLY LINE OF OLD RAND ROAD, 20.0 FEET TO THE POINT OF BEGINNING, ALL IN LAKE COUNTY, ILLINOIS.

c. **ACCESS RIGHTS**. Grantor agrees to allow Grantee such reasonable access over the Subject Property as needed to exercise the above easement rights.

d. **GRANTEE USE.** GRANTEE shall have the right to do all things necessary, useful or convenient for the purposes outlined in paragraph a. above.

GRANTOR hereby covenants with GRANTEE that GRANTEE shall have quiet and peaceful possession, use and enjoyment of the Easement granted herein.

e. **RIGHTS RESERVED**. The easement rights granted herein are non-exclusive in nature and are subject to all matters of record. GRANTOR shall have the right to use the Subject Property, or any portion thereof, or any property of GRANTOR's adjoining the Public Utility Easement for any purpose not inconsistent with the full use and enjoyment of the rights granted herein in favor of GRANTEE.

4. **BINDING EFFECT.** This Agreement, and the easement rights granted herein, shall constitute perpetual covenants that run with the land and shall be binding upon the parties and their respective successors, transferees and assigns effect.

5. **RECORDING.** This Agreement shall be recorded following execution by both parties hereto. Grantee agrees to be responsible for the recording and the costs related thereto.

6. **GOVERNING LAW.** This Agreement shall be governed by and construed in accordance with the laws of the State of Illinois.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date of the last signatory below and inserted at the top of this Agreement.

GRANTEE:
Village of Lake Zurich

Mayor

Attest:

Village Clerk

GRANTOR:
JumpCo LLC Park Ave. Series

By:

By:

ACKNOWLEDGEMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

VILLAGE OF LAKE ZURICH

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____, personally known to me to be the Mayor of the Village of Lake Zurich, and _____, personally known to me to be the Village Clerk of said municipal corporation, and personally known to me to be the same persons whose name are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that, as such Village President, and Village Clerk, 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 corporate authorities of the Village of Lake Zurich, and as their free and voluntary act, and as the free and voluntary act and deed of said municipal corporation for the uses and purposes therein set forth.

GIVEN under my hand and Notary Seal, this _____ day of _____, 2025.

_____

Notary Public

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

GRANTOR
JumpCo LLC Park Ave. Series

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____, and _____ personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they signed and delivered the said instrument as their free and voluntary act, for the uses and purposes herein set forth.

GIVEN under my hand and Notary Seal, this _____ day of _____, 2025.

_____

Notary Public

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 2025-09 **AGENDA ITEM 3.B**
PZC Meeting Date: August 20, 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: August 20, 2025

Re: PZC 2025-09: Final Plan Approval for Meadow Wood East Single-Family Residential Subdivision

SUBJECT

Mr. Mike Naumowicz, (the "Applicant"), is partnering with a consultant, Mr. Kirk Rustman, requesting Final Plan Approval of a Planned Unit Development for the development of the property commonly referred to as Meadow Wood East ("Subject Property") containing 15 single family homes. The Subject Property is approximately 8 acres, located north of Manchester Road, and legally described in Exhibit A attached hereto.

The Development Concept Plan (Preliminary Plan) for the project was approved on January 6, 2025 through Ordinance No. 2025-01-600 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 – *Meadow Wood East – Manchester Road.*"

Mr. Mike Naumowicz is the contract purchaser of the Subject Property. The owner of the Subject Property is Ms. Mary Christine Misik.

GENERAL INFORMATION

Requested Action: Final Plan Approval for a Planned Unit Development

Current Zoning: R-5 Single Family Residential District

Current Use: Unimproved Land

Proposed Use: Single-Family Homes

Property Location: 0 Manchester Road

Applicant: Mike Naumowicz

Owner: Mary Christine Misik

Staff Coordinator: Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Ordinance No. 2025-01-600
D. Site Photos
E. Aerial Map
F. Zoning Map
G. Parcel Map
H. Development Application and Attachments
I. Development Review Comments

BACKGROUND

Mr. Mike Naumowicz, (the "Applicant"), along with developer partner, Mr. Kirk Rustman, is seeking Final Plan Approval for the proposed Planned Unit Development located north of Manchester Road, commonly referred to as Meadow Wood East, 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 15 single-family homes.

The Subject Property is located within the Village's R-5 single family residential district. The Subject Property is approximately 8 acres, comprised of 17 lots. 15 of those are platted for single-family homes, while the remaining 2 lots serve as outlots. The Subject Property is vacant land with no existing improvements. The only available access to the proposed development will be from Manchester Road to the south. A condition of Ordinance No. 2025-01-600 was that the Applicant request approval of a Final Plan for the development of the property prior to obtaining permits for construction.

Pursuant to public notice published on July 26, 2025, in the Daily Herald, a public meeting was scheduled with the Lake Zurich Planning & Zoning Commission for August 20, 2025, to consider the Final Plan. On July 23, 2025, the Village posted a public hearing sign on the Subject Property (Exhibit B).

Prior Development Concept Plan (Preliminary Plan) Approval:

On January 6, 2025, the Applicant was granted Development Concept Plan (Preliminary Plan) approval for the development through Ordinance No. 2025-01-600. The ordinance specifically granted the following zoning approvals along with conditions for approval:

A. An amendment to the Zoning Map of the Village of Lake Zurich to rezone the Subject Property from R-4 Single-Family Residential District to R-5 Single-family Residential District, in accordance with the procedures 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 Subject Property.

B. The Development Concept Plan for the Subject Property, approved as an Amendment of prior PUD Ordinance No. 2004-09-307A, such Development Concept Plan being attached hereto and made a part hereof as Exhibit B, to authorize a Single-family residential subdivision in accordance with the standards for the grant of a PUD as 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."

C. Completion of the necessary steps to cause the resubdivision of the approximately 8 acres of the easterly portion of Meadow Wood East Final Plat of Subdivision recorded as Document No. 5881470 with the Lake County Recorder on October 24, 2005; to complete the procedures for a new subdivision plat to create fifteen (15) single-family lots.

D. Conditions for approval of the Development Concept Plan (Preliminary Plan) outlining the preliminary terms and conditions of the development.

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

A. Modification to Sections 9-3-11.B.1.b which provides for a minimum lot area of no less than 10,000 square feet, said modification authorizing the construction of new single-family residential buildings on lots 5, 6, 7 and 8 with a minimum lot area of 9,154 square feet.

B. 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 63 feet.

C. Modification to Sections 9-3-11.C.1.b which provides for a minimum corner side of 30 feet, said modification authorizing the construction of new single-family residential buildings on lots 5 and 15 with a minimum corner side yard of 15 feet.

A Copy of Ordinance No. 2025-01-600 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-01-06-2025

Staff additionally offers the following additional information for reference:

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 October 16, 2024. The video from the PZC meeting can be viewed at the following link:
Planning&ZoningCommissionMeeting-10-16-2024

GENERAL FINDINGS

Staff of the Community Development Department and its Development Review Team (DRT) have evaluated the Final Plan and continue to review the documents 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.

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 2025-09, 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. Cover Letter prepared by Kim Lask of Haeger Engineering dated June 26, 2025.
   b. Legal Description of the Subject Property.
   c. ALTA/ACSM Land Title Survey prepared by Illinois Professional Land Surveyor No. 2639, dated May 19, 2005.
   d. Final Engineering for Meadow Wood East Subdivision Sheets C1.0 – C9.3 prepared by Haeger Engineering dated March 5, 2025.
   e. Final Stormwater Report prepared by Casey Builders dated March 5, 2025.
   f. Stormwater Management System Maintenance Plan for New Facilities prepared by Haeger Engineering dated March 5, 2025.
   g. Final Plat of Resubdivision of Meadow Wood East prepared by Haeger Engineering dated March 13, 2025.
   h. Landscape Plans Sheets L101 and L102 prepared by Dowden Design Group dated January 28, 2025.
   i. Engineers Opinion of Probable Cost (EOPC) Site Design prepared by Haeger Engineering dated June 24, 2025
   j. Engineers Opinion of Probable Cost (EOPC) Manchester Road Resurfacing (Meadow Wood East to Miller Road) prepared by Haeger Engineering dated June 24, 2025
   k. Mass Grading and Construction Staging Plan prepared by Haeger Engineering dated June 25, 2025
   l. Construction Schedule (proposed)
   m. IDNR EcoCAT approval dated October 16, 2024
   n. Preliminary Wetland Assessment prepared by DK Environmental Services, Inc (DKES) dated July 9, 2024.

   o. Pertinent Planning and Zoning Commission Submittal prepared by Mike Naumowicz consisting of the following exhibits:

i. Single-Family Subdivision Rendering
ii. Single-Family Home Renderings
iii. Street Lighting Rendering
iv. Preliminary Plat of Resubdivision of Meadow Wood Single-Family prepared by Haeger Engineering dated August 19, 2024.
v. HardiePlank Lap Siding general information dated September, 2019.
vi. Street lighting Morati Series Post Top Light by Rugged Grade information.
vii. Stone Master Grey-Mix Roma Manufactured Stone Veneer Siding visual and spec sheet.
viii. Vacant Land Contract of Purchase signed by Mr. Mike Naumowicz and Ms. Mary Christine Misik for 0 Manchester Road, prepared by Main Street Organization of Realtors dated June 20, 2024.

2. All stormwater runoff generated by the development of the Subject Property shall require Village approval and be drained to the required detention basins. No surface runoff shall be permitted to directly drain to the existing residential properties to the south.

3. The building elevation design and use of building materials for all new single-family residences within the Subject Property shall follow the anti-monotony policies and requirements of the Village.

4. No dwelling units within the Subject Property shall be made available for rent or occupied by renters, but shall be occupied by the owner of that dwelling unit.

5. The southerly lot line of the Subject Property shall contain a landscape buffer with year-round landscape material and a permanent fence to properly screen the development from the residences to the south. Such landscape buffer and fence shall be denoted on the Final Landscape Plans for consideration by the Village Board prior to Final Plan approval.

6. 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 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.

7. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village which shall incorporate those terms and conditions for development as well as those pertinent terms and conditions outlined in the "Annexation and Development Agreement by and between the Village of Lake Zurich, Mary Chris Misik, and Insignia Homes, LLC (Meadow Wood Subdivision," dated August 5, 2005, including but not limited to agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit 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 provision:

a. Establishment of a "backup" open space and stormwater management Special Service Area (SSA) to ensure that these areas and features on the Subject Property are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

8. The Developer shall be responsible for payment of all Development Impact Contributions, as set forth in Title 10 of the Lake Zurich Municipal entitled "Land Development Code" as a condition of the approval of the PUD and Final Plat. The school impact contributions, and library impact contributions 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 specifically denoted as follows:

   a. The required school development impact contribution:
      1 to 3-bedroom home - $2,545.80
      4-bedroom home - $4,336.95
      5-bedroom home - $5,206.50

   b. The required library development impact per dwelling unit: - $125.00

9. Prior to the issuance of any building permit for the Property, the Owner shall pay to the Village, at the time a building permit is issued for each of the first through fourteen single-family dwelling units in the Single-Family Parcel, a park land contribution of $8,124.00 for each single-family dwelling unit containing up to 4 bedrooms, in lieu of the required donation of park land. Homes proposed with an excess of 4 bedrooms shall pay a park land donation of $10,044.00 per dwelling unit.

10. Prior to the issuance of any building permit for the Subject Property, the Owner shall pay to the Village, at the time a building permit is issued for each residential building a fee of $3,500 for connection to Lake Michigan Water. Such fee shall be commonly referred to as "CLC-JAWA Connection Fee."

11. Developer shall coordinate the various construction activities, including site clearing, demolition, earthwork, infrastructure installation, and house construction, to minimize disruption on the adjoining roadway 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.

As construction proceeds into the site, all staging and storage of materials shall be accomplished and maintained on the Subject Property to minimize any negative impact on the existing residences to the south.

12. All streets within the subdivision shall be constructed according to Village construction standards applicable to public streets, and shall be dedicated to the Village of Lake Zurich upon substantial completion of the subdivision.

    Upon substantial completion of the development and as determined by the Village Engineer and Public Works Director, a designated portion of Manchester Road shall be re-surfaced to the specifications of the village. The Developer agrees to employ the services of only those contactors that are "prequalified" to bid on state highway and locally advertised projects in Illinois in conformance with the processes governed by Title 44 of the Illinois Administrative Code; Part 650 entitled "Prequalification of Contractors, Authorization to Bid, and Subcontractor Registration." The validity of the contractor's prequalification rating shall be up to date as required by the State. The Village further reserves the right to disapprove any contractor selected by Developer to perform the work if such contractor is deemed inadequate to be able to successfully and safely perform the public improvements outlined in this Agreement.

13. 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.

    Unless an extension is granted by the Village Staff, all site improvements and construction of individual buildings as described herein conducted following the expiration of the two

(2) year time period shall be subject to the WDO requirements, fees and codes effective at that time.

14. 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 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.

15. No modification shall be deemed an amendment to the Development Agreement if the modification is being pursued in accordance with the Lake Zurich Zoning Code and the Lake Zurich Municipal Code and is approved by the Village in accordance therewith.

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,

Sarosh Saher, Community Development Director
Colleen McCauley, Planner

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

Meadow Wood East
August 20, 2025

The Planning & Zoning Commission recommends approval of Application PZC 2025-09, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated August 20, 2025, 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. Cover Letter prepared by Kim Lask of Haeger Engineering dated June 26, 2025.
   b. Legal Description of the Subject Property.
   c. ALTA/ACSM Land Title Survey prepared by Illinois Professional Land Surveyor No. 2639, dated May 19, 2005.
   d. Final Engineering for Meadow Wood East Subdivision Sheets C1.0 – C9.3 prepared by Haeger Engineering dated March 5, 2025.
   e. Final Stormwater Report prepared by Casey Builders dated March 5, 2025.
   f. Stormwater Management System Maintenance Plan for New Facilities prepared by Haeger Engineering dated March 5, 2025.
   g. Final Plat of Resubdivision of Meadow Wood East prepared by Haeger Engineering dated March 13, 2025.
   h. Landscape Plans Sheets L101 and L102 prepared by Dowden Design Group dated January 28, 2025.
   i. Engineers Opinion of Probable Cost (EOPC) Site Design prepared by Haeger Engineering dated June 24, 2025
   j. Engineers Opinion of Probable Cost (EOPC) Manchester Road Resurfacing (Meadow Wood East to Miller Road) prepared by Haeger Engineering dated June 24, 2025
   k. Mass Grading and Construction Staging Plan prepared by Haeger Engineering dated June 25, 2025
   l. Construction Schedule (proposed)
   m. IDNR EcoCAT approval dated October 16, 2024
   n. Preliminary Wetland Assessment prepared by DK Environmental Services, Inc (DKES) dated July 9, 2024.

   o. Pertinent Planning and Zoning Commission Submittal prepared by Mike Naumowicz consisting of the following exhibits:
      ix. Single-Family Subdivision Rendering
      x. Single-Family Home Renderings
      xi. Street Lighting Rendering

xii. Preliminary Plat of Resubdivision of Meadow Wood Single-Family prepared by Haeger Engineering dated August 19, 2024.
xiii. HardiePlank Lap Siding general information dated September, 2019.
xiv. Street lighting Morati Series Post Top Light by Rugged Grade information.
xv. Stone Master Grey-Mix Roma Manufactured Stone Veneer Siding visual and spec sheet.
xvi. Vacant Land Contract of Purchase signed by Mr. Mike Naumowicz and Ms. Mary Christine Misik for 0 Manchester Road, prepared by Main Street Organization of Realtors dated June 20, 2024.

2. All stormwater runoff generated by the development of the Subject Property shall require Village approval and be drained to the required detention basins. No surface runoff shall be permitted to directly drain to the existing residential properties to the south.

3. The building elevation design and use of building materials for all new single-family residences within the Subject Property shall follow the anti-monotony policies and requirements of the Village.

4. No dwelling units within the Subject Property shall be made available for rent or occupied by renters, but shall be occupied by the owner of that dwelling unit.

5. The southerly lot line of the Subject Property shall contain a landscape buffer with year-round landscape material and a permanent fence to properly screen the development from the residences to the south. Such landscape buffer and fence shall be denoted on the Final Landscape Plans for consideration by the Village Board prior to Final Plan approval.

6. 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 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.

7. As part of Final Plan approval, the Developer shall enter into a binding development agreement with the Village which shall incorporate those terms and conditions for development as well as those pertinent terms and conditions outlined in the "Annexation and Development Agreement by and between the Village of Lake Zurich, Mary Chris Misik, and Insignia Homes, LLC (Meadow Wood Subdivision," dated August 5, 2005, including but not limited to agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit 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 provision:

a. Establishment of a "backup" open space and stormwater management Special Service Area (SSA) to ensure that these areas and features on the Subject Property are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

8. The Developer shall be responsible for payment of all Development Impact Contributions, as set forth in Title 10 of the Lake Zurich Municipal entitled "Land Development Code" as a condition of the approval of the PUD and Final Plat. The school impact contributions, and library impact contributions 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 specifically denoted as follows:

   a. The required school development impact contribution:
      1 to 3-bedroom home - $2,545.80
      4-bedroom home - $4,336.95
      5-bedroom home - $5,206.50

   b. The required library development impact per dwelling unit: - $125.00

9. Prior to the issuance of any building permit for the Property, the Owner shall pay to the Village, at the time a building permit is issued for each of the first through fourteen single-family dwelling units in the Single-Family Parcel, a park land contribution of $8,124.00 for each single-family dwelling unit containing up to 4 bedrooms, in lieu of the required donation of park land. Homes proposed with an excess of 4 bedrooms shall pay a park land donation of $10,044.00 per dwelling unit.

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    Upon substantial completion of the development and as determined by the Village Engineer and Public Works Director, a designated portion of Manchester Road shall be re-surfaced to the specifications of the village. The Developer agrees to employ the services of only those contactors that are "prequalified" to bid on state highway and locally advertised projects in Illinois in conformance with the processes governed by Title 44 of the Illinois Administrative Code; Part 650 entitled "Prequalification of Contractors, Authorization to Bid, and Subcontractor Registration." The validity of the contractor's prequalification rating shall be up to date as required by the State. The Village further reserves the right to disapprove any contractor selected by Developer to perform the work if such contractor is deemed inadequate to be able to successfully and safely perform the public improvements outlined in this Agreement.

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    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.

    Unless an extension is granted by the Village Staff, all site improvements and construction of individual buildings as described herein conducted following the expiration of the two (2) year time period shall be subject to the WDO requirements, fees and codes effective at that time.

14. 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 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.

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

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

_____

Planning & Zoning Commission Chairman

EXHIBIT A

LEGAL DESCRIPTION OF SUBJECT PROPERTY

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF THE NORTH HALF OF SAID SOUTHEAST QUARTER OF SECTION 7: THENCE SOUTH 89 DEGREES 17 MINUTES 24 SECONDS EAST ALONG THE SOUTH LINE OF THE NORTH HALF OF SAID SOUTHEAST QUARTER OF SECTION 7, A DISTANCE OF 860.94 FEET;
THENCE NORTH 12 DEGREES 40 MINUTES 32 SECONDS WEST, 47.23 FEET;
THENCE NORTH 31 DEGREES 54 MINUTES 58 SECONDS WEST, 82.07 FEET;
THENCE NORTH 34 DEGREES 08 MINUTES 35 SECONDS WEST, 44.06 FEET;
THENCE NORTH 14 DEGREES 54 MINUTES 33 SECONDS WEST, 31.54 FEET;
THENCE NORTH 12 DEGREES 26 MINUTES 26 SECONDS WEST, 92.08 FEET;
THENCE NORTH 21 DEGREES 06 MINUTES 49 SECONDS WEST, 103.04 FEET;
THENCE NORTH 18 DEGREES 00 MINUTES 10 SECONDS WEST, 58.68 FEET;
THENCE NORTH 40 DEGREES 11 MINUTES 60 SECONDS WEST, 68.64 FEET;
THENCE NORTH 07 DEGREES 40 MINUTES 50 SECONDS WEST, 108.98 FEET;
THENCE NORTH 00 DEGREES 42 MINUTES 36 SECONDS WEST, 85.88 FEET TO THE NORTH LINE OF THE SOUTH 660.00 FEET OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF AFORESAID SECTION 7: THENCE SOUTH 89 DEGREES 17 MINUTES 24 SECONDS EAST ALONG SAID NORTH LINE 866.67 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 56 DEGREES 48 MINUTES 46 SECONDS WEST, 75.37 FEET; THENCE SOUTH 44 DEGREES 50 MINUTES 39 SECONDS WEST, 95.48 FEET; THENCE SOUTH 66 DEGREES 04 MINUTES 11 SECONDS WEST, 94.70 FEET; THENCE SOUTH 37 DEGREES 09 MINUTES 58 SECONDS WEST, 78.78 FEET; THENCE SOUTH 17 DEGREES 45 MINUTES 12 SECONDS WEST, 137.20 FEET; THENCE SOUTH 26 DEGREES 50 MIUTES 58 SECONDS WEST, 106.93 FEET; THENCE SOUTH 06 DEGREES 15 MINUTES 12 SECONDS WEST, 90.26 FEET; THENCE SOUTH 05 DEGREES 43 MINUTES 17 SECONDS WEST, 99.51 FEET; THENCE SOUTH 00 DEGREES 42 MINUTES 36 SECONDS WEST, 30.45 FEET TO THE AFORESAID SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7; THENCE SOUTH 89 DEGREES 17 MINUTES 24 SECONDS EAST ALONG SAID SOUTH LINE, 518.03 FEET TO THE WEST LINE OF THE EAST 761.60 FEET OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 7; THENCE NORTH 00 DEGREES 00 MINUTES 00 SECONDS EAST ALONG SAID WEST LINE, 660.00 FEET OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7; THENCE NORTH 89 DEGREES 17 MINUTES 24 SECONDS WEST ALONG SAID NORTH LINE, 243.14 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

EXHIBIT B
HEARING SIGN ON SUBJECT PROPERTY

HAEGER ENGINEERING
consulting engineers · land surveyors

100 East State Parkway
Schaumburg, Illinois 60173-4546
tel: 847.394.6600
fax: 847.394.6608

June 26, 2025

Sarosh Saher
Village of Lake Zurich
505 Tesler Road
Lake Zurich, IL 60047

RE: Meadow Wood East
Final Engineering Plan Submittal
Haeger File No.: 21-024

Dear Sarosh,

On behalf of Casey Builders, we are submitting digital copies of the following documents for Meadow Wood East residential subdivision for review and approval.

- Engineering Plans, dated 6/05/2025
- Stormwater Management Report, dated 3/5/2025
- Maintenance Plan, dated 3/5/2025
- Plat of Subdivision, dated 3/13/2025
- Landscape Plans, dated 1/28/2025
- Engineer's Estimate of Construction Cost, dated 6/24/2025
- Engineer's Estimate of Construction Cost (offsite resurfacing), dated 6/24/2025
- Mass Grading and Construction Staging Plan, dated 6/25/2025
- Construction Schedule
- IEPA Sanitary Permit Application
- IEPA Water Permit Application
- IDNR EcoCAT Approval, dated 10/16/2024

Note that the Watershed Development Permit Application and LCSMC Letter of No Wetland Impact (LONI) will be submitted separately.

We look forward to working with you as we pursue project approval. Should you require further information or have any questions, please do not hesitate to contact me at kim-l@haegerengineering.com or 847-230-3176.

Sincerely,
HAEGER ENGINEERING, LLC

Kim Lask, P.E., PTOE, CFM
Project Manager

cc: Kirk Rustman – Casey Builders
Jodi McCarthy, P.E. – Manhard Consulting

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
MANCHESTER ROAD

SECTION 7 TOWNSHIP 43 NORTH RANGE 7 EAST
LAKE ZURICH, ILLINOIS
LAKE COUNTY

DEVELOPER / SUBDIVIDER:

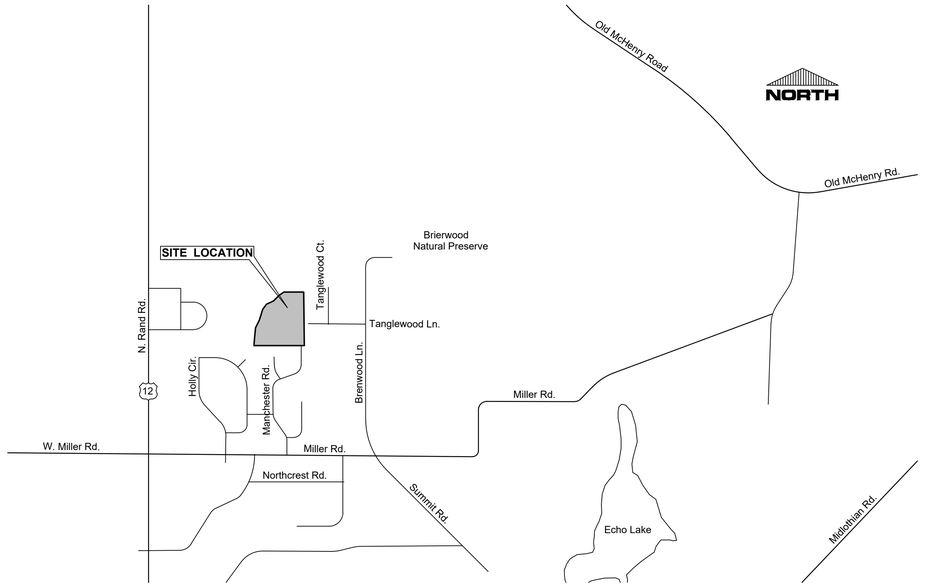
Casey Builders
509 W. Old Northwest Highway
Barrington, IL 60010

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway Schaumburg, IL 60173
Tel: 847-394-6600
Fax: 847-394-6608
www.haegerengineering.com

VILLAGE OF LAKE ZURICH

70 E. Main Street, Lake Zurich, IL 60047
Tel: 847-438-5141
Fax: 847-540-1769



LOCATION MAP
Not To Scale

BENCHMARKS:

CP # 8005
Description: CP CN 8-9-24
Elevation: 839.88 NAVD 88 (Geoid 12A)

CP # 8015
Description: CP CN 8-9-24
Elevation: 837.40 NAVD 88 (Geoid 12A)

INDEX TO SHEETS

NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0	GENERAL NOTES AND SPECIFICATIONS
C2.1	GENERAL NOTES AND SPECIFICATIONS
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C4.0	OVERALL SITE PLAN
C5.0	GEOMETRY & PAVING PLAN - NORTH
C5.1	GEOMETRY & PAVING PLAN - SOUTH
C6.0	GRADING PLAN - NORTH
C6.1	GRADING PLAN - SOUTH
C7.0	UTILITY PLAN - NORTH
C7.1	UTILITY PLAN - SOUTH
C8.0	MANCHESTER ROAD PLAN & PROFILE
C8.1	LIVERPOOL COURT PLAN & PROFILE
C9.0	VILLAGE OF LAKE ZURICH STANDARD DETAILS
C9.1	VILLAGE OF LAKE ZURICH STANDARD DETAILS
C9.2	VILLAGE OF LAKE ZURICH STANDARD DETAILS
C9.3	STANDARD DETAILS

STORMWATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC1.1	SWPPP GENERAL NOTES
EC1.2	STORMWATER POLLUTION PREVENTION PLAN
EC1.3	SWPPP STANDARD DETAILS

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
B	B-Box	B
W	Well Head	W
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
H	Hand Hole	H
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
G	Gas Valve	G
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
E	Electrical Pedestal	E
E	Electric Manhole	E
	Guy Wire	
	Utility Pole	
T	Telephone Pedestal	T
T	Telephone Manhole	T
T	Telephone Line	T
CATV	Cable TV Line	CATV
	Cable TV Pedestal	
	Flagpole	
M	Mailbox	M
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	T/W XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	B/W XXX.XX
	Open Lid Frame & Grate	Gr XXX.XX
	Closed Lid Frame & Lid	Rim XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	
	Recommended Garage Hand With Driveway Slope	X.X%

KIMBERLY M. LAU
062-054034
LICENSED PROFESSIONAL ENGINEER
OF THE STATE OF ILLINOIS
EXPIRES 11-30-25

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173 • Tel 847.394.6600 Fax 847.394.6608
Illinois Professional Design Firm License No. 184.003152
www.haegerengineering.com

TITLE SHEET
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C1.0 / C9

© 2025 Haeger Engineering, LLC

Plot Date: Jun 26, 2025 - 8:21am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg

GENERAL NOTES

1. Definition of Terms:
   a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
   b. "Engineer" shall mean Haeger Engineering, LLC.
   c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
   d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC, the Engineer.
   e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows;
   a. All applicable Village/City and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
   b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction", latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Standards. Hereafter these items shall be collectively be referred to as the IDOT Standard Specifications.
   c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
   d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition.
   e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
   f. All handicap accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
   g. General Notes and Specifications contained herein or elsewhere as a separate document.

   If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.
3. Contract Documents:
   a. The Engineer's Plans and Specifications shall be included as part of the Contract Documents.
   b. All Contractors shall carefully examine the Plans and Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding or start of construction.
   c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award. It is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or shown but that are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this result and to turn over the project in complete operating condition, irrespective of whether the contract documents cover every individual item in minute detail.
   d. The Contractor shall review the subsurface exploration and geotechnical report (a.k.a. soil boring report), to become familiar with the subsurface soil conditions for the site. Copies of all such soil boring reports for the property can be obtained from the Owner. If any additional soils data is needed to confirm the Contractor's opinions of the subsurface conditions, this shall be done at the Contractor's expense. The Contractor shall obtain the Owner's written authorization to access the site to conduct a supplemental soils investigation. The Owner and Engineer make no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof. Furthermore, the Owner and Engineer assume no responsibility for the possibility that during construction, the soil and groundwater conditions may vary between borings or are different than previously indicated. Any bracing, sheeting, dewatering or special construction methods deemed necessary by the Contractor in order to install the proposed improvements shall be considered incidental to the Contract and no additional compensation will be allowed.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Engineer's attention shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is indicated on the Plans, and no specific item is included in the Contract for payment, the work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans (existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by:

   Haeger Engineering
   100 East State Parkway, Schaumburg, IL 60173
   Tel: 847-394-6600
   Job Number: 24-136

7. The Owner shall obtain the necessary approvals from the following Jurisdictional Agencies:

NOTE: The Project Engineer is to list all known required entities which approvals and/or permits are required. This list will vary with every Project, so again the Project Engineer will need to modify this example list and only list those that are applicable to their project.

   a. Village of Lake Zurich/City
   b. Illinois Environmental Protection Agency (IEPA) - Water and Sewer Division
   c. Illinois Environmental Protection Agency (IEPA) - Notice of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
   d. (County) Stormwater Management Commission

8. The Contractor, unless otherwise agreed upon in writing with the Owner prior to the start of Construction, shall at his own expense, obtain all other approvals including permits, licenses, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agencies. In addition, the Contractor shall meet all of the requirements of any permits as might be issued for this work by other Agencies, and shall pay for at their sole expense any surety, insurance or bonds as may be required by the Jurisdictional Agencies.
9. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer. The Contractor and Party authorizing the work to proceed shall be assumed to be proceeding at their own risk and the Engineer shall not be held liable or responsible for any work being performed without a permit.
10. The Contractor shall indemnify and hold harmless the Owner, Engineer, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, employees, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgment of every nature and description brought or recovered against them, by reason of any act, error or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
11. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agencies, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
12. The location of existing underground utilities such as water mains, sewers, gas lines, electric lines, cable TV lines, fiber optic lines, etc., as shown on the Plans, has been determined from the best available information and has been provided for the convenience of the Contractor. However, the Owner and Engineer do not assume responsibility in the event that during construction, utilities other than those shown may be encountered and that the actual location of those which are shown may be different from the location as shown on the Plans. The Contractor is to verify the location of all utilities prior to the start of work and is responsible for damage to the same. The Contractor shall contact J.U.L.I.E. or Digger by dialing 811 (Outside the City of Chicago - J.U.L.I.E.: 1-800-892-0123 or within the City of Chicago - Digger: 312-744-7000) and the Village/City Public Works Department for utility locates at least 48 hours, excluding weekends and holidays, before digging. For any utility companies which are not members of JULIE or DIGGER, the Contractor shall contact the Owners of each respective utility directly for utility locates at least 48 hours, excluding weekends and holidays, before digging.
13. In some instances, the existing utilities are shown on the Plans according to information obtained from the utility companies (atlas information) and/or surveys performed By Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that become apparent as the result of field locates By Others. The Contractor shall make their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not located in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or utility to avoid the conflict.
14. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies of any and all services or facilities owned or operated by them within the limits or general vicinity of the proposed improvements. Further, at the direction of the Owner and Utility Companies the Contractor shall coordinate the location and install PVC sleeves as necessary under the proposed pavement, curbs, walks, etc. for utility companies to run their proposed utility lines.
15. Before doing any work which will damage, disturb or leave unsupported, or unprotected any utility lines or related appurtenances encountered, the Contractor shall notify the respective Owner thereof, who will make all arrangements for relocating, adjusting, bracing, or otherwise maintaining or abandoning service on lines that fall within the limits of the proposed construction without cost to the Contractor, including the removal of all cables, manhole covers and other related appurtenances which the Owner desires to salvage. After such arrangements have been made, the Contractor will proceed with the work as directed by the Engineer. All utility lines and related appurtenances which are abandoned shall be removed if necessary and legally disposed of legally off-site by the Contractor.
16. No extra compensation will be allowed by the Contractor for any expense incurred for complying with all of these aforementioned utility coordination and cooperation requirements, or because of delays, inconvenience or interruptions in their work resulting from the failure of any utility company to remove, relocate, reconstruct or abandon their services. The responsibility for prompt and timely removal, relocation, reconstruction or abandonment of their facilities by all utility companies involved, and the coordination of their own work with that of these companies to the end that work on this improvement is not delayed because of the necessary changes in the existing utilities, public or private, shall rest upon the Contractor.
17. Prior to commencing work, the Contractor is to field check and verify all critical locations, elevations, materials, sizes, dimensions, and conditions affecting the work, and notify the Engineer immediately if there are any suspected discrepancies. No work shall be performed until the suspected discrepancy has been resolved. The Contractor shall also call to the attention of the Engineer any errors or discrepancies which may be suspected in the lines and grades which are established by the Surveyor, and shall not proceed with the work until any lines and grades which are to believed to be in error have been verified or corrected by the Engineer.
18. The Contractor shall maintain positive drainage at all times during construction. Construction shall not block off-site drainage and the flow from any drainage ways, field tiles, storm sewers or similar draining off-site properties. All on-site existing field tiles, storm sewers, drainage ways or similar encountered or damaged during construction shall be maintained, restored to their original pre-construction condition or better, properly re-routed, and/or connected to the proposed stormwater drainage system. If this can't be accomplished then the field tile should be repaired or re-routed with new pipe of similar diameter to the original line and put back in service. The Contractor shall notify the Engineer if any such field tiles are encountered. Whenever during any construction activities any loose material is deposited in the flow line of gutters, ditches, drainage structures, etc. such that the natural flow of water is obstructed, this material shall be removed by the responsible party.
19. Prior to commencement of construction, on sites that will disturb one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain or more (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
20. No construction activities, disturbance or fill shall occur within the limits of natural resources such as wetlands, floodplains, creeks, streams, ponds, lakes, basins, reservoirs, etc. or their respective buffers unless specifically specified on the Plans and further that the Owner and Contractor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent property, to protect them from sediment, fuels, oils, bitumens, calcium chloride, or other harmful materials that may be a detriment. The Contractor shall conduct and schedule their Construction so as to avoid siltation, or other disturbance or impact to these natural resource areas. The Contractor shall not disturb or otherwise impact these designated natural resource areas, or areas that have been designated to be protected or as essential habitat for State or Federal listed endangered or threatened species, or Prairie or Savannah areas where the Owner has made commitments for protection of these areas. Also, if previously unidentified natural resource areas, prairies, savannahs, or areas or locations suspected of containing protected species are identified during construction, the Contractor shall not disturb them unless written permission to do so is granted by the Owner or applicable Jurisdictional Agency. If the Owner, Engineer, or applicable Jurisdictional Agency determines that additional measures are necessary to prevent or mitigate project effects on natural resource areas, prairies, savannahs, protected species, or essential habitat the Contractor shall cooperate in accomplishing these measures.
21. The Contractor shall confine their activities to within the project boundaries, work areas, or easements specified. No work shall be performed on adjacent private property or outside the project work areas without the written permission of each respective Owner. The Contractor shall be liable for damage caused to existing or newly installed improvements as well as any damage on adjacent property or areas outside designated work areas, provided damage us a result of Contractor action, or lack thereof.
22. The Contractor is responsible for returning all areas affected by equipment, materials and/or laborers to pre-construction condition or better. All existing utilities or improvements, including but not limited to pavements, curbs, drives, trees, and parkways damaged or removed during construction shall be promptly restored to their respective original pre-construction condition or better. The Contractor is also responsible for protecting all newly constructed work from damage until the project has been completed and has been approved and accepted by the Owner.
23. Clean-up and final restoration shall be performed immediately upon completion of each phase of the work or when directed to do so by the Owner, so that the work will be restored as nearly as possible to their original pre-construction condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, landscaping, fences, mailboxes, storm sewers, drain tiles, sanitary sewers, water mains, etc. It shall also be the responsibility of the Contractor to remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner.
24. All proposed grades shown on the Plans shall be considered to be finished grade surface elevations unless noted otherwise.
25. Construction staking/layout shall be provided by the Contractor and shall be included in the Contract Price unless otherwise agreed upon in writing with the Owner prior to the start of Construction.
26. All Construction means and methods, techniques, procedures, scheduling, sequencing, and job site safety is the sole responsibility of the Contractor.
27. The Contractor shall observe and comply with all the Occupational Safety and Health Administration (OSHA) standards, rules and regulations, as well as any other applicable local, state and federal safety requirements.
28. All trenching, shoring, bracing and construction work performed shall be in accordance with the Occupational Safety and Health Administration (OSHA) standards.
29. The Contractor shall take whatever steps necessary to protect the public from open trenches, excavations, and other site obstructions or hazards. No trenches, excavations or holes in the pavement or parkway are to be left open over a holiday, weekend, or after 3 p.m. on the day preceding a holiday or weekend.
30. During construction the Contractor and their Sub-Contractors shall keep the premises clean by removing all rubbish, debris, waste material and other accumulations as necessary. The Contractor shall clean the premises to the satisfaction of the Village/City and Owner.
31. The Contractor shall have appropriate equipment and material including street sweepers and end loaders available on-site at all times when equipment or vehicles are using existing public or private roads and/or pavement. The Contractor shall immediately remove any sediment or debris including but not limited to dirt, mud, clay, sediment, concrete, gravel, sand, stones, plant material, refuse, garbage, oil, grease, etc. deposited on any roadway, street, walk, alley or other pavement by any equipment, vehicles or personnel associated with this project. This work shall be considered incidental to the Contract.
32. The Contractor shall at all times maintain proper dust control at the site and shall have a watering truck readily available during all working hours. The Contractor shall water the entire site whenever the site conditions become unhealthy due to blowing soil or dust. The site shall be watered as many times per day as necessary to maintain a healthy work site as determined by the Owner or Engineer. Water for non-emergency use shall not be obtained from any fire hydrant, unless the fire hydrant is metered with a proper backflow preventer in accordance with Village/City or Jurisdictional Agency requirements. The cost to furnish dust control shall be incidental to the cost of Construction.
33. Trees not marked for removal shall be protected as necessary by the Contractor. In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree or trees in accordance with Village/City requirements. If the Village/City does not have specific tree replacement requirements, the damaged existing or newly planted tree shall be replaced in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications. The Contractor shall ensure that they are familiar with the applicable tree preservation requirements and shall be held responsible for the replacement of all damaged trees not designed for removal, and any penalties associated with the unapproved removal of trees.
34. Where overhanging branches, limbs, or roots interfere with the required construction activities, said branches, limbs, or roots shall be trimmed or pruned as necessary in accordance with Section 201 of the IDOT Standard Specifications. This work shall be performed under the supervision of an approved arborist or landscape architect.
35. The Contractor is responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices, in accordance with the Plans, applicable IDOT Standard Specifications and the MUTCD Standards to inform and protect the public during all phases of construction. The Contractor shall provide all signage, barricades, devices, equipment, personnel, etc. necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency which at their discretion may require the Contractor to furnish traffic control under these or other circumstances where in their opinion it is necessary for the protection of life and property. Emergency vehicle access along with access to fire hydrants shall be maintained at all times. Further, unless authorized by the Owner, all existing access points shall be maintained at all times by the Contractor.
36. Where noted in the Plans, the Contractor shall have Shop Drawings and any other required supporting documentation or calculations prepared and submitted for review and approval prior to any fabrication, placement, or construction. If structural elements such as retaining walls are required, the drawings and any required supporting design calculations must be prepared, and signed and sealed by an Illinois licensed Structural Engineer.
37. The Contractor is responsible for having a set of approved Plans and Specifications with the latest revision date on the job site at all times during the construction period.
38. The Contractor shall maintain a clean, legible, undamaged set of Field Marked Construction Plans. These Field Marked Construction Plans shall show the location of the actual installed location of all underground utilities including related appurtenances (sanitary, storm, water, service stubs, gas, telephone, electric, cable TV, etc.) giving particular attention to concealed elements that would be difficult to measure and record at a later date. Any approved modifications, deviations, or alterations from the approved Plans should also be noted and shown on these Field Marked Construction Plans. These Field Marked Construction Plans shall be provided to the Owner/Engineer at the completion of construction.
39. All work that is performed that is not in conformity with the Plans, Specifications or other Contract Documents or that is defective shall be removed and replaced, or otherwise corrected or remedied by and at the sole expense of the Contractor. Any unauthorized work or work performed beyond the limits or in excess of that shown on the Plans will not be measured or paid for.
40. All work performed under the Plans, Specifications or other Contract Documents shall be guaranteed against all defects in materials and workmanship of whatever nature by the Contractor and his surety for a minimum period of 12 months from the date of final acceptance of the work by the Village/City, other applicable Jurisdictional Agencies, and the Owner, unless otherwise agreed upon in writing with the Owner prior to the start of construction,.
41. Before acceptance by the Owner and prior to final payment all work shall be inspected and approved by the Owner or designated representative. Final payment will be made after the Contractor's work has been approved and accepted or as required by the Contract Documents.
42. If required, the Owner shall have As-built or Record Drawings prepared and submitted to the Village/City and all other applicable Jurisdictional Agencies for approval after the completion of construction. These drawings shall be prepared in accordance with the Village/City and other applicable Jurisdictional Agency requirements. The As-built or Record Drawings must be prepared, and signed and sealed by a registered professional Engineer in Illinois.

DEMOLITION AND CLEARING

1. The Contractor shall perform all demolition, clearing, grubbing, and tree removal and protection work in accordance with all applicable Federal, State, County and Local requirements or as noted in the Plans.
2. Prior to the commencement of any demolition or clearing activities, the Owner or Contractor shall obtain all applicable permits to disconnect the existing utility services to each building proposed for demolition.
3. The Contractor shall coordinate all demolition work with the Village/City, utility companies, and other Jurisdictional Agencies, so as to ensure the protection of all existing sewer, water main, and other utilities, and further to ensure that proper stormwater conveyance is attained until the proposed improvements can be installed and placed into operation.
4. Clearing shall consist of the removal and legal disposal of all obstructions such as trees, hedges, fences, walls, accumulations of rubbish of whatever nature, and all logs, shrubs, brush, grass, weeds, and other vegetation and stumps. These items shall be removed whenever they are found within the street right-of-way and within the limits of construction. Trees to be removed shall also be identified by the Engineer on the Plans or in the field. All trees except those designated to be saved or protected, as well as all stumps and hedges within the limits of construction, shall be removed completely and legally disposed of off-site or as otherwise designated on the Plans or authorized by the Owner. Trees designated to be saved or protected as indicated on the Plans or as directed by the Engineer, shall be protected from damage in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications.
5. All items shown to be removed on the Plans including items not specifically noted but necessary to be removed to construct the proposed improvements shall be demolished or removed as necessary and disposed of legally off-site by the Contractor.
6. Existing utilities to be disconnected shall be done so at the main or as directed by the applicable Jurisdictional Agency or as noted on the Plans.
7. Utilities marked to be abandoned shall be abandoned as required by the applicable Jurisdictional Agency or as noted on the Plans.
8. All existing pavement or concrete to be removed shall be saw-cut along the limits of the proposed removal to provide a clean vertical edge. The cost of saw-cutting shall be considered incidental to the removal of each item.
9. All voids left by any item removed under any proposed building, pavement walk or other structural areas or within zones of influence thereof shall be properly backfilled with suitable backfill material and/or compacted as necessary by the Contractor.
10. The Contractor shall implement a daily program for dust control as it relates to the demolition and clearing activities. This program is to be approved by the Village/City prior to the start of any demolition or clearing work.
11. All existing building services serving buildings that are to be removed shall be disconnected and removed as required by the applicable Jurisdictional Agency.
12. All existing wells shown on the Plans to be abandoned or that are discovered during the course of construction shall be exposed and cut-off three (3) feet below the proposed finished grade and sealed by the Contractor in accordance with Section 920 of the "Illinois Water Well Construction Code", latest edition, or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
13. All existing septic tanks, grease traps or similar shown on the Plans to be abandoned or that are discovered during the course of construction shall have all liquids and solids removed and disposed of legally off-site by a licensed commercial waste hauler in accordance with the requirements of the Health Department or as required by any Local, County, State or Federal rules and regulations. The structures shall then be removed and disposed legally off-site or broken in-place, so as not to hold liquid, and back-filled with suitable materials by the Contractor or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
14. Any material containing asbestos or other hazardous materials found within existing structures or other items shown to be removed in order to construct the proposed improvements shall be removed from the site and legally disposed of off-site by the Contractor in accordance with applicable County, State or Federal rules or regulations.
15. All fire access lanes or routes located within the existing project area shall remain in service, clean of debris, and accessible for use by emergency vehicles at all times while demolition and clearing work is being performed.
16. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their demolition or clearing operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

EARTHWORK AND GRADING

1. All earthwork and grading activities shall be performed in accordance with the IDOT Standard Specifications or as noted in the Plans. Included in this work, but not necessarily limited to the following are: stripping and stockpiling of topsoil, mass grading and fine grading of the site and roadways, excavation of unsuitable materials and adequate disposal of unsuitable materials and their replacement with suitable materials where required, construction of detention ponds, berm construction, and miscellaneous topsoil respread and seeding.
2. Any earthwork quantities, calculations, summaries that have been furnished by the Engineer are for information purposes only and are provided without any guarantee by the Owner or Engineer whatsoever as to their sufficiency or accuracy. They are intended to be used solely as a guide for the Contractor in determining the scope of the completed project. It is the responsibility of the Contractor to determine all material quantities and apprise themselves of all site conditions. The Contractor warrants that he has performed his own investigations as necessary and his own calculations to determine site soil conditions and earthwork quantities. The Engineer makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction tolerances and construction methods that are beyond the control of the Engineer. In the event that the Earthwork is indicated to be Lump Sum then the Contract Price submitted by the Contractor shall be considered as Lump Sum and shall include all items necessary for the complete project and no claims for extra work will be recognized unless authorized in writing by the Owner.
3. The soil boring reports for the subject property can be obtained from the Owner. The information presented in these reports is solely for the guidance of the Contractor. The Owner and the Engineer make no representation or warranty regarding the information contained in the boring logs or soils report. The Contractor shall make their own investigations and shall plan their work accordingly. Arrangements to enter the property during the bidding phase may be made upon request of the Owner. There will be no additional payment for expenses incurred by the Contractor resulting from adverse soil or ground water conditions.
4. The initial establishment of soil erosion and sediment control measures such as the placement of erosion control silt fence, stabilized construction entrance, inlet protection, etc. shall be installed by the Contractor prior to the start of demolition, clearing and mass grading.
5. All earthwork and grading operations are to be supervised and inspected by a qualified Geotechnical/Soils Engineer or their designated representative. All testing, inspection, observation, and supervision of soil quality, unsuitable soil removal and its replacement, compaction testing, ensuring ponds and retention areas hold/retain water and other soils related operations shall be entirely the responsibility of the Geotechnical/Soils Engineer. Furthermore, no undercut or other recommended remediation work shall be performed without authorization by the Owner and Documentation of the extent by the Geotechnical/Soils Engineer.
6. A qualified Geotechnical/Soils Engineer or their designated representative shall observe the construction of the retention and detention areas including berming to ensure the areas will be capable of holding the designated normal and high water levels. Gravel or sand seams, or other conditions which may be encountered and which might tend to dewater the area shall be remedied as directed by the Geotechnical/Soils Engineer.
7. Topsoil stripping or excavation shall initially consist of the removal of the uppermost layers of organic soil and stockpiling at a location shown on the Plans, in another area deemed appropriate by the Contractor and approved by the Owner, or at a location specified by the Owner or Engineer. No stockpile location shall be finalized without the explicit approval from the Owner. Further, stockpiles shall not be located within flood prone areas or within designated buffer areas.
8. Stripping of vegetation or ground cover, grading, or other soil disturbance activities shall be done in a manner which will minimize soil erosion. Further, the disturbance shall be kept to a minimum and all disturbed areas shall be stabilized with temporary or permanent measures within fourteen (14) days of active hydrologic disturbance or re-disturbance.
9. The Contractor shall take precautionary measures to minimize earthwork and other activities in the areas where trees are to be saved or protected as to not cause injury to roots or trunks.
10. Embankment placement including preparation of existing ground surface prior to embankment placement and compaction shall be in accordance with Section 205 of the IDOT Standard Specifications. All embankments located within structural fill areas or zones of influence thereof shall be constructed to a minimum 95% of the modified proctor density in accordance with ASTM D1557. Embankments located in non-structural fill areas shall be constructed to a minimum of 90% of the modified proctor density in accordance with ASTM D1557.
11. Topsoil respread shall consist of placing a minimum of a four (4) inch layer of topsoil or depth indicated on the Plans over the disturbed unpaved areas within the construction limits. These areas shall then be seeded, sodded, landscaped, stabilized, etc. as indicated on the Plans.
12. Sod shall be placed on all disturbed areas within the right-of-way and at other locations indicated on the Plans.
13. Refer to the Landscape Plans prepared By Others for additional information on the landscaping and ground cover requirements.
14. Completed subgrade grading and final finished grading for all proposed improvements shall be within a tolerance of plus or minus one-tenth (0.1) foot of the design elevation.
15. Contractor shall provide uniform slopes between proposed grades and smooth vertical curves/transitions through all high and low points. Smooth transitions shall be provided where any proposed improvements match into or abut existing improvements.
16. The subgrade for the proposed streets and other pavement areas shall be proof-rolled by the Contractor in the presence of the Village/City Engineer or applicable Jurisdictional Agency and the Geotechnical/Soils Engineer. Any unstable areas or failures encountered shall be removed and replaced or remediated as directed by the Village/City Engineer or applicable Jurisdictional Agency and Geotechnical/Soils Engineer. Any unstable areas or failures encountered and remediation method including approximate size, quantity, etc. shall be documented by the Geotechnical/Soils Engineer.
17. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

SEWER AND WATER MAIN GENERAL NOTES

1. All sanitary sewers, storm sewers and water mains as well as their services and other related appurtenances shall be constructed and tested in accordance with the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition, the requirements of the applicable Jurisdictional Agency, and the applicable Typical Details.
2. Rough grading shall be within one (1) foot of finished subgrade elevation shall be completed prior to the commencement of the underground utility construction.
3. Trench excavation, bedding and backfill, and compaction for sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances shall be in accordance with applicable Trench Section Details.
4. When in the opinion of the Geotechnical/Soils Engineer, unsuitable soil conditions are encountered within utility trenches which require the removal of unsuitable materials below the depth of the bedding specified, the Contractor shall remove the unsuitable soils and replace the material with granular compacted bedding material as directed by the Geotechnical/Soils Engineer, Village/City or other applicable Jurisdictional Agency. The depth of the required removal and replacement shall be documented by the Geotechnical/Soils Engineer and witnessed by the Contractor. This work, when approved by the Owner and Geotechnical/Soils Engineer, will be measured and paid for at the contract unit price per cubic yard in place for unsuitable soil which price shall include the removal and off-site disposal of unsuitable soil, the additional bedding material, and all labor, materials and equipment required to perform the work as specified.
5. All utility trenches for the proposed sanitary sewer, storm sewer, water main and services lying under or where the inner edge of the trench is within two (2) feet of any pavement area, curb, curb and gutter, stabilized shoulder, sidewalk, building, utility crossing or other structural area shall be backfilled with select granular backfill and compacted as noted on the Plans.
6. The Contractor shall be responsible for dewatering any excavation for the installation of sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances. Any dewatering required to construct the proposed underground improvements shall be considered incidental to the respective underground improvement.
7. Connections to an existing sewer main shall be to an existing service stub, wye, tee, or manhole where possible. Sewer connections to existing sanitary manholes shall be machine cored. All pipe connections to sanitary structures shall be made with flexible waterstop gasket/boot (resilient connector) conforming to ASTM C923.
8. When connecting to an existing sewer main by means other than an existing service stub, wye, tee, or manhole, one of the following methods shall be used:
   a. Circular saw-cut of sewer main by proper tools ("sewer-tap" machine or similar) and proper installation of a suitable hub-wye saddle or hub-tee saddle.
   b. Remove the entire Section of pipe breaking only the top of one bell and replace with a wye or tee branch Section.
   c. With pipe cutter, neatly and accurately cut out the desired length of pipe for insertion of proper fittings, using "Band-Seal" or similar flexible type couplings to hold it firmly in place.
   d. Other method approved by Jurisdictional Agency.
9. "Band-Seal" or similar flexible type couplings shall be used in the connection of sewer pipe of dissimilar materials.
10. The Contractor shall mark the locations of the ends of the service stubs with 4"x4" wood posts extending a minimum of three (3) feet above the ground. The top twelve (12) inches of post shall be painted green for sanitary, white for storm, and blue for water. The Contractor shall keep accurate records of all service connection locations.
11. All structures including but not limited to frames and lids or grates, cleanouts, b-boxes, etc. shall be adjusted as necessary by the Contractor to final finished grade elevation.
12. All sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances shall be thoroughly cleaned to the satisfaction of the Village/City, Owner, and Engineer as necessary during construction, prior to inspection and testing, and at the end of the project.
13. The Contractor shall coordinate the testing and televising so that it can be witnessed by the applicable Jurisdiction Agency.
14. The cost of the cleaning, televising, and testing shall be considered incidental to the Contract.
15. All deficiencies and defects observed as well as any necessary corrective work required as the result of testing or television inspection shall be performed by the Contractor at no additional cost to the Owner and without delay. All dips, cracks, leaks, improperly sealed joints and departures from the approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and/or re-televised and such further inspection made as may appear warranted by the Owner or as required by the Jurisdictional Agency.
16. Refer to Sanitary Sewer, Storm Sewer, Water Main and Water Main Protection Requirements for additional requirements.

SANITARY SEWER

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Gravity Sanitary Sewer Pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D3034 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3212 and F477.
   b. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
3. Where water main quality pipe and joints are required to meet the water main protection requirements the sanitary sewer pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D2241 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3139 and F477.
   b. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
4. All sanitary manholes shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478 and shall have a minimum inside diameter of 48-inches. If manhole diameter is not specified in the Plans the required manhole diameter shall be determined by size of pipes and their orientation. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Benches and defined channel invert flow lines shall be provided at bottom of structures to provide smooth defined flow path between all inlet and outlet pipe inverts. Sanitary manholes shall have eccentric offset cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height or as permitted by the applicable Jurisdictional Agency. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar.
5. External chimney seals shall be provided on all sanitary manholes and all sanitary manholes shall be watertight.
6. Sanitary manhole frames and lids shall be Neenah R-1713 with Type B, self-sealing, watertight lids with concealed pick holes or approved equal, unless noted otherwise in the Plans. Sanitary manhole lids shall be imprinted with the word "SANITARY" cast into the lid.
7. Manhole steps shall be furnished and installed in all Sanitary and Storm structures in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and as shown on the Plans. Steps shall be polypropylene coated steel core reinforced steps with slip, load, and pullout ratings in accordance with ASTM C478 and OSHA requirements. The steps shall be placed uniformly at twelve (12) to sixteen (16) inches on-center and shall be located directly below the manhole frame opening and shall not be located directly over a pipe opening with the alignment of the steps generally perpendicular to the pipe flow direction wherever possible.
8. An external drop manhole structure in accordance with Plans or other Jurisdictional Agency requirements shall be provided where the difference between inverts is greater than or equal to two (2) feet.
9. The minimum cover over sanitary sewer lines and services shall be three (3) feet.
10. The minimum sanitary service line size shall be 6-inch diameter pipe at a 1.0% minimum slope. All services stubs shall be capped with a watertight plug until conn

STORM SEWER

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Storm Sewer Pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Reinforced Concrete Pipe (RCP) conforming to ASTM C76 with O-Ring gasket joints conforming to ASTM C443. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
   b. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D3034 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3212.
   c. High Density Polyethylene (HDPE) Pipe with smooth wall interior conforming to ASTM D3350 with joints conforming to ASTM D3212 and ASTM D3350.
   d. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
3. Where water main quality pipe and joints are required to meet the water main protection requirements the storm sewer pipe shall be constructed from one or more of the following materials as specified on the:
   a. Reinforced Concrete Pipe (RCP) conforming to ASTM C361 with O-Ring gasket joints conforming to ASTM C443 and C361. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
   b. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D2241 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3139 and F477.
   c. High Density Polyethylene (HDPE) pressure pipe with smooth wall interior and joints conforming to AWWA C-906.
   d. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
4. Non-circular reinforced concrete pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Reinforced Concrete Arch Pipe in accordance with ASTM C506 and AASHTO M206.
   b. Reinforced Concrete Elliptical Pipe in accordance with ASTM C507 and AASHTO M207.
   c. Reinforced Concrete Box Culvert Sections in accordance with ASTM C1433.
5. All storm structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478. If the structure diameter is not specified in the Plans the required manhole diameter shall be determined by size of pipes and their orientation. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Benches and defined channel invert flow lines shall be provided at bottom of structures to provide smooth defined flow path between all inlet and outlet pipe inverts. Storm manholes and catch basins shall have eccentric offset cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Catch Basins shall have the sump depth as specified in the Plans. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar.
6. Manhole steps shall be furnished and installed in all Sanitary and Storm structures in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and as shown on the Plans. Steps shall be polypropylene coated steel core reinforced steps with slip, load, and pullout ratings in accordance with ASTM C478 and OSHA requirements. The steps shall be placed uniformly at twelve (12) to sixteen (16) inches on-center and shall be located directly below the manhole frame opening and shall not be located directly over a pipe opening with the alignment of the steps generally perpendicular to the pipe flow direction wherever possible.
7. Open lid storm structures are designated with "Gr" on the Plans and closed lid storm structures are designated with "Rim" on the Plans.
8. Closed lid storm structures frames and lids shall be Neenah R-1713 with Type B lid, or approved equal, unless noted otherwise in the Plans. Closed lid storm lids shall be imprinted with the word "STORM" cast into the lid.
9. Open lid storm structures frames and lids shall be Neenah R-2504-D, or approved equal, unless noted otherwise in the Plans.
10. Yard area drain structures shall be Nyloplast inline drains or drain basin structures, or approved equal, unless noted otherwise in the Plans.
11. Concrete flared end sections shall be precast reinforced concrete with an end block cast separate to anchor flared end section in place in accordance with IDOT Standard 542301 for circular concrete pipe and IDOT Standard 542306 for elliptical concrete pipe. Grating for flared end sections shall be in accordance with IDOT Standard 542311 and shall be provided at all flared end sections twelve (12) inches or greater.
12. Rip-Rap with filter fabric in accordance with Section 281 of the IDOT Standard Specifications shall be provided at locations shown on the Plans.
13. Cleanouts shall be provided in locations shown on the Plans or as required by the Jurisdictional Agency.
14. All downspouts, footing drains, and outside storm drains shall discharge to the storm sewer or discharge at grade. No stormwater shall be discharged into the sanitary sewer system.
15. Perforated pipe underdrains shall be corrugated flexible HDPE pipe conforming to AASHTO M252 or M294, perforated polyethylene pipe of diameter specified on the Plans with a smooth interior and wrapped in a soil filter fabric sock supplied and installed by the Contractor.
16. Elevations of structures located in curb and gutter are flow line elevations.
17. Elevations of flared end sections are provided at the extreme outer end of the flared end section.

WATER MAIN

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Water Main Pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Ductile Iron Pipe (DIP), Class 52 conforming to ANSI A21.51 and AWWA C151 with a 150 psi working pressure, with push-on double sealing rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings. If specified, the ductile iron pipe and fittings shall be encased by a polyethylene encasement with an 8 mil thickness, Class C (Black) conforming to ANSI A21.5 and AWWA C105. Installation of DIP and fittings shall be in accordance with AWWA C600.
   b. Polyvinyl Chloride (PVC) Pipe, SDR 18 conforming to AWWA C900 (4"-12" diameters) and AWWA C905 (14"-48" diameters) with a pressure rating of 235 conforming to ASTM D2241 and joints in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477. Installation of PVC pipe and fittings shall be in accordance with AWWA C605.
   c. High Density Polyethylene (HDPE) pressure pipe and fittings for water main in accordance with AWWA C906, DR 11, 160 psi, with ductile iron pipe outside dimension.
3. Ductile iron fittings or cast iron fittings shall conform to ANSI A21.10 and AWWA C111; and compact ductile iron fittings shall conform to ANSI A21.53 and AWWA C153.
4. All water structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478 and shall have a minimum inside diameter of 48-inches. If structure diameter is not specified in the Plans the required structure diameter shall be determined by size of pipes and appurtenances that need to be located within said structure. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Water structures shall have concentric cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar. All water structures shall be watertight.
5. Valve vaults shall have minimum inside diameter of forty-eight (48) inches for eight (8) inch diameter and smaller valves, and have a minimum inside diameter of sixty (60) inches for ten (10) inch and larger valves.
6. Water services 2 ½ inches in diameter and smaller shall be Type K Copper for underground services conforming to ASTM B88 and ASTM B251. Larger diameter water services shall be of same pipe and joint materials as the mainline water main or as noted on the Plans.
7. The minimum cover from finished grade to the top of the water main and water services shall be 5.5 feet.
8. Water main fittings (i.e., bends, elbows, tees, reducers, etc.) may not be specifically referenced on the Plans and are to be considered incidental and included in the linear footage cost of the watermain.
9. The standards for maximum deflection at pipe joints and laying radius for the various pipe types and lengths shall be per the following:
   a. Ductile Iron Pipe (DIP) - AWWA C600.
   b. Polyvinyl Chloride (PVC) Pipe - AWWA C900.
   c. High Density Polyethylene (HDPE) - Per Manufacturer's requirements.
10. Thrust blocking shall be installed on water mains at all tees, elbows, plugs, and bends 11 ¼ degrees or greater etc. per the "Standard Specifications for Water and Sewer Construction", latest edition. Thrust blocking shall be poured in place Portland Cement Concrete.
11. All bends greater than 10 degrees, hydrants, tees, and fittings shall be mechanical joint with Mega-Lug retaining glands or Field Lok gasket in casings, between fittings and at grade changes.
12. All bolts and nuts shall be stainless steel.
13. A tracer wire shall be installed on all non-metallic water mains. The wire shall be continuous from valve vault to valve vault.
14. Frame and lids for water structures shall be Neenah R-1713 or approved equal and lids shall be imprinted with the word "WATER" cast into the lid.
15. All water valves, fire hydrants, b-boxes, corporation stops, curb stops, ground key stops, service boxes, tapping sleeves, and other water main related appurtenances shall conform to Village/City or applicable Jurisdictional Agency Requirements and shall furnish and install the same. Contractor shall verify exact model, style, type, and manufacturer required prior to ordering. All fire hydrants shall be painted in accordance with the applicable Jurisdictional Agency requirements.
16. Valves shall be non-rising stem type and shall close by turning clockwise. All valves shall be resilient wedge gate or ball valves, except that butterfly valves shall be installed on all water mains 16" diameter and larger, conforming to AWWA C500 with a minimum rated working pressure of 200 psi and in accordance with applicable Jurisdictional Agency requirements. Specialty valves and fittings such as cut-in-valves, tapping sleeves and valves, pressure reducing valves, insertion valves, and air release valves shall conform to the requirements of the applicable Jurisdictional Agency requirements and shall be installed at locations indicated on the Plans.
17. When making connections to existing water mains requires a shutdown that requires an interruption in service, the Contractor shall contact the Owner of the water main and they shall mutually agree upon a date and a time for connections which will allow ample time to perform the work required in order to make the required connection. Notifications of all users to be affected by the interruption shall be provided a minimum of twenty-four (24) hours prior to the service interruption. All water mains opened to atmosphere must be disinfected prior to returning the water main to service.
18. Water Main and related appurtenances shall be tested in accordance with the following:
   a. All water mains shall be tested by means of a pressure test and leakage test, in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition, AWWA C600, and in accordance with applicable Jurisdictional Agency requirements.
   b. All water structures (i.e., valve vaults) shall be subject to a leakage test in accordance with IEPA guidelines and Jurisdictional Agency requirements.
19. After completion of the water main testing, the water mains and related appurtenances shall be flushed clean and disinfected (chlorinated) in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and in accordance with applicable Jurisdictional Agency requirements.

WATER MAIN PROTECTION REQUIREMENTS

Water mains, water services and related appurtenances shall be protected from any existing or proposed drains, sanitary sewers, storm sewers, combined sewers, force mains, and sewer services. All these previously mentioned items shall collectively be referred to as "sewer(s)" for the remainder of this section. Horizontal and vertical separation requirements between water mains and sewers as well as other water main protection requirements shall be in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", latest edition and per the following:

1. Horizontal Separation:
   a. Whenever possible, an existing or proposed water main must be at least ten (10) feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service.
   b. Should local conditions exist which would prevent a lateral separation of ten (10) feet, an existing or proposed water main may be closer than ten (10) feet to a sewer provided that the water main invert is at least eighteen (18) inches above the crown of the sewer, and is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
   c. If it is impossible to obtain proper horizontal and vertical separation as described in Items 1a and 1b above, both the water main and sewer must be constructed of pipe and joint material that conforms to water main quality pipe and joint standards, and be pressure tested to the maximum expected surcharge head to assure water tightness before backfilling.
2. Vertical Separation:
   a. Whenever water mains cross sewers, the water main shall be laid at such an elevation that the invert of the water main is at least eighteen (18) inches above the crown of the sewer. This vertical separation shall be maintained for that portion of the water main located within ten (10) feet horizontally of any sewer crossed. This must be measured as the perpendicular distance from the water main to the sewer. A length of water main pipe shall be centered over the sewer to be crossed with joints placed equidistant from the sewer.
   b. Where conditions exist that the minimum vertical separation set forth in Item 2a above cannot be maintained, or it is necessary for the water main to pass under a sewer, one of the following two measures must be taken:
      i. The water main shall be installed within a PVC casing pipe that conforms to water main quality pipe and joint standards and the casing pipe shall extend on each side of the crossing until the normal distance from the water main to the sewer is at least ten (10) feet.
      ii. The involved sewer shall be constructed of pipe and joint material which would conform to water main quality pipe and joint standards until the normal distance on either side of the crossing from the water main to the sewer is at least ten (10) feet.
   c. In making such crossings, a length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the invert of the sewer and the crown of the water main shall be maintained, along with means to support the sewer to prevent their settling and breaking the water main.
3. The horizontal and vertical separation between water service lines and sewers or related service lines should be the same as for water mains, as detailed above, except that when minimum horizontal and vertical separation cannot be maintained, water main quality pipe and joints as described under Vertical Separation above, may be used for sewer or related service lines.
4. Water mains or services shall not be allowed to pass through or come into contact with sewer structures.
5. Water mains shall be separated from septic tanks, disposal fields, seepage beds, and sewage lift stations by a minimum of twenty-five (25) feet.
6. Water mains shall be separated from sanitary sewer force mains by a minimum of at least ten (10) feet horizontally and there shall be an eighteen (18) inch vertical separation at crossings.
7. The Contractor shall protect water mains and service lines from the entrance of hydrocarbons through diffusion through any material used in the construction of the line.
8. Casing pipe shall be installed in locations and of material specified on the Plans or where necessary to meet the water main protection requirements. The carrier pipe shall be securely blocked and banded with appropriately spaced spacers, and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the voids between the casing and carrier pipe shall be filled with sand, pea gravel or flowable fill and the ends shall be sealed.

PAVEMENT, CURB & GUTTER, AND WALKS

1. All work under this Section shall be performed in accordance the IDOT Standard Specifications or as specified in the Plans.
2. Concrete curb or curb and gutter shall be constructed in accordance with the Plans and Section 606 of the IDOT Standard Specifications. A ¾" pre-molded fiber joint filler along with two (2) 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps, centered on joint, shall be provided at expansion joints. Expansion joints shall be provided at a maximum of sixty (60) foot intervals and at all points of curvature and tangency, curb returns, five (5) feet either side of edge of structures, and at the end of each pour. Construction joints shall be provided at maximum twenty (20) foot intervals.
3. Where proposed curb or curb and gutter connects to an existing curb or curb and gutter, the existing curb or curb and gutter shall be saw-cut and then two 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps shall be drilled and installed nine (9) inches into the existing and proposed curb. Bars shall be installed in a location similar to that of the expansion joint in the curb or curb and gutter as applicable.
4. All curb and curb and gutter constructed over a utility trench shall be reinforced with two (2) #4 epoxy coated reinforcing bars for a length of ten (10) feet centered over the trench or as shown on the plans.
5. Reversed pitched curb and gutter shall be installed in areas where pavement slopes away from the curb.
6. Sidewalks and walks shall be constructed in accordance with the Plans and Section 424 of the IDOT Standard Specifications. Concrete sidewalks and walks shall be thickened to a minimum of 6" at all driveways. All curb and walks shall be IDOT Portland Cement Concrete, Class SI, on compacted aggregate base course as shown on the Plans. Scored contraction joints shall be provided at five (5) foot intervals or as specified in the Plans. Expansion joints consisting of a ½" pre-molded fiber joint filler shall be provided at maximum fifty (50) foot intervals, and adjacent to concrete curbs, drives, foundations, ramps, etc. as well as when meeting existing concrete walks.
7. Sidewalks and walks constructed over a utility trench shall be reinforced with three (3) #4 round epoxy coated reinforcing bars for a length of ten (10) feet centered over the utility trench or as shown on the plans.
8. Curb ramps accessible to the disabled with raised truncated dome detectable warning surface of standard brick red color or other contrasting color shall be provided at all locations where sidewalk meets curb and at other locations shown on the Plans in accordance with the Illinois Accessibility Code (IAC), latest edition and IDOT Standard 424001, latest revision.
9. Curing and protection of all exposed concrete surfaces shall be in accordance with the IDOT Standard Specifications. No "honey-combing" or other similar failures of the concrete surfaces will be accepted.
10. Aggregate base course shall be in accordance with the Plans and Section 351 of the IDOT Standard Specifications. Aggregate base course material shall be CA-6, Type B, 100% crushed gravel conforming to Section 1004 of the IDOT Standard Specifications.
11. Bituminous binder and surface courses shall be Hot Mix Asphalt (HMA) of type and compacted thickness as specified in the Plans and shall be constructed in accordance with Section 406 of the IDOT Standard Specifications. The surface course shall be made with virgin materials; no recycled materials shall be allowed unless specified otherwise on the Plans. The Contractor shall provide and pay for the services of a competent paving laboratory to design and supervise the control of the paving mixture. All paving materials and mixes shall be IDOT certified.
12. Portland cement concrete (PCC) pavement shall be Class PV with reinforcement as specified on Plans and be constructed in accordance with Section 420 of the IDOT Standard Specifications.
13. All concrete work shall be finished with a broom finish unless specified otherwise in the Plans.
14. The Contractor shall saw-cut the exposed edges of all existing pavement adjacent to any proposed pavement, apron, sidewalk, curb and gutter or similar to provide a smooth, clean edge that is free of loose material. A proper transition butt joint and/or taper shall also be provided as necessary. Refer to butt joint detail for additional information.
15. The testing of the subgrade, aggregate base course, bituminous aggregate material, binder course, surface course, and concrete work shall be required and be performed in accordance with the IDOT Standard Specifications and requirements of the applicable Jurisdictional Agency. A qualified testing firm shall be employed to perform the required tests, ensure quality and conformance, and provide the results to the Engineer, Owner, and Jurisdictional Agency. The Contractor shall provide the Owner with a construction schedule and shall coordinate all required testing with the testing firm.
16. Prior to the commencement of any paving activities, a proof-roll must be performed by the Contractor and approved by the Village/City or applicable Jurisdictional Agency, and the Owner. All areas not passing the proof-roll shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner. Any remediate areas shall be re-tested.
17. Prior to installation of the aggregate base course:
   a. The subgrade shall be prepared in accordance with Section 301 of the IDOT Standard Specifications.
   b. The Contractor shall be responsible for all subgrade compaction and preparation to within 0.1-ft of the proposed subgrade elevation. Subgrade shall be compacted to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
   c. Sub-grade shall pass a proof-roll and any unsuitable areas in the subgrade shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner.
18. Prior to installation of the binder course:
   a. The aggregate base course shall be prepared in accordance with Section 351 of the IDOT Standard Specifications.
   b. The aggregate base course shall be clean and dry.
   c. The bituminous priming material shall be prepared and applied according to Section 403 of the IDOT Standard Specifications.
   d. The Contractor shall prime the aggregate base course at a rate of 0.25 gallons per square yard prior to the placement of the binder course.
   e. The binder course shall be placed only when the temperature in the shade is at least 40º F and the forecast is for rising temperatures.
19. Prior to the installation of the surface course:
   a. The Contractor shall patch and repair all damaged and failed areas in the binder course to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
   b. The Contractor shall repair all damaged curb and gutter or other concrete pavement to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
   c. Structures within pavement shall be adjusted to final surface grade.
   d. The Contractor shall clean and prime the binder course at a rate of 0.05 gallons per square yard prior to the placement of the surface course.
   e. The surface course shall be placed only when the air temperature in the shade is at least 45º F and the forecast is for rising temperatures.
20. Pavement marking/striping:
   a. All Pavement markings shall be in accordance with Section 780 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size and color specified on the Plans.
   b. Pavement marking on freeways shall be placed with truck-mounted equipment. Markings on roads other than freeways may be placed with either truck-mounted or hand-operated equipment.
   c. Before applying the pavement marking material, the pavement shall be clean, dry, and free of debris or any other material that would reduce the adhesion of the markings on the pavement.
   d. Pavement markings shall be applied in accordance with the manufacturer's recommended instructions.
   e. Pavement markings shall be uniform and have clean, straight edges.
   f. Pavement marking words and symbols shall conform closely to the dimensions and spacing specified in the MUTCD, IDOT Standard Details, and the Plans.
   g. Deviations from the required dimensions and spacing or other departures from reasonable standards of professionalism will be cause for rejection by the Engineer.
21. Handicapped stalls shall be striped and signed in accordance with the Illinois Accessibility Code (IAC), latest edition and any other applicable ADA guidelines. Handicapped stalls shall be a minimum of sixteen (16) feet wide and signage shall be affixed to a post permanently mounted in the ground or wall and located in the center of the space no further than five (5) feet from the front of the accessible space. The minimum height to the bottom of the fine sign shall be four (4) feet. Handicapped stall striping shall be yellow in color.
22. All signs shall be in accordance with Section 720 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size, and color specified on the Plans.
23. Raised reflective pavement markers shall be in accordance with Section 781 of the IDOT Standard Specifications and be recessed into the pavement as required by the applicable Jurisdictional Agency.
24. Pavement marking and marker removal shall be in accordance with Section 783 of the IDOT Standard Specifications.
25. All pavements, curb, curb and gutters, walks, etc. shall be cleaned to the satisfaction of the Village/City or applicable Jurisdictional Agency, Owner, and Engineer as necessary during construction and at the end of the project prior to the final acceptance.

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
2. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
3. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
4. Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
5. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
6. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
7. After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent surface waters from flowing onto adjacent property.
8. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
9. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
10. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
11. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
12. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
13. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
14. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
15. All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
16. Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
17. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
18. The Contractor shall water the site, as required during dry weather to control dust.
19. Erosion Control Maintenance and Replacement Notes:
   a. Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
   b. Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
   c. Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
   d. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
   e. Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
20. The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
21. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
22. The work shall generally follow the following typical Construction Sequencing:
   a. Installation of them soil erosion and sediment control (SE/SC) measures:
      1. Selective vegetation removal for silt fence installation
      2. Silt fence installation
      3. Construction fencing around areas not to be disturbed
      4. Stabilized construction entrance
   b. Install tree protection fencing and tree removal where necessary (clear & grub)
   c. Construct sediment trapping devices (sediment traps, basins, etc.)
   d. Construct detention facilities and outlet control structure with restrictor.
   e. Strip and stockpile topsoil and mass grade the site
   f. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
   g. Install sanitary sewer, storm sewer, watermain and associated inlet & outlet protection
   h. Permanently stabilize detention basins with seed and erosion control blanket
   i. Temporarily stabilize all areas including lots that have reached temporary grade
   j. Install roadways, parking areas, etc.
   k. Final grade and permanently stabilize all outlot areas with topsoil and seed
   l. Install structures and grade individual lots
   m. Permanently stabilize site with topsoil and seed
   n. Remove all temporary SE/SC measures after the site is stabilized with vegetation

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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GENERAL NOTES AND SPECIFICATIONS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C2.1 / C9

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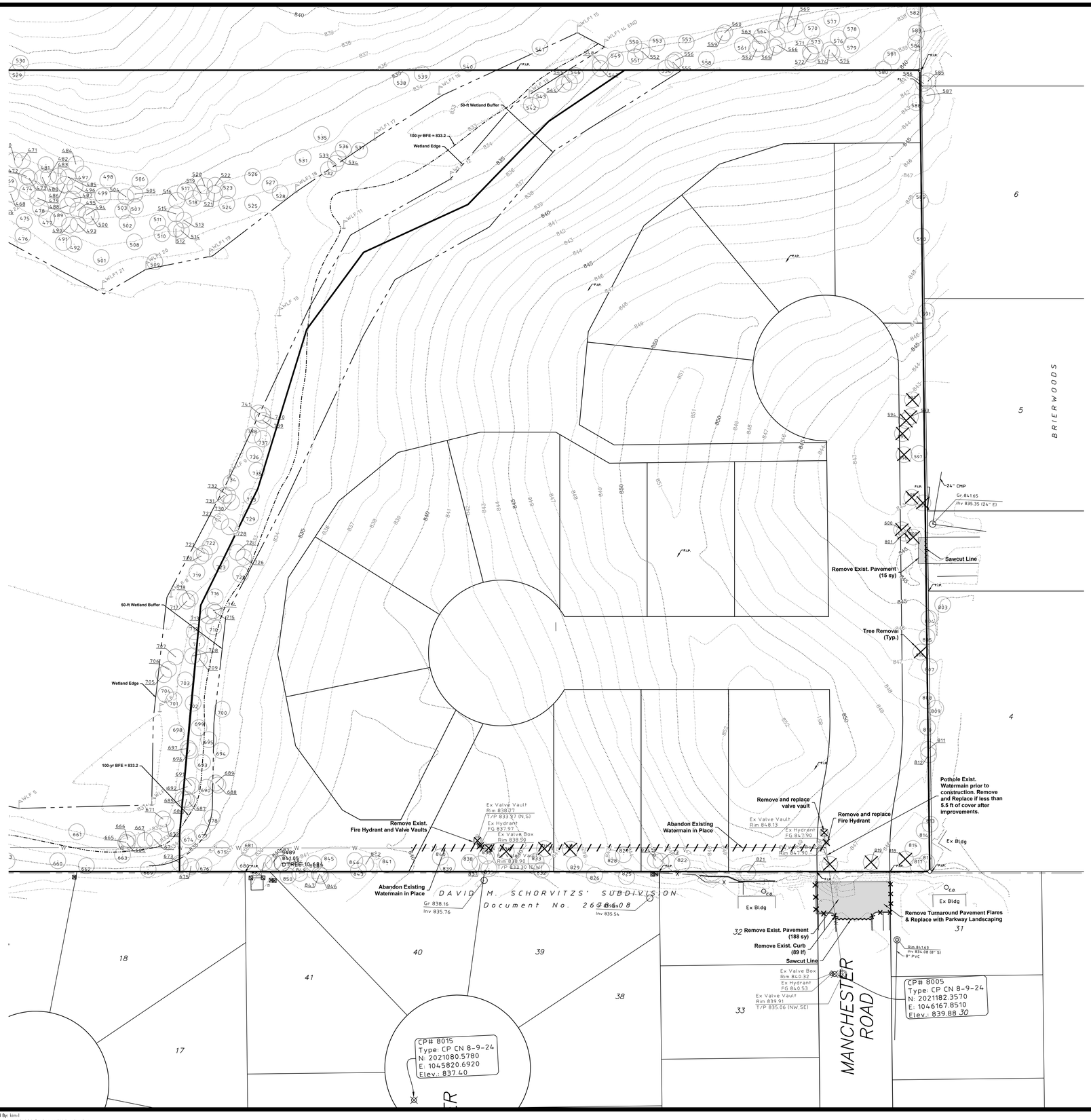

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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EXISTING CONDITIONS & DEMOLITION PLAN
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C3.0 / C9

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NORTH

20 0 40

Scale: 1" = 40'

N 87° 38' 27" E 243.14'

N 53° 44' 37" E 78.67'

N 41° 46' 30" E 96.46'

N 63° 00' 02" E 94.70'

N 34° 05' 49" E 78.76'

N 14° 42' 05" E 137.20'

N 23° 46' 59" E 106.85'

N 03° 11' 03" E 90.26'

N 02° 21' 33" W 30.45'

S 87° 38' 27" W 618.03'

S 03° 04' 09" E 660.55'

50-ft Wetland Buffer

100-yr BFE = 833.2

Wetland Edge

NWL 833.8

HWL 839.0

NWL 836.0

HWL 839.0

NORTH BASIN
HWL 839.00
NWL 833.80
Bottom 833.60
Volume = 3.31 ac-ft

SOUTH BASIN
HWL 839.00
NWL 836.00
Bottom 835.50
Volume 0.25 ac-ft

1 Area = 10,058 S.F. = 0.2309 AC.
2 Area = 11,780 S.F. = 0.2704 AC.
3 Area = 12,408 S.F. = 0.2848 AC.
4 Area = 11,428 S.F. = 0.2623 AC.
5 Area = 9,826 S.F. = 0.2255 AC.
6 Area = 9,154 S.F. = 0.2101 AC.
7 Area = 9,573 S.F. = 0.2197 AC.
8 Area = 9,886 S.F. = 0.2269 AC.
9 Area = 11,320 S.F. = 0.2599 AC.
10 Area = 11,318 S.F. = 0.2598 AC.
11 Area = 11,579 S.F. = 0.2658 AC.
12 Area = 10,962 S.F. = 0.2516 AC.
13 Area = 10,743 S.F. = 0.2466 AC.
14 Area = 10,799 S.F. = 0.2479 AC.
15 Area = 11,760 S.F. = 0.2699 AC.

LIVERPOOL COURT

MANCHESTER ROAD

TANGLEWOOD LANE

BRIERWOODS
Document No. 1869977

DAVID M. SCHORVITZS' SUBDIVISION
Document No. 2678608

Ex Bldg

24" CMP

Rim 84.163
Inv 83.08 (8" S)
8" PVC

No.	Revision	Date
1	Changed Storm Sewer to HDPE	04-05-2025

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OVERALL SITE PLAN

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C4.0 / C9

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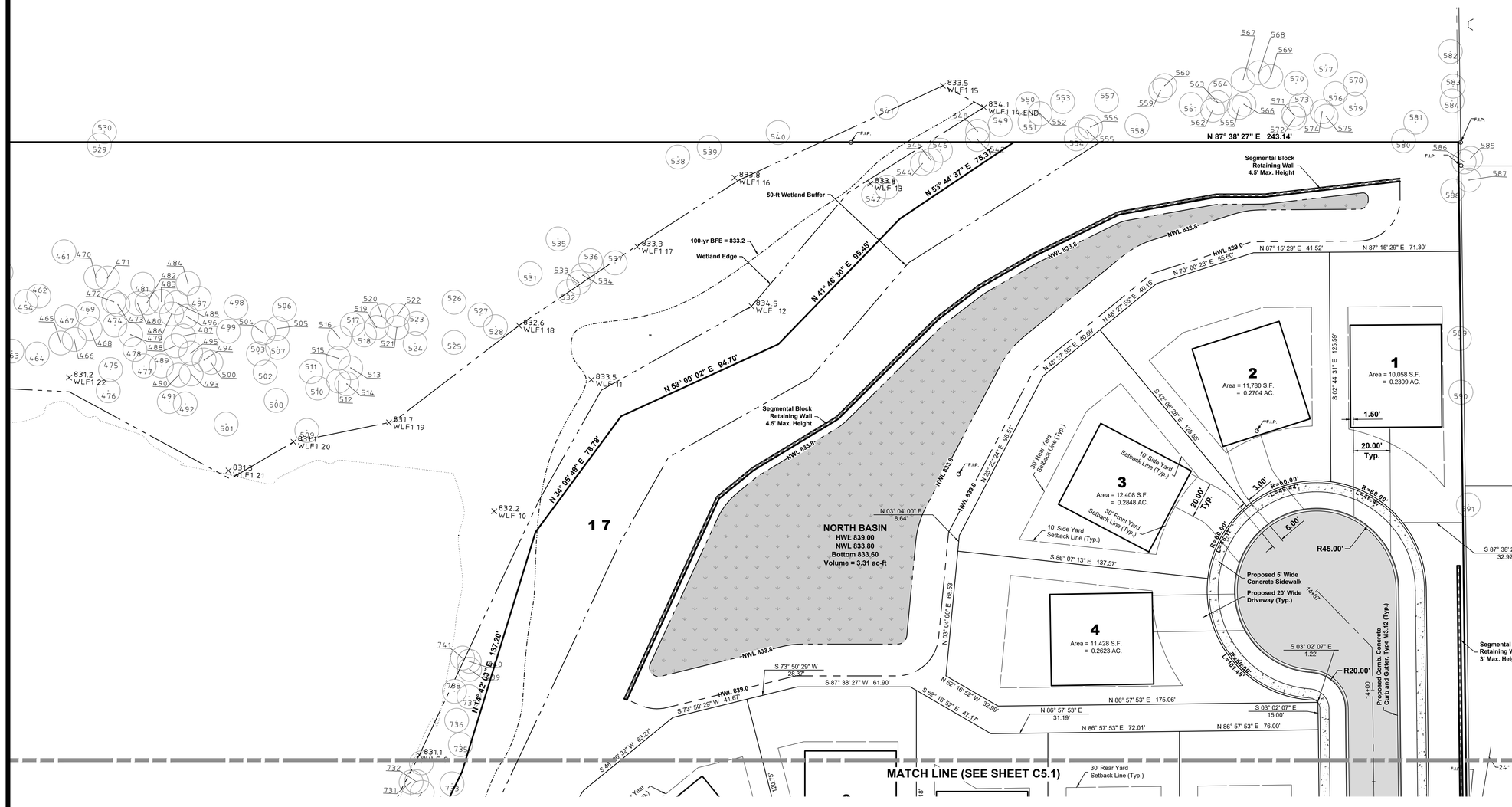

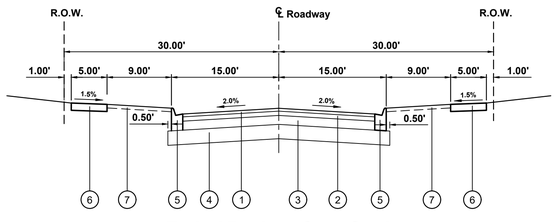

Typical Roadway Cross Section

LEGEND

1. Hot-Mix Asphalt Surface Course, Mix C, IL-9.5, N50 - 1.5"
2. Hot-Mix Asphalt Binder Course, IL-19, N50 - 2.0"
3. Bituminous Aggregate Material - 5.0"
4. Aggregate Base Course, Type B, CA-6, 3"
5. Combination Concrete Curb and Gutter, Type M-3.12
6. P.C.C. Sidewalk, 5"
7. Topsoil and Seeding 4"

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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GEOMETRY & PAVING PLAN - NORTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C5.0 / C9

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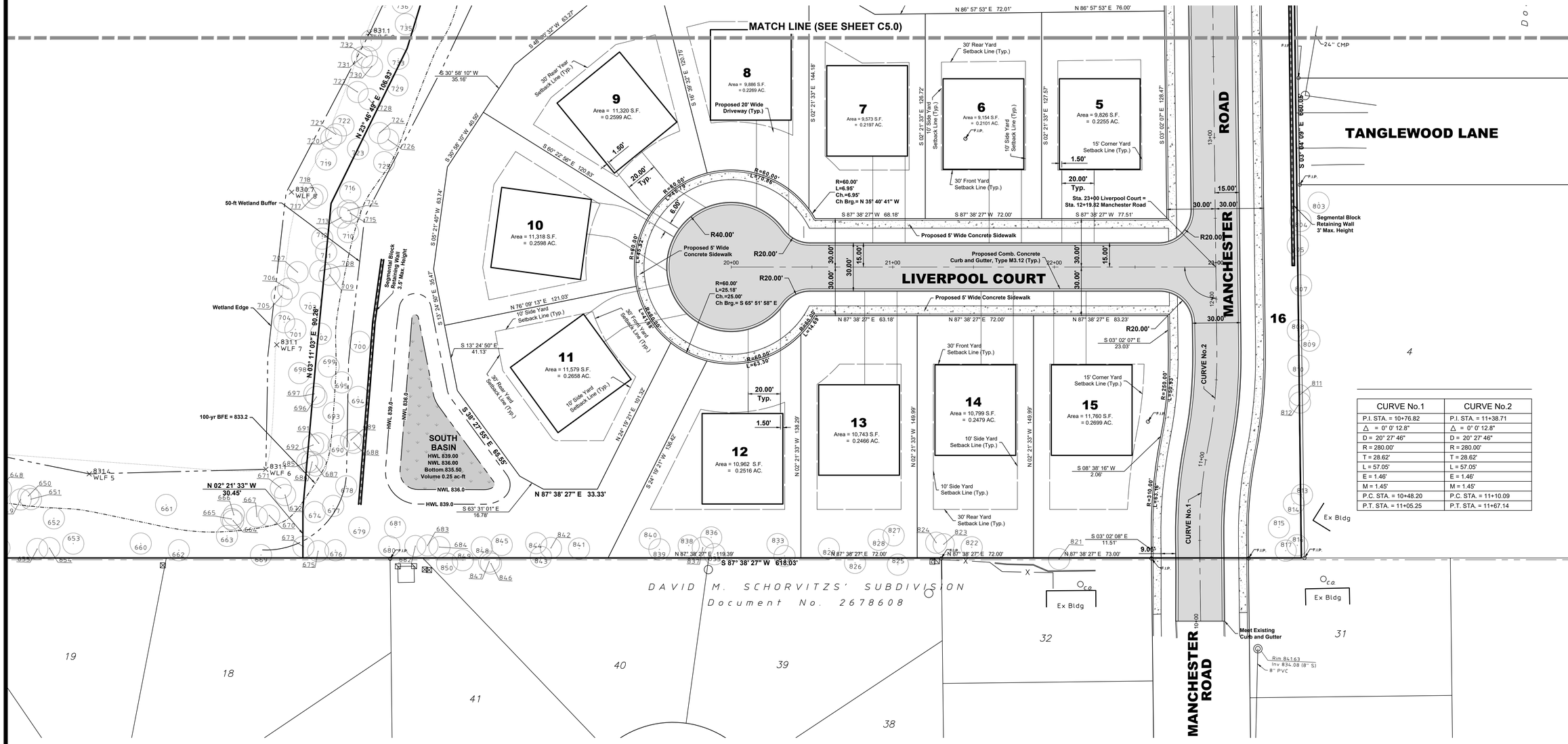
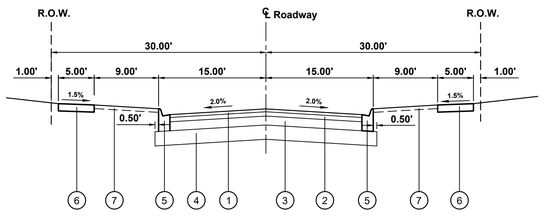


CURVE No.1	CURVE No.2
P.I. STA. = 10+76.82	P.I. STA. = 11+38.71
Δ = 0° 0' 12.8"	Δ = 0° 0' 12.8"
D = 20° 27' 46"	D = 20° 27' 46"
R = 280.00'	R = 280.00'
T = 28.62'	T = 28.62'
L = 57.05'	L = 57.05'
E = 1.46'	E = 1.46'
M = 1.45'	M = 1.45'
P.C. STA. = 10+48.20	P.C. STA. = 11+10.09
P.T. STA. = 11+05.25	P.T. STA. = 11+67.14



Typical Roadway Cross Section

LEGEND

1. Hot-Mix Asphalt Surface Course, Mix C, IL-9.5, N50 - 1.5"
2. Hot-Mix Asphalt Binder Course, IL-19, N50 - 2.0"
3. Bituminous Aggregate Material - 5.0"
4. Aggregate Base Course, Type B, CA-6, 3"
5. Combination Concrete Curb and Gutter, Type M-3.12
6. P.C.C. Sidewalk, 5"
7. Topsoil and Seeding 4"

NORTH

Scale: 1" = 30'

No.	Date	Revision
1	06-05-2025	Changed Storm Sewer to HDPE

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GEOMETRY & PAVING PLAN - SOUTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet C5.1/C9

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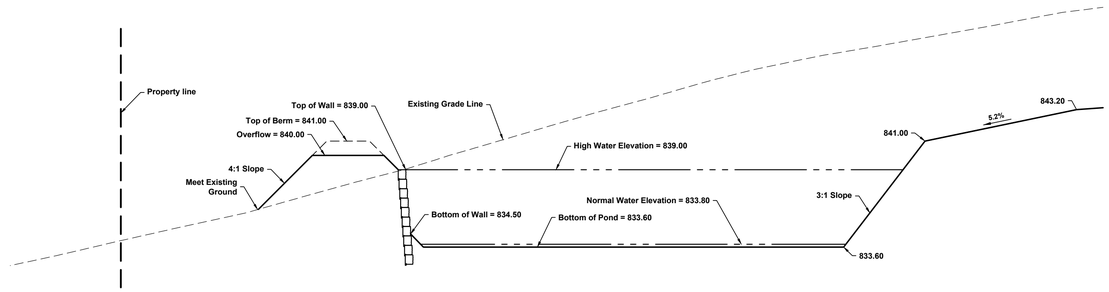
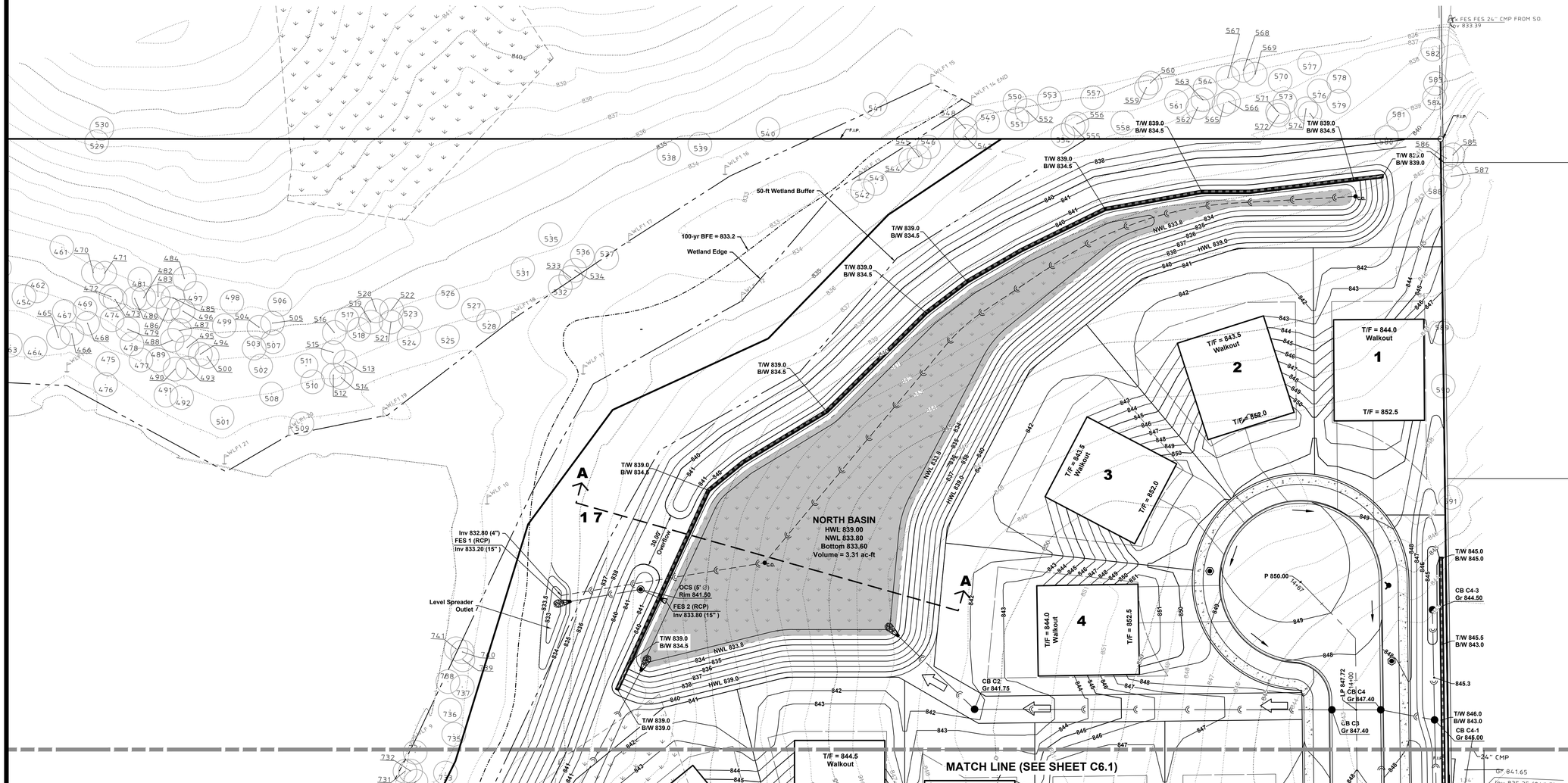


CROSS SECTION A-A

SCALE : 1" = 20' Horz. / 1" = 5' Vert.



7

6

5

BRIERWOODS

Document No. 1869977

NORTH

15 0 30

Scale: 1" = 30'

No.	Revision	Date
1	Changed Storm Sewer to HDPE	04-05-2025

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GRADING PLAN - NORTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C6.0 / C9

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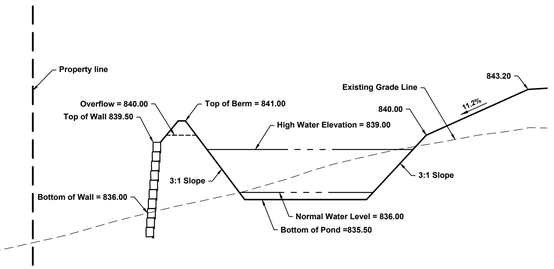

CROSS SECTION B-B

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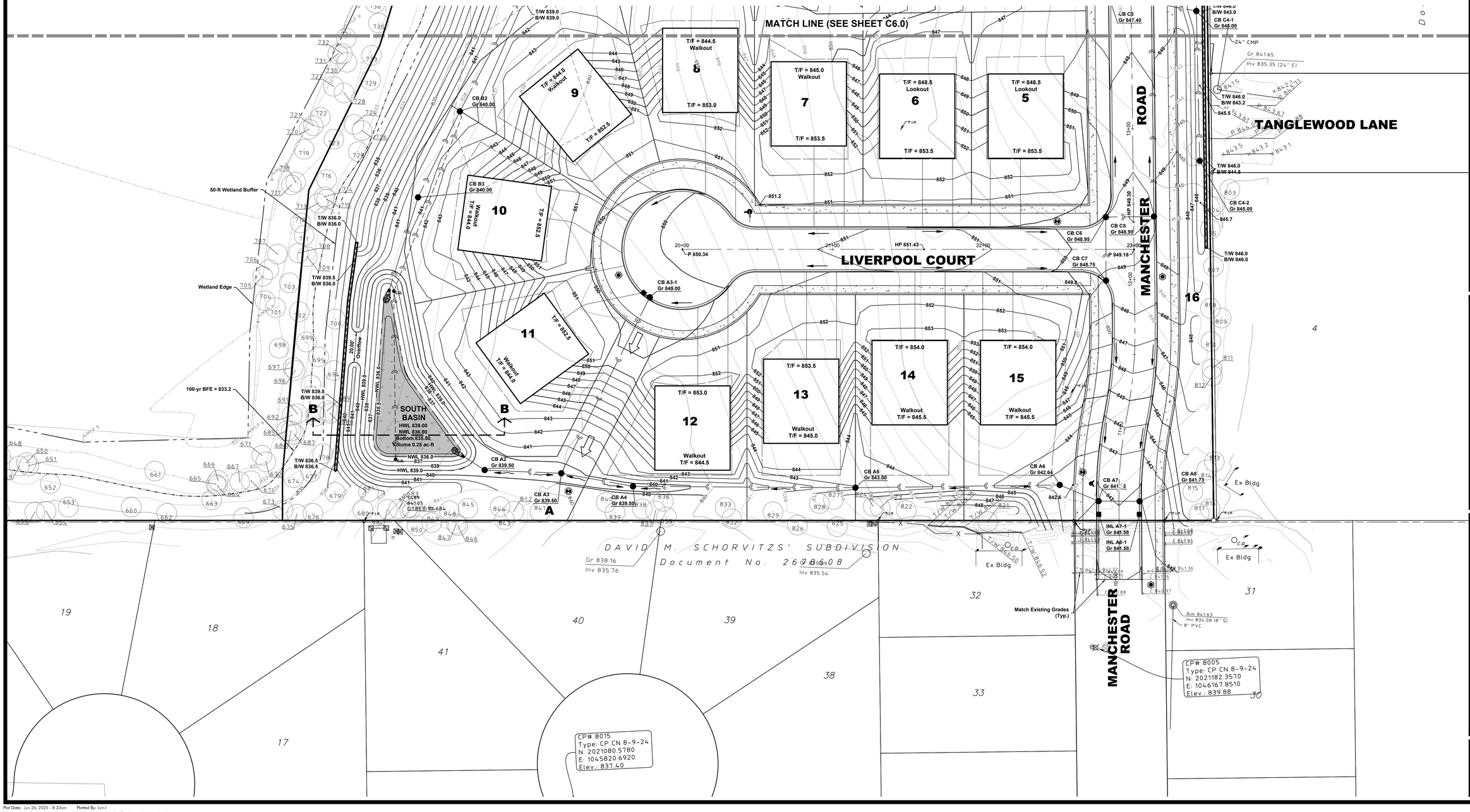

No.	Revision	Date
1	Changed Storm Sewer to HDPE	04-05-2025

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GRADING PLAN - SOUTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C6.1 / C9

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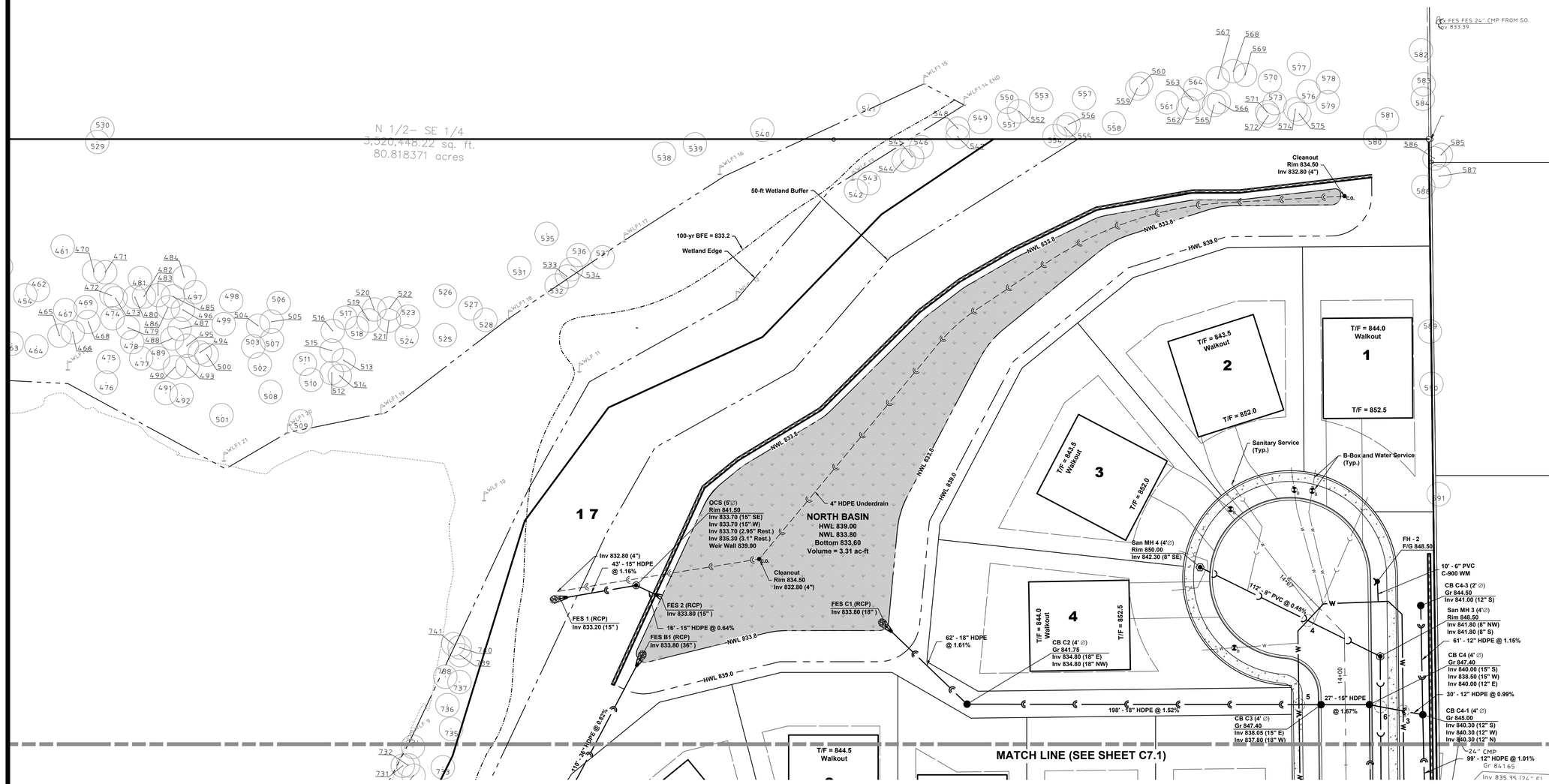
UTILITY CROSSINGS

Crossing No. 3 Bot of 12" HDPE Storm = 840.02 Top of 8" PVC Water = 841.48 Set Top of 8" PVC Water = 838.52
Crossing No. 4 Bot of 8" PVC Sanitary = 841.97 Top of 8" PVC Water = 842.94 Set Top of 8" PVC Water = 840.47
Crossing No. 5 Bot of 8" PVC Water = 841.30 Top of 18" HDPE Storm = 839.32 Delta = 1.98 Feet
Crossing No. 6 Bot of 8" PVC Sanitary = 841.61 Top of 12" HDPE Storm = 841.23 Delta = 0.38 Feet



NORTH

15 0 30

Scale: 1" = 30'

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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UTILITY PLAN - NORTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
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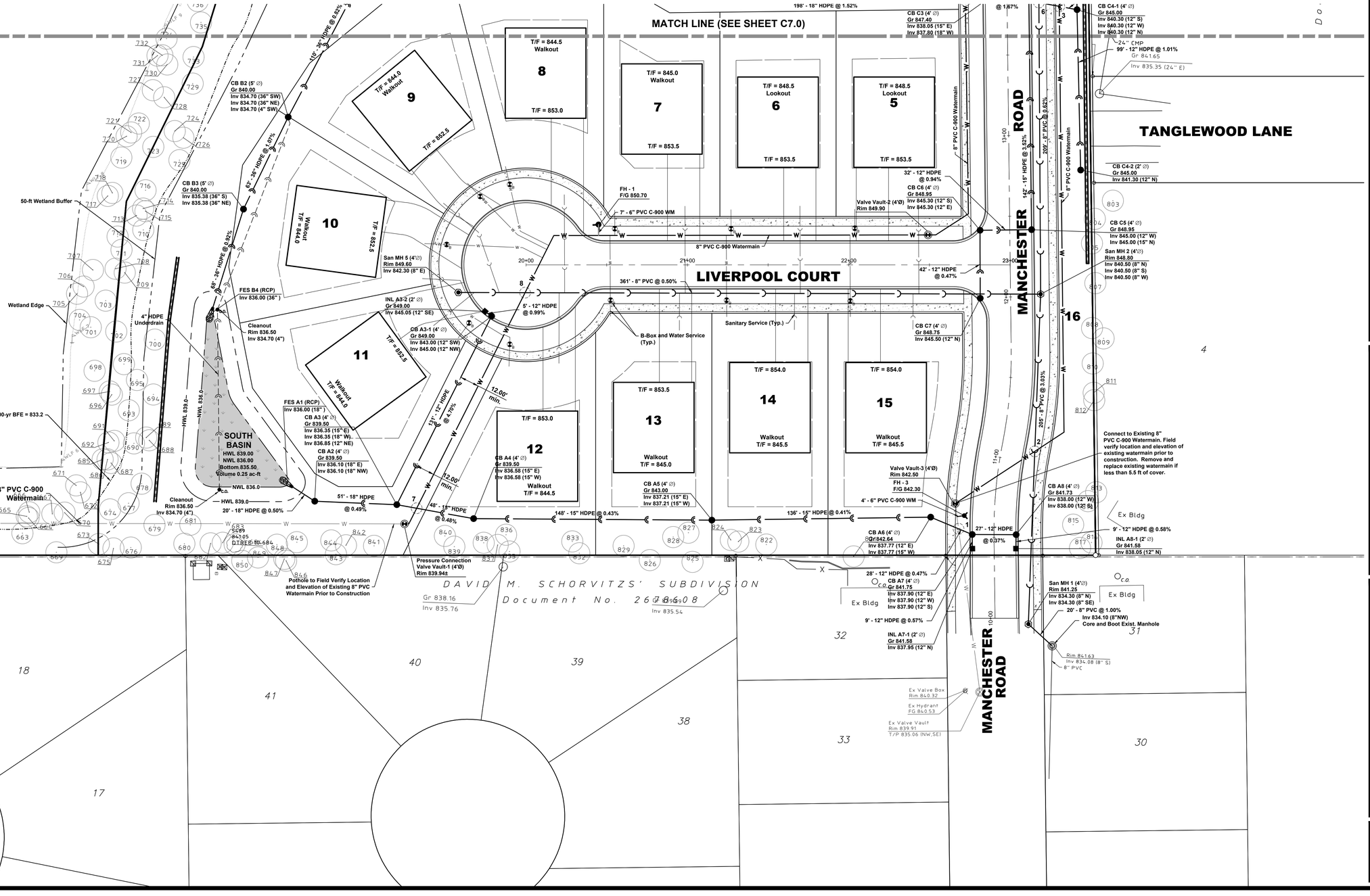
UTILITY CROSSINGS

Crossing No. 1 Bot of 12" HDPE Storm = 837.69 Top of 8" PVC Water = 836.40 Set Top of 8" PVC Water = 836.19
Crossing No. 2 Bot of 8" PVC Sanitary = 837.52 Top of 8" DIP WM = 838.89 Set Top of 8" DIP WM = 836.02
Crossing No. 7 Bot of 15" HDPE Storm = 836.22 Top of 8" PVC Water = 833.90 Delta = 2.32 Feet
Crossing No. 8 Bot of 8" PVC Sanitary = 842.07 Top of 8" PVC Water = 844.10 Set Top of 8" PVC Water = 840.57



NORTH

Scale: 1" = 30'

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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UTILITY PLAN - SOUTH

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C7.1 / C9

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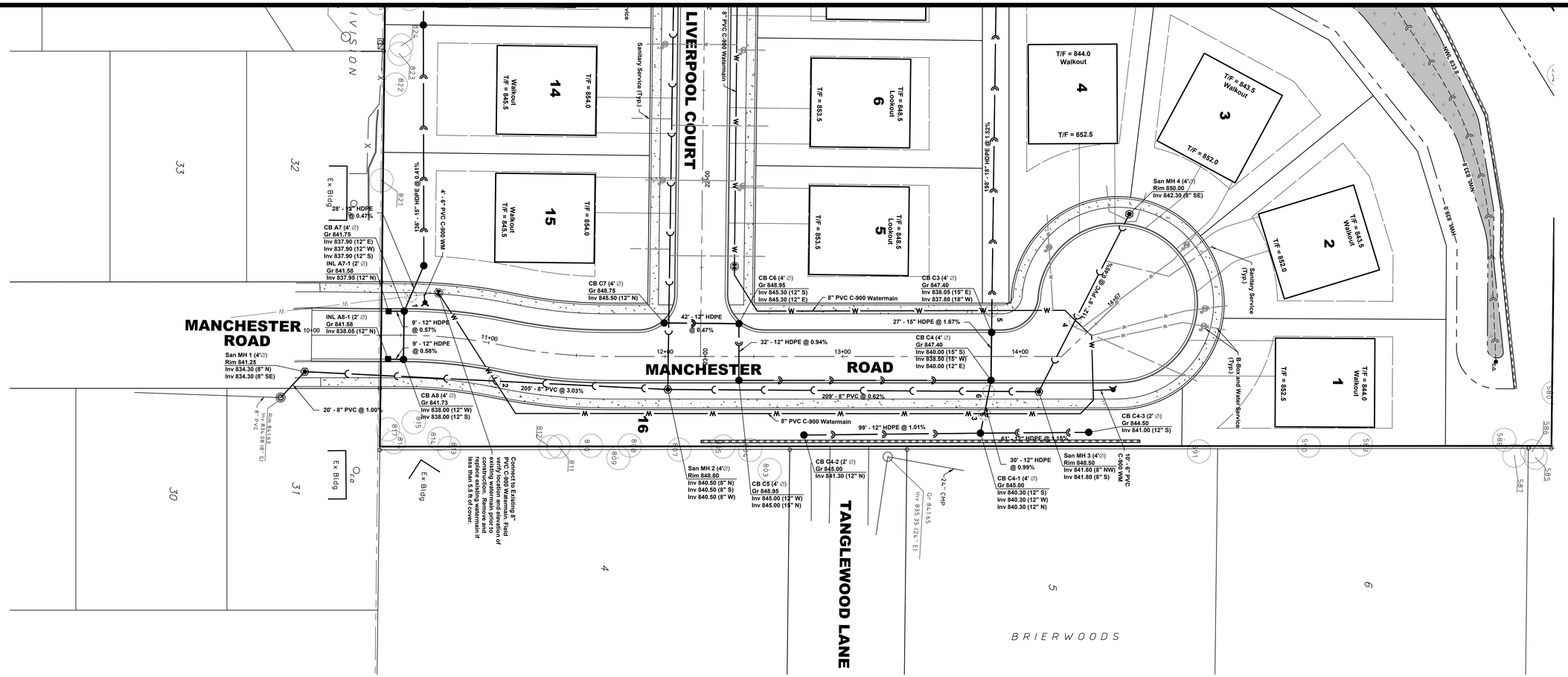
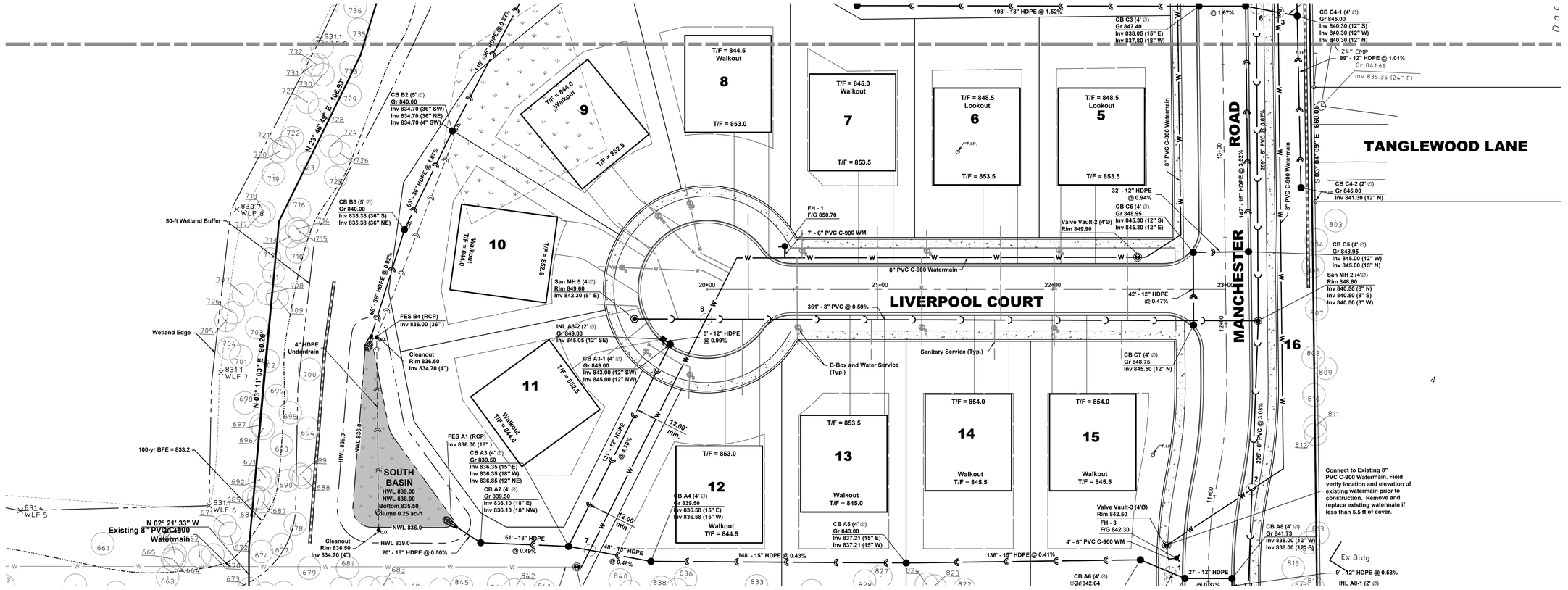
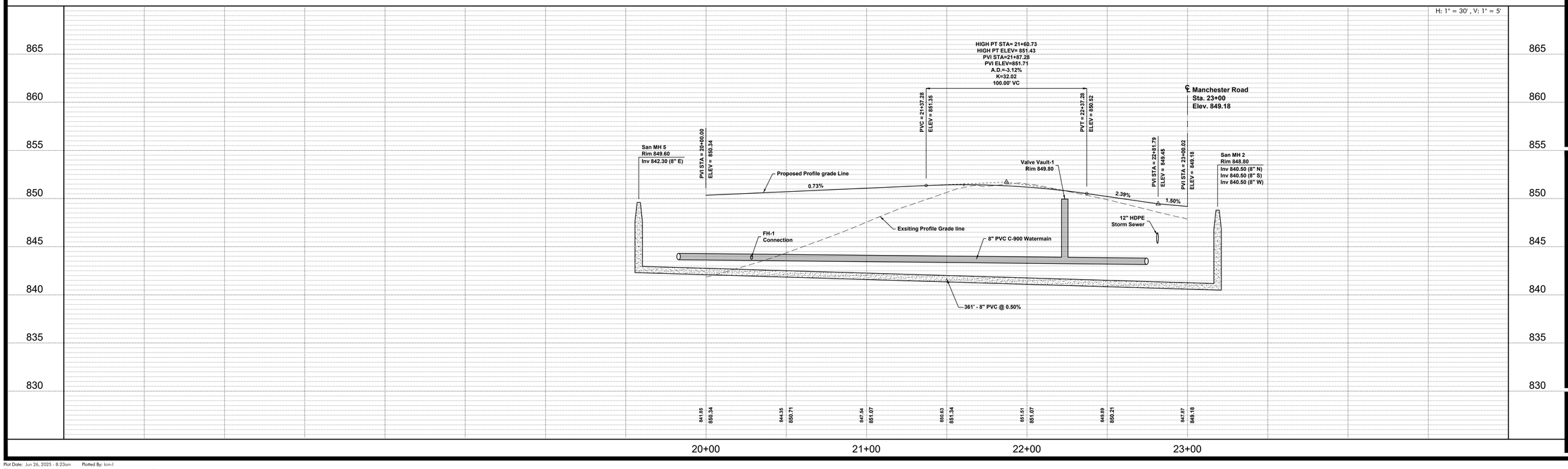

LIVERPOOL COURT
MANCHESTER ROAD
TANGLEWOOD LANE
BRIERWOODS
Ex Bldg
Ex Bldg
Ex Bldg
T/F = 854.0
Walkout
T/F = 845.5
14
15
16
T/F = 853.5
T/F = 848.5
Lookout
6
5
T/F = 844.0
Walkout
4
T/F = 852.5
T/F = 843.5
Walkout
3
T/F = 852.0
T/F = 843.5
Walkout
2
T/F = 852.0
T/F = 844.0
Walkout
1
T/F = 852.5
NORTH
Scale: 1" = 30'
8" PVC C-900 Watermain
Sanitary Service (Typ.)
4'-4" - 8" PVC C-900 WM
9' - 12" HDPE @ 0.57%
9' - 12" HDPE @ 0.58%
42' - 12" HDPE @ 0.47%
32' - 12" HDPE @ 0.94%
27' - 15" HDPE @ 1.67%
198' - 18" HDPE @ 1.52%
99' - 12" HDPE @ 1.01%
61' - 12" HDPE @ 1.15%
30' - 12" HDPE @ 0.99%
28' - 12" HDPE @ 0.47%
205' - 8" PVC @ 3.03%
209' - 8" PVC @ 0.62%
20' - 8" PVC @ 1.00%
17' - 8" PVC @ 0.59%
15' - 8" PVC C-900 WM
INL 833.5
INL 829.0
CB A7 (4' ∅)
Gr 841.75
Inv 837.90 (12" E)
Inv 837.90 (12" W)
Inv 837.90 (12" S)
INL A7-1 (2' ∅)
Gr 841.58
Inv 837.95 (12" N)
INL A8-1 (2' ∅)
Gr 841.58
Inv 838.05 (12" N)
San MH 1 (4'∅)
Rim 841.25
Inv 834.30 (8" N)
Inv 834.30 (8" SE)
CB A8 (4' ∅)
Gr 841.73
Inv 838.00 (12" W)
Inv 838.00 (12" S)
CB C7 (4' ∅)
Gr 848.75
Inv 845.50 (12" N)
CB C6 (4' ∅)
Gr 848.95
Inv 845.30 (12" S)
Inv 845.30 (12" E)
CB C3 (4' ∅)
Gr 847.40
Inv 838.05 (15" E)
Inv 837.80 (18" W)
CB C4 (4' ∅)
Gr 847.40
Inv 840.00 (15" S)
Inv 838.50 (15" W)
Inv 840.00 (12" E)
San MH 4 (4'∅)
Rim 850.00
Inv 842.30 (8" SE)
CB C4-3 (2' ∅)
Gr 844.50
Inv 841.00 (12" S)
San MH 3 (4'∅)
Rim 848.50
Inv 841.50 (8" NW)
Inv 841.80 (8" S)
San MH 2 (4'∅)
Rim 848.80
Inv 840.50 (8" N)
Inv 840.50 (8" S)
Inv 840.50 (8" W)
CB C5 (4' ∅)
Gr 848.95
Inv 845.00 (12" W)
Inv 845.00 (15" N)
CB C4-2 (2' ∅)
Gr 845.00
Inv 841.30 (12" N)
CB C4-1 (4' ∅)
Gr 845.00
Inv 840.30 (12" S)
Inv 840.30 (12" W)
Inv 840.30 (12" N)
24" CMP
Gr 841.65
Inv 835.55 (24" E)
Connect to Existing 8" PVC C-900 Watermain. Field verify location and elevation of existing watermain prior to construction. Remove and replace existing watermain if less than 5.5 ft of cover.
Sanitary Service (Typ.)
B-Box and Water Service (Typ.)
Ex San MH
Rim 841.63
Inv 834.08 (8" S)
Ex Bldg
Ex Bldg
Ex Bldg



LIVERPOOL COURT



NORTH
15 0 30
Scale: 1" = 30'

No.	Revision	Date
1	Changed Storm Sewer to HDPE	04-05-2025

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LIVERPOOL COURT
PLAN & PROFILE
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C8.1 / C9

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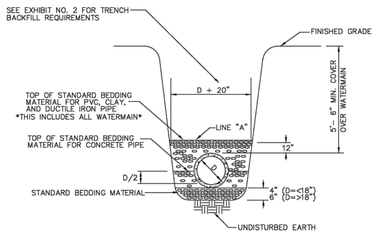
Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136 Plan and Profile.dwg

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.

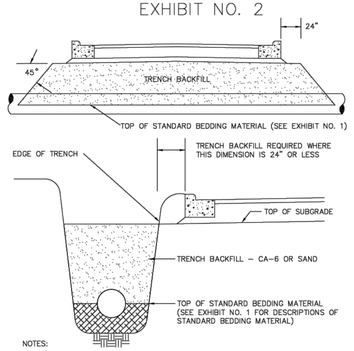
EXHIBIT NO. 1



NOTES:
1. STANDARD BEDDING MATERIAL FOR NON-PLASTIC PIPE INCLUDING ALL WATERMAIN SHALL BE 1/4" TO 3/4" CRUSHED STONE, ASTM 448, SIZE CA-7 TO CA-11.
2. STANDARD BEDDING MATERIAL FOR PLASTIC PIPE SHALL CONFORM TO ASTM D2321, CLASS II NON-ANGULAR AGGREGATE.
3. SELECT, WELL COMPACTED EXCAVATED MATERIAL SHALL BE PLACED TO LINE "A" IF STANDARD BEDDING MATERIAL IS NOT REQUIRED TO LINE "A."
4. VOIDS LEFT BY SHEETING SHALL BE FILLED WITH STANDARD BEDDING MATERIAL AS THE SHEETING IS REMOVED.

TYPICAL TRENCH AND STANDARD BEDDING

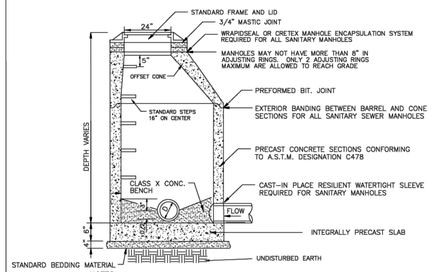
EXHIBIT NO. 2



NOTES:
1. TRENCH BACKFILL SHALL CONFORM TO THE PROVISIONS OF ARTICLE 208 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. TRENCH DIMENSIONS AS DETAILED ELSEWHERE SHALL BE USED TO CALCULATE PAYMENT LIMITS. ADDITIONAL TRENCH BACKFILL NECESSARY TO FILL A TRENCH WIDER THAN THAT DETAILED SHALL BE PROVIDED AND PLACED AT NO ADDITIONAL COST TO THE DEVELOPER, OWNER, OR VILLAGE.

TRENCH BACKFILL

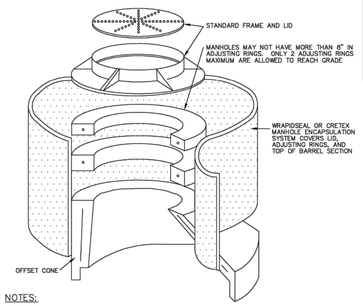
EXHIBIT NO. 3



NOTES:
1. FOR SEWERS 24 INCHES OR LESS IN DIAMETER, USE 48 INCH MANHOLES; FOR SEWERS MORE THAN 24" INCHES IN DIAMETER, USE 60" INCH MANHOLES.
2. FOR VITRIFIED CLAY PIPE SEWERS, LOCATE A BELL OR SPIGOT AS APPROPRIATE JUST OUTSIDE THE MANHOLE WALL TO PROVIDE A PIVOT POINT FOR ANY DIFFERENT MOVEMENT.
3. WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM REQUIRED FOR ALL SANITARY SEWER MANHOLES. (SEE EXHIBIT NO. 4)
4. WATER TIGHT SEALENT REQUIRED FOR ALL SANITARY SEWER MANHOLES.

STANDARD MANHOLE

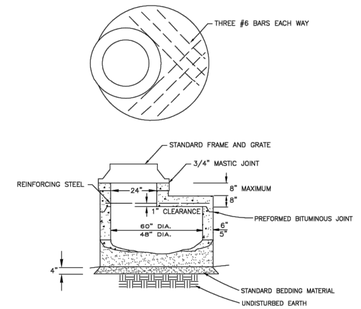
EXHIBIT NO. 4



NOTES:
1. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED ON ALL SANITARY SEWER MANHOLES.
2. WRAPIDSEAL OR CRETEX MANHOLE ENCAPSULATION SYSTEMS ARE REQUIRED, ANY OTHER PRODUCTS OR OTHER DESIGN SOLUTIONS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER OR DIRECTOR OF PUBLIC WORKS.
3. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND INSTRUCTIONS.

WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM

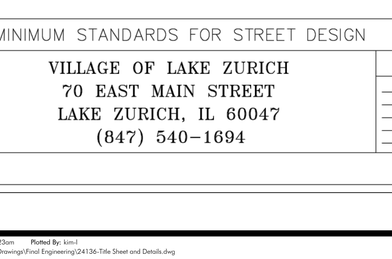
EXHIBIT NO. 5



NOTES:
1. A 6" THICK SLAB TOP MAY BE ALLOWED FOR 48" DIAMETER RESTRICTED DEPTH CATCH BASINS NOT IN PAVEMENT.
2. A WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM SHALL BE REQUIRED IN LOCATIONS WHERE WRAPIDSEAL IS CALLED FOR.
3. NO STEPS ARE REQUIRED IN RESTRICTED DEPTH CATCH MANHOLES.

FLAT TOP FOR RESTRICTED DEPTH MANHOLE

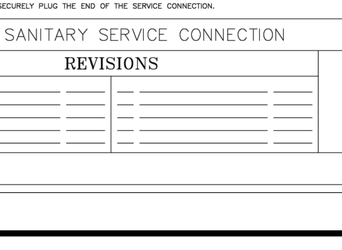
EXHIBIT NO. 7



NOTES:
1. FOR SEWER PIPES 24 INCHES OR LESS IN DIAMETER, USE 48 INCH DIAMETER CATCH BASIN; FOR SEWER PIPES MORE THAN 24 INCHES IN DIAMETER, USE 60 INCH DIAMETER CATCH BASIN.
2. OUTLET PIPE SHALL BE NO LESS THAN 12 INCHES IN DIAMETER.
3. STEPS ARE REQUIRED IF THE CATCH BASIN IS OVER 7' IN DEPTH.
4. STEPS ARE TO BE 16" ON CENTER, ON THE OPPOSITE SIDE FROM THE OUTLET PIPE.

CATCH BASIN

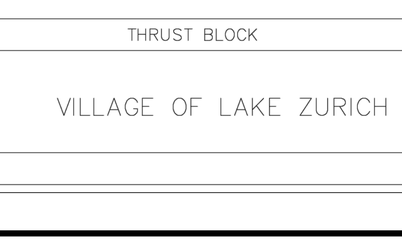
EXHIBIT NO. 8



NOTES:
1. A 6" THICK SLAB TOP MAY BE ALLOWED FOR 48" DIAMETER RESTRICTED DEPTH CATCH BASINS NOT IN PAVEMENT.
2. NO STEPS ARE REQUIRED IN RESTRICTED DEPTH CATCH BASINS.

FLAT SLAB TOP FOR RESTRICTED DEPTH C.B.

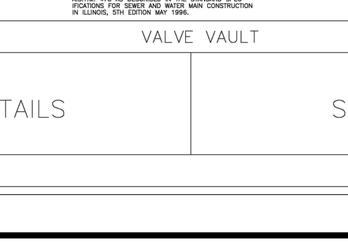
EXHIBIT NO. 9



NOTES:
1. INLET BARREL SECTIONS SHALL CONFORM TO A.S.T.M. DESIGNATION C478.
2. MINIMUM PIPE SIZE FOR INLETS IN PUBLIC STREETS IS 10" DIAMETER.
3. DUCTILE IRON PIPE SHALL BE USED IN PAVED AREAS OF PUBLIC STREETS FOR INLET PROTECTION IF LESS THAN 3 FEET OF COVER IS PROVIDED.

INLET

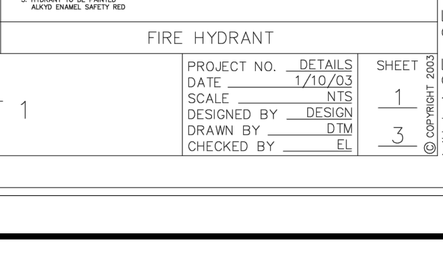
EXHIBIT NO. 10



NOTES:
1. WIDTH OF THE FOUNDATION SHALL BE THE SAME AS THE WIDTH OF THE FLARED END SECTION. THE TOP OF FOUNDATION SHALL EXTEND HALF-WAY UP THE SIDE OF THE FLARED END SECTION.
2. THE BOTTOM OF THE FOUNDATION SHALL REST ON UNDISTURBED EARTH. THE BOTTOM OF THE FOUNDATION SHALL BE NO LESS THAN THREE (3') DEEP AT THE OPEN END OF THE FLARED END SECTION.
3. A FOUNDATION SIMILAR TO THIS FOUNDATION SHALL BE CONSTRUCTED UNDER ALL PRECAST HEADWALLS.

FOUNDATION FOR FLARED END SECTION

EXHIBIT NO. 11



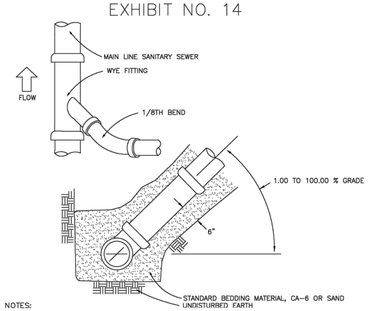
UNDERDRAIN

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

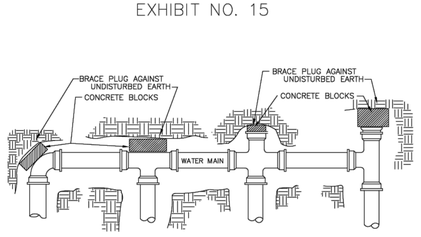
EXHIBIT NO. 14



NOTES:
1. THIS EXHIBIT IS APPLICABLE TO FOUR (4) OR (6) INCH SANITARY SERVICE CONNECTIONS ONLY. LARGER DIAMETER SANITARY SEWER CONNECTIONS SHALL BE MADE AT MANHOLES ONLY.
2. THE BEDDING UNDER THE WYE FITTING AND STUB SHALL BE CAREFULLY COMPACTED TO PREVENT THE WYE FITTING FROM ROTATING.
3. THE SANITARY SERVICE CONNECTION PIPE SHALL BE LAID IN A STRAIGHT LINE AND AT A UNIFORM GRADIENT FROM THE TOP OF THE RISE FROM THE MAIN LINE TO THREE (3) FEET BEYOND THE RIGHT-OF-WAY LINE.
4. SECURELY PLUG THE END OF THE SERVICE CONNECTION.

SANITARY SERVICE CONNECTION

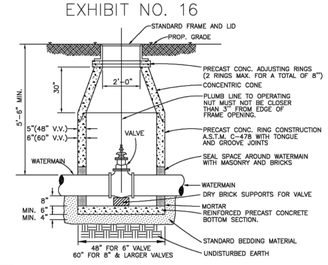
EXHIBIT NO. 15



NOTES:
1. PROVIDE THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT ALL BENDS, TEES, CAPS, VALVES, HYDRANTS, AND AT POINTS SPECIFIED BY THE ENGINEER.
2. ALL BLOCKING SHALL BE MADE WITH CONCRETE BLOCKS AGAINST UNDISTURBED VERTICAL EARTH SURFACE.
3. ALTERNATE METHODS OF RESTRAINING WATER MAIN COMPONENTS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER.
4. NO WOOD IS ALLOWED IN THE THRUST BLOCKS.
5. MEGALUGS SERIES 1100 OR APPROVED EQUAL ARE REQUIRED AT ALL JOINTS.

THRUST BLOCK

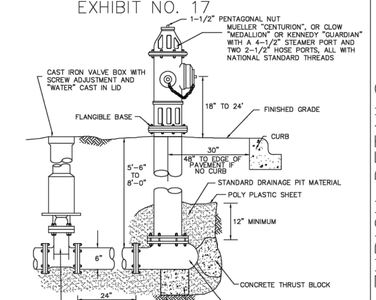
EXHIBIT NO. 16



NOTES:
1. WATER MAIN 8 INCHES OR MORE IN DIAMETE SHALL REQUIRE A 60 INCH DIAMETER VALVE VAULT. WATER MAIN LESS THAN 8 INCHES IN DIAMETER SHALL REQUIRE A 48 INCH VALVE VAULT
2. INSTALL MINIMUM 4" OF SELECTED GRANULAR BACKFILL UNDER STRUCTURE BOTTOM SECTION AND FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING MATERIAL.
3. PIPE OPENINGS SHALL BE CAST INTO WALL.
4. STRUCTURE FRAME, ADJUSTING RINGS, AND ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL.
5. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
6. VALVE VAULT BARREL SECTIONS SHALL CONFORM TO A.S.T.M. 478 AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, 5TH EDITION MAY 1996.

VALVE VAULT

EXHIBIT NO. 17



NOTES:
1. STEAMER PORT TO FACE PAVEMENT
2. PROVIDE 2 FOOT DIAMETER BY 2 FEET DEEP DRAINAGE PIT FILLED WITH 1 INCH WASHED STONE BELOW AND ADJACENT TO HYDRANT
3. HYDRANT TO BE PAINTED ALKYD ENAMEL SAFETY RED

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

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VILLAGE OF LAKE ZURICH DETAILS

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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VILLAGE OF LAKE ZURICH
STANDARD DETAILS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet C9.0 / C9

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Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg

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 Depth over 15 feet – SDR 12 or 18 Service Laterals: PVC SCH 40 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" WrapidSeal Manhole Encapsulation System is required on all sanitary manholes Contractor shall be qualified by manufacturer's rep. to install WrapidSeal Exterior banding between barrel and cone sections is required Manhole must be water tight and sealed from the outside Fiberglass steps
Casing	The casing 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
Forcemain	If PVC pipe (C900) is used, #6 solid copper tracing wire is required for locating purposes

WATERMAIN

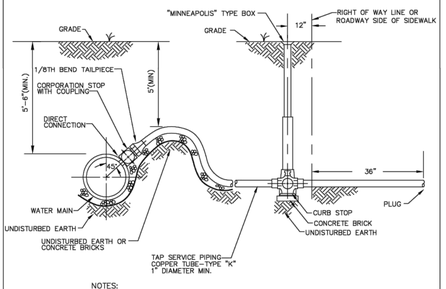
Fire Hydrants	Clow Medallion, 5 1/4 " with Auxiliary Valve Kennedy Guardian, 5 1/4 " with Auxiliary Valve Mueller Centurian A – 423 with Auxiliary Valve 5 1/4 " three–way (2 hose nozzles and 1 pumper nozzle) Painted Safety Red
Pipe	Class 52 Ductile Iron, cement lined, Megalugs Series 1100 required at all fittings Wrapping the watermain 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 American Flow Control AFC series 500 NRS Resilient Wedge Valve UL/FM General Mueller Resilient Wedge Valve Non–Rising Stem, Mechanical Joint
Manholes	Cast Iron Frames and Lids: Neenah Type 1 self–sealing Marked "Water"
Casing	The casing 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
Corporation Stop	Mueller H – 15000 – 1" Size AY McDonald 4701
Roundway	Mueller H–15154 – 1" Stop, Minneapolis Pattern AY McDonald 6104
B–Box	Mueller H – 10300 Upper section inside diameter 1 1/4" Mueller H – 10302 Upper section inside diameter 1 1/2"
Service Line	1" Type K Copper, or as required by plumbing code
Tapping Saddle	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 first permanent water valves are installed.
9. Water vaults for 8" valves and larger must have an inside diameter of 60".

UTILITY MATERIAL STANDARDS

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.

HANDICAP RAMP

EXHIBIT NO. 19

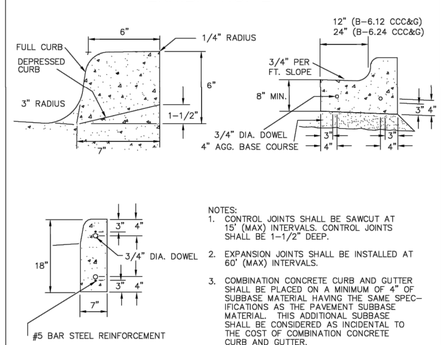
STREET	RIGHT–OF WAY WIDTH	PAVEMENT WIDTH*	RADIUS OF HORIZ. CURVES	LENGTH OF VERT. CURVES	TANGENT BETWEEN HORIZ. REVERSE CURVES	MAXIMUM GRADIENT	MINIMUM GRADIENT	CLEAR SIGHT DISTANCE
MAJOR	100 FT.	54 FT.	500 FT.	200 (a) FT.	200 FT.	5%	0.5%	500 FT.
COLLECTOR	80 FT.	44 FT.	400 FT.	200 (a) FT.	200 FT.	5%	0.5%	400 FT.
MINOR	60 FT.	30 FT.	150 FT.	100 (b) FT.	–	6%	0.5%	200 FT.
CUL–DE–SAC	120 FT.	88 FT.	150 FT.	100 (b) FT.	–	6%	0.5%	200 FT.
MARGINAL ACCESS	60 FT.	30 FT.	400 FT.	200 (a) FT.	100 FT.	6%	0.5%	200 FT.
IN BUSINESS AND INDUSTRIAL DIST.	80–100 FT.	54 FT.	500 FT.	200 (a) 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) FORTY (40) 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

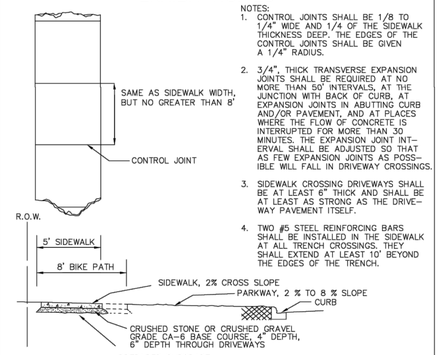
EXHIBIT NO. 24



NOTES:
1. CONTROL JOINTS SHALL BE SAWCUT AT 15' (MAX) INTERVALS. CONTROL JOINTS SHALL BE 1–1/2" DEEP.
2. EXPANSION JOINTS SHALL BE INSTALLED AT 60' (MAX) INTERVALS.
3. COMBINATION CONCRETE CURB AND GUTTER SHALL BE PLACED ON A MINIMUM OF 4" OF SUBBASE MATERIAL HAVING THE SAME SPECIFICATIONS AS 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

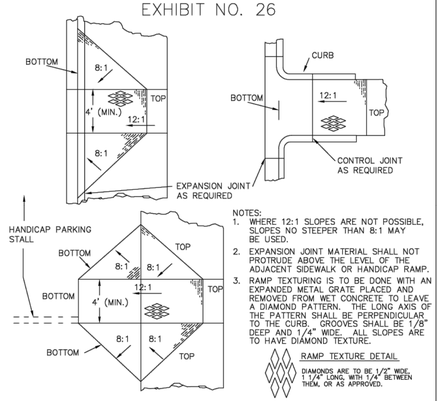


NOTES:
1. CONTROL JOINTS SHALL BE 1/8 TO 1/4" WIDE AND 1/4 OF THE SIDEWALK THICKNESS DEEP. THE EDGES OF THE CONTROL JOINTS SHALL BE GIVEN A 1/4" RADIUS.
2. 3/4", THICK TRANSVERSE EXPANSION JOINTS SHALL BE REQUIRED AT NO MORE THAN 50' INTERVALS, AT THE JUNCTION WITH BACK OF CURB, AT EXPANSION JOINTS IN ABUTTING CURB AND/OR PAVEMENT, AND AT PLACES WHERE THE FLOW OF CONCRETE IS INTERRUPTED FOR MORE THAN 30 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 AT LEAST AS STRONG AS 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

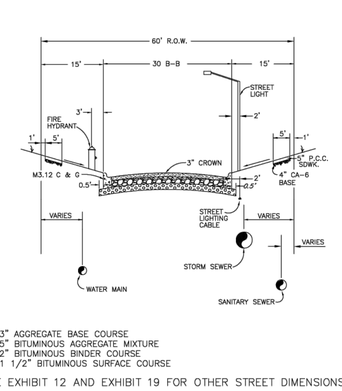
WATER SERVICE CONNECTION

EXHIBIT NO. 26



NOTES:
1. WHERE 12:1 SLOPES ARE NOT POSSIBLE, SLOPES NO STEEPER THAN 8:1 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 FROM WET CONCRETE TO LEAVE A DIAMOND PATTERN. THE LONG AXIS OF THE PATTERN SHALL BE PERPENDICULAR TO THE CURB. GROOVES SHALL BE 1/8" DEEP AND 1/4" WIDE. ALL SLOPES ARE TO HAVE DIAMOND TEXTURE.

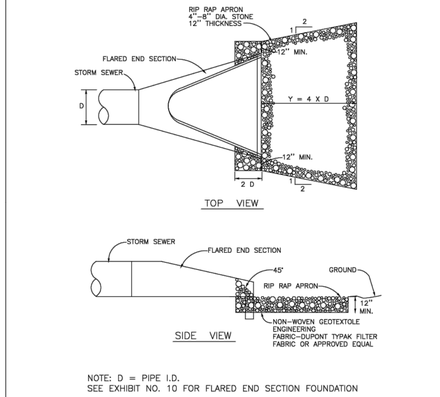
TYPICAL MINOR STREET DESIGN DETAIL



3" AGGREGATE BASE COURSE
5" BITUMINOUS AGGREGATE MIXTURE
2" BITUMINOUS BINDER COURSE
1 1/2" BITUMINOUS SURFACE COURSE

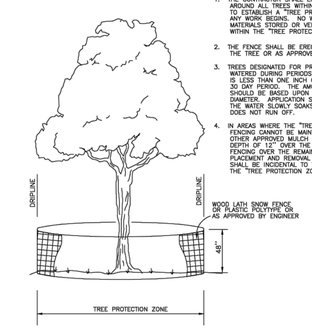
SEE EXHIBIT 12 AND EXHIBIT 19 FOR OTHER STREET DIMENSIONS

FLARED END SECTION RIP RAP



NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

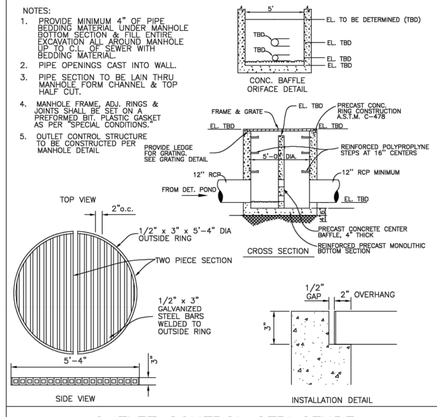
SIDEWALK



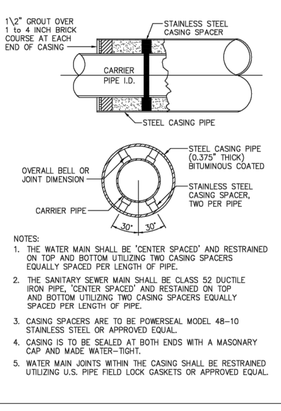
1. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES WITHIN THE CONSTRUCTED AREA TO ESTABLISH A "TREE PROTECTION ZONE" BEFORE ANY WORK BEGINS. NO WORK IS TO BE PERFORMED, MATERIALS STORED OR VEHICLES DRIVEN OR PARKED WITHIN THE "TREE PROTECTION ZONE".
2. THE FENCE SHALL BE ERECTED AT THE DRIP–LINE OF THE TREE OR AS APPROVED BY ENGINEER.
3. TREES DESIGNATED FOR PROTECTION SHOULD BE WATERED DURING PERIODS OF DROUGHT WHEN THERE IS LESS THAN ONE INCH OF RAIN FALL DURING ANY 30 DAY PERIOD. THE AMOUNT OF WATER PER TREE SHOULD BE BASED ON 10 GALLONS PER INCH OF DIAMETER. APPLICATION SHOULD BE MADE SO THAT THE WATER SLOWLY SOAKS INTO THE GROUND AND DOES NOT RUN OFF.
4. IN AREAS WHERE THE "TREE PROTECTION ZONE" FENCING CANNOT BE MAINTAINED WOOD CHIPS OR OTHER APPROVED MULCH MUST BE APPLIED TO A DEPTH OF 12" OVER THE AREA NOT PROTECTED BY FENCING OVER THE REMAINDER OF THE ZONE. PLACEMENT AND REMOVAL OF THE MULCHED AREA SHALL BE INCIDENTAL TO THE ESTABLISHMENT OF THE "TREE PROTECTION ZONE".

TREE PROTECTION FENCE

OUTLET CONTROL STRUCTURE

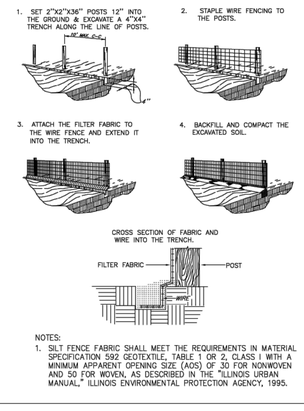


PIPE CASING DETAIL



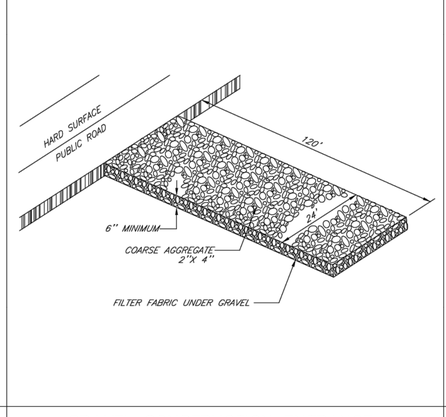
NOTES:
1. THE WATER MAIN SHALL BE 'CENTER SPACED' AND RESTRAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
2. THE SANITARY SEWER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE, 'CENTER SPACED' AND RESTAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
3. CASING SPACERS ARE TO BE POWERSEAL MODEL 48–10 STAINLESS STEEL OR APPROVED EQUAL.
4. CASING IS TO BE SEALED AT BOTH ENDS WITH A MASONARY CAP AND MADE WATER–TIGHT.
5. WATER MAIN JOINTS WITHIN THE CASING SHALL BE RESTRAINED UTILIZING U.S. PIPE FIELD LOCK GASKETS OR APPROVED EQUAL.

SILT FENCE DETAIL

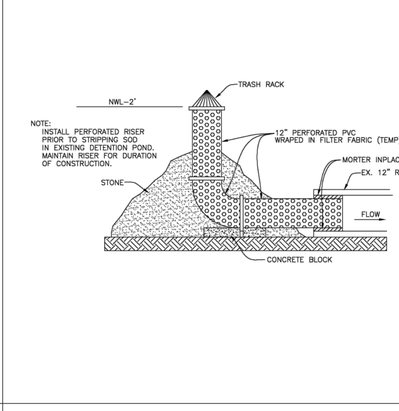


NOTES:
1. SILT FENCE FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I WITH A MINIMUM APPARENT OPENING SIZE (AOS) OF 30 FOR NONWOVEN AND 50 FOR WOVEN, AS DESCRIBED IN THE "ILLINOIS URBAN MANUAL," ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, 1995.

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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VILLAGE OF LAKE ZURICH DETAILS

No. 1 — Revision — Changed Storm Sewer to HDPE — 04-05-2025 — Date

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VILLAGE OF LAKE ZURICH
STANDARD DETAILS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet C9.1 / C9

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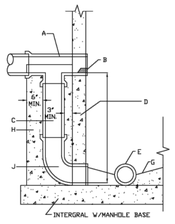
Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim.l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg

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.



LEGEND:
A. DUCTILE IRON PIPE
B. BRICK AND MORTAR DAM HEIGHT EQUALS 1/3 DIAMETER OF SEWER.
C. OUTSIDE DROP PIPE: 8" DIA UNLESS OTHERWISE NOTED ON THE PLANS.
D. MANHOLE SIDEWALLS: PRECAST REINFORCED CONCRETE RISERS, MINIMUM 5" THICKNESS.
E. MAINLINE SEWER (LARGEST DIAMETER)
F. RISER PIPE: PVC SDR 35, 8" DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
G. MANHOLE BENCH FILLET: POURED IN PLACE CONCRETE UNLESS POURED WITH PRECAST REINFORCED CONCRETE BASE AND BOTTOM WALL.
H. CLASS X CONCRETE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
J. 90 DEGREE BEND DUCTILE IRON PIPE.

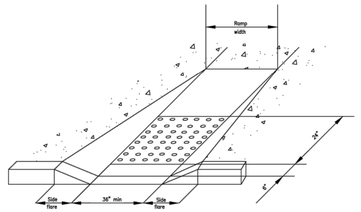
NOTES:
1. ALL JOINTS SHALL CONFORM TO A.S.T.M. C-425 SPECIFICATIONS EXCEPT "2" BELOW.
2. JUTE AND MORTAR OR BITMINOUS MASTIC JOINT ALLOWED ONLY AS SHOWN
3. RISERS SHALL BE CONSTRUCTED WHERE MAIN LINE SEWER EXCEEDS 12" UNLESS OTHERWISE NOTED.
4. RISERS SHALL BE CONSTRUCTED IN UNDISTRURBED SIDEBANK EARTH.

OUTSIDE DROP PIPE DETAIL

PIPE DIA	Y MIN Y1 MIN	Y MIN Y2 MIN	Z MIN	DESIGN TRENCH WIDTH RANGE	L	
4"	4"	8"	4"	1.6' - 2.6'		18"
6"	4"	8"	4"	1.6' - 2.6'		
8"	4"	8"	4"	1.8' - 3.3'		
10"	4"	8"	4"	2.0' - 3.0'		
12"	4"	8"	4"	2.3' - 3.3'		
15"	4"	8"	4"	2.6' - 3.9'		
18"	6"	8"	6"	3.0' - 4.3'		
20"	6"	8"	6"	3.3' - 4.3'		
21"	6"	10"	6"	3.3' - 4.6'		
24"	6"	10"	6"	3.3' - 4.9'		
27"	9"	12"	9"	4.3' - 5.2'		36"
30"	9"	12"	9"	4.3' - 5.2'		
36"	9"	12"	9"	4.9' - 7.2'		
42"	6"	10"	9"	5.6' - 7.9'		
48"	6"	10"	9"	6.6' - 8.5'		

NOTES
1. Y1 SHALL BE USED IN ALL OCCASIONS EXCEPT WHERE Y2 IS SPECIFIED, OR DIRECTED BY THE ENGINEER.
2. Y2 IS TO BE USED IN LIEU OF Y1 WHERE THE EXCAVATION IS ROCK OR HOLES EXIST CONTAINING BOULDERS, LARGE FLINTS, STONES OR OTHER IRREGULAR HARD SPOTS
3. DIMENSION Y2 SHALL BE INCREASED AT A RATE OF 2" PER ADDITIONAL 3.2' COVER IN EXCESS OF 16'.
4. ALL DIMENSIONS ARE IN INCHES AND FEET.
5. CONSTRUCTION WIDTHS FOR PIPE TRENCHES MUST BE WITHIN THE DESIGN RANGES GIVEN INCLUSIVE OF TEMPORARY WORKS AND PIPE SURROUND MATERIALS UNLESS OTHERWISE APPROVED BY THE ENGINEER (TRENCH SUPPORT, ETC.). DESIGN CHECK ON ANY ALTERNATIVE PROPOSAL.
6. JOINT HOLES SHALL BE PROVIDED IN TRENCHES AT SOCKETS.

HANDICAP RAMP DETAIL

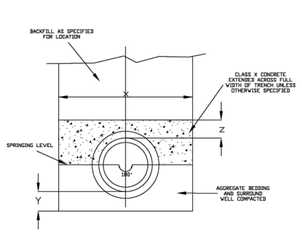


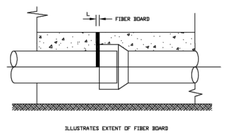
GENERAL NOTES
1. THE MAXIMUM SLOPE OF THE SIDE FLARE FOR THE RAMP SHALL BE 10:1 (HORIZONTAL TO VERTICAL). IF THE WIDTH OF THE LANDING AREA BETWEEN THE TOP OF THE RAMP AND AN OBSTRUCTION IS LESS THAN 4' THEN THE MAXIMUM SLOPE SHALL BE 12:1
2. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H)
3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN
4. TRUNCATED DOMES TO BE FEDERAL STANDARD COLOR 33166, BRICK RED

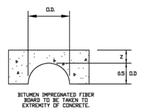
LEGEND
SIDEWALK
RAMP
DETECTABLE WARNINGS

TYPE B RAMP

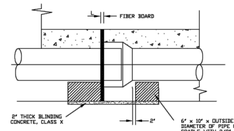
MASS CONCRETE ARCH

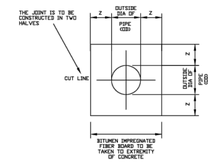






FLEXIBLE JOINT





BEDDING DETAILS: PIPES IN SINGLE TRENCHES

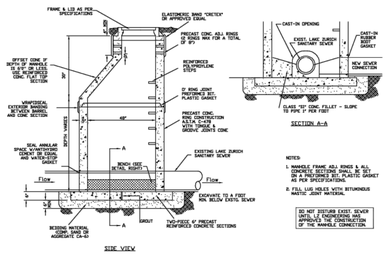
STANDARD MH CONSTRN. OVER EXSTG SEWER

LAKE ZURICH ENGINEERING DIVISION SANITARY MANHOLE CONSTRUCTION SEQUENCING

THE CONTRACTOR SHALL EXCAVATE AT LEAST 10" BELOW THE BOTTOM OF THE EXISTING SANITARY SEWER MAIN AND SET IN PLACE A 6" THICK TWO-PIECE PRE-CAST REINFORCED CONCRETE BOTTOM (SPLIT BOTTOM) ON A MINIMUM OF 4" THICK COMPACTED AGGREGATE BASE (CA-6). TWO-PIECE BOTTOM SHALL BE LEVEL AND THE SEAM ORIENTATED PERPENDICULAR TO THE MAIN SEWER.

SET-IN PLACE A 48" (INSIDE DIMENSION) PRE-CAST REINFORCED CONCRETE RISER SECTION WITH SUFFICIENTLY SIZED OPENINGS CAST-IN (DOG HOUSE) TO PREVENT DIRECT CONTACT WITH THE EXISTING SEWER PIPE. THE RISER SECTION SHALL BE SET ON MASTIC STRIPS TO FORM A TIGHT SEAL BETWEEN THE RISER SECTION AND THE SPLIT BOTTOM. THE ANNULAR SPACE BETWEEN THE RISER SECTION AND THE SEWER PIPE SHALL BE FILLED WITH SOLID AND SEALED WITH NON-SHRINK CEMENT. THE REMAINING SECTIONS OF THE PROPOSED MANHOLE SHALL BE INSTALLED UPON FINISHED GRADE AS INDICATED.

THE REMAINING SPACE AT THE INSIDE BOTTOM OF THE PROPOSED MANHOLE SHALL BE FILLED WITH CLASS "SI" CONCRETE AND BE TROWELED SMOOTH TO FORM A SLOPED BOTTOM (BENCH) AT THE CENTERLINE OF THE EXISTING SEWER PIPE. UPON ACCEPTANCE OF THE NEW SERVICE AND MANHOLE BY A LAKE ZURICH ENGINEERING OFFICIAL, THE CONTRACTOR SHALL REMOVE THE TOP HALF OF THE EXISTING SEWER PIPE AND SMOOTH ALL SHARP EDGES WITH HYDRAULIC CEMENT. THE INVERT OF THE NEW PIPE SHALL BE FORMED SO AS TO DIRECT SEWAGE INTO THE FLOW OF THE MAIN SEWER.



NOTES:
1. MANHOLE FRAME ADJ. RINGS & ADJ. CONCRETE SECTIONS SHALL BE SET IN A PREFORMED BIT. PLASTIC GASKET AS PER SPECIFICATIONS.
2. FILL LIFT HOLES WITH BITUMINOUS MASTIC JOINT MATERIAL.

DO NOT DISTURB EXIST. SEWER UNTIL LZ ENGINEERING HAS INSPECTED THE COMPLETION OF THE MANHOLE CONNECTION

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
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DESIGNED BY RK
DRAWN BY RK
CHECKED BY EL

SHEET 3 / 3

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VILLAGE OF LAKE ZURICH DETAILS

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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VILLAGE OF LAKE ZURICH
STANDARD DETAILS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet C9.2 / C9

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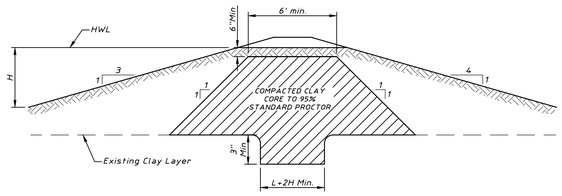
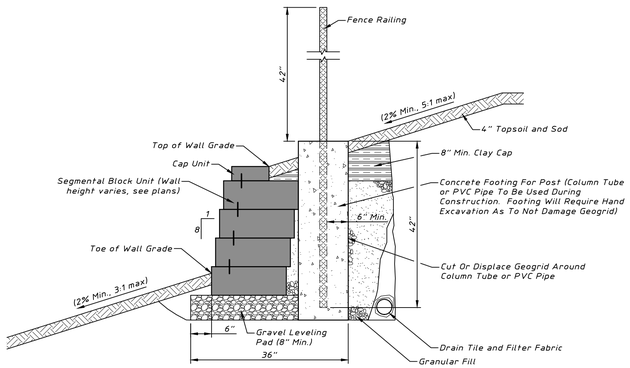
Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg



NOTE:
Remove all existing unsuitable material under the clay core and backfill with compacted clay or similar structural material, or provide a stable subgrade for the berm by other suitable means, as directed by the soils engineer.

DETENTION POND BERM SECTION



NOTES:

1. Wall shall be constructed in accordance with the specification guidelines of the selected manufacturer. Contractor shall submit shop drawings to the engineer for approval prior to construction. Drawings must be signed & sealed by a registered structural engineer.
2. This Detail Does Not Account For Extreme Vehicle Impact
3. Color to be determined by Architect.

SEGMENTAL BLOCK RETAINING WALL WITH FENCE

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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100 East State Parkway, Schaumburg, IL 60173 • Tel. 847.394.6600 | Fax. 847.394.6608
Illinois Professional Design Firm License No.: 184-003132
www.haegerengineering.com

STANDARD DETAILS

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	C9.3 / C9

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Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg

MEADOW WOOD EAST SUBDIVISION
STORMWATER POLLUTION PREVENTION PLAN
MANCHESTER ROAD

SECTION 7 TOWNSHIP 43 NORTH RANGE 10 EAST
LAKE ZURICH, ILLINOIS
LAKE COUNTY

DEVELOPER / SUBDIVIDER:

Casey Builders
509 W. Old Northwest Highway
Barrington, IL 60010

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway Schaumburg, IL 60173
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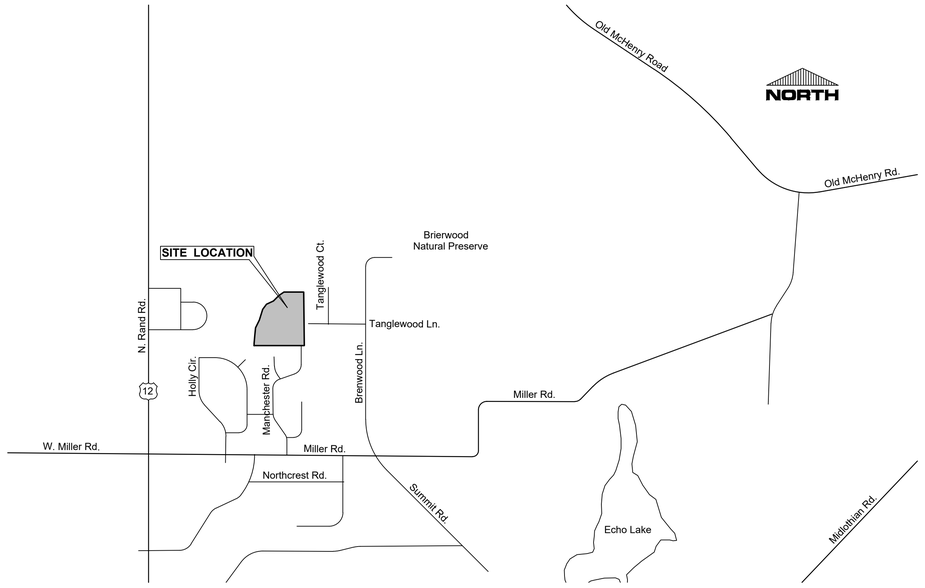
VILLAGE OF LAKE ZURICH

70 E. Main Street, Lake Zurich, IL 60047
Tel: 847-438-5141
Fax: 847-540-1769



LOCATION MAP
Not To Scale

STORMWATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC1.1	SWPPP GENERAL NOTES
EC1.2	STORMWATER POLLUTION PREVENTION PLAN
EC1.3	SWPPP STANDARD DETAILS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
B	B-Box	B
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
H	Hand Hole	H
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
G	Gas Valve	G
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
E	Electrical Pedestal	E
E	Electric Manhole	E
	Guy Wire	
	Utility Pole	
T	Telephone Pedestal	T
T	Telephone Manhole	T
T	Telephone Line	T
CATV	Cable TV Line	CATV
C	Cable TV Pedestal	C
	Flagpole	
M	Mailbox	M
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	T/W XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	B/W XXX.XX
	Open Lid Frame & Grate	Gr XXX.XX
	Closed Lid Frame & Lid	Rim XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	
	Recommended Garage Hand With Driveway Slope	X.X%

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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SWPPP TITLE SHEET
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet EC1.0 / C9

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Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-SWPPP.dwg

Stormwater Pollution Prevention Plan

This plan has been prepared to comply with the provisions of the NPDES Permit Number _____, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____
Owner's Name *Signature*

_____ _____
Title *Date*

_____
Name of Firm/Company

I. Site Description:

A. The following is a description of the project location:

The project is located southeast of US Route 12 (North Rand Road) and Miller Road in the Village of Lake Zurich, Lake County Illinois (See Location Map on Title Sheet for additional information).

B. The following is a description of the construction activity which is the subject of this plan:

Construction of single-family residential subdivision with public streets, stormwater management, and utilities.

C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Exact phasing and sequencing has yet to be determined. Generally, pavement and trees will be removed as required, and then clearing and grubbing will occur. Next, mass grading will commence for the building pad and parking areas. Then the underground utilities will be constructed. Finally, pavement will be constructed, followed by the installation of landscaping.

D. The total area of the construction site is estimated to be approximately ± 7.81 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

The weighted runoff coefficient after completion of all construction activities is approximately 0.6.

F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

Please refer to the geotechnical report.

G. The following is a description of potentially erosive areas associated with this project:

Areas with side slopes exceeding 3:1 slopes. These slope areas on the site shall be stabilized with a turf reinforcement mat and hydroseeded growing media system.

H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

The soil disturbing activities consist of grading and general infrastructure improvements over the entire site. The Contractor shall be responsible for maintaining all disturbances within the site, and shall protect all off-site areas as needed.

I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

J. The following is a list of receiving water(s) and the ultimate receiving water(s), and aerial extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

The closest receiving water is Lake Zurich.

K. The following pollutants of concern will be associated with this construction project:

Soil sediment and dust, and construction of bituminous pavement.

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 14 or more calendar days.

   a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

   The following Stabilization Practices will be used for this project: Temporary blanket & seeding, permanent seeding,as shown on the Plans.

   Describe how the Stabilization Practices listed above will be utilized: Seed & blanket.

   See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   The following Structural Practices will be used for this project: Perimeter erosion control (silt) fence.

   Describe how the Structural Practices listed above will be utilized:

   See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

   The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Stormwater Pollution Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

   b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls: Installation of a storm sewer system. All inlets will be protected with silt baskets.

4. Other Controls:

a. Vehicle Entrances and Exits - Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

b. Material Delivery, Storage, and Use - The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:

- All products delivered to the project site must be properly labeled.
- Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
- A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
- Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
- Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.

c. Stockpile Management - BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:

- Perimeter Erosion Barrier
- Temporary Seeding
- Temporary Mulch
- Plastic Covers
- Soil Binders
- Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

All disturbed areas shall be graded to keep runoff and sediment on-site to the greatest extent possible. Site shall be graded in such a matter to direct runoff to storm structures with catch-all inlet protection. Contractor shall maintain, replace, clean, and add additional measures as needed during the progression of construction to prevent sediment, debris, etc from leaving the site.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of the incident. The resident Engineer shall then complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

A. Spill Prevention and Control - BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.

B. Concrete Residuals and Washout Wastes - The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:

- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
- The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
- All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
- Concrete waste solids/liquids shall be disposed of properly.

C. Litter Management - A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

D. Vehicle and Equipment Cleaning - Vehicles and equipment are to be cleaned in designated areas only, preferably off site.

E. Vehicle and Equipment Fueling - A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:

- Containment
- Spill Prevention and Control
- Use of Drip Pans and Absorbents
- Automatic Shut-Off Nozzles
- Topping Off Restrictions
- Leak Inspection and Repair

F. Vehicle and Equipment Maintenance - On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.

LAKE COUNTY
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 restrictor & 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 outlot 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

Soil Erosion Control Notes

1. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
2. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
3. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter fencing prior to the start of any clearing or grading activities.
4. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
5. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
6. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
7. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
8. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
9. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
10. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
11. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
12. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
13. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
14. The work shall generally follow the following typical Construction Sequencing:
    a. Installation of the soil erosion and sediment control (SE/SC) measures:
       a.1. Selective vegetation removal for silt fence installation
       a.2. Silt fence installation
       a.3. Stabilized construction entrance
    b. Tree removal where necessary
    c. Strip and stockpile topsoil and mass grade the site
    d. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
    e. Construction of storm sewer system and other utilities, along with associated inlet protection
    f. Temporary stabilization of areas that have reached temporary grade
    g. Building construction
    h. Parking lot construction
    i. Permanently stabilize site with topsoil, seed and blanket
    j. Remove all temporary SE/SC measures after the site is stabilized with vegetation

Owner/Contractor Certification Statement

This certification statement is part of the Storm Water Pollution Prevention Plan for the Meadow Wood East Subdivision, in accordance with General NPDES Permit No. _____ issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project; I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

_____ _____
Name *Signature*

_____ _____
Title *Date*

_____ _____
Name of Firm/Company *Telephone*

_____ _____
Address *City/State/Zip*

The Owner, and all Contractor's and Sub-Contractor's performing work on this site are required to sign the above illustrated Certification Statement. The signed Certifications shall be maintained on the site with the SWPPP.

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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SWPPP GENERAL NOTES

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet EC1.1 / C9

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Plot Date: Jun 26, 2025 - 8:23am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-SWPPP.dwg

Erosion Control Legend

- Stabilized Construction Entrance
- Concrete Washout
- Temporary Stockpile Location
- See Landscape Plan
- Temproary Seed & Blanket
  - 6" Topsoil (min.)
  - IDOT Seed Mixture 2
  - North American Green DS75 Blanket on Slopes 4:1 or Greater
  - See Landscape Plan for Permanent Seeding and Planting Information
- Silt Fence
- Inlet Filter Basket
- Ditch Check

NORTH

20 0 40

Scale: 1" = 40'

Double Row Silt Fence, 4' apart (Typ.)
Install Before Site Disturbance

50-ft Wetland Buffer

100-yr BFE = 833.2

Wetland Edge

NORTH BASIN
HWL 839.00
NWL 833.80
Bottom 833.60
Volume = 3.31 ac-ft

SOUTH BASIN
HWL 839.00
NWL 836.00
Bottom 835.50
Volume 0.25 ac-ft

Inlet Protection (Typ.)

Tree Protection Fence

Ditch Check (Typ.)

Detention Basin Seed Mix
Genesis Lo Pro Wet Mesic
Seed Mix With flowers

Install Silt Fence
Before Site Disturbance

Concrete Washout Area

Construction Entrance

TANGLEWOOD LANE

LIVERPOOL COURT

MANCHESTER ROAD

LIVERPOOL ROAD

No.	Revision	Date
1	Changed Storm Sewer to HDPE	04-05-2025

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STORMWATER POLLUTION PREVENTION PLAN
MEADOW WOOD EAST SUBDIVISION FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	EC1.2 / C9

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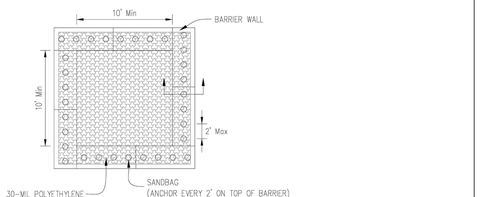
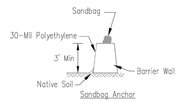
Plot Date: Jun 26, 2025 - 8:24am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-Grading and Utility plan.dwg

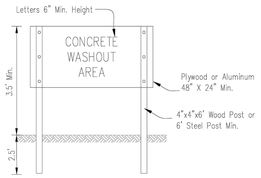
AUTOCAD2006



PLAN VIEW



BARRIER WALL ANCHOR SECTION

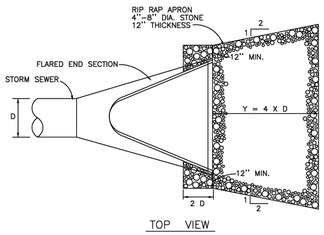


SIGN DETAIL

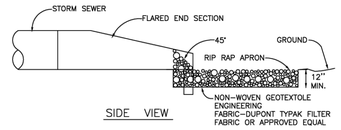
NOTES:

1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend 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 two-thirds full.

1" = 4' Horiz.	No. Revision Date By Chkd	TEMPORARY CONCRETE WASHOUT FACILITY – BARRIER WALL	Designed ____ Date ____ Drawn T. JOHNSON 8/08 Checked ____ Approved ____



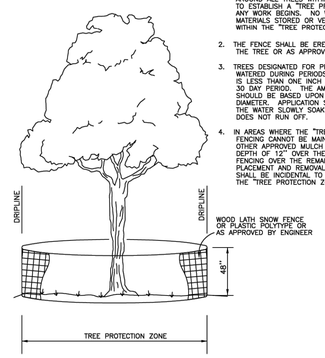
TOP VIEW



SIDE VIEW

NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

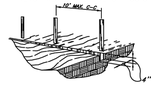
FLARED END SECTION RIP RAP



1. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES WITHIN THE CONSTRUCTED AREA TO ESTABLISH A "TREE PROTECTION ZONE" BEFORE ANY WORK BEGINS. NO WORK IS TO BE PERFORMED, MATERIALS STORED OR VEHICLES DRIVEN OR PARKED WITHIN THE "TREE PROTECTION ZONE".
2. THE FENCE SHALL BE ERECTED AT THE DRIP-LINE OF THE TREE OR AS APPROVED BY ENGINEER.
3. TREES DESIGNATED FOR PROTECTION SHOULD BE WATERED DURING PERIODS OF DROUGHT WHEN THERE IS LESS THAN ONE INCH OF RAIN FALL DURING ANY 30 DAY PERIOD. THE AMOUNT OF WATER PER TREE SHOULD BE BASED UPON 50 GALLONS PER INCH DIAMETER. APPLICATION SHOULD BE MADE SO THAT THE WATER SLOWLY SOAKS INTO THE GROUND AND DOES NOT RUN OFF.
4. IN AREAS WHERE THE "TREE PROTECTION ZONE" FENCING CANNOT BE MAINTAINED WOOD CHIPS OR OTHER APPROVED MULCH MUST BE APPLIED TO A DEPTH OF 12" OVER THE AREA NOT PROTECTED BY FENCING OVER THE REMAINDER OF THE ZONE. PLACEMENT AND REMOVAL OF THE MULCHED AREA SHALL BE INCIDENTAL TO THE ESTABLISHMENT OF THE "TREE PROTECTION ZONE".

TREE PROTECTION FENCE

1. SET 2"X2"X36" POSTS 12" INTO THE GROUND & EXCAVATE A 4"X4" TRENCH ALONG THE LINE OF POSTS.

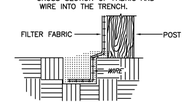


2. STAPLE WIRE FENCING TO THE POSTS.

3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.

4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

CROSS SECTION OF FABRIC AND WIRE INTO THE TRENCH.



NOTES:
1. SILT FENCE FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I WITH A MINIMUM APPARENT OPENING SIZE (AOS) OF 30 FOR NONWOVEN AND 50 FOR WOVEN, AS DESCRIBED IN THE "ILLINOIS URBAN MANUAL," ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, 1995.

SILT FENCE DETAIL

GRAVEL CONSTRUCTION ENTRANCE

TEMPORARY PERFORATED RISER DETAIL

No.	Date	Revision
1	04-05-2025	Changed Storm Sewer to HDPE

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SWPPP STANDARD DETAILS

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS

Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
Sheet EC1.3 C9

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Plot Date: Jun 26, 2025 - 8:24am Plotted By: kim-l
File Name: P:\2024\24136\Drawings\Final Engineering\24136-SWPPP.dwg

FINAL STORMWATER MANAGEMENT REPORT

Contents:

1	Project Overview
2	Existing Conditions
3	Depressional Storage
4	Stormwater Management
5	Critical Duration Analysis
6	Water Quality Treatment / Runoff Volume Reduction
7	Floodplain Impacts
8	Wetlands
Appendix A	Standard Exhibits
Appendix B	Existing Conditions Drainage Exhibit and Calculations
Appendix C	Existing Conditions Critical Duration Analysis PondPack Report
Appendix D	Proposed Conditions Drainage Exhibit and Calculations
Appendix E	Proposed Conditions Critical Duration Analysis PondPack Report
Appendix F	Storm Sewer, Inlet Capacity, and Overflow Calculations
Appendix G	Wetland Assessment

Project:
Meadow Wood East Subdivision

Location:
Lake Zurich, Illinois

Prepared For:
Casey Builders
509 W. Old Northwest Highway
Barrington, IL 60010

Date:
March 5, 2025

KIMBERLY M. LASK
062-054034
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS

EXPIRES 11-30-25

Prepared By:
Kim Lask, P.E., PTOE, CFM
Haeger Project No.: 24-136

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1 PROJECT OVERVIEW

This narrative presents the results of the preliminary stormwater analysis for the proposed Meadow Wood East single family subdivision located between Tanglewood Lane and Manchester Road in Lake Zurich, Illinois (Lake County) with PIN numbers: 1407402041, 1407402042, 1407402043, 1407402044, 1407402045, 1407402046, 1407402047, 1407402048, 1407402049, 1407402050 and 1407402051. The property consists of 7.81 acres of land and is proposing to build 15 single-family residences, detention basins, utilities, and roadways.

2 EXISTING CONDITIONS

The 7.81-acre site is currently vacant. The property has a drainage divide with three primary drainage areas. Runoff from the site travels west to an existing wetland, south to an existing residential subdivision, and east to a depressional area. For detailed information on drainage areas and flow direction, refer to the Existing Conditions Drainage Exhibit in *Appendix B*.

The property has significant topographic relief, with a fall of approximately 20 feet from the highest point in the middle of the property to the lowest point at the southwest corner of the property. There are no significant offsite drainage areas tributary to the site.

3 DEPRESSIONAL STORAGE

The existing site has a depressional storage area along the eastern boundary. This area overflows into an existing catch basin located to the south. To determine the storage volume in the depressional area, a PondPack model was utilized. A peak storage volume of 0.105 acre-ft was calculated during the 100-year, 1-hour storm event.

4 STORMWATER MANAGEMENT

Stormwater runoff from the development will be directed into one of the two proposed detention basins located on-site. The South Basin located at the southwest corner of the property, collects stormwater runoff from the south portion of the site. The South Basin discharges via a 36” storm sewer into the North Basin, which is located at the northwest corner of the property. The North Basin collects stormwater runoff from the remainder of the development area and discharges via restricted release to the west. A portion of the property near the west property line, from the top of berm flow unrestricted offsite. The unrestricted flow has been subtracted from the 100-Year allowable release rate for the development area. The time of concentration was assumed to be 10-minutes for all unrestricted drainage areas. Bulletin-75 rainfall depths were used for all stormwater calculations and stormwater models. Refer to the Proposed Conditions Drainage Exhibit included in *Appendix D* for the delineated drainage areas.

Adequate detention storage has been provided to limit the 2-year, 24-hour and 100-year, 24-hour release rates from the proposed development area to 0.04 cfs/acre and 0.15 cfs/acre, respectively. The cumulative development area for the proposed improvements is 6.484 acres, therefore the 100-year allowable release rate is 0.648 cfs. To account for the unrestricted flow, the allowable release rates have been reduced by the 2-year, 24-hour and 100-year, 24-hour peak flow from the unrestricted area. Stormwater modeling indicates the unrestricted peak flow is 0.088 cfs for the 2-year 24-hour storm and 0.309 cfs for the 100-year 24-hour storm. The release rates have been reduced to 0.171 cfs and 0.664 cfs for the 2-year and 100-year storm events, respectively.

The ultimate site discharge location is through the North Basin outlet control structure (OCS). The restrictors were designed to limit flow leaving the site to meet the total allowable release rate. The OCS, which is located at the west side of the North Basin, utilizes a 2.2-inch restrictor with an invert elevation of 833.70 and a 2.7-inch restrictor with an invert elevation of 835.30. The peak discharge from the restrictor was calculated to be 0.663 cfs at a design HWL of 839.00. Stormwater modeling indicates that 0.179 acre-ft of detention storage is required for the South Basin and 2.860 acre-ft is required for the North Basin. Adding these volumes to the 0.105 acre-ft of depressional storage yields a total required detention volume of 3.144 acre-ft. The South Basin provides 0.286 acre-ft of storage at the design HWL 839.00, and the North Basin provides 3.310 acre-ft of storage at the design HWL 839.00. The proposed north and south detention basins provide 3.596 acre-ft of storage, collectively. Please refer to the Stormwater Calculations included in *Appendix D* for additional information. The PondPack report providing results from the model is included in *Appendix E*.

The time of concentration (Tc) was conservatively assumed to be 10 minutes for the tributary areas to the North Basin and the South Basin. Bulletin-75 rainfall depths were used for all stormwater calculations and stormwater models. Hydrologic soil group D was assumed for all open space areas.

5 CRITICAL DURATION ANALYSIS

A critical duration analysis was prepared to compare the existing and proposed runoff from the site. The summary of results is provided below, with the detailed PondPack output included in *Appendix C* and *Appendix E*.

Table 2 – Critical Duration Analysis Summary

Existing Conditions PondPack Results

Flow Area	2-Year Storm Event		10-Year Storm Event		50-Year Storm Event		100-Year Storm Event	
	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)
To West	2-Hr	1.23	1-Hr	3.98	1-Hr	9.69	1-Hr	12.70
To Depressional Area	2-Hr	0.88	1-Hr	2.59	1-Hr	5.70	1-Hr	7.30
To South	2-Hr	0.51	1-Hr	1.59	1-Hr	3.67	1-Hr	4.76
Total Flow		2.62		8.16		19.06		24.76

Proposed Conditions PondPack Results

Flow Area	2-Year Storm Event		10-Year Storm Event		50-Year Storm Event		100-Year Storm Event	
	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)	Peak Duration	Peak Flow (cfs)
Unrestricted to West	2-Hr	0.246	1-Hr	0.695	1-Hr	1.480	30-Min	1.872
From North Pond	72-Hr	0.199	48-Hr	0.420	48-Hr	0.567	48-Hr	0.619
Total Flow		0.445		1.115		2.047		2.491

6 WATER QUALITY / RUNOFF VOLUME REDUCTION

According to the Lake County Watershed Development Ordinance (WDO), the water quality treatment standard requires that at least the first 0.01 inch of runoff for every 1% of new impervious surface be diverted and detained. The required water quality volume for the development is 0.052 acre-ft.

Runoff Volume Reduction (RVR) storage is located between the pond bottom and the pond normal water level (NWL) for both the north and south basins. A total of 0.130 acre-ft of storage is proposed. The RVR storage will capture initial first flush discharges and encourage infiltration and evapotranspiration. The basins will be planted with native plantings that will aid in filtering potential pollutants such as metals, oils, nutrients, and organics prior to leaving the site. Runoff from the new impervious areas will flow into and be filtered in the system.

These measures will meet the County's stormwater quality RVR requirements. By implementing RVR storage and native plantings, the overall runoff volume will be reduced and treated as required. Further information can be found in the calculations in *Appendix D.*

RVR TECHNIQUES & BMP SELECTION PER §503.01

The following list in *italics* is in order of preference for preparing a stormwater management plan. How that technique or practice has been included in this stormwater management plan follows in **bold**.

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)*

A 50-ft wetland buffer will be provided.

B. *Minimization or disconnection of impervious surfaces*

Native plantings will be installed at the bottom of the detention basins below the system outlet to maximize onsite infiltration.

C. *Enhancement of the infiltration and storage characteristics of the development site using appropriate best management practices*

The storage area below the outlet is designed to capture the initial runoff (first flush) from rainfall events. By holding the water below the outlet, the design encourages infiltration which helps recharge groundwater and reduces the volume of surface runoff.

D. *The use of open channels with native vegetation to convey stormwater runoff*

Open channels are proposed in all side yards and overflow areas.

E. *Structural measures that provide water quality and volume reduction*

The detention basins provide water quality and volume reduction. The level spreader at the basin outlet will distribute stormwater over a wide area, promoting infiltration and reducing the velocity of runoff.

F. *Structural measures that provide only volume reduction or other rainwater harvesting practices*

Structural measures that provide only volume reduction are not proposed.

G. Measures that provide water quality and quantity control

As indicated above, the detention basins will provide water quality and quantity control.

H. Measures that provide only quantity control.

Structures that provide only quantity control are not proposed.

7 FLOODPLAIN IMPACTS

The FEMA flood map for the area indicates that the 100-year flood elevation of the adjacent wetland is elevation 833.2. The upland area of the property does not fall below this elevation, and no fill within the floodplain is proposed for the project.

8 WETLANDS / WATERS OF THE U.S.

A preliminary wetland assessment was conducted by DK Environmental Services, Inc. on July 9, 2024. The findings revealed that no wetlands exist on the property. However, an isolated offsite wetland is located northwest of the property. No impacts are proposed to the wetland, and as such, we have requested a Letter of No Objection from Lake County Stormwater Management Commission.

The Lake County WDO mandates a 50-ft buffer from wetlands "with a total surface area greater than or equal to two and one-half acres", which we will be providing in accordance with Section 505.01.B of the Lake County WDO. Minimal grading activities for the stormwater management system are proposed within the buffer. An energy dissipation level spreader is proposed at the North Basin outlet.

APPENDIX A – Exhibits

NORTH

0 200

Scale: 1" = 200'

AERIAL EXHIBIT

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

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Engineer:	K M L
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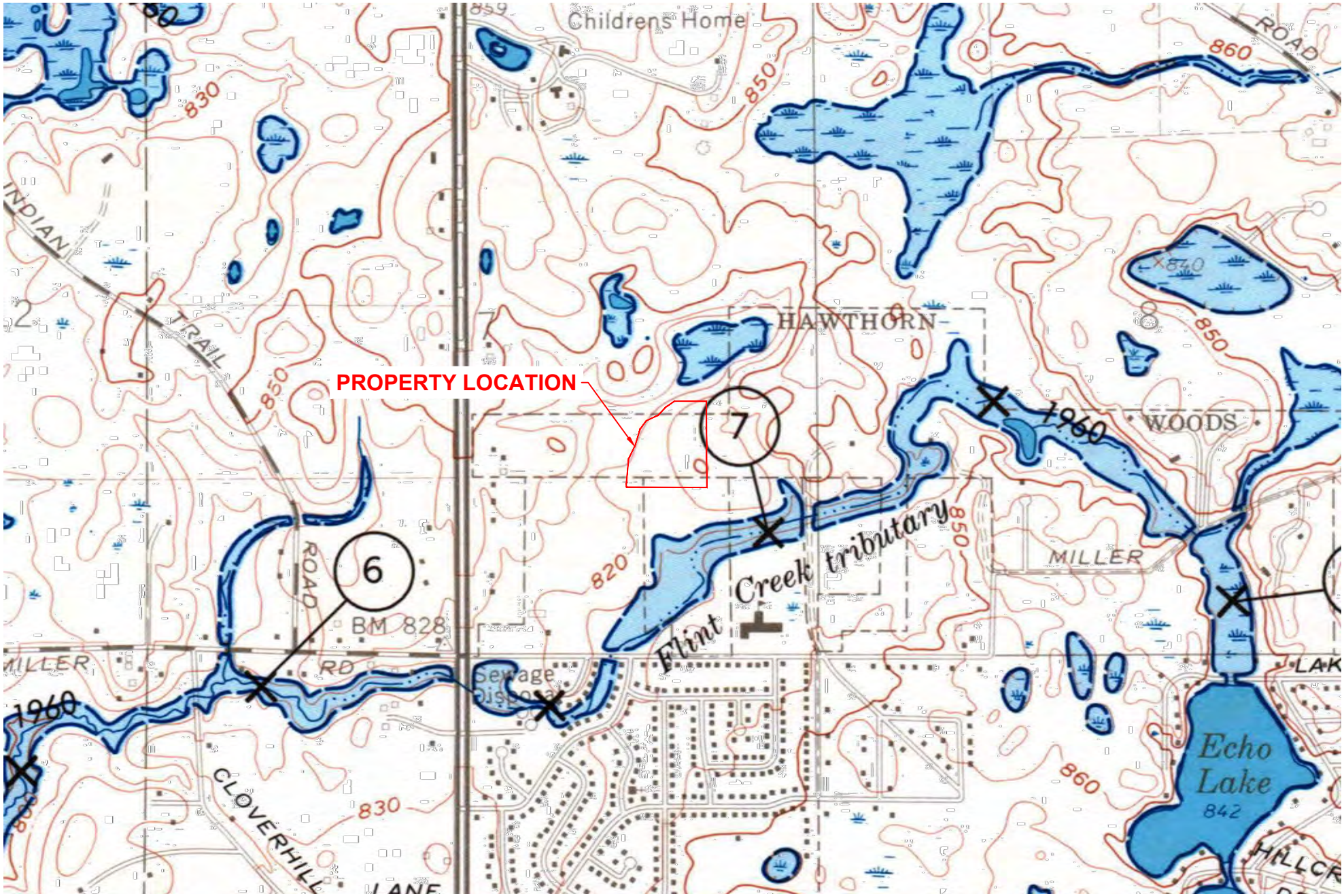

NORTH

0 1000

Scale: 1" = 1000'

HYDROLOGIC ATLAS EXHIBIT

MEADOW WOOD EAST SUBDIVISION
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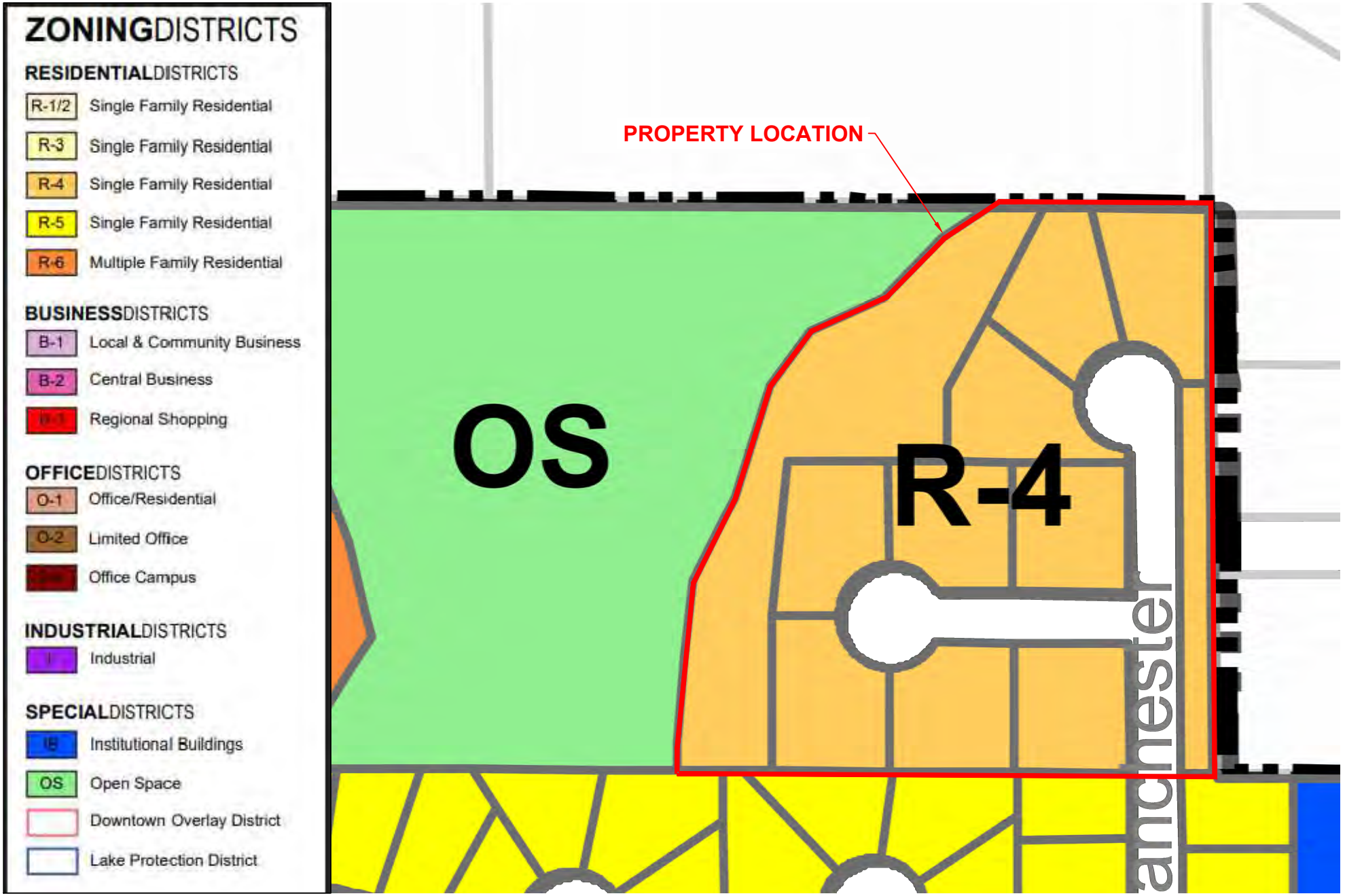

NORTH

0 150

Scale: 1" = 150'

ZONING EXHIBIT

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NORTH

0 500

Scale: 1" = 500'

USGS EXHIBIT

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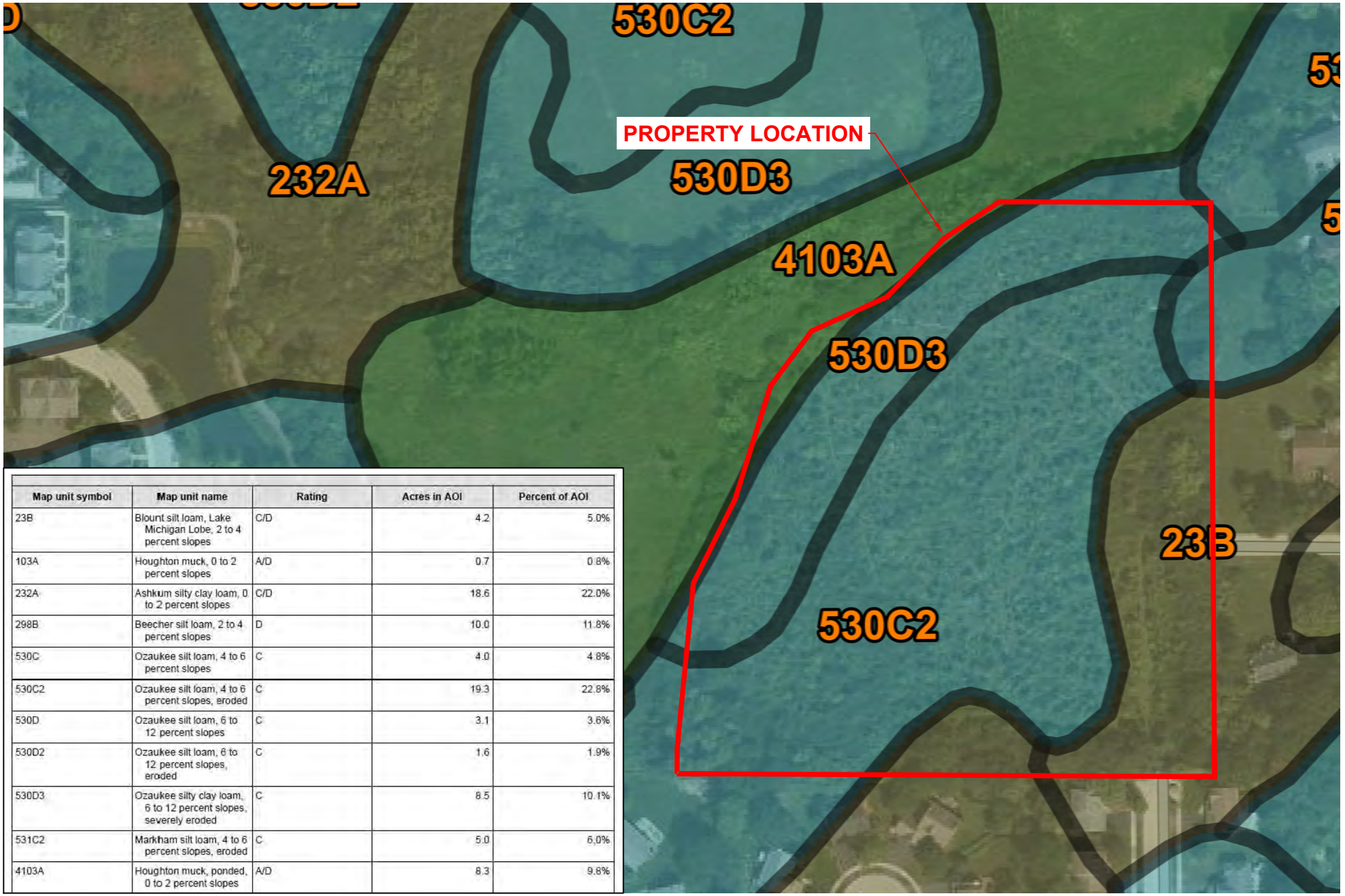

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
23B	Blount silt loam, Lake Michigan Lobe, 2 to 4 percent slopes	C/D	4.2	5.0%
103A	Houghton muck, 0 to 2 percent slopes	A/D	0.7	0.8%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	C/D	18.6	22.0%
298B	Beecher silt loam, 2 to 4 percent slopes	D	10.0	11.8%
530C	Ozaukee silt loam, 4 to 6 percent slopes	C	4.0	4.8%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	C	19.3	22.8%
530D	Ozaukee silt loam, 6 to 12 percent slopes	C	3.1	3.6%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	C	1.6	1.9%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	C	8.5	10.1%
531C2	Markham silt loam, 4 to 6 percent slopes, eroded	C	5.0	6.0%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	A/D	8.3	9.8%

NORTH

0 150

Scale: 1" = 150'

NRCS SOIL EXHIBIT

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

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Sheet	5/ 1

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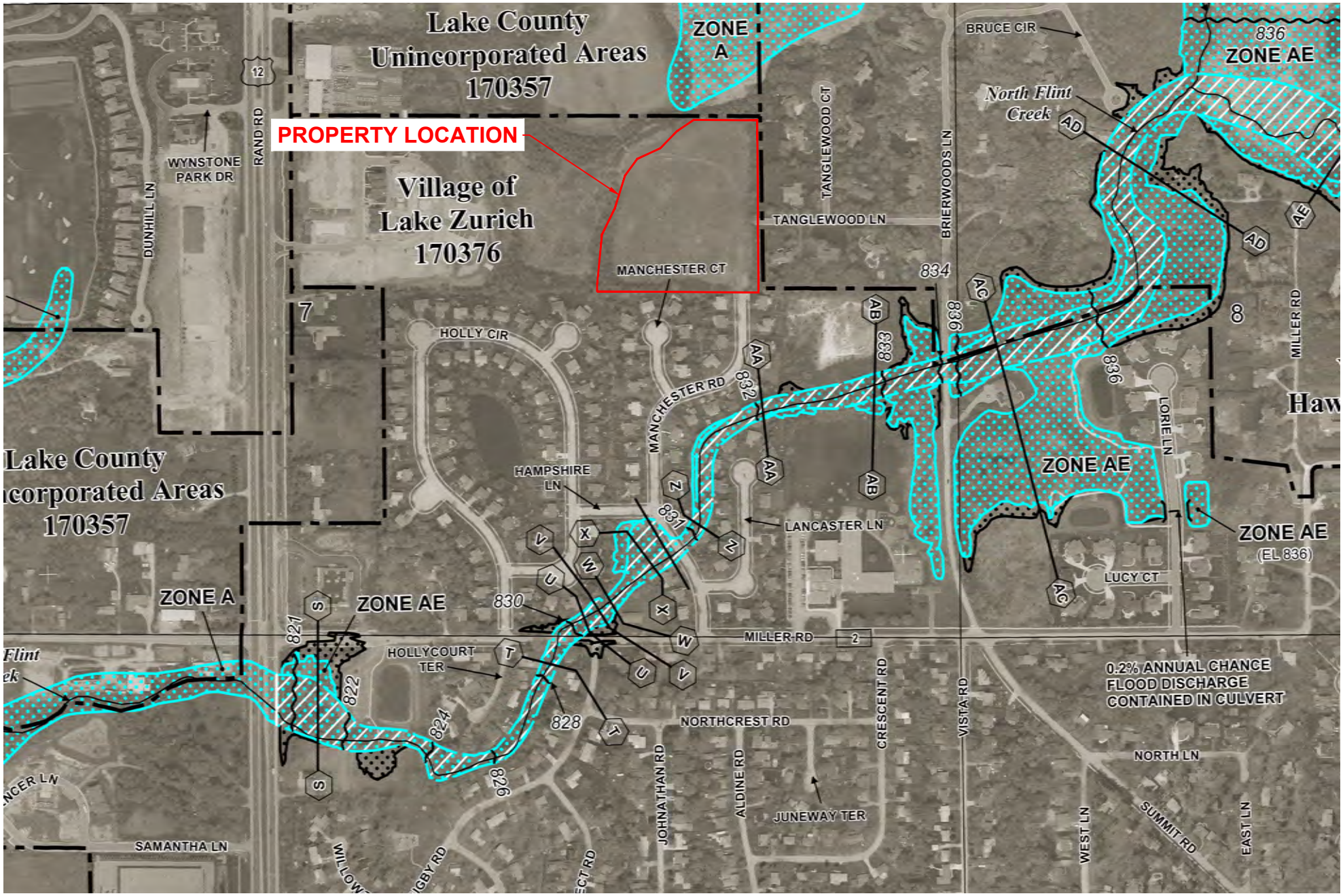

NORTH

0 500

Scale: 1" = 500'

FEMA EXHIBIT

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

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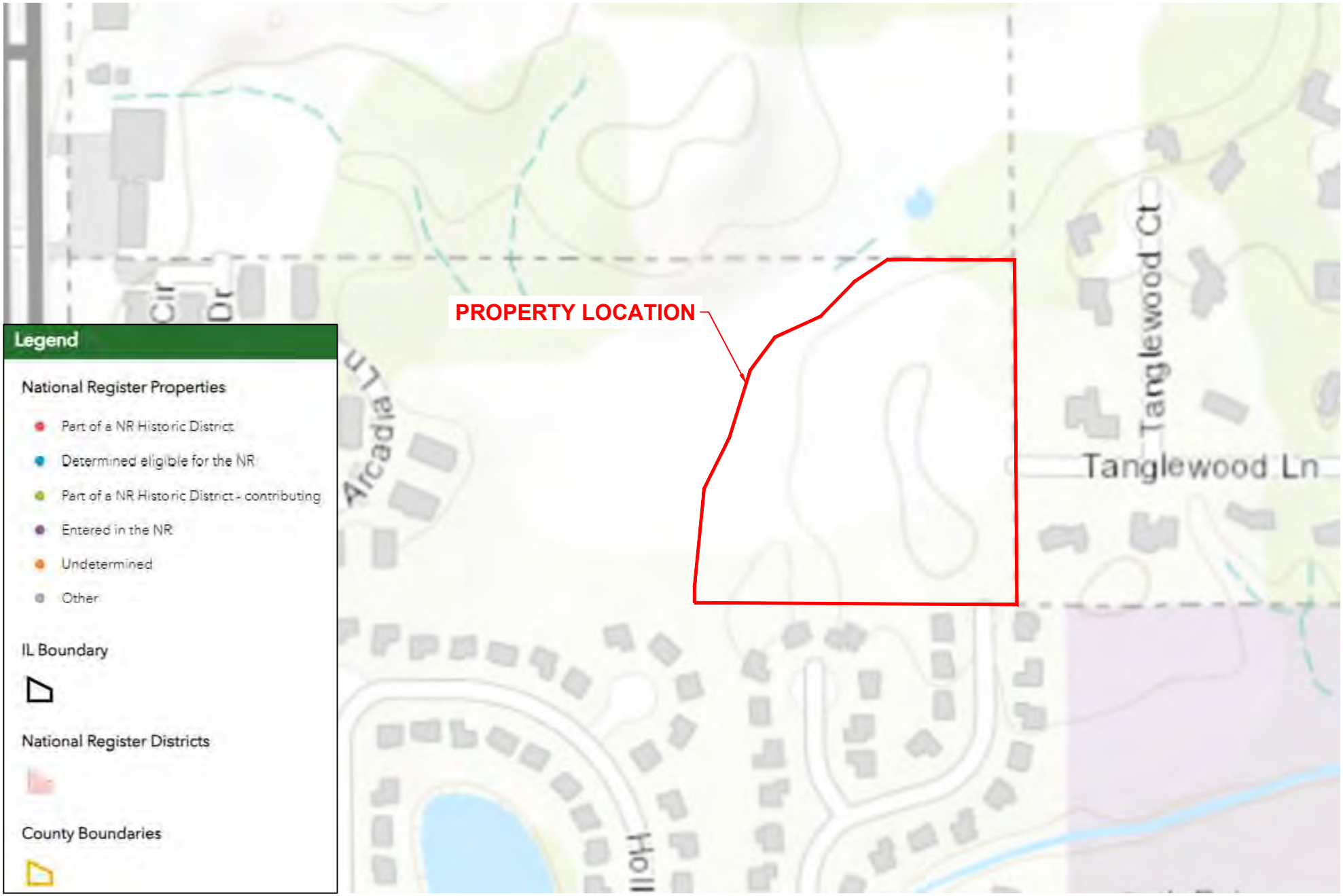

NORTH

0 250

Scale: 1" = 250'

HARGIS EXHIBIT

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

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Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	7 / 1

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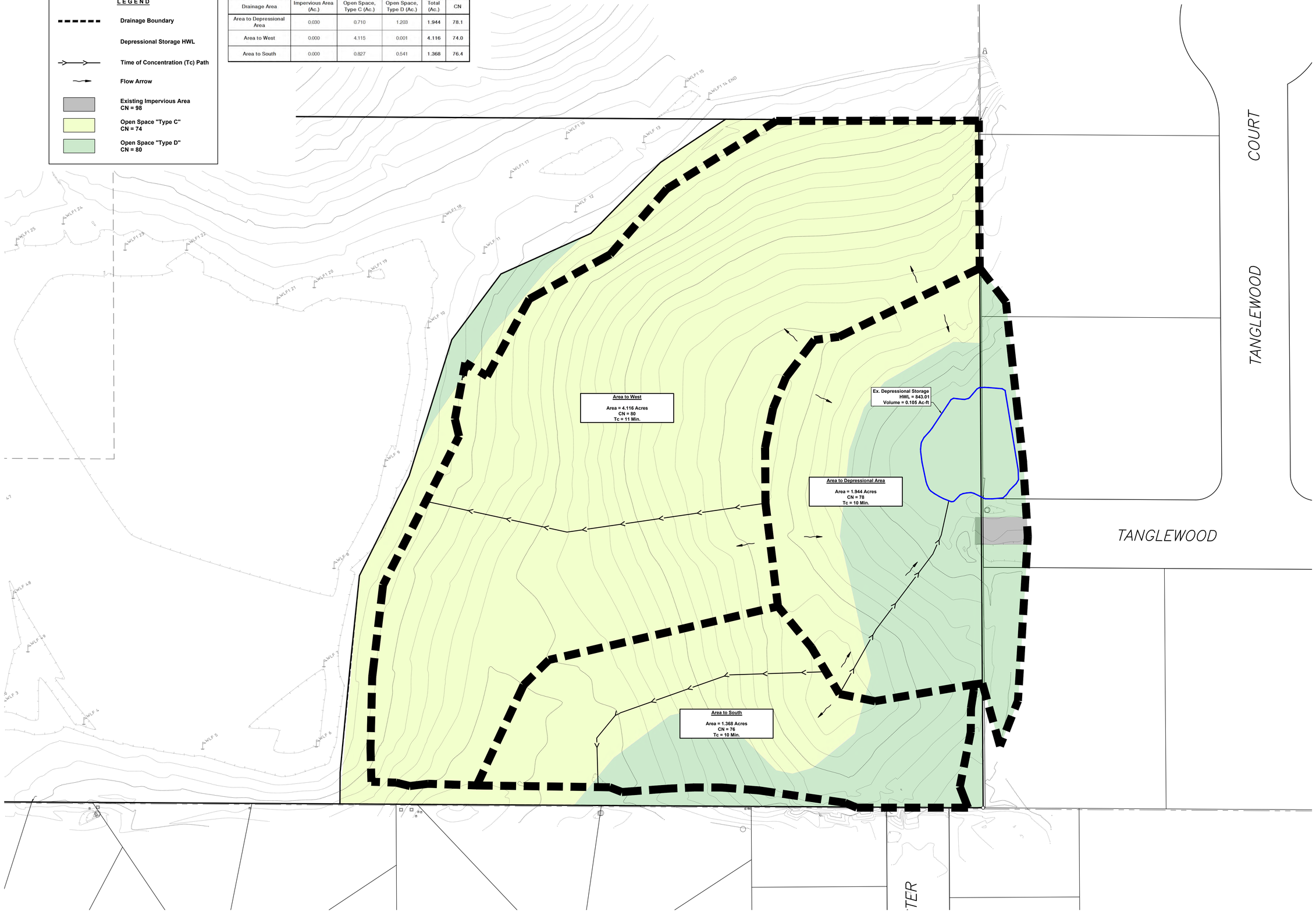
APPENDIX B – Existing Conditions Drainage Exhibit and Calculations

LEGEND

- Drainage Boundary
- Depressional Storage HWL
- Time of Concentration (Tc) Path
- Flow Arrow
- Existing Impervious Area CN = 98
- Open Space "Type C" CN = 74
- Open Space "Type D" CN = 80

Existing Conditions CN Calcs

Drainage Area	Impervious Area (Ac.)	Open Space, Type C (Ac.)	Open Space, Type D (Ac.)	Total (Ac.)	CN
Area to Depressional Area	0.030	0.710	1.203	1.944	78.1
Area to West	0.000	4.115	0.001	4.116	74.0
Area to South	0.000	0.827	0.541	1.368	76.4



NORTH

20 0 40

Scale: 1" = 40'

No.	Revision	Date

HAEGER ENGINEERING
consulting engineers • • land surveyors
100 East State Parkway, Schaumburg, IL 60173 • Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No.: 184.003152
www.haegerengineering.com

EXISTING CONDITIONS DRAINAGE EXHIBIT

MEADOW WOOD EAST SUBDIVISION

LAKE ZURICH, IL

Project Manager:	M L A
Engineer:	K M L
Date:	02-28-2025
Project No.	24-136
Sheet	1/1

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Plot Date: Mar 04, 2025 - 2:11pm Plotted By: kim-l Layout: 24x36 LS
File Name: P:\2024\24136\Drawings\Exhibits\24-136 Existing Conditions Drainage Exhibit.dwg

HAEGER ENGINEERING
consulting engineers · land surveyors

100 East State Parkway
Schaumburg, Illinois 60173-5300
Tel: 847.394.6600
Fax: 847.394.6608

Stormwater Management Calculations

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: KML
Reviewed:
Date: 2/28/2025

Existing Conditions Land Coverage

Entire Site	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	67,100	1.540	19.7%	98.0	0.90
Pervious Area (Soil Group C) =	203,709	4.677	59.9%	74.0	0.45
Pervious Area (Soil Group D) =	69,240	1.590	20.4%	80.0	0.45
Total Area =	**340,049**	**7.806**	**100.00%**	**80.0**	**0.54**

Existing Tributary Areas

Area to West	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	0	0.000	0.0%	98.0	0.90
Pervious Area (Soil Group C)=	179,260	4.115	100.0%	74.0	0.45
Pervious Area (Soil Group D)=	47	0.001	0.0%	80.0	0.45
Total Area =	**179,307**	**4.116**	**100.00%**	**74.0**	**0.45**

Area to Depressional Area	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	1,316	0.030	1.6%	98.0	0.90
Pervious Area (Soil Group C)=	30,928	0.710	36.5%	74.0	0.45
Pervious Area (Soil Group D)=	52,421	1.203	61.9%	80.0	0.45
Total Area =	**84,665**	**1.944**	**100.00%**	**78.1**	**0.46**

Area to South	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	0	0.000	0.0%	98.0	0.90
Pervious Area (Soil Group C)=	36,026	0.827	60.5%	74.0	0.45
Pervious Area (Soil Group D)=	23,568	0.541	39.5%	80.0	0.45
Total Area =	**59,594**	**1.368**	**100.00%**	**76.4**	**0.45**

APPENDIX C – Existing Critical Duration PondPack Reports

(2-yr, 10-yr, 50-yr & 100-yr)

Existing 2-yr Critical Duration

Project Summary	
Title	24-136 Existing Conditions PondPack Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Existing Conditions Critical Duration Analysis

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Subsection: User Notifications

User Notifications?	No user notifications generated.

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to Depressional Area	2 yr 10 min	2.00	0.001	0.24	0.07
Area to Depressional Area	2 yr 15 min	2.00	0.006	0.28	0.34
Area to Depressional Area	2 yr 30 min	2.00	0.021	0.38	0.71
Area to Depressional Area	2 yr 1 hr	2.00	0.043	0.43	0.81
Area to Depressional Area	2 yr 2 hr	2.00	0.073	0.66	0.88
Area to Depressional Area	2 yr 3 hr	2.00	0.091	0.91	0.79
Area to Depressional Area	2 yr 6 hr	2.00	0.091	0.91	0.79
Area to Depressional Area	2 yr 12 hr	2.00	0.172	6.00	0.47
Area to Depressional Area	2 yr 18 hr	2.00	0.199	12.60	0.43
Area to Depressional Area	2 yr 24 hr	2.00	0.223	16.80	0.35
Area to Depressional Area	2 yr 48 hr	2.00	0.263	41.50	0.27
Area to Depressional Area	2 yr 72 hr	2.00	0.302	62.50	0.20
Area to Depressional Area	2 yr 120 hr	2.00	0.361	104.00	0.14
Area to Depressional Area	2 yr 240 hr	2.00	0.523	208.50	0.10
Area to West	2 yr 10 min	2.00	0.000	0.00	0.00
Area to West	2 yr 15 min	2.00	0.004	0.31	0.23
Area to West	2 yr 30 min	2.00	0.024	0.42	0.87
Area to West	2 yr 1 hr	2.00	0.059	0.64	1.08
Area to West	2 yr 2 hr	2.00	0.111	0.69	1.23
Area to West	2 yr 3 hr	2.00	0.143	0.94	1.17
Area to West	2 yr 6 hr	2.00	0.143	0.94	1.17
Area to West	2 yr 12 hr	2.00	0.292	6.00	0.82
Area to West	2 yr 18 hr	2.00	0.342	12.70	0.78
Area to West	2 yr 24 hr	2.00	0.388	16.80	0.65
Area to West	2 yr 48 hr	2.00	0.464	41.50	0.50
Area to West	2 yr 72 hr	2.00	0.541	62.50	0.38
Area to West	2 yr 120 hr	2.00	0.656	104.00	0.27
Area to West	2 yr 240 hr	2.00	0.978	208.50	0.19
Area to South	2 yr 10 min	2.00	0.000	0.25	0.01
Area to South	2 yr 15 min	2.00	0.002	0.29	0.15
Area to South	2 yr 30 min	2.00	0.011	0.38	0.39
Area to South	2 yr 1 hr	2.00	0.025	0.44	0.45

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to South	2 yr 2 hr	2.00	0.044	0.66	0.51
Area to South	2 yr 3 hr	2.00	0.056	0.91	0.47
Area to South	2 yr 6 hr	2.00	0.056	0.91	0.47
Area to South	2 yr 12 hr	2.00	0.109	6.00	0.30
Area to South	2 yr 18 hr	2.00	0.127	12.60	0.28
Area to South	2 yr 24 hr	2.00	0.143	16.80	0.23
Area to South	2 yr 48 hr	2.00	0.169	41.50	0.18
Area to South	2 yr 72 hr	2.00	0.196	62.50	0.14
Area to South	2 yr 120 hr	2.00	0.236	104.00	0.10
Area to South	2 yr 240 hr	2.00	0.346	208.50	0.07

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From Existing Depressional Area	2 yr 10 min	2.00	0.001	0.24	0.07
From Existing Depressional Area	2 yr 15 min	2.00	0.006	0.29	0.34
From Existing Depressional Area	2 yr 30 min	2.00	0.021	0.49	0.59
From Existing Depressional Area	2 yr 1 hr	2.00	0.043	0.73	0.66
From Existing Depressional Area	2 yr 2 hr	2.00	0.073	0.85	0.67
From Existing Depressional Area	2 yr 3 hr	2.00	0.091	1.09	0.65
From Existing Depressional Area	2 yr 6 hr	2.00	0.091	1.09	0.65
From Existing Depressional Area	2 yr 12 hr	2.00	0.172	6.00	0.46
From Existing Depressional Area	2 yr 18 hr	2.00	0.199	12.70	0.43
From Existing Depressional Area	2 yr 24 hr	2.00	0.223	16.00	0.35
From Existing Depressional Area	2 yr 48 hr	2.00	0.263	41.50	0.27
From Existing Depressional Area	2 yr 72 hr	2.00	0.302	62.50	0.20
From Existing Depressional Area	2 yr 120 hr	2.00	0.361	104.00	0.14
From Existing Depressional Area	2 yr 240 hr	2.00	0.523	208.50	0.10
To West	2 yr 10 min	2.00	0.000	0.00	0.00
To West	2 yr 15 min	2.00	0.004	0.31	0.23
To West	2 yr 30 min	2.00	0.024	0.42	0.87

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
To West	2 yr 1 hr	2.00	0.059	0.64	1.08
To West	2 yr 2 hr	2.00	0.111	0.69	1.23
To West	2 yr 3 hr	2.00	0.143	0.94	1.17
To West	2 yr 6 hr	2.00	0.143	0.94	1.17
To West	2 yr 12 hr	2.00	0.292	6.00	0.82
To West	2 yr 18 hr	2.00	0.342	12.70	0.78
To West	2 yr 24 hr	2.00	0.388	16.80	0.65
To West	2 yr 48 hr	2.00	0.464	41.50	0.50
To West	2 yr 72 hr	2.00	0.541	62.50	0.38
To West	2 yr 120 hr	2.00	0.656	104.00	0.27
To West	2 yr 240 hr	2.00	0.978	208.50	0.19
To South	2 yr 10 min	2.00	0.000	0.25	0.01
To South	2 yr 15 min	2.00	0.002	0.29	0.15
To South	2 yr 30 min	2.00	0.011	0.38	0.39
To South	2 yr 1 hr	2.00	0.025	0.44	0.45
To South	2 yr 2 hr	2.00	0.044	0.66	0.51
To South	2 yr 3 hr	2.00	0.056	0.91	0.47
To South	2 yr 6 hr	2.00	0.056	0.91	0.47
To South	2 yr 12 hr	2.00	0.109	6.00	0.30
To South	2 yr 18 hr	2.00	0.127	12.60	0.28
To South	2 yr 24 hr	2.00	0.143	16.80	0.23
To South	2 yr 48 hr	2.00	0.169	41.50	0.18
To South	2 yr 72 hr	2.00	0.196	62.50	0.14
To South	2 yr 120 hr	2.00	0.236	104.00	0.10
To South	2 yr 240 hr	2.00	0.346	208.50	0.07

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	2 yr 10 min	2.00	0.001	0.24	0.07	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 10 min	2.00	0.001	0.24	0.07	841.73	0.000
Existing Depressional Area (IN)	2 yr 15 min	2.00	0.006	0.28	0.34	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 15 min	2.00	0.006	0.29	0.34	841.90	0.000

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	2 yr 30 min	2.00	0.021	0.38	0.71	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 30 min	2.00	0.021	0.49	0.59	842.02	0.002
Existing Depressional Area (IN)	2 yr 1 hr	2.00	0.043	0.43	0.81	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 1 hr	2.00	0.043	0.73	0.66	842.04	0.004
Existing Depressional Area (IN)	2 yr 2 hr	2.00	0.073	0.66	0.88	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 2 hr	2.00	0.073	0.85	0.67	842.05	0.005
Existing Depressional Area (IN)	2 yr 3 hr	2.00	0.091	0.91	0.79	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 3 hr	2.00	0.091	1.09	0.65	842.04	0.004
Existing Depressional Area (IN)	2 yr 6 hr	2.00	0.091	0.91	0.79	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 6 hr	2.00	0.091	1.09	0.65	842.04	0.004
Existing Depressional Area (IN)	2 yr 12 hr	2.00	0.172	6.00	0.47	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 12 hr	2.00	0.172	6.00	0.46	841.96	0.000
Existing Depressional Area (IN)	2 yr 18 hr	2.00	0.199	12.60	0.43	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 18 hr	2.00	0.199	12.70	0.43	841.95	0.000
Existing Depressional Area (IN)	2 yr 24 hr	2.00	0.223	16.80	0.35	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (OUT)	2 yr 24 hr	2.00	0.223	16.00	0.35	841.91	0.000
Existing Depressional Area (IN)	2 yr 48 hr	2.00	0.263	41.50	0.27	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 48 hr	2.00	0.263	41.50	0.27	841.86	0.000
Existing Depressional Area (IN)	2 yr 72 hr	2.00	0.302	62.50	0.20	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 72 hr	2.00	0.302	62.50	0.20	841.83	0.000
Existing Depressional Area (IN)	2 yr 120 hr	2.00	0.361	104.00	0.14	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 120 hr	2.00	0.361	104.00	0.14	841.79	0.000
Existing Depressional Area (IN)	2 yr 240 hr	2.00	0.523	208.50	0.10	(N/A)	(N/A)
Existing Depressional Area (OUT)	2 yr 240 hr	2.00	0.523	208.50	0.10	841.75	0.000

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Time-Depth Curve: 1 hr 2 yr	
Label	1 hr 2 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.13
0.05	0.16	0.20	0.23	0.27	0.30
0.10	0.34	0.38	0.42	0.46	0.50
0.15	0.54	0.58	0.61	0.65	0.68
0.20	0.72	0.75	0.78	0.81	0.84
0.25	0.87	0.90	0.92	0.95	0.97
0.30	0.99	1.01	1.03	1.05	1.06
0.35	1.08	1.09	1.11	1.12	1.13
0.40	1.14	1.16	1.17	1.18	1.19
0.45	1.20	1.21	1.22	1.23	1.24
0.50	1.25	1.26	1.27	1.28	1.29
0.55	1.30	1.31	1.32	1.33	1.34
0.60	1.35	1.36	1.37	1.38	1.38
0.65	1.39	1.40	1.41	1.41	1.42
0.70	1.43	1.43	1.44	1.44	1.45
0.75	1.46	1.46	1.47	1.47	1.48
0.80	1.48	1.49	1.49	1.50	1.50
0.85	1.50	1.51	1.51	1.52	1.52
0.90	1.53	1.53	1.54	1.54	1.54
0.95	1.55	1.55	1.56	1.56	1.57
1.00	1.57	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 10 min

Return Event: 2.00 years
Storm Event: 10 min 2 yr

Time-Depth Curve: 10 min 2 yr	
Label	10 min 2 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.17 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.03	0.04	0.06
0.01	0.07	0.09	0.10	0.12	0.14
0.02	0.15	0.17	0.19	0.21	0.22
0.03	0.24	0.26	0.27	0.29	0.30
0.03	0.32	0.33	0.35	0.36	0.37
0.04	0.39	0.40	0.41	0.42	0.43
0.05	0.44	0.45	0.46	0.47	0.47
0.06	0.48	0.49	0.49	0.50	0.50
0.07	0.51	0.52	0.52	0.53	0.53
0.08	0.53	0.54	0.54	0.55	0.55
0.08	0.56	0.56	0.57	0.57	0.58
0.09	0.58	0.59	0.59	0.59	0.60
0.10	0.60	0.61	0.61	0.61	0.62
0.11	0.62	0.62	0.63	0.63	0.63
0.12	0.64	0.64	0.64	0.64	0.65
0.13	0.65	0.65	0.65	0.66	0.66
0.13	0.66	0.66	0.66	0.67	0.67
0.14	0.67	0.67	0.67	0.68	0.68
0.15	0.68	0.68	0.68	0.69	0.69
0.16	0.69	0.69	0.69	0.70	0.70
0.17	0.70	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 12 hr

Return Event: 2.00 years
Storm Event: 12 hr 2 yr

Time-Depth Curve: 12 hr 2 yr	
Label	12 hr 2 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.06
0.60	0.08	0.10	0.12	0.13	0.15
1.20	0.17	0.20	0.22	0.24	0.26
1.80	0.29	0.31	0.34	0.37	0.40
2.40	0.43	0.47	0.51	0.54	0.58
3.00	0.62	0.67	0.72	0.77	0.82
3.60	0.87	0.93	0.99	1.04	1.10
4.20	1.16	1.23	1.29	1.35	1.41
4.80	1.48	1.54	1.60	1.66	1.71
5.40	1.77	1.82	1.88	1.93	1.98
6.00	2.03	2.07	2.11	2.15	2.19
6.60	2.22	2.26	2.29	2.33	2.36
7.20	2.39	2.42	2.45	2.48	2.50
7.80	2.52	2.54	2.56	2.58	2.59
8.40	2.61	2.63	2.64	2.65	2.67
9.00	2.68	2.69	2.71	2.72	2.73
9.60	2.74	2.75	2.76	2.77	2.78
10.20	2.79	2.80	2.81	2.81	2.82
10.80	2.83	2.84	2.85	2.85	2.86
11.40	2.87	2.88	2.89	2.89	2.90
12.00	2.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 120 hr

Return Event: 2.00 years
Storm Event: 120 hr 2 yr

Time-Depth Curve: 120 hr 2 yr	
Label	120 hr 2 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
6.00	0.12	0.15	0.18	0.20	0.23
12.00	0.25	0.28	0.30	0.33	0.36
18.00	0.39	0.41	0.44	0.47	0.50
24.00	0.53	0.56	0.59	0.62	0.64
30.00	0.67	0.70	0.73	0.76	0.79
36.00	0.81	0.84	0.86	0.89	0.92
42.00	0.94	0.97	1.00	1.02	1.05
48.00	1.08	1.10	1.13	1.16	1.20
54.00	1.23	1.26	1.29	1.32	1.35
60.00	1.38	1.41	1.44	1.47	1.49
66.00	1.52	1.55	1.57	1.60	1.62
72.00	1.65	1.67	1.69	1.72	1.75
78.00	1.78	1.80	1.84	1.88	1.92
84.00	1.96	2.00	2.07	2.14	2.20
90.00	2.27	2.35	2.44	2.52	2.61
96.00	2.71	2.81	2.92	3.02	3.14
102.00	3.25	3.37	3.48	3.59	3.69
108.00	3.79	3.90	3.99	4.05	4.12
114.00	4.19	4.25	4.29	4.34	4.38
120.00	4.42	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 15 min

Return Event: 2.00 years
Storm Event: 15 min 2 yr

Time-Depth Curve: 15 min 2 yr	
Label	15 min 2 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.05	0.07
0.01	0.09	0.11	0.13	0.15	0.17
0.03	0.20	0.22	0.24	0.26	0.29
0.04	0.31	0.33	0.35	0.37	0.39
0.05	0.41	0.43	0.45	0.46	0.48
0.06	0.50	0.51	0.53	0.54	0.56
0.08	0.57	0.58	0.59	0.60	0.61
0.09	0.62	0.63	0.63	0.64	0.65
0.10	0.66	0.66	0.67	0.68	0.68
0.11	0.69	0.69	0.70	0.71	0.71
0.13	0.72	0.72	0.73	0.74	0.74
0.14	0.75	0.75	0.76	0.76	0.77
0.15	0.77	0.78	0.78	0.79	0.79
0.16	0.80	0.80	0.81	0.81	0.81
0.18	0.82	0.82	0.82	0.83	0.83
0.19	0.83	0.84	0.84	0.84	0.85
0.20	0.85	0.85	0.85	0.86	0.86
0.21	0.86	0.87	0.87	0.87	0.87
0.23	0.88	0.88	0.88	0.88	0.89
0.24	0.89	0.89	0.89	0.90	0.90
0.25	0.90	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 hr 2 yr

Time-Depth Curve: 18 hr 2 yr	
Label	18 hr 2 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.06
0.90	0.08	0.10	0.11	0.13	0.15
1.80	0.16	0.18	0.20	0.22	0.24
2.70	0.26	0.27	0.29	0.31	0.33
3.60	0.35	0.37	0.39	0.41	0.43
4.50	0.45	0.47	0.49	0.51	0.53
5.40	0.55	0.57	0.59	0.61	0.63
6.30	0.66	0.68	0.70	0.73	0.76
7.20	0.78	0.81	0.84	0.87	0.91
8.10	0.94	0.98	1.02	1.06	1.10
9.00	1.14	1.20	1.26	1.31	1.37
9.90	1.43	1.49	1.55	1.62	1.68
10.80	1.75	1.82	1.88	1.95	2.02
11.70	2.08	2.15	2.22	2.28	2.34
12.60	2.40	2.46	2.51	2.57	2.62
13.50	2.67	2.70	2.74	2.78	2.81
14.40	2.84	2.86	2.89	2.92	2.93
15.30	2.95	2.97	2.99	3.00	3.01
16.20	3.03	3.04	3.05	3.06	3.07
17.10	3.09	3.10	3.11	3.12	3.13
18.00	3.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 2 hr

Return Event: 2.00 years
Storm Event: 2 hr 2 yr

Time-Depth Curve: 2 hr 2 yr	
Label	2 hr 2 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.10	0.20	0.24	0.29	0.33	0.38
0.20	0.42	0.47	0.52	0.57	0.62
0.30	0.66	0.71	0.76	0.80	0.84
0.40	0.89	0.93	0.96	1.00	1.04
0.50	1.08	1.11	1.14	1.17	1.20
0.60	1.23	1.25	1.27	1.30	1.32
0.70	1.33	1.35	1.37	1.38	1.40
0.80	1.41	1.43	1.44	1.46	1.47
0.90	1.48	1.50	1.51	1.52	1.54
1.00	1.55	1.56	1.57	1.59	1.60
1.10	1.61	1.62	1.64	1.65	1.66
1.20	1.67	1.68	1.69	1.70	1.71
1.30	1.72	1.73	1.74	1.75	1.75
1.40	1.76	1.77	1.78	1.78	1.79
1.50	1.80	1.80	1.81	1.82	1.82
1.60	1.83	1.84	1.84	1.85	1.85
1.70	1.86	1.86	1.87	1.88	1.88
1.80	1.89	1.89	1.90	1.90	1.91
1.90	1.91	1.92	1.92	1.93	1.93
2.00	1.94	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Time-Depth Curve: 24 hr 2 yr	
Label	24 hr 2 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.07
1.20	0.08	0.10	0.12	0.14	0.16
2.40	0.18	0.19	0.21	0.23	0.25
3.60	0.27	0.29	0.31	0.33	0.35
4.80	0.37	0.39	0.42	0.44	0.46
6.00	0.48	0.50	0.52	0.54	0.56
7.20	0.58	0.60	0.63	0.65	0.67
8.40	0.70	0.72	0.75	0.78	0.80
9.60	0.83	0.86	0.89	0.93	0.97
10.80	1.00	1.04	1.08	1.13	1.17
12.00	1.21	1.27	1.34	1.40	1.46
13.20	1.52	1.59	1.65	1.72	1.79
14.40	1.86	1.93	2.00	2.07	2.14
15.60	2.22	2.29	2.36	2.42	2.49
16.80	2.56	2.62	2.67	2.73	2.78
18.00	2.84	2.87	2.91	2.95	2.99
19.20	3.02	3.05	3.07	3.10	3.12
20.40	3.14	3.16	3.18	3.19	3.21
21.60	3.22	3.23	3.25	3.26	3.27
22.80	3.28	3.29	3.31	3.32	3.33
24.00	3.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 240 hr

Return Event: 2.00 years
Storm Event: 240 hr 2 yr

Time-Depth Curve: 240 hr 2 yr	
Label	240 hr 2 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.12
12.00	0.16	0.19	0.22	0.26	0.29
24.00	0.32	0.35	0.38	0.42	0.45
36.00	0.49	0.52	0.56	0.60	0.63
48.00	0.67	0.71	0.74	0.78	0.82
60.00	0.85	0.89	0.92	0.96	1.00
72.00	1.03	1.06	1.10	1.13	1.16
84.00	1.19	1.23	1.26	1.30	1.33
96.00	1.37	1.40	1.44	1.48	1.52
108.00	1.55	1.59	1.63	1.67	1.71
120.00	1.75	1.79	1.82	1.86	1.89
132.00	1.93	1.96	1.99	2.02	2.05
144.00	2.09	2.12	2.15	2.18	2.22
156.00	2.25	2.29	2.33	2.38	2.43
168.00	2.48	2.54	2.62	2.71	2.79
180.00	2.87	2.98	3.09	3.20	3.30
192.00	3.43	3.56	3.70	3.83	3.97
204.00	4.12	4.26	4.41	4.55	4.68
216.00	4.81	4.94	5.05	5.14	5.22
228.00	5.31	5.39	5.44	5.49	5.55
240.00	5.60	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 3 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

Time-Depth Curve: 3 hr 2 yr	
Label	3 hr 2 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.09	0.13	0.17
0.15	0.22	0.27	0.32	0.36	0.41
0.30	0.47	0.52	0.57	0.63	0.68
0.45	0.73	0.79	0.84	0.88	0.93
0.60	0.98	1.02	1.06	1.11	1.15
0.75	1.19	1.22	1.26	1.29	1.33
0.90	1.35	1.38	1.40	1.43	1.45
1.05	1.47	1.49	1.51	1.52	1.54
1.20	1.56	1.58	1.59	1.61	1.62
1.35	1.64	1.65	1.66	1.68	1.69
1.50	1.71	1.72	1.74	1.75	1.76
1.65	1.78	1.79	1.80	1.82	1.83
1.80	1.84	1.85	1.86	1.88	1.89
1.95	1.90	1.91	1.92	1.93	1.94
2.10	1.94	1.95	1.96	1.97	1.98
2.25	1.98	1.99	2.00	2.00	2.01
2.40	2.02	2.02	2.03	2.04	2.04
2.55	2.05	2.06	2.06	2.07	2.08
2.70	2.08	2.09	2.09	2.10	2.10
2.85	2.11	2.12	2.12	2.13	2.13
3.00	2.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 6 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

Time-Depth Curve: 3 hr 2 yr	
Label	3 hr 2 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.09	0.13	0.17
0.15	0.22	0.27	0.32	0.36	0.41
0.30	0.47	0.52	0.57	0.63	0.68
0.45	0.73	0.79	0.84	0.88	0.93
0.60	0.98	1.02	1.06	1.11	1.15
0.75	1.19	1.22	1.26	1.29	1.33
0.90	1.35	1.38	1.40	1.43	1.45
1.05	1.47	1.49	1.51	1.52	1.54
1.20	1.56	1.58	1.59	1.61	1.62
1.35	1.64	1.65	1.66	1.68	1.69
1.50	1.71	1.72	1.74	1.75	1.76
1.65	1.78	1.79	1.80	1.82	1.83
1.80	1.84	1.85	1.86	1.88	1.89
1.95	1.90	1.91	1.92	1.93	1.94
2.10	1.94	1.95	1.96	1.97	1.98
2.25	1.98	1.99	2.00	2.00	2.01
2.40	2.02	2.02	2.03	2.04	2.04
2.55	2.05	2.06	2.06	2.07	2.08
2.70	2.08	2.09	2.09	2.10	2.10
2.85	2.11	2.12	2.12	2.13	2.13
3.00	2.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 2 yr

Time-Depth Curve: 30 min 2 yr	
Label	30 min 2 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.03	0.13	0.15	0.18	0.21	0.24
0.05	0.27	0.30	0.33	0.36	0.39
0.08	0.42	0.46	0.48	0.51	0.54
0.10	0.57	0.59	0.62	0.64	0.66
0.13	0.69	0.71	0.73	0.75	0.77
0.15	0.78	0.80	0.81	0.83	0.84
0.18	0.85	0.86	0.87	0.88	0.89
0.20	0.90	0.91	0.92	0.93	0.94
0.23	0.95	0.96	0.96	0.97	0.98
0.25	0.99	1.00	1.01	1.01	1.02
0.28	1.03	1.04	1.05	1.05	1.06
0.30	1.07	1.07	1.08	1.09	1.09
0.33	1.10	1.11	1.11	1.12	1.12
0.35	1.13	1.13	1.14	1.14	1.14
0.38	1.15	1.15	1.16	1.16	1.17
0.40	1.17	1.17	1.18	1.18	1.18
0.43	1.19	1.19	1.20	1.20	1.20
0.45	1.21	1.21	1.21	1.22	1.22
0.48	1.22	1.23	1.23	1.23	1.24
0.50	1.24	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 hr 2 yr

Time-Depth Curve: 48 hr 2 yr	
Label	48 hr 2 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.06	0.08
2.40	0.10	0.12	0.15	0.17	0.19
4.80	0.21	0.23	0.25	0.27	0.30
7.20	0.32	0.34	0.37	0.39	0.41
9.60	0.44	0.46	0.49	0.51	0.53
12.00	0.56	0.58	0.60	0.63	0.65
14.40	0.67	0.69	0.72	0.74	0.76
16.80	0.78	0.80	0.82	0.85	0.87
19.20	0.89	0.91	0.94	0.96	0.99
21.60	1.02	1.04	1.07	1.09	1.12
24.00	1.14	1.17	1.19	1.21	1.24
26.40	1.26	1.28	1.30	1.32	1.34
28.80	1.36	1.38	1.40	1.42	1.45
31.20	1.47	1.49	1.52	1.55	1.59
33.60	1.62	1.66	1.71	1.77	1.82
36.00	1.88	1.95	2.02	2.09	2.16
38.40	2.24	2.33	2.42	2.50	2.60
40.80	2.69	2.79	2.88	2.97	3.06
43.20	3.14	3.23	3.30	3.36	3.41
45.60	3.47	3.52	3.56	3.59	3.63
48.00	3.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 hr 2 yr

Time-Depth Curve: 72 hr 2 yr	
Label	72 hr 2 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.07	0.09
3.60	0.11	0.14	0.16	0.18	0.20
7.20	0.23	0.25	0.27	0.30	0.32
10.80	0.35	0.37	0.40	0.42	0.45
14.40	0.48	0.50	0.53	0.55	0.58
18.00	0.60	0.63	0.66	0.68	0.71
21.60	0.73	0.75	0.78	0.80	0.82
25.20	0.85	0.87	0.89	0.92	0.94
28.80	0.97	0.99	1.02	1.05	1.07
32.40	1.10	1.13	1.16	1.19	1.21
36.00	1.24	1.27	1.29	1.32	1.34
39.60	1.37	1.39	1.41	1.43	1.46
43.20	1.48	1.50	1.52	1.55	1.57
46.80	1.60	1.62	1.65	1.69	1.72
50.40	1.76	1.80	1.86	1.92	1.98
54.00	2.04	2.11	2.19	2.27	2.34
57.60	2.43	2.53	2.62	2.72	2.82
61.20	2.92	3.02	3.13	3.22	3.32
64.80	3.41	3.50	3.58	3.64	3.70
68.40	3.76	3.82	3.86	3.89	3.93
72.00	3.97	(N/A)	(N/A)	(N/A)	(N/A)

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.16 ft/s
Segment Time of Concentration	0.18 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.19 ft/s
Segment Time of Concentration	0.15 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	181.00 ft
Is Paved?	False
Slope	0.038 ft/ft
Average Velocity	3.15 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.17 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.052 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.17 ft/s
Segment Time of Concentration	0.16 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	230.00 ft
Is Paved?	False
Slope	0.052 ft/ft
Average Velocity	3.68 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Area to West
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 10 min

Return Event: 2.00 years
Storm Event: 10 min 2 yr

Storm Event	10 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.70 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.24 hours
Flow (Peak, Computed)	0.07 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.24 hours
Flow (Peak Interpolated Output)	0.07 ft³/s
Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.01 in
Runoff Volume (Pervious)	0.001 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.001 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 10 min

Return Event: 2.00 years
Storm Event: 10 min 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 12 hr

Return Event: 2.00 years
Storm Event: 12 hr 2 yr

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	6.02 hours
Flow (Peak, Computed)	0.47 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	6.00 hours
Flow (Peak Interpolated Output)	0.47 ft³/s
Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.07 in
Runoff Volume (Pervious)	0.172 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.172 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.14 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.14 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.23 in
Runoff Volume (Pervious)	0.361 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.361 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.28 hours
Flow (Peak, Computed)	0.34 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.28 hours
Flow (Peak Interpolated Output)	0.34 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.04 in
Runoff Volume (Pervious)	0.006 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.006 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.63 hours
Flow (Peak, Computed)	0.43 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	12.60 hours
Flow (Peak Interpolated Output)	0.43 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.23 in
Runoff Volume (Pervious)	0.199 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.199 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.66 hours
Flow (Peak, Computed)	0.88 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.66 hours
Flow (Peak Interpolated Output)	0.88 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.45 in
Runoff Volume (Pervious)	0.073 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.073 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	16.84 hours
Flow (Peak, Computed)	0.35 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	16.80 hours
Flow (Peak Interpolated Output)	0.35 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.38 in
Runoff Volume (Pervious)	0.223 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.223 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.80 hours
Flow (Peak, Computed)	0.10 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.10 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.23 in
Runoff Volume (Pervious)	0.523 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.523 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.92 hours
Flow (Peak, Computed)	0.79 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.91 hours
Flow (Peak Interpolated Output)	0.79 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.56 in
Runoff Volume (Pervious)	0.091 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.091 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.38 hours
Flow (Peak, Computed)	0.71 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.38 hours
Flow (Peak Interpolated Output)	0.71 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.13 in
Runoff Volume (Pervious)	0.021 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.021 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.78 hours
Flow (Peak, Computed)	0.27 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.27 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.62 in
Runoff Volume (Pervious)	0.262 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.263 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.92 hours
Flow (Peak, Computed)	0.79 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.91 hours
Flow (Peak Interpolated Output)	0.79 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.56 in
Runoff Volume (Pervious)	0.091 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.091 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.20 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.20 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.86 in
Runoff Volume (Pervious)	0.302 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.302 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	1 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.44 hours
Flow (Peak, Computed)	0.45 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.44 hours
Flow (Peak Interpolated Output)	0.45 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.21 in
Runoff Volume (Pervious)	0.025 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.025 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	10 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.70 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.24 hours
Flow (Peak, Computed)	0.01 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	0.01 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.00 in
Runoff Volume (Pervious)	0.000 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.000 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	6.02 hours
Flow (Peak, Computed)	0.30 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	6.00 hours
Flow (Peak Interpolated Output)	0.30 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.95 in
Runoff Volume (Pervious)	0.109 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.109 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.10 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.10 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.07 in
Runoff Volume (Pervious)	0.236 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.236 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.29 hours
Flow (Peak, Computed)	0.15 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.29 hours
Flow (Peak Interpolated Output)	0.15 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.02 in
Runoff Volume (Pervious)	0.002 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.002 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.64 hours
Flow (Peak, Computed)	0.28 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	12.60 hours
Flow (Peak Interpolated Output)	0.28 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.11 in
Runoff Volume (Pervious)	0.127 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.127 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.66 hours
Flow (Peak, Computed)	0.51 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.66 hours
Flow (Peak Interpolated Output)	0.51 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.38 in
Runoff Volume (Pervious)	0.044 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.044 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	16.84 hours
Flow (Peak, Computed)	0.23 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	16.80 hours
Flow (Peak Interpolated Output)	0.23 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.25 in
Runoff Volume (Pervious)	0.143 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.143 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.07 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.07 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.04 in
Runoff Volume (Pervious)	0.346 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.346 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 240 hr

Return Event: 2.00 years
Storm Event: 240 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 3 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.91 hours
Flow (Peak, Computed)	0.47 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.91 hours
Flow (Peak Interpolated Output)	0.47 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.49 in
Runoff Volume (Pervious)	0.056 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.056 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 3 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 2 yr

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.38 hours
Flow (Peak, Computed)	0.39 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.38 hours
Flow (Peak Interpolated Output)	0.39 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.10 in
Runoff Volume (Pervious)	0.011 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.011 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.77 hours
Flow (Peak, Computed)	0.18 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.18 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.48 in
Runoff Volume (Pervious)	0.169 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.169 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.91 hours
Flow (Peak, Computed)	0.47 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.91 hours
Flow (Peak Interpolated Output)	0.47 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.49 in
Runoff Volume (Pervious)	0.056 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.056 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.14 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.14 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.72 in
Runoff Volume (Pervious)	0.196 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.196 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	1 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.57 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.63 hours
Flow (Peak, Computed)	1.08 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.64 hours
Flow (Peak Interpolated Output)	1.08 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.17 in
Runoff Volume (Pervious)	0.059 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.059 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	10 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.70 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.00 hours
Flow (Peak, Computed)	0.00 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.00 hours
Flow (Peak Interpolated Output)	0.00 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.00 in
Runoff Volume (Pervious)	0.000 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.000 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	6.01 hours
Flow (Peak, Computed)	0.82 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	6.00 hours
Flow (Peak Interpolated Output)	0.82 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.85 in
Runoff Volume (Pervious)	0.292 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.292 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 12 hr

Return Event: 2.00 years
Storm Event: 12 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 120 hr

Return Event: 2.00 years
Storm Event: 120 hr 2 yr

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.39 hours
Flow (Peak, Computed)	0.27 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.27 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.91 in
Runoff Volume (Pervious)	0.655 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.656 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 120 hr

Return Event: 2.00 years
Storm Event: 120 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 15 min

Return Event: 2.00 years
Storm Event: 15 min 2 yr

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.31 hours
Flow (Peak, Computed)	0.24 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.31 hours
Flow (Peak Interpolated Output)	0.23 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.01 in
Runoff Volume (Pervious)	0.004 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.004 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.64 hours
Flow (Peak, Computed)	0.78 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	12.70 hours
Flow (Peak Interpolated Output)	0.78 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.00 in
Runoff Volume (Pervious)	0.342 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.342 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.68 hours
Flow (Peak, Computed)	1.23 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.69 hours
Flow (Peak Interpolated Output)	1.23 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.32 in
Runoff Volume (Pervious)	0.111 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.111 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	16.85 hours
Flow (Peak, Computed)	0.65 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	16.80 hours
Flow (Peak Interpolated Output)	0.65 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.13 in
Runoff Volume (Pervious)	0.388 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.388 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.19 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.19 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.85 in
Runoff Volume (Pervious)	0.978 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.978 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.94 hours
Flow (Peak, Computed)	1.17 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.94 hours
Flow (Peak Interpolated Output)	1.17 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.42 in
Runoff Volume (Pervious)	0.143 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.143 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.42 hours
Flow (Peak, Computed)	0.87 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.42 hours
Flow (Peak Interpolated Output)	0.87 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.07 in
Runoff Volume (Pervious)	0.024 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.024 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.78 hours
Flow (Peak, Computed)	0.51 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.50 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	0.464 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.464 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.94 hours
Flow (Peak, Computed)	1.17 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.94 hours
Flow (Peak Interpolated Output)	1.17 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.42 in
Runoff Volume (Pervious)	0.143 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.143 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.39 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.38 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.57 in
Runoff Volume (Pervious)	0.540 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.541 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Requested Pond Water Surface Elevations	
Minimum (Headwater)	841.00 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	845.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Existing CB	Forward	TW	841.58	845.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Label: Existing OCS
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Structure ID: Existing CB Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	841.58 ft
Orifice Diameter	12.00 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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Existing 10-yr Critical Duration

Project Summary	
Title	24-136 Existing Conditions PondPack Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Existing Conditions Critical Duration Analysis

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Subsection: User Notifications

User Notifications?	No user notifications generated.

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to Depressional Area	10 yr 15 min	10.00	0.030	0.24	1.59
Area to Depressional Area	10 yr 30 min	10.00	0.070	0.29	2.31
Area to Depressional Area	10 yr 1 hr	10.00	0.119	0.38	2.59
Area to Depressional Area	10 yr 2 hr	10.00	0.182	0.61	2.38
Area to Depressional Area	10 yr 3 hr	10.00	0.218	0.82	2.00
Area to Depressional Area	10 yr 6 hr	10.00	0.288	1.53	1.37
Area to Depressional Area	10 yr 18 hr	10.00	0.417	11.90	0.83
Area to Depressional Area	10 yr 12 hr	10.00	0.369	5.00	0.98
Area to Depressional Area	10 yr 24 hr	10.00	0.460	15.90	0.68
Area to Depressional Area	10 yr 48 hr	10.00	0.526	41.50	0.49
Area to Depressional Area	10 yr 72 hr	10.00	0.587	62.50	0.36
Area to Depressional Area	10 yr 120 hr	10.00	0.679	104.00	0.24
Area to Depressional Area	10 yr 240 hr	10.00	0.911	208.50	0.16
Area to West	10 yr 15 min	10.00	0.039	0.26	2.10
Area to West	10 yr 30 min	10.00	0.106	0.35	3.44
Area to West	10 yr 1 hr	10.00	0.193	0.40	3.98
Area to West	10 yr 2 hr	10.00	0.309	0.63	3.93
Area to West	10 yr 3 hr	10.00	0.379	0.87	3.38
Area to West	10 yr 6 hr	10.00	0.513	1.55	2.42
Area to West	10 yr 18 hr	10.00	0.767	11.90	1.58
Area to West	10 yr 12 hr	10.00	0.671	5.00	1.77
Area to West	10 yr 24 hr	10.00	0.852	15.90	1.30
Area to West	10 yr 48 hr	10.00	0.985	41.50	0.96
Area to West	10 yr 72 hr	10.00	1.108	62.50	0.71
Area to West	10 yr 120 hr	10.00	1.293	104.00	0.49
Area to West	10 yr 240 hr	10.00	1.767	208.50	0.32
Area to South	10 yr 15 min	10.00	0.017	0.25	0.91
Area to South	10 yr 30 min	10.00	0.042	0.31	1.38
Area to South	10 yr 1 hr	10.00	0.074	0.38	1.59
Area to South	10 yr 2 hr	10.00	0.115	0.62	1.50
Area to South	10 yr 3 hr	10.00	0.139	0.82	1.27
Area to South	10 yr 6 hr	10.00	0.186	1.53	0.88
Area to South	10 yr 18 hr	10.00	0.274	11.90	0.55

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to South	10 yr 12 hr	10.00	0.241	5.00	0.64
Area to South	10 yr 24 hr	10.00	0.303	15.90	0.46
Area to South	10 yr 48 hr	10.00	0.349	41.50	0.33
Area to South	10 yr 72 hr	10.00	0.391	62.50	0.24
Area to South	10 yr 120 hr	10.00	0.454	104.00	0.17
Area to South	10 yr 240 hr	10.00	0.614	208.50	0.11

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From Existing Depressional Area	10 yr 15 min	10.00	0.030	0.36	0.84
From Existing Depressional Area	10 yr 30 min	10.00	0.070	0.53	1.34
From Existing Depressional Area	10 yr 1 hr	10.00	0.119	0.72	1.56
From Existing Depressional Area	10 yr 2 hr	10.00	0.182	0.85	1.59
From Existing Depressional Area	10 yr 3 hr	10.00	0.218	1.08	1.51
From Existing Depressional Area	10 yr 6 hr	10.00	0.288	1.82	1.22
From Existing Depressional Area	10 yr 18 hr	10.00	0.417	12.20	0.81
From Existing Depressional Area	10 yr 12 hr	10.00	0.369	5.70	0.93
From Existing Depressional Area	10 yr 24 hr	10.00	0.460	16.20	0.67
From Existing Depressional Area	10 yr 48 hr	10.00	0.526	41.50	0.48
From Existing Depressional Area	10 yr 72 hr	10.00	0.587	62.50	0.36
From Existing Depressional Area	10 yr 120 hr	10.00	0.679	104.00	0.24
From Existing Depressional Area	10 yr 240 hr	10.00	0.911	208.50	0.16
To West	10 yr 15 min	10.00	0.039	0.26	2.10
To West	10 yr 30 min	10.00	0.106	0.35	3.44
To West	10 yr 1 hr	10.00	0.193	0.40	3.98
To West	10 yr 2 hr	10.00	0.309	0.63	3.93
To West	10 yr 3 hr	10.00	0.379	0.87	3.38
To West	10 yr 6 hr	10.00	0.513	1.55	2.42
To West	10 yr 18 hr	10.00	0.767	11.90	1.58
To West	10 yr 12 hr	10.00	0.671	5.00	1.77
To West	10 yr 24 hr	10.00	0.852	15.90	1.30

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
To West	10 yr 48 hr	10.00	0.985	41.50	0.96
To West	10 yr 72 hr	10.00	1.108	62.50	0.71
To West	10 yr 120 hr	10.00	1.293	104.00	0.49
To West	10 yr 240 hr	10.00	1.767	208.50	0.32
To South	10 yr 15 min	10.00	0.017	0.25	0.91
To South	10 yr 30 min	10.00	0.042	0.31	1.38
To South	10 yr 1 hr	10.00	0.074	0.38	1.59
To South	10 yr 2 hr	10.00	0.115	0.62	1.50
To South	10 yr 3 hr	10.00	0.139	0.82	1.27
To South	10 yr 6 hr	10.00	0.186	1.53	0.88
To South	10 yr 18 hr	10.00	0.274	11.90	0.55
To South	10 yr 12 hr	10.00	0.241	5.00	0.64
To South	10 yr 24 hr	10.00	0.303	15.90	0.46
To South	10 yr 48 hr	10.00	0.349	41.50	0.33
To South	10 yr 72 hr	10.00	0.391	62.50	0.24
To South	10 yr 120 hr	10.00	0.454	104.00	0.17
To South	10 yr 240 hr	10.00	0.614	208.50	0.11

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	10 yr 15 min	10.00	0.030	0.24	1.59	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 15 min	10.00	0.030	0.36	0.84	842.10	0.011
Existing Depressional Area (IN)	10 yr 30 min	10.00	0.070	0.29	2.31	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 30 min	10.00	0.070	0.53	1.34	842.26	0.027
Existing Depressional Area (IN)	10 yr 1 hr	10.00	0.119	0.38	2.59	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 1 hr	10.00	0.119	0.72	1.56	842.32	0.033
Existing Depressional Area (IN)	10 yr 2 hr	10.00	0.182	0.61	2.38	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (OUT)	10 yr 2 hr	10.00	0.182	0.85	1.59	842.33	0.034
Existing Depressional Area (IN)	10 yr 3 hr	10.00	0.218	0.82	2.00	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 3 hr	10.00	0.218	1.08	1.51	842.31	0.032
Existing Depressional Area (IN)	10 yr 6 hr	10.00	0.288	1.53	1.37	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 6 hr	10.00	0.288	1.82	1.22	842.22	0.023
Existing Depressional Area (IN)	10 yr 18 hr	10.00	0.417	11.90	0.83	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 18 hr	10.00	0.417	12.20	0.81	842.09	0.010
Existing Depressional Area (IN)	10 yr 12 hr	10.00	0.369	5.00	0.98	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 12 hr	10.00	0.369	5.70	0.93	842.13	0.014
Existing Depressional Area (IN)	10 yr 24 hr	10.00	0.460	15.90	0.68	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 24 hr	10.00	0.460	16.20	0.67	842.04	0.005
Existing Depressional Area (IN)	10 yr 48 hr	10.00	0.526	41.50	0.49	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 48 hr	10.00	0.526	41.50	0.48	841.97	0.000
Existing Depressional Area (IN)	10 yr 72 hr	10.00	0.587	62.50	0.36	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 72 hr	10.00	0.587	62.50	0.36	841.91	0.000

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	10 yr 120 hr	10.00	0.679	104.00	0.24	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 120 hr	10.00	0.679	104.00	0.24	841.85	0.000
Existing Depressional Area (IN)	10 yr 240 hr	10.00	0.911	208.50	0.16	(N/A)	(N/A)
Existing Depressional Area (OUT)	10 yr 240 hr	10.00	0.911	208.50	0.16	841.80	0.000

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Time-Depth Curve: 1 hr 10 yr	
Label	1 hr 10 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.15	0.19
0.05	0.25	0.30	0.36	0.41	0.47
0.10	0.53	0.59	0.65	0.71	0.77
0.15	0.83	0.89	0.95	1.00	1.05
0.20	1.10	1.16	1.20	1.25	1.30
0.25	1.34	1.38	1.42	1.46	1.50
0.30	1.53	1.56	1.59	1.62	1.64
0.35	1.66	1.68	1.70	1.72	1.74
0.40	1.76	1.78	1.80	1.82	1.83
0.45	1.85	1.87	1.88	1.90	1.91
0.50	1.93	1.95	1.96	1.98	2.00
0.55	2.01	2.03	2.04	2.06	2.07
0.60	2.08	2.10	2.11	2.12	2.13
0.65	2.15	2.16	2.17	2.18	2.19
0.70	2.20	2.21	2.22	2.23	2.23
0.75	2.24	2.25	2.26	2.27	2.27
0.80	2.28	2.29	2.30	2.31	2.31
0.85	2.32	2.33	2.33	2.34	2.35
0.90	2.35	2.36	2.37	2.37	2.38
0.95	2.39	2.39	2.40	2.41	2.41
1.00	2.42	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

Time-Depth Curve: 12 hr 10 yr	
Label	12 hr 10 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.60	0.13	0.15	0.18	0.21	0.24
1.20	0.27	0.30	0.33	0.37	0.41
1.80	0.44	0.48	0.52	0.57	0.62
2.40	0.67	0.72	0.78	0.84	0.90
3.00	0.96	1.03	1.11	1.18	1.26
3.60	1.34	1.43	1.52	1.60	1.70
4.20	1.79	1.89	1.98	2.08	2.18
4.80	2.27	2.37	2.46	2.55	2.64
5.40	2.72	2.81	2.89	2.97	3.05
6.00	3.13	3.19	3.25	3.31	3.37
6.60	3.43	3.48	3.53	3.58	3.63
7.20	3.68	3.72	3.77	3.81	3.84
7.80	3.88	3.91	3.94	3.97	3.99
8.40	4.02	4.05	4.07	4.09	4.11
9.00	4.13	4.15	4.16	4.18	4.20
9.60	4.22	4.23	4.25	4.26	4.28
10.20	4.29	4.31	4.32	4.33	4.35
10.80	4.36	4.37	4.38	4.39	4.41
11.40	4.42	4.43	4.44	4.46	4.47
12.00	4.48	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

Time-Depth Curve: 120 hr 10 yr	
Label	120 hr 10 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.15
6.00	0.19	0.23	0.27	0.31	0.34
12.00	0.38	0.42	0.46	0.50	0.54
18.00	0.58	0.62	0.67	0.71	0.76
24.00	0.80	0.84	0.89	0.93	0.97
30.00	1.02	1.06	1.10	1.15	1.19
36.00	1.23	1.27	1.31	1.35	1.38
42.00	1.42	1.46	1.51	1.55	1.59
48.00	1.63	1.67	1.71	1.76	1.81
54.00	1.85	1.90	1.95	1.99	2.04
60.00	2.09	2.13	2.17	2.21	2.26
66.00	2.30	2.34	2.37	2.41	2.45
72.00	2.49	2.52	2.56	2.60	2.64
78.00	2.68	2.73	2.78	2.84	2.90
84.00	2.96	3.03	3.13	3.23	3.33
90.00	3.43	3.55	3.68	3.81	3.94
96.00	4.09	4.25	4.41	4.57	4.74
102.00	4.91	5.09	5.26	5.42	5.58
108.00	5.73	5.89	6.03	6.13	6.23
114.00	6.33	6.43	6.49	6.55	6.62
120.00	6.68	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 15 min

Return Event: 10.00 years
Storm Event: 15 min 10 yr

Time-Depth Curve: 15 min 10 yr	
Label	15 min 10 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.08	0.11
0.01	0.14	0.17	0.20	0.24	0.27
0.03	0.30	0.34	0.37	0.41	0.44
0.04	0.48	0.51	0.54	0.57	0.60
0.05	0.63	0.66	0.69	0.72	0.74
0.06	0.77	0.79	0.82	0.84	0.86
0.08	0.88	0.90	0.91	0.93	0.94
0.09	0.95	0.97	0.98	0.99	1.00
0.10	1.01	1.02	1.03	1.04	1.05
0.11	1.06	1.07	1.08	1.09	1.10
0.13	1.11	1.12	1.13	1.14	1.15
0.14	1.15	1.16	1.17	1.18	1.19
0.15	1.20	1.20	1.21	1.22	1.23
0.16	1.23	1.24	1.25	1.25	1.26
0.18	1.26	1.27	1.27	1.28	1.28
0.19	1.29	1.29	1.30	1.30	1.31
0.20	1.31	1.32	1.32	1.32	1.33
0.21	1.33	1.34	1.34	1.34	1.35
0.23	1.35	1.36	1.36	1.36	1.37
0.24	1.37	1.37	1.38	1.38	1.39
0.25	1.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 18 hr

Return Event: 10.00 years
Storm Event: 18 hr 10 yr

Time-Depth Curve: 18 hr 10 yr	
Label	18 hr 10 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.90	0.12	0.15	0.17	0.20	0.23
1.80	0.25	0.28	0.31	0.34	0.37
2.70	0.39	0.42	0.45	0.48	0.51
3.60	0.54	0.57	0.60	0.63	0.66
4.50	0.70	0.72	0.75	0.78	0.81
5.40	0.84	0.88	0.91	0.94	0.97
6.30	1.01	1.05	1.08	1.12	1.16
7.20	1.21	1.25	1.29	1.35	1.40
8.10	1.45	1.51	1.57	1.63	1.70
9.00	1.76	1.85	1.94	2.02	2.11
9.90	2.21	2.30	2.40	2.49	2.59
10.80	2.69	2.80	2.90	3.00	3.11
11.70	3.21	3.31	3.41	3.51	3.61
12.60	3.70	3.80	3.88	3.95	4.03
13.50	4.11	4.17	4.22	4.28	4.33
14.40	4.38	4.42	4.45	4.49	4.52
15.30	4.55	4.58	4.60	4.62	4.64
16.20	4.66	4.68	4.70	4.72	4.74
17.10	4.76	4.77	4.79	4.81	4.82
18.00	4.84	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

Time-Depth Curve: 2 hr 10 yr	
Label	2 hr 10 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.18	0.24
0.10	0.31	0.37	0.44	0.51	0.58
0.20	0.65	0.73	0.80	0.88	0.95
0.30	1.02	1.10	1.17	1.23	1.30
0.40	1.36	1.43	1.49	1.54	1.60
0.50	1.66	1.71	1.76	1.80	1.85
0.60	1.89	1.93	1.96	2.00	2.03
0.70	2.05	2.08	2.10	2.13	2.15
0.80	2.18	2.20	2.22	2.24	2.26
0.90	2.28	2.30	2.33	2.35	2.37
1.00	2.39	2.41	2.43	2.45	2.46
1.10	2.48	2.50	2.52	2.54	2.56
1.20	2.57	2.59	2.61	2.62	2.64
1.30	2.65	2.67	2.68	2.69	2.70
1.40	2.72	2.73	2.74	2.75	2.76
1.50	2.77	2.78	2.79	2.80	2.81
1.60	2.82	2.83	2.84	2.85	2.86
1.70	2.87	2.87	2.88	2.89	2.90
1.80	2.91	2.92	2.93	2.93	2.94
1.90	2.95	2.96	2.97	2.97	2.98
2.00	2.99	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

Time-Depth Curve: 24 hr 10 yr	
Label	24 hr 10 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.05	0.08	0.10
1.20	0.13	0.16	0.18	0.21	0.24
2.40	0.27	0.30	0.33	0.36	0.39
3.60	0.42	0.45	0.48	0.51	0.54
4.80	0.58	0.61	0.64	0.67	0.71
6.00	0.74	0.77	0.80	0.83	0.87
7.20	0.90	0.93	0.97	1.00	1.04
8.40	1.08	1.11	1.15	1.20	1.24
9.60	1.28	1.33	1.37	1.43	1.49
10.80	1.55	1.60	1.67	1.74	1.81
12.00	1.87	1.97	2.06	2.15	2.25
13.20	2.35	2.45	2.55	2.65	2.76
14.40	2.87	2.98	3.09	3.20	3.31
15.60	3.42	3.53	3.63	3.74	3.84
16.80	3.94	4.04	4.12	4.21	4.29
18.00	4.37	4.43	4.49	4.55	4.61
19.20	4.66	4.70	4.74	4.78	4.81
20.40	4.84	4.87	4.90	4.92	4.94
21.60	4.96	4.98	5.00	5.02	5.04
22.80	5.06	5.08	5.10	5.11	5.13
24.00	5.15	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

Time-Depth Curve: 240 hr 10 yr	
Label	240 hr 10 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.18
12.00	0.23	0.28	0.33	0.38	0.43
24.00	0.47	0.52	0.56	0.61	0.67
36.00	0.72	0.77	0.83	0.88	0.93
48.00	0.99	1.04	1.10	1.15	1.20
60.00	1.26	1.31	1.36	1.42	1.47
72.00	1.52	1.57	1.61	1.66	1.71
84.00	1.76	1.81	1.86	1.91	1.96
96.00	2.01	2.06	2.12	2.17	2.23
108.00	2.29	2.35	2.41	2.46	2.52
120.00	2.58	2.63	2.68	2.74	2.79
132.00	2.84	2.88	2.93	2.98	3.03
144.00	3.07	3.12	3.16	3.21	3.26
156.00	3.32	3.37	3.43	3.50	3.58
168.00	3.66	3.74	3.86	3.99	4.11
180.00	4.23	4.39	4.55	4.71	4.87
192.00	5.06	5.25	5.45	5.64	5.85
204.00	6.07	6.28	6.50	6.70	6.89
216.00	7.08	7.27	7.44	7.57	7.69
228.00	7.82	7.94	8.01	8.09	8.17
240.00	8.25	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

Time-Depth Curve: 3 hr 10 yr	
Label	3 hr 10 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.13	0.20	0.26
0.15	0.34	0.41	0.49	0.56	0.64
0.30	0.72	0.80	0.89	0.97	1.05
0.45	1.13	1.21	1.29	1.36	1.43
0.60	1.51	1.58	1.64	1.70	1.77
0.75	1.83	1.88	1.94	1.99	2.05
0.90	2.09	2.13	2.17	2.21	2.24
1.05	2.27	2.29	2.32	2.35	2.38
1.20	2.40	2.43	2.46	2.48	2.50
1.35	2.52	2.54	2.57	2.59	2.61
1.50	2.63	2.66	2.68	2.70	2.72
1.65	2.74	2.76	2.78	2.80	2.82
1.80	2.84	2.86	2.88	2.89	2.91
1.95	2.93	2.94	2.96	2.97	2.98
2.10	3.00	3.01	3.02	3.03	3.05
2.25	3.06	3.07	3.08	3.09	3.10
2.40	3.11	3.12	3.13	3.14	3.15
2.55	3.16	3.17	3.18	3.19	3.20
2.70	3.21	3.22	3.23	3.24	3.25
2.85	3.25	3.26	3.27	3.28	3.29
3.00	3.30	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

Time-Depth Curve: 30 min 10 yr	
Label	30 min 10 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.11	0.15
0.03	0.20	0.24	0.28	0.32	0.37
0.05	0.42	0.47	0.51	0.56	0.61
0.08	0.65	0.70	0.75	0.79	0.83
0.10	0.87	0.91	0.95	0.99	1.02
0.13	1.06	1.09	1.12	1.15	1.18
0.15	1.21	1.23	1.25	1.28	1.29
0.18	1.31	1.33	1.34	1.36	1.38
0.20	1.39	1.41	1.42	1.43	1.45
0.23	1.46	1.47	1.49	1.50	1.51
0.25	1.52	1.54	1.55	1.56	1.57
0.28	1.59	1.60	1.61	1.62	1.63
0.30	1.64	1.65	1.66	1.67	1.68
0.33	1.69	1.70	1.71	1.72	1.73
0.35	1.73	1.74	1.75	1.76	1.76
0.38	1.77	1.78	1.78	1.79	1.79
0.40	1.80	1.81	1.81	1.82	1.83
0.43	1.83	1.84	1.84	1.85	1.85
0.45	1.86	1.86	1.87	1.87	1.88
0.48	1.88	1.89	1.89	1.90	1.90
0.50	1.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

Time-Depth Curve: 48 hr 10 yr	
Label	48 hr 10 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.12
2.40	0.16	0.19	0.22	0.26	0.29
4.80	0.32	0.35	0.38	0.42	0.45
7.20	0.49	0.53	0.56	0.60	0.64
9.60	0.67	0.71	0.75	0.78	0.82
12.00	0.86	0.89	0.93	0.96	1.00
14.40	1.03	1.07	1.10	1.13	1.17
16.80	1.20	1.23	1.27	1.30	1.34
19.20	1.37	1.40	1.44	1.48	1.52
21.60	1.56	1.60	1.64	1.68	1.72
24.00	1.76	1.79	1.83	1.86	1.90
26.40	1.93	1.97	2.00	2.03	2.06
28.80	2.09	2.12	2.15	2.19	2.22
31.20	2.26	2.29	2.33	2.39	2.44
33.60	2.49	2.55	2.63	2.71	2.80
36.00	2.88	2.99	3.10	3.21	3.32
38.40	3.44	3.58	3.71	3.84	3.99
40.80	4.13	4.28	4.43	4.56	4.69
43.20	4.82	4.95	5.07	5.16	5.24
45.60	5.33	5.41	5.46	5.51	5.57
48.00	5.62	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

Time-Depth Curve: 6 hr 10 yr	
Label	6 hr 10 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.08	0.15	0.23	0.31
0.30	0.40	0.48	0.57	0.66	0.75
0.60	0.84	0.94	1.04	1.13	1.23
0.90	1.32	1.42	1.51	1.59	1.68
1.20	1.76	1.84	1.92	1.99	2.07
1.50	2.14	2.20	2.27	2.33	2.39
1.80	2.44	2.49	2.53	2.58	2.62
2.10	2.65	2.68	2.72	2.75	2.78
2.40	2.81	2.84	2.87	2.90	2.92
2.70	2.95	2.98	3.00	3.03	3.05
3.00	3.08	3.11	3.13	3.16	3.18
3.30	3.21	3.23	3.26	3.28	3.30
3.60	3.32	3.34	3.36	3.38	3.40
3.90	3.42	3.44	3.46	3.47	3.49
4.20	3.51	3.52	3.54	3.55	3.56
4.50	3.58	3.59	3.60	3.62	3.63
4.80	3.64	3.65	3.66	3.68	3.69
5.10	3.70	3.71	3.72	3.73	3.74
5.40	3.75	3.77	3.78	3.79	3.80
5.70	3.81	3.82	3.83	3.84	3.85
6.00	3.86	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

Time-Depth Curve: 72 hr 10 yr	
Label	72 hr 10 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.07	0.10	0.13
3.60	0.17	0.21	0.24	0.28	0.31
7.20	0.35	0.38	0.41	0.45	0.49
10.80	0.53	0.57	0.61	0.64	0.68
14.40	0.72	0.76	0.80	0.84	0.88
18.00	0.92	0.96	1.00	1.04	1.08
21.60	1.11	1.15	1.18	1.22	1.25
25.20	1.29	1.33	1.36	1.40	1.44
28.80	1.47	1.51	1.55	1.59	1.64
32.40	1.68	1.72	1.76	1.81	1.85
36.00	1.89	1.93	1.97	2.01	2.04
39.60	2.08	2.12	2.15	2.19	2.22
43.20	2.25	2.29	2.32	2.36	2.39
46.80	2.43	2.47	2.51	2.57	2.63
50.40	2.68	2.74	2.83	2.92	3.01
54.00	3.10	3.22	3.34	3.45	3.57
57.60	3.71	3.85	3.99	4.14	4.29
61.20	4.45	4.61	4.76	4.91	5.05
64.80	5.19	5.33	5.46	5.55	5.64
68.40	5.73	5.82	5.88	5.93	5.99
72.00	6.05	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations
Label: Area to Depressional Area
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.16 ft/s
Segment Time of Concentration	0.18 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.19 ft/s
Segment Time of Concentration	0.15 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	181.00 ft
Is Paved?	False
Slope	0.038 ft/ft
Average Velocity	3.15 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.17 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.052 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.17 ft/s
Segment Time of Concentration	0.16 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	230.00 ft
Is Paved?	False
Slope	0.052 ft/ft
Average Velocity	3.68 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

Subsection: Time of Concentration Calculations
Label: Area to West
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area
Label: Area to Depressional Area
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Area to South
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Area to West
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.38 hours
Flow (Peak, Computed)	2.60 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.38 hours
Flow (Peak Interpolated Output)	2.59 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.74 in
Runoff Volume (Pervious)	0.119 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.119 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.99 hours
Flow (Peak, Computed)	0.98 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.98 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.28 in
Runoff Volume (Pervious)	0.369 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.24 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.24 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.19 in
Runoff Volume (Pervious)	0.678 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.679 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.24 hours
Flow (Peak, Computed)	1.59 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.24 hours
Flow (Peak Interpolated Output)	1.59 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.19 in
Runoff Volume (Pervious)	0.030 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.030 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 15 min

Return Event: 10.00 years
Storm Event: 15 min 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.93 hours
Flow (Peak, Computed)	0.83 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.83 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.58 in
Runoff Volume (Pervious)	0.417 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.417 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.61 hours
Flow (Peak, Computed)	2.38 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.61 hours
Flow (Peak Interpolated Output)	2.38 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.12 in
Runoff Volume (Pervious)	0.182 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.182 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.88 hours
Flow (Peak, Computed)	0.68 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.68 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.84 in
Runoff Volume (Pervious)	0.460 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.460 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.80 hours
Flow (Peak, Computed)	0.16 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.16 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.62 in
Runoff Volume (Pervious)	0.910 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.911 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	2.00 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.82 hours
Flow (Peak Interpolated Output)	2.00 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.35 in
Runoff Volume (Pervious)	0.218 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.218 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.28 hours
Flow (Peak, Computed)	2.31 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.29 hours
Flow (Peak Interpolated Output)	2.31 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.43 in
Runoff Volume (Pervious)	0.070 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.070 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.49 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.49 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.525 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.526 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.53 hours
Flow (Peak, Computed)	1.37 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.53 hours
Flow (Peak Interpolated Output)	1.37 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.78 in
Runoff Volume (Pervious)	0.288 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.288 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.36 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.36 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.62 in
Runoff Volume (Pervious)	0.587 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.587 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.38 hours
Flow (Peak, Computed)	1.59 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.38 hours
Flow (Peak Interpolated Output)	1.59 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.65 in
Runoff Volume (Pervious)	0.074 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.074 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	5.00 hours
Flow (Peak, Computed)	0.64 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.64 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.11 in
Runoff Volume (Pervious)	0.241 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.241 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.17 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.17 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.97 in
Runoff Volume (Pervious)	0.453 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.454 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 15 min

Return Event: 10.00 years
Storm Event: 15 min 10 yr

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.24 hours
Flow (Peak, Computed)	0.92 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	0.91 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.15 in
Runoff Volume (Pervious)	0.017 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.017 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 15 min

Return Event: 10.00 years
Storm Event: 15 min 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 18 hr

Return Event: 10.00 years
Storm Event: 18 hr 10 yr

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.93 hours
Flow (Peak, Computed)	0.55 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.55 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.40 in
Runoff Volume (Pervious)	0.274 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.274 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 18 hr

Return Event: 10.00 years
Storm Event: 18 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.62 hours
Flow (Peak, Computed)	1.50 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.62 hours
Flow (Peak Interpolated Output)	1.50 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.01 in
Runoff Volume (Pervious)	0.115 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.115 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.46 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.46 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.66 in
Runoff Volume (Pervious)	0.303 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.303 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.11 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.11 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.39 in
Runoff Volume (Pervious)	0.614 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.614 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	1.27 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.82 hours
Flow (Peak Interpolated Output)	1.27 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.22 in
Runoff Volume (Pervious)	0.139 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.139 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.31 hours
Flow (Peak, Computed)	1.38 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.31 hours
Flow (Peak Interpolated Output)	1.38 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.37 in
Runoff Volume (Pervious)	0.042 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.042 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.77 hours
Flow (Peak, Computed)	0.33 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.33 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.05 in
Runoff Volume (Pervious)	0.348 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.349 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.53 hours
Flow (Peak, Computed)	0.88 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.53 hours
Flow (Peak Interpolated Output)	0.88 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.63 in
Runoff Volume (Pervious)	0.186 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.186 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.25 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.24 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.42 in
Runoff Volume (Pervious)	0.390 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.391 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.40 hours
Flow (Peak, Computed)	3.98 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.40 hours
Flow (Peak Interpolated Output)	3.98 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.56 in
Runoff Volume (Pervious)	0.193 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.193 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	5.05 hours
Flow (Peak, Computed)	1.78 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.77 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.96 in
Runoff Volume (Pervious)	0.671 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.671 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.39 hours
Flow (Peak, Computed)	0.49 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.49 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.76 in
Runoff Volume (Pervious)	1.291 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.293 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.26 hours
Flow (Peak, Computed)	2.11 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.26 hours
Flow (Peak Interpolated Output)	2.10 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.11 in
Runoff Volume (Pervious)	0.039 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.039 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.94 hours
Flow (Peak, Computed)	1.58 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.58 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.24 in
Runoff Volume (Pervious)	0.767 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.767 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.63 hours
Flow (Peak, Computed)	3.93 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.63 hours
Flow (Peak Interpolated Output)	3.93 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.90 in
Runoff Volume (Pervious)	0.309 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.309 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.88 hours
Flow (Peak, Computed)	1.30 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	1.30 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.48 in
Runoff Volume (Pervious)	0.852 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.852 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.32 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.32 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.15 in
Runoff Volume (Pervious)	1.766 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.767 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.87 hours
Flow (Peak, Computed)	3.38 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.87 hours
Flow (Peak Interpolated Output)	3.38 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.10 in
Runoff Volume (Pervious)	0.379 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.379 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	3.44 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	3.44 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.31 in
Runoff Volume (Pervious)	0.106 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.106 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.78 hours
Flow (Peak, Computed)	0.96 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.96 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.87 in
Runoff Volume (Pervious)	0.984 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.985 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.55 hours
Flow (Peak, Computed)	2.42 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.55 hours
Flow (Peak Interpolated Output)	2.42 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.49 in
Runoff Volume (Pervious)	0.513 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.513 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.71 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.71 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.23 in
Runoff Volume (Pervious)	1.107 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.108 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Requested Pond Water Surface Elevations	
Minimum (Headwater)	841.00 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	845.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Existing CB	Forward	TW	841.58	845.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Existing CB Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	841.58 ft
Orifice Diameter	12.00 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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Project Summary	
Title	24-136 Existing Conditions PondPack Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Existing Conditions Critical Duration Analysis

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Subsection: User Notifications

User Notifications?	No user notifications generated.

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to Depressional Area	50 yr 10 min	50.00	0.044	0.19	2.73
Area to Depressional Area	50 yr 15 min	50.00	0.081	0.22	4.17
Area to Depressional Area	50 yr 30 min	50.00	0.158	0.26	5.46
Area to Depressional Area	50 yr 1 hr	50.00	0.246	0.36	5.70
Area to Depressional Area	50 yr 2 hr	50.00	0.351	0.57	4.78
Area to Depressional Area	50 yr 3 hr	50.00	0.412	0.77	3.88
Area to Depressional Area	50 yr 6 hr	50.00	0.527	1.30	2.58
Area to Depressional Area	50 yr 12 hr	50.00	0.656	5.00	1.72
Area to Depressional Area	50 yr 18 hr	50.00	0.732	11.90	1.37
Area to Depressional Area	50 yr 24 hr	50.00	0.798	15.90	1.11
Area to Depressional Area	50 yr 48 hr	50.00	0.893	41.50	0.77
Area to Depressional Area	50 yr 72 hr	50.00	0.970	62.50	0.55
Area to Depressional Area	50 yr 120 hr	50.00	1.084	104.00	0.36
Area to Depressional Area	50 yr 240 hr	50.00	1.371	208.50	0.22
Area to West	50 yr 10 min	50.00	0.060	0.21	3.86
Area to West	50 yr 15 min	50.00	0.125	0.24	6.47
Area to West	50 yr 30 min	50.00	0.265	0.28	8.87
Area to West	50 yr 1 hr	50.00	0.432	0.37	9.69
Area to West	50 yr 2 hr	50.00	0.637	0.59	8.50
Area to West	50 yr 3 hr	50.00	0.757	0.80	7.04
Area to West	50 yr 6 hr	50.00	0.987	1.32	4.73
Area to West	50 yr 12 hr	50.00	1.247	5.00	3.30
Area to West	50 yr 18 hr	50.00	1.401	11.90	2.71
Area to West	50 yr 24 hr	50.00	1.537	15.90	2.21
Area to West	50 yr 48 hr	50.00	1.731	41.50	1.56
Area to West	50 yr 72 hr	50.00	1.889	62.50	1.12
Area to West	50 yr 120 hr	50.00	2.124	104.00	0.74
Area to West	50 yr 240 hr	50.00	2.717	208.50	0.46
Area to South	50 yr 10 min	50.00	0.025	0.20	1.64
Area to South	50 yr 15 min	50.00	0.049	0.22	2.60
Area to South	50 yr 30 min	50.00	0.099	0.26	3.44
Area to South	50 yr 1 hr	50.00	0.158	0.36	3.67

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to South	50 yr 2 hr	50.00	0.229	0.57	3.11
Area to South	50 yr 3 hr	50.00	0.270	0.78	2.54
Area to South	50 yr 6 hr	50.00	0.349	1.31	1.70
Area to South	50 yr 12 hr	50.00	0.438	5.00	1.16
Area to South	50 yr 18 hr	50.00	0.490	11.90	0.93
Area to South	50 yr 24 hr	50.00	0.536	15.90	0.76
Area to South	50 yr 48 hr	50.00	0.602	41.50	0.53
Area to South	50 yr 72 hr	50.00	0.656	62.50	0.38
Area to South	50 yr 120 hr	50.00	0.735	104.00	0.25
Area to South	50 yr 240 hr	50.00	0.934	208.50	0.16

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From Existing Depressional Area	50 yr 10 min	50.00	0.044	0.31	1.13
From Existing Depressional Area	50 yr 15 min	50.00	0.081	0.36	1.87
From Existing Depressional Area	50 yr 30 min	50.00	0.158	0.50	2.93
From Existing Depressional Area	50 yr 1 hr	50.00	0.246	0.66	3.15
From Existing Depressional Area	50 yr 2 hr	50.00	0.351	0.80	3.17
From Existing Depressional Area	50 yr 3 hr	50.00	0.412	1.03	3.01
From Existing Depressional Area	50 yr 6 hr	50.00	0.527	1.64	2.34
From Existing Depressional Area	50 yr 12 hr	50.00	0.656	5.20	1.64
From Existing Depressional Area	50 yr 18 hr	50.00	0.732	12.10	1.35
From Existing Depressional Area	50 yr 24 hr	50.00	0.798	16.00	1.10
From Existing Depressional Area	50 yr 48 hr	50.00	0.893	41.50	0.77
From Existing Depressional Area	50 yr 72 hr	50.00	0.970	62.50	0.55
From Existing Depressional Area	50 yr 120 hr	50.00	1.084	104.00	0.36
From Existing Depressional Area	50 yr 240 hr	50.00	1.371	208.50	0.22
To West	50 yr 10 min	50.00	0.060	0.21	3.86
To West	50 yr 15 min	50.00	0.125	0.24	6.47
To West	50 yr 30 min	50.00	0.265	0.28	8.87

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
To West	50 yr 1 hr	50.00	0.432	0.37	9.69
To West	50 yr 2 hr	50.00	0.637	0.59	8.50
To West	50 yr 3 hr	50.00	0.757	0.80	7.04
To West	50 yr 6 hr	50.00	0.987	1.32	4.73
To West	50 yr 12 hr	50.00	1.247	5.00	3.30
To West	50 yr 18 hr	50.00	1.401	11.90	2.71
To West	50 yr 24 hr	50.00	1.537	15.90	2.21
To West	50 yr 48 hr	50.00	1.731	41.50	1.56
To West	50 yr 72 hr	50.00	1.889	62.50	1.12
To West	50 yr 120 hr	50.00	2.124	104.00	0.74
To West	50 yr 240 hr	50.00	2.717	208.50	0.46
To South	50 yr 10 min	50.00	0.025	0.20	1.64
To South	50 yr 15 min	50.00	0.049	0.22	2.60
To South	50 yr 30 min	50.00	0.099	0.26	3.44
To South	50 yr 1 hr	50.00	0.158	0.36	3.67
To South	50 yr 2 hr	50.00	0.229	0.57	3.11
To South	50 yr 3 hr	50.00	0.270	0.78	2.54
To South	50 yr 6 hr	50.00	0.349	1.31	1.70
To South	50 yr 12 hr	50.00	0.438	5.00	1.16
To South	50 yr 18 hr	50.00	0.490	11.90	0.93
To South	50 yr 24 hr	50.00	0.536	15.90	0.76
To South	50 yr 48 hr	50.00	0.602	41.50	0.53
To South	50 yr 72 hr	50.00	0.656	62.50	0.38
To South	50 yr 120 hr	50.00	0.735	104.00	0.25
To South	50 yr 240 hr	50.00	0.934	208.50	0.16

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	50 yr 10 min	50.00	0.044	0.19	2.73	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 10 min	50.00	0.044	0.31	1.13	842.20	0.021
Existing Depressional Area (IN)	50 yr 15 min	50.00	0.081	0.22	4.17	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 15 min	50.00	0.081	0.36	1.87	842.40	0.041

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	50 yr 30 min	50.00	0.158	0.26	5.46	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 30 min	50.00	0.158	0.50	2.93	842.66	0.068
Existing Depressional Area (IN)	50 yr 1 hr	50.00	0.246	0.36	5.70	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 1 hr	50.00	0.246	0.66	3.15	842.75	0.077
Existing Depressional Area (IN)	50 yr 2 hr	50.00	0.351	0.57	4.78	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 2 hr	50.00	0.351	0.80	3.17	842.76	0.078
Existing Depressional Area (IN)	50 yr 3 hr	50.00	0.412	0.77	3.88	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 3 hr	50.00	0.412	1.03	3.01	842.69	0.071
Existing Depressional Area (IN)	50 yr 6 hr	50.00	0.527	1.30	2.58	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 6 hr	50.00	0.527	1.64	2.34	842.52	0.054
Existing Depressional Area (IN)	50 yr 12 hr	50.00	0.656	5.00	1.72	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 12 hr	50.00	0.656	5.20	1.64	842.34	0.035
Existing Depressional Area (IN)	50 yr 18 hr	50.00	0.732	11.90	1.37	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 18 hr	50.00	0.732	12.10	1.35	842.26	0.027
Existing Depressional Area (IN)	50 yr 24 hr	50.00	0.798	15.90	1.11	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (OUT)	50 yr 24 hr	50.00	0.798	16.00	1.10	842.19	0.019
Existing Depressional Area (IN)	50 yr 48 hr	50.00	0.893	41.50	0.77	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 48 hr	50.00	0.893	41.50	0.77	842.08	0.008
Existing Depressional Area (IN)	50 yr 72 hr	50.00	0.970	62.50	0.55	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 72 hr	50.00	0.970	62.50	0.55	842.00	0.000
Existing Depressional Area (IN)	50 yr 120 hr	50.00	1.084	104.00	0.36	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 120 hr	50.00	1.084	104.00	0.36	841.92	0.000
Existing Depressional Area (IN)	50 yr 240 hr	50.00	1.371	208.50	0.22	(N/A)	(N/A)
Existing Depressional Area (OUT)	50 yr 240 hr	50.00	1.371	208.50	0.22	841.84	0.000

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

Time-Depth Curve: 1 hr 50 yr	
Label	1 hr 50 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.14	0.21	0.28
0.05	0.36	0.44	0.52	0.60	0.68
0.10	0.77	0.86	0.95	1.04	1.12
0.15	1.21	1.30	1.38	1.46	1.53
0.20	1.61	1.69	1.75	1.82	1.89
0.25	1.96	2.02	2.07	2.13	2.19
0.30	2.23	2.27	2.32	2.36	2.39
0.35	2.42	2.45	2.48	2.51	2.54
0.40	2.57	2.60	2.63	2.65	2.67
0.45	2.70	2.72	2.75	2.77	2.79
0.50	2.82	2.84	2.86	2.89	2.91
0.55	2.93	2.95	2.98	3.00	3.02
0.60	3.04	3.06	3.08	3.09	3.11
0.65	3.13	3.15	3.16	3.18	3.19
0.70	3.21	3.22	3.23	3.25	3.26
0.75	3.27	3.28	3.29	3.31	3.32
0.80	3.33	3.34	3.35	3.36	3.37
0.85	3.38	3.39	3.40	3.41	3.42
0.90	3.43	3.44	3.45	3.46	3.47
0.95	3.48	3.49	3.50	3.51	3.52
1.00	3.53	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

Time-Depth Curve: 10 min 50 yr	
Label	10 min 50 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.17 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.10	0.13
0.01	0.16	0.20	0.23	0.27	0.31
0.02	0.35	0.39	0.42	0.46	0.50
0.03	0.54	0.58	0.62	0.65	0.69
0.03	0.72	0.75	0.79	0.82	0.85
0.04	0.88	0.90	0.93	0.95	0.98
0.05	1.00	1.02	1.04	1.06	1.07
0.06	1.08	1.10	1.11	1.13	1.14
0.07	1.15	1.16	1.18	1.19	1.20
0.08	1.21	1.22	1.23	1.24	1.25
0.08	1.26	1.27	1.28	1.29	1.30
0.09	1.31	1.32	1.33	1.34	1.35
0.10	1.36	1.37	1.38	1.38	1.39
0.11	1.40	1.41	1.42	1.42	1.43
0.12	1.44	1.44	1.45	1.45	1.46
0.13	1.46	1.47	1.47	1.48	1.48
0.13	1.49	1.49	1.50	1.51	1.51
0.14	1.51	1.52	1.52	1.53	1.53
0.15	1.54	1.54	1.55	1.55	1.55
0.16	1.56	1.56	1.57	1.57	1.58
0.17	1.58	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

Time-Depth Curve: 12 hr 50 yr	
Label	12 hr 50 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.14
0.60	0.18	0.22	0.26	0.30	0.35
1.20	0.39	0.44	0.48	0.54	0.59
1.80	0.65	0.70	0.76	0.83	0.90
2.40	0.97	1.05	1.13	1.22	1.31
3.00	1.40	1.51	1.62	1.73	1.84
3.60	1.96	2.09	2.21	2.34	2.47
4.20	2.61	2.75	2.89	3.03	3.17
4.80	3.31	3.45	3.59	3.72	3.84
5.40	3.97	4.09	4.21	4.32	4.44
6.00	4.56	4.64	4.73	4.82	4.91
6.60	4.99	5.07	5.15	5.22	5.29
7.20	5.36	5.43	5.50	5.56	5.60
7.80	5.65	5.70	5.75	5.78	5.82
8.40	5.86	5.90	5.93	5.96	5.99
9.00	6.02	6.04	6.07	6.10	6.12
9.60	6.15	6.17	6.19	6.21	6.24
10.20	6.26	6.28	6.30	6.32	6.33
10.80	6.35	6.37	6.39	6.41	6.42
11.40	6.44	6.46	6.48	6.49	6.51
12.00	6.53	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

Time-Depth Curve: 120 hr 50 ry	
Label	120 hr 50 ry
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.16	0.21
6.00	0.26	0.32	0.38	0.43	0.48
12.00	0.54	0.59	0.64	0.70	0.76
18.00	0.82	0.88	0.94	1.00	1.06
24.00	1.12	1.19	1.25	1.31	1.37
30.00	1.43	1.49	1.55	1.61	1.67
36.00	1.73	1.78	1.84	1.89	1.95
42.00	2.00	2.06	2.12	2.17	2.23
48.00	2.29	2.35	2.41	2.47	2.54
54.00	2.61	2.67	2.74	2.80	2.87
60.00	2.93	2.99	3.05	3.11	3.17
66.00	3.23	3.28	3.34	3.39	3.45
72.00	3.50	3.55	3.60	3.66	3.71
78.00	3.77	3.83	3.90	3.99	4.07
84.00	4.16	4.26	4.40	4.54	4.68
90.00	4.82	5.00	5.18	5.36	5.54
96.00	5.75	5.98	6.20	6.42	6.66
102.00	6.90	7.15	7.39	7.63	7.84
108.00	8.06	8.28	8.47	8.61	8.76
114.00	8.90	9.03	9.12	9.21	9.30
120.00	9.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

Time-Depth Curve: 15 min 50 yr	
Label	15 min 50 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.01	0.21	0.25	0.30	0.34	0.39
0.03	0.44	0.49	0.55	0.60	0.65
0.04	0.70	0.74	0.79	0.84	0.88
0.05	0.93	0.97	1.01	1.05	1.09
0.06	1.13	1.16	1.19	1.23	1.26
0.08	1.28	1.31	1.33	1.36	1.38
0.09	1.39	1.41	1.43	1.45	1.46
0.10	1.48	1.49	1.51	1.52	1.54
0.11	1.55	1.56	1.58	1.59	1.61
0.13	1.62	1.63	1.65	1.66	1.67
0.14	1.69	1.70	1.71	1.72	1.74
0.15	1.75	1.76	1.77	1.78	1.79
0.16	1.80	1.81	1.82	1.83	1.84
0.18	1.84	1.85	1.86	1.87	1.87
0.19	1.88	1.89	1.89	1.90	1.91
0.20	1.91	1.92	1.93	1.93	1.94
0.21	1.95	1.95	1.96	1.96	1.97
0.23	1.97	1.98	1.99	1.99	2.00
0.24	2.00	2.01	2.01	2.02	2.02
0.25	2.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

Time-Depth Curve: 18 hr 50 yr	
Label	18 hr 50 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.07	0.10	0.14
0.90	0.18	0.21	0.25	0.29	0.33
1.80	0.37	0.41	0.45	0.49	0.53
2.70	0.57	0.62	0.66	0.70	0.75
3.60	0.79	0.83	0.88	0.92	0.97
4.50	1.01	1.06	1.10	1.14	1.18
5.40	1.23	1.28	1.32	1.37	1.42
6.30	1.47	1.53	1.58	1.64	1.70
7.20	1.76	1.82	1.88	1.96	2.04
8.10	2.12	2.20	2.29	2.38	2.47
9.00	2.56	2.69	2.82	2.95	3.07
9.90	3.21	3.35	3.49	3.63	3.77
10.80	3.93	4.08	4.23	4.38	4.53
11.70	4.68	4.83	4.97	5.11	5.25
12.60	5.40	5.53	5.65	5.76	5.87
13.50	5.99	6.07	6.15	6.23	6.31
14.40	6.37	6.43	6.49	6.55	6.59
15.30	6.63	6.66	6.70	6.74	6.77
16.20	6.79	6.82	6.85	6.88	6.90
17.10	6.93	6.95	6.98	7.00	7.03
18.00	7.05	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

Time-Depth Curve: 2 hr 50 yr	
Label	2 hr 50 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.09	0.17	0.26	0.35
0.10	0.45	0.54	0.64	0.74	0.84
0.20	0.95	1.06	1.17	1.28	1.38
0.30	1.49	1.60	1.70	1.79	1.89
0.40	1.98	2.08	2.16	2.25	2.33
0.50	2.41	2.48	2.56	2.63	2.70
0.60	2.75	2.80	2.85	2.91	2.95
0.70	2.99	3.02	3.06	3.10	3.13
0.80	3.17	3.20	3.24	3.27	3.29
0.90	3.32	3.35	3.38	3.41	3.44
1.00	3.47	3.50	3.53	3.56	3.59
1.10	3.61	3.64	3.67	3.70	3.72
1.20	3.74	3.77	3.79	3.81	3.83
1.30	3.86	3.88	3.90	3.92	3.93
1.40	3.95	3.97	3.98	4.00	4.02
1.50	4.03	4.05	4.06	4.07	4.09
1.60	4.10	4.12	4.13	4.14	4.16
1.70	4.17	4.18	4.19	4.21	4.22
1.80	4.23	4.24	4.26	4.27	4.28
1.90	4.29	4.30	4.31	4.33	4.34
2.00	4.35	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

Time-Depth Curve: 24 hr 50 yr	
Label	24 hr 50 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.15
1.20	0.19	0.23	0.27	0.31	0.35
2.40	0.39	0.44	0.48	0.52	0.57
3.60	0.61	0.65	0.70	0.75	0.79
4.80	0.84	0.89	0.93	0.98	1.03
6.00	1.08	1.12	1.17	1.21	1.26
7.20	1.31	1.36	1.41	1.46	1.51
8.40	1.57	1.62	1.68	1.74	1.80
9.60	1.87	1.93	2.00	2.09	2.17
10.80	2.25	2.34	2.43	2.53	2.63
12.00	2.73	2.86	3.00	3.14	3.27
13.20	3.42	3.56	3.71	3.86	4.02
14.40	4.18	4.34	4.50	4.66	4.82
15.60	4.98	5.14	5.29	5.44	5.59
16.80	5.74	5.88	6.01	6.13	6.25
18.00	6.37	6.46	6.54	6.63	6.72
19.20	6.78	6.84	6.90	6.96	7.01
20.40	7.05	7.09	7.13	7.17	7.20
21.60	7.23	7.26	7.29	7.32	7.34
22.80	7.37	7.40	7.42	7.45	7.47
24.00	7.50	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

Time-Depth Curve: 240 hr 50 yr	
Label	240 hr 50 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.19	0.25
12.00	0.32	0.38	0.45	0.52	0.58
24.00	0.64	0.71	0.77	0.84	0.91
36.00	0.98	1.05	1.13	1.20	1.27
48.00	1.35	1.42	1.50	1.57	1.64
60.00	1.71	1.79	1.86	1.93	2.00
72.00	2.07	2.14	2.20	2.27	2.33
84.00	2.40	2.47	2.54	2.61	2.68
96.00	2.74	2.81	2.89	2.97	3.05
108.00	3.13	3.21	3.28	3.36	3.44
120.00	3.52	3.59	3.66	3.73	3.81
132.00	3.87	3.94	4.00	4.07	4.13
144.00	4.19	4.26	4.32	4.38	4.45
156.00	4.53	4.60	4.68	4.78	4.89
168.00	4.99	5.10	5.27	5.44	5.61
180.00	5.78	5.99	6.21	6.43	6.64
192.00	6.90	7.17	7.43	7.70	7.99
204.00	8.28	8.57	8.87	9.14	9.41
216.00	9.67	9.93	10.16	10.33	10.50
228.00	10.67	10.83	10.94	11.05	11.15
240.00	11.26	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

Time-Depth Curve: 3 hr 50 yr	
Label	3 hr 50 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.10	0.19	0.29	0.39
0.15	0.49	0.60	0.71	0.82	0.93
0.30	1.05	1.17	1.29	1.41	1.53
0.45	1.64	1.76	1.87	1.98	2.08
0.60	2.19	2.29	2.39	2.48	2.57
0.75	2.66	2.74	2.82	2.90	2.98
0.90	3.04	3.09	3.15	3.21	3.25
1.05	3.30	3.34	3.38	3.42	3.46
1.20	3.50	3.53	3.57	3.60	3.64
1.35	3.67	3.70	3.73	3.77	3.80
1.50	3.83	3.86	3.89	3.93	3.96
1.65	3.99	4.02	4.05	4.08	4.11
1.80	4.13	4.16	4.18	4.21	4.23
1.95	4.25	4.28	4.30	4.32	4.34
2.10	4.36	4.38	4.40	4.41	4.43
2.25	4.45	4.46	4.48	4.50	4.51
2.40	4.53	4.54	4.56	4.57	4.59
2.55	4.60	4.61	4.63	4.64	4.66
2.70	4.67	4.68	4.70	4.71	4.72
2.85	4.73	4.75	4.76	4.77	4.79
3.00	4.80	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

Time-Depth Curve: 30 min 50 yr	
Label	30 min 50 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.11	0.17	0.22
0.03	0.28	0.35	0.41	0.47	0.54
0.05	0.61	0.68	0.75	0.82	0.88
0.08	0.95	1.02	1.09	1.15	1.21
0.10	1.27	1.33	1.38	1.44	1.49
0.13	1.54	1.59	1.63	1.68	1.72
0.15	1.76	1.79	1.82	1.86	1.88
0.18	1.91	1.93	1.96	1.98	2.00
0.20	2.02	2.05	2.07	2.09	2.11
0.23	2.12	2.14	2.16	2.18	2.20
0.25	2.22	2.24	2.26	2.27	2.29
0.28	2.31	2.33	2.34	2.36	2.38
0.30	2.39	2.41	2.42	2.44	2.45
0.33	2.46	2.48	2.49	2.50	2.51
0.35	2.53	2.54	2.55	2.56	2.57
0.38	2.58	2.59	2.59	2.60	2.61
0.40	2.62	2.63	2.64	2.65	2.66
0.43	2.66	2.67	2.68	2.69	2.70
0.45	2.70	2.71	2.72	2.73	2.73
0.48	2.74	2.75	2.76	2.76	2.77
0.50	2.78	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

Time-Depth Curve: 48 hr 50 yr	
Label	48 hr 50 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.18
2.40	0.23	0.28	0.32	0.37	0.42
4.80	0.47	0.51	0.56	0.60	0.66
7.20	0.71	0.76	0.81	0.87	0.92
9.60	0.97	1.03	1.08	1.13	1.19
12.00	1.24	1.29	1.34	1.40	1.45
14.40	1.50	1.54	1.59	1.64	1.69
16.80	1.73	1.78	1.83	1.88	1.93
19.20	1.98	2.03	2.08	2.14	2.20
21.60	2.26	2.31	2.37	2.43	2.48
24.00	2.54	2.59	2.64	2.70	2.75
26.40	2.80	2.84	2.89	2.94	2.98
28.80	3.03	3.07	3.12	3.16	3.22
31.20	3.27	3.32	3.38	3.45	3.53
33.60	3.60	3.69	3.81	3.93	4.05
36.00	4.17	4.33	4.48	4.64	4.80
38.40	4.98	5.18	5.37	5.56	5.77
40.80	5.98	6.19	6.40	6.60	6.79
43.20	6.98	7.17	7.33	7.46	7.58
45.60	7.71	7.82	7.90	7.98	8.05
48.00	8.13	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

Time-Depth Curve: 6 hr 50 yr	
Label	6 hr 50 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.11	0.23	0.34	0.45
0.30	0.58	0.70	0.83	0.96	1.09
0.60	1.23	1.37	1.51	1.65	1.79
0.90	1.93	2.07	2.20	2.32	2.45
1.20	2.57	2.69	2.80	2.91	3.02
1.50	3.12	3.22	3.31	3.40	3.49
1.80	3.56	3.63	3.69	3.76	3.82
2.10	3.87	3.91	3.96	4.01	4.06
2.40	4.10	4.15	4.19	4.23	4.26
2.70	4.30	4.34	4.38	4.42	4.45
3.00	4.49	4.53	4.57	4.60	4.64
3.30	4.68	4.71	4.75	4.78	4.82
3.60	4.85	4.88	4.91	4.93	4.96
3.90	4.99	5.02	5.04	5.07	5.09
4.20	5.11	5.14	5.16	5.18	5.20
4.50	5.22	5.24	5.25	5.27	5.29
4.80	5.31	5.33	5.34	5.36	5.38
5.10	5.40	5.41	5.43	5.44	5.46
5.40	5.48	5.49	5.51	5.52	5.54
5.70	5.55	5.57	5.58	5.60	5.61
6.00	5.63	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

Time-Depth Curve: 72 hr 50 yr	
Label	72 hr 50 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.14	0.19
3.60	0.24	0.29	0.35	0.40	0.45
7.20	0.49	0.54	0.59	0.64	0.70
10.80	0.75	0.81	0.86	0.92	0.98
14.40	1.04	1.09	1.15	1.20	1.26
18.00	1.32	1.37	1.43	1.48	1.54
21.60	1.59	1.64	1.69	1.74	1.79
25.20	1.84	1.89	1.95	2.00	2.05
28.80	2.11	2.16	2.22	2.28	2.34
32.40	2.40	2.46	2.52	2.58	2.64
36.00	2.70	2.75	2.81	2.86	2.92
39.60	2.97	3.02	3.07	3.12	3.17
43.20	3.22	3.26	3.31	3.36	3.42
46.80	3.47	3.53	3.59	3.67	3.75
50.40	3.83	3.92	4.05	4.17	4.30
54.00	4.43	4.60	4.76	4.93	5.10
57.60	5.30	5.50	5.70	5.91	6.13
61.20	6.35	6.58	6.80	7.02	7.22
64.80	7.42	7.62	7.79	7.93	8.06
68.40	8.19	8.31	8.39	8.48	8.56
72.00	8.64	(N/A)	(N/A)	(N/A)	(N/A)

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.16 ft/s
Segment Time of Concentration	0.18 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.19 ft/s
Segment Time of Concentration	0.15 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	181.00 ft
Is Paved?	False
Slope	0.038 ft/ft
Average Velocity	3.15 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.17 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.052 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.17 ft/s
Segment Time of Concentration	0.16 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	230.00 ft
Is Paved?	False
Slope	0.052 ft/ft
Average Velocity	3.68 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	5.72 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.36 hours
Flow (Peak Interpolated Output)	5.70 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.52 in
Runoff Volume (Pervious)	0.246 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.246 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	10 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	1.58 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.19 hours
Flow (Peak, Computed)	2.73 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.19 hours
Flow (Peak Interpolated Output)	2.73 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.27 in
Runoff Volume (Pervious)	0.044 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.044 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	1.72 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.72 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.05 in
Runoff Volume (Pervious)	0.656 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.656 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.37 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.36 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.69 in
Runoff Volume (Pervious)	1.083 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.084 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.21 hours
Flow (Peak, Computed)	4.17 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.22 hours
Flow (Peak Interpolated Output)	4.17 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.50 in
Runoff Volume (Pervious)	0.081 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.081 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.93 hours
Flow (Peak, Computed)	1.37 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.37 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.52 in
Runoff Volume (Pervious)	0.732 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.732 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.56 hours
Flow (Peak, Computed)	4.79 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.57 hours
Flow (Peak Interpolated Output)	4.78 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.17 in
Runoff Volume (Pervious)	0.351 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.351 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.86 hours
Flow (Peak, Computed)	1.11 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	1.11 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.93 in
Runoff Volume (Pervious)	0.798 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.798 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.80 hours
Flow (Peak, Computed)	0.22 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.22 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.46 in
Runoff Volume (Pervious)	1.370 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.371 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.78 hours
Flow (Peak, Computed)	3.88 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.77 hours
Flow (Peak Interpolated Output)	3.88 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.54 in
Runoff Volume (Pervious)	0.412 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.412 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.26 hours
Flow (Peak, Computed)	5.46 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.26 hours
Flow (Peak Interpolated Output)	5.46 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.97 in
Runoff Volume (Pervious)	0.158 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.158 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.77 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.77 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.51 in
Runoff Volume (Pervious)	0.892 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.893 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 48 hr
Return Event: 50.00 years
Storm Event: 48 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	2.58 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	2.58 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.527 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.527 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 6 hr
Return Event: 50.00 years
Storm Event: 6 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.55 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.55 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.99 in
Runoff Volume (Pervious)	0.969 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.970 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 72 hr
Return Event: 50.00 years
Storm Event: 72 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	3.68 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.36 hours
Flow (Peak Interpolated Output)	3.67 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.39 in
Runoff Volume (Pervious)	0.158 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.158 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 50 yr 1 hr
Return Event: 50.00 years
Storm Event: 1 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	10 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	1.58 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	1.65 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	1.64 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.22 in
Runoff Volume (Pervious)	0.025 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.025 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.98 hours
Flow (Peak, Computed)	1.16 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.16 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.84 in
Runoff Volume (Pervious)	0.438 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.438 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.25 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.25 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.44 in
Runoff Volume (Pervious)	0.734 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.735 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.22 hours
Flow (Peak, Computed)	2.60 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.22 hours
Flow (Peak Interpolated Output)	2.60 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.43 in
Runoff Volume (Pervious)	0.049 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.049 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.91 hours
Flow (Peak, Computed)	0.93 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.93 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.30 in
Runoff Volume (Pervious)	0.490 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.490 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.58 hours
Flow (Peak, Computed)	3.11 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.57 hours
Flow (Peak Interpolated Output)	3.11 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.01 in
Runoff Volume (Pervious)	0.229 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.229 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.76 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.76 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.71 in
Runoff Volume (Pervious)	0.536 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.536 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.16 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.16 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.19 in
Runoff Volume (Pervious)	0.934 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.934 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.77 hours
Flow (Peak, Computed)	2.54 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.78 hours
Flow (Peak Interpolated Output)	2.54 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.37 in
Runoff Volume (Pervious)	0.270 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.270 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.27 hours
Flow (Peak, Computed)	3.45 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.26 hours
Flow (Peak Interpolated Output)	3.44 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.87 in
Runoff Volume (Pervious)	0.099 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.099 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.77 hours
Flow (Peak, Computed)	0.53 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.53 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.28 in
Runoff Volume (Pervious)	0.602 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.602 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.31 hours
Flow (Peak, Computed)	1.70 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.31 hours
Flow (Peak Interpolated Output)	1.70 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.06 in
Runoff Volume (Pervious)	0.349 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.349 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.38 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.38 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.74 in
Runoff Volume (Pervious)	0.655 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.656 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.38 hours
Flow (Peak, Computed)	9.71 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.37 hours
Flow (Peak Interpolated Output)	9.69 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.26 in
Runoff Volume (Pervious)	0.432 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.432 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	10 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	1.58 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.21 hours
Flow (Peak, Computed)	3.86 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.21 hours
Flow (Peak Interpolated Output)	3.86 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.18 in
Runoff Volume (Pervious)	0.060 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.060 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.98 hours
Flow (Peak, Computed)	3.30 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	3.30 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.64 in
Runoff Volume (Pervious)	1.247 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.247 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.39 hours
Flow (Peak, Computed)	0.75 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.74 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.19 in
Runoff Volume (Pervious)	2.122 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.124 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	6.51 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.24 hours
Flow (Peak Interpolated Output)	6.47 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.36 in
Runoff Volume (Pervious)	0.125 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.125 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.91 hours
Flow (Peak, Computed)	2.71 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	2.71 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.09 in
Runoff Volume (Pervious)	1.401 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.401 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.59 hours
Flow (Peak, Computed)	8.51 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.59 hours
Flow (Peak Interpolated Output)	8.50 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.86 in
Runoff Volume (Pervious)	0.637 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.637 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.88 hours
Flow (Peak, Computed)	2.21 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	2.21 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.48 in
Runoff Volume (Pervious)	1.537 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.537 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.46 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.46 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.92 in
Runoff Volume (Pervious)	2.717 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.717 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.80 hours
Flow (Peak, Computed)	7.04 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	7.04 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.21 in
Runoff Volume (Pervious)	0.757 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.757 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.28 hours
Flow (Peak, Computed)	8.87 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.28 hours
Flow (Peak Interpolated Output)	8.87 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.77 in
Runoff Volume (Pervious)	0.265 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.265 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.56 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	1.56 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.04 in
Runoff Volume (Pervious)	1.729 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.731 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.32 hours
Flow (Peak, Computed)	4.73 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.32 hours
Flow (Peak Interpolated Output)	4.73 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.88 in
Runoff Volume (Pervious)	0.987 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.987 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	1.12 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	1.12 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.50 in
Runoff Volume (Pervious)	1.887 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.889 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Requested Pond Water Surface Elevations	
Minimum (Headwater)	841.00 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	845.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Existing CB	Forward	TW	841.58	845.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Existing CB Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	841.58 ft
Orifice Diameter	12.00 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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User Notifications...2

Existing 100-yr Critical Duration

Project Summary	
Title	24-136 Existing Conditions PondPack Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Existing Conditions Critical Duration Analysis

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Subsection: User Notifications

User Notifications?	No user notifications generated.

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to Depressional Area	100 yr 15 min	100.00	0.109	0.21	5.61
Area to Depressional Area	100 yr 30 min	100.00	0.203	0.26	7.12
Area to Depressional Area	100 yr 1 hr	100.00	0.309	0.35	7.30
Area to Depressional Area	100 yr 2 hr	100.00	0.435	0.56	5.98
Area to Depressional Area	100 yr 3 hr	100.00	0.507	0.75	4.82
Area to Depressional Area	100 yr 6 hr	100.00	0.641	1.29	3.16
Area to Depressional Area	100 yr 12 hr	100.00	0.792	5.00	2.07
Area to Depressional Area	100 yr 18 hr	100.00	0.882	11.90	1.61
Area to Depressional Area	100 yr 24 hr	100.00	0.959	15.90	1.30
Area to Depressional Area	100 yr 48 hr	100.00	1.067	41.50	0.90
Area to Depressional Area	100 yr 72 hr	100.00	1.154	62.50	0.64
Area to Depressional Area	100 yr 120 hr	100.00	1.279	104.00	0.42
Area to Depressional Area	100 yr 240 hr	100.00	1.587	208.50	0.25
Area to Depressional Area	100 yr 10 min	500.00	0.113	0.19	7.05
Area to West	100 yr 15 min	100.00	0.175	0.23	9.01
Area to West	100 yr 30 min	100.00	0.349	0.26	11.91
Area to West	100 yr 1 hr	100.00	0.555	0.36	12.70
Area to West	100 yr 2 hr	100.00	0.803	0.57	10.84
Area to West	100 yr 3 hr	100.00	0.947	0.78	8.88
Area to West	100 yr 6 hr	100.00	1.218	1.31	5.91
Area to West	100 yr 12 hr	100.00	1.525	5.00	4.02
Area to West	100 yr 18 hr	100.00	1.708	11.90	3.23
Area to West	100 yr 24 hr	100.00	1.865	15.90	2.62
Area to West	100 yr 48 hr	100.00	2.088	41.50	1.83
Area to West	100 yr 72 hr	100.00	2.269	62.50	1.31
Area to West	100 yr 120 hr	100.00	2.527	104.00	0.86
Area to West	100 yr 240 hr	100.00	3.167	208.50	0.53
Area to West	100 yr 10 min	500.00	0.182	0.19	11.42
Area to South	100 yr 15 min	100.00	0.067	0.22	3.54
Area to South	100 yr 30 min	100.00	0.129	0.25	4.56
Area to South	100 yr 1 hr	100.00	0.201	0.35	4.76
Area to South	100 yr 2 hr	100.00	0.286	0.55	3.93

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Area to South	100 yr 3 hr	100.00	0.336	0.77	3.17
Area to South	100 yr 6 hr	100.00	0.428	1.30	2.10
Area to South	100 yr 12 hr	100.00	0.532	5.00	1.40
Area to South	100 yr 18 hr	100.00	0.594	11.90	1.11
Area to South	100 yr 24 hr	100.00	0.647	15.90	0.90
Area to South	100 yr 48 hr	100.00	0.723	41.50	0.62
Area to South	100 yr 72 hr	100.00	0.784	62.50	0.44
Area to South	100 yr 120 hr	100.00	0.870	104.00	0.29
Area to South	100 yr 240 hr	100.00	1.085	208.50	0.18
Area to South	100 yr 10 min	500.00	0.070	0.18	4.50

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From Existing Depressional Area	100 yr 15 min	100.00	0.109	0.36	2.52
From Existing Depressional Area	100 yr 30 min	100.00	0.203	0.51	3.47
From Existing Depressional Area	100 yr 1 hr	100.00	0.309	0.68	3.70
From Existing Depressional Area	100 yr 2 hr	100.00	0.435	0.82	3.70
From Existing Depressional Area	100 yr 3 hr	100.00	0.507	1.04	3.54
From Existing Depressional Area	100 yr 6 hr	100.00	0.641	1.61	2.88
From Existing Depressional Area	100 yr 12 hr	100.00	0.792	5.20	1.98
From Existing Depressional Area	100 yr 18 hr	100.00	0.882	12.10	1.59
From Existing Depressional Area	100 yr 24 hr	100.00	0.959	16.00	1.29
From Existing Depressional Area	100 yr 48 hr	100.00	1.067	41.50	0.90
From Existing Depressional Area	100 yr 72 hr	100.00	1.154	62.50	0.64
From Existing Depressional Area	100 yr 120 hr	100.00	1.279	104.00	0.42
From Existing Depressional Area	100 yr 240 hr	100.00	1.587	208.50	0.25
From Existing Depressional Area	100 yr 10 min	500.00	0.113	0.30	2.80
To West	100 yr 15 min	100.00	0.175	0.23	9.01
To West	100 yr 30 min	100.00	0.349	0.26	11.91
To West	100 yr 1 hr	100.00	0.555	0.36	12.70

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
To West	100 yr 2 hr	100.00	0.803	0.57	10.84
To West	100 yr 3 hr	100.00	0.947	0.78	8.88
To West	100 yr 6 hr	100.00	1.218	1.31	5.91
To West	100 yr 12 hr	100.00	1.525	5.00	4.02
To West	100 yr 18 hr	100.00	1.708	11.90	3.23
To West	100 yr 24 hr	100.00	1.865	15.90	2.62
To West	100 yr 48 hr	100.00	2.088	41.50	1.83
To West	100 yr 72 hr	100.00	2.269	62.50	1.31
To West	100 yr 120 hr	100.00	2.527	104.00	0.86
To West	100 yr 240 hr	100.00	3.167	208.50	0.53
To West	100 yr 10 min	500.00	0.182	0.19	11.42
To South	100 yr 15 min	100.00	0.067	0.22	3.54
To South	100 yr 30 min	100.00	0.129	0.25	4.56
To South	100 yr 1 hr	100.00	0.201	0.35	4.76
To South	100 yr 2 hr	100.00	0.286	0.55	3.93
To South	100 yr 3 hr	100.00	0.336	0.77	3.17
To South	100 yr 6 hr	100.00	0.428	1.30	2.10
To South	100 yr 12 hr	100.00	0.532	5.00	1.40
To South	100 yr 18 hr	100.00	0.594	11.90	1.11
To South	100 yr 24 hr	100.00	0.647	15.90	0.90
To South	100 yr 48 hr	100.00	0.723	41.50	0.62
To South	100 yr 72 hr	100.00	0.784	62.50	0.44
To South	100 yr 120 hr	100.00	0.870	104.00	0.29
To South	100 yr 240 hr	100.00	1.085	208.50	0.18
To South	100 yr 10 min	500.00	0.070	0.18	4.50

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	100 yr 15 min	100.00	0.109	0.21	5.61	(N/A)	(N/A)
Existing Depressional Area (OUT)	100 yr 15 min	100.00	0.109	0.36	2.52	842.56	0.058
Existing Depressional Area (IN)	100 yr 30 min	100.00	0.203	0.26	7.12	(N/A)	(N/A)
Existing Depressional Area (OUT)	100 yr 30 min	100.00	0.203	0.51	3.47	842.89	0.092

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Depressional Area (IN)	100 yr 1 hr	100.00	0.309	0.35	7.30	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 1 hr	100.00	0.309	0.68	3.70	843.01	0.105
Existing Depressional Area (OUT)	100 yr 2 hr	100.00	0.435	0.56	5.98	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 2 hr	100.00	0.435	0.82	3.70	843.01	0.105
Existing Depressional Area (OUT)	100 yr 3 hr	100.00	0.507	0.75	4.82	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 3 hr	100.00	0.507	1.04	3.54	842.93	0.096
Existing Depressional Area (OUT)	100 yr 6 hr	100.00	0.641	1.29	3.16	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 6 hr	100.00	0.641	1.61	2.88	842.64	0.066
Existing Depressional Area (OUT)	100 yr 12 hr	100.00	0.792	5.00	2.07	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 12 hr	100.00	0.792	5.20	1.98	842.43	0.044
Existing Depressional Area (OUT)	100 yr 18 hr	100.00	0.882	11.90	1.61	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 18 hr	100.00	0.882	12.10	1.59	842.33	0.034
Existing Depressional Area (OUT)	100 yr 24 hr	100.00	0.959	15.90	1.30	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 24 hr	100.00	0.959	16.00	1.29	842.25	0.025
Existing Depressional Area (OUT)	100 yr 48 hr	100.00	1.067	41.50	0.90	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 48 hr	100.00	1.067	41.50	0.90	842.12	0.013
Existing Depressional Area (OUT)	100 yr 72 hr	100.00	1.154	62.50	0.64	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 72 hr	100.00	1.154	62.50	0.64	842.03	0.004
Existing Depressional Area (OUT)	100 yr 120 hr	100.00	1.279	104.00	0.42	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 120 hr	100.00	1.279	104.00	0.42	841.94	0.000
Existing Depressional Area (OUT)	100 yr 240 hr	100.00	1.587	208.50	0.25	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 240 hr	100.00	1.587	208.50	0.25	841.86	0.000
Existing Depressional Area (OUT)	100 yr 10 min	500.00	0.113	0.19	7.05	(N/A)	(N/A)
Existing Depressional Area (IN)	100 yr 10 min	500.00	0.113	0.30	2.80	842.61	0.063
Existing Depressional Area (OUT)							

Subsection: Master Network Summary

Pond Summary

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Time-Depth Curve: 1 hr 100 yr	
Label	1 hr 100 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.08	0.16	0.24	0.32
0.05	0.41	0.50	0.59	0.68	0.78
0.10	0.88	0.98	1.08	1.18	1.28
0.15	1.38	1.48	1.57	1.66	1.75
0.20	1.84	1.93	2.00	2.08	2.16
0.25	2.24	2.30	2.37	2.43	2.50
0.30	2.55	2.60	2.64	2.69	2.73
0.35	2.77	2.80	2.84	2.87	2.90
0.40	2.94	2.97	3.00	3.03	3.05
0.45	3.08	3.11	3.13	3.16	3.19
0.50	3.22	3.24	3.27	3.30	3.32
0.55	3.35	3.37	3.40	3.42	3.45
0.60	3.47	3.49	3.51	3.53	3.55
0.65	3.57	3.59	3.61	3.63	3.64
0.70	3.66	3.68	3.69	3.71	3.72
0.75	3.74	3.75	3.76	3.77	3.79
0.80	3.80	3.81	3.83	3.84	3.85
0.85	3.86	3.87	3.89	3.90	3.91
0.90	3.92	3.93	3.94	3.95	3.96
0.95	3.97	3.99	4.00	4.01	4.02
1.00	4.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 500 Year Critical Storm
Scenario: 100 yr 10 min

Return Event: 500.00 years
Storm Event: 10 min 500 yr

Time-Depth Curve: 10 min 500 yr	
Label	10 min 500 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.17 hours
Return Event	500.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.19
0.01	0.24	0.29	0.35	0.40	0.46
0.02	0.52	0.58	0.63	0.69	0.75
0.03	0.81	0.87	0.92	0.97	1.03
0.03	1.08	1.13	1.17	1.22	1.26
0.04	1.31	1.35	1.39	1.42	1.46
0.05	1.49	1.52	1.55	1.58	1.60
0.06	1.62	1.64	1.66	1.68	1.70
0.07	1.72	1.74	1.76	1.77	1.79
0.08	1.80	1.82	1.84	1.85	1.87
0.08	1.88	1.90	1.91	1.93	1.95
0.09	1.96	1.98	1.99	2.01	2.02
0.10	2.03	2.04	2.06	2.07	2.08
0.11	2.09	2.10	2.11	2.12	2.13
0.12	2.14	2.15	2.16	2.17	2.18
0.13	2.19	2.20	2.20	2.21	2.22
0.13	2.23	2.23	2.24	2.25	2.26
0.14	2.26	2.27	2.28	2.28	2.29
0.15	2.30	2.30	2.31	2.32	2.32
0.16	2.33	2.33	2.34	2.35	2.35
0.17	2.36	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

Time-Depth Curve: 12 hr 100 yr	
Label	12 hr 100 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.60	0.21	0.25	0.30	0.34	0.39
1.20	0.45	0.50	0.55	0.61	0.68
1.80	0.74	0.80	0.87	0.95	1.03
2.40	1.11	1.19	1.29	1.40	1.50
3.00	1.60	1.72	1.85	1.97	2.10
3.60	2.24	2.38	2.53	2.67	2.82
4.20	2.98	3.14	3.30	3.46	3.62
4.80	3.78	3.95	4.10	4.25	4.39
5.40	4.53	4.68	4.81	4.94	5.07
6.00	5.20	5.31	5.41	5.51	5.61
6.60	5.70	5.79	5.88	5.97	6.05
7.20	6.13	6.20	6.28	6.35	6.40
7.80	6.46	6.51	6.57	6.61	6.65
8.40	6.69	6.74	6.77	6.81	6.84
9.00	6.88	6.91	6.93	6.96	6.99
9.60	7.02	7.05	7.07	7.10	7.12
10.20	7.15	7.17	7.19	7.21	7.24
10.80	7.26	7.28	7.30	7.32	7.34
11.40	7.36	7.38	7.40	7.42	7.44
12.00	7.46	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

Time-Depth Curve: 120 hr 100 yr	
Label	120 hr 100 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.18	0.24
6.00	0.30	0.36	0.43	0.49	0.55
12.00	0.61	0.67	0.73	0.79	0.86
18.00	0.93	1.00	1.07	1.14	1.21
24.00	1.28	1.35	1.42	1.49	1.55
30.00	1.62	1.69	1.76	1.83	1.90
36.00	1.96	2.02	2.08	2.15	2.21
42.00	2.27	2.34	2.40	2.47	2.53
48.00	2.60	2.66	2.73	2.81	2.88
54.00	2.96	3.03	3.11	3.18	3.26
60.00	3.33	3.40	3.47	3.53	3.60
66.00	3.67	3.73	3.79	3.85	3.91
72.00	3.97	4.03	4.09	4.15	4.22
78.00	4.28	4.35	4.43	4.53	4.63
84.00	4.72	4.83	4.99	5.15	5.31
90.00	5.47	5.67	5.88	6.08	6.29
96.00	6.53	6.79	7.04	7.29	7.56
102.00	7.84	8.12	8.39	8.66	8.90
108.00	9.15	9.40	9.62	9.78	9.94
114.00	10.10	10.25	10.36	10.46	10.56
120.00	10.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

Time-Depth Curve: 15 min 100 yr	
Label	15 min 100 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.19
0.01	0.24	0.29	0.34	0.39	0.45
0.03	0.51	0.57	0.62	0.68	0.74
0.04	0.79	0.85	0.91	0.96	1.01
0.05	1.06	1.11	1.15	1.20	1.24
0.06	1.29	1.33	1.36	1.40	1.44
0.08	1.47	1.49	1.52	1.55	1.57
0.09	1.59	1.61	1.63	1.65	1.67
0.10	1.69	1.71	1.73	1.74	1.76
0.11	1.77	1.79	1.80	1.82	1.84
0.13	1.85	1.87	1.88	1.90	1.91
0.14	1.93	1.94	1.96	1.97	1.98
0.15	2.00	2.01	2.02	2.03	2.04
0.16	2.06	2.07	2.08	2.09	2.10
0.18	2.11	2.12	2.13	2.13	2.14
0.19	2.15	2.16	2.17	2.17	2.18
0.20	2.19	2.20	2.20	2.21	2.22
0.21	2.22	2.23	2.24	2.24	2.25
0.23	2.26	2.26	2.27	2.28	2.28
0.24	2.29	2.29	2.30	2.31	2.31
0.25	2.32	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

Time-Depth Curve: 18 hr 100 yr	
Label	18 hr 100 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.90	0.20	0.25	0.29	0.33	0.38
1.80	0.42	0.47	0.51	0.56	0.61
2.70	0.66	0.70	0.75	0.80	0.85
3.60	0.90	0.95	1.00	1.05	1.11
4.50	1.16	1.21	1.26	1.31	1.35
5.40	1.41	1.46	1.51	1.57	1.62
6.30	1.68	1.74	1.81	1.87	1.94
7.20	2.01	2.08	2.15	2.24	2.33
8.10	2.42	2.51	2.62	2.72	2.82
9.00	2.93	3.08	3.22	3.37	3.52
9.90	3.67	3.83	3.99	4.15	4.32
10.80	4.49	4.66	4.83	5.00	5.18
11.70	5.35	5.52	5.69	5.85	6.01
12.60	6.17	6.32	6.45	6.58	6.71
13.50	6.84	6.94	7.03	7.12	7.22
14.40	7.29	7.35	7.42	7.48	7.53
15.30	7.58	7.62	7.66	7.70	7.73
16.20	7.77	7.80	7.83	7.86	7.89
17.10	7.92	7.95	7.98	8.00	8.03
18.00	8.06	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

Time-Depth Curve: 2 hr 100 yr	
Label	2 hr 100 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.10	0.20	0.30	0.40
0.10	0.51	0.62	0.73	0.84	0.96
0.20	1.09	1.21	1.34	1.46	1.58
0.30	1.70	1.82	1.94	2.05	2.16
0.40	2.27	2.37	2.47	2.57	2.66
0.50	2.76	2.84	2.92	3.00	3.08
0.60	3.14	3.20	3.26	3.32	3.37
0.70	3.41	3.46	3.50	3.54	3.58
0.80	3.62	3.66	3.70	3.73	3.76
0.90	3.80	3.83	3.86	3.90	3.93
1.00	3.97	4.00	4.03	4.06	4.10
1.10	4.13	4.16	4.19	4.22	4.25
1.20	4.28	4.30	4.33	4.36	4.38
1.30	4.41	4.43	4.45	4.47	4.49
1.40	4.51	4.53	4.55	4.57	4.59
1.50	4.61	4.62	4.64	4.65	4.67
1.60	4.69	4.70	4.72	4.73	4.75
1.70	4.76	4.78	4.79	4.81	4.82
1.80	4.83	4.85	4.86	4.88	4.89
1.90	4.90	4.92	4.93	4.94	4.96
2.00	4.97	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

Time-Depth Curve: 24 hr 100 yr	
Label	24 hr 100 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.13	0.17
1.20	0.21	0.26	0.31	0.35	0.40
2.40	0.45	0.50	0.55	0.60	0.65
3.60	0.70	0.75	0.80	0.85	0.91
4.80	0.96	1.01	1.07	1.12	1.18
6.00	1.23	1.28	1.34	1.39	1.44
7.20	1.50	1.55	1.61	1.66	1.73
8.40	1.79	1.86	1.92	1.99	2.06
9.60	2.13	2.21	2.29	2.38	2.48
10.80	2.57	2.67	2.78	2.89	3.00
12.00	3.12	3.27	3.43	3.58	3.74
13.20	3.90	4.07	4.24	4.41	4.59
14.40	4.77	4.95	5.14	5.32	5.50
15.60	5.69	5.87	6.05	6.22	6.39
16.80	6.56	6.72	6.86	7.00	7.14
18.00	7.28	7.38	7.48	7.58	7.67
19.20	7.75	7.82	7.89	7.96	8.01
20.40	8.06	8.10	8.15	8.19	8.22
21.60	8.26	8.29	8.33	8.36	8.39
22.80	8.42	8.45	8.48	8.51	8.54
24.00	8.57	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

Time-Depth Curve: 240 hr 100 yr	
Label	240 hr 100 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.14	0.21	0.28
12.00	0.35	0.43	0.51	0.58	0.65
24.00	0.72	0.79	0.87	0.94	1.02
36.00	1.10	1.18	1.27	1.35	1.43
48.00	1.52	1.60	1.68	1.76	1.84
60.00	1.93	2.01	2.09	2.17	2.25
72.00	2.33	2.40	2.47	2.55	2.62
84.00	2.70	2.77	2.85	2.93	3.01
96.00	3.08	3.16	3.24	3.33	3.42
108.00	3.51	3.60	3.69	3.78	3.87
120.00	3.95	4.03	4.11	4.19	4.27
132.00	4.35	4.42	4.50	4.57	4.64
144.00	4.71	4.78	4.85	4.92	5.00
156.00	5.08	5.16	5.26	5.37	5.49
168.00	5.61	5.73	5.92	6.11	6.30
180.00	6.49	6.73	6.98	7.22	7.46
192.00	7.75	8.05	8.35	8.65	8.97
204.00	9.30	9.63	9.96	10.27	10.57
216.00	10.86	11.15	11.41	11.60	11.80
228.00	11.99	12.17	12.29	12.41	12.53
240.00	12.65	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

Time-Depth Curve: 3 hr 100 yr	
Label	3 hr 100 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.11	0.22	0.33	0.44
0.15	0.56	0.69	0.81	0.93	1.06
0.30	1.20	1.34	1.47	1.61	1.75
0.45	1.88	2.01	2.14	2.26	2.38
0.60	2.50	2.62	2.73	2.83	2.94
0.75	3.05	3.14	3.22	3.31	3.40
0.90	3.47	3.54	3.60	3.67	3.72
1.05	3.77	3.82	3.86	3.91	3.95
1.20	4.00	4.04	4.08	4.12	4.16
1.35	4.19	4.23	4.27	4.31	4.34
1.50	4.38	4.42	4.45	4.49	4.53
1.65	4.56	4.60	4.63	4.66	4.70
1.80	4.73	4.75	4.78	4.81	4.84
1.95	4.87	4.89	4.92	4.94	4.96
2.10	4.99	5.01	5.03	5.05	5.07
2.25	5.09	5.11	5.12	5.14	5.16
2.40	5.18	5.19	5.21	5.23	5.25
2.55	5.26	5.28	5.29	5.31	5.32
2.70	5.34	5.36	5.37	5.39	5.40
2.85	5.41	5.43	5.44	5.46	5.47
3.00	5.49	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

Time-Depth Curve: 30 min 100 yr	
Label	30 min 100 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.13	0.19	0.25
0.03	0.32	0.40	0.47	0.54	0.61
0.05	0.69	0.77	0.85	0.93	1.01
0.08	1.09	1.16	1.24	1.31	1.38
0.10	1.45	1.51	1.58	1.64	1.70
0.13	1.76	1.81	1.86	1.91	1.96
0.15	2.00	2.04	2.08	2.12	2.15
0.18	2.18	2.20	2.23	2.26	2.28
0.20	2.31	2.33	2.36	2.38	2.40
0.23	2.42	2.44	2.47	2.49	2.51
0.25	2.53	2.55	2.57	2.59	2.61
0.28	2.63	2.65	2.67	2.69	2.71
0.30	2.73	2.75	2.76	2.78	2.79
0.33	2.81	2.83	2.84	2.85	2.87
0.35	2.88	2.89	2.90	2.92	2.93
0.38	2.94	2.95	2.96	2.97	2.98
0.40	2.99	3.00	3.01	3.02	3.03
0.43	3.04	3.05	3.06	3.07	3.07
0.45	3.08	3.09	3.10	3.11	3.12
0.48	3.13	3.14	3.14	3.15	3.16
0.50	3.17	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

Time-Depth Curve: 48 hr 100 yr	
Label	48 hr 100 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.15	0.21
2.40	0.26	0.32	0.37	0.43	0.48
4.80	0.53	0.58	0.63	0.69	0.75
7.20	0.81	0.87	0.93	0.99	1.05
9.60	1.11	1.17	1.23	1.29	1.35
12.00	1.41	1.47	1.53	1.59	1.65
14.40	1.71	1.76	1.81	1.87	1.92
16.80	1.98	2.04	2.09	2.15	2.20
19.20	2.26	2.32	2.38	2.45	2.51
21.60	2.58	2.64	2.71	2.77	2.84
24.00	2.90	2.96	3.02	3.08	3.14
26.40	3.19	3.25	3.30	3.35	3.41
28.80	3.46	3.51	3.56	3.61	3.67
31.20	3.73	3.79	3.86	3.94	4.03
33.60	4.11	4.21	4.34	4.48	4.62
36.00	4.76	4.94	5.12	5.30	5.47
38.40	5.69	5.91	6.13	6.35	6.58
40.80	6.82	7.07	7.31	7.54	7.75
43.20	7.97	8.18	8.37	8.51	8.65
45.60	8.80	8.93	9.02	9.10	9.19
48.00	9.28	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

Time-Depth Curve: 6 hr 100 yr	
Label	6 hr 100 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.13	0.26	0.39	0.52
0.30	0.66	0.80	0.95	1.09	1.25
0.60	1.41	1.57	1.73	1.89	2.04
0.90	2.20	2.36	2.51	2.65	2.79
1.20	2.93	3.07	3.20	3.32	3.44
1.50	3.57	3.67	3.78	3.88	3.99
1.80	4.07	4.14	4.22	4.30	4.36
2.10	4.41	4.47	4.53	4.58	4.63
2.40	4.68	4.73	4.78	4.83	4.87
2.70	4.91	4.96	5.00	5.04	5.09
3.00	5.13	5.17	5.22	5.26	5.30
3.30	5.34	5.38	5.42	5.46	5.50
3.60	5.53	5.57	5.60	5.64	5.67
3.90	5.70	5.73	5.76	5.79	5.81
4.20	5.84	5.87	5.89	5.91	5.94
4.50	5.96	5.98	6.00	6.02	6.04
4.80	6.06	6.08	6.10	6.12	6.14
5.10	6.16	6.18	6.20	6.22	6.24
5.40	6.25	6.27	6.29	6.31	6.32
5.70	6.34	6.36	6.38	6.39	6.41
6.00	6.43	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

Time-Depth Curve: 72 hr 100 yr	
Label	72 hr 100 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.11	0.16	0.22
3.60	0.28	0.33	0.39	0.45	0.51
7.20	0.56	0.62	0.67	0.73	0.80
10.80	0.86	0.92	0.99	1.05	1.12
14.40	1.18	1.24	1.31	1.37	1.44
18.00	1.50	1.56	1.63	1.69	1.75
21.60	1.81	1.87	1.93	1.98	2.04
25.20	2.10	2.16	2.22	2.28	2.34
28.80	2.40	2.46	2.53	2.60	2.67
32.40	2.73	2.80	2.87	2.94	3.01
36.00	3.08	3.14	3.20	3.27	3.33
39.60	3.39	3.44	3.50	3.56	3.61
43.20	3.67	3.72	3.78	3.83	3.90
46.80	3.96	4.02	4.09	4.18	4.27
50.40	4.36	4.46	4.61	4.76	4.91
54.00	5.05	5.24	5.43	5.62	5.81
57.60	6.04	6.27	6.50	6.74	6.99
61.20	7.24	7.50	7.76	8.00	8.23
64.80	8.46	8.68	8.89	9.04	9.19
68.40	9.34	9.48	9.57	9.66	9.76
72.00	9.85	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations
Label: Area to Depressional Area
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.16 ft/s
Segment Time of Concentration	0.18 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

Subsection: Time of Concentration Calculations
Label: Area to Depressional Area
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: Area to South
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.19 ft/s
Segment Time of Concentration	0.15 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	181.00 ft
Is Paved?	False
Slope	0.038 ft/ft
Average Velocity	3.15 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.17 hours

Subsection: Time of Concentration Calculations
Label: Area to South
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.240
Slope	0.052 ft/ft
2 Year 24 Hour Depth	3.34 in
Average Velocity	0.17 ft/s
Segment Time of Concentration	0.16 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	230.00 ft
Is Paved?	False
Slope	0.052 ft/ft
Average Velocity	3.68 ft/s
Segment Time of Concentration	0.02 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.18 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	7.31 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	7.30 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.91 in
Runoff Volume (Pervious)	0.309 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.309 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	2.07 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	2.07 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.89 in
Runoff Volume (Pervious)	0.792 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.792 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.42 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.42 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.89 in
Runoff Volume (Pervious)	1.278 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.279 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.21 hours
Flow (Peak, Computed)	5.63 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.21 hours
Flow (Peak Interpolated Output)	5.61 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.67 in
Runoff Volume (Pervious)	0.109 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.109 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	1.61 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.61 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.45 in
Runoff Volume (Pervious)	0.882 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.882 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.56 hours
Flow (Peak, Computed)	5.98 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.56 hours
Flow (Peak Interpolated Output)	5.98 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.69 in
Runoff Volume (Pervious)	0.435 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.435 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.86 hours
Flow (Peak, Computed)	1.31 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	1.30 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.92 in
Runoff Volume (Pervious)	0.959 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.959 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.80 hours
Flow (Peak, Computed)	0.25 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.25 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.80 in
Runoff Volume (Pervious)	1.587 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.587 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.75 hours
Flow (Peak, Computed)	4.82 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.75 hours
Flow (Peak Interpolated Output)	4.82 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	0.507 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.507 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.26 hours
Flow (Peak, Computed)	7.13 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.26 hours
Flow (Peak Interpolated Output)	7.12 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.25 in
Runoff Volume (Pervious)	0.203 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.203 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.90 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.90 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.58 in
Runoff Volume (Pervious)	1.066 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.067 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	3.16 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.29 hours
Flow (Peak Interpolated Output)	3.16 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.96 in
Runoff Volume (Pervious)	0.641 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.641 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.64 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.64 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.12 in
Runoff Volume (Pervious)	1.153 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.154 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	10 min 500 yr
Return Event	500.00 years
Duration	50.00 hours
Depth	2.36 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.943 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.19 hours
Flow (Peak, Computed)	7.08 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.19 hours
Flow (Peak Interpolated Output)	7.05 ft³/s

Drainage Area	
SCS CN (Composite)	78.000
Area (User Defined)	1.943 acres
Maximum Retention (Pervious)	2.82 in
Maximum Retention (Pervious, 20 percent)	0.56 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.70 in
Runoff Volume (Pervious)	0.113 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.113 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	12.48 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	4.77 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	4.76 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.76 in
Runoff Volume (Pervious)	0.201 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.201 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	1.40 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.40 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.67 in
Runoff Volume (Pervious)	0.532 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.532 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.29 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.29 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.63 in
Runoff Volume (Pervious)	0.869 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.870 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.22 hours
Flow (Peak, Computed)	3.55 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.22 hours
Flow (Peak Interpolated Output)	3.54 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.59 in
Runoff Volume (Pervious)	0.067 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.067 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.91 hours
Flow (Peak, Computed)	1.11 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.11 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.21 in
Runoff Volume (Pervious)	0.594 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.594 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.55 hours
Flow (Peak, Computed)	3.93 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.55 hours
Flow (Peak Interpolated Output)	3.93 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.51 in
Runoff Volume (Pervious)	0.286 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.286 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.90 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.90 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.68 in
Runoff Volume (Pervious)	0.647 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.647 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.18 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.18 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.52 in
Runoff Volume (Pervious)	1.085 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.085 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.77 hours
Flow (Peak, Computed)	3.17 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.77 hours
Flow (Peak Interpolated Output)	3.17 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.94 in
Runoff Volume (Pervious)	0.336 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.336 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.24 hours
Flow (Peak, Computed)	4.57 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	4.56 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.13 in
Runoff Volume (Pervious)	0.129 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.129 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.77 hours
Flow (Peak, Computed)	0.62 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	0.62 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.34 in
Runoff Volume (Pervious)	0.722 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.723 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.31 hours
Flow (Peak, Computed)	2.10 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	2.10 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.75 in
Runoff Volume (Pervious)	0.428 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.428 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	0.45 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	0.44 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.87 in
Runoff Volume (Pervious)	0.783 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.784 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 10 min

Return Event: 500.00 years
Storm Event: 10 min 500 yr

Storm Event	10 min 500 yr
Return Event	500.00 years
Duration	50.00 hours
Depth	2.36 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	1.368 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.18 hours
Flow (Peak, Computed)	4.52 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.18 hours
Flow (Peak Interpolated Output)	4.50 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	1.368 acres
Maximum Retention (Pervious)	3.16 in
Maximum Retention (Pervious, 20 percent)	0.63 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.61 in
Runoff Volume (Pervious)	0.070 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.070 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.34 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 10 min

Return Event: 500.00 years
Storm Event: 10 min 500 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.44 hours
Total unit time, Tb	0.55 hours

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.35 hours
Flow (Peak, Computed)	12.71 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.36 hours
Flow (Peak Interpolated Output)	12.70 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.62 in
Runoff Volume (Pervious)	0.555 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.555 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.98 hours
Flow (Peak, Computed)	4.02 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	4.02 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.45 in
Runoff Volume (Pervious)	1.525 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.525 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.39 hours
Flow (Peak, Computed)	0.87 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	104.00 hours
Flow (Peak Interpolated Output)	0.86 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.36 in
Runoff Volume (Pervious)	2.525 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.527 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	9.03 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.23 hours
Flow (Peak Interpolated Output)	9.01 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.51 in
Runoff Volume (Pervious)	0.175 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.175 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.91 hours
Flow (Peak, Computed)	3.23 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	3.23 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.98 in
Runoff Volume (Pervious)	1.708 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.708 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.56 hours
Flow (Peak, Computed)	10.84 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.57 hours
Flow (Peak Interpolated Output)	10.84 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.34 in
Runoff Volume (Pervious)	0.803 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.803 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.86 hours
Flow (Peak, Computed)	2.63 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	2.62 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.44 in
Runoff Volume (Pervious)	1.865 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.865 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.53 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	208.50 hours
Flow (Peak Interpolated Output)	0.53 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.23 in
Runoff Volume (Pervious)	3.167 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.167 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.78 hours
Flow (Peak, Computed)	8.88 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.78 hours
Flow (Peak Interpolated Output)	8.88 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.76 in
Runoff Volume (Pervious)	0.947 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.947 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.26 hours
Flow (Peak, Computed)	11.92 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.26 hours
Flow (Peak Interpolated Output)	11.91 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.02 in
Runoff Volume (Pervious)	0.349 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.349 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.84 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	41.50 hours
Flow (Peak Interpolated Output)	1.83 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.08 in
Runoff Volume (Pervious)	2.087 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.088 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.32 hours
Flow (Peak, Computed)	5.92 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	1.31 hours
Flow (Peak Interpolated Output)	5.91 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.55 in
Runoff Volume (Pervious)	1.218 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.218 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.64 hours
Flow (Peak, Computed)	1.32 ft³/s
Output Increment	0.50 hours
Time to Flow (Peak Interpolated Output)	62.50 hours
Flow (Peak Interpolated Output)	1.31 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.61 in
Runoff Volume (Pervious)	2.267 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.269 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Storm Event	10 min 500 yr
Return Event	500.00 years
Duration	50.00 hours
Depth	2.36 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	4.116 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.19 hours
Flow (Peak, Computed)	11.45 ft³/s
Output Increment	0.01 hours
Time to Flow (Peak Interpolated Output)	0.19 hours
Flow (Peak Interpolated Output)	11.42 ft³/s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	4.116 acres
Maximum Retention (Pervious)	3.51 in
Maximum Retention (Pervious, 20 percent)	0.70 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.53 in
Runoff Volume (Pervious)	0.182 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.182 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	26.47 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.59 hours

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
841.00	0.000
842.00	0.000
843.00	0.103
844.00	0.389
845.00	1.000

Requested Pond Water Surface Elevations	
Minimum (Headwater)	841.00 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	845.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Existing CB	Forward	TW	841.58	845.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Label: Existing OCS
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Structure ID: Existing CB Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	841.58 ft
Orifice Diameter	12.00 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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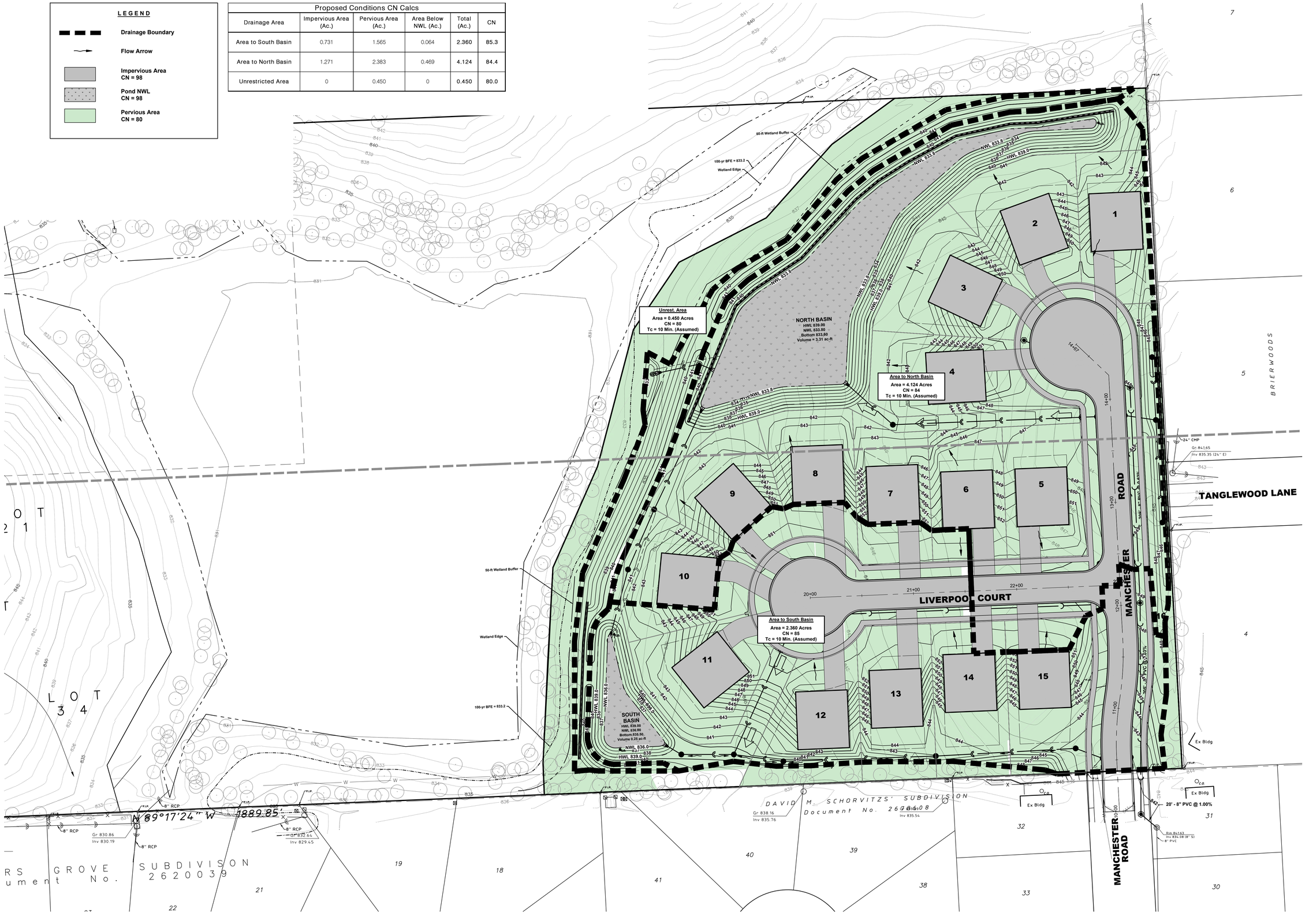
APPENDIX D – Proposed Conditions Drainage Exhibit and Calculations

LEGEND

- Drainage Boundary
- Flow Arrow
- Impervious Area CN = 98
- Pond NWL CN = 98
- Pervious Area CN = 80

Proposed Conditions CN Calcs					
Drainage Area	Impervious Area (Ac.)	Pervious Area (Ac.)	Area Below NWL (Ac.)	Total (Ac.)	CN
Area to South Basin	0.731	1.565	0.064	2.360	85.3
Area to North Basin	1.271	2.383	0.469	4.124	84.4
Unrestricted Area	0	0.450	0	0.450	80.0



NORTH

20 0 40

Scale: 1" = 40'

No.	Revision	Date

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PROPOSED CONDITIONS DRAINAGE EXHIBIT

MEADOW WOOD EAST SUBDIVISION

LAKE ZURICH, IL

Project Manager: M L A
Engineer: K M L
Date: 02-28-2025
Project No. 24-136
Sheet 1/1

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Plot Date: Mar 04, 2025 - 2:48pm Plotted By: kim-l Layout: 24x36 LS
File Name: P:\2024\24136\Drawings\Exhibits\24-136 Proposed Conditions Drainage Exhibit.dwg

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Stormwater Management Calculations

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: KML
Reviewed:
Date: 2/28/2025

Proposed Conditions Land Coverage

Entire Site	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	87,210	2.002	25.6%	98.0	0.90
Pervious Area =	229,624	5.271	67.5%	80.0	0.45
Area below NWL =	23,215	0.533	6.8%	77.0	0.15
Total Area =	**340,049**	**7.806**	**100.00%**	**84.4**	**0.54**

Disturbed Area Only	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	87,210	2.002	28.9%	98.0	0.90
Pervious Area =	191,587	4.398	63.4%	80.0	0.45
Area below NWL =	23,215	0.533	7.7%	77.0	0.15
Total Area =	**302,012**	**6.933**	**100.00%**	**85.0**	**0.56**

Proposed Areas Tributary to Onsite Detention

Area to South Basin	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	31,854	0.731	31.0%	98.0	0.90
Pervious Area =	68,170	1.565	66.3%	80.0	0.45
Area Below NWL	2,775	0.064	2.7%	70.0	0.45
Total Area =	**102,799**	**2.360**	**100.00%**	**85.3**	**0.59**

Area to North Basin	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	55,356	1.271	30.8%	98.0	0.90
Pervious Area =	103,824	2.383	57.8%	80.0	0.45
Area Below NWL	20,440	0.469	11.4%	70.0	0.45
Total Area =	**179,620**	**4.124**	**100.00%**	**84.4**	**0.59**

Unrestricted Area

Unrest. Area	Sq. Ft	Acre	Percentage	CN	C-Value
Impervious Area =	0	0.000	0.0%	98.0	0.90
Pervious Area =	19,593	0.450	100.0%	80.0	0.45
Total Area =	**19,593**	**0.450**	**100.00%**	**80.0**	**0.45**

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Stormwater Management Calculations

Project:	Meadow Wood East Subdivision	Prepared:	KML
Location:	Lake Zurich, IL	Reviewed:	
Project #:	24-136	Date:	2/28/2025

Site Release Rate

Detained Area	6.483	ac
2-Year Allowable Release Rate (0.04 cfs/ac) (Based on Proposed Detained Area) =	0.259	cfs
Unrestricted 2-Year 24-Hour Flow =	0.088	cfs
Total 2-Year Allowable Release Rate =	**0.171**	**cfs**
100-Year Allowable Release Rate (0.15 cfs/ac) (Based on Proposed Detained Area) =	0.973	cfs
Unrestricted 100-Year 24-Hour Flow =	0.309	cfs
Total 100-Year Allowable Release Rate =	**0.664**	**cfs**

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NORTH POND STORMWATER SUMMARY

Project: 20237 IL-22
Location: Kildeer, IL
Project #: 23-210

Prepared: KJL, MDM
Reviewed: MLA
Date: 12/27/2023
Revised: 2/22/2024

RVR/Water Quality Calculations

Total Detained Area =	6.483 Acres
Impervious Area =	2.002 Acres
% Impervious =	31%
Required Water Quality Storage Rate =	**0.31 in/Acre**
Required Water Quality Storage Volume =	0.052 Ac-ft

Retention Volume Below South Basin NWL (Based on Contour Slice Method)					
Contour	Area (SF)	Incremental Volume (CF)	Incremental Volume (Ac-ft)	Accumulated Volume (Ac-ft)	
835.50	2,169			0.000	(Pond Bottom)
		1,229	0.028		
836.00	**2,745**			**0.028**	(Pond NWL)

Retention Volume Below North Basin NWL (Based on Contour Slice Method)					
Contour	Area (SF)	Incremental Volume (CF)	Incremental Volume (Ac-ft)	Accumulated Volume (Ac-ft)	
833.60	22,027			0.000	(Pond Bottom)
		4,437	0.102		
833.80	**22,344**			**0.102**	(Pond NWL)

Provided Retention Storage Volume =	**0.130 Ac-ft**
RVR Credit (Water Quality Treatment) =	**100%**
RVR Quantity =	**0.130 Ac-ft**
RVR Quantity per Acre of Impervious Area =	**2829.877 cu-ft/ac**
Percent of Annual Rainfall Events =	**84%**

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NORTH BASIN STORMWATER SUMMARY

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: KJL
Reviewed: KML
Date: 2/28/2025

North Basin Storage Calculations

North Pond Detention Storage (Based on Contour Slice Method)					
Contour	Area (SF)	Incremental Volume (CF)	Incremental Volume (Ac-ft)	Accumulated Volume (Ac-ft)	
833.60	22,027			0.000	(Pond Bottom)
		4,437	0.102		
833.80	**22,344**			**0.000**	**Pond NWL**
		4,533	0.104		
834.00	22,981			0.104	
		24,209	0.556		
835.00	25,437			0.660	
		26,285	0.603		
836.00	27,132			1.263	
		27,989	0.643		
837.00	28,846			1.906	
		29,713	0.682		
838.00	30,579			2.588	
		31,455	0.722		
839.00	**32,330**			**3.310**	**(100-Yr Design HWL)**

North Basin Emergency Overflow Weir Sizing

The emergency overflow weir has been designed to pass the 100-year critical duration peak flow for the total area tributary to the detention pond.

100-Yr Critical Duration Peak Flow =	29.80	cfs (100-Year, 1-Hr Storm)
Required Weir Capacity =	29.80	cfs

Broad Crested Weir

Length =	**30**	ft
C =	3	
$Q = C \times L \times H^{1.5}$		
Weir Elevation=	840.00	

Weir Discharge		
Elev. Stage	Weir Head (ft)	Weir Discharge (CFS)
840.00	0.00	0.0
840.25	0.25	11.3
840.48	**0.48**	**29.9**
841.00	1.00	90.0

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SOUTH POND STORMWATER SUMMARY

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: KJL
Reviewed: KML
Date: 2/28/2025

South Pond Storage Calculations

South Pond Detention Storage (Based on Contour Slice Method)					
Contour	Area (SF)	Incremental Volume (CF)	Incremental Volume (Ac-ft)	Accumulated Volume (Ac-ft)	
835.50	2,169			0.000	(Pond Bottom)
		1,229	0.028		
836.00	**2,745**			**0.000**	**(Pond NWL)**
		3,203	0.074		
837.00	**3,661**			0.074	
		4,141	0.095		
838.00	4,621			0.169	
		5,130	0.118		
839.00	**5,638**			**0.286**	**(100-Yr Design HWL)**

C. South Basin Emergency Overflow Weir Sizing

The emergency overflow weir has been designed to pass the 100-year critical duration peak flow for the total area tributary to the detention pond.

100-Yr Critical Duration Peak Flow =	16.78	cfs (100-Year, 1-Hr Storm)
Required Weir Capacity =	16.78	cfs

Broad Crested Weir

Length =	**20**	ft
C =	3	
$Q = C \times L \times H^{1.5}$		
Weir Elevation=	840.00	

Weir Discharge		
Elev. Stage	Weir Head (ft)	Weir Discharge (CFS)
840.00	0.00	0.0
840.25	0.25	7.5
840.43	**0.43**	**16.9**
841.00	1.00	60.0

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Outlet Control Structure

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: KML
Reviewed:
Date: 2/28/2025

Orifice Sizing - 2 Stage (for Detention Sizing)

A. Formula

$$Q = CA\sqrt{2gh}$$

Where:
Q = Allowable Discharge (cfs)
C = Orifice Discharge Coefficient
A = Area of Orifice (sq.ft.)
g = 32.17ft./sec^2
h = Head (ft.)

B. Values

	2-Year		100-Year	
Allowable Release Rate =	0.04	cfs/ac.	0.15	cfs/ac.
Q =	0.171	cfs	0.664	cfs
C =	0.61		0.61	
Invert of Orifice =	833.70	ft.	835.30	ft.
HWL =	835.30	ft.	839.00	ft.
h =	1.50	ft.	3.59	ft.
Max. Orifice Dia. =	2.29	in.	2.70	in.
Actual Orifice Dia. =	**2.2**	**in.**	**2.7**	**in.**
2-Year Discharge =	0.159	cfs	0.000	cfs
100-Year Discharge =	**0.295**	**cfs**	**0.368**	**cfs**
Total 100-Year Discharge =	**0.663**	**cfs**		

C. Rating Table

WATER ELEVATION (ft.)	HEAD (ft.)	Q (cfs)
834.00	0.21	0.059
835.00	1.21	0.142
836.00	2.21	0.341
837.00	3.21	0.476
838.00	4.21	0.578
839.00	5.21	0.663
		#NUM!

Overflow Weir Sizing

A. Formula

$$Q = CL\sqrt{h^3}$$

Where:
Q = Overflow (cfs)
C = Weir Coefficient
L = Weir Length (ft.)
h = Head (ft.)

B. Values

Overflow Rate =	1.0	cfs/ac.
Min. Q =	15.040	cfs
C =	3.30	
Weir Length =	6.00	ft.
Weir Elevation =	848.60	ft.
Water Level Above Weir =	**849.43**	**ft.**

PondPack Crit Duration

C. Rating Table

WATER ELEVATION (ft.)	HEAD (ft.)	Q (cfs)
848.70	0.10	0.626
848.80	0.20	1.771
848.90	0.30	3.253
849.00	0.40	5.009
849.10	0.50	7.000

APPENDIX E – Proposed Critical Duration PondPack Reports

(2-yr, 10-yr, 50-yr & 100-yr)

Proposed 2-yr Critical Duration

Project Summary	
Title	24-136 Proposed Conditions PondPack Pond Sizing Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Proposed Conditions Model. Critical Duration Analysis

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	Unit Hydrograph Summary, 2.00 years (2 yr 120 hr)	83
	Unit Hydrograph Summary, 2.00 years (2 yr 15 min)	85
	Unit Hydrograph Summary, 2.00 years (2 yr 18 hr)	87
	Unit Hydrograph Summary, 2.00 years (2 yr 2 hr)	89
	Unit Hydrograph Summary, 2.00 years (2 yr 24 hr)	91
	Unit Hydrograph Summary, 2.00 years (2 yr 240 hr)	93
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Subsection: User Notifications

User Notifications

Message Id	7
Scenario	2 yr 15 min
Element Type	Catchment
Element Id	825
Label	Unrestricted to West
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 2.2 % is greater than 1.5 %. Computed peak flow= 0.118 ft³/s Interp. peak flow= 0.116 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	39
Scenario	2 yr 15 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 30 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 1 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 2 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	2 yr 3 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 6 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	2 yr 15 min
Element Type	Scenario
Element Id	661
Label	2 yr 15 min
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.05 hours.
Source	Warning
Message Id	7
Scenario	2 yr 1 hr
Element Type	Catchment
Element Id	425
Label	On-Site Area to South Pond
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 1.9 % is greater than 1.5 %. Computed peak flow= 2.161 ft³/s Interp. peak flow= 2.120 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	39
Scenario	2 yr 12 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	2 yr 18 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 24 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 48 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 72 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	2 yr 120 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	2 yr 240 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	2 yr 48 hr
Element Type	Scenario
Element Id	670
Label	2 yr 48 hr
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.10 hours.
Source	Warning

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to South Pond	2 yr 24 hr	2.00	0.369	15.90	0.541
On-Site Area to South Pond	2 yr 15 min	2.00	0.026	0.25	1.350
On-Site Area to South Pond	2 yr 30 min	2.00	0.058	0.30	1.933
On-Site Area to South Pond	2 yr 1 hr	2.00	0.098	0.35	2.120
On-Site Area to South Pond	2 yr 2 hr	2.00	0.148	0.60	1.954
On-Site Area to South Pond	2 yr 3 hr	2.00	0.177	0.80	1.630
On-Site Area to South Pond	2 yr 6 hr	2.00	0.177	0.80	1.630
On-Site Area to South Pond	2 yr 12 hr	2.00	0.298	5.00	0.790
On-Site Area to South Pond	2 yr 18 hr	2.00	0.336	11.90	0.661
On-Site Area to South Pond	2 yr 48 hr	2.00	0.424	41.70	0.392
On-Site Area to South Pond	2 yr 72 hr	2.00	0.478	62.60	0.290
On-Site Area to South Pond	2 yr 120 hr	2.00	0.558	104.40	0.199
On-Site Area to South Pond	2 yr 240 hr	2.00	0.772	208.80	0.131
On-Site Area to North Pond	2 yr 24 hr	2.00	0.619	15.90	0.918
On-Site Area to North Pond	2 yr 15 min	2.00	0.038	0.25	2.052
On-Site Area to North Pond	2 yr 30 min	2.00	0.092	0.30	3.026
On-Site Area to North Pond	2 yr 1 hr	2.00	0.157	0.40	3.373
On-Site Area to North Pond	2 yr 2 hr	2.00	0.241	0.60	3.157
On-Site Area to North Pond	2 yr 3 hr	2.00	0.290	0.80	2.650
On-Site Area to North Pond	2 yr 6 hr	2.00	0.290	0.80	2.650
On-Site Area to North Pond	2 yr 12 hr	2.00	0.496	5.00	1.315
On-Site Area to North Pond	2 yr 18 hr	2.00	0.561	11.90	1.119
On-Site Area to North Pond	2 yr 48 hr	2.00	0.713	41.70	0.669
On-Site Area to North Pond	2 yr 72 hr	2.00	0.806	62.60	0.496

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to North Pond	2 yr 120 hr	2.00	0.943	104.40	0.341
On-Site Area to North Pond	2 yr 240 hr	2.00	1.314	208.80	0.227
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	2 yr 15 min	2.00	0.002	0.25	0.116
Unrestricted to West	2 yr 30 min	2.00	0.006	0.35	0.209
Unrestricted to West	2 yr 1 hr	2.00	0.012	0.40	0.241
Unrestricted to West	2 yr 2 hr	2.00	0.020	0.65	0.246
Unrestricted to West	2 yr 3 hr	2.00	0.024	0.90	0.215
Unrestricted to West	2 yr 6 hr	2.00	0.024	0.90	0.215
Unrestricted to West	2 yr 12 hr	2.00	0.044	6.00	0.118
Unrestricted to West	2 yr 18 hr	2.00	0.051	11.90	0.106
Unrestricted to West	2 yr 48 hr	2.00	0.066	41.70	0.066
Unrestricted to West	2 yr 72 hr	2.00	0.076	62.60	0.050
Unrestricted to West	2 yr 120 hr	2.00	0.090	104.40	0.034
Unrestricted to West	2 yr 240 hr	2.00	0.128	208.80	0.023

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From North Pond	2 yr 24 hr	2.00	0.847	24.10	0.159
From North Pond	2 yr 15 min	2.00	0.064	0.65	0.036
From North Pond	2 yr 30 min	2.00	0.147	0.85	0.062
From North Pond	2 yr 1 hr	2.00	0.221	1.30	0.087
From North Pond	2 yr 2 hr	2.00	0.308	2.25	0.106
From North Pond	2 yr 3 hr	2.00	0.353	3.25	0.116
From North Pond	2 yr 6 hr	2.00	0.353	3.25	0.116
From North Pond	2 yr 12 hr	2.00	0.738	12.20	0.146
From North Pond	2 yr 18 hr	2.00	0.799	18.20	0.154
From North Pond	2 yr 48 hr	2.00	1.137	48.20	0.190
From North Pond	2 yr 72 hr	2.00	1.284	72.10	0.199
From North Pond	2 yr 120 hr	2.00	1.501	120.00	0.187
From North Pond	2 yr 240 hr	2.00	2.086	230.50	0.183
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	2 yr 15 min	2.00	0.002	0.25	0.116
Unrestricted to West	2 yr 30 min	2.00	0.006	0.35	0.209
Unrestricted to West	2 yr 1 hr	2.00	0.012	0.40	0.241
Unrestricted to West	2 yr 2 hr	2.00	0.020	0.65	0.246
Unrestricted to West	2 yr 3 hr	2.00	0.024	0.90	0.215
Unrestricted to West	2 yr 6 hr	2.00	0.024	0.90	0.215
Unrestricted to West	2 yr 12 hr	2.00	0.044	6.00	0.118
Unrestricted to West	2 yr 18 hr	2.00	0.051	11.90	0.106

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Unrestricted to West	2 yr 48 hr	2.00	0.066	41.70	0.066
Unrestricted to West	2 yr 72 hr	2.00	0.076	62.60	0.050
Unrestricted to West	2 yr 120 hr	2.00	0.090	104.40	0.034
Unrestricted to West	2 yr 240 hr	2.00	0.128	208.80	0.023

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	2 yr 24 hr	2.00	0.369	15.90	0.541	(N/A)	(N/A)
South Pond (OUT)	2 yr 24 hr	2.00	0.369	15.90	0.541	836.32	0.000
South Pond (IN)	2 yr 15 min	2.00	0.026	0.25	1.350	(N/A)	(N/A)
South Pond (OUT)	2 yr 15 min	2.00	0.025	0.25	1.291	836.50	0.000
South Pond (IN)	2 yr 30 min	2.00	0.058	0.30	1.933	(N/A)	(N/A)
South Pond (OUT)	2 yr 30 min	2.00	0.058	0.40	1.627	836.56	0.004
South Pond (IN)	2 yr 1 hr	2.00	0.098	0.35	2.120	(N/A)	(N/A)
South Pond (OUT)	2 yr 1 hr	2.00	0.098	0.50	1.732	836.58	0.006
South Pond (IN)	2 yr 2 hr	2.00	0.148	0.60	1.954	(N/A)	(N/A)
South Pond (OUT)	2 yr 2 hr	2.00	0.148	0.70	1.710	836.57	0.006
South Pond (IN)	2 yr 3 hr	2.00	0.177	0.80	1.630	(N/A)	(N/A)
South Pond (OUT)	2 yr 3 hr	2.00	0.177	0.95	1.524	836.54	0.003
South Pond (IN)	2 yr 6 hr	2.00	0.177	0.80	1.630	(N/A)	(N/A)
South Pond (OUT)	2 yr 6 hr	2.00	0.177	0.95	1.524	836.54	0.003
South Pond (IN)	2 yr 12 hr	2.00	0.298	5.00	0.790	(N/A)	(N/A)
South Pond (OUT)	2 yr 12 hr	2.00	0.297	5.10	0.785	836.38	0.000
South Pond (IN)	2 yr 18 hr	2.00	0.336	11.90	0.661	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (OUT)	2 yr 18 hr	2.00	0.336	12.00	0.660	836.35	0.000
South Pond (IN)	2 yr 48 hr	2.00	0.424	41.70	0.392	(N/A)	(N/A)
South Pond (OUT)	2 yr 48 hr	2.00	0.424	41.80	0.391	836.27	0.000
South Pond (IN)	2 yr 72 hr	2.00	0.478	62.60	0.290	(N/A)	(N/A)
South Pond (OUT)	2 yr 72 hr	2.00	0.478	62.60	0.290	836.23	0.000
South Pond (IN)	2 yr 120 hr	2.00	0.558	104.40	0.199	(N/A)	(N/A)
South Pond (OUT)	2 yr 120 hr	2.00	0.558	104.40	0.199	836.19	0.000
South Pond (IN)	2 yr 240 hr	2.00	0.772	208.80	0.131	(N/A)	(N/A)
South Pond (OUT)	2 yr 240 hr	2.00	0.772	208.80	0.131	836.15	0.000
North Pond (IN)	2 yr 24 hr	2.00	0.988	15.90	1.458	(N/A)	(N/A)
North Pond (OUT)	2 yr 24 hr	2.00	0.847	24.10	0.159	835.30	0.841
North Pond (IN)	2 yr 15 min	2.00	0.064	0.25	3.343	(N/A)	(N/A)
North Pond (OUT)	2 yr 15 min	2.00	0.064	0.65	0.036	833.92	0.062
North Pond (IN)	2 yr 30 min	2.00	0.150	0.30	4.528	(N/A)	(N/A)
North Pond (OUT)	2 yr 30 min	2.00	0.147	0.85	0.062	834.08	0.147
North Pond (IN)	2 yr 1 hr	2.00	0.255	0.40	4.991	(N/A)	(N/A)
North Pond (OUT)	2 yr 1 hr	2.00	0.221	1.30	0.087	834.26	0.248
North Pond (IN)	2 yr 2 hr	2.00	0.389	0.65	4.763	(N/A)	(N/A)
North Pond (OUT)	2 yr 2 hr	2.00	0.308	2.25	0.106	834.49	0.375
North Pond (IN)	2 yr 3 hr	2.00	0.467	0.85	4.134	(N/A)	(N/A)
North Pond (OUT)	2 yr 3 hr	2.00	0.353	3.25	0.116	834.61	0.445
North Pond (IN)	2 yr 6 hr	2.00	0.467	0.85	4.134	(N/A)	(N/A)
North Pond (OUT)	2 yr 6 hr	2.00	0.353	3.25	0.116	834.61	0.445

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (IN)	2 yr 12 hr	2.00	0.793	5.00	2.100	(N/A)	(N/A)
North Pond (OUT)	2 yr 12 hr	2.00	0.738	12.20	0.146	835.08	0.706
North Pond (IN)	2 yr 18 hr	2.00	0.896	11.90	1.778	(N/A)	(N/A)
North Pond (OUT)	2 yr 18 hr	2.00	0.799	18.20	0.154	835.22	0.790
North Pond (IN)	2 yr 48 hr	2.00	1.137	41.70	1.060	(N/A)	(N/A)
North Pond (OUT)	2 yr 48 hr	2.00	1.137	48.20	0.190	835.40	0.901
North Pond (IN)	2 yr 72 hr	2.00	1.284	62.60	0.786	(N/A)	(N/A)
North Pond (OUT)	2 yr 72 hr	2.00	1.284	72.10	0.199	835.43	0.919
North Pond (IN)	2 yr 120 hr	2.00	1.501	104.40	0.540	(N/A)	(N/A)
North Pond (OUT)	2 yr 120 hr	2.00	1.501	120.00	0.187	835.39	0.897
North Pond (IN)	2 yr 240 hr	2.00	2.086	208.80	0.358	(N/A)	(N/A)
North Pond (OUT)	2 yr 240 hr	2.00	2.086	230.50	0.183	835.38	0.889

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Time-Depth Curve: 1 hr 2 yr	
Label	1 hr 2 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.13
0.05	0.16	0.20	0.23	0.27	0.30
0.10	0.34	0.38	0.42	0.46	0.50
0.15	0.54	0.58	0.61	0.65	0.68
0.20	0.72	0.75	0.78	0.81	0.84
0.25	0.87	0.90	0.92	0.95	0.97
0.30	0.99	1.01	1.03	1.05	1.06
0.35	1.08	1.09	1.11	1.12	1.13
0.40	1.14	1.16	1.17	1.18	1.19
0.45	1.20	1.21	1.22	1.23	1.24
0.50	1.25	1.26	1.27	1.28	1.29
0.55	1.30	1.31	1.32	1.33	1.34
0.60	1.35	1.36	1.37	1.38	1.38
0.65	1.39	1.40	1.41	1.41	1.42
0.70	1.43	1.43	1.44	1.44	1.45
0.75	1.46	1.46	1.47	1.47	1.48
0.80	1.48	1.49	1.49	1.50	1.50
0.85	1.50	1.51	1.51	1.52	1.52
0.90	1.53	1.53	1.54	1.54	1.54
0.95	1.55	1.55	1.56	1.56	1.57
1.00	1.57	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 12 hr

Return Event: 2.00 years
Storm Event: 12 hr 2 yr

Time-Depth Curve: 12 hr 2 yr	
Label	12 hr 2 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.06
0.60	0.08	0.10	0.12	0.13	0.15
1.20	0.17	0.20	0.22	0.24	0.26
1.80	0.29	0.31	0.34	0.37	0.40
2.40	0.43	0.47	0.51	0.54	0.58
3.00	0.62	0.67	0.72	0.77	0.82
3.60	0.87	0.93	0.99	1.04	1.10
4.20	1.16	1.23	1.29	1.35	1.41
4.80	1.48	1.54	1.60	1.66	1.71
5.40	1.77	1.82	1.88	1.93	1.98
6.00	2.03	2.07	2.11	2.15	2.19
6.60	2.22	2.26	2.29	2.33	2.36
7.20	2.39	2.42	2.45	2.48	2.50
7.80	2.52	2.54	2.56	2.58	2.59
8.40	2.61	2.63	2.64	2.65	2.67
9.00	2.68	2.69	2.71	2.72	2.73
9.60	2.74	2.75	2.76	2.77	2.78
10.20	2.79	2.80	2.81	2.81	2.82
10.80	2.83	2.84	2.85	2.85	2.86
11.40	2.87	2.88	2.89	2.89	2.90
12.00	2.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 120 hr

Return Event: 2.00 years
Storm Event: 120 hr 2 yr

Time-Depth Curve: 120 hr 2 yr	
Label	120 hr 2 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
6.00	0.12	0.15	0.18	0.20	0.23
12.00	0.25	0.28	0.30	0.33	0.36
18.00	0.39	0.41	0.44	0.47	0.50
24.00	0.53	0.56	0.59	0.62	0.64
30.00	0.67	0.70	0.73	0.76	0.79
36.00	0.81	0.84	0.86	0.89	0.92
42.00	0.94	0.97	1.00	1.02	1.05
48.00	1.08	1.10	1.13	1.16	1.20
54.00	1.23	1.26	1.29	1.32	1.35
60.00	1.38	1.41	1.44	1.47	1.49
66.00	1.52	1.55	1.57	1.60	1.62
72.00	1.65	1.67	1.69	1.72	1.75
78.00	1.78	1.80	1.84	1.88	1.92
84.00	1.96	2.00	2.07	2.14	2.20
90.00	2.27	2.35	2.44	2.52	2.61
96.00	2.71	2.81	2.92	3.02	3.14
102.00	3.25	3.37	3.48	3.59	3.69
108.00	3.79	3.90	3.99	4.05	4.12
114.00	4.19	4.25	4.29	4.34	4.38
120.00	4.42	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 15 min

Return Event: 2.00 years
Storm Event: 15 min 2 yr

Time-Depth Curve: 15 min 2 yr	
Label	15 min 2 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.05	0.07
0.01	0.09	0.11	0.13	0.15	0.17
0.03	0.20	0.22	0.24	0.26	0.29
0.04	0.31	0.33	0.35	0.37	0.39
0.05	0.41	0.43	0.45	0.46	0.48
0.06	0.50	0.51	0.53	0.54	0.56
0.08	0.57	0.58	0.59	0.60	0.61
0.09	0.62	0.63	0.63	0.64	0.65
0.10	0.66	0.66	0.67	0.68	0.68
0.11	0.69	0.69	0.70	0.71	0.71
0.13	0.72	0.72	0.73	0.74	0.74
0.14	0.75	0.75	0.76	0.76	0.77
0.15	0.77	0.78	0.78	0.79	0.79
0.16	0.80	0.80	0.81	0.81	0.81
0.18	0.82	0.82	0.82	0.83	0.83
0.19	0.83	0.84	0.84	0.84	0.85
0.20	0.85	0.85	0.85	0.86	0.86
0.21	0.86	0.87	0.87	0.87	0.87
0.23	0.88	0.88	0.88	0.88	0.89
0.24	0.89	0.89	0.89	0.90	0.90
0.25	0.90	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 hr 2 yr

Time-Depth Curve: 18 hr 2 yr	
Label	18 hr 2 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.06
0.90	0.08	0.10	0.11	0.13	0.15
1.80	0.16	0.18	0.20	0.22	0.24
2.70	0.26	0.27	0.29	0.31	0.33
3.60	0.35	0.37	0.39	0.41	0.43
4.50	0.45	0.47	0.49	0.51	0.53
5.40	0.55	0.57	0.59	0.61	0.63
6.30	0.66	0.68	0.70	0.73	0.76
7.20	0.78	0.81	0.84	0.87	0.91
8.10	0.94	0.98	1.02	1.06	1.10
9.00	1.14	1.20	1.26	1.31	1.37
9.90	1.43	1.49	1.55	1.62	1.68
10.80	1.75	1.82	1.88	1.95	2.02
11.70	2.08	2.15	2.22	2.28	2.34
12.60	2.40	2.46	2.51	2.57	2.62
13.50	2.67	2.70	2.74	2.78	2.81
14.40	2.84	2.86	2.89	2.92	2.93
15.30	2.95	2.97	2.99	3.00	3.01
16.20	3.03	3.04	3.05	3.06	3.07
17.10	3.09	3.10	3.11	3.12	3.13
18.00	3.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 2 hr

Return Event: 2.00 years
Storm Event: 2 hr 2 yr

Time-Depth Curve: 2 hr 2 yr	
Label	2 hr 2 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.10	0.20	0.24	0.29	0.33	0.38
0.20	0.42	0.47	0.52	0.57	0.62
0.30	0.66	0.71	0.76	0.80	0.84
0.40	0.89	0.93	0.96	1.00	1.04
0.50	1.08	1.11	1.14	1.17	1.20
0.60	1.23	1.25	1.27	1.30	1.32
0.70	1.33	1.35	1.37	1.38	1.40
0.80	1.41	1.43	1.44	1.46	1.47
0.90	1.48	1.50	1.51	1.52	1.54
1.00	1.55	1.56	1.57	1.59	1.60
1.10	1.61	1.62	1.64	1.65	1.66
1.20	1.67	1.68	1.69	1.70	1.71
1.30	1.72	1.73	1.74	1.75	1.75
1.40	1.76	1.77	1.78	1.78	1.79
1.50	1.80	1.80	1.81	1.82	1.82
1.60	1.83	1.84	1.84	1.85	1.85
1.70	1.86	1.86	1.87	1.88	1.88
1.80	1.89	1.89	1.90	1.90	1.91
1.90	1.91	1.92	1.92	1.93	1.93
2.00	1.94	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Time-Depth Curve: 24 hr 2 yr	
Label	24 hr 2 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.07
1.20	0.08	0.10	0.12	0.14	0.16
2.40	0.18	0.19	0.21	0.23	0.25
3.60	0.27	0.29	0.31	0.33	0.35
4.80	0.37	0.39	0.42	0.44	0.46
6.00	0.48	0.50	0.52	0.54	0.56
7.20	0.58	0.60	0.63	0.65	0.67
8.40	0.70	0.72	0.75	0.78	0.80
9.60	0.83	0.86	0.89	0.93	0.97
10.80	1.00	1.04	1.08	1.13	1.17
12.00	1.21	1.27	1.34	1.40	1.46
13.20	1.52	1.59	1.65	1.72	1.79
14.40	1.86	1.93	2.00	2.07	2.14
15.60	2.22	2.29	2.36	2.42	2.49
16.80	2.56	2.62	2.67	2.73	2.78
18.00	2.84	2.87	2.91	2.95	2.99
19.20	3.02	3.05	3.07	3.10	3.12
20.40	3.14	3.16	3.18	3.19	3.21
21.60	3.22	3.23	3.25	3.26	3.27
22.80	3.28	3.29	3.31	3.32	3.33
24.00	3.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 240 hr

Return Event: 2.00 years
Storm Event: 240 hr 2 yr

Time-Depth Curve: 240 hr 2 yr	
Label	240 hr 2 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.12
12.00	0.16	0.19	0.22	0.26	0.29
24.00	0.32	0.35	0.38	0.42	0.45
36.00	0.49	0.52	0.56	0.60	0.63
48.00	0.67	0.71	0.74	0.78	0.82
60.00	0.85	0.89	0.92	0.96	1.00
72.00	1.03	1.06	1.10	1.13	1.16
84.00	1.19	1.23	1.26	1.30	1.33
96.00	1.37	1.40	1.44	1.48	1.52
108.00	1.55	1.59	1.63	1.67	1.71
120.00	1.75	1.79	1.82	1.86	1.89
132.00	1.93	1.96	1.99	2.02	2.05
144.00	2.09	2.12	2.15	2.18	2.22
156.00	2.25	2.29	2.33	2.38	2.43
168.00	2.48	2.54	2.62	2.71	2.79
180.00	2.87	2.98	3.09	3.20	3.30
192.00	3.43	3.56	3.70	3.83	3.97
204.00	4.12	4.26	4.41	4.55	4.68
216.00	4.81	4.94	5.05	5.14	5.22
228.00	5.31	5.39	5.44	5.49	5.55
240.00	5.60	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 3 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

Time-Depth Curve: 3 hr 2 yr	
Label	3 hr 2 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.09	0.13	0.17
0.15	0.22	0.27	0.32	0.36	0.41
0.30	0.47	0.52	0.57	0.63	0.68
0.45	0.73	0.79	0.84	0.88	0.93
0.60	0.98	1.02	1.06	1.11	1.15
0.75	1.19	1.22	1.26	1.29	1.33
0.90	1.35	1.38	1.40	1.43	1.45
1.05	1.47	1.49	1.51	1.52	1.54
1.20	1.56	1.58	1.59	1.61	1.62
1.35	1.64	1.65	1.66	1.68	1.69
1.50	1.71	1.72	1.74	1.75	1.76
1.65	1.78	1.79	1.80	1.82	1.83
1.80	1.84	1.85	1.86	1.88	1.89
1.95	1.90	1.91	1.92	1.93	1.94
2.10	1.94	1.95	1.96	1.97	1.98
2.25	1.98	1.99	2.00	2.00	2.01
2.40	2.02	2.02	2.03	2.04	2.04
2.55	2.05	2.06	2.06	2.07	2.08
2.70	2.08	2.09	2.09	2.10	2.10
2.85	2.11	2.12	2.12	2.13	2.13
3.00	2.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 6 hr

Return Event: 2.00 years
Storm Event: 3 hr 2 yr

Time-Depth Curve: 3 hr 2 yr	
Label	3 hr 2 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.09	0.13	0.17
0.15	0.22	0.27	0.32	0.36	0.41
0.30	0.47	0.52	0.57	0.63	0.68
0.45	0.73	0.79	0.84	0.88	0.93
0.60	0.98	1.02	1.06	1.11	1.15
0.75	1.19	1.22	1.26	1.29	1.33
0.90	1.35	1.38	1.40	1.43	1.45
1.05	1.47	1.49	1.51	1.52	1.54
1.20	1.56	1.58	1.59	1.61	1.62
1.35	1.64	1.65	1.66	1.68	1.69
1.50	1.71	1.72	1.74	1.75	1.76
1.65	1.78	1.79	1.80	1.82	1.83
1.80	1.84	1.85	1.86	1.88	1.89
1.95	1.90	1.91	1.92	1.93	1.94
2.10	1.94	1.95	1.96	1.97	1.98
2.25	1.98	1.99	2.00	2.00	2.01
2.40	2.02	2.02	2.03	2.04	2.04
2.55	2.05	2.06	2.06	2.07	2.08
2.70	2.08	2.09	2.09	2.10	2.10
2.85	2.11	2.12	2.12	2.13	2.13
3.00	2.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 2 yr

Time-Depth Curve: 30 min 2 yr	
Label	30 min 2 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.03	0.13	0.15	0.18	0.21	0.24
0.05	0.27	0.30	0.33	0.36	0.39
0.08	0.42	0.46	0.48	0.51	0.54
0.10	0.57	0.59	0.62	0.64	0.66
0.13	0.69	0.71	0.73	0.75	0.77
0.15	0.78	0.80	0.81	0.83	0.84
0.18	0.85	0.86	0.87	0.88	0.89
0.20	0.90	0.91	0.92	0.93	0.94
0.23	0.95	0.96	0.96	0.97	0.98
0.25	0.99	1.00	1.01	1.01	1.02
0.28	1.03	1.04	1.05	1.05	1.06
0.30	1.07	1.07	1.08	1.09	1.09
0.33	1.10	1.11	1.11	1.12	1.12
0.35	1.13	1.13	1.14	1.14	1.14
0.38	1.15	1.15	1.16	1.16	1.17
0.40	1.17	1.17	1.18	1.18	1.18
0.43	1.19	1.19	1.20	1.20	1.20
0.45	1.21	1.21	1.21	1.22	1.22
0.48	1.22	1.23	1.23	1.23	1.24
0.50	1.24	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 hr 2 yr

Time-Depth Curve: 48 hr 2 yr	
Label	48 hr 2 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.06	0.08
2.40	0.10	0.12	0.15	0.17	0.19
4.80	0.21	0.23	0.25	0.27	0.30
7.20	0.32	0.34	0.37	0.39	0.41
9.60	0.44	0.46	0.49	0.51	0.53
12.00	0.56	0.58	0.60	0.63	0.65
14.40	0.67	0.69	0.72	0.74	0.76
16.80	0.78	0.80	0.82	0.85	0.87
19.20	0.89	0.91	0.94	0.96	0.99
21.60	1.02	1.04	1.07	1.09	1.12
24.00	1.14	1.17	1.19	1.21	1.24
26.40	1.26	1.28	1.30	1.32	1.34
28.80	1.36	1.38	1.40	1.42	1.45
31.20	1.47	1.49	1.52	1.55	1.59
33.60	1.62	1.66	1.71	1.77	1.82
36.00	1.88	1.95	2.02	2.09	2.16
38.40	2.24	2.33	2.42	2.50	2.60
40.80	2.69	2.79	2.88	2.97	3.06
43.20	3.14	3.23	3.30	3.36	3.41
45.60	3.47	3.52	3.56	3.59	3.63
48.00	3.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 hr 2 yr

Time-Depth Curve: 72 hr 2 yr	
Label	72 hr 2 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.04	0.07	0.09
3.60	0.11	0.14	0.16	0.18	0.20
7.20	0.23	0.25	0.27	0.30	0.32
10.80	0.35	0.37	0.40	0.42	0.45
14.40	0.48	0.50	0.53	0.55	0.58
18.00	0.60	0.63	0.66	0.68	0.71
21.60	0.73	0.75	0.78	0.80	0.82
25.20	0.85	0.87	0.89	0.92	0.94
28.80	0.97	0.99	1.02	1.05	1.07
32.40	1.10	1.13	1.16	1.19	1.21
36.00	1.24	1.27	1.29	1.32	1.34
39.60	1.37	1.39	1.41	1.43	1.46
43.20	1.48	1.50	1.52	1.55	1.57
46.80	1.60	1.62	1.65	1.69	1.72
50.40	1.76	1.80	1.86	1.92	1.98
54.00	2.04	2.11	2.19	2.27	2.34
57.60	2.43	2.53	2.62	2.72	2.82
61.20	2.92	3.02	3.13	3.22	3.32
64.80	3.41	3.50	3.58	3.64	3.70
68.40	3.76	3.82	3.86	3.89	3.93
72.00	3.97	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to North Pond
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to South Pond
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Unrestricted to West
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	1 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.39 hours
Flow (Peak, Computed)	3.422 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.40 hours
Flow (Peak Interpolated Output)	3.373 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.46 in
Runoff Volume (Pervious)	0.157 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.157 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.99 hours
Flow (Peak, Computed)	1.316 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.315 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.44 in
Runoff Volume (Pervious)	0.496 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.496 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.341 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.341 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.74 in
Runoff Volume (Pervious)	0.943 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.943 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	2.054 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	2.052 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.11 in
Runoff Volume (Pervious)	0.038 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.038 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.92 hours
Flow (Peak, Computed)	1.120 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.119 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.63 in
Runoff Volume (Pervious)	0.561 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.561 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.61 hours
Flow (Peak, Computed)	3.161 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.60 hours
Flow (Peak Interpolated Output)	3.157 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.70 in
Runoff Volume (Pervious)	0.241 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.241 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.918 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.918 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.80 in
Runoff Volume (Pervious)	0.619 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.619 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.227 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.80 hours
Flow (Peak Interpolated Output)	0.227 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.82 in
Runoff Volume (Pervious)	1.314 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.314 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	2.656 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	2.650 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.84 in
Runoff Volume (Pervious)	0.290 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.290 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.29 hours
Flow (Peak, Computed)	3.032 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.30 hours
Flow (Peak Interpolated Output)	3.026 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.27 in
Runoff Volume (Pervious)	0.092 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.092 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.670 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.669 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.07 in
Runoff Volume (Pervious)	0.713 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.713 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	2.656 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	2.650 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.84 in
Runoff Volume (Pervious)	0.290 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.290 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.496 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.496 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.34 in
Runoff Volume (Pervious)	0.806 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.806 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.36 hours
Flow (Peak, Computed)	2.161 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	2.120 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.50 in
Runoff Volume (Pervious)	0.098 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.098 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.99 hours
Flow (Peak, Computed)	0.790 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.790 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.298 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.298 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.199 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.199 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.84 in
Runoff Volume (Pervious)	0.558 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.558 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	1.352 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	1.350 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.13 in
Runoff Volume (Pervious)	0.025 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.026 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.92 hours
Flow (Peak, Computed)	0.662 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.661 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.71 in
Runoff Volume (Pervious)	0.336 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.336 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.59 hours
Flow (Peak, Computed)	1.955 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.60 hours
Flow (Peak Interpolated Output)	1.954 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.75 in
Runoff Volume (Pervious)	0.148 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.148 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.541 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.541 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.88 in
Runoff Volume (Pervious)	0.369 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.131 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.80 hours
Flow (Peak Interpolated Output)	0.131 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.93 in
Runoff Volume (Pervious)	0.772 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.772 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	1.630 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	1.630 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.90 in
Runoff Volume (Pervious)	0.177 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.177 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.27 hours
Flow (Peak, Computed)	1.946 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.30 hours
Flow (Peak Interpolated Output)	1.933 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.30 in
Runoff Volume (Pervious)	0.058 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.058 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.392 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.392 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.16 in
Runoff Volume (Pervious)	0.424 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.424 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.82 hours
Flow (Peak, Computed)	1.630 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	1.630 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.90 in
Runoff Volume (Pervious)	0.177 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.177 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.290 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.290 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.43 in
Runoff Volume (Pervious)	0.478 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.478 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.41 hours
Flow (Peak, Computed)	0.242 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.40 hours
Flow (Peak Interpolated Output)	0.241 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.32 in
Runoff Volume (Pervious)	0.012 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.012 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	2.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	5.55 hours
Flow (Peak, Computed)	0.118 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	6.00 hours
Flow (Peak Interpolated Output)	0.118 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.18 in
Runoff Volume (Pervious)	0.044 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.044 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	4.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.034 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.034 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.39 in
Runoff Volume (Pervious)	0.090 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.090 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	0.90 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.27 hours
Flow (Peak, Computed)	0.118 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	0.116 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.06 in
Runoff Volume (Pervious)	0.002 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.002 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.95 hours
Flow (Peak, Computed)	0.106 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.106 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.36 in
Runoff Volume (Pervious)	0.051 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.051 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.94 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.63 hours
Flow (Peak, Computed)	0.247 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.65 hours
Flow (Peak Interpolated Output)	0.246 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.53 in
Runoff Volume (Pervious)	0.020 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.020 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.89 hours
Flow (Peak, Computed)	0.088 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.088 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.057 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.057 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	5.60 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.023 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.80 hours
Flow (Peak Interpolated Output)	0.023 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.42 in
Runoff Volume (Pervious)	0.128 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.128 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.88 hours
Flow (Peak, Computed)	0.215 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.90 hours
Flow (Peak Interpolated Output)	0.215 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.65 in
Runoff Volume (Pervious)	0.024 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.024 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	1.24 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.36 hours
Flow (Peak, Computed)	0.210 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	0.209 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.17 in
Runoff Volume (Pervious)	0.006 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.006 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.77 hours
Flow (Peak, Computed)	0.066 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.066 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.76 in
Runoff Volume (Pervious)	0.066 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.066 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 2 yr
Return Event	2.00 years
Duration	50.00 hours
Depth	2.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.88 hours
Flow (Peak, Computed)	0.215 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.90 hours
Flow (Peak Interpolated Output)	0.215 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.65 in
Runoff Volume (Pervious)	0.024 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.024 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 2 yr
Return Event	2.00 years
Duration	500.00 hours
Depth	3.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.65 hours
Flow (Peak, Computed)	0.050 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.050 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.02 in
Runoff Volume (Pervious)	0.076 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.076 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Requested Pond Water Surface Elevations	
Minimum (Headwater)	835.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Interconnected Culvert	Forward + Reverse	TW	836.00	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Interconnected Culvert Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	36.00 in
Length	240.00 ft
Length (Computed Barrel)	240.01 ft
Slope (Computed)	0.009 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.007
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.091
T2 ratio (HW/D)	1.193
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	839.27 ft	T1 Flow	42.851 ft³/s
T2 Elevation	839.58 ft	T2 Flow	48.973 ft³/s

Requested Pond Water Surface Elevations	
Minimum (Headwater)	833.70 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	North 2-Year Restrictor	Forward	TW	833.70	839.00
Orifice-Circular	North 100-Year Restrictor	Forward	TW	835.30	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: North 2-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	833.70 ft
Orifice Diameter	2.20 in
Orifice Coefficient	0.610

Structure ID: North 100-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	835.30 ft
Orifice Diameter	2.70 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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Proposed 10-yr Critical Duration

Project Summary	
Title	24-136 Proposed Conditions PondPack Pond Sizing Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Proposed Conditions Model. Critical Duration Analysis

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Message Id	7
Scenario	10 yr 15 min
Element Type	Catchment
Element Id	819
Label	On-Site Area to North Pond
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 1.7 % is greater than 1.5 %. Computed peak flow= 6.273 ft³/s Interp. peak flow= 6.165 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	39
Scenario	10 yr 15 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 30 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 1 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 2 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	10 yr 3 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 6 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	10 yr 15 min
Element Type	Scenario
Element Id	630
Label	10 yr 15 min
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.05 hours.
Source	Warning
Message Id	7
Scenario	10 yr 30 min
Element Type	Catchment
Element Id	825
Label	Unrestricted to West
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 1.8 % is greater than 1.5 %. Computed peak flow= 0.645 ft³/s Interp. peak flow= 0.633 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	39
Scenario	10 yr 12 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	10 yr 18 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 24 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 48 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 72 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	10 yr 120 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	10 yr 240 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	10 yr 48 hr
Element Type	Scenario
Element Id	639
Label	10 yr 48 hr
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.10 hours.
Source	Warning

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to South Pond	2 yr 24 hr	2.00	0.369	15.90	0.541
On-Site Area to South Pond	10 yr 15 min	10.00	0.076	0.20	3.901
On-Site Area to South Pond	10 yr 30 min	10.00	0.144	0.25	5.105
On-Site Area to South Pond	10 yr 1 hr	10.00	0.219	0.35	5.196
On-Site Area to South Pond	10 yr 2 hr	10.00	0.311	0.55	4.280
On-Site Area to South Pond	10 yr 3 hr	10.00	0.362	0.75	3.439
On-Site Area to South Pond	10 yr 6 hr	10.00	0.459	1.30	2.257
On-Site Area to South Pond	10 yr 12 hr	10.00	0.569	5.00	1.487
On-Site Area to South Pond	10 yr 18 hr	10.00	0.633	11.90	1.167
On-Site Area to South Pond	10 yr 24 hr	10.00	0.690	15.90	0.944
On-Site Area to South Pond	10 yr 48 hr	10.00	0.776	41.70	0.659
On-Site Area to South Pond	10 yr 72 hr	10.00	0.855	62.60	0.478
On-Site Area to South Pond	10 yr 120 hr	10.00	0.973	104.40	0.321
On-Site Area to South Pond	10 yr 240 hr	10.00	1.269	208.70	0.203
On-Site Area to North Pond	2 yr 24 hr	2.00	0.619	15.90	0.918
On-Site Area to North Pond	10 yr 15 min	10.00	0.120	0.20	6.165
On-Site Area to North Pond	10 yr 30 min	10.00	0.234	0.25	8.227
On-Site Area to North Pond	10 yr 1 hr	10.00	0.362	0.35	8.496
On-Site Area to North Pond	10 yr 2 hr	10.00	0.518	0.55	7.090
On-Site Area to North Pond	10 yr 3 hr	10.00	0.607	0.75	5.731
On-Site Area to North Pond	10 yr 6 hr	10.00	0.772	1.30	3.783
On-Site Area to North Pond	10 yr 12 hr	10.00	0.962	5.00	2.524
On-Site Area to North Pond	10 yr 18 hr	10.00	1.073	11.90	2.000
On-Site Area to North Pond	10 yr 24 hr	10.00	1.171	15.90	1.621

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to North Pond	10 yr 48 hr	10.00	1.320	41.70	1.136
On-Site Area to North Pond	10 yr 72 hr	10.00	1.458	62.60	0.826
On-Site Area to North Pond	10 yr 120 hr	10.00	1.662	104.40	0.555
On-Site Area to North Pond	10 yr 240 hr	10.00	2.177	208.70	0.351
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	10 yr 15 min	10.00	0.009	0.25	0.458
Unrestricted to West	10 yr 30 min	10.00	0.019	0.30	0.633
Unrestricted to West	10 yr 1 hr	10.00	0.031	0.35	0.695
Unrestricted to West	10 yr 2 hr	10.00	0.047	0.60	0.621
Unrestricted to West	10 yr 3 hr	10.00	0.055	0.80	0.515
Unrestricted to West	10 yr 6 hr	10.00	0.072	1.30	0.345
Unrestricted to West	10 yr 12 hr	10.00	0.092	5.00	0.243
Unrestricted to West	10 yr 18 hr	10.00	0.103	11.90	0.201
Unrestricted to West	10 yr 24 hr	10.00	0.113	15.90	0.164
Unrestricted to West	10 yr 48 hr	10.00	0.129	41.70	0.117
Unrestricted to West	10 yr 72 hr	10.00	0.143	62.60	0.086
Unrestricted to West	10 yr 120 hr	10.00	0.165	104.40	0.058
Unrestricted to West	10 yr 240 hr	10.00	0.220	208.80	0.037

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From North Pond	2 yr 24 hr	2.00	0.847	24.10	0.159
From North Pond	10 yr 15 min	10.00	0.180	0.65	0.076
From North Pond	10 yr 30 min	10.00	0.303	0.85	0.105
From North Pond	10 yr 1 hr	10.00	0.416	1.30	0.132
From North Pond	10 yr 2 hr	10.00	0.519	2.30	0.156
From North Pond	10 yr 3 hr	10.00	0.577	3.25	0.207
From North Pond	10 yr 6 hr	10.00	0.715	6.20	0.300
From North Pond	10 yr 12 hr	10.00	1.323	12.10	0.359
From North Pond	10 yr 18 hr	10.00	1.427	18.10	0.390
From North Pond	10 yr 24 hr	10.00	1.519	24.00	0.402
From North Pond	10 yr 48 hr	10.00	2.096	48.10	0.420
From North Pond	10 yr 72 hr	10.00	2.313	72.10	0.415
From North Pond	10 yr 120 hr	10.00	2.635	115.40	0.392
From North Pond	10 yr 240 hr	10.00	3.446	221.00	0.357
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	10 yr 15 min	10.00	0.009	0.25	0.458
Unrestricted to West	10 yr 30 min	10.00	0.019	0.30	0.633

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Unrestricted to West	10 yr 1 hr	10.00	0.031	0.35	0.695
Unrestricted to West	10 yr 2 hr	10.00	0.047	0.60	0.621
Unrestricted to West	10 yr 3 hr	10.00	0.055	0.80	0.515
Unrestricted to West	10 yr 6 hr	10.00	0.072	1.30	0.345
Unrestricted to West	10 yr 12 hr	10.00	0.092	5.00	0.243
Unrestricted to West	10 yr 18 hr	10.00	0.103	11.90	0.201
Unrestricted to West	10 yr 24 hr	10.00	0.113	15.90	0.164
Unrestricted to West	10 yr 48 hr	10.00	0.129	41.70	0.117
Unrestricted to West	10 yr 72 hr	10.00	0.143	62.60	0.086
Unrestricted to West	10 yr 120 hr	10.00	0.165	104.40	0.058
Unrestricted to West	10 yr 240 hr	10.00	0.220	208.80	0.037

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	2 yr 24 hr	2.00	0.369	15.90	0.541	(N/A)	(N/A)
South Pond (OUT)	2 yr 24 hr	2.00	0.369	15.90	0.541	836.32	0.000
South Pond (IN)	10 yr 15 min	10.00	0.076	0.20	3.901	(N/A)	(N/A)
South Pond (OUT)	10 yr 15 min	10.00	0.076	0.30	2.648	836.72	0.017
South Pond (IN)	10 yr 30 min	10.00	0.144	0.25	5.105	(N/A)	(N/A)
South Pond (OUT)	10 yr 30 min	10.00	0.144	0.40	3.687	836.85	0.027
South Pond (IN)	10 yr 1 hr	10.00	0.219	0.35	5.196	(N/A)	(N/A)
South Pond (OUT)	10 yr 1 hr	10.00	0.219	0.50	3.888	836.87	0.029
South Pond (IN)	10 yr 2 hr	10.00	0.311	0.55	4.280	(N/A)	(N/A)
South Pond (OUT)	10 yr 2 hr	10.00	0.311	0.70	3.713	836.85	0.028
South Pond (IN)	10 yr 3 hr	10.00	0.362	0.75	3.439	(N/A)	(N/A)
South Pond (OUT)	10 yr 3 hr	10.00	0.362	0.90	3.187	836.79	0.022
South Pond (IN)	10 yr 6 hr	10.00	0.459	1.30	2.257	(N/A)	(N/A)
South Pond (OUT)	10 yr 6 hr	10.00	0.459	1.45	2.174	836.65	0.012

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	10 yr 12 hr	10.00	0.569	5.00	1.487	(N/A)	(N/A)
South Pond (OUT)	10 yr 12 hr	10.00	0.569	5.10	1.456	836.53	0.002
South Pond (IN)	10 yr 18 hr	10.00	0.633	11.90	1.167	(N/A)	(N/A)
South Pond (OUT)	10 yr 18 hr	10.00	0.633	11.90	1.164	836.47	0.000
South Pond (IN)	10 yr 24 hr	10.00	0.690	15.90	0.944	(N/A)	(N/A)
South Pond (OUT)	10 yr 24 hr	10.00	0.690	15.90	0.944	836.43	0.000
South Pond (IN)	10 yr 48 hr	10.00	0.776	41.70	0.659	(N/A)	(N/A)
South Pond (OUT)	10 yr 48 hr	10.00	0.776	41.70	0.658	836.55	0.004
South Pond (IN)	10 yr 72 hr	10.00	0.855	62.60	0.478	(N/A)	(N/A)
South Pond (OUT)	10 yr 72 hr	10.00	0.855	62.60	0.478	836.51	0.001
South Pond (IN)	10 yr 120 hr	10.00	0.973	104.40	0.321	(N/A)	(N/A)
South Pond (OUT)	10 yr 120 hr	10.00	0.973	104.40	0.321	836.36	0.000
South Pond (IN)	10 yr 240 hr	10.00	1.269	208.70	0.203	(N/A)	(N/A)
South Pond (OUT)	10 yr 240 hr	10.00	1.269	208.80	0.203	836.19	0.000
North Pond (IN)	2 yr 24 hr	2.00	0.988	15.90	1.458	(N/A)	(N/A)
North Pond (OUT)	2 yr 24 hr	2.00	0.847	24.10	0.159	835.30	0.841
North Pond (IN)	10 yr 15 min	10.00	0.196	0.25	8.381	(N/A)	(N/A)
North Pond (OUT)	10 yr 15 min	10.00	0.180	0.65	0.076	834.16	0.193
North Pond (IN)	10 yr 30 min	10.00	0.378	0.30	10.942	(N/A)	(N/A)
North Pond (OUT)	10 yr 30 min	10.00	0.303	0.85	0.105	834.48	0.372
North Pond (IN)	10 yr 1 hr	10.00	0.582	0.40	11.626	(N/A)	(N/A)
North Pond (OUT)	10 yr 1 hr	10.00	0.416	1.30	0.132	834.84	0.571
North Pond (IN)	10 yr 2 hr	10.00	0.829	0.60	10.509	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (OUT)	10 yr 2 hr	10.00	0.519	2.30	0.156	835.24	0.807
North Pond (IN)	10 yr 3 hr	10.00	0.969	0.80	8.793	(N/A)	(N/A)
North Pond (OUT)	10 yr 3 hr	10.00	0.577	3.25	0.207	835.46	0.935
North Pond (IN)	10 yr 6 hr	10.00	1.231	1.30	5.917	(N/A)	(N/A)
North Pond (OUT)	10 yr 6 hr	10.00	0.715	6.20	0.300	835.80	1.141
North Pond (IN)	10 yr 12 hr	10.00	1.530	5.00	3.971	(N/A)	(N/A)
North Pond (OUT)	10 yr 12 hr	10.00	1.323	12.10	0.359	836.12	1.341
North Pond (IN)	10 yr 18 hr	10.00	1.707	11.90	3.164	(N/A)	(N/A)
North Pond (OUT)	10 yr 18 hr	10.00	1.427	18.10	0.390	836.32	1.472
North Pond (IN)	10 yr 24 hr	10.00	1.861	15.90	2.564	(N/A)	(N/A)
North Pond (OUT)	10 yr 24 hr	10.00	1.519	24.00	0.402	836.41	1.530
North Pond (IN)	10 yr 48 hr	10.00	2.096	41.70	1.794	(N/A)	(N/A)
North Pond (OUT)	10 yr 48 hr	10.00	2.096	48.10	0.420	836.55	1.614
North Pond (IN)	10 yr 72 hr	10.00	2.313	62.60	1.304	(N/A)	(N/A)
North Pond (OUT)	10 yr 72 hr	10.00	2.313	72.10	0.415	836.50	1.588
North Pond (IN)	10 yr 120 hr	10.00	2.635	104.40	0.876	(N/A)	(N/A)
North Pond (OUT)	10 yr 120 hr	10.00	2.635	115.40	0.392	836.34	1.481
North Pond (IN)	10 yr 240 hr	10.00	3.446	208.80	0.554	(N/A)	(N/A)
North Pond (OUT)	10 yr 240 hr	10.00	3.446	221.00	0.357	836.11	1.335

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

Time-Depth Curve: 1 hr 10 yr	
Label	1 hr 10 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.15	0.19
0.05	0.25	0.30	0.36	0.41	0.47
0.10	0.53	0.59	0.65	0.71	0.77
0.15	0.83	0.89	0.95	1.00	1.05
0.20	1.10	1.16	1.20	1.25	1.30
0.25	1.34	1.38	1.42	1.46	1.50
0.30	1.53	1.56	1.59	1.62	1.64
0.35	1.66	1.68	1.70	1.72	1.74
0.40	1.76	1.78	1.80	1.82	1.83
0.45	1.85	1.87	1.88	1.90	1.91
0.50	1.93	1.95	1.96	1.98	2.00
0.55	2.01	2.03	2.04	2.06	2.07
0.60	2.08	2.10	2.11	2.12	2.13
0.65	2.15	2.16	2.17	2.18	2.19
0.70	2.20	2.21	2.22	2.23	2.23
0.75	2.24	2.25	2.26	2.27	2.27
0.80	2.28	2.29	2.30	2.31	2.31
0.85	2.32	2.33	2.33	2.34	2.35
0.90	2.35	2.36	2.37	2.37	2.38
0.95	2.39	2.39	2.40	2.41	2.41
1.00	2.42	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

Time-Depth Curve: 12 hr 10 yr	
Label	12 hr 10 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.60	0.13	0.15	0.18	0.21	0.24
1.20	0.27	0.30	0.33	0.37	0.41
1.80	0.44	0.48	0.52	0.57	0.62
2.40	0.67	0.72	0.78	0.84	0.90
3.00	0.96	1.03	1.11	1.18	1.26
3.60	1.34	1.43	1.52	1.60	1.70
4.20	1.79	1.89	1.98	2.08	2.18
4.80	2.27	2.37	2.46	2.55	2.64
5.40	2.72	2.81	2.89	2.97	3.05
6.00	3.13	3.19	3.25	3.31	3.37
6.60	3.43	3.48	3.53	3.58	3.63
7.20	3.68	3.72	3.77	3.81	3.84
7.80	3.88	3.91	3.94	3.97	3.99
8.40	4.02	4.05	4.07	4.09	4.11
9.00	4.13	4.15	4.16	4.18	4.20
9.60	4.22	4.23	4.25	4.26	4.28
10.20	4.29	4.31	4.32	4.33	4.35
10.80	4.36	4.37	4.38	4.39	4.41
11.40	4.42	4.43	4.44	4.46	4.47
12.00	4.48	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

Time-Depth Curve: 120 hr 10 yr	
Label	120 hr 10 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.15
6.00	0.19	0.23	0.27	0.31	0.34
12.00	0.38	0.42	0.46	0.50	0.54
18.00	0.58	0.62	0.67	0.71	0.76
24.00	0.80	0.84	0.89	0.93	0.97
30.00	1.02	1.06	1.10	1.15	1.19
36.00	1.23	1.27	1.31	1.35	1.38
42.00	1.42	1.46	1.51	1.55	1.59
48.00	1.63	1.67	1.71	1.76	1.81
54.00	1.85	1.90	1.95	1.99	2.04
60.00	2.09	2.13	2.17	2.21	2.26
66.00	2.30	2.34	2.37	2.41	2.45
72.00	2.49	2.52	2.56	2.60	2.64
78.00	2.68	2.73	2.78	2.84	2.90
84.00	2.96	3.03	3.13	3.23	3.33
90.00	3.43	3.55	3.68	3.81	3.94
96.00	4.09	4.25	4.41	4.57	4.74
102.00	4.91	5.09	5.26	5.42	5.58
108.00	5.73	5.89	6.03	6.13	6.23
114.00	6.33	6.43	6.49	6.55	6.62
120.00	6.68	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 15 min

Return Event: 10.00 years
Storm Event: 15 min 10 yr

Time-Depth Curve: 15 min 10 yr	
Label	15 min 10 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.08	0.11
0.01	0.14	0.17	0.20	0.24	0.27
0.03	0.30	0.34	0.37	0.41	0.44
0.04	0.48	0.51	0.54	0.57	0.60
0.05	0.63	0.66	0.69	0.72	0.74
0.06	0.77	0.79	0.82	0.84	0.86
0.08	0.88	0.90	0.91	0.93	0.94
0.09	0.95	0.97	0.98	0.99	1.00
0.10	1.01	1.02	1.03	1.04	1.05
0.11	1.06	1.07	1.08	1.09	1.10
0.13	1.11	1.12	1.13	1.14	1.15
0.14	1.15	1.16	1.17	1.18	1.19
0.15	1.20	1.20	1.21	1.22	1.23
0.16	1.23	1.24	1.25	1.25	1.26
0.18	1.26	1.27	1.27	1.28	1.28
0.19	1.29	1.29	1.30	1.30	1.31
0.20	1.31	1.32	1.32	1.32	1.33
0.21	1.33	1.34	1.34	1.34	1.35
0.23	1.35	1.36	1.36	1.36	1.37
0.24	1.37	1.37	1.38	1.38	1.39
0.25	1.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 18 hr

Return Event: 10.00 years
Storm Event: 18 hr 10 yr

Time-Depth Curve: 18 hr 10 yr	
Label	18 hr 10 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.05	0.07	0.10
0.90	0.12	0.15	0.17	0.20	0.23
1.80	0.25	0.28	0.31	0.34	0.37
2.70	0.39	0.42	0.45	0.48	0.51
3.60	0.54	0.57	0.60	0.63	0.66
4.50	0.70	0.72	0.75	0.78	0.81
5.40	0.84	0.88	0.91	0.94	0.97
6.30	1.01	1.05	1.08	1.12	1.16
7.20	1.21	1.25	1.29	1.35	1.40
8.10	1.45	1.51	1.57	1.63	1.70
9.00	1.76	1.85	1.94	2.02	2.11
9.90	2.21	2.30	2.40	2.49	2.59
10.80	2.69	2.80	2.90	3.00	3.11
11.70	3.21	3.31	3.41	3.51	3.61
12.60	3.70	3.80	3.88	3.95	4.03
13.50	4.11	4.17	4.22	4.28	4.33
14.40	4.38	4.42	4.45	4.49	4.52
15.30	4.55	4.58	4.60	4.62	4.64
16.20	4.66	4.68	4.70	4.72	4.74
17.10	4.76	4.77	4.79	4.81	4.82
18.00	4.84	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

Time-Depth Curve: 2 hr 10 yr	
Label	2 hr 10 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.18	0.24
0.10	0.31	0.37	0.44	0.51	0.58
0.20	0.65	0.73	0.80	0.88	0.95
0.30	1.02	1.10	1.17	1.23	1.30
0.40	1.36	1.43	1.49	1.54	1.60
0.50	1.66	1.71	1.76	1.80	1.85
0.60	1.89	1.93	1.96	2.00	2.03
0.70	2.05	2.08	2.10	2.13	2.15
0.80	2.18	2.20	2.22	2.24	2.26
0.90	2.28	2.30	2.33	2.35	2.37
1.00	2.39	2.41	2.43	2.45	2.46
1.10	2.48	2.50	2.52	2.54	2.56
1.20	2.57	2.59	2.61	2.62	2.64
1.30	2.65	2.67	2.68	2.69	2.70
1.40	2.72	2.73	2.74	2.75	2.76
1.50	2.77	2.78	2.79	2.80	2.81
1.60	2.82	2.83	2.84	2.85	2.86
1.70	2.87	2.87	2.88	2.89	2.90
1.80	2.91	2.92	2.93	2.93	2.94
1.90	2.95	2.96	2.97	2.97	2.98
2.00	2.99	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

Time-Depth Curve: 24 hr 10 yr	
Label	24 hr 10 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.05	0.08	0.10
1.20	0.13	0.16	0.18	0.21	0.24
2.40	0.27	0.30	0.33	0.36	0.39
3.60	0.42	0.45	0.48	0.51	0.54
4.80	0.58	0.61	0.64	0.67	0.71
6.00	0.74	0.77	0.80	0.83	0.87
7.20	0.90	0.93	0.97	1.00	1.04
8.40	1.08	1.11	1.15	1.20	1.24
9.60	1.28	1.33	1.37	1.43	1.49
10.80	1.55	1.60	1.67	1.74	1.81
12.00	1.87	1.97	2.06	2.15	2.25
13.20	2.35	2.45	2.55	2.65	2.76
14.40	2.87	2.98	3.09	3.20	3.31
15.60	3.42	3.53	3.63	3.74	3.84
16.80	3.94	4.04	4.12	4.21	4.29
18.00	4.37	4.43	4.49	4.55	4.61
19.20	4.66	4.70	4.74	4.78	4.81
20.40	4.84	4.87	4.90	4.92	4.94
21.60	4.96	4.98	5.00	5.02	5.04
22.80	5.06	5.08	5.10	5.11	5.13
24.00	5.15	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Time-Depth Curve: 24 hr 2 yr	
Label	24 hr 2 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.07
1.20	0.08	0.10	0.12	0.14	0.16
2.40	0.18	0.19	0.21	0.23	0.25
3.60	0.27	0.29	0.31	0.33	0.35
4.80	0.37	0.39	0.42	0.44	0.46
6.00	0.48	0.50	0.52	0.54	0.56
7.20	0.58	0.60	0.63	0.65	0.67
8.40	0.70	0.72	0.75	0.78	0.80
9.60	0.83	0.86	0.89	0.93	0.97
10.80	1.00	1.04	1.08	1.13	1.17
12.00	1.21	1.27	1.34	1.40	1.46
13.20	1.52	1.59	1.65	1.72	1.79
14.40	1.86	1.93	2.00	2.07	2.14
15.60	2.22	2.29	2.36	2.42	2.49
16.80	2.56	2.62	2.67	2.73	2.78
18.00	2.84	2.87	2.91	2.95	2.99
19.20	3.02	3.05	3.07	3.10	3.12
20.40	3.14	3.16	3.18	3.19	3.21
21.60	3.22	3.23	3.25	3.26	3.27
22.80	3.28	3.29	3.31	3.32	3.33
24.00	3.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

Time-Depth Curve: 240 hr 10 yr	
Label	240 hr 10 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.18
12.00	0.23	0.28	0.33	0.38	0.43
24.00	0.47	0.52	0.56	0.61	0.67
36.00	0.72	0.77	0.83	0.88	0.93
48.00	0.99	1.04	1.10	1.15	1.20
60.00	1.26	1.31	1.36	1.42	1.47
72.00	1.52	1.57	1.61	1.66	1.71
84.00	1.76	1.81	1.86	1.91	1.96
96.00	2.01	2.06	2.12	2.17	2.23
108.00	2.29	2.35	2.41	2.46	2.52
120.00	2.58	2.63	2.68	2.74	2.79
132.00	2.84	2.88	2.93	2.98	3.03
144.00	3.07	3.12	3.16	3.21	3.26
156.00	3.32	3.37	3.43	3.50	3.58
168.00	3.66	3.74	3.86	3.99	4.11
180.00	4.23	4.39	4.55	4.71	4.87
192.00	5.06	5.25	5.45	5.64	5.85
204.00	6.07	6.28	6.50	6.70	6.89
216.00	7.08	7.27	7.44	7.57	7.69
228.00	7.82	7.94	8.01	8.09	8.17
240.00	8.25	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

Time-Depth Curve: 3 hr 10 yr	
Label	3 hr 10 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.13	0.20	0.26
0.15	0.34	0.41	0.49	0.56	0.64
0.30	0.72	0.80	0.89	0.97	1.05
0.45	1.13	1.21	1.29	1.36	1.43
0.60	1.51	1.58	1.64	1.70	1.77
0.75	1.83	1.88	1.94	1.99	2.05
0.90	2.09	2.13	2.17	2.21	2.24
1.05	2.27	2.29	2.32	2.35	2.38
1.20	2.40	2.43	2.46	2.48	2.50
1.35	2.52	2.54	2.57	2.59	2.61
1.50	2.63	2.66	2.68	2.70	2.72
1.65	2.74	2.76	2.78	2.80	2.82
1.80	2.84	2.86	2.88	2.89	2.91
1.95	2.93	2.94	2.96	2.97	2.98
2.10	3.00	3.01	3.02	3.03	3.05
2.25	3.06	3.07	3.08	3.09	3.10
2.40	3.11	3.12	3.13	3.14	3.15
2.55	3.16	3.17	3.18	3.19	3.20
2.70	3.21	3.22	3.23	3.24	3.25
2.85	3.25	3.26	3.27	3.28	3.29
3.00	3.30	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

Time-Depth Curve: 30 min 10 yr	
Label	30 min 10 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.11	0.15
0.03	0.20	0.24	0.28	0.32	0.37
0.05	0.42	0.47	0.51	0.56	0.61
0.08	0.65	0.70	0.75	0.79	0.83
0.10	0.87	0.91	0.95	0.99	1.02
0.13	1.06	1.09	1.12	1.15	1.18
0.15	1.21	1.23	1.25	1.28	1.29
0.18	1.31	1.33	1.34	1.36	1.38
0.20	1.39	1.41	1.42	1.43	1.45
0.23	1.46	1.47	1.49	1.50	1.51
0.25	1.52	1.54	1.55	1.56	1.57
0.28	1.59	1.60	1.61	1.62	1.63
0.30	1.64	1.65	1.66	1.67	1.68
0.33	1.69	1.70	1.71	1.72	1.73
0.35	1.73	1.74	1.75	1.76	1.76
0.38	1.77	1.78	1.78	1.79	1.79
0.40	1.80	1.81	1.81	1.82	1.83
0.43	1.83	1.84	1.84	1.85	1.85
0.45	1.86	1.86	1.87	1.87	1.88
0.48	1.88	1.89	1.89	1.90	1.90
0.50	1.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

Time-Depth Curve: 48 hr 10 yr	
Label	48 hr 10 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.06	0.09	0.12
2.40	0.16	0.19	0.22	0.26	0.29
4.80	0.32	0.35	0.38	0.42	0.45
7.20	0.49	0.53	0.56	0.60	0.64
9.60	0.67	0.71	0.75	0.78	0.82
12.00	0.86	0.89	0.93	0.96	1.00
14.40	1.03	1.07	1.10	1.13	1.17
16.80	1.20	1.23	1.27	1.30	1.34
19.20	1.37	1.40	1.44	1.48	1.52
21.60	1.56	1.60	1.64	1.68	1.72
24.00	1.76	1.79	1.83	1.86	1.90
26.40	1.93	1.97	2.00	2.03	2.06
28.80	2.09	2.12	2.15	2.19	2.22
31.20	2.26	2.29	2.33	2.39	2.44
33.60	2.49	2.55	2.63	2.71	2.80
36.00	2.88	2.99	3.10	3.21	3.32
38.40	3.44	3.58	3.71	3.84	3.99
40.80	4.13	4.28	4.43	4.56	4.69
43.20	4.82	4.95	5.07	5.16	5.24
45.60	5.33	5.41	5.46	5.51	5.57
48.00	5.62	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

Time-Depth Curve: 6 hr 10 yr	
Label	6 hr 10 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.08	0.15	0.23	0.31
0.30	0.40	0.48	0.57	0.66	0.75
0.60	0.84	0.94	1.04	1.13	1.23
0.90	1.32	1.42	1.51	1.59	1.68
1.20	1.76	1.84	1.92	1.99	2.07
1.50	2.14	2.20	2.27	2.33	2.39
1.80	2.44	2.49	2.53	2.58	2.62
2.10	2.65	2.68	2.72	2.75	2.78
2.40	2.81	2.84	2.87	2.90	2.92
2.70	2.95	2.98	3.00	3.03	3.05
3.00	3.08	3.11	3.13	3.16	3.18
3.30	3.21	3.23	3.26	3.28	3.30
3.60	3.32	3.34	3.36	3.38	3.40
3.90	3.42	3.44	3.46	3.47	3.49
4.20	3.51	3.52	3.54	3.55	3.56
4.50	3.58	3.59	3.60	3.62	3.63
4.80	3.64	3.65	3.66	3.68	3.69
5.10	3.70	3.71	3.72	3.73	3.74
5.40	3.75	3.77	3.78	3.79	3.80
5.70	3.81	3.82	3.83	3.84	3.85
6.00	3.86	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 10 Year Critical Storm
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

Time-Depth Curve: 72 hr 10 yr	
Label	72 hr 10 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	10.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.07	0.10	0.13
3.60	0.17	0.21	0.24	0.28	0.31
7.20	0.35	0.38	0.41	0.45	0.49
10.80	0.53	0.57	0.61	0.64	0.68
14.40	0.72	0.76	0.80	0.84	0.88
18.00	0.92	0.96	1.00	1.04	1.08
21.60	1.11	1.15	1.18	1.22	1.25
25.20	1.29	1.33	1.36	1.40	1.44
28.80	1.47	1.51	1.55	1.59	1.64
32.40	1.68	1.72	1.76	1.81	1.85
36.00	1.89	1.93	1.97	2.01	2.04
39.60	2.08	2.12	2.15	2.19	2.22
43.20	2.25	2.29	2.32	2.36	2.39
46.80	2.43	2.47	2.51	2.57	2.63
50.40	2.68	2.74	2.83	2.92	3.01
54.00	3.10	3.22	3.34	3.45	3.57
57.60	3.71	3.85	3.99	4.14	4.29
61.20	4.45	4.61	4.76	4.91	5.05
64.80	5.19	5.33	5.46	5.55	5.64
68.40	5.73	5.82	5.88	5.93	5.99
72.00	6.05	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Unrestricted to West
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.918 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.918 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.80 in
Runoff Volume (Pervious)	0.619 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.619 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.36 hours
Flow (Peak, Computed)	8.509 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	8.496 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.05 in
Runoff Volume (Pervious)	0.362 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.362 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	2.529 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	2.524 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.80 in
Runoff Volume (Pervious)	0.962 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.962 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.555 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.555 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.84 in
Runoff Volume (Pervious)	1.662 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.662 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	6.273 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	6.165 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.35 in
Runoff Volume (Pervious)	0.120 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.120 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.92 hours
Flow (Peak, Computed)	2.000 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	2.000 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.12 in
Runoff Volume (Pervious)	1.073 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.073 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.57 hours
Flow (Peak, Computed)	7.097 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.55 hours
Flow (Peak Interpolated Output)	7.090 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.518 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.518 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	1.623 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	1.621 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.41 in
Runoff Volume (Pervious)	1.171 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.171 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.351 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.351 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.34 in
Runoff Volume (Pervious)	2.177 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.177 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.77 hours
Flow (Peak, Computed)	5.736 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.75 hours
Flow (Peak Interpolated Output)	5.731 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.77 in
Runoff Volume (Pervious)	0.607 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.607 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	8.230 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	8.227 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.68 in
Runoff Volume (Pervious)	0.234 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.234 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.137 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	1.136 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.84 in
Runoff Volume (Pervious)	1.320 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.320 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	3.784 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	3.783 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.25 in
Runoff Volume (Pervious)	0.772 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.772 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.826 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.826 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.24 in
Runoff Volume (Pervious)	1.458 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.458 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.541 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.541 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.88 in
Runoff Volume (Pervious)	0.369 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	5.202 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	5.196 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.12 in
Runoff Volume (Pervious)	0.219 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.219 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	1.490 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	1.487 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.89 in
Runoff Volume (Pervious)	0.569 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.569 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.321 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.321 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.95 in
Runoff Volume (Pervious)	0.973 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.973 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	3.947 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	3.901 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.38 in
Runoff Volume (Pervious)	0.075 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.076 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	1.167 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.167 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.22 in
Runoff Volume (Pervious)	0.633 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.633 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.54 hours
Flow (Peak, Computed)	4.282 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.55 hours
Flow (Peak Interpolated Output)	4.280 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.58 in
Runoff Volume (Pervious)	0.311 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.311 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.945 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.944 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.51 in
Runoff Volume (Pervious)	0.690 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.690 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.203 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.203 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.45 in
Runoff Volume (Pervious)	1.269 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.269 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.75 hours
Flow (Peak, Computed)	3.440 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.75 hours
Flow (Peak Interpolated Output)	3.439 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.84 in
Runoff Volume (Pervious)	0.363 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.362 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	5.108 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	5.105 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.73 in
Runoff Volume (Pervious)	0.144 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.144 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.659 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.659 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.95 in
Runoff Volume (Pervious)	0.776 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.776 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	2.258 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	2.257 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.33 in
Runoff Volume (Pervious)	0.459 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.459 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.478 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.478 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.35 in
Runoff Volume (Pervious)	0.855 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.855 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.89 hours
Flow (Peak, Computed)	0.088 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.088 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.057 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.057 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.42 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.36 hours
Flow (Peak, Computed)	0.705 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	0.695 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.83 in
Runoff Volume (Pervious)	0.031 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.031 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 1 hr
Return Event: 10.00 years
Storm Event: 1 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.99 hours
Flow (Peak, Computed)	0.243 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.243 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.44 in
Runoff Volume (Pervious)	0.092 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.092 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 12 hr
Return Event: 10.00 years
Storm Event: 12 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.68 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.40 hours
Flow (Peak, Computed)	0.058 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.058 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.40 in
Runoff Volume (Pervious)	0.165 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.165 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	0.464 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	0.458 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.23 in
Runoff Volume (Pervious)	0.009 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.009 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	4.84 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.92 hours
Flow (Peak, Computed)	0.201 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.201 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.75 in
Runoff Volume (Pervious)	0.103 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.103 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 18 hr
Return Event: 10.00 years
Storm Event: 18 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	2.99 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.59 hours
Flow (Peak, Computed)	0.622 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.60 hours
Flow (Peak Interpolated Output)	0.621 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.24 in
Runoff Volume (Pervious)	0.047 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.047 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 2 hr
Return Event: 10.00 years
Storm Event: 2 hr 10 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 10 yr
Return Event	10.00 years
Duration	100.00 hours
Depth	5.15 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.164 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.164 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.02 in
Runoff Volume (Pervious)	0.113 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.113 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	8.25 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.037 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.80 hours
Flow (Peak Interpolated Output)	0.037 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.86 in
Runoff Volume (Pervious)	0.220 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.220 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.30 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.79 hours
Flow (Peak, Computed)	0.516 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.80 hours
Flow (Peak Interpolated Output)	0.515 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.48 in
Runoff Volume (Pervious)	0.055 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.055 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	1.91 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.27 hours
Flow (Peak, Computed)	0.645 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.30 hours
Flow (Peak Interpolated Output)	0.633 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.51 in
Runoff Volume (Pervious)	0.019 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.019 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	5.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.117 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.117 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.44 in
Runoff Volume (Pervious)	0.129 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.129 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 10 yr
Return Event	10.00 years
Duration	50.00 hours
Depth	3.86 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.31 hours
Flow (Peak, Computed)	0.346 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	0.345 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.93 in
Runoff Volume (Pervious)	0.072 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.072 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 10 yr
Return Event	10.00 years
Duration	500.00 hours
Depth	6.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.086 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.086 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.83 in
Runoff Volume (Pervious)	0.143 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.143 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
833.70	0.000
833.80	0.000
834.00	0.104
835.00	0.660
836.00	1.263
837.00	1.906
838.00	2.588
839.00	3.310

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
835.50	0.000
836.50	0.000
837.00	0.039
838.00	0.134
839.00	0.252

Requested Pond Water Surface Elevations	
Minimum (Headwater)	835.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Interconnected Culvert	Forward + Reverse	TW	836.00	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Interconnected Culvert
Structure Type: Culvert-Circular

Number of Barrels	1
Diameter	36.00 in
Length	240.00 ft
Length (Computed Barrel)	240.01 ft
Slope (Computed)	0.009 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.007
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.091
T2 ratio (HW/D)	1.193
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	839.27 ft	T1 Flow	42.851 ft³/s
T2 Elevation	839.58 ft	T2 Flow	48.973 ft³/s

Requested Pond Water Surface Elevations	
Minimum (Headwater)	833.70 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	North 2-Year Restrictor	Forward	TW	833.70	839.00
Orifice-Circular	North 100-Year Restrictor	Forward	TW	835.30	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: North 2-Year Restrictor
Structure Type: Orifice-Circular

Number of Openings	1
Elevation	833.70 ft
Orifice Diameter	2.20 in
Orifice Coefficient	0.610

Structure ID: North 100-Year Restrictor
Structure Type: Orifice-Circular

Number of Openings	1
Elevation	835.30 ft
Orifice Diameter	2.70 in
Orifice Coefficient	0.610

Structure ID: TW
Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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Proposed 50-yr Critical Duration

Project Summary	
Title	24-136 Proposed Conditions PondPack Pond Sizing Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Proposed Conditions Model. Critical Duration Analysis

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Scenario	50 yr 15 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 30 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 1 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 2 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 3 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	50 yr 6 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	50 yr 15 min
Element Type	Scenario
Element Id	386
Label	50 yr 15 min
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.05 hours.
Source	Warning
Message Id	39
Scenario	50 yr 12 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	40
Scenario	50 yr 12 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (2.7 % of Inflow Volume))
Source	Warning
Message Id	39
Scenario	50 yr 18 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	50 yr 24 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	40
Scenario	50 yr 18 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (3.1 % of Inflow Volume))
Source	Warning
Message Id	40
Scenario	50 yr 24 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (4.3 % of Inflow Volume))
Source	Warning
Message Id	39
Scenario	50 yr 48 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 72 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	50 yr 120 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	50 yr 240 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	50 yr 48 hr
Element Type	Scenario
Element Id	395
Label	50 yr 48 hr
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.10 hours.
Source	Warning
Message Id	40
Scenario	50 yr 48 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (4.0 % of Inflow Volume))
Source	Warning
Message Id	40
Scenario	50 yr 72 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (3.2 % of Inflow Volume))
Source	Warning

User Notifications

Message Id	40
Scenario	50 yr 240 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (2.2 % of Outflow Volume))
Source	Warning

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to South Pond	2 yr 24 hr	2.00	0.369	15.90	0.541
On-Site Area to South Pond	50 yr 15 min	50.00	0.161	0.20	8.460
On-Site Area to South Pond	50 yr 30 min	50.00	0.277	0.25	10.173
On-Site Area to South Pond	50 yr 1 hr	50.00	0.402	0.35	9.812
On-Site Area to South Pond	50 yr 2 hr	50.00	0.545	0.50	7.675
On-Site Area to South Pond	50 yr 3 hr	50.00	0.626	0.70	6.082
On-Site Area to South Pond	50 yr 6 hr	50.00	0.778	1.05	3.914
On-Site Area to South Pond	50 yr 12 hr	50.00	0.945	4.90	2.414
On-Site Area to South Pond	50 yr 18 hr	50.00	1.042	11.90	1.820
On-Site Area to South Pond	50 yr 24 hr	50.00	1.127	15.80	1.464
On-Site Area to South Pond	50 yr 48 hr	50.00	1.247	41.70	0.996
On-Site Area to South Pond	50 yr 72 hr	50.00	1.344	62.60	0.710
On-Site Area to South Pond	50 yr 120 hr	50.00	1.487	104.40	0.466
On-Site Area to South Pond	50 yr 240 hr	50.00	1.846	208.70	0.282
On-Site Area to North Pond	2 yr 24 hr	2.00	0.619	15.90	0.918
On-Site Area to North Pond	50 yr 15 min	50.00	0.263	0.20	13.808
On-Site Area to North Pond	50 yr 30 min	50.00	0.460	0.25	16.830
On-Site Area to North Pond	50 yr 1 hr	50.00	0.674	0.35	16.401
On-Site Area to North Pond	50 yr 2 hr	50.00	0.921	0.50	12.885
On-Site Area to North Pond	50 yr 3 hr	50.00	1.061	0.70	10.272
On-Site Area to North Pond	50 yr 6 hr	50.00	1.323	1.05	6.601
On-Site Area to North Pond	50 yr 12 hr	50.00	1.613	5.00	4.141
On-Site Area to North Pond	50 yr 18 hr	50.00	1.782	11.90	3.144
On-Site Area to North Pond	50 yr 24 hr	50.00	1.930	15.80	2.531

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to North Pond	50 yr 48 hr	50.00	2.137	41.70	1.727
On-Site Area to North Pond	50 yr 72 hr	50.00	2.306	62.60	1.232
On-Site Area to North Pond	50 yr 120 hr	50.00	2.555	104.40	0.809
On-Site Area to North Pond	50 yr 240 hr	50.00	3.181	208.70	0.491
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	50 yr 15 min	50.00	0.022	0.20	1.128
Unrestricted to West	50 yr 30 min	50.00	0.041	0.25	1.455
Unrestricted to West	50 yr 1 hr	50.00	0.062	0.35	1.480
Unrestricted to West	50 yr 2 hr	50.00	0.088	0.55	1.208
Unrestricted to West	50 yr 3 hr	50.00	0.102	0.75	0.969
Unrestricted to West	50 yr 6 hr	50.00	0.129	1.30	0.637
Unrestricted to West	50 yr 12 hr	50.00	0.160	5.00	0.417
Unrestricted to West	50 yr 18 hr	50.00	0.178	11.90	0.326
Unrestricted to West	50 yr 24 hr	50.00	0.193	15.80	0.264
Unrestricted to West	50 yr 48 hr	50.00	0.216	41.70	0.182
Unrestricted to West	50 yr 72 hr	50.00	0.234	62.60	0.130
Unrestricted to West	50 yr 120 hr	50.00	0.260	104.40	0.086
Unrestricted to West	50 yr 240 hr	50.00	0.327	208.70	0.053

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From North Pond	2 yr 24 hr	2.00	0.847	24.10	0.159
From North Pond	50 yr 15 min	50.00	0.331	0.70	0.112
From North Pond	50 yr 30 min	50.00	0.485	0.90	0.148
From North Pond	50 yr 1 hr	50.00	0.643	1.30	0.271
From North Pond	50 yr 2 hr	50.00	0.885	2.25	0.380
From North Pond	50 yr 3 hr	50.00	1.029	3.25	0.420
From North Pond	50 yr 6 hr	50.00	1.299	6.15	0.474
From North Pond	50 yr 12 hr	50.00	2.136	12.10	0.519
From North Pond	50 yr 18 hr	50.00	2.295	18.10	0.547
From North Pond	50 yr 24 hr	50.00	2.430	24.10	0.557
From North Pond	50 yr 48 hr	50.00	3.333	48.10	0.567
From North Pond	50 yr 72 hr	50.00	3.606	72.10	0.556
From North Pond	50 yr 120 hr	50.00	4.042	118.40	0.525
From North Pond	50 yr 240 hr	50.00	5.069	228.00	0.473
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	50 yr 15 min	50.00	0.022	0.20	1.128
Unrestricted to West	50 yr 30 min	50.00	0.041	0.25	1.455

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Unrestricted to West	50 yr 1 hr	50.00	0.062	0.35	1.480
Unrestricted to West	50 yr 2 hr	50.00	0.088	0.55	1.208
Unrestricted to West	50 yr 3 hr	50.00	0.102	0.75	0.969
Unrestricted to West	50 yr 6 hr	50.00	0.129	1.30	0.637
Unrestricted to West	50 yr 12 hr	50.00	0.160	5.00	0.417
Unrestricted to West	50 yr 18 hr	50.00	0.178	11.90	0.326
Unrestricted to West	50 yr 24 hr	50.00	0.193	15.80	0.264
Unrestricted to West	50 yr 48 hr	50.00	0.216	41.70	0.182
Unrestricted to West	50 yr 72 hr	50.00	0.234	62.60	0.130
Unrestricted to West	50 yr 120 hr	50.00	0.260	104.40	0.086
Unrestricted to West	50 yr 240 hr	50.00	0.327	208.70	0.053

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	2 yr 24 hr	2.00	0.369	15.90	0.541	(N/A)	(N/A)
South Pond (OUT)	2 yr 24 hr	2.00	0.369	15.90	0.541	836.32	0.000
South Pond (IN)	50 yr 15 min	50.00	0.161	0.20	8.460	(N/A)	(N/A)
South Pond (OUT)	50 yr 15 min	50.00	0.161	0.30	5.581	837.06	0.044
South Pond (IN)	50 yr 30 min	50.00	0.277	0.25	10.173	(N/A)	(N/A)
South Pond (OUT)	50 yr 30 min	50.00	0.277	0.35	7.192	837.21	0.059
South Pond (IN)	50 yr 1 hr	50.00	0.402	0.35	9.812	(N/A)	(N/A)
South Pond (OUT)	50 yr 1 hr	50.00	0.402	0.45	7.554	837.24	0.062
South Pond (IN)	50 yr 2 hr	50.00	0.545	0.50	7.675	(N/A)	(N/A)
South Pond (OUT)	50 yr 2 hr	50.00	0.545	0.65	6.803	837.17	0.055
South Pond (IN)	50 yr 3 hr	50.00	0.626	0.70	6.082	(N/A)	(N/A)
South Pond (OUT)	50 yr 3 hr	50.00	0.626	0.85	5.690	837.07	0.045
South Pond (Reverse)	50 yr 3 hr	50.00	0.000	4.35	-0.013	(N/A)	(N/A)
South Pond (IN)	50 yr 6 hr	50.00	0.778	1.05	3.914	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (OUT)	50 yr 6 hr	50.00	0.776	1.35	3.807	836.99	0.038
South Pond (IN)	50 yr 12 hr	50.00	0.945	4.90	2.414	(N/A)	(N/A)
South Pond (OUT)	50 yr 12 hr	50.00	0.919	5.10	2.379	837.40	0.077
South Pond (Reverse)	50 yr 12 hr	50.00	0.000	29.20	-0.006	(N/A)	(N/A)
South Pond (IN)	50 yr 18 hr	50.00	1.042	11.90	1.820	(N/A)	(N/A)
South Pond (OUT)	50 yr 18 hr	50.00	1.010	11.90	1.810	837.68	0.103
South Pond (IN)	50 yr 24 hr	50.00	1.127	15.80	1.464	(N/A)	(N/A)
South Pond (OUT)	50 yr 24 hr	50.00	1.078	15.40	1.449	837.78	0.113
South Pond (IN)	50 yr 48 hr	50.00	1.247	41.70	0.996	(N/A)	(N/A)
South Pond (OUT)	50 yr 48 hr	50.00	1.196	39.20	0.888	837.90	0.124
South Pond (IN)	50 yr 72 hr	50.00	1.344	62.60	0.710	(N/A)	(N/A)
South Pond (OUT)	50 yr 72 hr	50.00	1.301	59.00	0.634	837.77	0.112
South Pond (IN)	50 yr 120 hr	50.00	1.487	104.40	0.466	(N/A)	(N/A)
South Pond (OUT)	50 yr 120 hr	50.00	1.487	99.80	0.436	837.46	0.082
South Pond (IN)	50 yr 240 hr	50.00	1.846	208.70	0.282	(N/A)	(N/A)
South Pond (OUT)	50 yr 240 hr	50.00	1.888	204.60	0.283	836.98	0.037
North Pond (IN)	2 yr 24 hr	2.00	0.988	15.90	1.458	(N/A)	(N/A)
North Pond (OUT)	2 yr 24 hr	2.00	0.847	24.10	0.159	835.30	0.841
North Pond (IN)	50 yr 15 min	50.00	0.424	0.20	17.593	(N/A)	(N/A)
North Pond (OUT)	50 yr 15 min	50.00	0.331	0.70	0.112	834.57	0.419
North Pond (IN)	50 yr 30 min	50.00	0.737	0.25	22.159	(N/A)	(N/A)
North Pond (OUT)	50 yr 30 min	50.00	0.485	0.90	0.148	835.11	0.728
North Pond (IN)	50 yr 1 hr	50.00	1.076	0.35	22.667	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (OUT)	50 yr 1 hr	50.00	0.643	1.30	0.271	835.66	1.058
North Pond (IN)	50 yr 2 hr	50.00	1.467	0.55	19.178	(N/A)	(N/A)
North Pond (OUT)	50 yr 2 hr	50.00	0.885	2.25	0.380	836.25	1.423
North Pond (IN)	50 yr 3 hr	50.00	1.687	0.75	15.709	(N/A)	(N/A)
North Pond (Reverse)	50 yr 3 hr	50.00	0.000	4.35	-0.013	(N/A)	(N/A)
North Pond (OUT)	50 yr 3 hr	50.00	1.029	3.25	0.420	836.54	1.611
North Pond (IN)	50 yr 6 hr	50.00	2.099	1.30	10.360	(N/A)	(N/A)
North Pond (OUT)	50 yr 6 hr	50.00	1.299	6.15	0.474	836.99	1.898
North Pond (IN)	50 yr 12 hr	50.00	2.532	5.00	6.516	(N/A)	(N/A)
North Pond (Reverse)	50 yr 12 hr	50.00	0.000	29.20	-0.006	(N/A)	(N/A)
North Pond (OUT)	50 yr 12 hr	50.00	2.136	12.10	0.519	837.40	2.178
North Pond (IN)	50 yr 18 hr	50.00	2.793	11.90	4.954	(N/A)	(N/A)
North Pond (OUT)	50 yr 18 hr	50.00	2.295	18.10	0.547	837.68	2.367
North Pond (IN)	50 yr 24 hr	50.00	3.008	15.40	3.960	(N/A)	(N/A)
North Pond (OUT)	50 yr 24 hr	50.00	2.430	24.10	0.557	837.78	2.437
North Pond (IN)	50 yr 48 hr	50.00	3.333	41.30	2.509	(N/A)	(N/A)
North Pond (OUT)	50 yr 48 hr	50.00	3.333	48.10	0.567	837.89	2.513
North Pond (IN)	50 yr 72 hr	50.00	3.606	61.90	1.809	(N/A)	(N/A)
North Pond (OUT)	50 yr 72 hr	50.00	3.606	72.10	0.556	837.77	2.431
North Pond (IN)	50 yr 120 hr	50.00	4.042	103.40	1.204	(N/A)	(N/A)
North Pond (OUT)	50 yr 120 hr	50.00	4.042	118.40	0.525	837.46	2.217
North Pond (IN)	50 yr 240 hr	50.00	5.069	204.60	0.772	(N/A)	(N/A)
North Pond (OUT)	50 yr 240 hr	50.00	5.069	228.00	0.473	836.98	1.892

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

Time-Depth Curve: 1 hr 50 yr	
Label	1 hr 50 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.14	0.21	0.28
0.05	0.36	0.44	0.52	0.60	0.68
0.10	0.77	0.86	0.95	1.04	1.12
0.15	1.21	1.30	1.38	1.46	1.53
0.20	1.61	1.69	1.75	1.82	1.89
0.25	1.96	2.02	2.07	2.13	2.19
0.30	2.23	2.27	2.32	2.36	2.39
0.35	2.42	2.45	2.48	2.51	2.54
0.40	2.57	2.60	2.63	2.65	2.67
0.45	2.70	2.72	2.75	2.77	2.79
0.50	2.82	2.84	2.86	2.89	2.91
0.55	2.93	2.95	2.98	3.00	3.02
0.60	3.04	3.06	3.08	3.09	3.11
0.65	3.13	3.15	3.16	3.18	3.19
0.70	3.21	3.22	3.23	3.25	3.26
0.75	3.27	3.28	3.29	3.31	3.32
0.80	3.33	3.34	3.35	3.36	3.37
0.85	3.38	3.39	3.40	3.41	3.42
0.90	3.43	3.44	3.45	3.46	3.47
0.95	3.48	3.49	3.50	3.51	3.52
1.00	3.53	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

Time-Depth Curve: 12 hr 50 yr	
Label	12 hr 50 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.14
0.60	0.18	0.22	0.26	0.30	0.35
1.20	0.39	0.44	0.48	0.54	0.59
1.80	0.65	0.70	0.76	0.83	0.90
2.40	0.97	1.05	1.13	1.22	1.31
3.00	1.40	1.51	1.62	1.73	1.84
3.60	1.96	2.09	2.21	2.34	2.47
4.20	2.61	2.75	2.89	3.03	3.17
4.80	3.31	3.45	3.59	3.72	3.84
5.40	3.97	4.09	4.21	4.32	4.44
6.00	4.56	4.64	4.73	4.82	4.91
6.60	4.99	5.07	5.15	5.22	5.29
7.20	5.36	5.43	5.50	5.56	5.60
7.80	5.65	5.70	5.75	5.78	5.82
8.40	5.86	5.90	5.93	5.96	5.99
9.00	6.02	6.04	6.07	6.10	6.12
9.60	6.15	6.17	6.19	6.21	6.24
10.20	6.26	6.28	6.30	6.32	6.33
10.80	6.35	6.37	6.39	6.41	6.42
11.40	6.44	6.46	6.48	6.49	6.51
12.00	6.53	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

Time-Depth Curve: 120 hr 50 ry	
Label	120 hr 50 ry
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.16	0.21
6.00	0.26	0.32	0.38	0.43	0.48
12.00	0.54	0.59	0.64	0.70	0.76
18.00	0.82	0.88	0.94	1.00	1.06
24.00	1.12	1.19	1.25	1.31	1.37
30.00	1.43	1.49	1.55	1.61	1.67
36.00	1.73	1.78	1.84	1.89	1.95
42.00	2.00	2.06	2.12	2.17	2.23
48.00	2.29	2.35	2.41	2.47	2.54
54.00	2.61	2.67	2.74	2.80	2.87
60.00	2.93	2.99	3.05	3.11	3.17
66.00	3.23	3.28	3.34	3.39	3.45
72.00	3.50	3.55	3.60	3.66	3.71
78.00	3.77	3.83	3.90	3.99	4.07
84.00	4.16	4.26	4.40	4.54	4.68
90.00	4.82	5.00	5.18	5.36	5.54
96.00	5.75	5.98	6.20	6.42	6.66
102.00	6.90	7.15	7.39	7.63	7.84
108.00	8.06	8.28	8.47	8.61	8.76
114.00	8.90	9.03	9.12	9.21	9.30
120.00	9.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

Time-Depth Curve: 15 min 50 yr	
Label	15 min 50 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.01	0.21	0.25	0.30	0.34	0.39
0.03	0.44	0.49	0.55	0.60	0.65
0.04	0.70	0.74	0.79	0.84	0.88
0.05	0.93	0.97	1.01	1.05	1.09
0.06	1.13	1.16	1.19	1.23	1.26
0.08	1.28	1.31	1.33	1.36	1.38
0.09	1.39	1.41	1.43	1.45	1.46
0.10	1.48	1.49	1.51	1.52	1.54
0.11	1.55	1.56	1.58	1.59	1.61
0.13	1.62	1.63	1.65	1.66	1.67
0.14	1.69	1.70	1.71	1.72	1.74
0.15	1.75	1.76	1.77	1.78	1.79
0.16	1.80	1.81	1.82	1.83	1.84
0.18	1.84	1.85	1.86	1.87	1.87
0.19	1.88	1.89	1.89	1.90	1.91
0.20	1.91	1.92	1.93	1.93	1.94
0.21	1.95	1.95	1.96	1.96	1.97
0.23	1.97	1.98	1.99	1.99	2.00
0.24	2.00	2.01	2.01	2.02	2.02
0.25	2.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

Time-Depth Curve: 18 hr 50 yr	
Label	18 hr 50 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.03	0.07	0.10	0.14
0.90	0.18	0.21	0.25	0.29	0.33
1.80	0.37	0.41	0.45	0.49	0.53
2.70	0.57	0.62	0.66	0.70	0.75
3.60	0.79	0.83	0.88	0.92	0.97
4.50	1.01	1.06	1.10	1.14	1.18
5.40	1.23	1.28	1.32	1.37	1.42
6.30	1.47	1.53	1.58	1.64	1.70
7.20	1.76	1.82	1.88	1.96	2.04
8.10	2.12	2.20	2.29	2.38	2.47
9.00	2.56	2.69	2.82	2.95	3.07
9.90	3.21	3.35	3.49	3.63	3.77
10.80	3.93	4.08	4.23	4.38	4.53
11.70	4.68	4.83	4.97	5.11	5.25
12.60	5.40	5.53	5.65	5.76	5.87
13.50	5.99	6.07	6.15	6.23	6.31
14.40	6.37	6.43	6.49	6.55	6.59
15.30	6.63	6.66	6.70	6.74	6.77
16.20	6.79	6.82	6.85	6.88	6.90
17.10	6.93	6.95	6.98	7.00	7.03
18.00	7.05	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

Time-Depth Curve: 2 hr 50 yr	
Label	2 hr 50 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.09	0.17	0.26	0.35
0.10	0.45	0.54	0.64	0.74	0.84
0.20	0.95	1.06	1.17	1.28	1.38
0.30	1.49	1.60	1.70	1.79	1.89
0.40	1.98	2.08	2.16	2.25	2.33
0.50	2.41	2.48	2.56	2.63	2.70
0.60	2.75	2.80	2.85	2.91	2.95
0.70	2.99	3.02	3.06	3.10	3.13
0.80	3.17	3.20	3.24	3.27	3.29
0.90	3.32	3.35	3.38	3.41	3.44
1.00	3.47	3.50	3.53	3.56	3.59
1.10	3.61	3.64	3.67	3.70	3.72
1.20	3.74	3.77	3.79	3.81	3.83
1.30	3.86	3.88	3.90	3.92	3.93
1.40	3.95	3.97	3.98	4.00	4.02
1.50	4.03	4.05	4.06	4.07	4.09
1.60	4.10	4.12	4.13	4.14	4.16
1.70	4.17	4.18	4.19	4.21	4.22
1.80	4.23	4.24	4.26	4.27	4.28
1.90	4.29	4.30	4.31	4.33	4.34
2.00	4.35	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Time-Depth Curve: 24 hr 2 yr	
Label	24 hr 2 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.07
1.20	0.08	0.10	0.12	0.14	0.16
2.40	0.18	0.19	0.21	0.23	0.25
3.60	0.27	0.29	0.31	0.33	0.35
4.80	0.37	0.39	0.42	0.44	0.46
6.00	0.48	0.50	0.52	0.54	0.56
7.20	0.58	0.60	0.63	0.65	0.67
8.40	0.70	0.72	0.75	0.78	0.80
9.60	0.83	0.86	0.89	0.93	0.97
10.80	1.00	1.04	1.08	1.13	1.17
12.00	1.21	1.27	1.34	1.40	1.46
13.20	1.52	1.59	1.65	1.72	1.79
14.40	1.86	1.93	2.00	2.07	2.14
15.60	2.22	2.29	2.36	2.42	2.49
16.80	2.56	2.62	2.67	2.73	2.78
18.00	2.84	2.87	2.91	2.95	2.99
19.20	3.02	3.05	3.07	3.10	3.12
20.40	3.14	3.16	3.18	3.19	3.21
21.60	3.22	3.23	3.25	3.26	3.27
22.80	3.28	3.29	3.31	3.32	3.33
24.00	3.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

Time-Depth Curve: 24 hr 50 yr	
Label	24 hr 50 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.07	0.11	0.15
1.20	0.19	0.23	0.27	0.31	0.35
2.40	0.39	0.44	0.48	0.52	0.57
3.60	0.61	0.65	0.70	0.75	0.79
4.80	0.84	0.89	0.93	0.98	1.03
6.00	1.08	1.12	1.17	1.21	1.26
7.20	1.31	1.36	1.41	1.46	1.51
8.40	1.57	1.62	1.68	1.74	1.80
9.60	1.87	1.93	2.00	2.09	2.17
10.80	2.25	2.34	2.43	2.53	2.63
12.00	2.73	2.86	3.00	3.14	3.27
13.20	3.42	3.56	3.71	3.86	4.02
14.40	4.18	4.34	4.50	4.66	4.82
15.60	4.98	5.14	5.29	5.44	5.59
16.80	5.74	5.88	6.01	6.13	6.25
18.00	6.37	6.46	6.54	6.63	6.72
19.20	6.78	6.84	6.90	6.96	7.01
20.40	7.05	7.09	7.13	7.17	7.20
21.60	7.23	7.26	7.29	7.32	7.34
22.80	7.37	7.40	7.42	7.45	7.47
24.00	7.50	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

Time-Depth Curve: 240 hr 50 yr	
Label	240 hr 50 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.19	0.25
12.00	0.32	0.38	0.45	0.52	0.58
24.00	0.64	0.71	0.77	0.84	0.91
36.00	0.98	1.05	1.13	1.20	1.27
48.00	1.35	1.42	1.50	1.57	1.64
60.00	1.71	1.79	1.86	1.93	2.00
72.00	2.07	2.14	2.20	2.27	2.33
84.00	2.40	2.47	2.54	2.61	2.68
96.00	2.74	2.81	2.89	2.97	3.05
108.00	3.13	3.21	3.28	3.36	3.44
120.00	3.52	3.59	3.66	3.73	3.81
132.00	3.87	3.94	4.00	4.07	4.13
144.00	4.19	4.26	4.32	4.38	4.45
156.00	4.53	4.60	4.68	4.78	4.89
168.00	4.99	5.10	5.27	5.44	5.61
180.00	5.78	5.99	6.21	6.43	6.64
192.00	6.90	7.17	7.43	7.70	7.99
204.00	8.28	8.57	8.87	9.14	9.41
216.00	9.67	9.93	10.16	10.33	10.50
228.00	10.67	10.83	10.94	11.05	11.15
240.00	11.26	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

Time-Depth Curve: 3 hr 50 yr	
Label	3 hr 50 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.10	0.19	0.29	0.39
0.15	0.49	0.60	0.71	0.82	0.93
0.30	1.05	1.17	1.29	1.41	1.53
0.45	1.64	1.76	1.87	1.98	2.08
0.60	2.19	2.29	2.39	2.48	2.57
0.75	2.66	2.74	2.82	2.90	2.98
0.90	3.04	3.09	3.15	3.21	3.25
1.05	3.30	3.34	3.38	3.42	3.46
1.20	3.50	3.53	3.57	3.60	3.64
1.35	3.67	3.70	3.73	3.77	3.80
1.50	3.83	3.86	3.89	3.93	3.96
1.65	3.99	4.02	4.05	4.08	4.11
1.80	4.13	4.16	4.18	4.21	4.23
1.95	4.25	4.28	4.30	4.32	4.34
2.10	4.36	4.38	4.40	4.41	4.43
2.25	4.45	4.46	4.48	4.50	4.51
2.40	4.53	4.54	4.56	4.57	4.59
2.55	4.60	4.61	4.63	4.64	4.66
2.70	4.67	4.68	4.70	4.71	4.72
2.85	4.73	4.75	4.76	4.77	4.79
3.00	4.80	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

Time-Depth Curve: 30 min 50 yr	
Label	30 min 50 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.11	0.17	0.22
0.03	0.28	0.35	0.41	0.47	0.54
0.05	0.61	0.68	0.75	0.82	0.88
0.08	0.95	1.02	1.09	1.15	1.21
0.10	1.27	1.33	1.38	1.44	1.49
0.13	1.54	1.59	1.63	1.68	1.72
0.15	1.76	1.79	1.82	1.86	1.88
0.18	1.91	1.93	1.96	1.98	2.00
0.20	2.02	2.05	2.07	2.09	2.11
0.23	2.12	2.14	2.16	2.18	2.20
0.25	2.22	2.24	2.26	2.27	2.29
0.28	2.31	2.33	2.34	2.36	2.38
0.30	2.39	2.41	2.42	2.44	2.45
0.33	2.46	2.48	2.49	2.50	2.51
0.35	2.53	2.54	2.55	2.56	2.57
0.38	2.58	2.59	2.59	2.60	2.61
0.40	2.62	2.63	2.64	2.65	2.66
0.43	2.66	2.67	2.68	2.69	2.70
0.45	2.70	2.71	2.72	2.73	2.73
0.48	2.74	2.75	2.76	2.76	2.77
0.50	2.78	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

Time-Depth Curve: 48 hr 50 yr	
Label	48 hr 50 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.18
2.40	0.23	0.28	0.32	0.37	0.42
4.80	0.47	0.51	0.56	0.60	0.66
7.20	0.71	0.76	0.81	0.87	0.92
9.60	0.97	1.03	1.08	1.13	1.19
12.00	1.24	1.29	1.34	1.40	1.45
14.40	1.50	1.54	1.59	1.64	1.69
16.80	1.73	1.78	1.83	1.88	1.93
19.20	1.98	2.03	2.08	2.14	2.20
21.60	2.26	2.31	2.37	2.43	2.48
24.00	2.54	2.59	2.64	2.70	2.75
26.40	2.80	2.84	2.89	2.94	2.98
28.80	3.03	3.07	3.12	3.16	3.22
31.20	3.27	3.32	3.38	3.45	3.53
33.60	3.60	3.69	3.81	3.93	4.05
36.00	4.17	4.33	4.48	4.64	4.80
38.40	4.98	5.18	5.37	5.56	5.77
40.80	5.98	6.19	6.40	6.60	6.79
43.20	6.98	7.17	7.33	7.46	7.58
45.60	7.71	7.82	7.90	7.98	8.05
48.00	8.13	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

Time-Depth Curve: 6 hr 50 yr	
Label	6 hr 50 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.11	0.23	0.34	0.45
0.30	0.58	0.70	0.83	0.96	1.09
0.60	1.23	1.37	1.51	1.65	1.79
0.90	1.93	2.07	2.20	2.32	2.45
1.20	2.57	2.69	2.80	2.91	3.02
1.50	3.12	3.22	3.31	3.40	3.49
1.80	3.56	3.63	3.69	3.76	3.82
2.10	3.87	3.91	3.96	4.01	4.06
2.40	4.10	4.15	4.19	4.23	4.26
2.70	4.30	4.34	4.38	4.42	4.45
3.00	4.49	4.53	4.57	4.60	4.64
3.30	4.68	4.71	4.75	4.78	4.82
3.60	4.85	4.88	4.91	4.93	4.96
3.90	4.99	5.02	5.04	5.07	5.09
4.20	5.11	5.14	5.16	5.18	5.20
4.50	5.22	5.24	5.25	5.27	5.29
4.80	5.31	5.33	5.34	5.36	5.38
5.10	5.40	5.41	5.43	5.44	5.46
5.40	5.48	5.49	5.51	5.52	5.54
5.70	5.55	5.57	5.58	5.60	5.61
6.00	5.63	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 50 Year Critical Storm
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

Time-Depth Curve: 72 hr 50 yr	
Label	72 hr 50 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	50.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.14	0.19
3.60	0.24	0.29	0.35	0.40	0.45
7.20	0.49	0.54	0.59	0.64	0.70
10.80	0.75	0.81	0.86	0.92	0.98
14.40	1.04	1.09	1.15	1.20	1.26
18.00	1.32	1.37	1.43	1.48	1.54
21.60	1.59	1.64	1.69	1.74	1.79
25.20	1.84	1.89	1.95	2.00	2.05
28.80	2.11	2.16	2.22	2.28	2.34
32.40	2.40	2.46	2.52	2.58	2.64
36.00	2.70	2.75	2.81	2.86	2.92
39.60	2.97	3.02	3.07	3.12	3.17
43.20	3.22	3.26	3.31	3.36	3.42
46.80	3.47	3.53	3.59	3.67	3.75
50.40	3.83	3.92	4.05	4.17	4.30
54.00	4.43	4.60	4.76	4.93	5.10
57.60	5.30	5.50	5.70	5.91	6.13
61.20	6.35	6.58	6.80	7.02	7.22
64.80	7.42	7.62	7.79	7.93	8.06
68.40	8.19	8.31	8.39	8.48	8.56
72.00	8.64	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Unrestricted to West
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.918 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.918 ft³/s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.80 in
Runoff Volume (Pervious)	0.619 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.619 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	16.540 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	16.401 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.96 in
Runoff Volume (Pervious)	0.674 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.674 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	4.156 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	4.141 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.69 in
Runoff Volume (Pervious)	1.613 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.613 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.809 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.809 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.44 in
Runoff Volume (Pervious)	2.555 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.555 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	13.881 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	13.808 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.77 in
Runoff Volume (Pervious)	0.263 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.263 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	3.144 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	3.144 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.19 in
Runoff Volume (Pervious)	1.782 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.782 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.52 hours
Flow (Peak, Computed)	12.943 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.50 hours
Flow (Peak Interpolated Output)	12.885 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.68 in
Runoff Volume (Pervious)	0.921 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.921 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.84 hours
Flow (Peak, Computed)	2.533 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	2.531 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.62 in
Runoff Volume (Pervious)	1.930 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.930 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.491 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.491 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.26 in
Runoff Volume (Pervious)	3.181 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.181 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.68 hours
Flow (Peak, Computed)	10.286 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.70 hours
Flow (Peak Interpolated Output)	10.272 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.09 in
Runoff Volume (Pervious)	1.061 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.061 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	16.849 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	16.830 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.34 in
Runoff Volume (Pervious)	0.459 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.460 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.728 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	1.727 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.22 in
Runoff Volume (Pervious)	2.137 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.137 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.07 hours
Flow (Peak, Computed)	6.617 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.05 hours
Flow (Peak Interpolated Output)	6.601 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.85 in
Runoff Volume (Pervious)	1.323 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.323 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	1.232 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	1.232 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.71 in
Runoff Volume (Pervious)	2.306 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.306 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.541 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.541 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.88 in
Runoff Volume (Pervious)	0.369 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	9.910 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	9.812 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.04 in
Runoff Volume (Pervious)	0.402 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.402 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	2.422 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	4.90 hours
Flow (Peak Interpolated Output)	2.414 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.80 in
Runoff Volume (Pervious)	0.945 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.945 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.466 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.466 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.56 in
Runoff Volume (Pervious)	1.487 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.487 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	8.494 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	8.460 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.82 in
Runoff Volume (Pervious)	0.161 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.161 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	1.820 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	1.820 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.30 in
Runoff Volume (Pervious)	1.042 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.042 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.52 hours
Flow (Peak, Computed)	7.692 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.50 hours
Flow (Peak Interpolated Output)	7.675 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.77 in
Runoff Volume (Pervious)	0.545 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.545 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.84 hours
Flow (Peak, Computed)	1.465 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	1.464 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.73 in
Runoff Volume (Pervious)	1.127 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.127 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.282 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.282 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.39 in
Runoff Volume (Pervious)	1.846 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.846 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.68 hours
Flow (Peak, Computed)	6.098 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.70 hours
Flow (Peak Interpolated Output)	6.082 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.18 in
Runoff Volume (Pervious)	0.626 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.626 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	10.221 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	10.173 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.41 in
Runoff Volume (Pervious)	0.276 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.277 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.996 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.996 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.34 in
Runoff Volume (Pervious)	1.247 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.247 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.07 hours
Flow (Peak, Computed)	3.921 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.05 hours
Flow (Peak Interpolated Output)	3.914 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.95 in
Runoff Volume (Pervious)	0.778 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.778 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.710 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.710 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.83 in
Runoff Volume (Pervious)	1.344 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.344 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 50 yr 72 hr

Return Event: 50.00 years
Storm Event: 72 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.89 hours
Flow (Peak, Computed)	0.088 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.088 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.057 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.057 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

Storm Event	1 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	3.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	1.483 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	1.480 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.66 in
Runoff Volume (Pervious)	0.062 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.062 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

Storm Event	12 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	6.53 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	0.418 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.417 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.26 in
Runoff Volume (Pervious)	0.160 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.160 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 12 hr

Return Event: 50.00 years
Storm Event: 12 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

Storm Event	120 hr 50 ry
Return Event	50.00 years
Duration	500.00 hours
Depth	9.39 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.086 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.086 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.94 in
Runoff Volume (Pervious)	0.260 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.260 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

Storm Event	15 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	1.140 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	1.128 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.58 in
Runoff Volume (Pervious)	0.022 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.022 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.05 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	0.326 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.326 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.74 in
Runoff Volume (Pervious)	0.178 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.178 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.35 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.54 hours
Flow (Peak, Computed)	1.209 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.55 hours
Flow (Peak Interpolated Output)	1.208 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.33 in
Runoff Volume (Pervious)	0.088 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.088 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

Storm Event	24 hr 50 yr
Return Event	50.00 years
Duration	100.00 hours
Depth	7.50 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.264 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	0.264 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.16 in
Runoff Volume (Pervious)	0.193 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.193 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 24 hr

Return Event: 50.00 years
Storm Event: 24 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 240 hr

Return Event: 50.00 years
Storm Event: 240 hr 50 yr

Storm Event	240 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	11.26 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.053 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.053 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.73 in
Runoff Volume (Pervious)	0.327 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.327 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	4.80 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.73 hours
Flow (Peak, Computed)	0.969 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.75 hours
Flow (Peak Interpolated Output)	0.969 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.72 in
Runoff Volume (Pervious)	0.102 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.102 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	2.78 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	1.456 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	1.455 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.09 in
Runoff Volume (Pervious)	0.041 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.041 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

Storm Event	48 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.13 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.182 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.182 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.75 in
Runoff Volume (Pervious)	0.216 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.216 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 48 hr

Return Event: 50.00 years
Storm Event: 48 hr 50 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 50 yr 6 hr

Return Event: 50.00 years
Storm Event: 6 hr 50 yr

Storm Event	6 hr 50 yr
Return Event	50.00 years
Duration	50.00 hours
Depth	5.63 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	0.637 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	0.637 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.45 in
Runoff Volume (Pervious)	0.129 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.129 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 50 yr
Return Event	50.00 years
Duration	500.00 hours
Depth	8.64 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.130 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.130 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.23 in
Runoff Volume (Pervious)	0.234 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.234 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
833.70	0.000
833.80	0.000
834.00	0.104
835.00	0.660
836.00	1.263
837.00	1.906
838.00	2.588
839.00	3.310

Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
835.50	0.000
836.50	0.000
837.00	0.039
838.00	0.134
839.00	0.252

Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Requested Pond Water Surface Elevations	
Minimum (Headwater)	835.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Interconnected Culvert	Forward + Reverse	TW	836.00	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Structure ID: Interconnected Culvert Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	36.00 in
Length	240.00 ft
Length (Computed Barrel)	240.01 ft
Slope (Computed)	0.009 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.007
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.091
T2 ratio (HW/D)	1.193
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	839.27 ft	T1 Flow	42.851 ft³/s
T2 Elevation	839.58 ft	T2 Flow	48.973 ft³/s

Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Requested Pond Water Surface Elevations	
Minimum (Headwater)	833.70 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	North 2-Year Restrictor	Forward	TW	833.70	839.00
Orifice-Circular	North 100-Year Restrictor	Forward	TW	835.30	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Structure ID: North 2-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	833.70 ft
Orifice Diameter	2.20 in
Orifice Coefficient	0.610

Structure ID: North 100-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	835.30 ft
Orifice Diameter	2.70 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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Proposed 100-yr Critical Duration

Project Summary	
Title	24-136 Proposed Conditions PondPack Pond Sizing Model
Engineer	KML
Company	Haeger Engineering LLC
Date	3/3/2025

Notes	Proposed Conditions Model. Critical Duration Analysis

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Scenario	100 yr 15 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 30 min
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 1 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 2 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 3 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	100 yr 6 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	100 yr 15 min
Element Type	Scenario
Element Id	371
Label	100 yr 15 min
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.05 hours.
Source	Warning
Message Id	40
Scenario	100 yr 6 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (3.2 % of Inflow Volume))
Source	Warning
Message Id	39
Scenario	100 yr 12 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	40
Scenario	100 yr 12 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (4.4 % of Inflow Volume))
Source	Warning

User Notifications

Message Id	39
Scenario	100 yr 18 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 24 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	40
Scenario	100 yr 18 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (4.8 % of Inflow Volume))
Source	Warning
Message Id	40
Scenario	100 yr 24 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (4.2 % of Inflow Volume))
Source	Warning
Message Id	39
Scenario	100 yr 48 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning

User Notifications

Message Id	39
Scenario	100 yr 72 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 120 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	39
Scenario	100 yr 240 hr
Element Type	Composite Outlet Structure
Element Id	806
Label	Interconnected Pond OCS
Time	(N/A)
Message	Reverse flow conditions encountered for one or more headwater elevations. Calculated reverse flows may be approximate.
Source	Warning
Message Id	38
Scenario	100 yr 48 hr
Element Type	Scenario
Element Id	380
Label	100 yr 48 hr
Time	(N/A)
Message	Requested ICPM calculation time increment is larger than the requested output hydrograph increment. ICPM calculation increment set to output increment 0.10 hours.
Source	Warning
Message Id	40
Scenario	100 yr 48 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (3.9 % of Inflow Volume))
Source	Warning

User Notifications

Message Id	40
Scenario	100 yr 72 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (3.6 % of Inflow Volume))
Source	Warning
Message Id	40
Scenario	100 yr 120 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (2.8 % of Inflow Volume))
Source	Warning
Message Id	40
Scenario	100 yr 240 hr
Element Type	Pond
Element Id	815
Label	South Pond
Time	(N/A)
Message	Mass balance for routing volumes vary by more than 0.5 %. (1.4 % of Outflow Volume))
Source	Warning

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to South Pond	2 yr 24 hr	2.00	0.369	15.90	0.541
On-Site Area to South Pond	100 yr 15 min	100.00	0.204	0.20	10.762
On-Site Area to South Pond	100 yr 30 min	100.00	0.341	0.25	12.622
On-Site Area to South Pond	100 yr 1 hr	100.00	0.489	0.35	11.997
On-Site Area to South Pond	100 yr 2 hr	100.00	0.657	0.50	9.328
On-Site Area to South Pond	100 yr 3 hr	100.00	0.752	0.65	7.370
On-Site Area to South Pond	100 yr 6 hr	100.00	0.926	1.05	4.719
On-Site Area to South Pond	100 yr 12 hr	100.00	1.120	4.90	2.837
On-Site Area to South Pond	100 yr 18 hr	100.00	1.233	11.90	2.116
On-Site Area to South Pond	100 yr 24 hr	100.00	1.330	15.80	1.699
On-Site Area to South Pond	100 yr 48 hr	100.00	1.466	41.70	1.149
On-Site Area to South Pond	100 yr 72 hr	100.00	1.575	62.60	0.817
On-Site Area to South Pond	100 yr 120 hr	100.00	1.731	104.40	0.533
On-Site Area to South Pond	100 yr 240 hr	100.00	2.115	208.70	0.319
On-Site Area to North Pond	2 yr 24 hr	2.00	0.619	15.90	0.918
On-Site Area to North Pond	100 yr 15 min	100.00	0.336	0.20	17.715
On-Site Area to North Pond	100 yr 30 min	100.00	0.570	0.25	21.023
On-Site Area to North Pond	100 yr 1 hr	100.00	0.824	0.35	20.170
On-Site Area to North Pond	100 yr 2 hr	100.00	1.114	0.50	15.748
On-Site Area to North Pond	100 yr 3 hr	100.00	1.279	0.65	12.468
On-Site Area to North Pond	100 yr 6 hr	100.00	1.581	1.05	8.000
On-Site Area to North Pond	100 yr 12 hr	100.00	1.917	4.90	4.880
On-Site Area to North Pond	100 yr 18 hr	100.00	2.114	11.90	3.663
On-Site Area to North Pond	100 yr 24 hr	100.00	2.283	15.80	2.943

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
On-Site Area to North Pond	100 yr 48 hr	100.00	2.519	41.70	1.996
On-Site Area to North Pond	100 yr 72 hr	100.00	2.709	62.60	1.419
On-Site Area to North Pond	100 yr 120 hr	100.00	2.980	104.40	0.927
On-Site Area to North Pond	100 yr 240 hr	100.00	3.649	208.70	0.555
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	100 yr 15 min	100.00	0.029	0.20	1.501
Unrestricted to West	100 yr 30 min	100.00	0.052	0.25	1.872
Unrestricted to West	100 yr 1 hr	100.00	0.078	0.35	1.867
Unrestricted to West	100 yr 2 hr	100.00	0.107	0.55	1.495
Unrestricted to West	100 yr 3 hr	100.00	0.125	0.70	1.197
Unrestricted to West	100 yr 6 hr	100.00	0.156	1.30	0.774
Unrestricted to West	100 yr 12 hr	100.00	0.192	5.00	0.497
Unrestricted to West	100 yr 18 hr	100.00	0.213	11.90	0.383
Unrestricted to West	100 yr 24 hr	100.00	0.231	15.80	0.309
Unrestricted to West	100 yr 48 hr	100.00	0.256	41.70	0.212
Unrestricted to West	100 yr 72 hr	100.00	0.277	62.60	0.151
Unrestricted to West	100 yr 120 hr	100.00	0.306	104.40	0.099
Unrestricted to West	100 yr 240 hr	100.00	0.378	208.70	0.060

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
From North Pond	2 yr 24 hr	2.00	0.847	24.10	0.159
From North Pond	100 yr 15 min	100.00	0.396	0.75	0.128
From North Pond	100 yr 30 min	100.00	0.557	0.95	0.190
From North Pond	100 yr 1 hr	100.00	0.789	1.35	0.344
From North Pond	100 yr 2 hr	100.00	1.093	2.25	0.439
From North Pond	100 yr 3 hr	100.00	1.263	3.20	0.476
From North Pond	100 yr 6 hr	100.00	1.557	6.15	0.527
From North Pond	100 yr 12 hr	100.00	2.503	12.10	0.574
From North Pond	100 yr 18 hr	100.00	2.691	18.10	0.600
From North Pond	100 yr 24 hr	100.00	2.864	24.10	0.611
From North Pond	100 yr 48 hr	100.00	3.928	48.10	0.619
From North Pond	100 yr 72 hr	100.00	4.227	72.10	0.607
From North Pond	100 yr 120 hr	100.00	4.662	115.40	0.574
From North Pond	100 yr 240 hr	100.00	5.794	221.10	0.517
Unrestricted to West	2 yr 24 hr	2.00	0.057	15.90	0.088
Unrestricted to West	100 yr 15 min	100.00	0.029	0.20	1.501
Unrestricted to West	100 yr 30 min	100.00	0.052	0.25	1.872

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Unrestricted to West	100 yr 1 hr	100.00	0.078	0.35	1.867
Unrestricted to West	100 yr 2 hr	100.00	0.107	0.55	1.495
Unrestricted to West	100 yr 3 hr	100.00	0.125	0.70	1.197
Unrestricted to West	100 yr 6 hr	100.00	0.156	1.30	0.774
Unrestricted to West	100 yr 12 hr	100.00	0.192	5.00	0.497
Unrestricted to West	100 yr 18 hr	100.00	0.213	11.90	0.383
Unrestricted to West	100 yr 24 hr	100.00	0.231	15.80	0.309
Unrestricted to West	100 yr 48 hr	100.00	0.256	41.70	0.212
Unrestricted to West	100 yr 72 hr	100.00	0.277	62.60	0.151
Unrestricted to West	100 yr 120 hr	100.00	0.306	104.40	0.099
Unrestricted to West	100 yr 240 hr	100.00	0.378	208.70	0.060

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	2 yr 24 hr	2.00	0.369	15.90	0.541	(N/A)	(N/A)
South Pond (OUT)	2 yr 24 hr	2.00	0.369	15.90	0.541	836.32	0.000
South Pond (IN)	100 yr 15 min	100.00	0.204	0.20	10.762	(N/A)	(N/A)
South Pond (OUT)	100 yr 15 min	100.00	0.204	0.30	7.087	837.20	0.058
South Pond (IN)	100 yr 30 min	100.00	0.341	0.25	12.622	(N/A)	(N/A)
South Pond (OUT)	100 yr 30 min	100.00	0.341	0.35	9.029	837.36	0.073
South Pond (IN)	100 yr 1 hr	100.00	0.489	0.35	11.997	(N/A)	(N/A)
South Pond (OUT)	100 yr 1 hr	100.00	0.489	0.45	9.377	837.39	0.076
South Pond (IN)	100 yr 2 hr	100.00	0.657	0.50	9.328	(N/A)	(N/A)
South Pond (OUT)	100 yr 2 hr	100.00	0.660	0.65	8.300	837.30	0.068
South Pond (Reverse)	100 yr 2 hr	100.00	0.000	6.35	-0.008	(N/A)	(N/A)
South Pond (IN)	100 yr 3 hr	100.00	0.752	0.65	7.370	(N/A)	(N/A)
South Pond (OUT)	100 yr 3 hr	100.00	0.750	0.80	6.892	837.18	0.056
South Pond (IN)	100 yr 6 hr	100.00	0.926	1.05	4.719	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (OUT)	100 yr 6 hr	100.00	0.896	1.30	4.574	837.48	0.085
South Pond (Reverse)	100 yr 6 hr	100.00	0.000	24.45	-0.002	(N/A)	(N/A)
South Pond (IN)	100 yr 12 hr	100.00	1.120	4.90	2.837	(N/A)	(N/A)
South Pond (OUT)	100 yr 12 hr	100.00	1.070	5.00	2.803	837.96	0.130
South Pond (IN)	100 yr 18 hr	100.00	1.233	11.90	2.116	(N/A)	(N/A)
South Pond (OUT)	100 yr 18 hr	100.00	1.174	11.30	2.078	838.25	0.164
South Pond (IN)	100 yr 24 hr	100.00	1.330	15.80	1.699	(N/A)	(N/A)
South Pond (OUT)	100 yr 24 hr	100.00	1.274	14.50	1.628	838.38	0.179
South Pond (IN)	100 yr 48 hr	100.00	1.466	41.70	1.149	(N/A)	(N/A)
South Pond (OUT)	100 yr 48 hr	100.00	1.409	41.40	0.877	838.47	0.190
South Pond (IN)	100 yr 72 hr	100.00	1.575	62.60	0.817	(N/A)	(N/A)
South Pond (OUT)	100 yr 72 hr	100.00	1.519	61.70	0.647	838.33	0.173
South Pond (IN)	100 yr 120 hr	100.00	1.731	104.40	0.533	(N/A)	(N/A)
South Pond (OUT)	100 yr 120 hr	100.00	1.682	96.10	0.464	837.96	0.130
South Pond (Reverse)	100 yr 120 hr	100.00	0.000	146.00	-0.006	(N/A)	(N/A)
South Pond (IN)	100 yr 240 hr	100.00	2.115	208.70	0.319	(N/A)	(N/A)
South Pond (OUT)	100 yr 240 hr	100.00	2.145	212.80	0.385	837.39	0.076
South Pond (Reverse)	100 yr 240 hr	100.00	0.000	253.90	-0.006	(N/A)	(N/A)
North Pond (IN)	2 yr 24 hr	2.00	0.988	15.90	1.458	(N/A)	(N/A)
North Pond (OUT)	2 yr 24 hr	2.00	0.847	24.10	0.159	835.30	0.841
North Pond (IN)	100 yr 15 min	100.00	0.540	0.20	22.701	(N/A)	(N/A)
North Pond (OUT)	100 yr 15 min	100.00	0.396	0.75	0.128	834.77	0.534
North Pond (IN)	100 yr 30 min	100.00	0.911	0.25	27.776	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (OUT)	100 yr 30 min	100.00	0.557	0.95	0.190	835.40	0.901
North Pond (IN)	100 yr 1 hr	100.00	1.313	0.35	28.126	(N/A)	(N/A)
North Pond (OUT)	100 yr 1 hr	100.00	0.789	1.35	0.344	836.04	1.290
North Pond (IN)	100 yr 2 hr	100.00	1.774	0.55	23.445	(N/A)	(N/A)
North Pond (Reverse)	100 yr 2 hr	100.00	0.000	6.35	-0.008	(N/A)	(N/A)
North Pond (OUT)	100 yr 2 hr	100.00	1.093	2.25	0.439	836.68	1.703
North Pond (IN)	100 yr 3 hr	100.00	2.029	0.75	19.031	(N/A)	(N/A)
North Pond (OUT)	100 yr 3 hr	100.00	1.263	3.20	0.476	837.00	1.906
North Pond (IN)	100 yr 6 hr	100.00	2.477	1.10	12.422	(N/A)	(N/A)
North Pond (Reverse)	100 yr 6 hr	100.00	0.000	24.45	-0.002	(N/A)	(N/A)
North Pond (OUT)	100 yr 6 hr	100.00	1.557	6.15	0.527	837.48	2.233
North Pond (IN)	100 yr 12 hr	100.00	2.987	5.00	7.676	(N/A)	(N/A)
North Pond (OUT)	100 yr 12 hr	100.00	2.503	12.10	0.574	837.96	2.563
North Pond (IN)	100 yr 18 hr	100.00	3.288	11.30	5.696	(N/A)	(N/A)
North Pond (OUT)	100 yr 18 hr	100.00	2.691	18.10	0.600	838.25	2.768
North Pond (IN)	100 yr 24 hr	100.00	3.556	14.50	4.507	(N/A)	(N/A)
North Pond (OUT)	100 yr 24 hr	100.00	2.864	24.10	0.611	838.38	2.860
North Pond (IN)	100 yr 48 hr	100.00	3.928	41.40	2.869	(N/A)	(N/A)
North Pond (OUT)	100 yr 48 hr	100.00	3.928	48.10	0.619	838.47	2.929
North Pond (IN)	100 yr 72 hr	100.00	4.227	62.30	2.063	(N/A)	(N/A)
North Pond (OUT)	100 yr 72 hr	100.00	4.227	72.10	0.607	838.33	2.826
North Pond (IN)	100 yr 120 hr	100.00	4.662	104.40	1.370	(N/A)	(N/A)
North Pond (Reverse)	100 yr 120 hr	100.00	0.000	146.00	-0.006	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (OUT)	100 yr 120 hr	100.00	4.662	115.40	0.574	837.96	2.561
North Pond (IN)	100 yr 240 hr	100.00	5.794	212.80	0.880	(N/A)	(N/A)
North Pond (Reverse)	100 yr 240 hr	100.00	0.000	253.90	-0.006	(N/A)	(N/A)
North Pond (OUT)	100 yr 240 hr	100.00	5.794	221.10	0.517	837.38	2.167

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

Time-Depth Curve: 1 hr 100 yr	
Label	1 hr 100 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	1.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.08	0.16	0.24	0.32
0.05	0.41	0.50	0.59	0.68	0.78
0.10	0.88	0.98	1.08	1.18	1.28
0.15	1.38	1.48	1.57	1.66	1.75
0.20	1.84	1.93	2.00	2.08	2.16
0.25	2.24	2.30	2.37	2.43	2.50
0.30	2.55	2.60	2.64	2.69	2.73
0.35	2.77	2.80	2.84	2.87	2.90
0.40	2.94	2.97	3.00	3.03	3.05
0.45	3.08	3.11	3.13	3.16	3.19
0.50	3.22	3.24	3.27	3.30	3.32
0.55	3.35	3.37	3.40	3.42	3.45
0.60	3.47	3.49	3.51	3.53	3.55
0.65	3.57	3.59	3.61	3.63	3.64
0.70	3.66	3.68	3.69	3.71	3.72
0.75	3.74	3.75	3.76	3.77	3.79
0.80	3.80	3.81	3.83	3.84	3.85
0.85	3.86	3.87	3.89	3.90	3.91
0.90	3.92	3.93	3.94	3.95	3.96
0.95	3.97	3.99	4.00	4.01	4.02
1.00	4.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

Time-Depth Curve: 12 hr 100 yr	
Label	12 hr 100 yr
Start Time	0.00 hours
Increment	0.12 hours
End Time	12.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.12 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.60	0.21	0.25	0.30	0.34	0.39
1.20	0.45	0.50	0.55	0.61	0.68
1.80	0.74	0.80	0.87	0.95	1.03
2.40	1.11	1.19	1.29	1.40	1.50
3.00	1.60	1.72	1.85	1.97	2.10
3.60	2.24	2.38	2.53	2.67	2.82
4.20	2.98	3.14	3.30	3.46	3.62
4.80	3.78	3.95	4.10	4.25	4.39
5.40	4.53	4.68	4.81	4.94	5.07
6.00	5.20	5.31	5.41	5.51	5.61
6.60	5.70	5.79	5.88	5.97	6.05
7.20	6.13	6.20	6.28	6.35	6.40
7.80	6.46	6.51	6.57	6.61	6.65
8.40	6.69	6.74	6.77	6.81	6.84
9.00	6.88	6.91	6.93	6.96	6.99
9.60	7.02	7.05	7.07	7.10	7.12
10.20	7.15	7.17	7.19	7.21	7.24
10.80	7.26	7.28	7.30	7.32	7.34
11.40	7.36	7.38	7.40	7.42	7.44
12.00	7.46	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

Time-Depth Curve: 120 hr 100 yr	
Label	120 hr 100 yr
Start Time	0.00 hours
Increment	1.20 hours
End Time	120.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.12	0.18	0.24
6.00	0.30	0.36	0.43	0.49	0.55
12.00	0.61	0.67	0.73	0.79	0.86
18.00	0.93	1.00	1.07	1.14	1.21
24.00	1.28	1.35	1.42	1.49	1.55
30.00	1.62	1.69	1.76	1.83	1.90
36.00	1.96	2.02	2.08	2.15	2.21
42.00	2.27	2.34	2.40	2.47	2.53
48.00	2.60	2.66	2.73	2.81	2.88
54.00	2.96	3.03	3.11	3.18	3.26
60.00	3.33	3.40	3.47	3.53	3.60
66.00	3.67	3.73	3.79	3.85	3.91
72.00	3.97	4.03	4.09	4.15	4.22
78.00	4.28	4.35	4.43	4.53	4.63
84.00	4.72	4.83	4.99	5.15	5.31
90.00	5.47	5.67	5.88	6.08	6.29
96.00	6.53	6.79	7.04	7.29	7.56
102.00	7.84	8.12	8.39	8.66	8.90
108.00	9.15	9.40	9.62	9.78	9.94
114.00	10.10	10.25	10.36	10.46	10.56
120.00	10.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

Time-Depth Curve: 15 min 100 yr	
Label	15 min 100 yr
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.25 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.09	0.14	0.19
0.01	0.24	0.29	0.34	0.39	0.45
0.03	0.51	0.57	0.62	0.68	0.74
0.04	0.79	0.85	0.91	0.96	1.01
0.05	1.06	1.11	1.15	1.20	1.24
0.06	1.29	1.33	1.36	1.40	1.44
0.08	1.47	1.49	1.52	1.55	1.57
0.09	1.59	1.61	1.63	1.65	1.67
0.10	1.69	1.71	1.73	1.74	1.76
0.11	1.77	1.79	1.80	1.82	1.84
0.13	1.85	1.87	1.88	1.90	1.91
0.14	1.93	1.94	1.96	1.97	1.98
0.15	2.00	2.01	2.02	2.03	2.04
0.16	2.06	2.07	2.08	2.09	2.10
0.18	2.11	2.12	2.13	2.13	2.14
0.19	2.15	2.16	2.17	2.17	2.18
0.20	2.19	2.20	2.20	2.21	2.22
0.21	2.22	2.23	2.24	2.24	2.25
0.23	2.26	2.26	2.27	2.28	2.28
0.24	2.29	2.29	2.30	2.31	2.31
0.25	2.32	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

Time-Depth Curve: 18 hr 100 yr	
Label	18 hr 100 yr
Start Time	0.00 hours
Increment	0.18 hours
End Time	18.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.18 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.12	0.16
0.90	0.20	0.25	0.29	0.33	0.38
1.80	0.42	0.47	0.51	0.56	0.61
2.70	0.66	0.70	0.75	0.80	0.85
3.60	0.90	0.95	1.00	1.05	1.11
4.50	1.16	1.21	1.26	1.31	1.35
5.40	1.41	1.46	1.51	1.57	1.62
6.30	1.68	1.74	1.81	1.87	1.94
7.20	2.01	2.08	2.15	2.24	2.33
8.10	2.42	2.51	2.62	2.72	2.82
9.00	2.93	3.08	3.22	3.37	3.52
9.90	3.67	3.83	3.99	4.15	4.32
10.80	4.49	4.66	4.83	5.00	5.18
11.70	5.35	5.52	5.69	5.85	6.01
12.60	6.17	6.32	6.45	6.58	6.71
13.50	6.84	6.94	7.03	7.12	7.22
14.40	7.29	7.35	7.42	7.48	7.53
15.30	7.58	7.62	7.66	7.70	7.73
16.20	7.77	7.80	7.83	7.86	7.89
17.10	7.92	7.95	7.98	8.00	8.03
18.00	8.06	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

Time-Depth Curve: 2 hr 100 yr	
Label	2 hr 100 yr
Start Time	0.00 hours
Increment	0.02 hours
End Time	2.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.02 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.10	0.20	0.30	0.40
0.10	0.51	0.62	0.73	0.84	0.96
0.20	1.09	1.21	1.34	1.46	1.58
0.30	1.70	1.82	1.94	2.05	2.16
0.40	2.27	2.37	2.47	2.57	2.66
0.50	2.76	2.84	2.92	3.00	3.08
0.60	3.14	3.20	3.26	3.32	3.37
0.70	3.41	3.46	3.50	3.54	3.58
0.80	3.62	3.66	3.70	3.73	3.76
0.90	3.80	3.83	3.86	3.90	3.93
1.00	3.97	4.00	4.03	4.06	4.10
1.10	4.13	4.16	4.19	4.22	4.25
1.20	4.28	4.30	4.33	4.36	4.38
1.30	4.41	4.43	4.45	4.47	4.49
1.40	4.51	4.53	4.55	4.57	4.59
1.50	4.61	4.62	4.64	4.65	4.67
1.60	4.69	4.70	4.72	4.73	4.75
1.70	4.76	4.78	4.79	4.81	4.82
1.80	4.83	4.85	4.86	4.88	4.89
1.90	4.90	4.92	4.93	4.94	4.96
2.00	4.97	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

Time-Depth Curve: 24 hr 100 yr	
Label	24 hr 100 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.04	0.08	0.13	0.17
1.20	0.21	0.26	0.31	0.35	0.40
2.40	0.45	0.50	0.55	0.60	0.65
3.60	0.70	0.75	0.80	0.85	0.91
4.80	0.96	1.01	1.07	1.12	1.18
6.00	1.23	1.28	1.34	1.39	1.44
7.20	1.50	1.55	1.61	1.66	1.73
8.40	1.79	1.86	1.92	1.99	2.06
9.60	2.13	2.21	2.29	2.38	2.48
10.80	2.57	2.67	2.78	2.89	3.00
12.00	3.12	3.27	3.43	3.58	3.74
13.20	3.90	4.07	4.24	4.41	4.59
14.40	4.77	4.95	5.14	5.32	5.50
15.60	5.69	5.87	6.05	6.22	6.39
16.80	6.56	6.72	6.86	7.00	7.14
18.00	7.28	7.38	7.48	7.58	7.67
19.20	7.75	7.82	7.89	7.96	8.01
20.40	8.06	8.10	8.15	8.19	8.22
21.60	8.26	8.29	8.33	8.36	8.39
22.80	8.42	8.45	8.48	8.51	8.54
24.00	8.57	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 2 Year Critical Storm
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Time-Depth Curve: 24 hr 2 yr	
Label	24 hr 2 yr
Start Time	0.00 hours
Increment	0.24 hours
End Time	24.00 hours
Return Event	2.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.24 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.02	0.03	0.05	0.07
1.20	0.08	0.10	0.12	0.14	0.16
2.40	0.18	0.19	0.21	0.23	0.25
3.60	0.27	0.29	0.31	0.33	0.35
4.80	0.37	0.39	0.42	0.44	0.46
6.00	0.48	0.50	0.52	0.54	0.56
7.20	0.58	0.60	0.63	0.65	0.67
8.40	0.70	0.72	0.75	0.78	0.80
9.60	0.83	0.86	0.89	0.93	0.97
10.80	1.00	1.04	1.08	1.13	1.17
12.00	1.21	1.27	1.34	1.40	1.46
13.20	1.52	1.59	1.65	1.72	1.79
14.40	1.86	1.93	2.00	2.07	2.14
15.60	2.22	2.29	2.36	2.42	2.49
16.80	2.56	2.62	2.67	2.73	2.78
18.00	2.84	2.87	2.91	2.95	2.99
19.20	3.02	3.05	3.07	3.10	3.12
20.40	3.14	3.16	3.18	3.19	3.21
21.60	3.22	3.23	3.25	3.26	3.27
22.80	3.28	3.29	3.31	3.32	3.33
24.00	3.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 240 hr

Return Event: 100.00 years
Storm Event: 240 hr 100 yr

Time-Depth Curve: 240 hr 100 yr	
Label	240 hr 100 yr
Start Time	0.00 hours
Increment	2.40 hours
End Time	240.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.07	0.14	0.21	0.28
12.00	0.35	0.43	0.51	0.58	0.65
24.00	0.72	0.79	0.87	0.94	1.02
36.00	1.10	1.18	1.27	1.35	1.43
48.00	1.52	1.60	1.68	1.76	1.84
60.00	1.93	2.01	2.09	2.17	2.25
72.00	2.33	2.40	2.47	2.55	2.62
84.00	2.70	2.77	2.85	2.93	3.01
96.00	3.08	3.16	3.24	3.33	3.42
108.00	3.51	3.60	3.69	3.78	3.87
120.00	3.95	4.03	4.11	4.19	4.27
132.00	4.35	4.42	4.50	4.57	4.64
144.00	4.71	4.78	4.85	4.92	5.00
156.00	5.08	5.16	5.26	5.37	5.49
168.00	5.61	5.73	5.92	6.11	6.30
180.00	6.49	6.73	6.98	7.22	7.46
192.00	7.75	8.05	8.35	8.65	8.97
204.00	9.30	9.63	9.96	10.27	10.57
216.00	10.86	11.15	11.41	11.60	11.80
228.00	11.99	12.17	12.29	12.41	12.53
240.00	12.65	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 3 hr

Return Event: 100.00 years
Storm Event: 3 hr 100 yr

Time-Depth Curve: 3 hr 100 yr	
Label	3 hr 100 yr
Start Time	0.00 hours
Increment	0.03 hours
End Time	3.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.11	0.22	0.33	0.44
0.15	0.56	0.69	0.81	0.93	1.06
0.30	1.20	1.34	1.47	1.61	1.75
0.45	1.88	2.01	2.14	2.26	2.38
0.60	2.50	2.62	2.73	2.83	2.94
0.75	3.05	3.14	3.22	3.31	3.40
0.90	3.47	3.54	3.60	3.67	3.72
1.05	3.77	3.82	3.86	3.91	3.95
1.20	4.00	4.04	4.08	4.12	4.16
1.35	4.19	4.23	4.27	4.31	4.34
1.50	4.38	4.42	4.45	4.49	4.53
1.65	4.56	4.60	4.63	4.66	4.70
1.80	4.73	4.75	4.78	4.81	4.84
1.95	4.87	4.89	4.92	4.94	4.96
2.10	4.99	5.01	5.03	5.05	5.07
2.25	5.09	5.11	5.12	5.14	5.16
2.40	5.18	5.19	5.21	5.23	5.25
2.55	5.26	5.28	5.29	5.31	5.32
2.70	5.34	5.36	5.37	5.39	5.40
2.85	5.41	5.43	5.44	5.46	5.47
3.00	5.49	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

Time-Depth Curve: 30 min 100 yr	
Label	30 min 100 yr
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.50 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.06	0.13	0.19	0.25
0.03	0.32	0.40	0.47	0.54	0.61
0.05	0.69	0.77	0.85	0.93	1.01
0.08	1.09	1.16	1.24	1.31	1.38
0.10	1.45	1.51	1.58	1.64	1.70
0.13	1.76	1.81	1.86	1.91	1.96
0.15	2.00	2.04	2.08	2.12	2.15
0.18	2.18	2.20	2.23	2.26	2.28
0.20	2.31	2.33	2.36	2.38	2.40
0.23	2.42	2.44	2.47	2.49	2.51
0.25	2.53	2.55	2.57	2.59	2.61
0.28	2.63	2.65	2.67	2.69	2.71
0.30	2.73	2.75	2.76	2.78	2.79
0.33	2.81	2.83	2.84	2.85	2.87
0.35	2.88	2.89	2.90	2.92	2.93
0.38	2.94	2.95	2.96	2.97	2.98
0.40	2.99	3.00	3.01	3.02	3.03
0.43	3.04	3.05	3.06	3.07	3.07
0.45	3.08	3.09	3.10	3.11	3.12
0.48	3.13	3.14	3.14	3.15	3.16
0.50	3.17	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

Time-Depth Curve: 48 hr 100 yr	
Label	48 hr 100 yr
Start Time	0.00 hours
Increment	0.48 hours
End Time	48.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.48 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.10	0.15	0.21
2.40	0.26	0.32	0.37	0.43	0.48
4.80	0.53	0.58	0.63	0.69	0.75
7.20	0.81	0.87	0.93	0.99	1.05
9.60	1.11	1.17	1.23	1.29	1.35
12.00	1.41	1.47	1.53	1.59	1.65
14.40	1.71	1.76	1.81	1.87	1.92
16.80	1.98	2.04	2.09	2.15	2.20
19.20	2.26	2.32	2.38	2.45	2.51
21.60	2.58	2.64	2.71	2.77	2.84
24.00	2.90	2.96	3.02	3.08	3.14
26.40	3.19	3.25	3.30	3.35	3.41
28.80	3.46	3.51	3.56	3.61	3.67
31.20	3.73	3.79	3.86	3.94	4.03
33.60	4.11	4.21	4.34	4.48	4.62
36.00	4.76	4.94	5.12	5.30	5.47
38.40	5.69	5.91	6.13	6.35	6.58
40.80	6.82	7.07	7.31	7.54	7.75
43.20	7.97	8.18	8.37	8.51	8.65
45.60	8.80	8.93	9.02	9.10	9.19
48.00	9.28	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

Time-Depth Curve: 6 hr 100 yr	
Label	6 hr 100 yr
Start Time	0.00 hours
Increment	0.06 hours
End Time	6.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.06 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.13	0.26	0.39	0.52
0.30	0.66	0.80	0.95	1.09	1.25
0.60	1.41	1.57	1.73	1.89	2.04
0.90	2.20	2.36	2.51	2.65	2.79
1.20	2.93	3.07	3.20	3.32	3.44
1.50	3.57	3.67	3.78	3.88	3.99
1.80	4.07	4.14	4.22	4.30	4.36
2.10	4.41	4.47	4.53	4.58	4.63
2.40	4.68	4.73	4.78	4.83	4.87
2.70	4.91	4.96	5.00	5.04	5.09
3.00	5.13	5.17	5.22	5.26	5.30
3.30	5.34	5.38	5.42	5.46	5.50
3.60	5.53	5.57	5.60	5.64	5.67
3.90	5.70	5.73	5.76	5.79	5.81
4.20	5.84	5.87	5.89	5.91	5.94
4.50	5.96	5.98	6.00	6.02	6.04
4.80	6.06	6.08	6.10	6.12	6.14
5.10	6.16	6.18	6.20	6.22	6.24
5.40	6.25	6.27	6.29	6.31	6.32
5.70	6.34	6.36	6.38	6.39	6.41
6.00	6.43	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical Storm
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

Time-Depth Curve: 72 hr 100 yr	
Label	72 hr 100 yr
Start Time	0.00 hours
Increment	0.72 hours
End Time	72.00 hours
Return Event	100.00 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.72 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.05	0.11	0.16	0.22
3.60	0.28	0.33	0.39	0.45	0.51
7.20	0.56	0.62	0.67	0.73	0.80
10.80	0.86	0.92	0.99	1.05	1.12
14.40	1.18	1.24	1.31	1.37	1.44
18.00	1.50	1.56	1.63	1.69	1.75
21.60	1.81	1.87	1.93	1.98	2.04
25.20	2.10	2.16	2.22	2.28	2.34
28.80	2.40	2.46	2.53	2.60	2.67
32.40	2.73	2.80	2.87	2.94	3.01
36.00	3.08	3.14	3.20	3.27	3.33
39.60	3.39	3.44	3.50	3.56	3.61
43.20	3.67	3.72	3.78	3.83	3.90
46.80	3.96	4.02	4.09	4.18	4.27
50.40	4.36	4.46	4.61	4.76	4.91
54.00	5.05	5.24	5.43	5.62	5.81
57.60	6.04	6.27	6.50	6.74	6.99
61.20	7.24	7.50	7.76	8.00	8.23
64.80	8.46	8.68	8.89	9.04	9.19
68.40	9.34	9.48	9.57	9.66	9.76
72.00	9.85	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: On-Site Area to South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
Label: Unrestricted to West
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.918 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.918 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.80 in
Runoff Volume (Pervious)	0.619 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.619 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	20.394 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	20.170 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.40 in
Runoff Volume (Pervious)	0.824 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.824 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	4.894 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	4.90 hours
Flow (Peak Interpolated Output)	4.880 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.58 in
Runoff Volume (Pervious)	1.917 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.917 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.927 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.927 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.67 in
Runoff Volume (Pervious)	2.980 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.980 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	17.769 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	17.715 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.98 in
Runoff Volume (Pervious)	0.336 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.336 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	3.663 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	3.663 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.15 in
Runoff Volume (Pervious)	2.114 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.114 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.52 hours
Flow (Peak, Computed)	15.756 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.50 hours
Flow (Peak Interpolated Output)	15.748 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.24 in
Runoff Volume (Pervious)	1.114 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.114 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.84 hours
Flow (Peak, Computed)	2.945 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	2.943 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.64 in
Runoff Volume (Pervious)	2.283 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.283 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.555 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.555 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	10.62 in
Runoff Volume (Pervious)	3.649 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.649 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.68 hours
Flow (Peak, Computed)	12.490 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.65 hours
Flow (Peak Interpolated Output)	12.468 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.72 in
Runoff Volume (Pervious)	1.279 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.279 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	21.208 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	21.023 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.66 in
Runoff Volume (Pervious)	0.569 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.570 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.996 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	1.996 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.33 in
Runoff Volume (Pervious)	2.519 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.519 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.07 hours
Flow (Peak, Computed)	8.010 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.05 hours
Flow (Peak Interpolated Output)	8.000 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.60 in
Runoff Volume (Pervious)	1.581 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.581 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	4.123 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	1.420 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	1.419 ft³/s

Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	4.123 acres
Maximum Retention (Pervious)	1.90 in
Maximum Retention (Pervious, 20 percent)	0.38 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.88 in
Runoff Volume (Pervious)	2.709 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.709 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	27.480 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.541 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.541 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.88 in
Runoff Volume (Pervious)	0.369 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.32 hours
Flow (Peak, Computed)	12.151 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	11.997 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.48 in
Runoff Volume (Pervious)	0.489 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.489 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.94 hours
Flow (Peak, Computed)	2.844 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	4.90 hours
Flow (Peak Interpolated Output)	2.837 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	1.120 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.120 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.533 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.533 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.80 in
Runoff Volume (Pervious)	1.731 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.731 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	10.782 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	10.762 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.04 in
Runoff Volume (Pervious)	0.204 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.204 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	2.116 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	2.116 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.27 in
Runoff Volume (Pervious)	1.233 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.233 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.50 hours
Flow (Peak, Computed)	9.329 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.50 hours
Flow (Peak Interpolated Output)	9.328 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.34 in
Runoff Volume (Pervious)	0.657 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.657 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.84 hours
Flow (Peak, Computed)	1.700 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	1.699 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.76 in
Runoff Volume (Pervious)	1.330 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.330 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.319 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.319 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	10.75 in
Runoff Volume (Pervious)	2.115 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.115 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.66 hours
Flow (Peak, Computed)	7.376 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.65 hours
Flow (Peak Interpolated Output)	7.370 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.82 in
Runoff Volume (Pervious)	0.752 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.752 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.23 hours
Flow (Peak, Computed)	12.802 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	12.622 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.73 in
Runoff Volume (Pervious)	0.341 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.341 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	1.149 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	1.149 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.45 in
Runoff Volume (Pervious)	1.466 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.466 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.07 hours
Flow (Peak, Computed)	4.722 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.05 hours
Flow (Peak Interpolated Output)	4.719 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.71 in
Runoff Volume (Pervious)	0.926 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.926 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	2.360 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.817 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.817 ft³/s

Drainage Area	
SCS CN (Composite)	85.000
Area (User Defined)	2.360 acres
Maximum Retention (Pervious)	1.76 in
Maximum Retention (Pervious, 20 percent)	0.35 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.01 in
Runoff Volume (Pervious)	1.575 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.575 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.729 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 2 yr
Return Event	2.00 years
Duration	100.00 hours
Depth	3.34 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.89 hours
Flow (Peak, Computed)	0.088 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.90 hours
Flow (Peak Interpolated Output)	0.088 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.51 in
Runoff Volume (Pervious)	0.057 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.057 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	1 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.03 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.34 hours
Flow (Peak, Computed)	1.877 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.35 hours
Flow (Peak Interpolated Output)	1.867 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.07 in
Runoff Volume (Pervious)	0.077 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.078 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	12 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	7.46 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	4.96 hours
Flow (Peak, Computed)	0.499 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	5.00 hours
Flow (Peak Interpolated Output)	0.497 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.12 in
Runoff Volume (Pervious)	0.192 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.192 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	120 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	10.66 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	104.38 hours
Flow (Peak, Computed)	0.099 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	104.40 hours
Flow (Peak Interpolated Output)	0.099 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.15 in
Runoff Volume (Pervious)	0.306 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.306 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	15 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	2.32 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.20 hours
Flow (Peak, Computed)	1.513 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.20 hours
Flow (Peak Interpolated Output)	1.501 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.77 in
Runoff Volume (Pervious)	0.029 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.029 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	18 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.06 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	11.90 hours
Flow (Peak, Computed)	0.383 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	11.90 hours
Flow (Peak Interpolated Output)	0.383 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.68 in
Runoff Volume (Pervious)	0.213 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.213 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	2 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	4.97 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.54 hours
Flow (Peak, Computed)	1.498 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.55 hours
Flow (Peak Interpolated Output)	1.495 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.87 in
Runoff Volume (Pervious)	0.108 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.107 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	24 hr 100 yr
Return Event	100.00 years
Duration	100.00 hours
Depth	8.57 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	15.87 hours
Flow (Peak, Computed)	0.309 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	15.80 hours
Flow (Peak Interpolated Output)	0.309 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.16 in
Runoff Volume (Pervious)	0.231 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.231 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	240 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	12.65 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	208.78 hours
Flow (Peak, Computed)	0.060 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	208.70 hours
Flow (Peak Interpolated Output)	0.060 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	10.08 in
Runoff Volume (Pervious)	0.378 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.378 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	3 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	5.49 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.70 hours
Flow (Peak, Computed)	1.197 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.70 hours
Flow (Peak Interpolated Output)	1.197 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.32 in
Runoff Volume (Pervious)	0.125 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.125 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	30 min 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	3.17 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	0.25 hours
Flow (Peak, Computed)	1.874 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	0.25 hours
Flow (Peak Interpolated Output)	1.872 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.38 in
Runoff Volume (Pervious)	0.052 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.052 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	48 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.28 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres
Computational Time Increment	0.02 hours
Time to Peak (Computed)	41.75 hours
Flow (Peak, Computed)	0.212 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	41.70 hours
Flow (Peak Interpolated Output)	0.212 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.83 in
Runoff Volume (Pervious)	0.256 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.256 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	6 hr 100 yr
Return Event	100.00 years
Duration	50.00 hours
Depth	6.43 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	1.29 hours
Flow (Peak, Computed)	0.774 ft³/s
Output Increment	0.05 hours
Time to Flow (Peak Interpolated Output)	1.30 hours
Flow (Peak Interpolated Output)	0.774 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.17 in
Runoff Volume (Pervious)	0.156 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.156 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Storm Event	72 hr 100 yr
Return Event	100.00 years
Duration	500.00 hours
Depth	9.85 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.450 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	62.63 hours
Flow (Peak, Computed)	0.151 ft³/s
Output Increment	0.10 hours
Time to Flow (Peak Interpolated Output)	62.60 hours
Flow (Peak Interpolated Output)	0.151 ft³/s

Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.450 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.38 in
Runoff Volume (Pervious)	0.277 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.277 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	2.999 ft³/s

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

Subsection: Elevation vs. Volume Curve
Label: North Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
833.70	0.000
833.80	0.000
834.00	0.104
835.00	0.660
836.00	1.263
837.00	1.906
838.00	2.588
839.00	3.310

Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
835.50	0.000
836.50	0.000
837.00	0.039
838.00	0.134
839.00	0.252

Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Requested Pond Water Surface Elevations	
Minimum (Headwater)	835.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Interconnected Culvert	Forward + Reverse	TW	836.00	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 2 yr 24 hr

Return Event: 2.00 years
Storm Event: 24 hr 2 yr

Structure ID: Interconnected Culvert Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	36.00 in
Length	240.00 ft
Length (Computed Barrel)	240.01 ft
Slope (Computed)	0.009 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.007
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.091
T2 ratio (HW/D)	1.193
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	839.27 ft	T1 Flow	42.851 ft³/s
T2 Elevation	839.58 ft	T2 Flow	48.973 ft³/s

Requested Pond Water Surface Elevations	
Minimum (Headwater)	833.70 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	839.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	North 2-Year Restrictor	Forward	TW	833.70	839.00
Orifice-Circular	North 100-Year Restrictor	Forward	TW	835.30	839.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: North 2-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	833.70 ft
Orifice Diameter	2.20 in
Orifice Coefficient	0.610

Structure ID: North 100-Year Restrictor Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	835.30 ft
Orifice Diameter	2.70 in
Orifice Coefficient	0.610

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

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APPENDIX F – Storm Sewer, Inlet Capacity, and Overflow Calculations

LEGEND

Impervious Area

Pervious Area

Structure #	Drainage Area				Combined C Factor
	$A_{total\ acre}$	$A_{total\ SF}$	$A_{pervious\ SF}$	$A_{impervious\ SF}$	
A1	0.000	0	0	0	0.00
A2	0.030	1,285	1,285	0	0.45
A3	0.135	5,870	5,870	0	0.45
A3-1	0.830	36,157	25,759	10,398	0.58
A4	0.253	11,014	5,414	5,600	0.68
A5	0.222	9,688	6,888	2,800	0.58
A6	0.091	3,983	2,583	1,400	0.61
A7	0.217	9,443	4,474	4,968	0.69
A8	0.189	8,252	4,308	3,944	0.67
B1	0.000	0	0	0	0.00
B2	0.156	6,783	5,383	1,400	0.54
B3	0.118	5,147	2,347	2,800	0.69
B4	0.000	0	0	0	0.00
C1	0.000	0	0	0	0.00
C2	0.474	20,657	13,657	7,000	0.60
C3	0.374	16,270	6,736	9,534	0.71
C4	0.323	14,082	4,591	9,491	0.75
C4-1	0.029	1,248	1,248	0	0.45
C4-2	0.059	2,572	2,572	0	0.45
C4-3	0.080	3,504	3,504	0	0.45
C5	0.005	215	92	122	0.71
C6	0.158	6,879	2,669	4,210	0.73
C7	0.156	6,782	2,661	4,121	0.72
TOTALS	**3.90**	**169,831**	**102,042**	**67,789**	**0.63**

NORTH

0 80

Scale: 1" = 80'

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STORM SEWER AND OVERLOW TRIBUTARY AREA EXHIBIT

MEADOW WOOD EAST SUBDIVISION

LAKE ZURICH, ILLINOIS

Project Manager:	MLA
Engineer:	KML
Date:	02-28-2025
Project No.	24-136
Sheet	1 / 1

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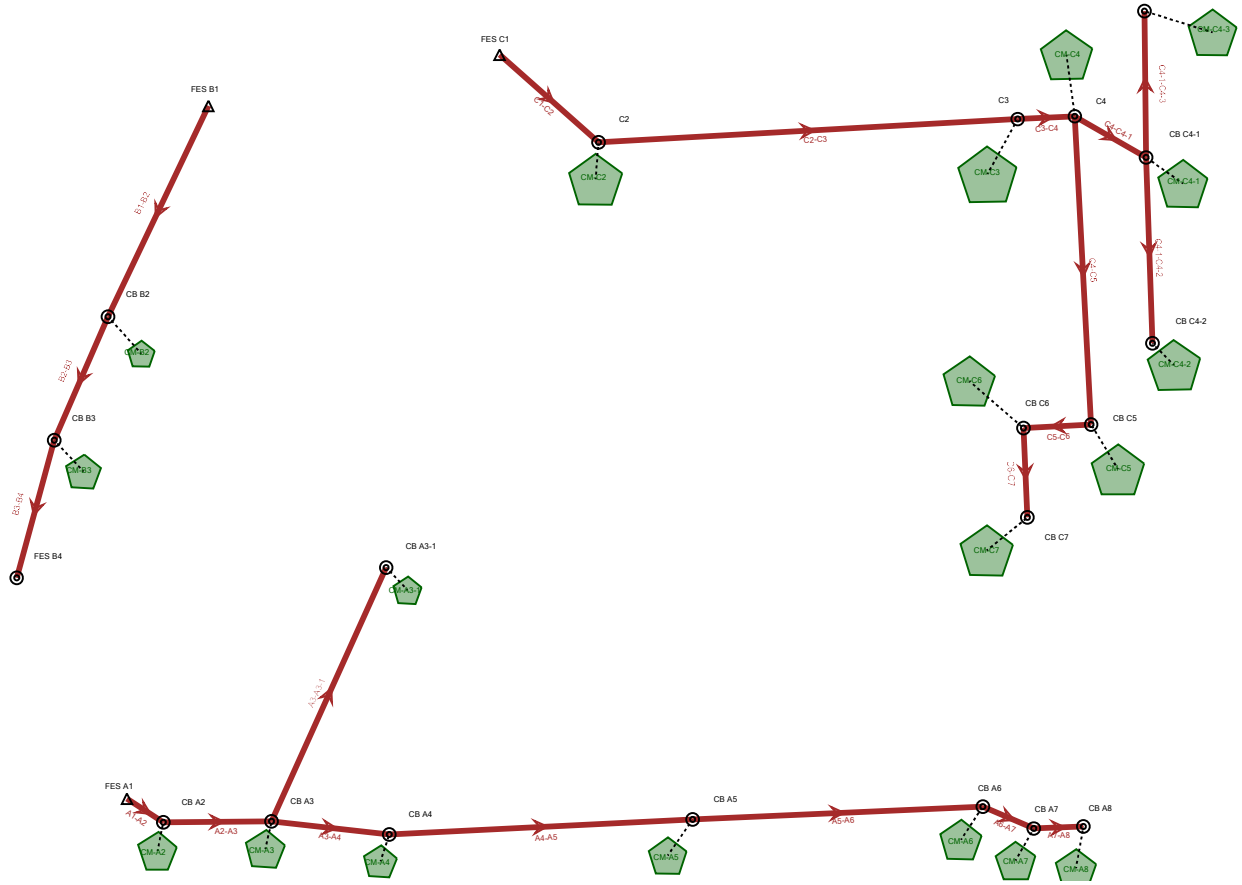
Plot Date: Mar 04, 2025 - 1:01pm Plotted By: kim-l Layout: 11x17 LS
File Name: P:\2024\24136\Drawings\Exhibits\24136 Tributary Area Exhibit.dwg

Meadow Wood East Storm Sewer Calculations

Meadow Wood East



Meadow Wood East Storm Sewer Calculations

Catchment Table - Time: 0.00 hours

ID	Label	Outflow Element	Area (User Defined) (acres)	Runoff Coefficient (Rational)	Time of Concentration (hours)	Flow (Total Out) (cfs)
95	CM-A2	CB A2	0.030	0.450	0.167	0.22
96	CM-A3	CB A3	0.135	0.450	0.167	0.66
97	CM-A4	CB A4	0.253	0.680	0.167	2.94
98	CM-A5	CB A5	0.222	0.580	0.167	0.24
99	CM-A6	CB A6	0.091	0.610	0.167	0.60
100	CM-A7	CB A7	0.217	0.690	0.167	1.63
101	CM-A8	CB A8	0.189	0.670	0.167	1.38
102	CM-A3-1	CB A3-1	0.830	0.580	0.167	5.24
103	CM-B2	CB B2	0.156	0.540	0.167	0.92
104	CM-B3	CB B3	0.118	0.690	0.167	0.87
106	CM-C2	C2	0.474	0.600	0.167	3.10
107	CM-C3	C3	0.374	0.710	0.167	2.89
108	CM-C4	C4	0.323	0.750	0.167	2.64
109	CM-C4-1	CB C4-1	0.029	0.450	0.167	0.14
110	CM-C4-2	CB C4-2	0.059	0.450	0.167	0.29
111	CM-C5	CB C5	0.005	0.710	0.167	0.04
112	CM-C6	CB C6	0.158	0.730	0.167	1.26
113	CM-C7	CB C7	0.156	0.720	0.167	1.22
139	CM-C4-3	CB C4-3	0.080	0.450	0.167	0.39

Meadow Wood East Storm Sewer Calculations

10-Year Storm Event

Conduit Table - Time: 0.00 hours

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Depth (Out) (ft)	Capacity (Full Flow) (cfs)
64	A3-A3-1	CB A3-1	843.00	CB A3	836.85	131.1	0.047	12.0	0.013	3.14	9.32	0.44	7.72
65	C6-C7	CB C7	845.50	CB C6	845.30	42.1	0.005	12.0	0.013	0.73	2.73	0.51	2.45
66	C5-C6	CB C6	845.30	CB C5	845.00	32.0	0.009	12.0	0.013	1.47	4.22	0.46	3.45
67	C4-C5	CB C5	845.00	C4	840.00	145.5	0.034	15.0	0.013	1.49	6.64	0.30	11.97
68	C3-C4	C4	838.50	C3	838.05	27.0	0.017	15.0	0.013	3.46	6.48	0.58	8.34
69	C4-C4-1	CB C4-1	840.30	C4	840.00	31.2	0.010	12.0	0.013	0.48	3.12	0.25	3.49
70	C2-C3	C3	837.80	C2	834.80	197.8	0.015	18.0	0.013	5.12	6.89	1.01	12.94
71	A5-A6	CB A6	837.77	CB A5	837.21	139.7	0.004	15.0	0.013	2.14	3.38	0.77	4.10
72	A4-A5	CB A5	837.21	CB A4	836.58	147.7	0.004	15.0	0.013	2.89	3.70	1.09	4.22
73	A6-A7	CB A7	837.90	CB A6	837.77	24.5	0.005	12.0	0.013	1.79	3.56	0.64	2.60
74	C4-1-C4-2	CB C4-2	841.30	CB C4-1	840.30	99.5	0.010	12.0	0.013	0.17	2.35	0.29	3.57
75	C1-C2	C2	834.80	FES C1	833.80	62.2	0.016	18.0	0.013	6.80	7.58	0.76	13.32
76	A7-A8	CB A8	838.00	CB A7	837.90	27.2	0.004	12.0	0.013	0.83	2.57	0.61	2.16
77	B2-B3	CB B3	835.38	CB B2	834.80	63.5	0.009	36.0	0.013	17.31	7.67	1.35	63.76
78	B1-B2	CB B2	834.80	FES B1	833.80	109.9	0.009	36.0	0.013	17.85	7.72	1.09	63.58
79	B3-B4	FES B4	836.00	CB B3	835.38	67.2	0.009	36.0	0.013	16.78	7.63	1.33	64.06
80	A3-A4	CB A4	836.58	CB A3	836.35	48.5	0.005	15.0	0.013	3.88	4.09	1.18	4.45
81	A2-A3	CB A3	836.35	CB A2	836.10	51.0	0.005	18.0	0.013	7.16	4.73	1.15	7.33
82	A1-A2	CB A2	836.10	FES A1	836.00	20.4	0.005	18.0	0.013	7.20	4.75	1.04	7.36
140	C4-1-C4-3	CB C4-3	841.00	CB C4-1	840.30	61.0	0.011	12.0	0.013	0.24	2.70	0.29	3.82

Meadow Wood East Storm Sewer Calculations

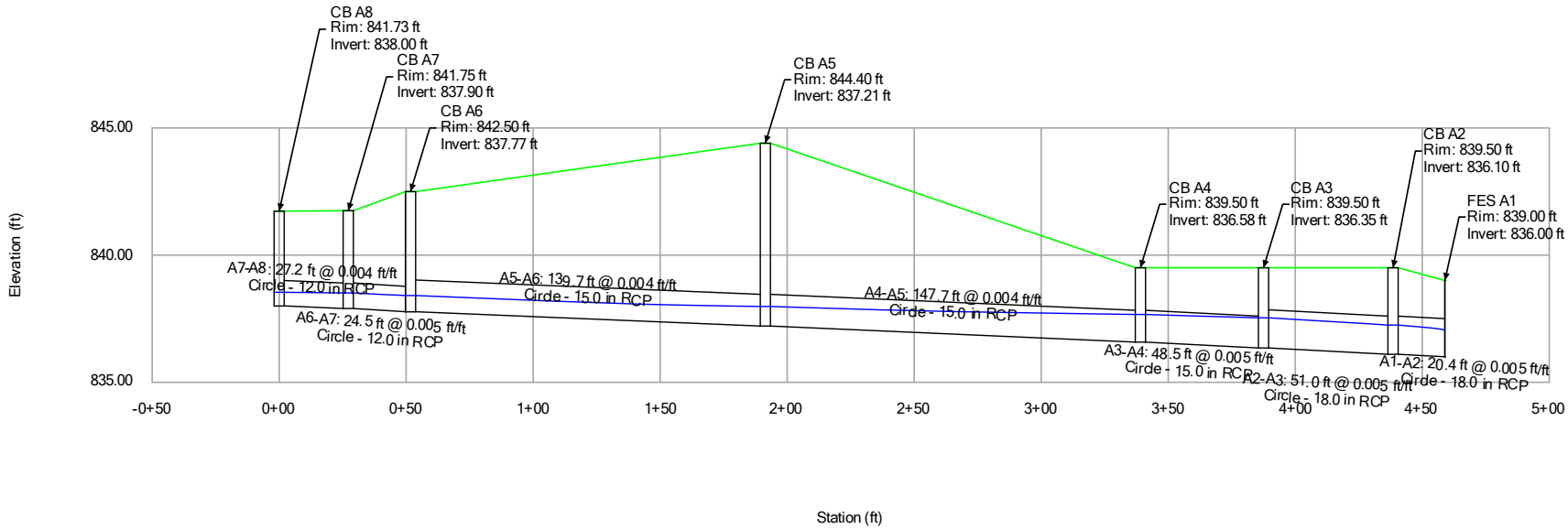
10-Year Storm Event

Combined Pipe/Node Report - Time: 0.00 hours

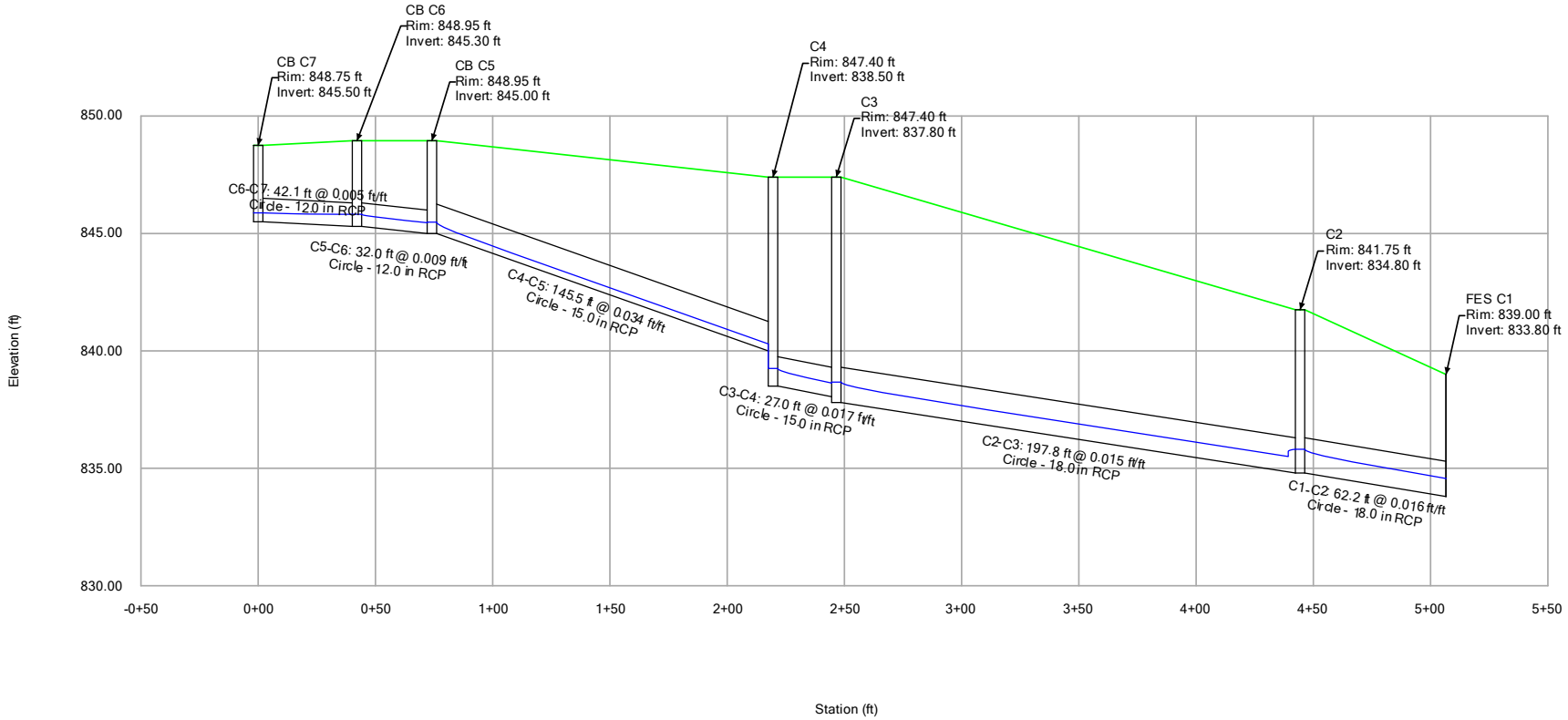
Label	Start Node	Stop Node	Length (ft)	Inlet C	System Intensity (in/h)	Upstream Inlet Area (acres)	Flow (cfs)	Rise (ft)	Capacity (Full Flow) (cfs)	Velocity (ft/s)	Invert (Start) (ft)	Invert (Stop) (ft)	HGL (in) (ft)	HGL (out) (ft)	Slope (ft/ft)
A3-A3-1	CB A3-1	CB A3	131.1	0.580	6.480	0.830	3.14	1.00	7.72	9.32	843.00	836.85	843.76	837.29	0.047
C6-C7	CB C7	CB C6	42.1	0.720	6.480	0.156	0.73	1.00	2.45	2.73	845.50	845.30	845.88	845.81	0.005
C5-C6	CB C6	CB C5	32.0	0.730	6.413	0.158	1.47	1.00	3.45	4.22	845.30	845.00	845.81	845.46	0.009
C4-C5	CB C5	C4	145.5	0.710	6.380	0.005	1.49	1.25	11.97	6.64	845.00	840.00	845.48	840.30	0.034
C3-C4	C4	C3	27.0	0.750	6.253	0.323	3.46	1.25	8.34	6.48	838.50	838.05	839.25	838.63	0.017
C4-C4-1	CB C4-1	C4	31.2	0.450	6.296	0.029	0.48	1.00	3.49	3.12	840.30	840.00	840.59	840.25	0.010
C2-C3	C3	C2	197.8	0.710	6.235	0.374	5.12	1.50	12.94	6.89	837.80	834.80	838.67	835.81	0.015
A5-A6	CB A6	CB A5	139.7	0.610	6.404	0.091	2.14	1.25	4.10	3.38	837.77	837.21	838.41	837.98	0.004
A4-A5	CB A5	CB A4	147.7	0.580	6.226	0.222	2.89	1.25	4.22	3.70	837.21	836.58	837.98	837.67	0.004
A6-A7	CB A7	CB A6	24.5	0.690	6.434	0.217	1.79	1.00	2.60	3.56	837.90	837.77	838.52	838.41	0.005
C4-1-C4-2	CB C4-2	CB C4-1	99.5	0.450	6.480	0.059	0.17	1.00	3.57	2.35	841.30	840.30	841.47	840.59	0.010
C1-C2	C2	FES C1	62.2	0.600	6.135	0.474	6.80	1.50	13.32	7.58	834.80	833.80	835.81	834.57	0.016
A7-A8	CB A8	CB A7	27.2	0.670	6.480	0.189	0.83	1.00	2.16	2.57	838.00	837.90	838.54	838.52	0.004
B2-B3	CB B3	CB B2	63.5	0.690	6.480	0.118	17.31	3.00	63.76	7.67	835.38	834.80	836.71	836.15	0.009
B1-B2	CB B2	FES B1	109.9	0.540	6.444	0.156	17.85	3.00	63.58	7.72	834.80	833.80	836.15	834.89	0.009
B3-B4	FES B4	CB B3	67.2	(N/A)	7.436	(N/A)	16.78	3.00	64.06	7.63	836.00	835.38	837.31	836.71	0.009
A3-A4	CB A4	CB A3	48.5	0.680	6.089	0.253	3.88	1.25	4.45	4.09	836.58	836.35	837.67	837.53	0.005
A2-A3	CB A3	CB A2	51.0	0.450	6.048	0.135	7.16	1.50	7.33	4.73	836.35	836.10	837.53	837.25	0.005
A1-A2	CB A2	FES A1	20.4	0.450	6.013	0.030	7.20	1.50	7.36	4.75	836.10	836.00	837.25	837.04	0.005
C4-1-C4-3	CB C4-3	CB C4-1	61.0	0.450	6.480	0.080	0.24	1.00	3.82	2.70	841.00	840.30	841.20	840.59	0.011

Note: Flow through B3-B4 includes critical duration peak flow from PondPack model.

Meadow Wood East Storm Sewer Calculations
10-Year Storm Event



Meadow Wood East Storm Sewer Calculations
10-Year Storm Event



Meadow Wood East Storm Sewer Calculations

100-Year Storm Event

Conduit Table - Time: 0.00 hours

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Depth (Out) (ft)	Capacity (Full Flow) (cfs)
64	A3-A3-1	CB A3-1	843.00	CB A3	836.85	131.1	0.047	12.0	0.013	5.24	10.56	1.49	7.72
65	C6-C7	CB C7	845.50	CB C6	845.30	42.1	0.005	12.0	0.013	1.22	3.12	0.67	2.45
66	C5-C6	CB C6	845.30	CB C5	845.00	32.0	0.009	12.0	0.013	2.46	4.77	0.62	3.45
67	C4-C5	CB C5	845.00	C4	840.00	145.5	0.034	15.0	0.013	2.48	7.70	0.39	11.97
68	C3-C4	C4	838.50	C3	838.05	27.0	0.017	15.0	0.013	5.80	7.34	0.79	8.34
69	C4-C4-1	CB C4-1	840.30	C4	840.00	31.2	0.010	12.0	0.013	0.80	3.61	0.33	3.49
70	C2-C3	C3	837.80	C2	834.80	197.8	0.015	18.0	0.013	8.58	7.83	1.29	12.94
71	A5-A6	CB A6	837.77	CB A5	837.21	139.7	0.004	15.0	0.013	3.56	2.90	2.42	4.10
72	A4-A5	CB A5	837.21	CB A4	836.58	147.7	0.004	15.0	0.013	4.79	3.90	2.24	4.22
73	A6-A7	CB A7	837.90	CB A6	837.77	24.5	0.005	12.0	0.013	2.98	3.79	2.28	2.60
74	C4-1-C4-2	CB C4-2	841.30	CB C4-1	840.30	99.5	0.010	12.0	0.013	0.29	2.73	0.37	3.57
75	C1-C2	C2	834.80	FES C1	833.80	62.2	0.016	18.0	0.013	11.41	8.47	1.08	13.32
76	A7-A8	CB A8	838.00	CB A7	837.90	27.2	0.004	12.0	0.013	1.38	1.76	2.32	2.16
77	B2-B3	CB B3	835.38	CB B2	834.80	63.5	0.009	36.0	0.013	17.66	7.71	1.38	63.76
78	B1-B2	CB B2	834.80	FES B1	833.80	109.9	0.009	36.0	0.013	18.57	7.80	1.11	63.58
79	B3-B4	FES B4	836.00	CB B3	835.38	67.2	0.009	36.0	0.013	16.78	7.63	1.34	64.06
80	A3-A4	CB A4	836.58	CB A3	836.35	48.5	0.005	15.0	0.013	6.44	5.25	1.99	4.45
81	A2-A3	CB A3	836.35	CB A2	836.10	51.0	0.005	18.0	0.013	11.90	6.73	1.58	7.33
82	A1-A2	CB A2	836.10	FES A1	836.00	20.4	0.005	18.0	0.013	12.00	6.79	1.31	7.36
140	C4-1-C4-3	CB C4-3	841.00	CB C4-1	840.30	61.0	0.011	12.0	0.013	0.39	3.13	0.37	3.82

Meadow Wood East Storm Sewer Calculations

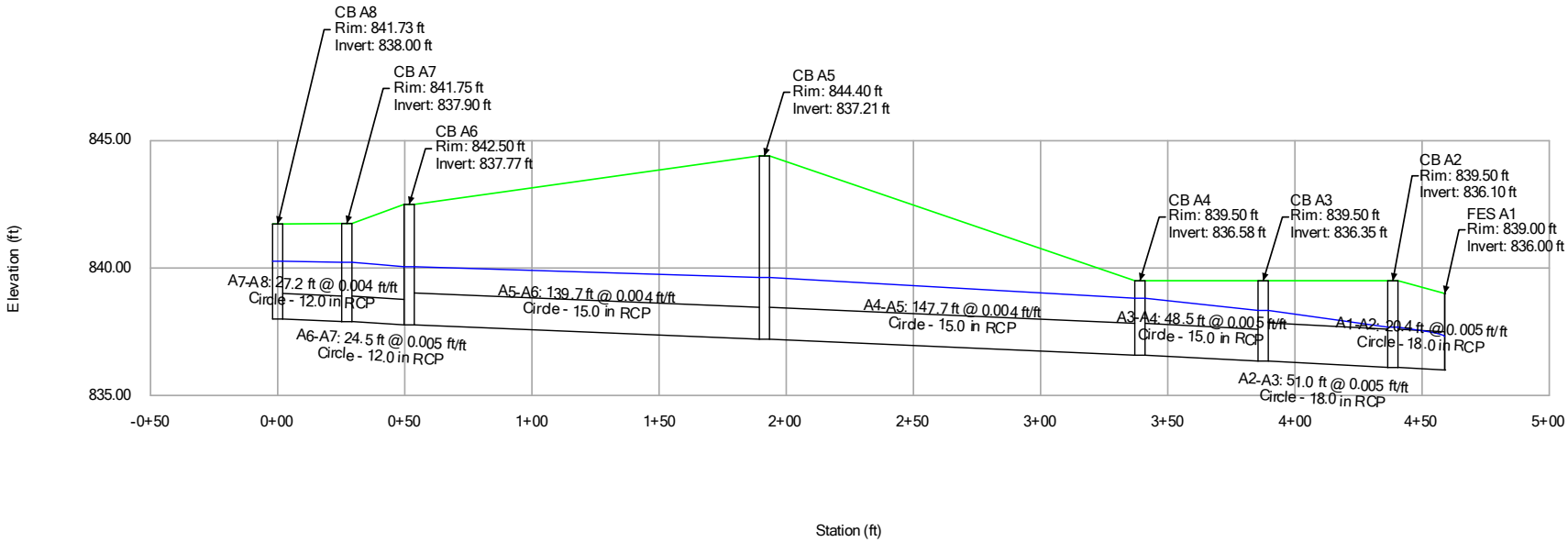
100-Year Storm Event

Combined Pipe/Node Report - Time: 0.00 hours

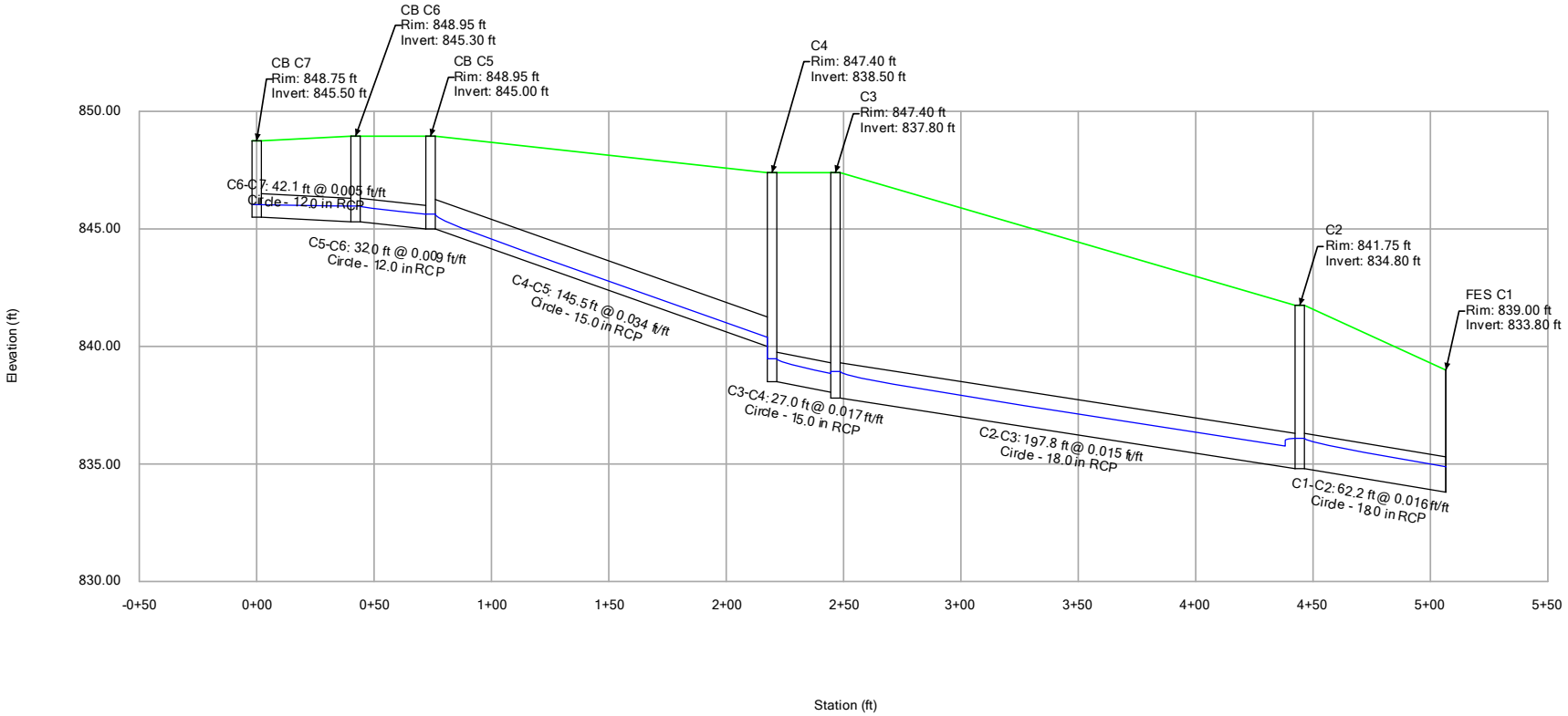
Label	Start Node	Stop Node	Length (ft)	Inlet C	System Intensity (in/h)	Upstream Inlet Area (acres)	Flow (cfs)	Rise (ft)	Capacity (Full Flow) (cfs)	Velocity (ft/s)	Invert (Start) (ft)	Invert (Stop) (ft)	HGL (in) (ft)	HGL (out) (ft)	Slope (ft/ft)
A3-A3-1	CB A3-1	CB A3	131.1	0.580	10.800	0.830	5.24	1.00	7.72	10.56	843.00	836.85	843.93	838.34	0.047
C6-C7	CB C7	CB C6	42.1	0.720	10.800	0.156	1.22	1.00	2.45	3.12	845.50	845.30	846.03	845.97	0.005
C5-C6	CB C6	CB C5	32.0	0.730	10.704	0.158	2.46	1.00	3.45	4.77	845.30	845.00	845.97	845.62	0.009
C4-C5	CB C5	C4	145.5	0.710	10.656	0.005	2.48	1.25	11.97	7.70	845.00	840.00	845.63	840.39	0.034
C3-C4	C4	C3	27.0	0.750	10.479	0.323	5.80	1.25	8.34	7.34	838.50	838.05	839.48	838.85	0.017
C4-C4-1	CB C4-1	C4	31.2	0.450	10.541	0.029	0.80	1.00	3.49	3.61	840.30	840.00	840.67	840.33	0.010
C2-C3	C3	C2	197.8	0.710	10.453	0.374	8.58	1.50	12.94	7.83	837.80	834.80	838.94	836.09	0.015
A5-A6	CB A6	CB A5	139.7	0.610	10.644	0.091	3.56	1.25	4.10	2.90	837.77	837.21	840.06	839.63	0.004
A4-A5	CB A5	CB A4	147.7	0.580	10.318	0.222	4.79	1.25	4.22	3.90	837.21	836.58	839.63	838.82	0.004
A6-A7	CB A7	CB A6	24.5	0.690	10.690	0.217	2.98	1.00	2.60	3.79	837.90	837.77	840.23	840.06	0.005
C4-1-C4-2	CB C4-2	CB C4-1	99.5	0.450	10.800	0.059	0.29	1.00	3.57	2.73	841.30	840.30	841.52	840.67	0.010
C1-C2	C2	FES C1	62.2	0.600	10.296	0.474	11.41	1.50	13.32	8.47	834.80	833.80	836.09	834.88	0.016
A7-A8	CB A8	CB A7	27.2	0.670	10.800	0.189	1.38	1.00	2.16	1.76	838.00	837.90	840.27	840.23	0.004
B2-B3	CB B3	CB B2	63.5	0.690	10.800	0.118	17.66	3.00	63.76	7.71	835.38	834.80	836.72	836.18	0.009
B1-B2	CB B2	FES B1	109.9	0.540	10.741	0.156	18.57	3.00	63.58	7.80	834.80	833.80	836.18	834.91	0.009
B3-B4	FES B4	CB B3	67.2	(N/A)	12.354	(N/A)	16.78	3.00	64.06	7.63	836.00	835.38	837.31	836.72	0.009
A3-A4	CB A4	CB A3	48.5	0.680	10.102	0.253	6.44	1.25	4.45	5.25	836.58	836.35	838.82	838.34	0.005
A2-A3	CB A3	CB A2	51.0	0.450	10.049	0.135	11.90	1.50	7.33	6.73	836.35	836.10	838.34	837.68	0.005
A1-A2	CB A2	FES A1	20.4	0.450	10.015	0.030	12.00	1.50	7.36	6.79	836.10	836.00	837.68	837.32	0.005
C4-1-C4-3	CB C4-3	CB C4-1	61.0	0.450	10.800	0.080	0.39	1.00	3.82	3.13	841.00	840.30	841.26	840.67	0.011

Note: Flow through B3-B4 includes critical duration peak flow from PondPack model.

Meadow Wood East Storm Sewer Calculations
100-Year Storm Event



Meadow Wood East Storm Sewer Calculations
100-Year Storm Event



Grate & Curb Opening Capacities Calculations

Project: Meadow Wood
Haeger Project No.: 24-136

Equations

Weir Equation (Grates): Q = CP(h)^1.5 (from Neenah Foundry Co. Engineering Tools) C = Weir coefficient = 3.3 Q = Flow rate (cfs) P = Wetted perimeter of grate (ft) h = Head (ft) Note: this weir equation applies to on-grade grates when head is less than or equal to 0.3'	Orifice Equation: Q = 0.6(A)(2gh)^0.5 (from Neenah Foundry Co. Engineering Tools) Q = flow rate (cfs) A = Open area of grate (sf) g = Gravitation constant = 32.174 ft/s^2 h = Head (ft) Note: orifice equation applies to on-grade grates when head is greater than 0.3'	Weir Equation (Curb Openings): Q = CL(h)^1.5 (from Neenah Foundry Co. Engineering Tools) C = Weir coefficient = 3.3 Q = Flow rate (cfs) L = Unobstructed length of curb opening (ft) h = Head (ft) (max 6") Note: This weir equation applies to structures with curb openings

Project-Related Grate Characteristic Table

Grate Catalogue No.	Grate Type	Open Area, A (sf)	Weir Perimeter, P (ft)	Length of Curb Opening (ft)	% of Curb Opening Unobstructed	Unobstructed Length of Curb Opening, L (ft)	
Neenah R-2504-D	D	0.9	6.0	0.0	N/A	0	(Pavement Structures NOT in Curb Line)
Neenah R-4340-B	B	1.1	6.0	0.0	N/A	0	(Structures in Grass)
Neenah R-3501-P	C	1.5	4.3	0.0	N/A	0	(Structures in Curb Line at Sag)
Neenah R-3501-PR/PL	L	1.6	4.7	0.0	N/A	0	(Structures in Curb Line at Slope)

Grate Capacity Calculations

Storm Sewer Stucture ID	C-Factor	Drainage Area (Acres)	Tc (min)	i (in/hr)	Rim Elevation (Feet)	Overflow Elevation (Feet)	Max. Depth of Water over Grates (Feet)	Grate Type	Free Open Area (sf)	Weir Perimeter (LF)	Grate Capacity (cfs)	Curb Opening Capacity (cfs)	Grate + Curb Opening Capacity (cfs)	Bypassed Flow (cfs)	100-Year Runoff (cfs)	Total Flow to Structure (cfs)	# Grates Required (Each)	# Grates Provided (Each)
A3	0.45	0.135	5.00	12.36	839.50	839.80	0.30	Neenah R-4340-B	1.10	6.0	3.3	0.0	3.25	0.00	0.75	0.75	0.2	1
A3-1	0.58	0.830	5.00	12.36	849.00	849.50	0.50	Neenah R-3501-P	1.50	4.3	5.1	0.0	5.10	0.00	5.94	5.94	1.2	2
A4	0.68	0.253	5.00	12.36	839.09	839.80	0.71	Neenah R-4340-B	1.10	6.0	4.5	0.0	4.46	0.00	2.12	2.12	0.5	1
B2	0.54	0.156	5.00	12.36	840.00	840.50	0.50	Neenah R-4340-B	1.10	6.0	3.7	0.0	3.74	0.00	1.04	1.04	0.3	1
B3	0.69	0.118	5.00	12.36	840.00	840.50	0.50	Neenah R-4340-B	1.10	6.0	3.7	0.0	3.74	0.00	1.01	1.01	0.3	1
C3	0.71	0.374	5.00	12.36	847.40	847.90	0.50	Neenah R-3501-P	1.50	4.3	5.1	0.0	5.10	0.69	3.29	3.99	0.8	1
C4	0.75	0.323	5.00	12.36	847.40	847.90	0.50	Neenah R-3501-P	1.50	4.3	5.1	0.0	5.10	0.00	3.01	3.01	0.6	1
C4-1	0.45	0.029	5.00	12.36	845.00	845.30	0.30	Neenah R-4340-B	1.10	6.0	3.3	0.0	3.25	0.00	0.16	0.16	0.0	1
C4-2	0.45	0.059	5.00	12.36	845.00	845.50	0.50	Neenah R-4340-B	1.10	6.0	3.7	0.0	3.74	0.00	0.33	0.33	0.1	1
C4-3	0.45	0.080	5.00	12.36	844.50	845.00	0.50	Neenah R-4340-B	1.10	6.0	3.7	0.0	3.74	0.00	0.45	0.45	0.1	1

Bypass Flow Calculations: (n = 0.013, Grate = Neenah R-3501-PR with Grate Cross Slope = (0.875"/14")

Storm Sewer Stucture ID	C-Factor	Drainage Area (Acres)	Tc (min)	i (in/hr)	100-Year Runoff (cfs)	Bypassed Flow to Structure (cfs)	Total Flow to Structure, Q_T (cfs)	Pavement Cross Slope, S_x (ft/ft)	Longitudinal Slope, S (ft/ft)	Depth of Water in Gutter, d_g (ft)	Depth of Water In Pavement, d_p (ft)	Pavement Spread* (ft)	Flow in Gutter, Q_g (Intercepted Flow, Q_i) (cfs)	Flow in Pavement, Q_p (Bypass Flow, Q_b) (cfs)
A7	0.69	0.217	5.00	12.36	1.84	0.67	2.51	0.019	0.055	0.18	0.10	5.51	1.22	1.29
A7-1			5.00	12.36	0.00	1.29	1.29	0.019	0.019	0.17	0.10	5.14	0.66	0.63
A8	0.67	0.189	5.00	12.36	1.56	0.00	1.56	0.019	0.055	0.15	0.08	4.27	0.90	0.66
A8-1			5.00	12.36	0.00	0.66	0.66	0.019	0.019	0.14	0.07	3.52	0.43	0.23
C5	0.71	0.005	5.00	12.36	0.04	0.00	0.04	0.022	0.019	0.06	0.00	0.00	0.04	0.00
C6	0.73	0.158	5.00	12.36	1.42	0.00	1.42	0.019	0.024	0.17	0.10	5.09	0.73	0.69
C7	0.72	0.156	5.00	12.36	1.39	0.00	1.39	0.019	0.024	0.17	0.10	5.03	0.72	0.67

Equations:

$Q_g = 0.56 \frac{Z_u}{n} \left(d_g^{8/3} - d_p^{8/3}\right) S^{1/2}$ (IDOT Eq. 8-4)

$Q_p = 0.56 \frac{Z_u}{n} dp^{8/3} S^{1/2}$ (IDOT Eq. 8-5)

Q = flow rate, ft^3/s
n = Manning's coefficient

$Q_T = Qg + Qp$ (IDOT Eq. 8-6)

$Z = \frac{1}{S_x}$ = reciprocal of the cross slope

S = longitudinal slope, ft/ft
d_g = depth of channel at deepest point, ft
S_x = cross slope, ft/ft
Note: The intercepted flow is assumed to be the entire flow passing over the width of the grate ($Q_i = Q_g$).

MEADOW WOOD EAST

100-YEAR EMERGENCY OVERFLOW ROUTE CALCULATIONS

Prepared by: KML
Date: 3/3/2025

Overflow Channel Flow

Manning's Equation = (1.49/n) * A * R^(2/3) * S^(1/2)
n = roughness coefficient
A = cross-sectional flow area (ft^2)
R = hydraulic radius = A / P (ft)
S = longitudinal slope (ft/ft)
P = wetted perimeter (ft)

Assumptions:
n = 0.035 (Channels are to be located in grass yards)

Note: Time of concentration is conservatively assumed to be 10 minutes for all areas.

Overflow Weir

Irregular Weir Equation Q = C * A * H^(1/2)
Cipolletti Weir Q = 3.367 * L * H^(3/2)
Broad-Crested Weir Q = C * L * H^(3/2)
C = weir coefficient
A = cross-sectional flow area (ft^2)
L = weir length

OVERFLOW-1

Required Flow Rate from Drainage Areas

Trib. Areas =	A3-1	
Total Area =	**0.830**	**Ac.**
Combined c-Factor =	0.58	
T_c =	10	min
$i_{100\text{-yr}}$ =	10.80	min
Q (Q=CiA):	5.19	cfs
Total Q:	**5.19**	**cfs**

Broad-Crested Weir Capacity

Weir Coef. =	3.0
Weir Length =	19.0 ft.
Crest Elevation =	850.30
Head =	0.20
Overflow Elevation =	850.50

OVERFLOW-2

Required Flow Rate from Drainage Areas

Trib. Areas =	A3-1,A4,A5	
Total Area =	**1.305**	**Ac.**
Combined c-Factor =	0.60	
T_c =	10	min
$i_{100\text{-yr}}$ =	10.80	min
Q (Q=CiA):	8.44	cfs
Total Q:	**8.44**	**cfs**

Cipoletti Weir Capacity

Weir Coef. =	3.367
Weir Length =	4 ft.
Crest Elevation =	839.80
Head =	0.73
Overflow Elevation =	840.53

OVERFLOW-3

Required Flow Rate from Drainage Areas

Trib. Areas =	C3,C4,C5,C6	
Total Area =	**0.701**	**Ac.**
Combined c-Factor =	0.59	
T_c =	10	min
$i_{100\text{-yr}}$ =	10.80	min
Q (Q=CiA):	4.50	cfs
Total Q:	**4.50**	**cfs**

Broad-Crested Weir Capacity

Weir Coef. =	3.0
Weir Length =	11.0 ft.
Crest Elevation =	847.90
Head =	0.27
Overflow Elevation =	848.17

OVERFLOW-4

Required Flow Rate from Drainage Areas

Trib. Areas =	Overflow-3,C2	
Total Area =	**0.731**	**Ac.**
Combined c-Factor =	0.59	
T_c =	10	min
$i_{100\text{-yr}}$ =	10.80	min
Q (Q=CiA):	4.65	cfs
Total Q:	**4.65**	**cfs**

Channel capacity

Base =	11 ft
Sideslope =	6 :1
Longitudinal Slope =	1.5%
Elevation =	842.40

HWL Stage	Depth in Channel	P (ft)	Flow Area (ft^2)	Channel Flow (ft^3)
842.40	0.00	11.00	0.00	0.00
842.62	**0.22**	**13.68**	**2.71**	**4.80**
843.00	0.60	25.83	8.76	22.2

APPENDIX G – Preliminary Wetland Assessment

July 9, 2024

Kirk Rustman
Sunrise Development
kirk.rustman@yahoo.com

EMAIL

Subject: **Preliminary Wetland Assessment**
Tract B – 0 Manchester Road
Village of Lake Zurich - Lake County, IL

Dear Mr. Rustman:

DK Environmental Services, Inc (DKES) conducted a Preliminary Wetland Determination for the future residential subdivision project site located at 0 Manchester Road in the Village of Lake Zurich. Source materials and publicly accessible data were reviewed in advance of the site investigation to determine the presence and extent of hydrologic connections, water features, and potential wetland areas (PWA's) that are likely to exist on the subject property and beyond the property limits. This was followed by an on-site investigation and flagging of the water feature for survey (to be completed by others). DKES completed field reconnaissance and wetland flagging on July 9, 2024.

The ±8-acre project development area currently consists of eleven unimproved parcels within Meadow Wood Subdivision recorded as Tract "B" and is located west of Tanglewood Lane and north of Manchester Rd. in the Village of Lake Zurich, Lake County, IL 60047 (see Exhibit 1 on p.4 below).

No wetlands were found on site. The study site extends beyond the future development site to identify the limits of the adjacent wetlands. The residential development site consists of moderately well-drained Ozaukee soils (530 C2/D3) and gently slopes to the north and west. Our investigation identified a single, isolated wetland area (**WETLAND "A"**) at the toe of the slope located to the west and north of the project area. For the portion of Wetland A contained within Lot 12 of Meadow Wood Subdivision at the west (PIN# 14-07-402-040) the wetland appears to be preserved in a conservation easement and is owned and maintained by the Meadow Wood Homeowner's Association. The emergent marsh extends onto the unincorporated property to the north under private ownership (PIN# 14-07-400-001) through a narrow drainage channel that separates the upland areas.

A review of the Lake County Wetland Inventory (Exhibit 2) indicates that there are no ADID (Advanced Identification) wetlands present within the project site. The identified Wetland A is depicted as a standard wetland and is not shown to be a high-quality aquatic resource (HQAR).

The Lake County GIS topographic layer indicates a closed depressional water feature of approximately 14 acres with no outlet and is generally shown to the west and north of the development site. The site is in the Flint Creek Watershed Planning Area, within the grater Fox River Watershed.

The National Wetland Inventory (NWI) map (Exhibit 3) shows a freshwater pond labeled PEM1F, describing a freshwater emergent wetland that is semi-permanently flooded.

During our field investigation, a total of one (1) on-site water feature: **WETLAND "A"**, an isolated, permanently inundated pond depression that has no continuous surface connection with a traditionally navigable Waters of the US (WOTUS), was confirmed and identified off-site to the west and north portion of the development site. The emergent marsh was flagged at the border and was inundated at the time of the field reconnaissance. Dominant vegetation observed within the marsh consists of narrow-leaved cattail (*Typha angustifolia*), which is bordered by a dense thicket of invasive, non-native shrubs including common buckthorn (*Rhamnus cathartica*) and honeysuckle (*Lonicera tatarica*).

The water feature meeting wetland conditions identified outside the development site is summarized below:

AREA/FEATURE	FLAGS	TYPE	MAPPED SOIL SERIES	JURISDICTION	HQAR
WETLAND A	A1-A28	Freshwater Emergent Wetland	4103A Houghton muck ponded 0 to 2 percent slopes Hydric	LAKE CO SMC* ----------	No

*NOTE: *Wetland A Jurisdiction must be confirmed by USACE and in coordination with the Lake County SMC*

- There are no wetlands identified on the development site
- WL "A" identified off-site to the west and north appears to be wholly off-site and does not encroach onto the development site
- WL "A" ribbon flags were affixed to live vegetation and labeled as depicted on the attached Exhibit 4 (for survey by others)
- WL "A" is a closed depression with no discernible outlet or connection to traditionally navigable waters of the US:

(1) Wetland A is not adjacent to a WOTUS, and
(2) Wetland A does not have a continuous surface connection with a WOTUS

Therefore, the water feature is likely under the local jurisdiction of the Lake County Stormwater Management Commission.

Note that this report is the opinion of DKES, Inc. and must be confirmed by regulatory agencies. Please contact our office should you have any additional questions or if we can be of further assistance.

Sincerely,

Daniel J. Krill CWS, CPESC, DECI
President, Ecologist
DK ENVIRONMENTAL SERVICES, INC.

Exhibits

1. Site Location Map with Hydro Lines
2. Lake County Wetland Inventory
3. National Wetland Inventory
4. Approximate **WL-A** Boundary (*flagged 7.09.2024*)
5. Representative Site Photos

Exhibit 1: LOCATION MAP: PROJECT STUDY AREA w/hydro lines

0 Manchester Road in the Village of Lake Zurich
Lake County, IL 60047
(approx. 8-acre site)

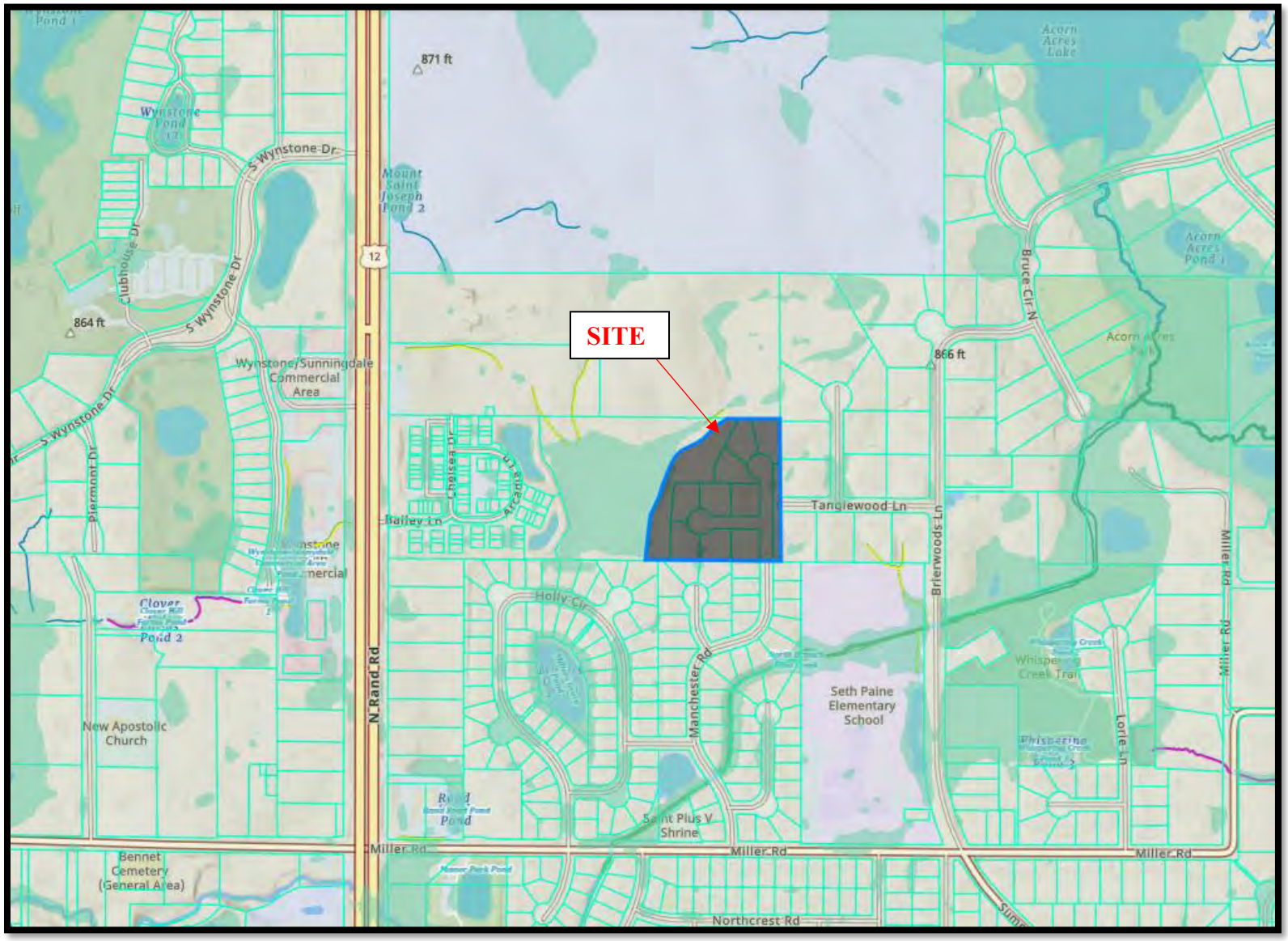


Exhibit 2: LAKE COUNTY WETLAND INVENTORY

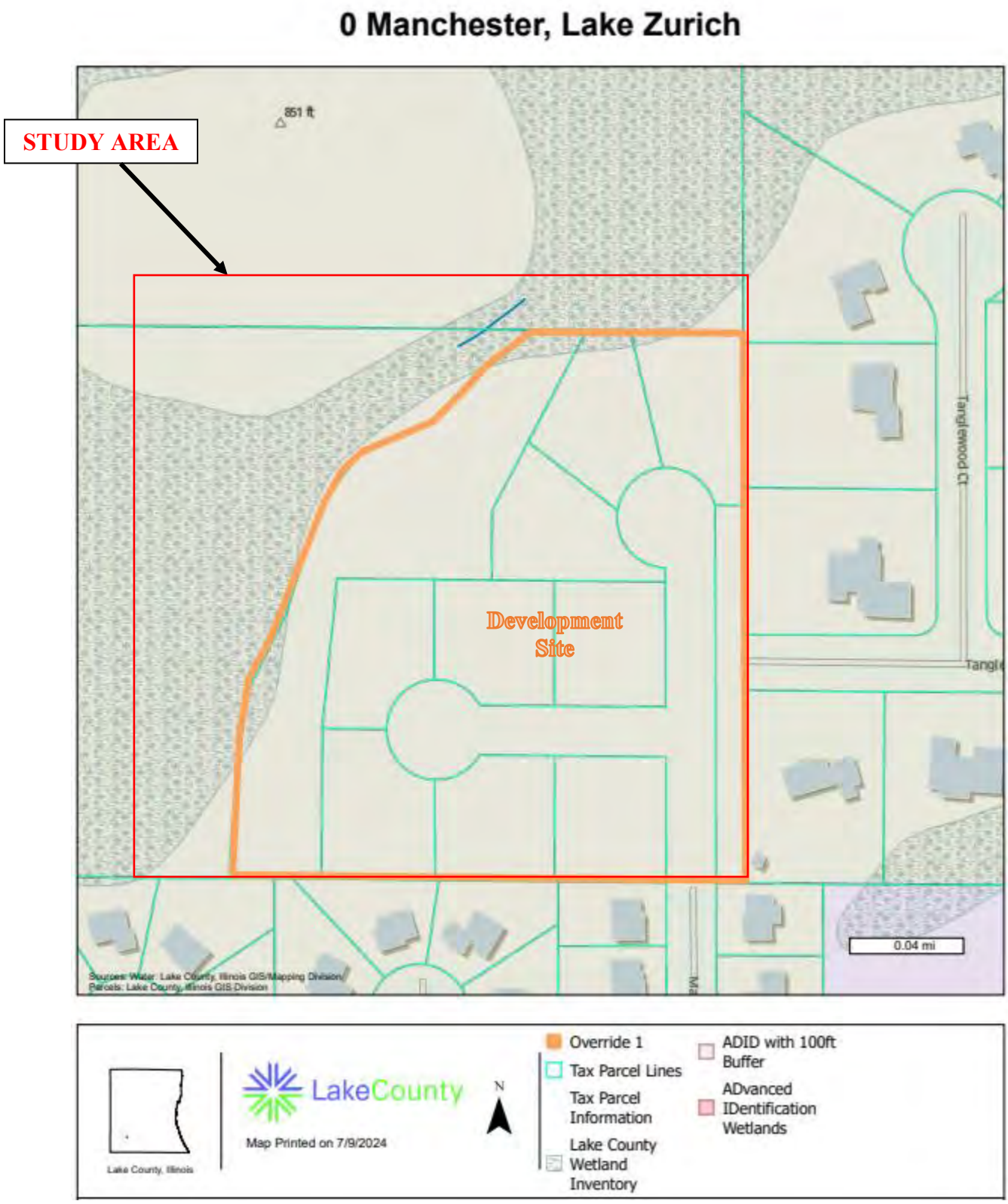
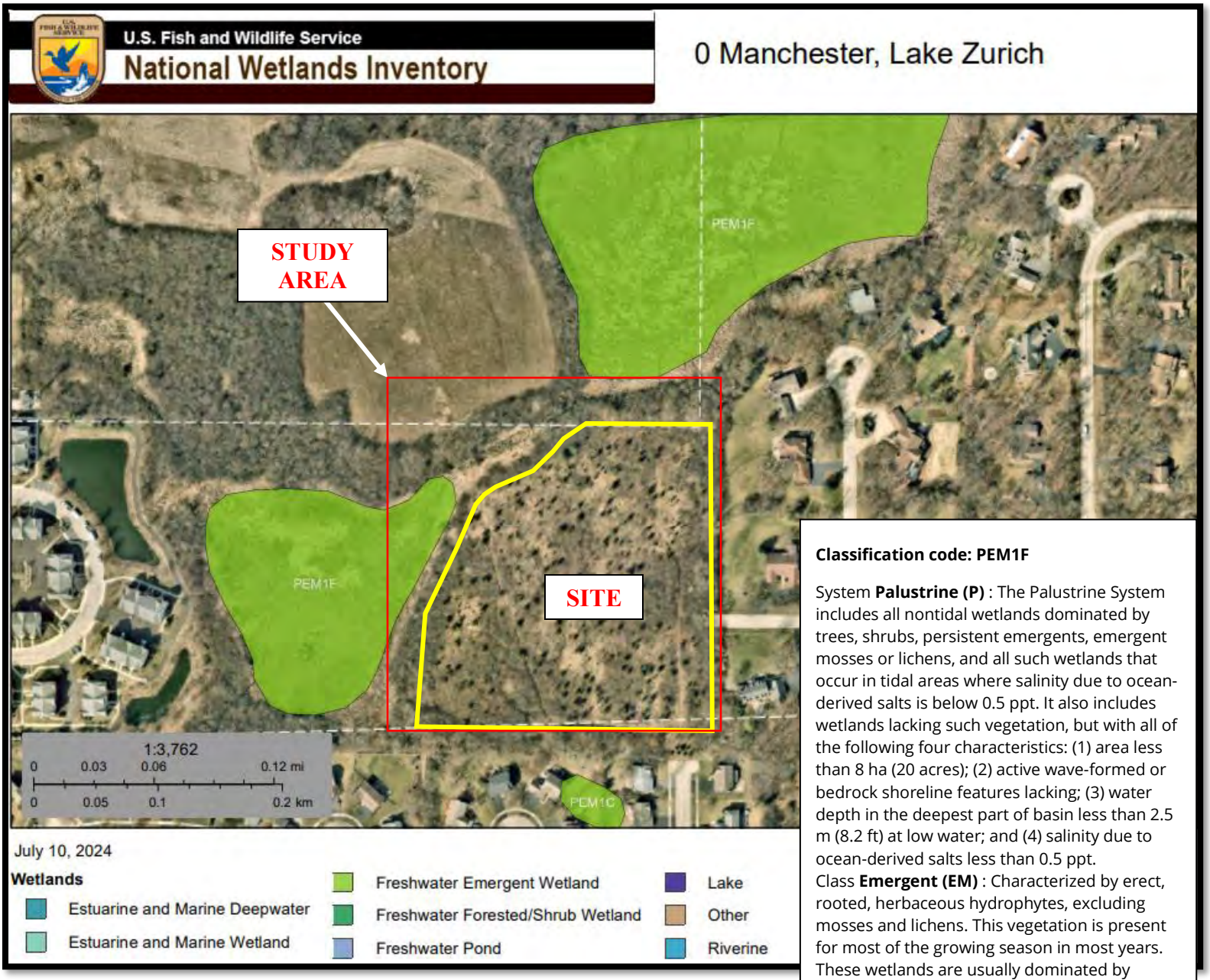


Exhibit 3: National Wetland Inventory (NWI)



Classification code: PEM1F

System **Palustrine (P)** : The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.
Class **Emergent (EM)** : Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
Subclass **Persistent (1)** : Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.
Water Regime **Semipermanently Flooded (F)** : Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

Exhibit 4: Approximate Wetland Area Boundary
Wetland Ribbon Flags A1-A28

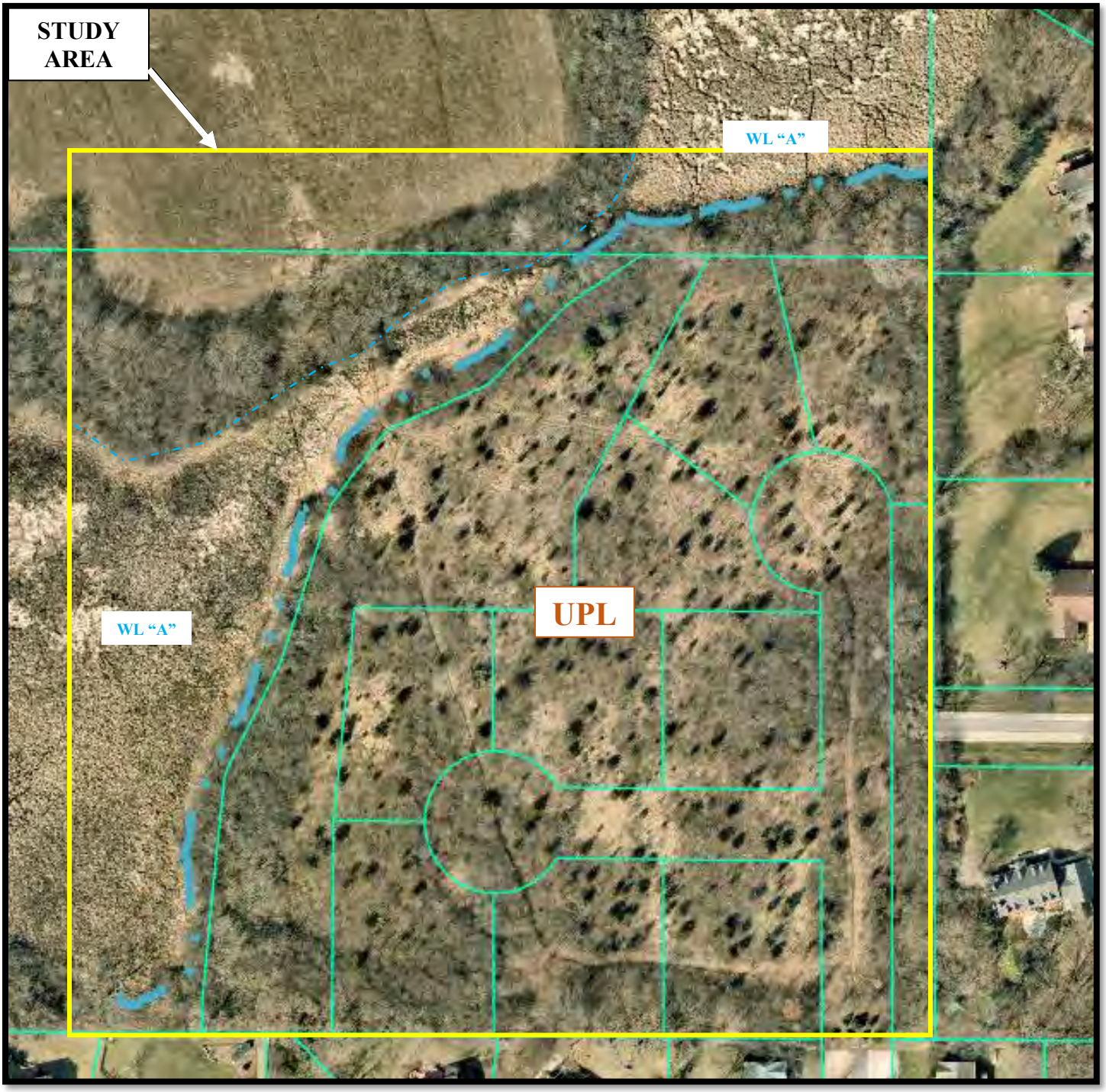


Exhibit 5: Representative Site Photos

View of **WL-A** posted at SW of site – facing NW

View of flagged **WL-A** at southwest
Wetland bordered by common buckthorn - facing NW

View of **WL-A** at west – cattail marsh facing W

View of **WL-A** posted and flagged at west of site – facing NW

Narrow channel at NW of site connecting two large depressions – facing NE

End flag #A28 at pipe outfall – NE of site facing N

STORMWATER MANAGEMENT SYSTEM
MAINTENANCE PLAN FOR NEW FACILITIES

Subject: MEADOW WOOD EAST SUBDIVISION

SUCH PROPERTY BEING THE REAL PROPERTY NOW DULY PLATTED AS MEADOW WOOD EAST SUBDIVISION, AS SUCH PLAT IS NOW RECORDED AS DOCUMENT NO. INSERT DOCUMENT NUMBER, IN THE OFFICE OF THE RECORDER OF DEEDS OF THE COUNTY OF LAKE, STATE OF ILLINOIS, HEREBY MAKES THE FOLLOWING DECLARATIONS OF MAINTENANCE RESPONSIBILITIES.

Ownership and Responsibility

Responsibility for both short- and long-term overall maintenance of the stormwater maintenance system belongs with the OWNER (select one): SUBDIVISION HOME-OWNER ASSOCIATION (HOA).

HOA and POA Covenants and Bylaws shall delineate the legal agreement establishing the Association's responsibilities for the enforcement and accomplishments of the attached prescribed Short-Term and Long-Term Maintenance requirements, which shall be considered part of the Covenant and Bylaws provisions.

Cost Considerations and Budgeting

Adequate funding to perform maintenance and replacement is an essential aspect for continued proper operation of the stormwater management system. In other words, put aside money for proper maintenance and establish a reasonable capital reserve account. However, special assessments or other capital fundraising may be necessary for unexpected system failures. Do not try to obtain funding on an emergency basis!

Maintenance and replacement needs and costs should be part of a maintenance budget or reserve study. If the maintenance plan is consistently budgeted and followed in conjunction with a properly prepared reserve study schedule, the stormwater management system components will enjoy their maximum useful lives and related repair costs kept to a minimum. Keep records of all maintenance costs in order to determine typical annual costs that would be the basis for the annual maintenance fund. Frequent maintenance will likely lead to less frequent and less costly serious long term maintenance issues that could result in major repairs or replacements. The attached short term and long term maintenance provisions may need to be adjusted based on performance and experience over the life of the stormwater management system.

Stormwater Management System

Exhibit A illustrates all stormwater management areas including: Floodplain, Wetlands, Detention Ponds, Open-Grate Inlet Structures, Storm Sewers, Culverts, Swales, Overland Flow Paths, and Buffers. The purpose of this exhibit is to let current and future OWNERs and maintenance personnel know what the stormwater management system consists of and where these areas are located.

The stormwater management system consists of a variety of components that convey stormwater runoff, safely and without damage to structures, from the point of origin to the detention pond(s). Runoff enters the system through inlet grates. The grates must be kept clear of debris or water will not be able to enter the system quickly enough and local ponding may occur.

From the inlets, the water flows through the storm sewers to the detention basins. Storm sewers generally require little maintenance; however, they should be periodically inspected for accumulated debris and physical integrity, especially at the bottom (invert) and top (crown) of the pipe. Soil above a cracked storm sewer can be washed away resulting in a sinkhole forming or other type of ground failure.

The storm sewers discharge into the detention basins. The purpose of the detention basins is to slow the rate at which water leaves the site to help prevent downstream flooding. The detention system discharges to the west through an outlet control structure.

Other components of the stormwater management system include the buffer areas. These areas are to be protected in their natural state. Please refer to the plat for further information.

Maintenance Considerations

Cleaning and repairing overland flow routes, swales, culverts, outflow pipes, and manholes are particularly important because these elements are not visually obvious, as are the surface area elements. If these subsurface elements become clogged, then water may flood the pavement, yards and other low areas and may cause extensive erosion damage. Cleaning of culverts, outflow pipes, and manholes must be made a routine maintenance activity scheduled for several times a year and on an as needed basis. Experience will show the required cleaning frequencies for specific drainage items. Frequent walk-through inspections should be conducted to see if any obstructions are present including garbage, wood, branches, cut grass, dirt, leaves, etc. Remember that these drainage structures were placed there for a reason and they can only operate as designed if they are properly maintained.

Native Seed Maintenance and Establishment Plan

1.0 MONITORING METHODOLOGY

The native plant communities will be monitored annually for 3 years following planting. The purpose of this monitoring will be to measure and assess the effectiveness of the plantings. Vegetation monitoring will be performed through the utilization of a meander search. The meander survey will identify all species encountered, dominant species within each plant community, and identify areas that require management necessary to reach design goals. Site conditions shall be photo documented during the monitoring session.

2.0 PERFORMANCE CRITERIA

1. At least 90% of the seeded area should be vegetated with cover crop species from the seed mix by June 1st following a spring seeding. If planting occurred in the fall or winter, minimum cover crop is expected. Matting shall be inspected to ensure that proper erosion control and seed protection is in place.

2. After one full growing season, aerial coverage of native species should be at least 20%.

3. After two full growing seasons, aerial coverage of native species should be at least 50%.

4. After the third full growing season, aerial coverage of native species should be at least 75%.

5. In no year should areas contain rills or gullies greater than four inches wide by four inches deep.

6. No area greater than 1 square meter shall be devoid of vegetation as measured by aerial coverage.

7. No more than 25% (by aerial cover) of the seeded area should be dominated by aggressive exotic species such as Reed Canary Grass (Phalaris arundinacea), Red Clover (Trifolium spp.), White or Yellow Sweet Clover (Melilotus spp.), Canada Thistle (Cirsium arvense), or Tall Fescue (Festuca elatior).

8. If these standards are not met, the contractor shall be responsible for supplemental seedings and herbicide applications in accordance with the specifications and input from a restoration ecologist.

3.0 MANAGEMENT PLAN

1. First Season. Control of undesirable plant species, when present in small quantities, shall consist primarily of selective herbicide application. Selective herbicides are absorbed through the plant tissues and into the root system, effectively killing the plant. Mowing shall be conducted twice in the spring and once in the summer at a height of at least 6 to 12 inches to prevent annual weeds from producing seed.

2. Second Season. Control of undesirable plant species during the second growing season shall consist primarily of herbicide application. The area shall be mowed at least once in the spring at a height of at least 6 to 8 inches to prevent annual weeds from producing seed.

3. Third Season and Long Term. Control of undesirable plant species shall consist primarily of spot herbicide application as needed. Mowing at a height of at least 6 to 8 inches may also be used as a management tool on an as needed basis.

Vegetative Growth

One of the most common maintenance problems is that of dying or invasive vegetation. The responsible party shall determine the cause of problem and correct it either by modifying the environment so the selected vegetation can grow or changing the type of vegetation planted to meet environmental requirements. For example, turf grass often dies in the bottoms of swales and ditches because the environment is too wet. These areas can be planted with wet-tolerant native vegetation that grow well in that type of environment and require little, if any, care after they become well established (typically 2 or more years).

Portions of the site have been planted with native vegetation. Native vegetation is an important part of the stormwater management system. Many native species have deep roots that help prevent erosion and also remove nutrients and other impurities from the stormwater runoff helping to minimize impacts to surface waters including streams, rivers and lakes. Native vegetation is not like turf grass and should be maintained as follows:

- Do not mow frequently. Mowing should be conducted either in early spring to control invasive vegetation before the desired native species are growing, or in the fall after native vegetation has flowered and gone to seed. DO NOT MOW NATIVE VEGETATION WHILE IT IS FLOWERING.
- Use periodic controlled burns to help maintain the health of the native vegetation. There are several firms that conduct controlled burns. SMC strongly recommends that you do not attempt controlled burns without professional assistance. Fertilizer and pesticide usage is normally NOT required and can actually encourage invasive vegetation.

- Re-seed or re-plant using the same mix as originally permitted if the original attempt did not grow well. Alternatively, a more appropriate native plant mix can be used if the original mix does not work well in certain locations. You can contact the Lake County Stormwater Management Commission, licensed native plant nurseries or other appropriate professional for help with a revised native planting mix. A copy of the native seed or plant mix should be attached to this maintenance plan for reference.

Pest Control

The most common pest in stormwater management facilities is the mosquito. Mosquitoes lay eggs in stagnant water and the eggs typically hatch into "wrigglers" in 3 to 4 days. Poorly designed stormwater management facilities can result in stagnant water that is great for mosquitoes. Mosquito populations can be reduced by the following measures:

- Make sure standing water is drained within 72-hours
- Maintain flowing or moving water conditions (aerators and fountains may help)
- Encourage natural mosquito predators, such as dragonflies, by maintaining native vegetation along waterlines
- Populate standing water bodies (i.e. detention ponds) with fathead minnows, or other appropriate species, to eat the mosquito larva (wrigglers). Note that some fish may also eat amphibian (frogs, toads and salamanders) larva (tadpoles) and should not be used. Consult with a professional before using this option.

Record Keeping

Separate and distinct records shall be maintained by the OWNER, in addition to those provided for the normal care and activities of the Association functions, to record the specific activities and costs thereof for the Short Term and Long-Term maintenance Plan implementation. The records shall include the dates of maintenance visits and the specific work performed. The records can be used to document maintenance history and as a basis for annual budgeting.

Conclusion

The stormwater management system for this development was designed to convey stormwater runoff without damage to structures or the environment. The only way the stormwater management system can operate as designed is if it is maintained properly over time. Failure to properly maintain the system can result in flooding, poor aesthetics, increased pest populations and poor water quality leaving the site. Contact the Lake County Stormwater Management Commission at 847-377-7720 with further questions.

_____, the owner's agent, has caused these presents to be signed and acknowledged,

this _____ day of _____, 20____.

By: _____

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General

- Litter and debris shall be controlled.
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of adequate size and shape.
- Roads and parking lots shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Berms

____ Settlement. If settlement observed, hire a PE.
____ Erosion. Repair as needed.
____ Unwanted growth or vegetation. Remove as needed.

Outlet and inlet structure

____ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
____ Separation of joints. Repair as needed.
____ Cracks, breaks, or deterioration of concrete. Repair as needed
____ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).
____ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

____ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed.

Storm Sewers

____ System is free draining into collection channels or catch basins. If concerned, clean or repair.
____ Catch basins. Remove sediment when more than 50% of basin sump is filled.

Swales

____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas

____ Need for planting, reseeding or sodding of native areas. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers

____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.

____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.

____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed no more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.

____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

Short-Term Maintenance Program

These are the items that need to be addressed through the year on an ongoing basis. This list is to be used as an example only and is not intended to be all inclusive

Stormwater Area	Periodic Inspection	Things to Look For	Repair Work
General – All Areas	March through November	Disturbed surface areas	Seed Area with grass or native vegetation Mulch to Protect soils
Residential Lot Areas	Weekly	Floatable Items that could wash into stormwater system	Dispose of Refuse Store Useable Items
Swales on site	March & June & October	Branches & Leaves/Trash	Collect & Dispose
Emergency Outflow	March through November	Branches & Leaves/Trash Pipe Condition	Collect & Dispose Repair/Replace
Manholes	March & June & October	Branches & Leaves/Trash Pipe Condition	Collect & Dispose Repair/Replace
Detention System	Every 6 months for first year, then annually or as needed	Sediment buildup	As indicated in Maintenance section
Roadway Drainage System	All year as needed	Standard procedure	Prescribed Process
Water Quality Structure	Every 6 months and as needed	Debris and sediment buildup	Vacuum sediment
Dead Vegetation	April/May	Dead vegetation	Re-seed / plant plugs
Native Vegetation	March and October	Native vegetation should be inactive	Replant / Mow / prescribed burn

Maintenance of Grassy Areas shall require application of fertilizer and related treatment to assure substantial grass growth and avoidance of soil erosion of barren or sparsely grassed soil surface areas. The prescribed periodic inspections for the short-term maintenance program are to be supplemented by additional inspections and maintenance work on an as-need basis such as at times following periods of substantial rainfall or storm activities, such as high winds.

Long-Term Maintenance Program

Long-term maintenance activities are those required that are typically conducted every several years. Some items only need to be addressed occasionally throughout the life of the stormwater management system. The short-term maintenance program is supplemented by long term repair/replacement of the various stormwater management features. For example, the periodic excavation of a detention pond to remove accumulated sediment or re-seating of sinking manholes might be needed. The maintenance intervals stated are typical, but all are on an as-needed basis as well. This list is to be used as an example only and is not intended to be all inclusive.

Stormwater Area	Periodic Inspection	Repair Work
Grassy Areas – swales	5-year intervals	Seed or sod
Erosion Prone Areas	Installed or plant as required	Ditch Checks to reduce flow velocities or plant native vegetation
Grassy areas – Periphery (buffer)	Annual 5-year intervals	Groom Seed
Tree Trimming	5-year intervals	Cut back
Native Vegetation Areas	2 to 3 year intervals	Controlled burn
Grassy Area	5-year intervals	Re-seed
Depressional Area Periphery – Siltation (Buffer)	5-year intervals	Remove / re-seed
At culvert and swales, outfalls, detention ponds	5-year intervals	Remove siltation Re-seed Restore Riprap
Emergency Outflow Pipes	5-year intervals	Restore / replace Inflow & Outflow Openings
Manholes	As needed basis	Reset cover / lid

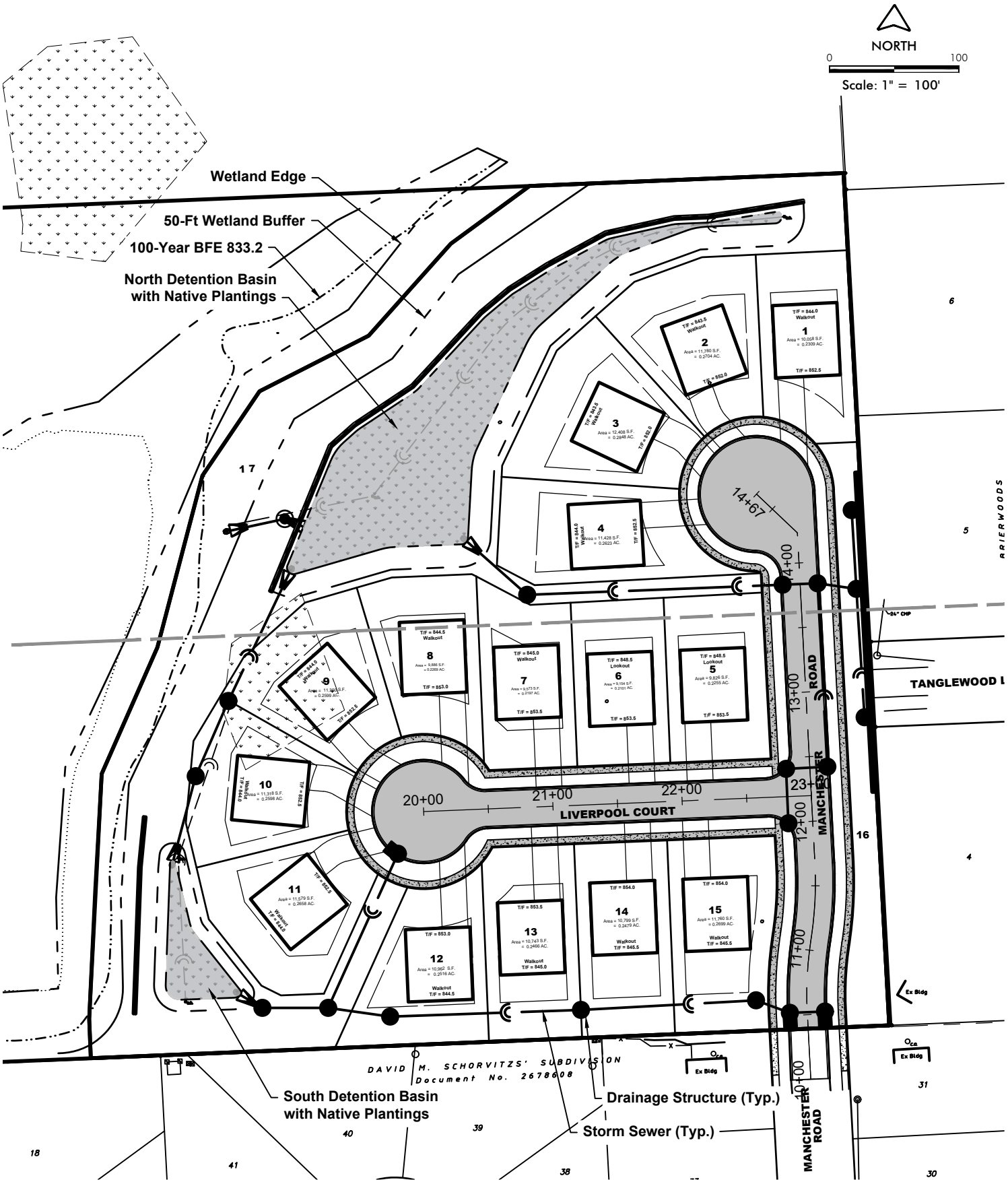


EXHIBIT A

MEADOW WOOD EAST SUBDIVISION

LAKE ZURICH, ILLINOIS

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173 Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152 www.HaegerEngineering.com

Project Manager:	M L A
Engineer:	K M L
Date:	03-05-2025
Project No.	24-136
Sheet	1 / 1

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P.I.N. 14-07-402-041
14-07-402-042
14-07-402-043
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14-07-402-046
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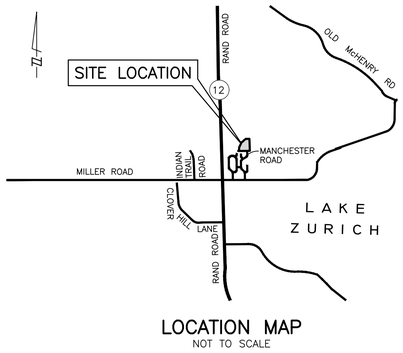
14-07-402-048
14-07-402-049
14-07-402-050
14-07-402-051

FINAL PLAT OF RESUBDIVISION

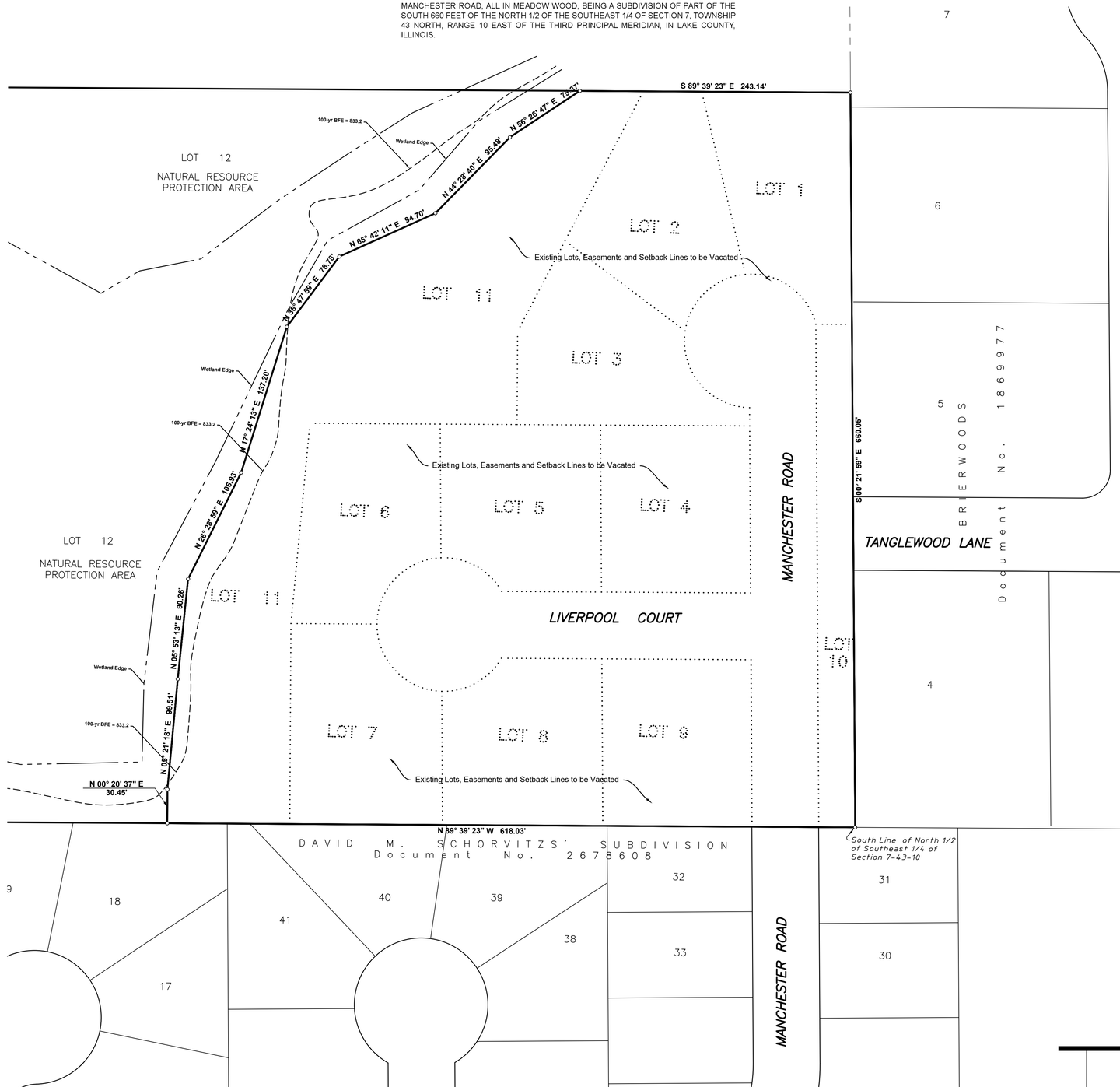
OF

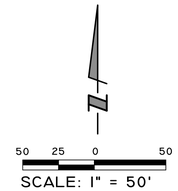
MEADOW WOOD EAST

BEING A SUBDIVISION OF LOTS 1 THRU 11 INCLUSIVE, LIVERPOOL COURT AND MANCHESTER ROAD, ALL IN MEADOW WOOD, BEING A SUBDIVISION OF PART OF THE SOUTH 660 FEET OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.



LOCATION MAP
NOT TO SCALE





- Set Concrete Monument
- Set 1/2" Pipe Unless
- Subdivision Boundary Line
- Roadway Center Line
- Easement Line
- Underlying Lot Lines
- LOT 1 — New Lot No.

SURVEYOR'S NOTES:

1. FIELD WORK WAS COMPLETED ON AUGUST 20, 2024
2. THE HORIZONTAL COORDINATES AND BASIS OF BEARING SHOWN HEREON ARE BASED ON NAD 83(2012) ILLINOIS EAST ZONE 1201 STATE PLANE COORDINATES AS REFERENCED FROM KARA COMPANY'S RTK NETWORK.
3. UNLESS OTHERWISE NOTED, 3/4" DIAMETER IRON PIPES WILL BE SET AT ALL LOT CORNERS IN ACCORDANCE TO THE PLAT ACT (765 ILCS 205/0.01 ET SEQ.).
4. ALL MEASUREMENTS AND DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
5. ALL EASEMENTS ARE HEREBY GRANTED UNLESS OTHERWISE NOTED.
6. THIS SUBDIVISION IS SUBJECT TO DECLARATION OF EASEMENTS, COVENANTS, AND RESTRICTIONS SET FOR IN DOC. NO. NOTHING SET FORTH HEREIN SHALL BE DEEMED TO PRECLUDE THE FUTURE RE-SUBDIVISION OF THE LOTS AND THE CONCURRENT CONSOLIDATION OF THEN EXISTING LOTS OR CREATION OF ADDITIONAL LOT(S) SUBJECT TO THE VILLAGE OF LAKE ZURICH SUBDIVISION ORDINANCE AND RELATED ORDINANCES REGARDING SAME.

No.	Date	Revision

Originally Prepared: 03.13.25 **Project No. 24-136**

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

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Plot Date: May 28, 2025 - 1:05pm Plotted By: jeff-g Layout: 24x36 Plot
File Name: P:\2024\24136\Drawings\Final Survey\24136-Plat of Subdivision-SHEET 1.dwg

P.I.N. 14-07-402-041
14-07-402-042
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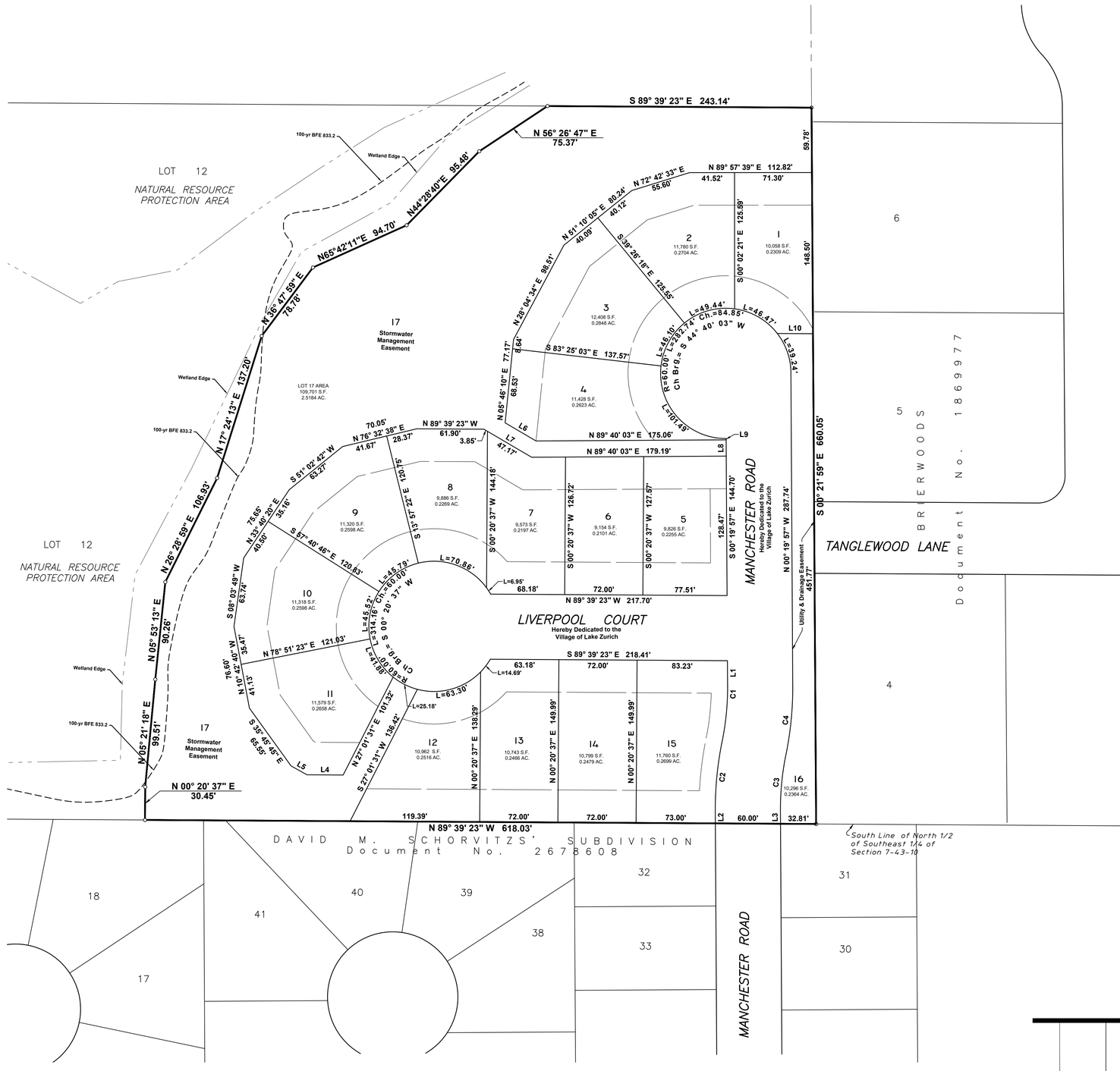
14-07-402-049
14-07-402-050
14-07-402-051

FINAL PLAT OF RESUBDIVISION
OF
MEADOW WOOD EAST

MAIL PLAT TO:

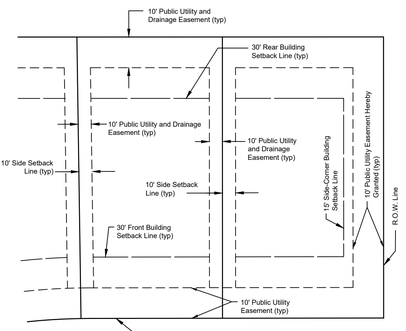
HAEGER ENGINEERING LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173



CURVE TABLE				
Curve	Length	Radius	Chord	Chord Bearing
C1	52.99'	250.73'	52.89'	S 5° 43' 50" W
C2	63.16'	310.00'	63.05'	S 5° 30' 14" W
C3	50.93'	250.00'	50.85'	N 5° 30' 15" E
C4	65.22'	310.60'	65.10'	N 5° 41' 20" E

LINE TABLE		
Line	Direction	Length
L1	S 0° 19' 57" E	23.03'
L2	S 0° 19' 58" E	11.51'
L3	N 0° 19' 57" W	12.21'
L4	S 89° 39' 23" E	33.33'
L5	S 60° 48' 51" E	16.78'
L6	N 59° 34' 42" W	32.99'
L7	S 59° 34' 42" E	51.02'
L9	N 0° 04' 46" E	1.22'

50 25 0 50
SCALE: 1" 50'



TYPICAL LOT SETBACK AND EASEMENT DETAIL
Not To Scale

- Set Concrete Monument
- Set 1/2" Pipe Unless
- Subdivision Boundary Line
- Roadway Center Line
- Easement Line
- Underlying Lot Lines
- LOT 1 — New Lot No.

Originally Prepared: 03.13.2025 **Project No. 24-136**

No.	Date	Revision

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173
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Illinois Professional Design Firm License No. 184-003152
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Plot Date: May 28, 2025 - 1:05pm Plotted By: jeff-g Layout: 24x36 Plot
File Name: P:\2024\24136\Drawings\Final Survey\24136-Plat of Subdivision_SHEET 2.dwg

P.I.N. 14-07-402-041
14-07-402-042
14-07-402-043
14-07-402-044
14-07-402-045
14-07-402-046
14-07-402-047
14-07-402-048
14-07-402-049
14-07-402-050
14-07-402-051

PRELIMINARY PLAT OF RESUBDIVISION
OF
MEADOW WOOD EAST

OWNER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THELAND DESCRIBED IN THE ANNEXED PLAT, AN HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER DTHE STYLE AND TITLE THEREON INDICATED.

THE UNDERSIGNED HEREBY DEDICATED FOR PUBLIC USE OF THE LANDS SHOWN ON THIS PLAT FOR THOROUGHFARES, STREETS, ALLEYS AND PUBLIC SERVICES; AND HEREBY ALSO RESERVES FOR AMERITECH AND THE PUBLIC SERVICE COMPANY, DIVISION OF COMMONWEALTH EDISON COMPANY AND THE EASEMENT PROVISIONS WHICH ARE STATED ON THEIR STANDARD FORM WHICH IS ATTACHED HERETO.

WE FURTHER CERTIFY THAT I, AS OWNER OF THE PROPERTY DESCRIBED AS THE SUBDIVISION AND LEGALLY DESCRIBED ON THE SAME NAME, HAVE DETERMINED TO THE BEST OF MY KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIIES.
LAKE ZURICH ELEMENTARY SCHOOL DISTRICT 95 AND
LAKE ZURICH COMMUNITY HIGH SCHOOL DISTRICT 95.
COLLEGE OF LAKE COUNTY

DATED THIS_____DAY OF_____, A.D. 2025.

BY:_____ _____
OWNER PRINTED NAME

TITLE: _____

ADDRESS OF OWNER: _____
_____
_____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, THE UNDERSIGNED, A NOTARY PUBLIC, IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT

_____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE ANNEXED PLAT AT THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS DAY _____OF _____,

_____AT _____, ILLINOIS.

BY:_____ _____
NOTARY PUBLIC PRINTED NAME

OWNER SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

THIS IS TO CERTIFY THAT _____, OWNER OF THE LAND HEREIN DESCRIBED OR DULY AUTHORIZED ATTORNEY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT, IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR 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 THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____DAY OF_____, A.D. 2025.

BY:_____ _____
OWNER OR ATTORNEY PRINTED NAME

TITLE: _____

ADDRESS: _____
_____
_____

ENGINEER SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, A REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISIONS HAVE BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____DAY OF_____, A.D. 2021.

BY:_____ _____
PROFESSIONAL ENGINEER PRINTED NAME

ADDRESS: _____
_____
_____

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_____, A.D. 2021.

BY:_____ _____
CHAIRMAN PRINTED NAME

VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____, VILLAGE ENGINEER OF THE VILLAGE OF LAKE ZURICH, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFOR, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY ILLINOIS THIS_____DAY OF_____, A.D. 2021.

BY:_____ _____
VILLAGE ENGINEER PRINTED NAME

VILLAGE CLERK CERTIFICATE

STATE OF ILLINOIS)
) SS
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 _____, 20_____ AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE VILLAGE OF LAKE ZURICH, ILLINOIS THIS _____DAY OF_____, A.D. 2021.

BY:_____ _____
VILLAGE CLERK PRINTED NAME

FINANCE DIRECTOR CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, FINANCE DIRECTOR FOR THE VILLAGE OF LAKE ZURICH, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR 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_____, A.D. 2021.

BY:_____ _____
FINANCE DIRECTOR PRINTED NAME

MAYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, MAYOR OF THE VILLAGE OF LAKE ZUIRCH HAVE APPROVED AND ACCEPTED THIS PLAT BY THE BOARD OF TRUSTEES OF THE VILLAGE

DATED AT LAKE ZURICH, LAKE COUNTY ILLINOIS THIS_____DAY OF_____, A.D. 2021.

BY:_____ _____
MAYOR PRINTED NAME

COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____, COUNTY CLERK OF LAKE COUNTY, ILLINOIS DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND INCLUDED IN THE SUBJECT PLAT.

I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE ANNEXED PLAT.

GIVEN UNDER MY HAND AND SEAL AT_____, ILLINOIS,

THIS DAY _____OF _____, _____.

BY:_____ _____
COUNTY CLERK PRINTED NAME

PUBLIC UTILITY AND DRAINAGE EASEMENT (PUDE) PROVISIONS

A NON-EXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH, AT&T, NICOR, COMMONWEALTH EDISON COMPANY, COMCAST AND 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" (PUDE) TO CONSTRUCT, INSTALL, LAY, RECONSTRUCT, REPAIR, REMOVE, REPLACE, INSPECT, MAINTAIN AND OPERATE UNDERGROUND TRANSMISSION AND DISTRIBUTION SYSTEMS AND LINES IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PUBLIC UTILITY AND DRAINAGE EASEMENT INCLUDING WITHOUT LIMITATION WATER MAINS, STORM SEWER, STORMWATER DRAINAGE, SANITARY SEWERS, FORCE MAINS, GAS MAINS, TELECOMMUNICATION CABLES, ELECTRIC CABLES, CABLE TELEVISION LINES AND ALL NECESSARY FACILITIES APPURTENANT 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 THEREON. 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 PLACED 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 PLACED OVER GRANTEE'S 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 NOT 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 DESIGNED WITHOUT THE SPECIFIC WRITTEN CONSENT OF THE VILLAGE OF LAKE ZURICH.

CROSS ACCESS EASEMENT PROVISIONS

A PERPETUAL NON-EXCLUSIVE EASEMENT FOR "CROSS ACCESS" IS HEREBY RESERVED FOR AND GRANTED TO THE OWNERS OF LOT 1 AND TO THEIR RESPECTIVE SUCCESSORS, ASSIGNS, TENANTS, LICENSEES, INVITEES, AND EMPLOYEES ON, OVER, THROUGH, ALONG AND ACROSS THE AREA OF THE PLAT DESIGNATED AS "CROSS ACCESS EASEMENT".

SURVEYORS CERTIFICATE

STATE OF ILLINOIS)
) SS:
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, JEFFREY W. GLUNT, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3760, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

LOTS 1 THRU 11 INCLUSIVE, LIVERPOOL COURT AND MANCHESTER ROAD, ALL IN MEADOW WOOD, BEING A SUBDIVISION OF PART OF THE SOUTH 660 FEET OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

THE LANDS SHOWN ON THE PLAT AND DESCRIBED IN THE ABOVE CAPTION, AND THAT THE SAID PLAT, DRAWN TO A SCALE OF 20 FEET PER 1 INCH ON SHEET ONE ARE A TRUE AND CORRECT REPRESENTATION OF THE SAID SURVEY AND SUBDIVISION. DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

I FURTHER CERTIFY THAT UPON COMPLETION OF CONSTRUCTION BUT NOT LONGER THAN ONE YEAR FROM THE RECORDING OF THIS PLAT, CONCRETE MONUMENTS, AS SHOWN, AND IRON PIPES AT ALL LOT CORNERS AND POINTS OF CHANGE IN ALIGNMENT WILL BE SET, AS REQUIRED BY THE PLAT ACT (765 ILCS 205/0.01 ET SEQ.).

THIS IS TO CERTIFY THAT PARTS OF OUTLOT A ARE LOCATED IN THE SPECIAL FLOOD HAZARD AREA IDENTIFIED FOR THE VILLAGE OF LAKE ZURICH, ILLINOIS, BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON THE FLOOD INSURANCE RATE MAPS, PANEL NO. 17097C0228K DATED SEPTEMBER 18, 2013.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS OF PRACTICE APPLICABLE TO BOUNDARY SURVEYS.

SCHAUMBURG, ILLINOIS _____MAY 28, 2025_____

BY: _____

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3695

STORMWATER MANAGEMENT EASEMENT FOR LOT 17

BLANKET DRAINAGE, STORMWATER MANAGEMENT, STORMWATER CONVEYANCE, AND DETENTION / RETENTION EASEMENT FOR LOT 17. THE VILLAGE OF LAKE ZURICH, TOGETHER WITH THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, ARE HEREBY GRANTED 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 DETENTION/RETENTION MANAGEMENT OF STORMWATER DETENTION/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/RETENTION 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, WATERMAIN, VAULTS, TRANSMISSIONS LINES, FENCING, LANDSCAPING, OR OTHER 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. PERMEABLE PAVER AREAS SHALL NOT BE SEAL COATED OR OTHERWISE MODIFIED TO REDUCE INFILTRATION. RESERVATION AND THE RIGHTS AS CONFERRED HEREIN SHALL BE OVER THE ENTIRE AREA DESIGNATED ON THIS OUTLOT A AND LOT 1 AND SHALL TAKE PRECEDENT OVER ANY AND ALL OTHER EASEMENT OR EASEMENTS OR LAND ENCUMBRANCES THAT MAY BE CONFERRED BY THE PLAT INCLUDING SPECIFICALLY, BUT WITHOUT LIMITATION, ANY OTHER BLANKET EASEMENTS PROVIDED FOR THESE LOTS. NOTHING SHALL BE CONSTRUCTED OR PLACED WITHIN, BELOW, ABOVE, OR OVERHEAD WITHOUT THE WRITTEN PERMISSION OF THE VILLAGE OF LAKE ZURICH. THE ENTIRE AREA DESIGNATED ON THIS PLAT IS TO BE PROPERLY MAINTAINED IN CONFORMITY WITH THE APPLICABLE ORDINANCES AND REGULATIONS.

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 PROTECTED 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 BE A TACIT DECLARATION THEREOF.

PROFESSIONAL AUTHORIZATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, JEFFREY W. GLUNT, A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, LICENSE NUMBER 035-3760, DO HEREBY AUTHORIZE THE VILLAGE OF LAKE ZURICH, ITS STAFF OR AUTHORIZED AGENT, TO PLACE THIS DOCUMENT OF RECORD IN THE COUNTY RECORDERS OFFICE IN MY NAME AND IN COMPLIANCE WITH THE ILLINOIS STATUTES CHAPTER 109 PARAGRAPH 2, AS AMENDED.

SCHAUMBURG, ILLINOIS _____

_____
JEFFREY W. GLUNT
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3760
MY LICENSE EXPIRES NOVEMBER 30, 2022 AND IS RENEWABLE

PREPARED BY:
HAEGER ENGINEERING, LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 E. STATE PARKWAY
SCHAUMBURG, IL 60173
TEL: (847)394-6600
FAX: (847)394-6608
PROJECT NO. 20-093

PLAT PREPARED FOR, SUBMITTED BY AND SEND NEW TAX BILL TO:
SAM GHANMA
NATIONAL LAND DEVELOPMENT GROUP LLC
514 STONE CANYON CIRCLE
INVERNESS, IL 60010

Originally Prepared: 03.13.2025 **Project No. 24-136**

No.	Date	Revision

HAEGER ENGINEERING
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Tel: 847.394.6600 Fax: 847.394.6608
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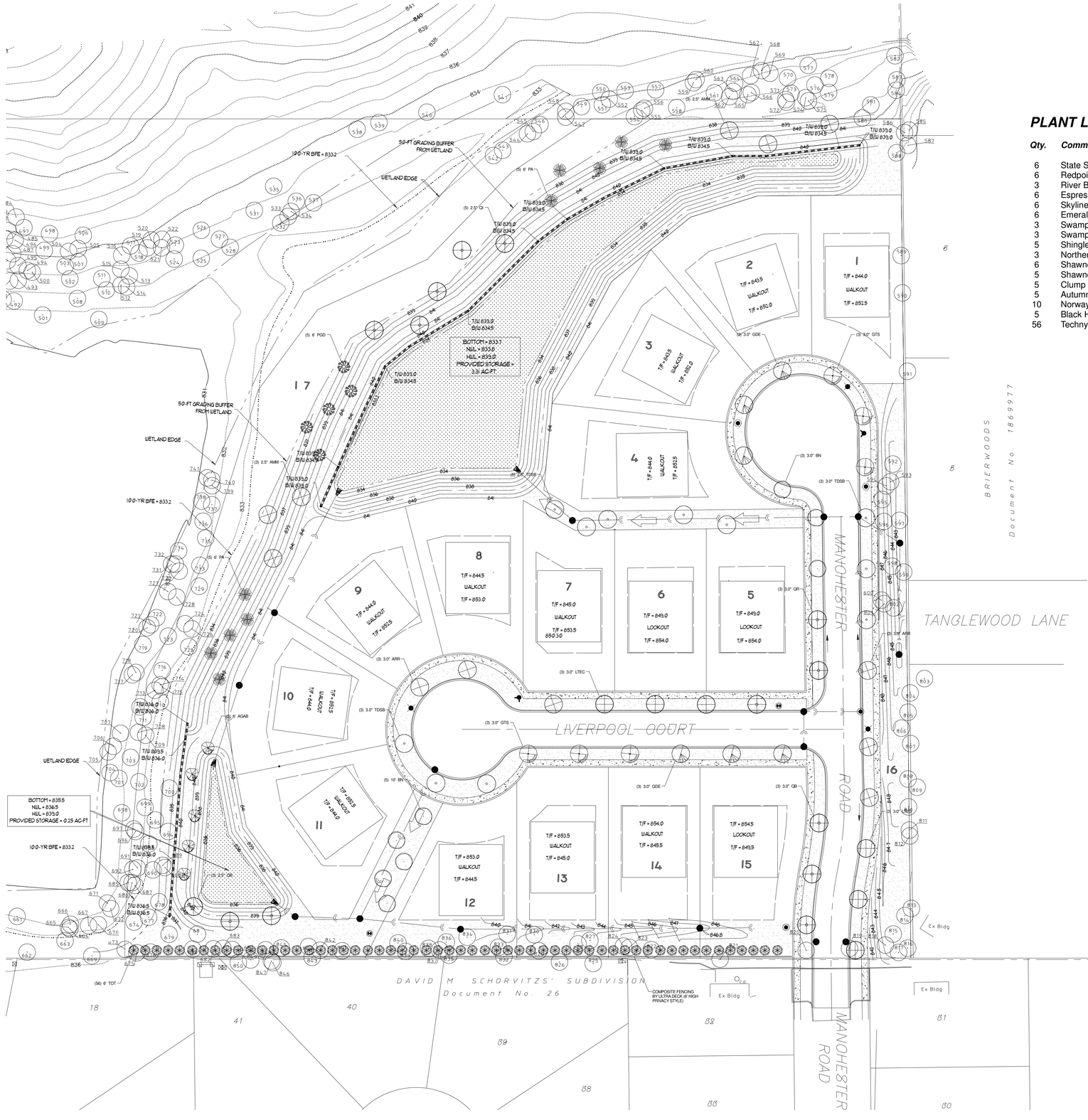
Plot Date: May 28, 2025 - 2:05pm Plotted By: jeff-g Layout: 24x36 Plot (2)
File Name: P:\2024\24136\Drawings\Final Survey\24136-Plat of Subdivision_SHEET 2.dwg



PLANT LIST

Qty.	Common Name	Botanical Name	Size	Remarks	Key
6	State Street Miyabe Maple	Acer miyabei 'Morton'	2.5"	B&B	AMM
6	Redpointe Maple	Acer rubrum 'Redpointe'	3.0"	B&B	ARR
3	River Birch (tree form)	Betula nigra	3.0"	B&B	BN
6	Espresso Kentucky Coffee Tree	Gymnocladus dioicus 'Espresso'	3.0"	B&B	GDE
6	Skyline Locust	Gleditsia triacanthos 'Skyline'	3.0"	B&B	GTS
6	Emerald City Tulip Tree	Liriodendron tulipifera 'Emerald City'	3.0"	B&B	LTEC
3	Swamp White Oak	Quercus bicolor	3.0"	B&B	QB
3	Swamp White Oak	Quercus bicolor	2.5"	B&B	QB
5	Shingle Oak	Quercus imbricaria	2.5"	B&B	QI
3	Northern Red Oak	Quercus rubra	3.0"	B&B	QR
6	Shawnee Brave Bald Cypress	Taxodium distichum 'Shawnee Brave'	3.0"	B&B	TDSB
5	Shawnee Brave Bald Cypress	Taxodium distichum 'Shawnee Brave'	2.5"	B&B	TDSB
5	Clump River Birch (3-4 stems)	Betula nigra	10'	B&B	BN
5	Autumn Brilliance Serviceberry	Amelanchier grandiflora	6'	B&B	AGAB
10	Norway Spruce	Picea abies	6'	B&B	PA
5	Black Hills Spruce	Picea glauca 'Densata'	6'	B&B	PGD
56	Techny Arborvitae	Thuja occidentalis 'Techny'	6'	B&B	TOT

REVISIONS:

DOWDEN DESIGN GROUP
LANDSCAPE ARCHITECTURE, DESIGN & PLANNING
P.O. BOX 415, LIBERTYVILLE, IL, 60048
DOWDENDESIGNGROUP.COM PHONE: (847) 362-1254

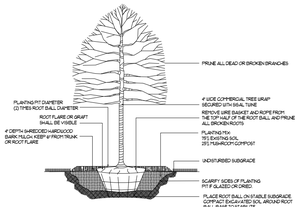
MEADOW WOOD SUBDIVISION

MANCHESTER ROAD
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN

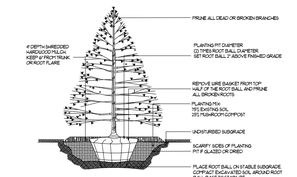
DATE: 01.28.25
SCALE: 1"=40'
DRAWN: CJD

L101



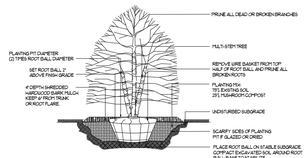
DETAIL

DECIDUOUS TREE PLANTING



DETAIL

EVERGREEN TREE PLANTING



DETAIL

DECIDUOUS ORNAMENTAL TREE PLANTING

PREMIUM BLUEGRASS SEED MIX (4-5 LBS/1000 S.F.)

MIX %	*SEED*	*GERMINATION*	*ORIGIN*
22.82%	AWARD KENTUCKY BLUEGRASS	85%	OR
22.22%	NuGLADE KENTUCKY BLUEGRASS	85%	OR/WA
17.79%	JACKPOT KENTUCKY BLUEGRASS	85%	OR/WA
16.11%	EVEREST KENTUCKY BLUEGRASS	85%	OR
9.98%	FIESTA 4 PERENNIAL RYEGRASS	90%	MN
9.97%	HANCOCK PERENNIAL RYEGRASS	90%	MN
1.11%	INERT MATTER		

NOTES:

1) The Landscape Contractor shall provide and install all plant materials in the quantities and sizes sufficient to complete planting as shown on the Landscape Plans. All plants shall comply with the requirements of the current American Standard for Nursery Stock published by The American Nursery and Landscape Association. Plants shall meet size, genus, species and variety and be in good health, free of insects, diseases or defects. No "park grade" materials shall be accepted. Trees not exhibiting a central (or single) leader will be rejected unless noted in the plant list as multi-stem. Quantity lists are supplied for convenience. The Landscape Contractor shall verify all quantities and, in case of a discrepancy, the drawn plan shall prevail over the plant list No plants are to be changed of substituted without approval of the Owner or a representative of James Dowden & Associates, Inc.

2) All plants shall be watered during the first 24-hour period following installation. A watering schedule must be agreed upon with the Owner (before plantings are installed) of whom, when and how plant materials are to be properly watered. The Landscape Contractor shall verify proper watering is being done for the establishment and health of all plant materials. The Landscape Contractor shall warranty all plant materials for one year from the time of installation and project acceptance.

3) Plants shall be balled and burlapped unless otherwise noted on the Landscape Plans. No root bound materials shall be accepted and all synthetic or plastic materials shall be removed at the time of planting. It is the option of the Landscape Contractor to roll back burlap from the top of the root ball.

4) Recommended mulch depth is four inches (4") of shredded hardwood bark. The Landscape Contractor shall avoid over-mulching and the creation of "mulch volcanoes." Mulch Beds shall extend a minimum of two feet (2') beyond the center of a tree or shrub. Mulch must be pulled back at least two inches (2') from the base of a tree so the base of the trunk and root crown are exposed.

5) Prepare all perennial beds with one cubic yard of garden compost per 100 sf and the compost shall be rototilled to an 8" depth.

6) All plants shall be set plumb. It is the option of the landscape contractor to stake deciduous trees but it is also the responsibility of the Landscape Contractor to guarantee the plants remain plumb until the end of the guarantee period.

7) Trees shall be installed a minimum of five feet (5') horizontally from underground electrical feeders, sanitary sewers, sanitary services, water mains, and water services. Trees shall be installed a minimum of ten feet (10') horizontally from utility structures including, but not limited to, manholes, valve vaults and valve boxes. Shade trees shall be a minimum of ten feet (10') from all light poles and all shrubs shall be a minimum of three to five feet (3'-5') from all fire hydrants.

8) The Landscape Contractor shall locate the existence of all underground utilities prior to starting work. The Landscape Contractor must also keep the pavement and work areas in neat and orderly condition throughout the construction process. The Landscape Contractor shall acquaint himself with. And verify. Working conditions in advance of submitting a proposal. Failure to recognize inherent responsibilities does not relieve the contractor of obligations due to miscalculations.

9) Property owners shall be responsible for maintaining all landscaping shown on the approved plans throughout the life of the development.

10) Turf shall be Premium Bluegrass Mix seed and blanket in all disturbed areas except where sod is noted.

11) Once a Landscape Plan has been approved and a Building Permit issued, the Planning and Zoning Administrator may authorize minor revisions to the approved Landscape Plan including the substitution of equivalent planting and ground covers where such revisions do not diminish the benefits of the approved Landscape Plan. As such, revisions shall require the written approval of the Planning and Zoning Administrator.

12) Trees and shrubs shall not be located closer than ten (10) feet to fire hydrants, transformers, or other above ground utilities.

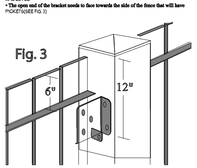
13) Bare root plants shall not be allowed.

14) All planted areas and landscaped islands shall receive a four (4) inch layer of shredded hardwood bark mulch.

INSTALLING FENCE PANELS

#FOR PRIVACY STYLE FENCE

STEP 1) BRACKET INSTALLATION
- Center and attach the top brackets, 12" down from the top of the post sleeve to the BOTTOM OF THE BRACKET. YOU CAN USE A STRING LEVEL BETWEEN BRACKETS TO CHECK THAT THEY ARE LEVEL.
- The open end of the bracket needs to face towards the side of the fence that will have PICKETS(SEE FG 1)



STEP 2) 2 X 4 SLEEVE ASSEMBLY
- Cut all 2 x 4's and 2 x 4 sleeves to 47-3/4" (For 72" O.C. post spacing).
- Slide the 2 x 4 sleeves over the 2 x 4 boards until the ends are flush, these will be your PICKET BACKER RAILS.

STEP 3) PREASSEMBLING FENCE PANEL
- On a flat surface position the 3 backer rails parallel to each other spaced 23" apart.
- Starting approximately 1/8" in from each side, evenly place all the pickets across the BACKER RAILS.
- Line up each picket so that it is at 90 degree angle to each backer rail and is 4" above THE TOP SURFACE OF THE UPPER BACKER RAIL.
- Using 1-5/8" screws attach pickets to the backer rail, 2 screws into each backer rail (8 screws per picket).

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THESE NEXT STEPS.

STEP 4) ATTACHING REMAINING BRACKETS
- Flip the panel over so that the pickets are now facing down.
- Attach the remaining 4 brackets to the ends of the middle and bottom backer rails.

STEP 5) INSTALLING PANELS BETWEEN THE POSTS
- Lift the panel into position between 2 posts and slide into the upper brackets that were PREVIOUSLY INSTALLED. FASTEN THE UPPER BRACKETS TO THE TOP BACKER RAIL.

STEP 6) LEVEL, PANEL AND COMPLETE ATTACHMENT
- Using a level check for vertical plumb alignment of panel and then fasten the remaining BRACKETS TO THE SIDES OF THE POST SLEEVES.
- Repeat steps 1 through 6 for all remaining fence panels.

FOR SCALLOPED STYLE FENCE

STEP 1) BRACKET INSTALLATION
- Center and attach the top brackets, 12" down from the top of the post sleeve to the BOTTOM OF THE BRACKET. YOU CAN USE A STRING LEVEL BETWEEN BRACKETS TO CHECK THAT THEY ARE LEVEL.
- The open end of the bracket needs to face towards the side of the fence that will have PICKETS(SEE FG 1)

STEP 2) 2 X 4 SLEEVE ASSEMBLY
- Cut all 2 X 4's and 2 X 4 sleeves to 47-3/4" (For 72" O.C. post spacing).
- Slide the 2 X 4 sleeves over the 2 X 4 boards until the ends are flush, these will be your PICKET BACKER RAILS.

STEP 3) PREASSEMBLING FENCE PANEL
- To create the scalloped top effect, you will need to cut the pickets to the following lengths: 2 qty - 72", 2 qty. - 71-1/4", 2 qty. - 70-1/2", 2 qty. 69-3/4", 2 qty. - 68", 2 qty. - 68-1/4", and 1 qty. - 67-1/2".
- On a flat surface position the 3 backer rails parallel to each other spaced 23" apart.
- Starting approximately 1/8" in from each side, evenly place all the pickets across the BACKER RAILS, BEGINNING THE LONGEST PICKETS ON THE OUTSIDE AND ARRANGING THE REST OF THE PICKETS IN DESCENDING SIZE TOWARD THE CENTER
- Line up each picket so that it is at 90 degree angle to each backer rail and the 2 outer pickets are 4" above the top surface of the upper backer rail.
- Working towards the middle of the panel, each picket should be 1/4" lower than the previous PICKET. AND ALL PICKETS SHOULD BE EVEN ALONG THE BOTTOM OF THE PANEL.
- Using 1-5/8" screws attach pickets to the backer rail, 2 screws into each backer rail (6 screws per picket).

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THESE NEXT STEPS.

STEP 4) ATTACHING REMAINING BRACKETS
- Flip the panel over so that the pickets are now facing down.
- Attach the remaining 4 brackets to the ends of the middle and bottom backer rails.

STEP 5) INSTALLING PANELS BETWEEN THE POSTS
- Lift the panel into position between 2 posts and slide into the upper brackets that were PREVIOUSLY INSTALLED. FASTEN THE UPPER BRACKETS TO THE TOP BACKER RAIL.

STEP 6) LEVEL, PANEL AND COMPLETE ATTACHMENT
- Using a level check for vertical plumb alignment of panel and then fasten the remaining BRACKETS TO THE SIDES OF THE POST SLEEVES.
- Repeat steps 1 through 6 for all remaining fence panels.

#FOR SHADOW BOX STYLE FENCE

STEP 1) BRACKET INSTALLATION
- Center and attach the top brackets, 12" down from the top of the post sleeve to the BOTTOM OF THE BRACKET. YOU CAN USE A STRING LEVEL BETWEEN BRACKETS TO CHECK THAT THEY ARE LEVEL.
- The open end of the bracket needs to face towards the side of the fence that will have 7 pickets (SEE FG 3)

STEP 2) 2 X 4 SLEEVE ASSEMBLY
- Cut all 2 X 4's and 2 X 4 sleeves to 47-3/4" (For 72" O.C. post spacing).
- Slide the 2 X 4 sleeves over the 2 X 4 boards until the ends are flush, these will be your picket BACKER RAILS.

STEP 3) PREASSEMBLING FENCE PANEL
- On a flat surface position the 3 backer rails parallel to each other spaced 23" apart.
- Starting approximately 1/8" in from each side, evenly place all the pickets across the BACKER RAILS.
- Line up each picket so that it is at 90 degree angle to each backer rail and is 4" above the top SURFACE OF THE UPPER BACKER RAIL.
- Starting from the left side and using 1-5/8" screws, attach every other picket to the backer rails - 2 screws into each backer rail (8 screws per picket).
- Remove the pickets you didn't attach to the backer rails - these will be used on the opposite side after you flip the panel over.

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THIS NEXT STEP.

STEP 4) ATTACHING REMAINING BRACKETS
- Flip the panel over so that the pickets are now facing down.
- On the back face of the backer rails evenly place the remaining pickets so they cover the OPENINGS THAT YOU CREATED BETWEEN THE POSTS ON THE OPPOSITE SIDE.
- Line up each picket so that it is at a 90 degree angle to each backer rail and is 4" above the top SURFACE OF THE UPPER BACKER RAIL.
- Starting from the left side, and using 1-5/8" screws, attach the remaining pickets to the backer rails - 2 screws into each backer rail (8 screws per picket).

STEP 4) ATTACHING REMAINING BRACKETS
- Attach the remaining 4 brackets to the ends of the middle and bottom backer rails.

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THESE NEXT STEPS.

STEP 5) INSTALLING PANELS BETWEEN THE POSTS
- Lift the panel into position between 2 posts and slide into the upper brackets that were PREVIOUSLY INSTALLED. FASTEN THE UPPER BRACKETS TO THE TOP BACKER RAIL.

STEP 6) LEVEL, PANEL AND COMPLETE ATTACHMENT
- Using a level check for vertical plumb alignment of panel and then fasten the remaining BRACKETS TO THE SIDES OF THE POST SLEEVES.
- Repeat steps 1 through 6 for all remaining fence panels.

FOR BASKET WEAVE STYLE FENCE

STEP 1) BRACKET INSTALLATION
- Center and attach the top brackets, 6-1/2" down from the top of the post sleeve to the bottom OF THE BRACKET. YOU CAN USE A STRING LEVEL BETWEEN BRACKETS TO CHECK THAT THEY ARE LEVEL.
- The open end of the bracket needs to face towards the side of the fence that will have 7 pickets (SEE FG 3)

STEP 2) 2 X 4 SLEEVE ASSEMBLY
- Cut all 2 X 4's and 2 X 4 sleeves to 47-3/4" (For 72" O.C. post spacing).
- Slide the 2 X 4 sleeves over the 2 X 4 boards until the ends are flush, these will be your picket BACKER RAILS.

STEP 3) PREASSEMBLING FENCE PANEL
- On a flat surface position the 3 backer rails parallel to each other spaced 64" apart or 72" to THE OUTER EDGES
- Starting approximately 1/8" in from each side, evenly place all the pickets across the BACKER RAILS.
- Line up each picket so that it is at a 90 degree angle to each backer rail and is flush with the TOP AND BOTTOM SURFACE OF THE UPPER AND LOWER BACKER RAILS.
- Starting from the left side and using 1-5/8" screws attach every other picket to the backer rails - 2 screws into each backer rail.
- Remove the pickets you didn't attach to the backer rails, these will be used later in THE ASSEMBLY.
- Lay the 3rd backer rail down on the ground, next to your panel, and attach a bracket to the OUTER EDGE OF EACH END POSITION THE BRACKETS SO THAT THE TOP, OR OPEN END OF THE BRACKET, ALL IS FACING THE DIRECTION OF THE TOP OF THE FENCE.

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THIS NEXT STEP.

- Flip the panel over so that the pickets are now facing down and lay the panel on top of the 3rd backer rail so that the middle backer rail is evenly spaced between the upper and lower BACKER RAILS.
- Attach the pickets to the middle backer rail using a 1-5/8" screw in the middle of each picket.
- Check that the spacing between the pickets remains consistent with the spacing on the upper AND LOWER BACKER RAILS
- Where the remaining pickets over the upper backer rail, between the attached pickets, under THE MIDDLE BACKER RAIL AND BACK TO THE TOP OF THE BOTTOM BACKER RAIL.
- Attach the remaining pickets to each of the upper and lower backer rails using 2 qty., 1-5/8" SCREWS AT EACH BACKER RAIL.

STEP 4) ATTACHING REMAINING BRACKETS
- Attach the remaining 1 brackets to the bottom backer rail. The brackets need to be installed in THE SAME DIRECTION AS THE MIDDLE BRACKETS.
- Once again flip the panel over and attach the last 4 installed pickets to the middle backer rail using a 1-5/8" screw in the middle of each picket.

NOTE DUE TO THE WEIGHT WE RECOMMEND THAT SOMEONE ASSIST YOU WITH THIS NEXT STEPS.

STEP 5) INSTALLING PANELS BETWEEN THE POSTS
- Lift the panel into position between 2 posts and slide into the upper brackets that were PREVIOUSLY INSTALLED. FASTEN THE UPPER BRACKETS TO THE TOP BACKER RAIL.

STEP 6) LEVEL, PANEL, AND COMPLETE ATTACHMENT
- Using a level check for vertical plumb alignment of panel and then fasten the remaining BRACKETS TO THE SIDES OF THE POST SLEEVES.
- Repeat steps 1 through 6 for all remaining fence panels.

CARE & MAINTENANCE

AS NEEDED A GENTLE BRUSH OR PILLO DETERGENT AND A GARDEN HOSE MAY BE USED TO KEEP YOUR FENCE LOOKING GREAT FOR YEARS TO COME

USE CAUTION WHEN TRIMMING WITH A STRING TRIMMER TO AVOID CONTACT WITH THE FENCE PANELS AND posts. Keeping the bottom edge of the fence 1" or more above the ground makes it easier to trim GRASS AROUND THE BASE OF THE FENCE

Low-Maintenance Composite Fencing by ULTRADECK

AVAILABLE AT MENARDS

MADE IN THE USA

WWW.MIDWESTMANUFACTURING.COM

Low-Maintenance Composite Fencing by ULTRADECK

PRODUCT INSTALLATION GUIDE

- COMPOSITE FENCING BY ULTRADECK CREATED USING STATE-OF-the-art equipment to specially blend plastic and wood fibers
- RESISTS SPLINTERING, CRACKING, ROTTING AND INSECTS
- NO SPECIAL TOOLS REQUIRED, EASY AS WORKING WITH WOOD
- LOW MAINTENANCE. SPEND MORE TIME ENJOYING YOUR FENCE RATHER THAN MAINTAINING IT!
- ULTRADECKS A TOP SELLING MANUFACTURER OF COMPOSITE WOOD MATERIALS
- OUR ENVIRONMENTALLY FRIENDLY PRODUCTS ARE MADE WITH RECYCLED MATERIALS DUE TO THE PRESENCE OF RECYCLED MATERIALS IN ULTRADECK'S ME COLOR AND TEXTURE VARIATIONS MAY OCCUR

TOOLS NEEDED

BUILDING A FENCE IS A REWARDING PROJECT YOU CAN DO WITH FEW TOOLS. AS WITH ANY PROJECT, BE SURE AND USE ALL NECESSARY PROTECTION, I.E. EYEWEAR, SAFETY BOOTS. HERE IS A LIST OF ITEMS YOU WILL NEED TO COMPLETE YOUR FENCE.

POST HOLE DIGGER
SHOVEL
DRILL/POWER SCREW DRIVER
HAMMER
LEVEL AND STRING LEVEL
STRING LINE
TAPE MEASURE
TABLE OR CIRCULAR SAW

ADDITIONAL MATERIAL:
BAG OF GRAVEL
INSTANT POST CEMENT
CONTAINER TO MIX CEMENT

NOTE
TO SPEED UP AND AID IN ASSEMBLY, GO TO WWW.MIDWESTMANUFACTURING.COM FOR INSTRUCTIONS TO CONSTRUCT A HELPFUL FENCE PANEL JIG

WWW.MIDWESTMANUFACTURING.COM

SOLID OR PRIVACY STYLE

ALLOWS FOR COMPLETE PRIVACY. USED TO SURROUND swimming pools, define PROPERTY LINES OR COVER AN UNATTRACTIVE AREA

YOU'LL NEED THE FOLLOWING COMPONENTS FOR EACH SECTION OF THIS STYLE OF FENCE:

FENCE COMPONENT	QTY. PER SECTION
(A) 13-piece picket pack	1 pack
(B) 2x4x67-3/4" composite sleeves	3
(C) 4x4x78" composite sleeves	1 (+ 1 at fence end)
(D) Mounting bracket sets	3 (sold as pairs)
(E) Post Cap	1 (per 4 X 4 sleeve)
• 1-5/8" screws	78
• AC2 treated 2x4x6'	3
• AC2 treated 4x4x10' post	1 (+1 at fence end)

REVISIONS:

DOWDEN DESIGN GROUP
LANDSCAPE ARCHITECTURE, DESIGN & PLANNING
P.O. BOX 415, LIBERTYVILLE, IL, 60048
DOWDENDESIGNGROUP.COM PHONE: (847) 362-1254

MEADOW WOOD SUBDIVISION
MANCHESTER ROAD
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN

DATE: 01.28.25
SCALE: NONE
DRAWN: CJD

L102

HAEGER ENGINEERING
consulting engineers · land surveyors

100 East State Parkway
Schaumburg, Illinois 60173-5300
Tel: 847.394.6600
Fax: 847.394.6608

Engineer's Opinion of Probable Construction Cost

Project: Meadow Wood
Location: Lake Zurich, Illinois
Project #: 24-136

Prepared: FRM
Reviewed: KML
Date: 6/24/2025

SUMMARY OF ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Section	Description	Total Cost
A	Demolition & Debris Removal	$ 16,324.00
B	Soil Erosion & Sediment Control	$ 36,860.00
C	Earthwork Improvements	$ 150,000.00
D	Storm Sewer Improvements	$ 171,880.00
E	Water Main Improvements	$ 103,455.00
F	Sanitary Sewer Improvements	$ 88,695.00
G	Pavement Improvements	$ 208,654.00
H	Miscellaneous	$ 149,715.00
	Total	$ 925,583.00
	Contingency (10%)	$ 92,558.30
	Total W/ Contingency	$ 1,018,141.30

Item No.

A	Demolition & Debris Removal	Quantity	Unit	Unit Price	Total Amount
1	Curb & Gutter Removal	89	LF	$5.00	$445.00
2	Tree Removal	17	EA	$500.00	$8,500.00
3	Fire Hydrant Removal	2	EA	$1,000.00	$2,000.00
4	Valve Vault Removal	3	EA	$1,250.00	$3,750.00
5	Sawcut Pavement	52	LF	$4.00	$208.00
6	Full Depth Pavement Removal	203	SY	$7.00	$1,421.00
				Subtotal	$16,324.00

B	Soil Erosion & Sediment Control	Quantity	Unit	Unit Price	Total Amount
1	Silt Fence	3,920	LF	$2.50	$9,800.00
2	Stabilized Construction Entrance	1	EA	$5,000.00	$5,000.00
3	Inlet Protection	23	EA	$250.00	$5,750.00
4	Ditch Checks	5	EA	$300.00	$1,500.00
5	Concrete Washout	1	EA	$500.00	$500.00
6	Temporary Seeding & Erosion Control Blanket	4.77	Ac	$3,000.00	$14,310.00
				Subtotal	$36,860.00

C	Earthwork Improvements	Quantity	Unit	Unit Price	Total Amount
1	Earthwork	1	BUDGET	$150,000.00	$150,000.00
				Subtotal	$150,000.00

D	Storm Sewer Improvements	Quantity	Unit	Unit Price	Total Amount
1	Storm Sewer - 4" Perforated HDPE Underdrain	758	LF	$25.00	$18,950.00
2	Storm Sewer - 12" HDPE	473	LF	$30.00	$14,190.00
3	Storm Sewer - 15" HDPE	560	LF	$35.00	$19,600.00
4	Storm Sewer - 18" HDPE	331	LF	$40.00	$13,240.00
5	Storm Sewer - 36" HDPE	241	LF	$80.00	$19,280.00
6	Catch Basin - Type C, 24" Dia.	2	EA	$2,000.00	$4,000.00
7	Catch Basin - Type A, 48" Dia.	15	EA	$3,000.00	$45,000.00
8	Catch Basin - Type A, 60" Dia.	2	EA	$4,500.00	$9,000.00
9	Outlet Control Structure w/Restrictor, 60" Dia.	1	EA	$6,500.00	$6,500.00
10	Inlet - Type C, 24" Dia.	3	EA	$1,500.00	$4,500.00
11	Underdrain Cleanout	4	EA	$500.00	$2,000.00
12	Flared End Section, 15" Dia.	2	EA	$1,250.00	$2,500.00
13	Flared End Section, 18" Dia.	2	EA	$1,500.00	$3,000.00
14	Flared End Section, 36" Dia.	2	EA	$2,500.00	$5,000.00
15	Trench Backfill	128	CY	$40.00	$5,120.00
				Subtotal	$171,880.00

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100 East State Parkway
Schaumburg, Illinois 60173-5300
Tel: 847.394.6600
Fax: 847.394.6608

Engineer's Opinion of Probable Construction Cost

Project: Meadow Wood
Location: Lake Zurich, Illinois
Project #: 24-136

Prepared: FRM
Reviewed: KML
Date: 6/24/2025

E	Water Main Improvements	Quantity	Unit	Unit Price	Total Amount
1	PVC C-900 Watermain - 8"	1,101	LF	$45.00	$49,545.00
2	1" Type K Copper Service (B-Box, Fittings, & Trench Backfill)	15	EA	$1,200.00	$18,000.00
3	Fire Hydrant Assembly w/ 6" Hydrant Lead	3	EA	$3,750.00	$11,250.00
4	Valve Vault, 48" Dia.	1	EA	$4,500.00	$4,500.00
5	Pressure Connection in Valve Vault, 48" Dia.	2	EA	$6,000.00	$12,000.00
6	Watermain Testing & Chlorination	1	EA	$2,000.00	$2,000.00
7	Trench Backfill	154	CY	$40.00	$6,160.00
				Subtotal	$103,455.00

F	Sanitary Sewer Improvements	Quantity	Unit	Unit Price	Total Amount
1	Sanitary Sewer - 8" PVC SDR 26	907	LF	$45.00	$40,815.00
2	Sanitary Service - 6" PVC SDR 26	658	LF	$30.00	$19,740.00
3	Sanitary Manhole - Type A, 48" Dia.	5	EA	$3,500.00	$17,500.00
4	Connection to Existing Sanitary Manhole	1	EA	$1,000.00	$1,000.00
5	Trench Backfill	241	CY	$40.00	$9,640.00
				Subtotal	$88,695.00

G	Pavement Improvements	Quantity	Unit	Unit Price	Total Amount
1	1.5" HMA Surface Course, Mix C, IL-9.5, N50	3,242	SY	$12.00	$38,904.00
2	2.0" HMA Binder Course, IL-19, N50	3,242	SY	$15.00	$48,630.00
3	5.0" Bituminous Aggregate Material	3,242	SY	$10.00	$32,420.00
4	3" Aggregate Base Course, Type B, CA-6	3,242	SY	$5.00	$16,210.00
5	5" PCC Walk, Class SI, w/ 3" Aggregate Base Course, Type B, CA-6	9,085	SF	$6.00	$54,510.00
6	Pavement Striping	1	LSUM	$500.00	$500.00
7	M3.12 Curb & Gutter	1,748	LF	$10.00	$17,480.00
				Subtotal	$208,654.00

H	Miscellaneous	Quantity	Unit	Unit Price	Total Amount
1	Segmental Block Retaining Wall	3,327	SF	$45.00	$149,715.00
				Subtotal	$149,715.00

Note: The Following are Not Included in the Above Quantities

1) Building Demolition
2) Dry Utility Disconnections, Connections, Relocations, Coordination, etc.
3) Landscaping, Fencing & Monument Signage
4) Permit, Inspection, and Municipal Fees
5) Construction Staking, As-Built Plans
6) NPDES Inspections (SWPPP Plan)
7) Unsuitable Material Excavation & Haul Off (if Applicable)

Disclaimer:

This Engineer's Opinion of Probable Construction Cost is based on the "Meadow Wood - Final Engineering" plans with the latest revision date of June 5, 2025. Quantities and line items are subject to change pending review & approval of the Plans by permitting agencies. The esimated costs shown herein are based on Haeger Engineering's best judgment as an experienced and qualified professional engineering firm, familiar with the construction industry. However, since Haeger Engineering, LLC has no control over the actual cost of labor, materials, equipment, or services provided by others, or over Contractor's methods of determining prices, or over competitive bidding or market conditions, Haeger Engineering, LLC cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from Opinions of Probable Construction Cost prepared by Haeger Engineering, LLC.

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100 East State Parkway
Schaumburg, Illinois 60173-5300
Tel: 847.394.6600

Engineer's Opinion of Probable Construction Cost

Manchester Rd Resurfacing (Meadow Woods East to Miller Rd)

Project: Meadow Wood East Subdivision
Location: Lake Zurich, Illinois
Project #: 24-136

Prepared: KML
Date: 6/24/2025

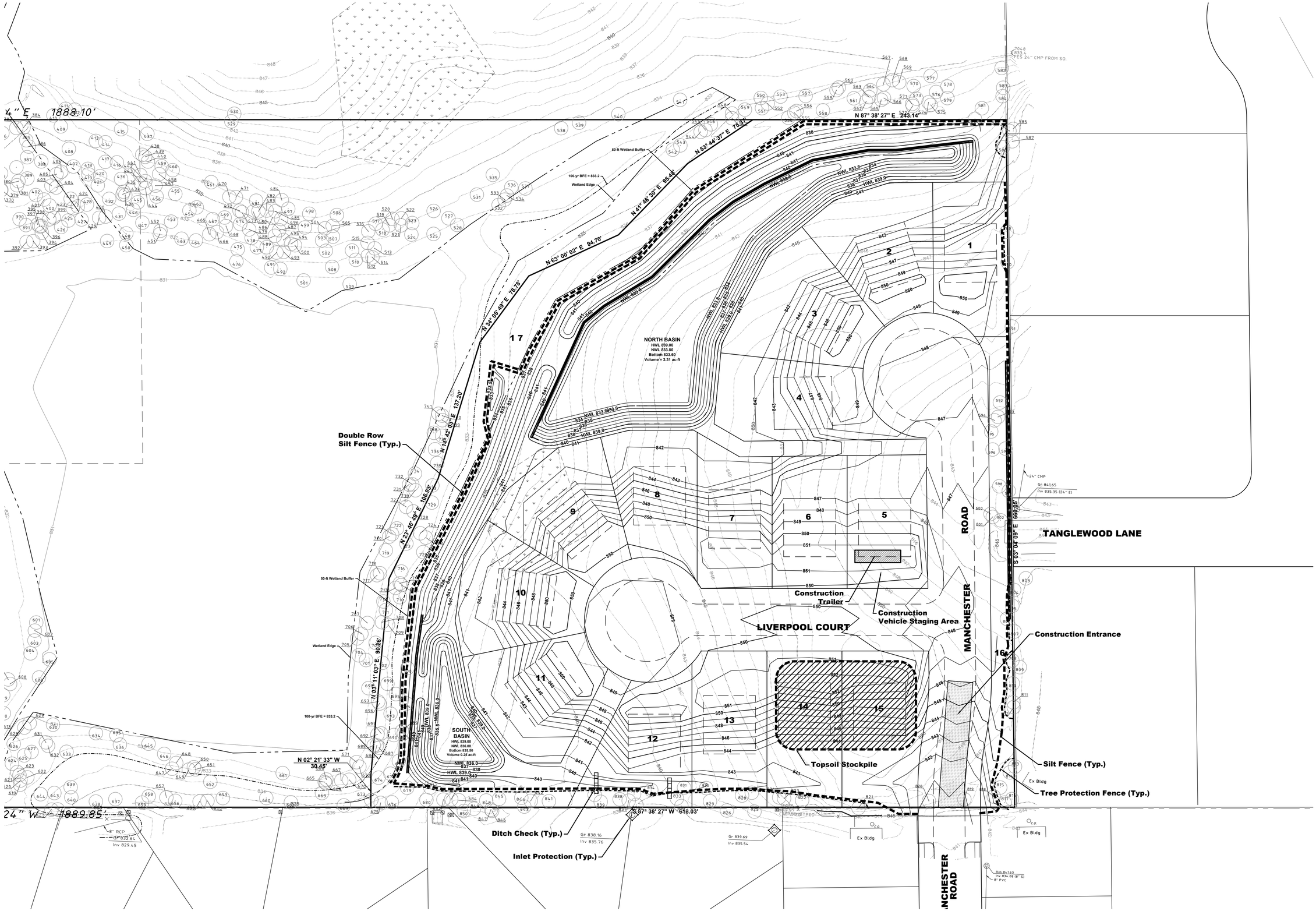
Manchester Road Resurfacing Improvements		Quantity	Unit	Unit Price	Total Amount
1	1.5" HMA Surface Removal	4,530	SY	$2.50	$11,325.00
2	1.5" HMA Surface Course, Mix C, IL-9.5, N50	4,530	SY	$12.00	$54,360.00
3	Bituminous Materials (Tack Coat) (0.05 lbs/sf)	2,039	LB	$0.50	$1,019.50
4	Striping (Crosswalk and Stop Bar at Miller Rd)	1	LSUM	$1,000.00	$1,000.00
5	Traffic Control & Protection (Budget)	1	LSUM	$10,000.00	$10,000.00
6	Mobilization	1	LSUM	$3,000.00	$3,000.00
				Subtotal	$80,704.50

Note: The Following are Not Included in the Above Quantities

1) Dry Utility Disconnections, Connections, Relocations, Coordination, etc.
2) Landscaping, Fencing & Monument Signage
3) Permit, Inspection, and Municipal Fees
4) Construction Staking, As-Built Plans
5) Unsuitable Material Excavation & Haul Off (if Applicable)

Disclaimer:

The estimated costs shown herein are based on Haeger Engineering's best judgment as an experienced and qualified professional engineering firm, familiar with the construction industry. However, since Haeger Engineering, LLC has no control over the actual cost of labor, materials, equipment, or services provided by others, or over Contractor's methods of determining prices, or over competitive bidding or market conditions, Haeger Engineering, LLC cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from Opinions of Probable Construction Cost prepared by Haeger Engineering, LLC.



NORTH

20 0 40

Scale: 1" = 40'

No.	Revision	Date

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MASS GRADING AND CONSTRUCTION STAGING PLAN

MEADOW WOODS EAST SUBDIVISION FINAL ENGINEERING

LAKE ZURICH, ILLINOIS

Project Manager:	M L A
Engineer:	K M L
Date:	06-25-2025
Project No.	24-136
Sheet	1/1

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Plot Date: Jun 26, 2025 - 10:09am Plotted By: gill-r Layout: 24x36 LS
File Name: P:\2024\24136\Drawings\Exhibits\24136 Mass Grading and Construction Staging plan.dwg

Meadow Wood East Project Schedule

SITE

Clearing
Start 7/1/2025
Complete 7/11/2025

Grading & Site Utilities
Start 7/14/2025
Complete 9/2/2025

Curbs
Start 9/3/2025
Complete 9/8/2025

Paving
Start 9/9/2025
Complete 9/12/2025

TYPICAL BUILDING

Pre Construction	Week 1-3
Foundation	Week 4-8
Framing	Week 9-12
MEP	Week 13-16
Insulation/Drywall	Week 17-18
Interior Finishes	Week 19-23
Fixtures/Appliances	Week 24-26
Landscape	Week 27-29

Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

For IEPA Use Only

Application for Permit or Construction Approval
WPC-PS-1

This form must be typewritten or printed legibly. This form may be completed manually or online using Adobe Reader, a copy of it saved locally, printed, and signed before it is submitted to:

Illinois Environmental Protection Agency
Permit Section, Division of Water Pollution Control
2520 West Iles Avenue
P.O. Box 19276
Springfield, IL 62794-9276

Reset All Fields

1. Owner Name: Casey Builders

Name of Project: Meadow Wood East Subdivision Final Engineering

Project Location Address (include nearest street and city address): Manchester Road

City: Lake Zurich Zip Code: 60047

Township: Ela County: Lake

2. Brief Description of the Project:

Sanitary sewer extension and service connections for a new 15-lot single-family residential subdivision.

3. Documents being Submitted: If the Project involves any of the items listed below, submit the corresponding schedule, and check the appropriate boxes

	Schedule		Schedule
Private Sewer Connection/Extensions	A/B ☒	Spray Irrigation	H ☐
Sewer Extension Construction Only	C ☐	Septic Tanks	I ☐
Sewage Treatment Works	D ☐	Industrial Treatment/Pretreatment	J ☐
Excess Flow Treatment	E ☐	Waste Characteristics	N ☐
Lift Station/force Main	F ☐	Erosion Control	P ☐
Fast Track Service Connection	FTP ☐	Trust Disclosure	T ☐
Sludge Disposal	G ☐		

Plans:

Title: Meadow Wood East Subdivision Final Engineering No. of Pages: 21

Specifications:

Title: Sheets C2.0 & C2.1 of Plans No. of Books/Pages: 2

Other Documents: (Please specify)

3.1 Illinois Historic Preservation Agency approval letter ◉ Yes ○ No

(If you have a copy of the IHPA approval letter, please send in with the Permit Application Package)

4. Land Trust: Is the project identified in item Number 1 therein, for which a permit is requested, to be constructed on land which is the subject of a trust? ○ Yes ◉ No

If yes, Schedule T (Trust Disclosure) must be completed and item 7.1.1 must be signed by a beneficiary trustee or trust officer.

5. This is an application for (Check appropriate box):

◉ A. Joint Construction and Operating Permit

○ B. Authorization to Construct (See Instructions) NPDES Permit No. IL00: _____ Issuance Date: _____

○ C. Construction Only Permit (Does Not Include Operations)

○ D. Operate Only Permit (Does Not Include Construction)

○ E. Supplemental Permit Request to Existing State Construction or Operating Permit No.: _____ Issuance Date: _____

6. Certifications and Approval

6.1 Certificate by Design Engineer (When required: refer to instructions)

I hereby certify that I am familiar with the information contained in this application, including the attached schedules indicated above, and that to the best of my knowledge and belief such information is true, complete and accurate. The plans and specifications (specifications other than Standard Specifications or local specifications on file with this Agency) as described above were prepared by me or under my direction.

Licensed Professional Engineer's Name: Kimberly Lask, P.E., PTOE, CFM

Licensed Professional Engineer's Title: Project Manager

Registration Number: 062-054034 License Expiration Date: 11-30-2025

Company: Haeger Engineering, LLC

Street Address: 100 East State Parkway PO Box: _____

City: Schaumburg State: IL Zip + 4: 60173

Email Address: kim-l@haegerengineering.com Phone: (847) 230-3176

Printed Name: Kimberly Lask

_____
Original Signature

_____
Date

Licensed Professional Engineer's Seal

7. Certifications and Approvals for Permits:

7.1 Certificate by Applicant(s):

I/We hereby certify that I/we have read and thoroughly understand the conditions and requirements of this Application, and am/are authorized to sign this application in accordance with the Rules and Regulations of the Illinois Pollution Control Board. I/we hereby agree to conform with the Standard conditions and with any other Special Conditions made part of this Permit.

7.1.1 Name of Applicant for Permit to Construct: Kirk Rustman

Title: _____ Organization: Casey Builders

Street Address: 509 W. Old Northwest Hwy., Suite 120 PO Box: _____

City: Barrington State: IL Zip + 4: 60010

Email Address: sunrisellc700@gmail.com Phone: (847) 812-8325

Printed Name: Kirk Rustman

_____ _____
Original Signature Date

7.1.2 Name of Applicant for Permit to Own and Operate: Village of Lake Zurich

Title: Mayor Organization:

Street Address: 70 E. Main Street PO Box:

City: Lake Zurich State: IL Zip + 4: 60047

Email Address: tom.poynton@lakezurich.org Phone: (847) 540-1683

Printed Name: Mayor Tom Poynton

Original Signature Date

7.2 Attested (Required When Applicant is a Unit of Government)

Title:

City clerk, Village Clerk, Sanitary District Clerk, etc.)

Original Signature Date

7.3 Applications from non-governmental applicants which are not signed by the owner, must be signed by a principal executive officer of at least the level of vice president, or a duly authorized representative.

7.4 Certificate by Intermediate Sewer Owner

I hereby certify that (Please check one):

- (●) 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Illinois Environmental Protection Act or Subtitle C. Chapter I, or
- ( ) 2. The Illinois Pollution Control Board, in PCB _____ dated _____ granted a variance from Subtitle C, Chapter I to allow construction of facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary:

8" PVC Sewer located within Manchester Road R.O.W.

Sewer System Owner: Village of Lake Zurich

Address: 70 E. Main Street

City: Lake Zurich State: IL Zip + 4: 60047

Email Address: tom.poynton@lakezurich.org Phone: (847) 540-1683

Printed Name: Mayor Tom Poynton

Original Signature Date

7.4.1 Additional Certificate by Intermediate Sewer Owner

I hereby certify that (Please check one):

- ○ 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Illinois Environmental Protection Act or Subtitle C. Chapter I, or
- ○ 2. The Illinois Pollution Control Board, in PCB _____ dated _____ granted a variance from Subtitle C, Chapter I to allow construction of facilities that are the subject of this application.
- ◉ 3. Not applicable.

Name and location of sewer system to which this project will be tributary:

_____

Sewer System Owner: _____

Address: _____

City: _____ State: ____ Zip + 4: _____

Email Address: _____ Phone: _____

Printed Name: _____

_____ _____

Original Signature Date

7.5 Certificate by Waste Treatment Works Owner

I hereby certify that (Please check one):

- ◉ 1. The wastewater treatment plant to which this project will be tributary has adequate reserve capacity to treat the wastewater that will be added by this project without causing a violation of the Illinois Environmental Protection Act or Subtitle C. Chapter I, or
- ○ 2. The Illinois Pollution Control Board, in PCB _____ dated _____ granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.
- ○ 3. I also certify that, if applicable, the industrial waste discharges described in the application are capable of being treated by treatment works.
- ○ 4. Not applicable.

Name of Waste Treatment Works: Lake County Des Plaines River Reclamation Facility

Waste Treatment Works Owner: Lake County Public Works Department

Address: 650 West Winchester Road

City: Libertyville State: IL Zip + 4: 60048

Email Address: publicworks@lakecountyil.gov Phone: (847) 377-7500

Printed Name: _____

_____ _____

Original Signature Date

Save Form with New Name

Print Form

Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Schedule A/B

This form must be typewritten or printed legibly. This form may be completed manually or online using Adobe Reader, a copy of it saved locally, printed, and signed before it is submitted to:

Illinois Environmental Protection Agency
Permit Section, Division of Water Pollution Control
2520 West Iles Avenue
P.O. Box 19276
Springfield, IL 62794-9276

Application for Sanitary Sewer: (please check one or both boxes as applicable)

☒ Service Connection - Schedule A ☒ Publicly Owned or Regulated Extensions - Schedule B

1. **Name of Project**: Meadow Wood East Subdivision Final Engineering

2. **Type of Service(s)**: (Check all that apply) ☒ Residential ☐ Commercial ☐ Light Industrial (Domestic Waste Only ☐ Manufacturing ☐ Recreational ☐ Other

3. **Nature of Project** - Project Consists of: (Check all that apply) ☒ Sewer Extension ☐ Trunk Sewer ☐ Replacement Sewer ☐ New Sanitary Sewer ☒ Sewer Connection ☐ Relief Sewer ☐ Interceptor Sewer

4. **Project Location, Service Area and Population:** Submit map(s) of the service area that include the following:

   4.1 An 8½ × 11 inch detailed project location map or USGS map or USGS map showing the project with respect to major roadways. In lieu of this map, a letter from the Illinois Historic Preservation Agency indicating compliance with the Illinois Historic Preservation Act for this project may be submitted.

   4.2 The proposed sewer layout and project location.

   Township: 43N Section: 7 Range: 10E

   4.3 Residential and/or non-residential areas and their associated waste loads to be immediately served by the sewers of this project.

   4.4 Potential residential and/or non-residential areas and their associated loads must be included in the overall design of the sewers of this project.

5. **Facilities Planning Area (FPA):**

   This project ◉ is ○ is not being constructed entirely within the Facilities Planning Area (FPA) boundaries.

   Name of FPA: Lake Zurich FPA of Southeast Lake FPA

6. **Type of Development**: The following design criteria should be used in estimating the population equivalent (P.E.) of a residential building:

Efficiency or Studio Apartment	= 1 person
1 Bedroom Apartment	= 1.5 persons
2 Bedroom Apartment	= 3 people
3 Bedroom Apartment	= 3 people
Single Family Home	= 3.5 people
Mobile Home	= 2.25 people

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied.

6.1 **Residential Buildings**

Number of Building(s): 15 Number of Single Family Dwelling Building(s): 15

Number of Multiple Family Dwelling Building(s): 0

Estimated Total Population Equivalent: 52.5 P.E.

*Please provide an itemized list for each multiple dwelling building including: Number of 1, 2, and 3 bedroom units; the total P.E. for each building and the total P.E. for multiple family dwellings.

*Please see attached PE Calculations.

6.2 **Non-Residential Buildings:** Describe use of building(s) - This box will expand as needed

N/A

Principal product(s) or activities - This box will expand as needed

N/A

Number of non-residential building(s) to be served under this Permit: 0

Non domestic liquid waste ◯ is (see Section 6.5) ◯ is not produced inside the building(s).

If liquid wastes other than domestic are produced, submit Schedule N.

Estimated number of employees: Estimated number of occupants (transients):

Estimated population equivalent (one population equivalent is 100 gallons of sewage per day, containing 0.17 pounds of BOD_5 and 0.20 pounds of suspended solids).

Flow P.E. BOD P.E. Suspended Solids P.E.

6.3 Total Loading for project (sum of 6.1 and 6.2)

Design Average Flow: 5,250 GPD P.E. 8.9 BOD

Design Max. Flow: 22,629 GPD P.E: 10.5 Suspended Solids

6.4 Commencing July 1, 2003, Section 12.2 of the Environmental Protection Act (415 ILCS 5/12.2, as amended by P.A. 93-32) requires the Agency to collect a fee for certain applications for the installation of sanitary sewer connections and extensions. Except for the conditions listed below, the following fee schedule shall apply:

Fee Dollars	Population Equivalents
100	1
400	2 - 20
800	21 - 100
1200	101 - 499
2400	500 or more

Please send the appropriate fee based upon section 6.4 or 6.5; certified or cashiers check made out to: "Treasurer, State of Illinois, Environmental Protection Permit and Inspection Fund" with the applicant's Federal Employee Identification Number (FEIN) appearing on the face of the check and submit along with this schedule. Any fee remitted to the Agency shall not be refunded at any time or for any reason, either in whole or in part.

The Sewer Permit fee does not apply to:

a) Any Department, Agency or Unit of State Government

b) Any unit of local government where **all** of the following conditions are met;

1) The cost of the installation or extension is paid wholly from monies of the unit of local government, state grants or loans, federal grants or loads, or any combination thereof;

2) The unit of local government is **NOT** given monies, reimbursed or paid, either in whole or in part, by another person (except for State grants or loans or federal grants or loans;

c) 1) Include a certified copy of the **budget item or the board or council minutes** which authorize the construction of this project with only local funds; **and**

2) I/we hereby certify that subsections (b)(1), (b)(2) and (c)(1) have been met.

_____

(Original Signature for Unit of Government)

6.5 A $1,000 fee shall be required for any industrial wastewater source that does not require pretreatment of the wastewater prior to discharge to the publicly owned treatment works or publicly regulated treatment works.

7. **DEVIATION FROM DESIGN CRITERIA:** The design criteria for sewers are contained in the "Illinois Recommended Standards for Sewage Works", Current Edition. This submittal ◯ does ◉ does not include deviations from said criteria. **If deviations are included, justification for said deviations must be attached.**

8. **INFILTRATION/EXFILTRATION LIMITS:** 200 gallons per inch diameter of sewer pipe per mile per day.

9. **SUMMARY OF SEWERS:**

Submit plan **and** profile drawings for all sanitary sewer extensions and for all sanitary sewer connections where either the domestic wastewater source serves more than one building, where the domestic wastewater source is 15 P.E. or more, where non-domestic waste is produced or where the connection is not direct to either a publicly-owned or publicly-regulated sewer.

	Service Connections		Publicly Owned or Regulated Extensions			
Pipe size – inches	6		8			
Total Length – feet	657		907			
Min. slope used - %	1.00		0.45			
Max. slope used - %	1.00		3.03			
Min. cover over sewers - feet (3' minimum)	6		6.7			
Pipe Material & Specs.	PVC SDR26 ASTM D3034		PVC SDR26 ASTM D3034			
Joint Material & Specs.	Elastomeric Gasket ASTM D3212/F477		Elastomeric Gasket ASTM D3212/F477			
Total Manholes	0		5			
Max. Distance Between Manholes	0		361			
Bedding Class for Rigid Pipe (A, B, or C per ASTM C12)	N/A		N/A			
Bedding Class for Flexible Pipe (IA, IB, II, or III per ASTM D2321-89)	1A/1B		1A/1B			

9.1 Is the project located in a flood plain? ◯ Yes ◉ No If yes, contact the Illinois Department of Natural Resources, Division of Water Resources Management for further permit requirements.

9.2 Are watertight manhole covers used on all manholes where the manhole tops are below cover or where the tops may be flooded by surface runoff or high water? ◉ Yes ◯ No

10. **EROSION CONTROL:**

The design criteria for Erosion Control are contained in the "Illinois Urban Manual" Current Edition, distributed by the National Resource Conservation Service. This submittal ◯ does ◉ does not include deviation from said criteria. If deviations are included, justification for said criteria must be attached. (See instructions for Schedule P to determine if Schedule P must be submitted.)

11. **EXISTING SEWER SYSTEM:**

A. This project will connect to one of the following:

1. ◉ Existing sanitary sewer
2. ◯ Existing combined sewer
3. ◯ Permitted sanitary sewer
4. ◯ Permitted combined sewer
5. ◯ Proposed sanitary sewer
6. ◯ Proposed combined sewer

If permitted but not constructed and operational provide permit number _____

B. Size and location of downstream sewer(s): - This box will expand as needed

8" PVC Sanitary Sewer located in Manchester Road R.O.W.

12. **WATER SUPPLY PROTECTION:**

The horizontal and/or vertical separation between sanitary sewers and watermains is in accordance with Section 370.350 of the Illinois Recommended Standards for Sewage Works. ◉ Yes ○ No

The location of proposed and existing watermain(s) must be shown in both the plan and profile views on plan sheet(s) for each water-sewer line crossing and at all locations within 10 feet horizontal distance of the proposed sewer line. Detailed drawing(s) for crossings, either typical or site-specific, shall be shown on the plan sheet(s).

12.1 HORIZONTAL SEPARATION:

All sewer line(s) is(are) 10 feet from water line(s) ◉ Yes ○ No
If no, provide justification AND describe the precautionary features against contamination

All proposed forcemain(s) 10' from water line(s) ○ Yes ○ No ◉ N/A

12.2 VERTICAL SEPARATION:

A. The water line(s) is/are at least 18 inches above the sewer line(s): ○ Yes ◉ No

If no, continue with 12.2.B and provide justification below as to why this is not possible and describe precautionary measures taken to prevent contamination.

B. The water line(s) is/are above the sewer lines(s) but less than 18 inches: ○ Yes ◉ No

If no, continue with 12.2.C and provide justification below as to why this is not possible and describe precautionary measures taken to prevent contamination.

C. The water line(s) is/are at least 18 inches below the sewer line(s): ◉ Yes ○ No

If no, provide justification below as to why this is not possible and describe precautionary measures taken to prevent contamination.

Justification and Precautionary Measures: - This box will expand as needed

For water main, storm sewer and sanitary sewer crossings, water main is 18" or more above the crossed pipe whenever possible. If that is not possible, then the water main is dipped for a minimum of 10' on either side of the crossing to achieve the 18" of vertical separation and the crossed pipe will be water main quality. Water services will be at least 18" below the sewer.

12.3 Proximity to wells, reservoirs, and other potable water sources: ○ Yes ◉ N/A

If yes, minimum distance, in feet _____

Describe precautionary measures taken to avoid contamination.

Location of all potable water sources shown on plan sheets. ○ Yes ○ No ◉ No Known Sources

13. **PIPE AND MANHOLE TESTING:**	Yes	No
Is infiltration testing included in plans, specifications, or special provisions?	◉	○
Is exfiltration test included in plans, specifications, or special provisions?	◉	○
Is air testing included in plans, specifications, or special provisions?	◉	○
Leakage testing for manholes included in plans, specifications, or special provisions?	◉	○

14. **FLEXIBLE PIPE TESTING:**

Is deflection test included in plans, specifications, or special provisions in accordance with the Illinois Recommended Standards for Sewage Works, Current Edition? ◉ Yes ○ No ○ N/A

15. **MISCELLANEOUS REQUIREMENTS**

The following requirements should be included on the plan sheets where so indicated. For items where this is not specified, the requirements may be on the plan sheets, in the specifications, or in the special provisions:

15.1 Standard Specifications for Water and Sewer Main Construction in Illinois, Current Edition, govern the construction of this project. ◉ Yes ○ No If no, provide specifications.

15.2 Pipe and joint ASTM/AWWA designation included on plan sheets. ◉ Yes ○ No

15.3 All flexible gravity sewer pipe installed in accordance with ASTM D2321-89; embedment materials for bedding, haunching, and initial backfill to at least 6 inches over the top of the pipe with Class IA or IB or II or III; processed material produced for highway construction used in the project classified according to particle size, shape, and gradation in accordance with ASTM D2321-89, Section 9 and Table 1. ◉ Yes ○ No ○ N/A

15.4 All rigid gravity sewer pipe installed in accordance with ASTM C12 and bedding material Class A, B, or C.

○ Yes ○ No ◉ N/A

15.5 Pickholes in all manholes likely to be flooded not larger than 1 inch in diameter and of the concealed type.

○ Yes ○ No ◉ N/A

15.6 All manholes numbered.

◉ Yes ○ No ○ N/A

15.7 Match lines shown on all plan sheets.

◉ Yes ○ No ○ N/A

HAEGER ENGINEERING

100 East State Parkway
Schaumburg, Illinois 60173-5300
Tel: 847.394.6600
Fax: 847.394.6608

POPULATION EQUIVALENT (PE) CALCULATIONS

Project: Meadow Wood East Subdivision
Location: Lake Zurich, IL
Project #: 24-136

Prepared: FRM
Reviewed: KML
Date: 6/5/2025

Meadow Wood East

Unit Type	# of Units	PE per Unit	Total PE
Single Family	15	3.5	52.5
TOTAL UNITS	15	TOTAL PE	52.5

Design Average Flow PE Calculation:

Total PE = 52.5 PE
Total Flow = 5,250 GPD

P.E. BOD_5 = 8.9 lbs BOD_5
P.E. Suspended Solids 10.5 lbs Suspended Solids

Design Max Flow PE Calculation:

Peaking factor = Q_{peak}/Q_{avg} = $(18 + P^{0.5}) / (4 + P^{0.5})$ P=Population in Thousands
Peaking Factor = 4.310

Design Max. = Peaking Factor x Flow
Design Max. = 226.3 PE
Design Max. = 22,629 GPD
Design Max. = 0.04 CFS

Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Public Water Supplies
Application for Construction Permit

The regulations referenced in this application are taken from the Illinois Environmental Protection Act, 2007. All subsequent rules, regulations, and violations listed in this document can be found within the Act. This application may be completed online, a copy saved locally, and printed before it is signed and mailed to the Illinois EPA.

1. Name of Public Water Supply: Village of Lake Zurich
2. Facility ID: IL0970850 County: Lake
3. Location of Project: North of Manchester Road, Lake Zurich, IL 60047
4. Title of Plans: Meadow Wood East Subdivision Final Engineering

   Number of Construction Drawings: 21
5. Documents being Submitted:
   - ☑ Application for Construction Permit
   - ☑ Schedule A - Cost Estimate
   - ☑ Schedule B - Water Main Construction
   - ☑ Specifications
   - ☑ Construction Drawings
   - ☐ Engineer's Design Summary
   - ☐ Schedule C-I Well Drilling Only
   - ☐ Schedule C-II Well Completion
   - ☑ Permit Fee (Applicable Water Main Only)
6. Scope of Project:

   Single family residential subdivision.
7. Illinois Commerce Commission: Are you a privately owned water company subject to Illinois Commerce Commission rules? ○ Yes ◉ No
8. Infringement on **Other Public Water Supplies:** Will any part of this project be located within the boundaries of an area served by another PWS? ○ Yes ◉ No

9. Certifications

NOTE: Each person signing this application certifies that the information in the application is complete and accurate, and that the text of the application has not been changed from the Agency's official construction permit application form.

9.1) Certificate by Design Engineer

I hereby certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate.

Name Kimberly Lask, P.E. Registration Number 062-054034

Firm Haeger Engineering, LLC

Address 100 East State Parkway

City Schaumburg State IL Zip 60173

Phone Number (847) 230-3176 Email (optional) kim-l@haegerengineering.com

Signature Date

9.2) Certificate by Applicant(s) to Construct

I hereby certify that I have read and thoroughly understand the conditions and requirements of this submittal. I/the representative company hereby agree to conform with the Standard Conditions and any Special Conditions made part of this Construction Permit.

Name Casey Builders

Address 509 W. Old Northwest Hwy., Suite 120

City Barrington State IL Zip 60010 Phone Number (847) 812-8325

Signature Date

9.3) Water Main Fees

Section 16.1 of the Illinois Environmental Protection Act (Act) requires the Agency to collect a fee for certain applications for the installation or extension of water mains. There are no permit fees for other improvements (for example, treatment facilities) to public water supply systems and only certain water main projects are affected. The Agency will not approve any construction application without the required fee. Except for the conditions listed in Section 9.4, the following fee schedule applies per Section 16.1(d) of the Act:

Fee : Total Length of Water Main

- ◯ $ 0 : 200 feet or less
- ◯ $ 240 : Greater than 200 feet but not more than 1,000 feet
- ◉ $ 720 : Greater than 1,000 feet, but not more than 5,000 feet
- ◯ $1200 : Greater than 5,000 feet

Please check the appropriate fee; make check or money order payable to: *Treasurer, State of Illinois* and submit along with this application. Any fee remitted to the Agency shall not be refunded at any time or for any reason, either in whole or in part.

9.4) Water Main Fee Exceptions - READ CAREFULLY BEFORE SIGNING THE FOLLOWING

The Water Main Permit fee does not apply to:

a. Any Department, Agency or Unit of State Government.

b. Any unit of local government where all of the following conditions are met:

i. The cost of the installation or extension is paid wholly from monies of the unit of local government, state grants or loans, federal grants or loans, or any combination thereof.

ii. The unit of local government is not given monies, reimbursed or paid, either in whole or in part, by another person (except for State grants or loans or federal grants or loans.

I, _____ hereby certify that this project meets the above criteria.

(Unit of local government & signature of authorized official)

DO NOT SIGN HERE UNLESS PROJECT MEETS FEE EXCEPTION CRITERIA.

9.5) Agreement to Furnish Water (this section must be completed if applicable)

The Village of Lake Zurich has agreed to furnish water to the area in which

(City, Town, Village, Water Company or Water Authority)

water main extensions are proposed by Casey Builders

(Applicant to construct)

according to plans titled Meadow Wood East Subdivision Final Engineering

prepared by Haeger Engineering, LLC

(Engineering Firm)

The undersigned acknowledges the public water supply's responsibility for examining the plans and specifications to determine the proposed extensions meet local laws, regulations, and ordinances.

Signature of authorized public water supply official	Title	Date

9.6) Certification by Owner(s) of Completed Public Water Supply Improvement(s)

I hereby certify that I have read and thoroughly understand the conditions and requirements of this submittal. I hereby agree to accept ownership of the project upon satisfactory completion.

Name of Public Water Supply	Facility ID
Village of Lake Zurich	IL0970850

Address	City	State	Zip
70 E. Main Street	Lake Zurich	IL	60047

Signature of authorized public water supply official	Date

Printed name of authorized public water supply official	Printed title of authorized public water supply official
Thomas M. Poynton	Mayor

NOTE: Applications signed by a person other than a responsible municipal official, corporation officer, or owner, must be accompanied by evidence of authority to sign the applications, unless documentation of such authority is on file with the Division of Public Water Supplies.

Felony Warning: Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony (415 ILCS 5/44(h)).

This Agency is authorized to require this information under Illinois Compiled Statutes, 415 ILCS 5/39 (2000). Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied.

IEPA - DIVISION OF PUBLIC WATER SUPPLIES - PERMIT SECTION
SCHEDULE A - ENGINEER=S COST ESTIMATE

Requests by various agencies and state and federal representatives for information on the cost of water works improvements have been numerous. Therefore, we feel there is a need for obtaining and compiling this information. We would appreciate your cooperation by supplying us with this data with each set of plans and specifications. Please submit the cost data with each of your projects sent in for approval.

1. Name of Public Water Supply Village of Lake Zurich

2.	SOURCE		
	A. Stream intake, impoundment.	$	
	B. Well (s).	$	
	C. Others	$	
		TOTAL	$ 0.00
3.	TREATMENT		
	A. Aeration facilities and detention basins.	$	
	B. High service pumps.	$	
	C. Filtration and/or ion exchange softening	$	
	D. Mixing and settling basins and/or flocculation equipment.	$	
	E. Chlorination and fluoridation equipment.	$	
	F. Recarbonation, chemical feeders, chemical handling equipment	$	
	G. Lab, buildings and miscellaneous.	$	
		TOTAL	$ 0.00
4.	WASTE DISPOSAL FACILITIES		
	A. Pumps and piping.	$	
	B. Holding structures	$	
	C. Treatment unit.	$	
		TOTAL	$ 0.00
5.	STORAGE		
	A. Ground level tank(s).	$	
	B. Elevated tank(s).	$	
	C. Pressure tank(s).	$	
		TOTAL	$ 0.00
6.	DISTRIBUTION SYSTEM		
	A. Feeder mains, booster pump(s) and station(s).	$	
	B. Water main extension(s)	$	
	C. Complete distribution.	$ 106,607.00	
		TOTAL	$ 106,607.00
7.	TOTAL PROJECT COST	$ 106,607.00	

IL 532-0843

This Agency is authorized to require this information under Illinois Compiled Statutes, 1415 ILCS 5/39 (1998). Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Public Water Supplies, Permit Section

Schedule B - Water Main Construction

*This form may be completed within Acrobat and printed. You may also complete a printed copy manually. Submit the completed form to the **Illinois EPA, Division of Public Water Supplies, Permit Section #13** at the address listed above.*

Name of Public Water Supply: Village of Lake Zurich ID# IL: 0970850

Project Title: Meadow Wood East Subdivision Final Engineering

Project Location (street names only): Manchester Road

1. Check the appropriate boxes to indicate the specifications to be used for the water main:
   - A. Standard Specifications for Water and Sewer Main Construction in Illinois 8th Edition (Updated 2020) ☑
   - B. Other, specifications submitted with the plan document or on file with the Agency ☐
2. Existing Population served by present supply: 19,984
3. Population to be served by water main extension: 53
4. For new service areas, would the disinfection byproducts maximum containment levels be met on a locational running annual average if a sample site were to be added to the new service area? ○ N/A ◉ Yes ○ No
5. Has this community water supply developed and does it maintain a systematic flushing program? ◉ Yes ○ No
6. Lowest normal chlorine residual expected on the proposed water main: 25 mg/L ◉ Free ○ Combined
7. Are a sufficient number of valves provided to isolate portions of the distribution system during repairs and maintenance and to facilitate unidirectional flushing, 500 foot intervals in commercial districts, or 1200 foot intervals in other districts? ◉ Yes ○ No
8. Disinfection:
   - A. Chemical: Chlorine
   - B. Initial Disinfectant Concentration: 50 (mg/L)
   - C. Final Disinfectant Concentration: 25 (mg/L)
   - D. Retention Time: 24 (hrs)
   - E. Are provisions made for collection of water samples to be collected for bacteriological analysis on two consecutive days taken at 24-hour intervals? ◉ Yes ○ No
   - F. Will samples from disinfection be collected from at least every 1,200 feet? If "No", attach a plan of samples to be taken along with justification for the lack of samples. ◉ Yes ○ No
9. Using the FEMA Map Service Center website (https://msc.fema.gov/), is this project located in a flood plain? ○ Yes ◉ No
   If yes, contact the Illinois Department of Natural Resources, Division of Water Resources Management; additional requirements may apply.
10. Are the minimum horizontal and vertical separation requirements in 35 Ill. Adm Code 604.1440 followed? If "No", explain provisions for protection of water main on a separate attachment. ◉ Yes ○ No
11. Does this project include any replacement water main which may have lead, partial lead, or galvanized requiring replacement service lines? ○ Yes ◉ No
12. Was the proposed water main sized after a hydraulic analysis based on flow demands and pressure requirements? Submit the hydraulic analysis to the Agency, if requested. ○ Yes ◉ No
13. Do all proposed fire hydrants have at least 6 inch in diameter leads and a lead length of 10 feet or less? Fire hydrant detail must be included in the plans if fire hydrants are proposed. ○ N/A ◉ Yes ○ No
14. Are any dead ends proposed? ○ Yes ◉ No

    If Yes, is there a flushing device? ○ Yes ○ No

    If No, explain in a separate attachment how water quality will be maintained in dead end.

This Agency is authorized to request this information under 415 ILCS 5/4(b)(2012). Disclosure of this information is voluntary and no penalties will result from the failure to provide the information. However, the absence of the information could prevent your application from being processed or could result in denial of your application from being or could result in denial of your application for certification. This form has been approved by the Forms Management Center.

15. Summary of Water Mains to be installed:

	Example											
Pipe size (inches)	12	8										
Total Length (feet)	2000	1101										
Pipe Material (DI, PVC, HDPE, etc)	PVC	PVC										
Pipe Specification (AWWA or ASTM)	AWWA C900	AWWA C900										
Joint Specification (AWWA or ASTM)	ASTM D3139	ASTM D3139										
Depth of Cover (feet)	5.0	5.5										
Maximum Capacity while maintaining 20 psi (gpm)	50	50										
Can maintain normal working pressure of 35 psi and 20 psi under all flow conditions	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Normal expected operating pressure range on proposed water main extension (PSI to PSI)	30 to 50	55 to 58										
Number of Fire Hydrants	3	3										
Number of Valves	2	3										
Size of water main connecting to (inches)	12	8										

16. Complete for crossings where water main crosses below or less than 18 inches above a sanitary or storm sewer:

	Example											
Crossing Number	1	1	2	3	4	7	8					
Plan Sheet Number	23	C7.1	C7.1	C7.0	C7.0	C7.1	C7.1					
Water Main Casing Pipe	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sewer Casing Pipe	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Water Main Quality Sewer	☐	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐
Reinforced Concrete Pipe with Rubber Gasket Joints	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Vertical Separation (inches)	20	18	18	18	18	27.8	18					

Attach additional tables as necessary.

17. All Water Main Construction Permit Applications must include all of the following:
- Application for Construction (Must include original signatures)
- Schedule A
- Schedule B
- Plans (with PE Seal and Signature) (Submit only the plan sheets necessary for review) (Profile view for all crossings in Item 16)
- State Historic Preservation Office Approval Letter (**Do not submit application without Approval Letter**)

18. Processing time may take up to 90 days, 45 days if a fee is paid. For faster permit processing, we have an expedited program. Do you request the expedited program? ◯ Yes ⊘ No
If Yes, we will email the engineer or designated contact with further instructions.

19. To designate a contact for this project other than the engineer, specify the following:

Name: _____ Phone: _____ Email: _____

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant:	Haeger Engineering LLC	*IDNR Project Number:*	2505140
Contact:	Kevin Lipinski	*Date:*	10/16/2024
Address:	100 E. State Parkway Schaumburg, IL 60173	*Alternate Number:*	24-136

Project: Meadow Wood Subdivision
Address: Manchester Road and Tanglewood Lane, Lake Zurich

Description: Single family residential subdivision northeast of Rand Road and Miller Road in Lake Zurich.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

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, 7

IL Department of Natural Resources Contact
Isabella Newingham
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Alan Keller
1021 North Grand Avenue East
Springfield, Illinois 62794 -9276

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.

Terms of Use

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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.

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COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

At the Heart of Community

APPLICATION PZC 2025-12 **AGENDA ITEM 4.A**
PZC Hearing Opening Date: July 16, 2025
PZC Continued Consideration: August 20, 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: August 20, 2025

Re: 2025-12 – 173 West Main Street (Block A)
The Waterfront of Lake Zurich – Mixed-Use Development
Continued Consideration

SUBJECT

THG Holdings LLC-Series I, represented by Mr. Derick Goodman of The Huron Group (the "Applicants") and contract purchasers of the property commonly referred to as "Block A" at 173 West Main Street (hereinafter referred to as the "Subject Property"), request approval to develop the existing vacant property with a new mixed-use development consisting of 19 single-family townhomes within five buildings, an approximately 4,875 square-foot commercial building, associated parking areas and stormwater detention facilities to be known as "The Waterfront of Lake Zurich."

The Subject Property consists of 10 parcels addressed collectively as 173 West Main Street owned by the Village of Lake Zurich. The Village has agreed to sell the parcels to the Applicant to allow for its redevelopment.

GENERAL INFORMATION

Requested Action:	Special Use Permit for a Planned Unit Development (PUD) Zoning Map Amendment and Subdivision
Current Zoning:	B-2 Central Business District R-5 Single-family Residential District DR Downtown Redevelopment Overlay District

Proposed Zoning:	B-2 Central Business District R-6 Multiple Family Residential District
Current Use:	Vacant Property
Property Location:	173 West Main Street 153 West Main Street 183 West Main Street 0 Lake Street 24 Lake Street 30 Lake Street 11 Mionske Drive 7 Mionske Drive
Applicants:	THC Holdings LLC-Series I
Owners:	Village of Lake Zurich
Staff Coordinator:	Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Site Photos
D. Aerial Map
E. Zoning Map
F. Parcel Map
G. Development Application and Attachments
H. Development Review Comments

BACKGROUND

The Subject Property commonly referred to as "Block A" consists of 10 parcels under 8 addresses, encompassing approximately 1.7 acres of land located off Main Street, directly across from the Promenade, and is legally described in Exhibit A attached hereto.

The Applicants filed an application with the Village of Lake Zurich received on June 16, 2025 (the "Application") seeking:

- A Special Use Permit for a Planned Unit Development (PUD) and approval of a Development Concept Plan (Preliminary Plan) to develop the Subject Property with a mixed-use project.
- Rezoning the Subject Property within the B-2 Central Business and R-6 Multiple-Family Residential District
- Exterior Appearance and Site Plan Approval consistent with a Development Concept Plan
- The grant of modifications to the Zoning Code under the PUD:
    - Bulk requirements for multiple family residential development
    - Parking requirements for commercial development

Existing Conditions

As part of the Village's downtown redevelopment strategy, the Subject Property at 173 West Main Street was acquired in 2005, followed by the purchase of the remaining parcels in 2006 and 2007. The site, commonly known as Block A, is located in the older section of the community and is bounded by Main Street to the west, Mionske Drive to the north, Lake Street to the south, and an mature established residential neighborhood to the east.

Today, the Subject Property is vacant and unimproved, containing no structures and characterized by a mix of existing trees and concrete surfaces that remained after the building structures were demolished.

The site lies directly across from the Village-owned and maintained promenade along the southeast side of the lake. It is also within the area currently undergoing the Main Street Improvement Project, which will enhance the streetscape over the next two years.

The Subject Property consists of ten parcels under two zoning classifications as follows:

- The four parcels fronting West Main Street (183, 173, and 153 West Main Street) are currently zoned within the B-2 Central Business District;
- The remaining six parcels to the east and interior to the Subject Property are currently zoned within the R-5 Single-Family Residential District.

The entire property is located within the DR Downtown Redevelopment Overlay District and a Tax Increment Financing (TIF) District.

Over the years, Block A has drawn interest from multiple developers proposing a range of mixed-use concepts, including retail, single-family, and multi-family residential uses. None of these proposals advanced beyond the conceptual stage.

Proposal

In February 2025, The Huron Group, represented by Mr. Derick Goodman, approached the Village with an offer to purchase the site for a townhome development. The Village Board approved the sale in April 2025, contingent upon a portion of the Subject Property being developed with a land use such as a restaurant that would be used as an amenity for the residents of the community. The

developer's proposed project is a mixed-use development consisting of 19 attached single-family townhomes and a two-story commercial building with associated parking.

The commercial building will occupy the northern portion of the site, complementing the existing commercial character of the Main Street Area. The residential portion will be located to the east and south, providing a transition to the adjacent residential neighborhoods.

The 19 townhomes will be arranged within five buildings, four buildings with four units each and one building with three units. Each unit will be three stories in height, include three bedrooms and three bathrooms, and be constructed with high-quality materials. The townhomes will have rear vehicular access, front-facing pedestrian entrances, and private two-car garages. Each garage will accommodate two vehicles, with an additional two spaces will be made available on the driveway, meeting the Village's parking requirements for single-family dwellings.

The commercial site will feature a 4,875-square-foot, two-story building with a 23-space parking lot located to the east. While the number of proposed onsite parking spaces is not sufficient due to the constraints of the site, additional public parking will be available nearby as part of the ongoing Main Street Improvement Project.

The site's circulation plan is designed to provide access to both the residential and commercial components. A 24-foot-wide drive will connect Lake Street to the rear of the 19 townhomes and will continue to the commercial parking lot as a one-way private driveway, ultimately connecting to Mionske Drive. Along Mionske Drive, two one-way access drives provide separate entrance and exit points to the commercial parking lot, spaced approximately 90 feet apart. The Mionske Drive access point only provides access to the commercial portion of the development.

Pursuant to public notice published on June 28, 2025, in the Daily Herald, a public hearing has been scheduled with the Lake Zurich Planning & Zoning Commission for July 16, 2025, to consider the Application. On June 28, 2025, the Village posted a public hearing sign on the Subject Property (Exhibit B).

The public hearing was opened by the PZC on July 16, but continued to the August 20, 2025 meeting to allow the Applicant time to address the comments provided by the Village's Development Review Team.

Staff offers the following additional information:

A. Contingent Approval of Sale. On April 7, 2025, the Village Board approved the sale of the 1.7-acre Block A property to THG Holdings, LLC, represented by Mr. Derick Goodman, contingent upon the granting of zoning entitlements for the future development of the Subject Property with townhome and commercial development. The Village Board's approval of the sale can be viewed at the following link: https://play.champds.com/lakezurichil/event/151

B. Zoning History. The Subject Property comprises an assemblage of 10 parcels. The four parcels facing West Main Street are zoned within the B-2 Central Business district, while the remaining 6 parcels to the rear and facing Mionske Drive and Lake Street are zoned within the R-5 single-family residential district. The entire property is subject to the provisions of the DR downtown redevelopment overlay district. It is also located within the boundaries of the Village's TIF-2 tax increment financing district.

The site was originally developed with single-family homes constructed in the 1940s and 1950s. The home at 173 West Main Street, built in the early 1940s, was converted in 1979 into a restaurant and lounge. Over the years, the restaurant changed ownership, was damaged by fire, and subsequently demolished in 2004. Following the fire, and the demolition in 2004, several homes constructed in the 1950s, were also demolished by the Village in 2007.

The Village acquired 173 West Main Street in 2005, followed by the purchase of the remaining parcels in 2006 and 2007. All structures on the Subject Property were demolished by the Village in 2007 to prepare the site for future redevelopment.

C. Surrounding Land Use and Zoning. The Subject Property is situated along West Main Street in the Main Street Area of Lake Zurich, directly across from the Village-owned Promenade, which extends along the southeast portion of the lake. The entire site lies within the DR Downtown Redevelopment Overlay District.

To the north, the area is zoned B-2 Central Business District and is developed with a restaurant. To the south, the surroundings consist of both single and multiple family residential buildings, while the areas to the east are improved with older single-family homes.

D. Trend of Development. The Subject Property is located within the Main Street Area of Lake Zurich, an area that has experienced significant investment from both the Village and private developers. These efforts have brought new retail and commercial businesses, as well as new development to the area. The Village's construction of the lakefront promenade, along with the ongoing Main Street Improvement Project, is driving further beautification and attracting additional investment. The Subject Property is surrounded by single- and multi-family residential uses, with the commercial and retail center of the Main Street Area located just to the north.

E. Zoning District. The zoning code provides for three (3) zoning districts for business and commercial uses. When taken together, these districts are intended to permit development of property for the full range of business and commercial uses needed to serve the citizens of Lake Zurich and the surrounding suburban area. The B-2 Central Business District is located in the center of the Village. It is intended to serve the entire Lake Zurich suburban community with a wide variety of retail and service uses. The bulk standards in this district are intended to reflect the generally more intense development of property existing in this area.

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 downtown center of the village of Lake Zurich is an important meeting place where residents and visitors greet neighbors, shop, stroll, picnic, visit public buildings, and enjoy the beauty of the lake. The village has continued to prosper, but the vitality of downtown Lake Zurich has diminished over the years. Because the downtown is critical to the wellbeing of the community, the village undertook extensive planning, study, and analyses regarding how to restore the downtown's vitality.

The result of the village's efforts was the adoption of carefully crafted master plans, redevelopment guidelines, the tax increment financing ("TIF") redevelopment plan, and other standards for all new development throughout the downtown. Those plans and standards establish a distinct character for the downtown that is necessary for its success. That character can be achieved only by the comprehensive and consistent application of the regulations of the DR downtown redevelopment overlay district to all new construction, redevelopment, exterior remodeling, and exterior alteration of downtown buildings, structures, and amenities.

F. Density Discussion. The Subject Property contains 1.7 acres of land area. With a total of 19 units, the density of the proposed development is 11.3 units per acre. This density is in-line with other townhome and higher density developments in the Village. Comparable townhome densities in the Main Street area include:

a. Canterbury Townes along Rt 22 with a density of approximately 11.5 units per acre and
b. Somerset Townhomes along Lakeview Place and North Old Rand Road with a density of approximately 19 units per acre.

GENERAL FINDINGS

Staff of the Village's Development Review Team (DRT) has evaluated the development against the various standards and provisions of the Lake Zurich Municipal Code and offers findings on specific sections of the Code.

9-18-3: STANDARDS FOR AMENDMENTS:

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 (with the recommendation of the PZC) should 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 the application:

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

Staff Response: Standard met. The proposed map amendment meets the purpose of the zoning code whose overall purpose is to maintain Lake Zurich as a community with thriving residential and business areas, in particular with respect to land use patterns, public infrastructure, community expectations and value.

One of the stated purposes of the zoning code is to implement and support the goals and policies of the Village's Comprehensive Plan, recently adopted in March 2025. The "Lake Zurich Together" Plan designates the future land use of the subject property as mixed-use. The proposed development aligns with this designation, as it includes both a commercial restaurant and residential housing. The property is located within the Main Street District, which supports the density proposed for the townhomes.

Accordingly, the requested map amendment to rezone the Subject Property to B-2 Central Business for the commercial portion and R-6 Multiple-Family Residential for the townhome portion is consistent with the land use vision and development goals outlined in the Comprehensive Plan. Additionally, both zoning classifications are consistent with immediately adjacent zoning classifications respectively.

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

Staff Response: Standard met. The proposed uses permitted by the zoning map amendment—commercial and residential—are consistent with the purpose and intent of the zoning code, which encourages the development of Subject Property with these uses in appropriate locations. The amendment would allow for a new restaurant to develop, as well as provide additional housing to the Main Street area.

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

1. Existing Uses and Classifications: The existing uses and zoning classifications for properties in the immediate vicinity of the subject property.

   Staff Response: Standard met. Adjacent properties are zoned B-2 and R-6. The proposed townhomes, zoned R-6 Multiple-Family Residential, will provide a compatible transition between the commercial development along West Main Street and the single-family homes to the east, which are zoned R-5.

2. Trend of Development: The trend of development in the immediate vicinity of the subject property, including changes, if any, in such trend since the subject property was placed in its present zoning classification.

   Staff Response: Standard met. The subject property is located along West Main Street, a key corridor in the Main Street District that supports important commercial and retail uses for the community. The proposed development will extend the established commercial corridor, while the townhomes will provide a transitional buffer to the single-family homes located to the east.

3. Diminution of Values: The extent to which the value of the subject property is diminished by the existing zoning classification applicable to it.

   Staff Response: Standard met. The subject property's current zoning of B-2 and R-5 limits the range of permissible uses. Reclassifying the site to align with the proposed development will expand its potential while maintaining compatibility with adjacent properties and portions of the property already zoned similarly.

4. Increase in Health, Safety, And Welfare: The extent, to which any such diminution in value is offset by an increase in the public health, safety, and welfare.

   Staff Response: Standard met. There is no evidence that this diminution in value is offset by an increase in the overall public health, safety, and welfare.

5. Effects On Adjacent Properties: The extent to which the use and enjoyment of adjacent properties would be affected by the proposed amendment.

   Staff Response. Standard partially met. The proposed development is designed to minimize impacts on surrounding properties through measures such as supplemental landscaping, fencing, and lighting that conform to Village standards, helping to protect adjacent properties and preserve the overall character of the area. Certain relief of the bulk requirements are also being requested to accommodate the density of the development.

6. Value Of Adjacent Properties: The extent to which the value of adjacent properties would be affected by the proposed amendment.

   Staff Response: Standard met. No evidence has been provided to demonstrate that the proposed development will have a negative impact on the value of adjacent properties. The development of the existing vacant property with a mixed-use development will enhance the Subject Property.

7. Future Development: The extent to which the future orderly development of adjacent properties would be affected by the proposed amendment.

Staff Response: Standard met. The proposed rezoning will not impact future development on adjacent properties.

8. Suitability Of Text Amendment: The suitability of the proposed text amendment for the zoning district in which the amendment is being proposed.

Staff Response: Not Applicable.

9. Ingress and Egress: The availability, where relevant, of adequate ingress to and egress from the subject property and the extent to which traffic conditions in the immediate vicinity of the subject property would be affected by the proposed amendment.

Staff Response: Standard met. Ingress and egress to the site will be available from both Mionske Drive and Lake street. Internal streets within the development will be designed to Village standards that will allow for proper emergency access to all properties within the subdivision.

10. Utilities and Services: The availability, where relevant, of adequate utilities and essential public services to the subject property to accommodate the uses permitted or permissible under its present zoning classification.

Staff Response: Standard met. The development will be served with new water, sanitary and storm water utilities in accordance with the standards provided in the land development code.

11. Length of Vacancy: The length of time that the subject property has been vacant, considered in the context of the pace of development in the vicinity of the subject property.

Staff Response: Standard met. The Subject Property has been vacant for nearly 20 years. The proposed rezoning would help facilitate use of the Subject Property and align with commercial businesses and residential properties in the vicinity.

12. Positive Effect: The proposed amendment creating a positive effect for the zoning district, its purposes, and adjacent properties shall be placed before the benefits of the petitioner.

Staff Response: Standard met. The proposed map amendment will support growth in the Main Street Area by allowing the development of a currently vacant lot. The addition of a new restaurant and residential properties will create a positive effect in the area.

9-22-5: STANDARDS FOR PLANNED UNIT DEVELOPMENTS.

Planned unit developments are included in the zoning code as a distinct category of special use. As such, they are authorized for the same general purposes as all other special uses and in recognition of the fact that traditional bulk, space, and yard regulations that may be useful in protecting the character of substantially developed and stable areas may impose rigidities on the development or redevelopment of parcels or areas that lend themselves to an individual, planned approach.

A. Special Use Permit Standards: No special use permit for a planned unit development shall be recommended or granted pursuant to this chapter unless the applicant shall establish that the proposed development will meet each of the standards made applicable to special use permits pursuant to chapter 19 of this title.

Staff Response: Standard met. Please refer to the "Standards for Special Use Permits" contained within this report.

B. Additional Standards for All Planned Unit Developments: No special use permit for a planned unit development shall be recommended or granted unless the applicant shall establish that the proposed development will meet each of the following additional standards:

1. Unified Ownership Required: The entire property proposed for planned unit development treatment shall be in single ownership or under such unified control as to ensure that the entire property will be developed as a unified whole. All owners of the property shall be included as joint applicants on all applications and all approvals shall bind all owners. The violation of any owner as to any tract shall be deemed a violation as to all owners and all tracts.

Staff Response: Standard met. The entire property that is subject to the PUD is under contract to be purchased by the Applicant, THG Holdings LLC-Series I.

2. Minimum Area: The applicant shall have the burden of establishing that the subject property is of sufficient size and shape to be planned and developed as a unified whole capable of meeting the objectives for which planned unit developments may be established pursuant to this section.

Staff Response: Standard met. The Subject Property is of sufficient size to accommodate the proposed development. This 1.7-acre assemblage, consisting of ten parcels, will support the construction of 19 single-family attached townhomes, a two-story commercial building, associated parking, and stormwater detention. The Subject Property provides adequate size and configuration to be developed as a single planned unit development that integrates both the townhomes and commercial uses as proposed.

While the commercial building will be served by a 23-space vehicular parking lot located immediately adjacent to the structure, additional parking is proposed to be provided on nearby properties by means of shared parking

agreements.

3. Covenants and Restrictions to Be Enforceable by Village: All covenants, deed restrictions, easements, and similar restrictions to be recorded in connection with the planned unit development shall provide that they may not be modified, removed, or released without the express consent of the board of trustees and that they may be enforced by the village as well as by future landowners within the proposed development.

   Staff Response: Standard met. The Village will ensure that any and all easements are properly recorded and will be enforced by the Village. Easements for onsite improvements will be provided at the time of Final Plan consideration. The residential development will need to be managed by a Homeowners Association that will be required to adopt its declarations of covenants, rights, and restrictions. The declarations will need to be reviewed and approved by the village prior to Final Plan approval.

4. Public Open Space and Contributions: Whenever the official comprehensive plan, zoning map, or official map indicates that development of a planned unit development will create a need for land for public purposes of the village within the proposed planned unit development, the board of trustees may require that such area be designated and to the extent such need is specifically and uniquely attributable to the proposed development, dedicated to the village for such use. In addition, the board of trustees may require evidence that all requirements of village ordinances pertaining to the dedication of land or the contribution of cash in connection with subdivisions or developments of land have been met as respects the proposed planned unit development.

   Staff Response: Standard met. Fees and contributions will be assessed by the Village in lieu of land dedication for public park purposes, in accordance with Section 10-4-5 of the municipal code. The developer will be provided with an estimate of the park impact fees to be paid in lieu of land dedication. Stormwater detention areas are not accepted as dedication for park purposes. As such the Developer intends to comply with the requirements of the Stormwater Management ordinances.

   The Lake Zurich Together Comprehensive Plan identifies Block A for mixed-use development with a community green space. The Main Street Improvement project being implemented by the Village will provide open space amenities in the form of the Promenade, lake overlooks, sidewalks, benches and other pedestrian amenities. The Developer will provide a context-appropriate, destination-style use, such as a restaurant, is proposed. This offeris residents a dedicated space for programming, events, and outdoor dining.

5. Common Open Space:

a. Amount, Location, And Use: The failure of a planned unit development to provide common open space shall be considered to be an indication that it has not satisfied the objectives for which such developments may be approved pursuant to this zoning code. When common open space is provided in a planned unit development, the amount and location of such open space shall be consistent with its intended function as set forth in the application and planned unit development plans. No such open space shall be used for the construction of any structure or improvement except such structures and improvements as may be approved in the final plan as appropriate to the intended leisure and recreational uses for which such open space is intended.

b. Preservation: Adequate safeguards, including recorded covenants or dedication of development rights, shall be provided to prevent the subsequent use of common open space for any use, structure, improvement, or development other than that shown on the approved final plan. The restrictions must be permanent and not for a given period of years and must run with the land. Such covenants and dedications may provide that they may be released, but only with the express written consent of the board of trustees.

c. Ownership And Maintenance: The final plan shall include such provisions for the ownership and maintenance of such open space and improvements as are reasonably necessary to ensure their continuity, care, conservation, maintenance, and operation in accordance with predetermined standards and to ensure that remedial measures will be available to the village if such open space or improvements are permitted to deteriorate or are not maintained in a condition consistent with the best interests of the planned unit development or the village.

d. Property Owners' Association: When the requirements of subsection B5c of this section are to be satisfied by the ownership or maintenance of such open space or improvements by a property owners' association, such association shall meet each of the following standards:

i. The bylaws and rules of the association and all declarations, covenants, and restrictions to be recorded must be approved as part of the final plan prior to becoming effective. Each such document shall provide that it shall not be amended in any manner that would result in it being in violation of the requirements of this subsection B5d(1); and

ii. The association must be established and all covenants and restrictions must be recorded prior to the sale of any property within the area of the planned unit development designated to have the exclusive use of the proposed open space or improvements; and

iii. The association must be responsible for casualty and liability insurance, taxes, and the maintenance of the open space and improvements to be deeded to it; and

iv. Membership in the association must be mandatory for each property owner and any successive owner having a right to the use or enjoyment of such open space or improvements; and

v. Every property owner having a right to the use or enjoyment of such open space or improvements must pay its pro rata share of the cost of the association by means of an assessment to be levied by the association that meets the requirements for becoming a lien on the property in accordance with state statutes; and

vi. The association must have the right to adjust the assessment to meet changed needs. The membership vote required to authorize such adjustment shall not be fixed at more than two-thirds (2/3) of the members voting on the issue; and

vii. The village must be given the right to enforce the covenants; and

viii. The village must be given the right, after ten (10) days' written notice to the association, to perform any maintenance or repair work that the association has neglected to perform, to assess the membership for such work and to have a lien against the property of any member failing to pay such assessment. For this purpose alone, the village shall have all the rights and powers of the association and its governing body under the agreements and declarations creating the association.

Staff Response: Standard Met. The development contains common open space that includes private streets, land between the buildings, pedestrian pathways, and stormwater management facilities. These areas are proposed to be owned and maintained by a Homeowner's Association (HOA). The specific responsibilities of the HOA will be provided for through declarations of covenants, rights and restrictions that will be required to be submitted for review and approval at the time of final plan consideration.

6. Landscaping and Perimeter Treatment: Any area of a planned unit development not used for structures or circulation elements shall be landscaped or otherwise improved. The perimeter of the planned unit development shall be treated so as to ensure compatibility with surrounding uses by means such as provision of compatible uses and structures, setbacks, screening, or natural or manmade buffers.

Staff Response: Standard partially met. The development has effectively incorporated foundation plantings and interior landscaping, particularly around the commercial parking lot. Currently, a 6-foot-high fence and five shade trees are provided along the northern half of the east lot line. However, to ensure year-round screening, the entire east lot line should be bordered with

a combination of the 6-foot-high fence and both evergreen and shade trees.

Landscaping and fencing may be installed within and along the approximately 15.57-foot-wide area on the southern half of the east lot line, which adjoins residential properties. This will provide additional privacy and buffer for the adjacent neighborhood.

The Applicant has indicated that they are in the process of researching the approximately 6-foot wide strip of property along the southerly portion of the east lot line to potentially acquire the property so that it can be incorporated into the development to provide the additional buffer needed to plan a landscape screen.

Private Streets: Private streets are prohibited unless expressly approved by the board of trustees. If so approved, they shall meet all construction standards applicable to public streets. No such streets shall be approved except upon the condition that they shall be owned and maintained by a property owners' association meeting the requirements set forth in subsection B5d of this section.

Staff Response: Standard met. This standard is written within the framework of single-family detached homes, whose subdivisions are developed with public streets. However, due to the nature of the Subject subdivision and at the recommendation of the Village's Development Review Team (DRT), all streets within the development are proposed to be constructed and maintained as private streets. Such streets will be constructed to village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

7. Sidewalks: A sidewalk meeting the standards of the Lake Zurich subdivision ordinance shall be provided along at least one side of every street in or abutting a planned unit development; provided, however, that such sidewalk may be constructed in a street right of way or as a specific element of the design of the planned unit development.

Staff Response: Standard partially met. A sidewalk is proposed along Main Street, partially through the site, and around the commercial building. However, sidewalk along the south side of the Subject Property should extend to the easterly property boundary to allow future connection to sidewalks in front of the single-family residential properties to the east.

Additionally, a sidewalk must be provided along the northerly lot line to connect the Village's Main Street sidewalk to the north-south walkway within the commercial parking lot. This northern sidewalk should also be stubbed to the easterly property line to facilitate future connections to sidewalks adjacent to the single-family residences.

Currently, the north-south sidewalk within the commercial parking lot terminates at the property line and continues onto grass within the right-of-way, which should be addressed for proper pedestrian connectivity.

8. Utilities: All utility lines shall be installed underground.

Staff Response: Standard met. All private and public utilities proposed to serve the development itself are proposed to be installed underground.

C. Additional Standards for Specific Planned Unit Developments: When the district regulations authorizing any planned unit development use in a particular district impose standards to be met by such planned unit development in such district, a special use permit for such development shall not be recommended or granted unless the applicant shall establish compliance with such standards. (Ord., 10-2004)

Staff Response: Standard Met. There are no additional standards imposed through the establishment of a commercial building that are proposed within the B-2 Central Business District or for the establishment of a townhome multiple-family subdivision proposed within the R-6 district. Any conditions governing the development of the subdivision by the developer and home builder along with the future maintenance of common areas will be memorialized within a binding development agreement between the village and developer.

9-19-3: STANDARDS FOR SPECIAL USE PERMITS.

Staff has reviewed the plan and found that the amendment will continue to remain in substantial conformance with the standards for Special Use Permits as outlined below.

A. General Standards: No special use permit for a planned unit development shall be recommended or granted unless the applicant shall establish substantial conformance with the following:

1. Zoning Code and Plan Purposes: The proposed use and development will be in harmony with the general and specific purposes for which this zoning code was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official comprehensive plan.

Staff Response: Standard met. The proposed development remains in substantial conformance with the purpose and intent of the B-2 Central Business District and aligns with the land use designation in the adopted Lake Zurich Together Comprehensive Plan, which identifies the entire assemblage of parcels as "Mixed Use."

The Main Street District Framework within the Comprehensive Plan envisions the site as mixed-use, incorporating residential units, community green space, active ground-floor uses, rear landscaping to buffer residential areas, and rooftop and patio spaces. The proposed development meets these objectives by providing an active commercial use with a rooftop terrace and patio. Additional landscaping will further enhance buffering for the residential properties to the east.

The project also supports the existing DR Downtown Redevelopment overlay district's goal of maintaining a retail and dining presence within the core Main Street area.

No Undue Adverse Impact. The proposed use and development will not have a substantial or undue adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

Staff Response: Standard met. The proposed commercial building and townhomes are designed in a manner so as to minimize any undue adverse effect upon itself or any adjacent properties. These measures include:

- **The density of the residential townhouse buildings at 11.3 units per acre is consistent with or below similar townhouse developments in the Main Street Area.**
- **Landscape buffers will be installed along the eastern lot line to screen the development from neighboring residential properties. Additional plantings and a 6-foot fence will further enhance this screening.**
- **Building and parking lot lighting will comply with all illumination standards and site lighting code requirements.**
- **On-site traffic will flow in a one-way direction from Mionske Drive into the commercial parking lot to reduce potential conflicts. Residential traffic will primarily enter from Lake Street, avoiding interference with the commercial lot. The Lake Street access will also serve as the access drive for emergency vehicles to enter the site.**
- **Locating the parking lot at the rear of the building improves the Main Street streetscape.**

In both use and design, the proposed development is consistent with the ongoing redevelopment trends along the Main Street area. It will enhance the character of the corridor by transforming and beautifying a vacant property. Combined with planned phased streetscape improvements, the Main Street frontage will provide an attractive, pedestrian-friendly environment.

2. No Interference with Surrounding Development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.

Staff Response: Standard met. The location and operation of the proposed development is not intended to interfere with the surrounding development. The vehicular drives are proposed to limit traffic for improved traffic flow within the site.

Setbacks for the project are in substantial conformance with the requirements of the B-2 Central Business District and the R-6 Multiple Family Residential District. The proposed residential density is also appropriate for the Main Street Area.

3. Adequate Public Facilities. The proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and schools, or the applicant will provide adequately for such services.

Staff Response: Standard met. Existing utilities currently run in the vicinity of the Subject Property. The Applicant is required to connect to such utilities –water and sanitary sewer.

4. No Traffic Congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through the surrounding streets.

Staff Response: Standard met. The proposed restaurant building will have traffic normally associated with commercial development. The layout of the parking lot, proximity of the proposed shared parking lot on a nearby property, entrance and exit points, and internal driveways are designed to minimize congestion and maintain smooth traffic flow. Vehicles visiting the restaurant will not need to pass through the residential townhome area to exit the site.

All streets within the development will be privately maintained.

No Destruction of Significant Features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

Staff Response: Standard met. The proposed development will not result in the destruction, loss, or damage of any natural or historic features as the development is improving property that was previously developed but currently vacant. The removal of existing mature trees of significance at the rear of the Subject Property will be compensated with a landscape plan that proposes a number of trees and shrubs within the PUD.

5. Compliance with Standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this Code authorizing such use.

Staff Response: Standard met. The proposed development will comply with all applicable additional standards imposed by the building codes for commercial buildings and single-family residences, except for certain bulk requirement modifications requested by the developer. These include reductions to the front setback from 25 feet to 10 feet, the south side setback from 7 feet to 5 feet, and the rear yard from 30 feet to 15 feet. A modification to the commercial parking requirements is also requested.

The development will also comply with the requirements of the Village adopted Lake County Watershed Development Ordinance (WDO) also known as the Stormwater Ordinance as the developer is providing for surface and underground stormwater detention facilities to minimize to the greatest extent the release of stormwater runoff into the public system that is currently strained.

6. Positive Effect. The proposed special use creating a positive effect for the zoning district, its purpose, and adjacent properties shall be placed before the benefits of the petitioner.

Staff Response: Standard met. The proposed development will assist in redeveloping and revitalizing a property that has been vacant for years within Lake Zurich's Main Street Area.

It will add new housing options to the community and introduce a commercial restaurant use as an amenity for the public to enjoy, creating both economic and social benefits for the district and its surrounding properties.

B. Special Standards for Specified Special Uses. When the district regulations authorizing any special use in a particular district impose special standards to be met by such use in such district, a permit for such use in such district shall not be recommended or granted unless the applicant shall establish compliance with such special standards.

Staff Response: Standard met. There are no special standards for any special uses being requested. Staff will ensure that compliance is established before any additional permits are issued.

C. Considerations. In determining whether the applicant's evidence establishes that the foregoing standards have been met, the Plan Commission and the Board of Trustees shall consider:

1. Benefit. Whether and to what extent the proposed use and development at the particular location requested is necessary or desirable to provide a service or a

facility that is in the interest of the public convenience or that will contribute to the general welfare of the neighborhood or community.

Staff Response: Standard met. The proposed development will bring a new and comprehensive lifestyle option to the Village. Residents of the village and surrounding municipalities will be provided with a convenient space for dining.

The development also provides a transition from the commercial uses to the north to the lower-density residential areas along Mionske Drive and Lake Street. The single-family townhomes serve as a buffer between commercial uses and the R-5 Single Family Residential District. This project will expand housing options for both empty nesters and first-time homebuyers seeking smaller, low-maintenance homes in close proximity to the lake and to the Main Street area.

2. Alternative Locations. Whether the purposes of the zoning code can be met by the location of the proposed use and development in some other area or zoning district that may be more appropriate than the proposed site.

Staff Response: Standard met. The proposed location is well-suited for a mixed-use development consisting of a commercial building and single-family townhomes. Its suitability is supported by the surrounding land uses, architecture, and design along Main Street, as well as its alignment with the adopted Comprehensive Plan. No alternative locations are currently proposed.

3. Mitigation of Adverse Impacts. Whether all steps possible have been taken to minimize any substantial or undue adverse effects of the proposed use and development on the immediate vicinity through building design, site design, landscaping, and screening.

Staff Response: Standard met. All steps necessary will be taken to minimize any substantial adverse effects of the proposed development.

IDENTIFICATION AND ANALYSIS OF ZONING RELIEF FOR THE PLANNED UNIT DEVELOPMENT (PUD)

On analysis of the proposed development against the various standards contained within the municipal code, staff has identified the following areas that will require zoning relief.

The Village Code includes several Planned Unit Development (PUD) objectives, which discuss desirability, creative approaches, architectural coordination, preservation of characteristics such as natural topography, use of and creation of open space.

1. **Off Street Parking Regulations.**

The proposed development includes a 4,875-square-foot, two-story commercial building with 23 parking spaces. While this falls short of the standard parking requirement, the site's location in the pedestrian-friendly Main Street Area allows nearby public parking to compensate for the shortfall. Additional parking is being added along West Main Street and is present throughout the area. The developer will secure a shared parking agreement with a neighboring property to address overflow needs. Parking spaces within 500 feet, including public lots and those along the Promenade, will also count toward meeting the requirement.

Section 9-10-1. OFF STREET PARKING.

Standard	Required	Proposed
Eating and drinking places 1 for each 5 persons of design capacity in the B-2 district	54 parking spaces	23 parking spaces (Deficient by 31 parking spaces)

2. Location Of Required Parking Spaces:
d. Deficiency Spaces: When proposed to eliminate a parking deficiency or when required because of a change in use or an increase in use intensity pursuant to subsections B1b or B1c of this section, parking spaces may be located within any district adjacent to the district in which the principal use in question is a permitted use, or within the same zoning district as, and within five hundred feet (500') of, the zoning lot on which the use to be served is located; provided, however, that such remote parking spaces may be allowed only when such remote site is covenanted to remain as parking for so long as said parking spaces are required to meet the standards of this code and only when such remote site is authorized by the regulations of the district within which it is located.

Section 9-10-1 requires that eating and drinking places provide 1 space for every 5 persons of capacity. The Applicants are proposing 23 parking spaces within the parking lot. The deficiency of parking will be addressed through public parking within 500 feet of the zoning lot and a parking agreement with a neighboring property.

2. **Bulk Regulations.**

The proposed development consists of 19 single-family attached townhomes, arranged within 5 buildings located on the southern portion of the site. Townhouse (single-family attached) dwellings are permitted only within the R-6 district, and therefore the applicable bulk, space, and yard requirements will follow those of the R-6 Residential District. The proposal will require certain modifications to the code's bulk requirements for the required yards, which are outlined below:

Section 9-3-11. Bulk, Space and Yard Requirements.

Standard	Required	Proposed

Minimum Lot Area per Unit (square feet)	5,000	2,859
Minimum Yards: Front and Corner Side (feet)	25	10
Minimum Yards: Rear (feet)	30	15
Minimum Landscaped Surface Area (Percent)	60	27

Additional modifications to the Zoning and Land development Code may be identified upon submission of the documents requested by staff.

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
- Section 9-22-5: Standards for Planned Unit Developments
- Section 9-19-3: Standards for Special Use Permits

Staff has determined that all standards for approval have been met and 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 2025-12, 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 and applicable governmental agencies:
   a. Zoning Application and Cover Letter dated June 18, 2025, and prepared by Mr. Derick Goodman, President of The Huron Group, Inc.
   b. Exhibit A: Legal Description of the Subject Property
   c. Design Package, dated June 19, 2025, prepared by Hirsch MPG Architecture & Planning, containing the site plan, townhome floor plans, elevations for the townhomes and restaurant, and renderings of the proposed development
   d. Building Material Specifications
   e. Boundary and Topographic Survey dated October 7, 2025, and prepared by R.E. Decker, P.C. Land Surveyors
   f. ALTA / NSPS Land Title Survey dated April 22, 2025, and prepared by R.E. Allen and Associates, LTD
   g. Preliminary Plat dated May 23, 2025, and prepared by R.E. Allen and Associates, LTD
   h. Preliminary Engineering (sheets 1, 2, 3, 4, 5, S1) dated June 18, 2025, and prepared by Pearson, Brown & Associates, Inc.
   i. Tree Inventory, Locations, and Report dated May 21, 2025, and prepared by Urban Forest Management, Inc.
   j. Preliminary Landscape Plan (sheet L1.1) dated June 18, 2025, and prepared by Gary R. Weber Associates, Inc.

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.

3. 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

roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

4. The development shall be properly screened with the required amount of landscaping and buffering plant material as required by the village code. The Property line along the east of the development shall be landscaped and screened from adjacent properties to the east 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 east lot line of the development should be designed with adequate width. This may be accomplished by the acquisition of the approximately 6-foot wide strip of property along the southerly portion of the east lot line. The final landscape plan shall be approved by village staff prior to approval of the project by the Village Board.

5. 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, 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.

6. 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.

7. 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').

8. All sidewalks within and along the periphery of the Development on the Subject Property shall be constructed by the Developer as part of the development.

9. 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.

10. The Developer shall be responsible for payment of all Development Impact Fees and utility connection 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. The amount of the fees shall be determined prior to obtaining Final Plan approval by the Village Board.

11. 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

173 West Main Street (Block A)
August 20, 2025

The Planning & Zoning Commission recommends approval of Application PZC 2025-12, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated August 20, 2025 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 and applicable governmental agencies:
   k. Zoning Application and Cover Letter dated June 18, 2025, and prepared by Mr. Derick Goodman, President of The Huron Group, Inc.
   l. Exhibit A: Legal Description of the Subject Property
   m. Design Package, dated June 19, 2025, prepared by Hirsch MPG Architecture & Planning, containing the site plan, townhome floor plans, elevations for the townhomes and restaurant, and renderings of the proposed development
   n. Building Material Specifications
   o. Boundary and Topographic Survey dated October 7, 2025, and prepared by R.E. Decker, P.C. Land Surveyors
   p. ALTA / NSPS Land Title Survey dated April 22, 2025, and prepared by R.E. Allen and Associates, LTD
   q. Preliminary Plat dated May 23, 2025, and prepared by R.E. Allen and Associates, LTD
   r. Preliminary Engineering (sheets 1, 2, 3, 4, 5, S1) dated June 18, 2025, and prepared by Pearson, Brown & Associates, Inc.
   s. Tree Inventory, Locations, and Report dated May 21, 2025, and prepared by Urban Forest Management, Inc.
   t. Preliminary Landscape Plan (sheet L1.1) dated June 18, 2025, and prepared by Gary R. Weber Associates, Inc.

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.

3. 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 roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

4. The development shall be properly screened with the required amount of landscaping and buffering plant material as required by the village code. The Property line along the east of the development shall be landscaped and screened from adjacent properties to the east 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 east lot line of the development should be designed with adequate width. This may be accomplished by the acquisition of the approximately 6-foot wide strip of property along the southerly portion of the east lot line. The final landscape plan shall be approved by village staff prior to approval of the project by the Village Board.

5. 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, 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.

6. 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.

7. 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').

8. All sidewalks within and along the periphery of the Development on the Subject Property shall be constructed by the Developer as part of the development.

9. 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:
    b. 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.

10. The Developer shall be responsible for payment of all Development Impact Fees and utility connection 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. The amount of the fees shall be determined prior to obtaining Final Plan approval by the Village Board.

11. 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

EXHIBIT A
LEGAL DESCRIPTION OF SUBJECT PROPERTY

PARCEL 1:

LOTS 1, 2, 3, 4, 5, 6, 7 AND 8 IN BLOCK 2 IN E. S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST QUARTER OF THE NORTHWEST 1 / 4 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176 IN BOOK "E" OF PLATS, PAGE 5, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

LOTS 1 AND 2 IN MIONSKE'S SECOND SUBDIVISION, BEING A PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 11, 1951 AS DOCUMENT 737804, IN BOOK 1066 OF RECORDS, PAGE 189, IN LAKE COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF A 10 FOOT NORTH-SOUTH ALLEY LYING NORTH OF LAKE STREET, EAST OF LOTS 3, 4 AND 5 AND WEST OF LOT 6, ALL IN BLOCK 2, IN E.S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST 1 / 4 OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 1 0 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176, IN BOOK "E" OF PLATS, PAGE 5 AS VACATED BY PLAT OF VACATION RECORDED MARCH 1ST, 2007 AS DOCUMENT NUMBER 614050 IN LAKE COUNTY, ILLINOIS.

EXHIBIT B

PUBLIC HEARING SIGN PRESENT AT THE SUBJECT PROPERTY

Derick Goodman, President
The Huron Group, Inc.
747 Lake Cook Road, Suite 100W
Deerfield, IL 60015
312-260-9822 X 702
dgoodman@thehurongroup.com

June 18th, 2025

Orlando Stratman, Chairperson of the Planning & Zoning Commission
Village of Lake Zurich, IL
70 E. Main St.
Lake Zurich, IL 60047

RE: 173 W. Main St, Lake Zurich, IL 60084

Dear Mr. Stratman,

THG Holdings LLC-Series I (THG) asks that the Village of Lake Zurich accept our formal application and provide a recommendation for the properly commonly known as 173 W. Main St. THG is seeking a Special use permit for a Planned Unit Development (PUD) & Preliminary Plat of Subdivision.

Existing Land Use: Unimproved/Vacant

Existing Zoning: B-2 Central Business District & R-5 Single Family Residential

Surrounding Area:

- North/Northeast — Commercial/Restaurant & Apartments
- East — Single Family
- South — Residential Single Family & Apartments
- West — Lake Zurich

Project Narrative/Use Description:

THG Holdings LLC-Series I is the contract purchaser for 173 W. Main St. The property is comprised of 10 parcels located at the southeast corner of Mionske St. and Main St. with a combined area of 1.686 acres. The Village of Lake Zurich acquired the property in two transactions in 2004 and 2006 and it has subsequently remained vacant. THG's intended use for the property is a mixed-use development which includes attached single family townhomes and a two-story commercial space with parking. We believe the included plan aligns well with the surrounded area with residential to the south and commercial to the north.

The 19 attached single-family homes will be arranged in townhome buildings of 3 or 4 homes and will be 3 stories high. Building size will be 45' deep by 67' or 89'. Each home will be approximately 2,540 square feet and have 3 bedrooms 2.5-3 baths, a 2-car private garage, and a private driveway.

The commercial site will include a 65X75' two story building and a parking lot for 31 spaces. Additional offsite public parking will be available along Main Street, and other opportunities are available as needed to expand parking capacity offsite.

Attachments:

Enclosed are the materials required for preliminary plat approval:

- Zoning application
- Preliminary plat of subdivision
- Preliminary engineering
- Preliminary landscaping
- Site Plan
- Building elevations / Renderings
- Building materials summary
- Tree inventory/report/locations
- Legal description
- PIN's
- Mailing list for subsequent hearings

Please don't hesitate to contact our office with any additional questions.

Thank you,

Derick Goodman

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: 173 W. Main St, Lake Zurich, IL
2. **Please attach complete legal description**
3. Property Identification number(s): See Legal & PIN's
4. Owner of record is: Village of Lake Zurich Phone: 847-540-1683
   E-Mail Michael.Duebner@lakezurich.org Address: 70 E Main St, Lake Zurich, IL 60047
5. Applicant is (**if different from owner**): THG Holdings LLC-Series I Phone: 312-260-9822 X702
   E-Mail dgoodman@thehurongroup.com Address: 747 Lake Cook Road, Suite 100W, Deerfield, IL 60015
6. Applicant's interest in the property (owner, agent, realtor, etc.): Contract Purchaser
7. All existing uses and improvements on the property are: Unimproved
8. The proposed uses on the property are: 3 Story Attached Single Family Townhome & 2 Story Commercial
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:
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property: Contract for sale of property from Village of Lake Zurich to THG Holdings LLC-Series I
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.

THG Holdings LLC-Series I — (Name of applicant)

(Signature of applicant)

Subscribed and sworn to before me this 16th day of June, 2025.

(Notary Public)

Official Seal
Jamie Disney
Notary Public State of Illinois
My Commission Expires 3/21/2027

My Commission Expires 3-21-27

Village of Lake Zurich — **(Name of Owner, if different)**

(Signature of Owner, if different)

Subscribed and sworn to before me this 16th day of June, 2025.

(Notary Public)

"OFFICIAL SEAL"
KYLE KORDELL
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 03/03/2026

My Commission Expires 3-3-2026

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

☐ Zoning Code **Map** Amendment to change zoning of Subject Property from ____ to ____

☐ 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 Planned Unit Development

(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 _____

_____

Shore House

Site Plan

HURON GROUP	Concept Design	19 June 2025
	The Waterfront At Lake Zurich	25010
	Lake Zurich, Illinois	AJM

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S

LAKE STREET ELEVATION

MAIN STREET ELEVATION

MONSKES DRIVE ELEVATION

HURON GROUP

Concept Design — 19 June 2025

The Waterfront At Lake Zurich — 25010

Lake Zurich, Illinois — AJM

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E.S

Level 1 Plan - Typical

HURONGROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

19 June 2025
25010
AJM

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Level 1 Plan - Lake St.

HURON GROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

19 June 2025
25010
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Level 2 PLan - Typical

HURONGROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

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Level 2 PLan - Lake St.

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The Waterfront At Lake Zurich — 25010

Lake Zurich, Illinois — AJM

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Level 3 Plan - Typical

HURON GROUP

Concept Design — 19 June 2025

The Waterfront At Lake Zurich — 25010

Lake Zurich, Illinois — AJM

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Front Elevation

HURON GROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

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E1

Back Elevation

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Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

19 June 2025
25010
AJM

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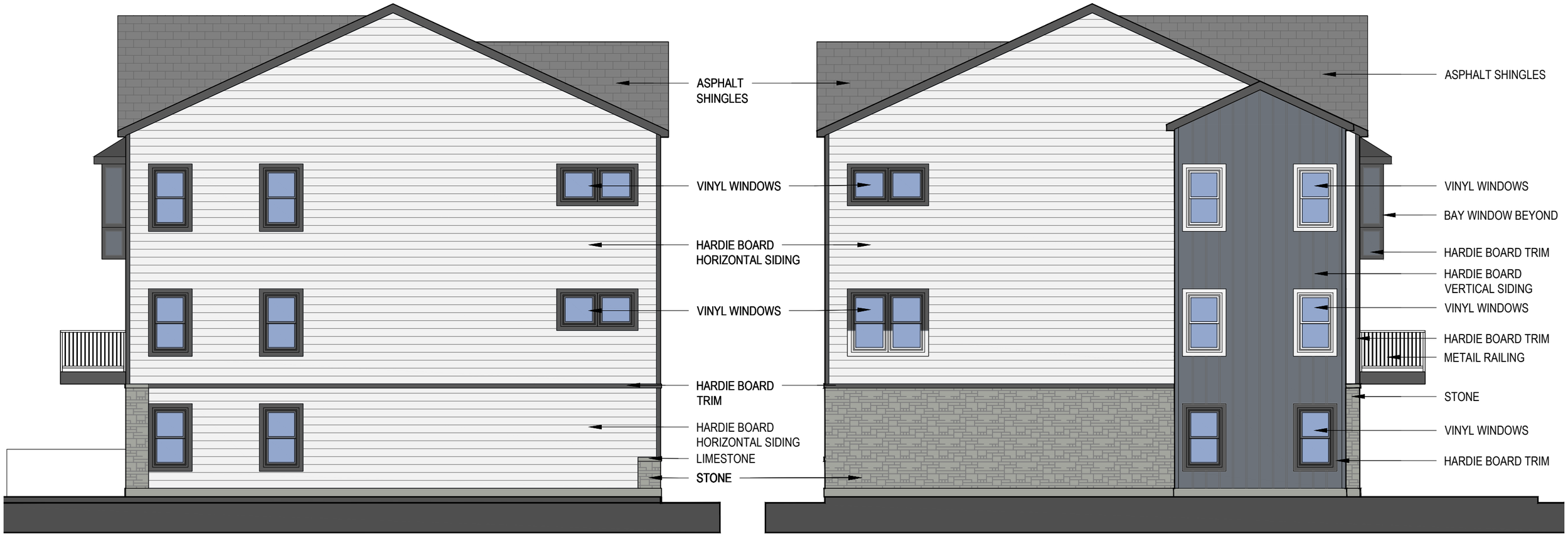
E2



Side Elevation

HURONGROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

19 June 2025
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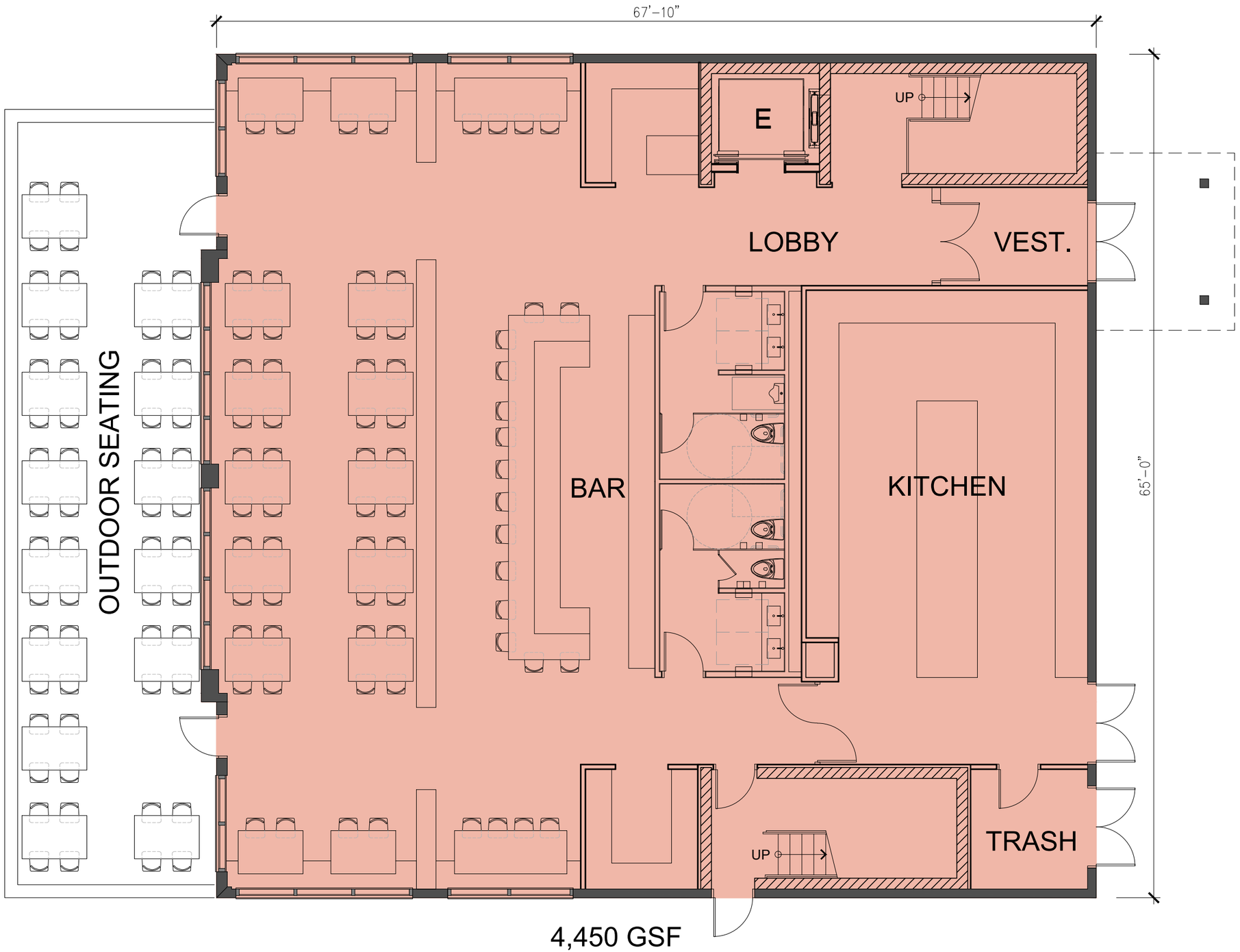
E3



4,450 GSF

Level 1- Restaurant

HURON GROUP

Concept Design — 19 June 2025

The Waterfront At Lake Zurich — 25010

Lake Zurich, Illinois — AJM

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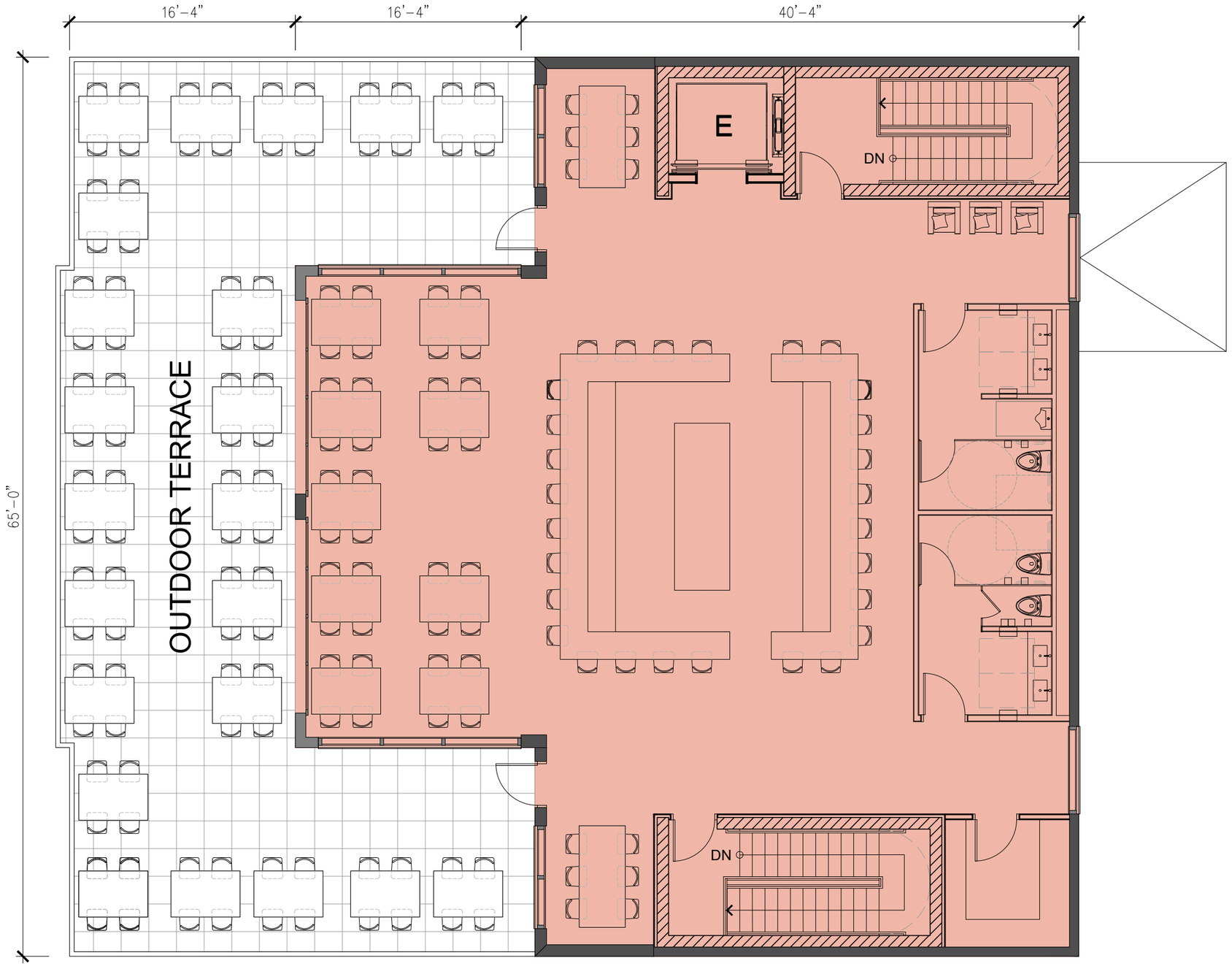
C1



3,160 GSF

Level 2 - Restaurant

HURONGROUP

Concept Design
The Waterfront At Lake Zurich
Lake Zurich, Illinois

19 June 2025
25010
AJM

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C2

Elevation - East

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25010
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CEE

Elevation - North

HURONGROUP

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Lake Zurich, Illinois

19 June 2025
25010
AJM

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CEN

Elevation - South

HURONGROUP

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Lake Zurich, Illinois

19 June 2025
25010
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CES

Elevation - West

HURON GROUP

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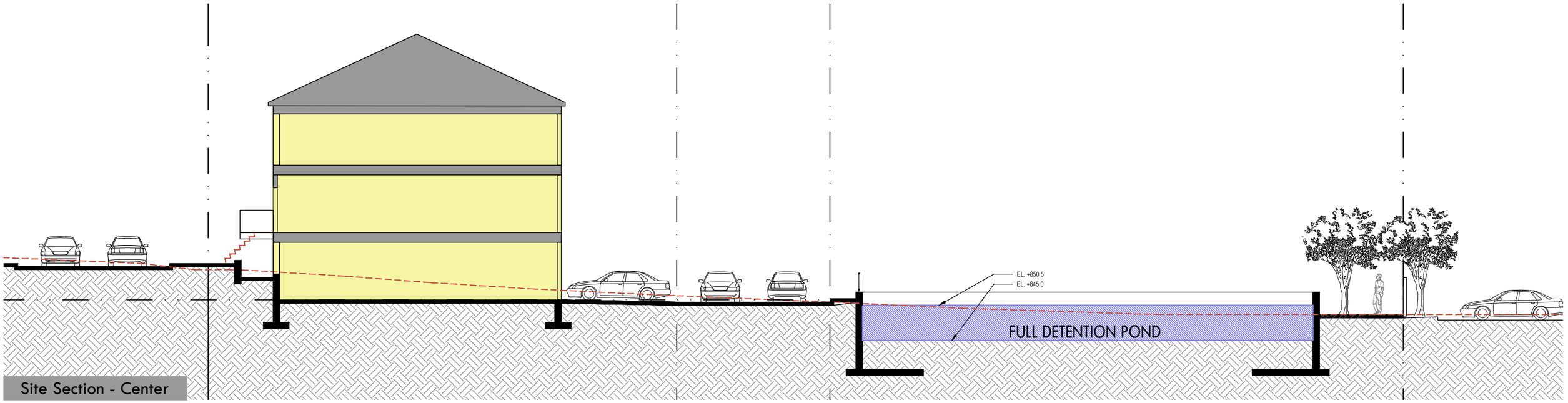
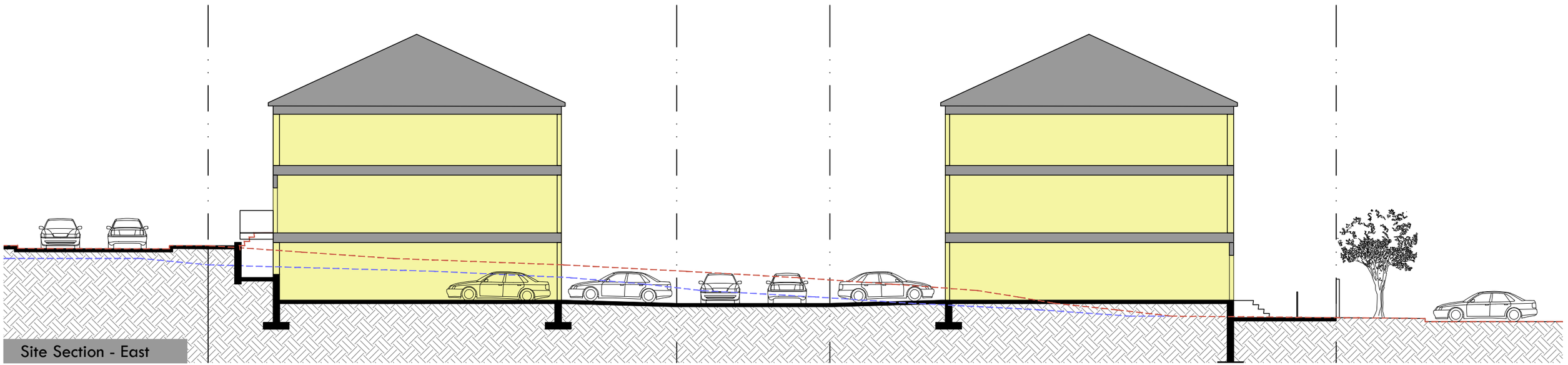
CEW



Site Section - Center



Site Section - East

HURONGROUP

Concept Design

19 June 2025

The Waterfront At Lake Zurich

25010

Lake Zurich, Illinois

AJM

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S1

BOUNDARY AND TOPOGRAPHIC

Survey

R. E. DECKER, P.C.

LAND SURVEYORS

114 E. COOK AVE., LIBERTYVILLE, ILLINOIS 60048

847-362-0091 FAX 847-362-0119 deckersurvey@gmail.com

The Illinois Professional Land Surveyors Association — CHARTERED 1993 — MEMBER

R.E. DECKER (1933-1999)

R.G. PAVLETIC P.L.S. 035-3261

The Meridian is assumed but reflects the record Subdivision or Deed, except when noted.

0 10 20 30 40

Scale, 1" = 20 ft.

PARCEL 1: Lots 1 and 2 in Mionskes Second Subdivision, being a part of the Northwest 1/4 of Section 20, Township 43 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof, recorded September 11, 1951 as Document 737804 in Book 1066 of Records, Page 189, in Lake County, Illinois.

Parcel 2: Lots 1, 2, 3, 4, 5, 6, 7 and 8 (together with vacated alley) in Block 2 of E.S. Bruces Subdivision of part of the Northeast Quarter of the Northwest Quarter of Section 20, Township 43 North, Range 10, East of the Third Principal Meridian, in Lake County, Illinois.

Legend

- Proposed Contour
- Existing Contour
- 762.65 - Proposed Elevation
- 762.2 - Existing Elevation
- Existing Deciduous Tree with Trunk Diameter
- Existing Conifer with Trunk Diameter
- Remove Tree
- Wood Utility Pole
- OH - Overhead Utility line

Utility Color Code:

- CT - Communications
- elec - Electric
- gas - Gas
- san - Sanitary
- sto - Storm
- wat - Water

Utility markers and lines shown in corresponding colors

- Underground Utility Marker

Valve Vault Rim-847.05'

INLET RIM-846.33' FULL

INLET RIM-846.41' FULL

CATCH BASIN RIM-846.50' FULL

CATCH BASIN RIM-846.42' S.INVERT-844.62'

CATCH BASIN RIM-846.77' FULL

CATCH BASIN RIM-846.16' N.INVERT-844.54'

10" CMP INVERT-845.71'

10" CMP INVERT-845.78'

10" CMP INVERT-845.80'

10" CMP INVERT-845.94'

10" CMP INVERT-846.02'

10" CMP INVERT-846.09'

10" CMP INVERT-846.18'

SANITARY MANHOLE RIM-847.31' S.INVERT-841.41' E.INVERT-841.21'

T/F-848.75'

T/F-848.56'

FOUND 1/2"IRON PIPE AT CORNER

Sign

WaterValve Top-847.33'

STREET

MIONSKES

DRIVE

60.00' R.O.W.

SIDEWALK

ASPHALT

S72°20'31"E 101.82'

4" PVC DAYLIGHT-846.58'

FOUND 1"IRON PIPE 0.80' W. & 0.20' S.

S18°55'02"W 7.65'

N89°49'23"E 129.20'

FOUND 3/4"IRON PIPE 0.50' E. & 0.35' N.

FOUND 1/2"IRON PIPE 0.60' WEST

Parcel Two

Parcel One

STOCKADE FENCE IS 0.60' WEST

T/F-848.71'

T/F-848.59'

S00°40'50"E 105.00'

STOCKADE FENCE IS 0.20' WEST

FOUND 1/2"IRON PIPE 0.40' WEST

FOUND 1/2"IRON PIPE 0.60' WEST

FOUND 1/2"IRON PIPE 0.50' EAST

N89°49'24"E 6.00'

15 Foot Alley

SURVEY AREA: 73453 SQ.FT.

SANITARY MANHOLE RIM-849.24' INVERT-842.29'

N18°50'09"E 310.32'

CONCRETE CURB

FIRE HYDRANT N.E. FLANGE-849.87'

MAIN

FOUND 1/2"IRON PIPE 0.25' EAST

CONCRETE

60.00' R.O.W.

TeleVault Rim-849.27'

Vacated Alley

Part of Lot A

S00°40'50"E 150.06'

T/F-857.77'

FOUND 5/8"IRON ROD 0.65' N & 0.65' W

FOUND IRON BAR 12.95' W. & 0.65' N.

320.97' S89°49'23"W

FOUND 3/4"IRON PIPE at 0.35' West

FOUND 1/2"IRON PIPE 0.75' W. & 0.10' N.

STORM MANHOLE RIM-849.62' S.INVERT-845.07' E.INVERT-845.12' N.INVERT-844.62'

FOUND 3/4"IRON PIPE AT CORNER SIDEWALK IS 1.50' WEST

SANITARY MANHOLE RIM-849.78' E.INVERT-843.38' S.INVERT-843.53'

LAKE

NO CURB

SANITARY MANHOLE RIM-855.65' S.INVERT-845.95' W.INVERT-843.00' N.INVERT-842.85' E.INVERT-842.95'

SANITARY MANHOLE RIM-859.58' W.INVERT-850.88'

STREET

40.00' R.O.W.

SANITARY MANHOLE RIM-858.77'

INLET RIM-850.53' INVERT-846.73'

FIRE HYDRANT N.W. FLANGE-863.10'

Project Benchmark

FIRE HYDRANT LOCATED ON THE WEST SIDE OF MAIN STREET N.W. FLANGE ELEVATION-849.87' NAVD'88

Legend of Abbreviations

N. = North	Doc. = Document
S. = South	SQ.FT. = square feet
E. = East	R.O.W. = Right of Way
W. = West	
N.E. = Northeast	
S.E. = Southeast	San. = sanitary
S.W. = Southwest	Sto. = storm
N.W. = Northwest	Inv. = invert
	PVC = polyvinyl chloride
Rec. = record	CMP = corrugated metal pipe
Meas. = measured	T/F = top of foundation

PROFESSIONAL LAND SURVEYOR — R.G. PAVLETIC — 035-3261 — Libertyville, Illinois — STATE OF ILLINOIS

expires 11-30-16

FIELD WORK COMPLETED: OCTOBER 7, 2015

STATE OF ILLINOIS } ss
COUNTY OF LAKE }

This professional service conforms to the current Illinois minimum standards for a "Boundary Survey."
This professional service conforms to the current Illinois minimum standards for topographic surveys.

R. E. DECKER, P.C.

By: _____
Professional Land Surveyor

Compare the Description on this Plat with your Deed and Title; also compare all stakes to this Plat before building by them, and report any differences at once. Dimensions are shown in feet and decimal parts thereof. Refer to Title, Covenants or Building Department for additional Easements, Setbacks or Restrictions which may exist.

ORDER NUMBER 15-882

ORDERED BY STREETSCAPE, LLC

FOR _____

REVISIONS: November 25, 2015 more topo

WITHOUT A RAISED SEAL PLAT IS NOT VALID

PROFESSIONAL DESIGN FIRM — R.E. DECKER, P.C. — 184-3086 — Libertyville, IL — STATE OF ILLINOIS

expires 4-30-15

Note Concerning Existing Utilities

When the plans or special provisions include information pertaining to the location of underground utilities such information represents only the opinion of the surveyor as to the location of such utilities and is only included for the convenience of the bidder. The surveyor and owner assume no responsibility whatsoever in respect to the sufficiency or accuracy of the information shown on the plans relative to the underground utility facilities. It shall be the contractor's responsibility to obtain from the respective utility companies, detailed information relative to the location of their facilities.

Contractor is responsible for contacting J.U.L.I.E. at 1-800-892-0123 and must obtain a dig number at least 72 hours prior to any work being done.

PRELIMINARY PLAT
OF

THE WATERFRONT AT LAKE ZURICH

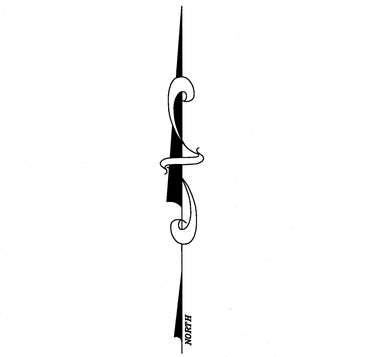
OF

PARCEL 1:
LOTS 1, 2, 3, 4, 5, 6, 7 AND 8 IN BLOCK 2 IN E. S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST QUARTER OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176 IN BOOK "E" OF PLATS, PAGE 5, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:
LOTS 1 AND 2 IN MIONSKE'S SECOND SUBDIVISION, BEING A PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 11, 1951 AS DOCUMENT 737804, IN BOOK 1066 OF RECORDS, PAGE 189, IN LAKE COUNTY, ILLINOIS.

PARCEL 3:
THAT PART OF A 10 FOOT NORTH–SOUTH ALLEY LYING NORTH OF LAKE STREET, EAST OF LOTS 3, 4 AND 5 AND WEST OF LOT 6, ALL IN BLOCK 2, IN E.S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176, IN BOOK "E" OF PLATS, PAGE 5 AS VACATED BY PLAT OF VACATION RECORDED MARCH 1, 2007 AS DOCUMENT NUMBER 6145050, IN LAKE COUNTY, ILLINOIS.

THE PREMISES COMMONLY KNOWN AS:
173 W. MAIN STREET, LAKE ZURICH, IL
PARCEL AREA = 1.686 ACRES, 73,443 S.F.
PIN'S: 14–20–105–001 (153 W. MAIN STREET)
14–20–105–002 (173 W. MAIN STREET)
14–20–105–003 (173 W. MAIN STREET)
14–20–105–004 (183 W. MAIN STREET)
14–20–105–005 (7 MIONSKE DRIVE)
14–20–105–006 (11 MIONSKE DRIVE)
14–20–105–010 (183 W. MAIN STREET)
14–20–105–011 (24 LAKE STREET)
14–20–105–012 (30 LAKE STREET)
14–20–105–017 (0 LAKE STREET)



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
File No. 75–26
P7525 PRELIM.DWG

Set Cut "X" Cross
102.55'rec.
102.87'meas. S 70°31'38" E
Found 1" Iron Pipe 0.57'S.& 0.56'E. of corner
Mionske Drive
PUBLIC ROADWAY
60'
6.86'meas. 7.1'rec. S 19°52'59" W
129.20'm.&r. S 88°56'20" E
102.63'
Found 1" Iron Pipe 0.77'E. of corner
26.57'
Found 3/4" Iron Pipe 0.04'S.& 0.43'E. of corner
Found 3/4" Iron Pipe
60'rec.
60'rec.
Found 1" Iron Pipe
76.08'
Main Street
PUBLIC ROADWAY
Lot 6
16,791 S.F.
COMMERCIAL
Outlot C
2,129 S.F.
79.01'
S 01°03'40" W
S 00°30'36" W
79.01'
Existing Residence
Existing Garage
Lot 3
Lot 4
105.01'
MIONSKES SECOND SUBDIVISION
14.59'
Outlot A
140.84'
N 69°55'26" W
S 69°55'26" E
74.07'
14.59'
25.00'
6.01'
N 69°55'26" W
42.67'
89.13'
116.46'
S 88°56'20" E
27.33'
6.0'
90.14'
S 88°56'20" E
89.00'
1.14'
6.0'
Found 3/4" Iron Pipe 0.30'S.& 0.50'E. of corner
26.00'
Found 3/4" Iron Pipe 0.23'S.& 0.58'W. of corner
Found 3/4" Iron Pipe
60'rec.
60'rec.
Found 1" Iron Pipe
15' A L L E Y
6.00'
N 88°56'20" W
310.20'm.&r. N 19°39'56" E
89.00'
12.00'
73.44'
S 69°55'26" E
73.35'
S 69°55'26" E
12.00'
Lot 1
6,564 S.F.
89.00'
N 20°04'34" E
97.82'
Street
S 20°04'34" W
78.07'
Outlot B
4,533 S.F.
STORMWATER DETENTION
N 01°03'40" E
72.50'
Lot 5
6,452 S.F.
72.50'
S 01°03'40" W
Part of Lot A
25.00'
L=48.08'
R=30.50'
57.93'
146.93'
S 88°56'20" E
89.00'
Waterfront
Shore Drive
Outlot A
19,163 S.F.
S 88°56'20" E
67.00'
12.00'
S 88°56'20" E
89.00'
Part of Lot A
150.01'meas. 150'rec.
S 00°30'38" W
MIONSKES SECOND SUBDIVISION
Lot 9
Lot 8
Existing Residence
Lot 2
6,500 S.F.
89.00'
89.00'
S 20°04'34" W
N 01°03'40" E
72.50'
Lot 3
4,858 S.F.
N 01°03'40" E
72.50'
N 01°03'40" E
72.50'
Lot 4
6,453 S.F.
72.50'
S 01°03'40" W
Outlot A
19,163 S.F.
29.53'
72.71'
S 69°55'26" E
136.33'
67.00'
12.00'
89.00'
15.67'
320.00'm.&r. N 88°56'20" W
6.0'
Found 1" Iron Pipe
60'rec.
60'rec.
Found 1" Iron Pipe
Set 1/2" Iron Rod
Set 1/2" Iron Rod
40'
40'
60'
Lake Street
PUBLIC ROADWAY
Found 5/8" Iron Rod
Found 1" Iron Pipe

FIELDWORK COMPLETED: 05–23–2025
CLIENT NAME: The Holdings LLC Series H
ADDRESS: 747 Lake Cook Road, Suite 100W
Deerfield, IL 60015

NOTES:
PLAT IS VOID if the Impressed Surveyors Seal does not appear. Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847–223–0914 FAX: 847–223–0980

PRELIMINARY PLAT
OF

THE WATERFRONT AT LAKE ZURICH

PARCEL 1:
LOTS 1, 2, 3, 4, 5, 6, 7 AND 8 IN BLOCK 2 IN E. S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST QUARTER OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176 IN BOOK "E" OF PLATS, PAGE 5, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:
LOTS 1 AND 2 IN MIONSKE'S SECOND SUBDIVISION, BEING A PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 11, 1951 AS DOCUMENT 737804, IN BOOK 1066 OF RECORDS, PAGE 189, IN LAKE COUNTY, ILLINOIS.

PARCEL 3:
THAT PART OF A 10 FOOT NORTH-SOUTH ALLEY LYING NORTH OF LAKE STREET, EAST OF LOTS 3, 4 AND 5 AND WEST OF LOT 6, ALL IN BLOCK 2, IN E.S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176, IN BOOK "E" OF PLATS, PAGE 5 AS VACATED BY PLAT OF VACATION RECORDED MARCH 1, 2007 AS DOCUMENT NUMBER 6145050, IN LAKE COUNTY, ILLINOIS.

THIS PLAT SUBMITTED FOR RECORDING BY, AND RETURN TO:

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

OWNERS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AN HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.
THE UNDERSIGNED HEREBY DEDICAID FOR PUBLIC USE OF THE LANDS SHOWN ON THIS PLAT FOR THOROUGHFARES, STREETS, ALLEYS AND PUBLIC SERVICES; AND HEREBY ALSO RESERVES FOR AMERITECH AND THE PUBLIC SERVICE COMPANY, DIVISION OF COMMONWEALTH EDISON COMPANY AND THE EASEMENT PROVISIONS WHICH ARE STATED ON THEIR STANDARD FORM WHICH IS ATTACHED HERETO.
WE FURTHER CERTIFY THAT I, AS OWNER OF THE PROPERTY DESCRIBED AS THE SUBDIVISION AND LEGALLY DESCRIBED ON THE SAME NAME, HAVE DETERMINED TO THE BEST OF MY KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIES.
LAKE ZURICH ELEMENTARY SCHOOL DISTRICT 95 AND
LAKE ZURICH COMMUNITY HIGH SCHOOL DISTRICT 95.

DATED THIS_____DAY OF _____A.D. 20 _____,

SIGNATURE_____

PRINTED NAME:_____

TITLE _____

ADDRESS: The Holdings LLC Series H
747 Lake Cook Road
Suite 100W
Deerfield, IL 60015

NOTARY PUBLIC

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, HEREBY CERTIFY THAT OF _____, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS _____ APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED AND DELIVERED SAID INSTRUMENT AS HIS/HER FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID _____, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS_____ DAY OF _____
_____ A.D. 20 _____.

NOTARY PUBLIC_____

SURVEYORS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, BRYAN J. LEE , ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 3616, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED TRACT OF LAND:

PARCEL 1: LOTS 1, 2, 3, 4, 5, 6, 7 AND 8 IN BLOCK 2 IN E. S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST QUARTER OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176 IN BOOK "E" OF PLATS, PAGE 5, IN LAKE COUNTY, ILLINOIS.
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PARCEL 3: THAT PART OF A 10 FOOT NORTH-SOUTH ALLEY LYING NORTH OF LAKE STREET, EAST OF LOTS 3, 4 AND 5 AND WEST OF LOT 6, ALL IN BLOCK 2, IN E.S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176, IN BOOK "E" OF PLATS, PAGE 5 AS VACATED BY PLAT OF VACATION RECORDED MARCH 1, 2007 AS DOCUMENT NUMBER 6145050, IN LAKE COUNTY, ILLINOIS.

AS SHOWN ON THE ANNEXED PLAT, WHICH IS TRUE AND CORRECT REPRESENTATION THEREOF. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF, BEARINGS ARE BASED ON TRUE NORTH DETERMINED BY GPS MEASUREMENT, AND THE AREA OF THE SUBDIVISION IS 1.686 ACRES GROSS. I HAVE MONUMENTED THE CORNERS OF THE LOTS SHOWN HEREON AND ALL POINTS OF CURVATURE AND POINTS OF TANGENCY WITH IRON RODS. CONCRETE MONUMENTS SET AT OPPOSITE CORNERS OF SUBDIVISION.

I FURTHER CERTIFY THAT THE PROPERTY BASED UPON EXAMINATION OF THE F.E.M.A. MAPS, HAS BEEN DETERMINED THAT NONE OF THE PROPERTY SHOWN HEREON IS SUBJECT TO FLOOD RISK (THE PROPERTY FALLS WITHIN A ZONE " ") AS PORTRAYED ON FLOOD INSURANCE RATE MAP NO.17097C0229K, EFFECTIVE DATE: 09-18-2023
AND I HEREBY DESIGNATE THE VILLAGE OF LAKE ZURICH TO RECORD THIS PLAT OF SUBDIVISION.
I ALSO CERITFY THAT THIS SUBDIVISION IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF LAKE ZURICH.
GIVEN UNDER MY HAND AND SEAL THIS_____ DAY OF _____ A.D. 20_____.

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I,_____, COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THE DESCRIBED PROPERTY. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE SUBJECT PLAT.

DATED THIS_____DAY OF _____, 20_____.

LAKE COUNTY CLERK_____

OWNERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT THE OWNER OF THE LAND HEREIN DESCRIBED OR DULY AUTHORIZED ATTORNEY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDE HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION

DATED THIS_____DAY OF _____, 20_____.

_____
OWNER OR OWNERS ATTORNEY

ENGINEERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT I, REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF SUCH SUBDIVISION OF ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH WATERS IN TO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____DAY OF _____, 20_____.

_____
ILLINOIS REGISTERED PROFESSIONAL ENGINEER
LICENSE NO.

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THE MEMBERS OF THE PLAN COMMISSION HAVE REVIEWED AND APPROVED THE ANNEXED PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____DAY OF _____A.D. 20 _____.

_____
PLAN COMMISSION CHAIRMAN

PLAT SUBMITTED BY CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THE PERSON LISTED IN THE FOLLOWING NOTE IS HEREBY GRANTED PERMISSION TO RECORD THIS PLAT ON BEHALF OF BRYAN J. LEE , ILLINOIS PROFESSIONAL LAND SURVEYOR.

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
DATED:
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

THIS PLAT SUBMITTED FOR RECORDING BY:

NAME:_____

BUSINESS:_____

ADDRESS: _____

CITY: _____

STATE/ZIP:_____

DATE: _____

File No. 75-25
F7525 PRELIM.DWG

VILLAGE CLERK CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

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 _____, 20 _____, AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE VILLAGE OF LAKE ZURICH, ILLINOIS THIS_____DAY OF _____A.D. 20 _____.

_____
VILLAGE CLERK

VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I,_____, VILLAGE ENGINEER FOR THE VILLAGE OF LAKE ZURICH, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE ANNEXED PLAT AND THE PLANS AND SPECIFICATIONS THEREFOR, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____ DAY OF _____A.D. 20 ____.

_____
VILLAGE ENGINEER

MAYOR'S CERTIFICATE

STATE OF ILLINOIS)
COUNT OF LAKE) S.S.

I,_____, MAYOR OF THE VILLAGE OF LAKE ZURICH HAVE APPROVED AND ACCEPTED THIS PLAT BY THE BOARD OF TRUSTEES OF THE VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____ DAY OF _____A.D. 20 _____.

_____
VILLAGE MAYOR

CERTIFICATE AS TO SPECIAL ASSESSMENTS

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, FINANCE DIRECTOR OF THE VILLAGE OF LAKE ZURICH, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THE PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS, THIS_____ DAY OF _____A.D. 20_____.

_____
FINANCE DIRECTOR

UTILITY EASEMENT PROVISIONS
A NON-EXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND THE PROPERTY OWNER'S ASSOCIATION AS MAY BE FURTHER DEFINED IN THE PROPERTY OWNER'S ASSOCIATION BYLAWS AND DECLARATIONS AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, WITHIN THE AREAS SO DESIGNATED ON THE PLAT AND MARKED MUNICIPAL UTILITY EASEMENT TO INSTALL, REPAIR, REMOVE, REPLACE, INSPECT AND MAINTAIN STRUCTURES AS DEPICTED ON THE SUBDIVISION PLAN IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE EASEMENT INCLUDING WITHOUT LIMITATION ALL NECESSARY FACILITIES APPURTENANT THERETO, TOGETHER WITH THE RIGHT OF ACCESS THERETO FOR THE PERSONNEL AND EQUIPMENT NECESSARY AND REQUIRED FOR SUCH USES AND PURPOSES. NO PERMANENT BUILDINGS, STRUCTURES OR FENCES SHALL BE CONSTRUCTED OR MANTAINED ON, ACROSS, OVER OR THROUGH SAID EASEMENT THAT ARE NOT SHOWN ON THE PLANS. THE VILLAGE SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER WITH PERSONNEL AND EQUIPMENT UPON SAID EASEMENT AT ANY TIME FOR THE PURPOSES OF ACCESS TO AND INSPECTION OF SAID EASEMENT. IF THE OWNER FAILS TO MAINTAIN SAID FACILITIES AND, AFTER RECEIPT OF NOTICE FROM THE VILLAGE OF SAID FAILURE, THE OWNER FAILS TO MAKE REQUIRED REPAIRS IN A REASONABLE PERIOD OF TIME, THE VILLAGE MAY MAKE THE REQUIRED REPAIRS AND SEEK REIMBURSEMENT FROM THE OWNER FOR THE COSTS INCURRED BY THE VILLAGE TO MAKE THE REPAIR AND/OR FILE A LIEN ON THE PROPERTY. IN ADDITION, A NONEXCLUSIVE EASEMENT IS HEREBY RESERVED AND GRANTED TO THE VILLAGE, ILLINOIS AND ITS RESPECTIVE SUCCESSORS AND ASSIGNS, WITHIN THE AREAS SO DESIGNATED ON THE PLAT AND MARKED MUNICIPAL UTILITY EASEMENT TO CONSTRUCT, INSTALL, RECONSTRUCT, REPAIR, REMOVE, REPLACE, INSPECT, MAINTAIN AND OPERATE UNDERGROUND TRANSMISSION AND DISTRIBUTION SYSTEMS AND LINES IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE MUNICIPAL UTILITY AND LANDSCAPE EASEMENT INCLUDING WITHOUT LIMITATION WATER MAINS, STORM SEWERS, SANITARY SEWERS, FORCE MAINS, ELECTRIC LINES, STREET LIGHTS, AND ALL NECESSARY FACILITIES APPURTENANT THERETO, 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 THEREON. TOGETHER WITH THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLE REQUIRED INCIDENTAL TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS, INCLUDING FENCES, SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON, OR OVER THE PROPERTY WITHIN SAID EASEMENT WITHOUT PRIOR WRITTEN CONSENT OF THE GRANTEE.

STORMWATER MANAGEMENT EASEMENT PROVISIONS
A PERMANENT, NON-EXCLUSIVE EASEMENT, TOGETHER WITH THE RIGHT OF ACCESS THERETO, IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND TO ITS RESPECTIVE SUCCESSORS AND ASSIGNS, TO ENTER IN, ON, UPON, UNDER, OVER, THROUGH, ALONG, AND ACROSS THE AREAS DESIGNATED ON THE PLAT AS STORMWATER MANAGEMENT EASEMENT FOR THE PURPOSE OF INSPECTING SUCH AREAS TO DETERMINE WHETHER THE IMPROVEMENTS AND SYSTEMS WHICH CONSTITUTE THE SAME HAVE BEEN AND ARE BEING PROPERLY MAINTAINED IN CONFORMITY WITH THE APPLICABLE ORDINANCES AND REGULATIONS.
THE VILLAGE OF LAKE ZURICH TOGETHER WITH THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, RETAINS THE RIGHTS, BUT NOT THE OBLIGATION, TO ENTER THE EASEMENT AND PERFORM ANY NECESSARY MAINTENANCE IF THE OWNER FAILS TO ADEQUATELY MAINTAIN THE AREA. THE OWNER 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 BE A TACIT DECLARATION THEREOF.
NO BUILDINGS, SIGNS, CONDUITS, CABLES, WIRES, SEWERS, PIPES, WATERMAINS, VAULTS, TRANSMISSION LINES, FENCING, LANDSCAPING, OR OTHER SUCH FEATURES, FACILITIES OR STRUCTURES SHALL BE CONSTRUCTED OR MAINTAINED FOR ANY PURPOSE WITHIN THE SAID EASEMENT WITHOUT PRIOR WRITTEN CONSENT OF THE VILLAGE OF LAKE ZURICH. THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE OPERATION AND MAINTENANCE THEREOF. NOTHING SHALL BE CONSTRUCTED OR PLACED WITHIN, ABOVE, OR OVERHEAD WITHOUT THE WRITTEN PERMISSION OF THE VILLAGE OF LAKE ZURICH.
THE EASEMENT DESCRIBED IN THIS SECTION IS AN EASEMENT APPURTENANT, RUNNING WITH THE LANDS. IT SHALL BE AT ALL TIMES BINDING UPON THE OWNER AND ALL OF ITS GRANTEES AND THEIR RESPECTIVE HEIRS, SUCCESSORS, ASSIGNS, AND TRANSFEREES. THIS EASEMENT MAY NOT BE AMENDED IF IT WOULD RESULT IN NONCOMPLIANCE WITH ANY ORDINANCES OR REGULATIONS (OR OTHER APPLICABLE REQUIREMENTS) CONCERNING THE STORMWATER MANAGEMENT EASEMENT AND THAT RESPONSIBILITY FOR CONTINUED MAINTENANCE, OPERATION, AND PRESERVATION OF SAID STORMWATER MANAGEMENT EASEMENT SHALL NOT BE ABROGATED EXCEPT BY APPROVAL OF THE VILLAGE OF LAKE ZURICH.

EASEMENT PROVISIONS
AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO
COMMONWEALTH EDISON COMPANY
AND
ILLINOIS BELL TELEPHONE COMPANY DBA AT&T, GRANTEES,
THEIR RESPECTIVE LICENSEES, SUCCESSORS AND ASSIGNS JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, COMMUNICATIONS, SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E" (OR SIMILAR DESIGNATION), THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHTS TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE 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 OR IN, UPON OR OVER THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E" (OR SIMILAR DESIGNATION) 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 THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(C), 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 AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING" AND "COMMON AREA". THE TERM "COMMON AREA OR AREAS", AND "COMMON ELEMENTS" INCLUDE REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL , RETENTION POND OR MECHANICAL EQUIPMENT.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF THE GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

FIELDWORK COMPLETED: 05-23-2025
CLIENT NAME: The Holdings LLC Series H
ADDRESS: 747 Lake Cook Road, Suite 100W
Deerfield, IL 60015

NOTES:
PLAT IS VOID if the Impressed Surveyors Seal does not appear.
Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

ALTA / NSPS
LAND TITLE SURVEY
OF

PARCEL 1:
LOTS 1, 2, 3, 4, 5, 6, 7 AND 8 IN BLOCK 2 IN E. S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST QUARTER OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176 IN BOOK "E" OF PLATS, PAGE 5, IN LAKE COUNTY, ILLINOIS.

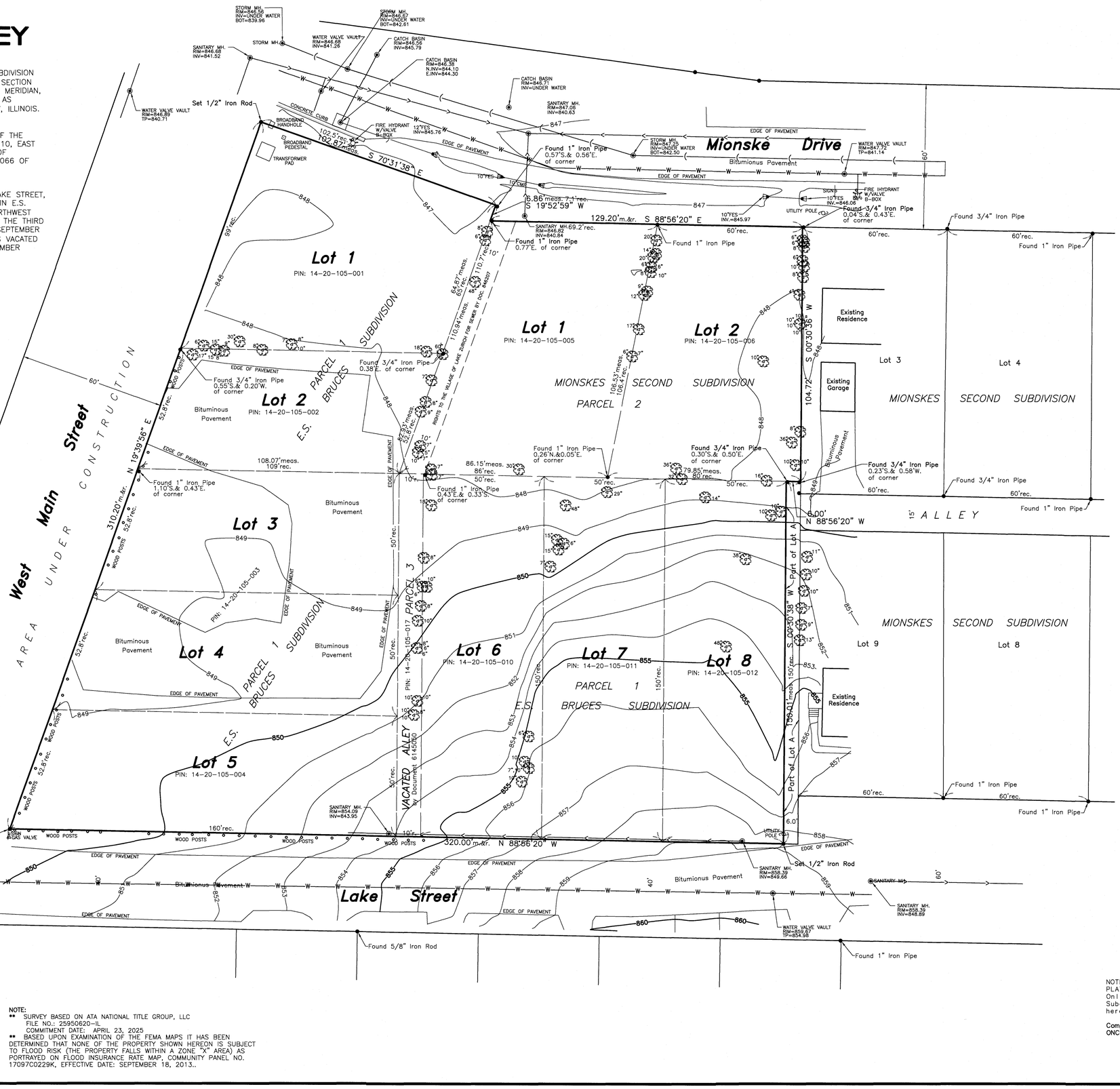
PARCEL 2:
LOTS 1 AND 2 IN MIONSKE'S SECOND SUBDIVISION, BEING A PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 11, 1951 AS DOCUMENT 737804, IN BOOK 1066 OF RECORDS, PAGE 189, IN LAKE COUNTY, ILLINOIS.

PARCEL 3:
THAT PART OF A 10 FOOT NORTH-SOUTH ALLEY LYING NORTH OF LAKE STREET, EAST OF LOTS 3, 4 AND 5 AND WEST OF LOT 6, ALL IN BLOCK 2, IN E.S. BRUCE'S SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 29, 1898 AS DOCUMENT 72176, IN BOOK "E" OF PLATS, PAGE 5 AS VACATED BY PLAT OF VACATION RECORDED MARCH 1, 2007 AS DOCUMENT NUMBER 6145050, IN LAKE COUNTY, ILLINOIS.

THE PREMISES COMMONLY KNOWN AS:
173 W. MAIN STREET, LAKE ZURICH, IL
PARCEL AREA = 1.686 ACRES, 73,443 S.F.
PIN'S: 14-20-105-001
14-20-105-002
14-20-105-003
14-20-105-004
14-20-105-005
14-20-105-006
14-20-105-010
14-20-105-011
14-20-105-012
14-20-105-017

NORTH

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
File No. 75-25
P75Z6.DWG



EXCEPTION NOTES:
3. EASEMENTS, CLAIM OF EASEMENTS OR ENCUMBRANCES THAT ARE NOT SHOWN IN THE PUBLIC RECORDS AND EXISTING WATER, MINERAL, OIL AND EXPLORATION RIGHTS.
4. THE EFFECT ON THE TITLE OF AN ENCUMBRANCE, VIOLATION, VARIATION, ADVERSE CIRCUMSTANCE, BOUNDARY LINE OVERLAP, OR ENCROACHMENT (INCLUDING AN ENCROACHMENT OF AN IMPROVEMENT ACROSS THE BOUNDARY LINES OF THE LAND), BUT ONLY IF THE ENCUMBRANCE, VIOLATION, VARIATION, ADVERSE CIRCUMSTANCE, BOUNDARY LINE OVERLAP, OR ENCROACHMENT WOULD HAVE BEEN DISCLOSED BY AN ACCURATE AND COMPLETE LAND TITLE SURVEY OF THE LAND.
19. RESERVATION IN WARRANTY DEED DATED MAY 6, 1898 AND RECORDED AUGUST 24, 1898 AS DOCUMENT 71820, FROM EDWARD R. CLARK AND CORNELIA R., HIS WIFE, TO EBEN S. BRUCE, OF TITLE TO TILE DRAIN RUNNING THROUGH THE LAND COVERED BY BRUCE'S SUBDIVISION AFORESAID, TOGETHER WITH RIGHT OF ACCESS THERETO FOR RENEWING OR REPAIRING THE SAME AND COVENANT AND AGREEMENT CONTAINED IN SAID DEED THAT NO BUILDINGS OR OBSTRUCTIONS SHALL BE BUILT UPON OR ACROSS SAID PROPERTY IN SUCH A WAY AS TO DAMAGE OR OBSTRUCT SAID DRAIN AND THAT IN CASE A RAILROAD TRACK IS BUILT ON SAID TRACT THAT THERE SHALL REMAIN AN OPENING OF NOT LESS THAN A 10 FOOT SPAN, THE SIDES OF WHICH SHALL BE BUILT WITH STONE AND MORTAR ABUTMENTS FOR THE PROTECTION OF SAID DRAIN. SAID INSTRUMENT CONTAINS NO PROVISION FOR A FORFEITURE OF OR REVERSION OF TITLE IN CASE OF BREACH OF CONDITION. (AFFECTS PARCEL 1)
20. RIGHT OF WAY NOT LESS THAN 10 FEET WIDE THROUGH LAND COVERED BY BRUCE'S SUBDIVISION HEREIN DESCRIBED, RESERVED IN WARRANTY DEED DATED MAY 6, 1898 AND RECORDED AUGUST 24, 1898 AS DOCUMENT 71820, FROM EDWARD R. CLARK AND CORNELIA R., HIS WIFE, TO EBEN S. BRUCE. (AFFECTS PARCEL 1)
21. RIGHT OF ELGIN, JOLIET AND EASTERN RAILWAY, ITS SUCCESSORS AND ASSIGNS, TO MAINTAIN PIPE LINE ACROSS LAND CONVEYED BY BRUCE'S SUBDIVISION HEREIN DESCRIBED, AS DISCLOSED BY DEED NOTED HEREIN AS DOCUMENT 71820. (AFFECTS PARCEL 1)
22. EASEMENT AND PRIVILEGE GRANTED BY THE GRANTEE IN WARRANTY DEED DATED APRIL 25, 1921 AND RECORDED APRIL 28, 1921 AS DOCUMENT 201471 FROM FRED F. HOEFT AND EMMA L., HIS WIFE, TO ARTHUR G. STAHL TO THE GRANTOR IN SAID DEED, TO MAINTAIN A DRAIN THROUGH THE SOUTHEAST CORNER OF LOT 4 (AFFECTS PARCEL 1 LOT 4).
23. COVENANTS AND CONDITIONS CONTAINED IN THE DEED FROM FRED F. HOEFT AND EMMA L. HOEFT, HIS WIFE, TO EDWARD W. HUTCHINSON, DATED SEPTEMBER 7, 1917 AND RECORDED MARCH 31, 1919 AS DOCUMENT 182688, THAT THE GRANTEE HEREIN SHALL HAVE THE PRIVILEGE TO CONSTRUCT AND MAINTAIN A BATHING PIER OR BOAT HOUSE UPON THE SHORE OF LAKE ZURICH AND FRONTING SAID PROPERTY AND OVER WATER COVERING LAND OWNED BY THE GRANTOR HEREIN, BUT SAID PIER OR BOAT HOUSE SHALL BE CONSTRUCTED IN SUCH MANNER AND SUCH LOCATION AS TO IN NO MANNER INTERFERE OR CONFLICT WITH THE CUTTING OR STORING OF ICE OR CARRYING ON OF THE ICE BUSINESS TO BE CONDUCTED BY THE GRANTOR HEREIN OR OTHERS. GRANTORS HEREIN RESERVE THE RIGHT TO RUN A DRAIN THROUGH THE PROPERTY HEREIN CONVEYED AND GRANTEE HAS THE PRIVILEGE OF CONNECTING WITH IT.SAID COVENANTS AND CONDITIONS ALSO REFERRED TO IN DEED DATED DECEMBER 10, 1921 AND RECORDED DECEMBER 17, 1921 AS DOCUMENT 207921, FROM EDWARD W. HUTCHINSON AND IRENE, HIS WIFE, TO OTTO J. DEWITZ AND IN DEED DATED MARCH 11, 1922 AND RECORDED MARCH 18, 1922 AS DOCUMENT 210045 FROM OTTO J. DEWITZ AND HANNAH R, HIS WIFE, TO IRENE A. HUTCHINSON.
NOTE: SAID INSTRUMENT CONTAINS NO PROVISION FOR A FORFEITURE OF OR REVERSION OF TITLE IN CASE OF BREACH OF CONDITION. (AFFECTS PARCEL 1 LOT 5).
24. COVENANTS, CONDITIONS AND RESTRICTIONS CONTAINED IN THE DEED FROM HAROLD HAN AND WIFE TO 24. STEVE J. KOLAKOWSKI, ET ASSIGNMENT OF LEASE, DATED MAY 29, 1948 AND RECORDED JUNE 1, 1948 AS DOCUMENT 644168, THAT AT NO TIME HEREAFTER, THE LAND HEREIN CONVEYED BE USED AS A PUBLIC PARKING LOT.
NOTE: SAID INSTRUMENT CONTAINS NO PROVISION FOR A FORFEITURE OF OR REVERSION OF TITLE IN CASE OF BREACH OF CONDITION. (AFFECTS PARCEL 1 LOT 6)
25. RIGHTS OF THE VILLAGE OF LAKE ZURICH, TO INSTALL, MAINTAIN, REPAIR AND REPLACE A SEWER MAIN OR INTERCEPTING SEWER IN AND ALONG THE WESTERLY 10 FEET OF THE LAND HEREIN, AS GRANTED BY INSTRUMENT RECORDED NOVEMBER 23, 1954 AS DOCUMENT 846207. (AFFECTS PARCEL 2 LOT 1)
26. AGREEMENT BY AND BETWEEN CHARLES R. MIONSKE AND CAROLINE M. MIONSKE, HIS WIFE AND VILLAGE OF LAKE ZURICH, A MUNICIPAL CORPORATION, THAT PARTIES OF THE FIRST PART WILL CONSTRUCT AT THEIR OWN EXPENSE, EITHER 8 INCH OR 19 INCH SANITARY SEWER WITH PROPERLY CLOSED JOINTS OF SUFFICIENT LENGTH TO SERVE THE LAND HEREIN. THE SEWER SYSTEM IS ALSO TO INCLUDE A LIFT STATION TO CARRY SEWERAGE. SAID VILLAGE AGREES TO FURNISH SEWER DISPOSAL FACILITIES TO PREMISES, AS CONTAINED IN INSTRUMENT RECORDED SEPTEMBER 27, 1956 AS DOCUMENT 924770. (AFFECTS PARCEL 1 AND PARCEL 2)
27. RIGHTS OF THE PUBLIC AND QUASI-PUBLIC UTILITIES, IF ANY, IN SAID VACATED MIONSKE DRIVE AND THE VACATED ALLEY FOR MAINTENANCE THEREIN OF POLES, CONDUITS, SEWERS AND OTHER FACILITIES. (AFFECTS PARCEL 3)
30. DEVELOPMENT AGREEMENT BETWEEN THE VILLAGE OF LAKE ZURICH AND EQUITY SERVICES GROUP, LLC RECORDED APRIL 22, 2009 AS DOCUMENT NO. 6463729, AND THE TERMS, PROVISION AND CONDITIONS CONTAINED THEREIN.

CERTIFIED TO:
** ATA NATIONAL TITLE GROUP, LLC
** THG HOLDINGS
** THE VILLAGE OF LAKE ZURICH, A MUNICIPAL CORPORATION
**

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THIS MAP OF PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1,2,3,4,7A,8,11 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 04-22-2025.

DATED: MAY 5TH, 2025

ILLINOIS PROFESSIONAL LAND SURVEYOR #35-3616
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

NOTE:
** SURVEY BASED ON ATA NATIONAL TITLE GROUP, LLC FILE NO.: 25950620-IL COMMITMENT DATE: APRIL 23, 2025
** BASED UPON EXAMINATION OF THE FEMA MAPS IT HAS BEEN DETERMINED THAT NONE OF THE PROPERTY SHOWN HEREON IS SUBJECT TO FLOOD RISK (THE PROPERTY FALLS WITHIN A ZONE "X" AREA) AS PORTRAYED ON FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 17097C0229K, EFFECTIVE DATE: SEPTEMBER 18, 2013..

FIELDWORK COMPLETED: 04-22-2025
CLIENT NAME: The Holdings LLC Series H
ADDRESS: 747 Lake Cook Road, Suite 100W
Deerfield, IL 60015

NOTES:
PLAT IS VOID if the Impressed Surveyors Seal does not appear. Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

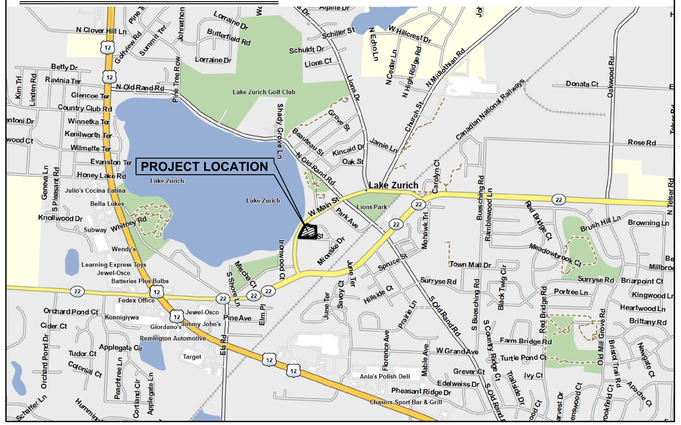
Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

PRELIMINARY ENGINEERING FOR

THE WATERFRONT AT LAKE ZURICH

LOCATION MAP NORTH



INDEX

1. COVER SHEET
2. EXISTING CONDITIONS & REMOVALS
3. SITE PLAN
4. GRADING PLAN
5. UTILITY PLAN

S1. STORMWATER

LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED	
		SANITARY SEWER			CENTER LINE
		FORCE MAIN			EASEMENT
		STORM SEWER			BUILDING SETBACK
		P.V.C. STORM SEWER			CURB & GUTTER
		COMBINED SEWER			CURB & REVERSE GUTTER PITCH
		DRAIN TILE			DEPRESSED CURB & GUTTER
W	W	WATER MAIN			GUARD RAIL
		TRENCH BACKFILL			FENCE
		MANHOLE			RETAINING WALL
		CATCH BASIN			CURB RAMP
		INLET			DRIVEWAY HAND
		YARD DRAIN			SIGN
		INLET MANHOLE	MB	MB	MAIL BOX
		FLARED END SECTION			SOIL BORING
		HEAD WALL			DECIDUOUS TREE, DIAMETER
LS	LS	LIFT STATION			EVERGREEN TREE, HEIGHT
		CLEAN-OUT	T/F 600.00	T/F 600.00	TOP OF FOUNDATION
M	M	METER VAULT	F/G 600.00	F/G 600.00	FINISHED GRADE
		VALVE VAULT	600.00	600.00	SPOT ELEVATION
		VALVE BOX	T/C 600.00	T/C 600.00	TOP OF CURB ELEVATION
		BUFFALO BOX	F/L 600.00	F/L 600.00	FLOW LINE OF GUTTER
		FIRE HYDRANT	600	600	CONTOUR
		CONFLICT			DITCH
		CROSSING			DRAINAGE FLOW
		TRIPLE BASIN			OVERLAND FLOW
GB	GB	GREASE BASIN	R-600.00	R-600.00	RIM ELEVATION
G	G	GAS MAIN	I-600.00	I-600.00	INVERT ELEVATION
E	E	ELECTRIC CABLE			WETLAND LIMIT
T	T	TELEPHONE CABLE			WETLAND BUFFER LINE
F	F	FIBER OPTIC CABLE			RIDGE LINE
C	C	CABLE			BASE FLOOD ELEVATION LINE
		STREET LIGHT			F.E.M.A. FLOODPLAIN LINE
		UTILITY POLE			
		PEDESTAL			
		TRANSFORMER			
G	G	GAS VALVE			
E	E	ELECTRIC BOX			
T	T	TELEPHONE MANHOLE			
F	F	FIBER OPTIC MANHOLE			
T	T	TRAFFIC SIGNAL BOX			
		TRAFFIC SIGNAL			

BENCHMARKS:

SOURCE BENCHMARK:
BENCH MARK RECOVERY SHEET
LAKE COUNTY, ILLINOIS
BENCH MARK DESIGNATION: 4-22AR
CUT "SQUARE" ON NORTHEAST CORNER OF DOUBLE HANDHOLE AT THE NORTHEAST CORNER OF ILLINOIS ROUTE 22 AND BUESCHING ROAD
NAVD88 ELEVATION = 874.59

SITE BENCHMARK:
SET "MAG" NAIL IN NORTH EDGE OF PAVEMENT ON LAKE STREET NEAR SOUTHWEST CORNER OF SITE.
NAVD88 ELEVATION = 849.82

PROPERTY INDEX NUMBER:

14-20-105-001 (153 W. MAIN STREET)
14-20-105-002 (173 W. MAIN STREET)
14-20-105-003 (173 W. MAIN STREET)
14-20-105-004 (183 W. MAIN STREET)
14-20-105-005 (7 MIONSKE DRIVE)
14-20-105-006 (11 MIONSKE DRIVE)
14-20-105-010 (183 W. MAIN STREET)
14-20-105-011 (24 LAKE STREET)
14-20-105-012 (30 LAKE STREET)
14-20-105-017 (0 LAKE STREET)

DRAINAGE CERTIFICATE

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS DEVELOPMENT OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE DEVELOPER 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 PROPERTY BECAUSE OF THE CONSTRUCTION OF THIS DEVELOPMENT.

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PREPARED FOR:

THG HOLDINGS LLC - SERIES I
747 LAKE COOK RD. SUITE 100 W, DEERFIELD, ILLINOIS, 60015, (312) 260-9822

CONSULTING ENGINEERS:

PEARSON, BROWN & ASSOCIATES, INC.
A PROFESSIONAL DESIGN FIRM - ILLINOIS PROFESSIONAL ENGINEERING CORPORATION - LICENSE NUMBER 184-001058 EXPIRES 04/30/27
1850 W. WINCHESTER ROAD - SUITE 205 LIBERTYVILLE, ILLINOIS 60048, (847) 367-6707

NOT FOR CONSTRUCTION

CONTACT JULIE AT 8-1-1 OR 800-892-0123
With the following:
County Lake
City/Twnship Lake Zurich / Ela 43N, 10E
Sec 1/4 Sec No. Sec 20, NW 1/4
Call 2 working days BEFORE YOU DIG.
Call Before You Dig — JULIE ILLINOIS ONE-CALL SYSTEM — illinoistcall.com

PERMIT	NUMBER	DATE ISSUED
IEPA - SANITARY		
IEPA - WATER		
IEPA - NOI		
VILLAGE - WDP		

REVISIONS		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

ANGELO K. ZOGRAFOS
062-062726
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
Exp. 11/30/25
ENGINEER'S SEAL & SIGNATURE

ORIGINAL ISSUE DATE: 06/18/25

SHEET NUMBER **1**

OF 6 SHEETS

JOB No. 25112

THE WATERFRONT AT LAKE ZURICH

NORTH

SCALE: 1" = 20'

THE WATERFRONT AT LAKE ZURICH

LAKE ZURICH, ILLINOIS

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DESIGNED BY: G.A.Z.
DRAWN BY: D.S.H.
CHECKED BY: A.K.Z.
ORIGINAL ISSUE: 06/19/25

DESCRIPTION

DATE | BY

REVISIONS

EXISTING CONDITIONS & REMOVALS

SHEET NUMBER

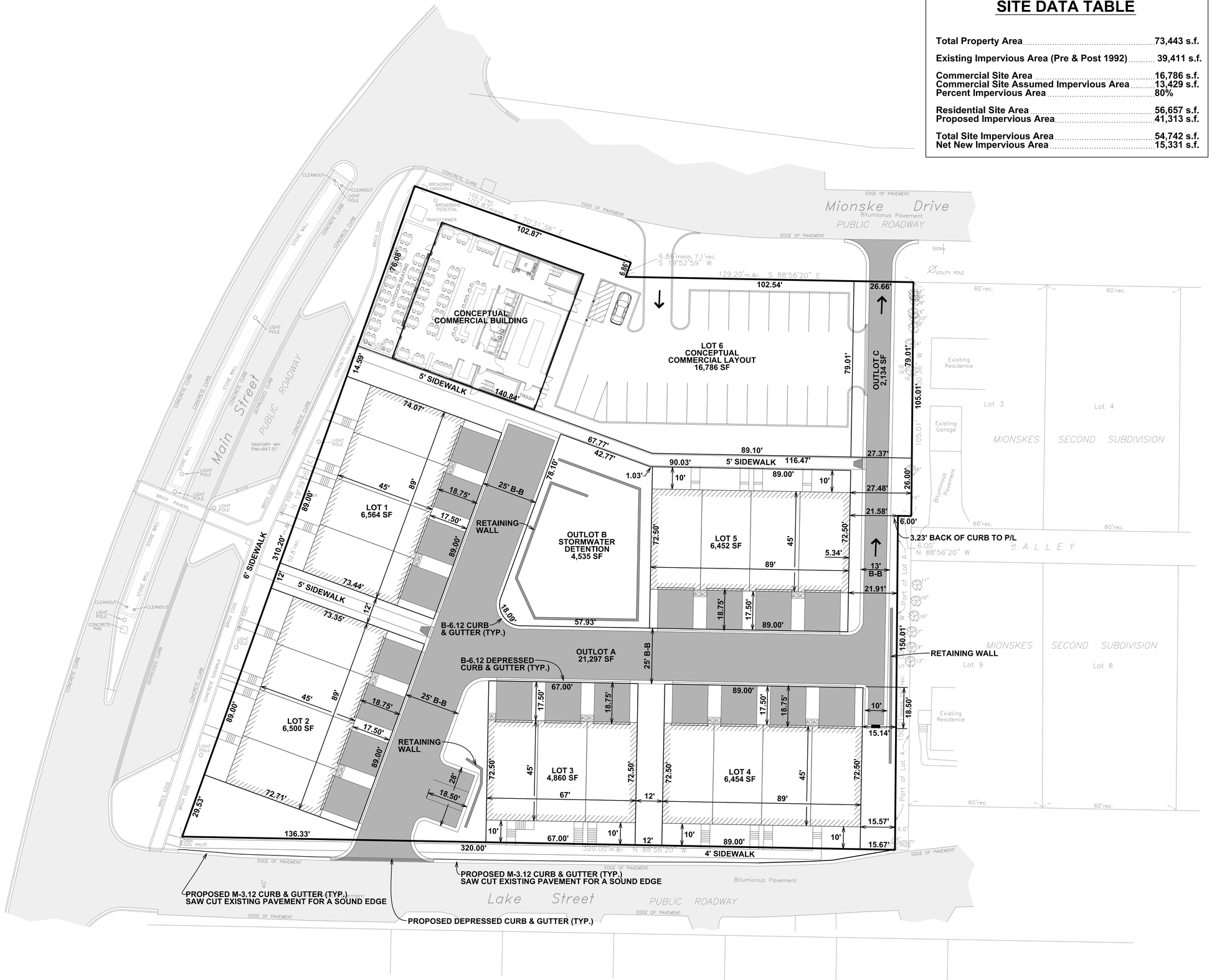
2

OF 6 SHEETS

JOB No. 25112

SITE DATA TABLE

Total Property Area	73,443 s.f.
Existing Impervious Area (Pre & Post 1992)	39,411 s.f.
Commercial Site Area	16,786 s.f.
Commercial Site Assumed Impervious Area	13,429 s.f.
Percent Impervious Area	80%
Residential Site Area	56,657 s.f.
Proposed Impervious Area	41,313 s.f.
Total Site Impervious Area	54,742 s.f.
Net New Impervious Area	15,331 s.f.



NORTH

SCALE: 1" = 20'

THE WATERFRONT AT LAKE ZURICH

LAKE ZURICH, ILLINOIS

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ORIGINAL ISSUE: 06/19/25

DESCRIPTION	DATE	BY

REVISIONS

SITE PLAN

SHEET NUMBER 3 OF 6 SHEETS

JOB No. 25112

DETENTION DESIGN SUMMARY

(DETENTION DESIGNED TO NOT EXCEED PRE-EXISTING 100YR, 24HR RUNOFF RATE IN PROP. COND.)

POND BOTTOM.....844.50 ft
POND OUTLET.....845.00 ft
POND HWL.....848.50 ft
WEIR ELEVATION INSIDE OUTLET STR.....848.50 ft OPERATING HEAD = 1.0'
LOW TOP OF WALL ELEV.....849.50 ft

DETENTION DESIGN:

HYDROLOGICALLY DISTURBED/DESIGN AREA .....1.686 ac. (Subject Property Area)

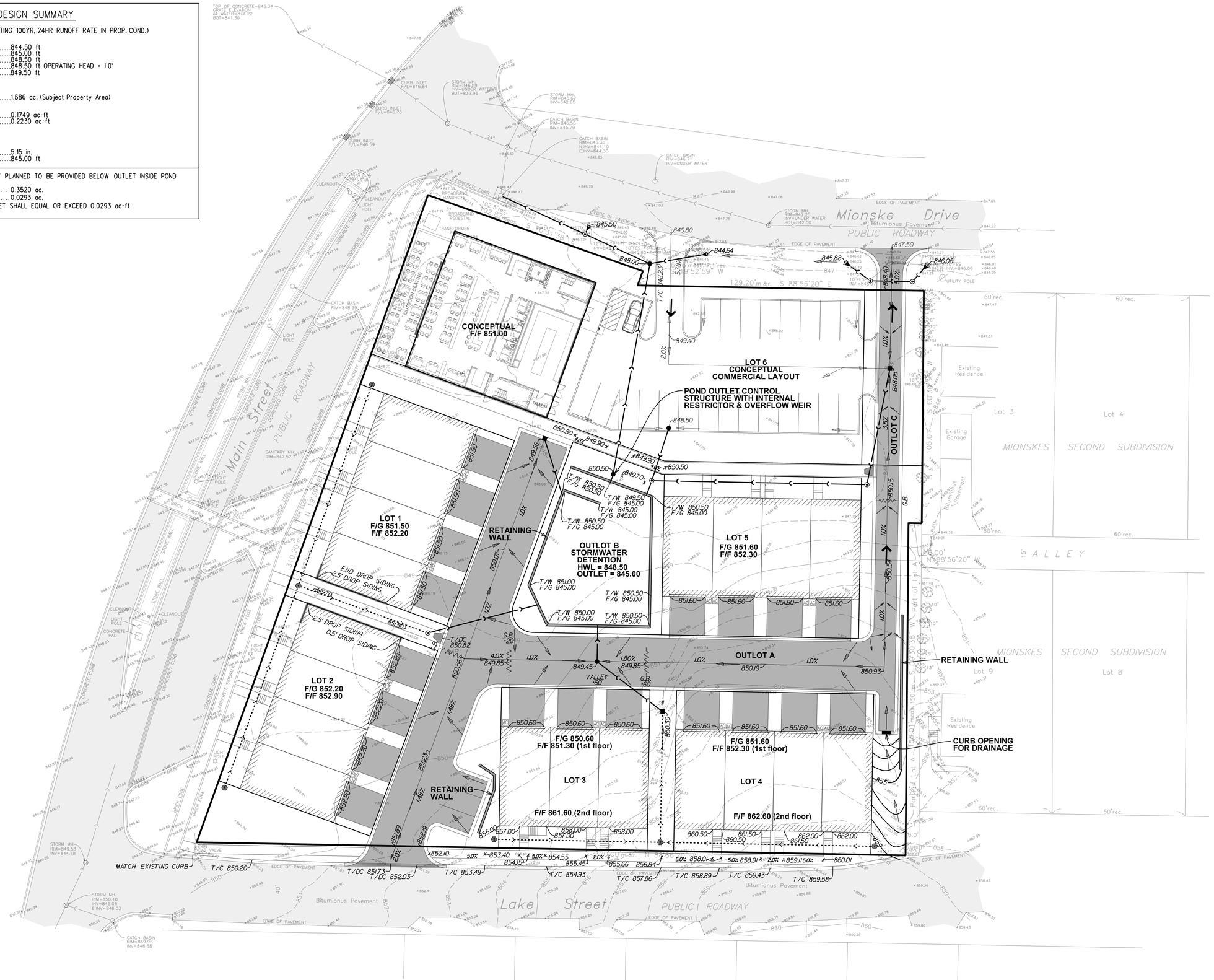
TOTAL 100YR STORAGE REQUIRED.....0.1749 ac-ft
TOTAL STORAGE PROVIDED AT ELEV. 848.50.....0.2230 ac-ft

OUTLET DESIGN:

LOWER RESTRICTOR DIAMETER.....5.15 in.
RESTRICTOR INVERT ELEVATION.....845.00 ft

RUNOFF VOLUME REDUCTION AND WATER QUALITY PLANNED TO BE PROVIDED BELOW OUTLET INSIDE POND

NET NEW ONSITE PROPOSED IMPERVIOUS.....0.3520 ac.
WATER QUALITY TREATMENT VOLUME.....0.0293 ac.
VOLUME TO BE PROVIDED IN POND BELOW OUTLET SHALL EQUAL OR EXCEED 0.0293 ac-ft



NORTH

SCALE: 1" = 20'

THE WATERFRONT AT LAKE ZURICH

LAKE ZURICH, ILLINOIS

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DESCRIPTION	DATE BY

REVISIONS

GRADING PLAN

SHEET NUMBER 4
OF 6 SHEETS

JOB No. 25112

NOTE:

ALL STORM SEWERS SHALL BE DESIGNED TO CONVEY THE 100-YEAR STORM EVENT.

NORTH

SCALE: 1" = 20'

THE WATERFRONT AT LAKE ZURICH

LAKE ZURICH, ILLINOIS

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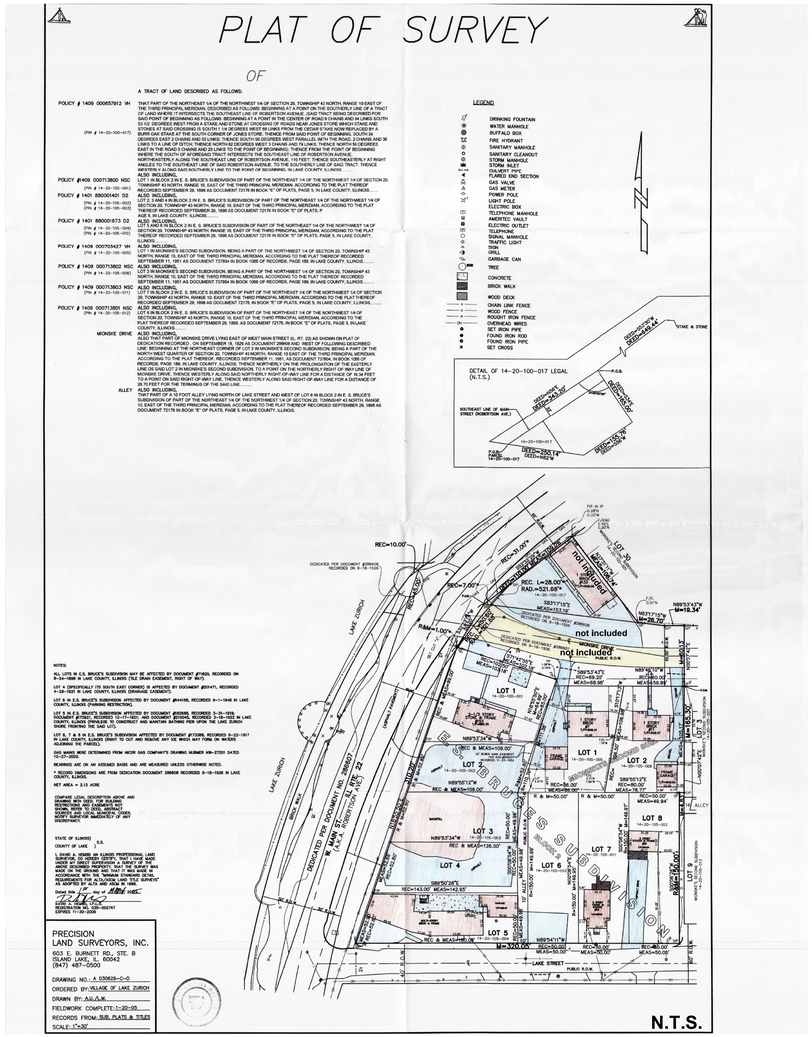
UTILITY PLAN

SHEET NUMBER 5 OF 6 SHEETS

JOB No. 25112



Property Area = 1.686 ac = 0.002634375 sq. mi.

Pre-existing coverage = 39,411 sf = 0.9047 ac

Composite CN determination for pre-existing condition
using CN = 90 for impervious and CN = 80 for pervious

CN = 0.9047 ac @ CN 98 + 0.7813 ac @ CN = 80 / 1.686 ac = 90

We executed a 100yr, 24hr HEC-HMS model for the property area with Tc = 10 min, CN =90 to determine the 100 yr peak runoff rate from the site for the pre-existing condition.

Peak release = 1.26 cfs for an allowable release rate per acre of 0.747 cfs per acre for the proposed conditions case. The proposed conditions 100yr, 24hr required detention model shall not exceed the 1.26 cfs rate.

Proposed Conditions:

Design area = 1.686 ac onsite area

Pre-existing coverage = 39,411 sf = 0.9047 ac

Total site impervious = 54,742 sf = 1.2567 ac

Net new site impervious = 15,331 sf = 0.3520 ac

**Composite CN based on actual proposed impervious:
using CN = 98 for impervious and 80 for pervious
CN = 1.2567 ac @ CN 98 + 0.4293 ac @ CN = 80 / 1.686 ac = 93
Tc=10 min.**

PROPOSED BASIN - RESTRICTOR DESIGN:

	100YR	allowable release based on pre-exist	1.260	cfs

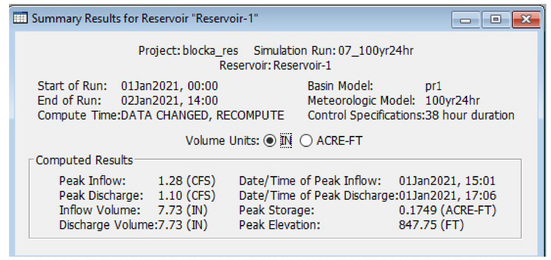
LOWER:
ORIFICE DIA. (IN) 5.15
AREA (SF) 0.145
COEF: 0.60

INVERT ELEVATION: 845.00

	STAGE	H (FT)	Q (CFS)
Outlet	845.00		0.00
	846.00	0.79	0.62
	847.00	1.79	0.93
	848.00	2.79	1.16
)CS internal weir	848.50	3.29	1.26

Stormwater Basin - Stage-Storage Calculations:

elevation	area (ac)	avg (ac)	interval (ft)	vol (ac-ft)	total (ac-ft)
845	0.062	0.031		0	0.000
846	0.063	0.0625	1	0.0625	0.063
847	0.064	0.0635	1	0.0635	0.126
848	0.065	0.0645	1	0.0645	0.191
848.5	0.066	0.0655	0.5	0.03275	0.223



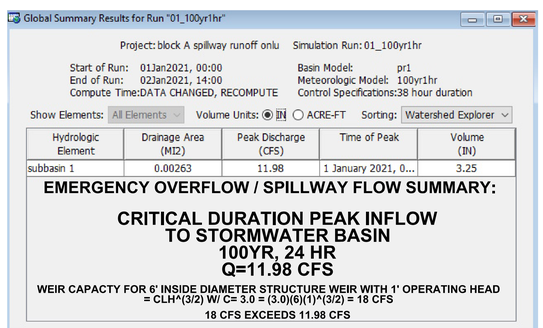
100YR, 24HR REQUIRED DETENTION VOLUME MODEL RESULTS:

**100YR REQUIRED VOLUME = 0.1749 AC-FT
PROPOSED PEAK RELEASE = 1.10 CFS
PRE-EXISTING RELEASE RATE = 1.26 CFS
(PROPOSED RATE IS LESS THAN THE PRE-EXISTING RATE)**

THE PROMENADE
EXISTING IMPERVIOUS SURFACE SUMMARY

PIN #	LOT #	BUILDING AREA (S.F.)	SIDEWALK/PATIO AREA (S.F.)	DRIVEWAY/PARKING AREA (S.F.)	
14-20-105-001	1	1,445	440	700	
14-20-105-004	5	3,620	1,150	800	
14-20-105-011	7	960	155	0	
14-20-105-012	8	605	325	1,500	
14-20-105-005	1	1,510	90	1,450	
14-20-105-006	2	1,425	160	700	
14-20-105-010	6			5,800	
14-20-105-002 & -003	2, 3 & 4		16,576		
MINOSKE DRIVE			8,724	not incl.	
14-20-100-017			5,721		
TOTAL		9,565	~~33,341~~	10,950	
GRAND TOTAL	~~53,856~~	9,565 +	18,896 +	10,950 =	39,411 SF

PRE-EXISTING IMPERVIOUS = 39,411 SF



EMERGENCY OVERFLOW / SPILLWAY FLOW SUMMARY:

**CRITICAL DURATION PEAK INFLOW
TO STORMWATER BASIN
100YR, 24 HR
Q=11.98 CFS**

**WEIR CAPACTY FOR 6' INSIDE DIAMETER STRUCTURE WEIR WITH 1' OPERATING HEAD
= CLH^(3/2) W/ C= 3.0 = (3.0)(6)(1)^(3/2) = 18 CFS**

18 CFS EXCEEDS 11.98 CFS

THE WATERFRONT AT LAKE ZURICH
LAKE ZURICH, ILLINOIS

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DESIGNED BY: G.A.Z.
DRAWN BY: D.S.H.
CHECKED BY: A.K.Z.
ORIGINAL ISSUE: 06/19/25.

DESCRIPTION | DATE | BY

REVISIONS

STORMWATER

SHEET NUMBER
S1
OF 6 SHEETS

JOB No. 25112

Preliminary Landscape Plan

The Waterfront at Lake Zurich

Lake Zurich, Illinois

June 18, 2025

CONSULTANTS:

LANDSCAPE ARCHITECT:

GARY R. WEBER ASSOCIATES, INC
402 W. LIBERTY DRIVE
WHEATON, ILLINOIS 60187

ARCHITECT:

HIRSCH MPG
225 W HUBBARD STREET, SUITE 500
CHICAGO, ILLINOIS 60654

LOCATION MAP

SCALE: 1"=200'

INDEX OF PLAN SHEETS

SHEET NO.	DESCRIPTION
L1.0	COVER SHEET
L1.1	LANDSCAPE PLAN

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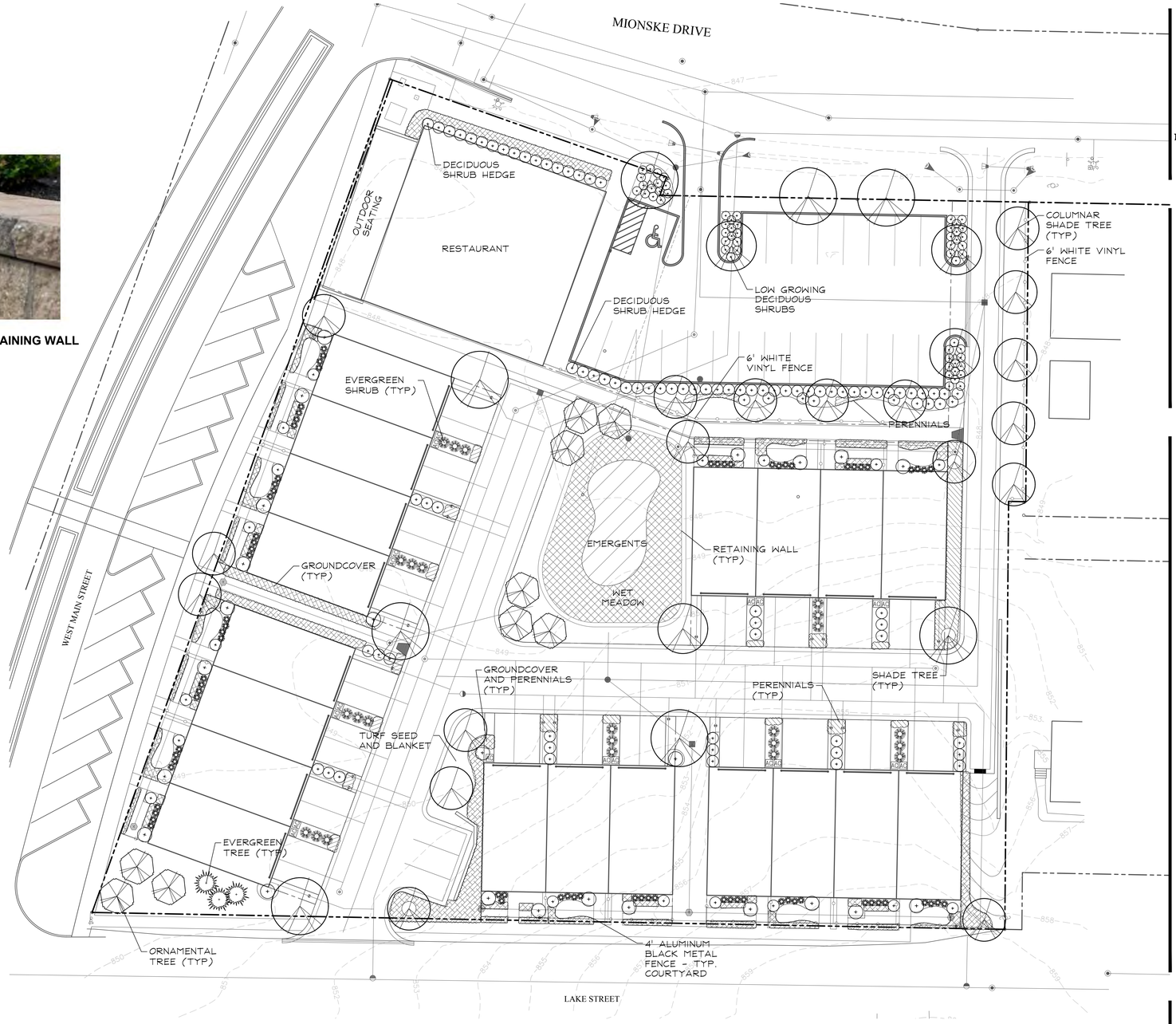
REPRESENTATIVE PLANT LIST

Key	Botanical/Common Name	Size	Remarks
	SHADE TREES		
	Acer x freemanii 'Jeffer's Red' AUTUMN BLAZE MAPLE	2 1/2" Cal.	
	Celtis occidentalis COMMON HACKBERRY	2 1/2" Cal.	
	Gleditsia triacanthos var. inermis 'Skycole' SKYLINE HONEYLOCUST	2 1/2" Cal.	
	Quercus macrocarpa BUR OAK	2 1/2" Cal.	
	Tilia americana 'Redmond' REDMOND AMERICAN LINDEN	2 1/2" Cal.	
	Ginkgo biloba 'Princeton Sentry' PRINCETON SENTRY GINKGO	2 1/2" Cal.	Columnar
	ORNAMENTAL TREES		
	Amelanchier x grandiflora APPLE SERVICEBERRY	6' Ht.	Multi-Stem
	Betula nigra 'Cully' HERITAGE RIVER BIRCH	6' Ht.	Multi-Stem
	Cercis canadensis EASTERN REDBUD	6' Ht.	Multi-Stem
	EVERGREEN TREES		
	Thuja 'Green Giant' GREEN GIANT ARBORVITAE	8' Ht.	
	DECIDUOUS SHRUBS		
	Cornus sericea 'Baileyi' BAILEY'S REDTWIG DOGWOOD	36" Tall	5' O.C.
	Hydrangea paniculata 'SMHPLOF' LITTLE QUICK FIRE HYDRANGEA	24" Tall	3' O.C.
	Syringa meyeri 'Palabin' DWARF KOREAN LILAC	24" Tall	4' O.C.
	Viburnum x juddii JUDD VIBURNUM	36" Tall	4' O.C.
	EVERGREEN SHRUBS		
	Juniperus conferta 'Blue Pacific' BLUE PACIFIC JUNIPER	24" Wide	4' O.C.
	Buxus x 'Glencoe' CHICAGOLAND GREEN BOXWOOD	24" Wide	3' O.C.
	PERENNIALS AND ORNAMENTAL GRASSES		
	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
	Schizachyrium scoparium 'Twilight Zone' TWILIGHT LITTLE BLUESTEM	#1	24" O.C.
	Sporobolus heterolepis PRAIRIE DROPSEED	#1	24" O.C.
	GROUNDCOVERS		
	Liriope spicata CREEPING LILYTURF	#SP4	18" O.C.

NATIVE SEED LEGEND

Key	Description
	EMERGENT SEED & PLUGS
	WET MEADOW SEED & BLANKET

UNILOCK PISA STONE GRANITE RETAINING WALL



GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING
ECOLOGICAL CONSULTING
LANDSCAPE ARCHITECTURE
402 WEST LIBERTY DRIVE
WHEATON, ILLINOIS 60187
PHONE: 630-668-7197

HOME BUILDER
THE HURON GROUP
747 LAKE COOK ROAD
SUITE 100W
DEERFIELD, ILLINOIS 60015

THE WATERFRONT AT LAKE ZURICH

LAKE ZURICH, ILLINOIS

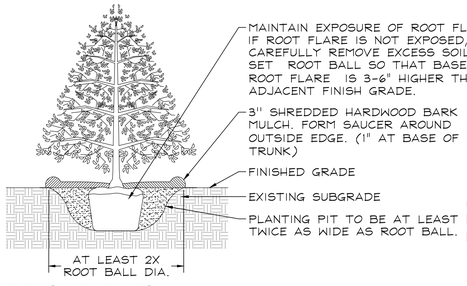
PRELIMINARY LANDSCAPE PLAN

0 10' 20' 40' 60'
SCALE: 1"=20'
NORTH

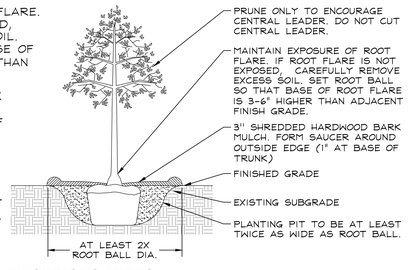
GENERAL LANDSCAPE NOTES

1. Contractor shall verify underground utility lines and is responsible for any damage.
2. Contractor shall verify all existing conditions in the field prior to construction and shall notify landscape architect of any variance.
3. Material quantities shown are for contractors convenience only. The Contractor must verify all material and supply sufficient materials to complete the job per plan.
4. The landscape architect reserves the right to inspect trees and shrubs either at place of growth or at site before planting, for compliance with requirements of variety, size and quality.
5. Work shall conform to American Standard for Nursery Stock, State of Illinois Horticultural Standards, and Local Municipal requirements.
6. Contractor shall secure and pay for all permits, fees, and inspections necessary for the proper execution of this work and comply with all codes applicable to this work.
7. Contractor shall monitor landscape throughout the installation process and ensure regular manual watering of all plants and turf areas is sufficient for normal establishment.
8. See General Conditions and Specifications for landscape work for additional requirements.

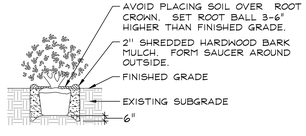
PLANTING DETAILS



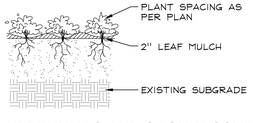
EVERGREEN TREES
NOT TO SCALE



DECIDUOUS TREES
NOT TO SCALE

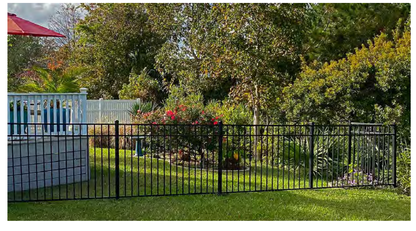


DECIDUOUS AND EVERGREEN SHRUBS
NOT TO SCALE



PERENNIALS AND GROUNDCOVERS
NOT TO SCALE

6' WHITE VINYL FENCE



4' BLACK ALUMINUM FENCE

811 Know what's below. Call before you dig.

REVISIONS

DATE	06.18.25
PROJECT NO.	HUR2501
DRAWN	EAN
CHECKED	TSB
SHEET NO.	L1.1

PLOT DWG

Tree Inventory Listing
173 W. Main Street
Lake Zurich, IL
Prepared by Urban Forest Management, Inc. 5/15/2025

Tag No.	Botanical Name	Common Name	Size	Cond.	Problems	Insect/Disease	Comments	Co-Leaders at DBH	LZ Tree Classification
1801	Acer saccharinum	Silver Maple	40	FAIR	double leader, minor deadwood, suckering, compaction		Old tag# 143. construction parking across root zone, heavy seed crop		Desirable Species
1802	Salix nigra	Black Willow	9	FAIR	weak crotch, twist in trunk, minor deadwood			Forked at 1.5'	Desirable Species
1803	Acer negundo	Boxelder Maple	4	FAIR	over-topped, sweep, suckering				Undesirable Species
1804	Acer platanoides	Norway Maple	10	FAIR	over-topped, double leader, one-sided, basal scar showing good callus growth				Desirable Species
1805	Catalpa speciosa	Northern Catalpa	37	POOR	multiple leaders, upper cavity, basal decay, basal scar, trunk scar, slight lean, hollow				Desirable Species - DQ CONDITION
1806	Juniperus virginiana	Eastern Red-cedar	10	FAIR	double leader, over-topped				Desirable Species
1807	Acer platanoides	Norway Maple	12	FAIR	one-sided, double leader				Desirable Species
1808	Acer platanoides	Norway Maple	16	FAIR	over-topped, slight sweep		Old tag #4331. 16" co-leader fused with #1809 at 5'	Forked at 1' with an 8" co-leader	Desirable Species
1809	Ulmus americana	American Elm	22	FAIR	one-sided, double leader, suckering, minor deadwood		Old tag #149		Landmark Species
1810	Acer platanoides	Norway Maple	8	FAIR	over-topped, one-sided, minor deadwood				Desirable Species
1811	Acer platanoides	Norway Maple	18	FAIR	over-topped, double leader, damaged leader, slight sweep				Desirable Species
1812	Catalpa speciosa	Northern Catalpa	4	GOOD	one-sided				Desirable Species
1813	Fraxinus pennsylvanica	Green Ash	4	POOR	one-sided, over-topped, trunk scar, suckering	emerald ash borer			Undesirable Species
1814	Acer platanoides	Norway Maple	7	FAIR	double leader, slight lean, thin crown			Forked at 1'	Desirable Species
1815	Morus alba	White Mulberry (Common Mulberry)	5	FAIR	slight lean, thin crown, minor deadwood				Undesirable Species
1816	Morus alba	White Mulberry (Common Mulberry)	9	FAIR	slight lean, one-sided				Undesirable Species
1817	Morus alba	White Mulberry (Common Mulberry)	5	FAIR	slight lean, thin crown				Undesirable Species
1818	Morus alba	White Mulberry (Common Mulberry)	7	FAIR	over-topped, double leader, weak crotch				Undesirable Species
1819	Acer saccharinum	Silver Maple	44	POOR	broken limbs, minor deadwood, storm damage, dieback, multiple leaders, hollow				Desirable Species - DQ CONDITION
1820	Morus alba	White Mulberry (Common Mulberry)	4	FAIR	over-topped, one-sided, twist in trunk				Undesirable Species
1821	Populus deltoides	Eastern Cottonwood	71	POOR	damaged leader, top broken off		snapped off at 35'		Desirable Species - DQ CONDITION
1822	Acer platanoides	Norway Maple	23	FAIR	minor deadwood, storm damage				Desirable Species
1823	Morus alba	White Mulberry (Common Mulberry)	5	FAIR	over-topped, slight sweep, sweep, basal scar			Forked at base with 4", 3", 2" co-leaders	Undesirable Species
1824	Acer negundo	Boxelder Maple	8	POOR	over-topped, minor deadwood, suckering, twist in trunk				Undesirable Species
1825	Ailanthus altissima	Tree-of-Heaven	8	FAIR	minor deadwood, over-topped, slight sweep				Undesirable Species
1826	Ulmus americana	American Elm	13	FAIR	over-topped, slight sweep, one-sided				Landmark Species
1827	Acer platanoides	Norway Maple	6	FAIR	thin crown, twist in trunk				Desirable Species
1828	Ulmus americana	American Elm	6	POOR	over-topped, slight sweep		dead/uprooted ash against trunk at 10'		Landmark Species - DQ CONDITION
1829	Ulmus americana	American Elm	10	FAIR	over-topped, slight sweep, minor deadwood				Landmark Species
1830	Acer platanoides	Norway Maple	11	FAIR	over-topped, twist in trunk, basal scar, decay		dead/uprooted ash caught in crown	Forked at base with a 5" co-leader	Desirable Species
1831	Acer platanoides	Norway Maple	9	FAIR	over-topped, one-sided, basal scar, double leader,		wire wrapped around co-leader		Desirable Species
1832	Ulmus americana	American Elm	9	FAIR	thin crown, construction fill				Landmark Species
1833	Ulmus americana	American Elm	7	FAIR	thin crown, construction fill, one-sided				Landmark Species
1834	Acer negundo	Boxelder Maple	5	POOR	metal in trunk, excessive lean, construction fill				Undesirable Species
1835	Morus alba	White Mulberry (Common Mulberry)	23	FAIR	slight lean, weak crotch, multiple leaders			Forked at 5.5'	Undesirable Species
1836	Ulmus americana	American Elm	6	FAIR	over-topped, twist in trunk, thin crown				Landmark Species
1837	Ulmus americana	American Elm	4	FAIR	over-topped, slight sweep, thin crown, trunk scar, suckering				Landmark Species
1838	Juglans nigra	Black Walnut	5	FAIR	sweep, double leader, trunk scar, over-topped				Landmark Species
1839	Crataegus crus-galli	Cockspur Hawthorn	5	POOR	decay, sweep, suckering		co-leader snapped off at 6'		Desirable Species - DQ CONDITION
1840	Juglans nigra	Black Walnut	6	FAIR	over-topped, multiple leaders				Landmark Species
1841	Crataegus crus-galli	Cockspur Hawthorn	11	POOR	decay, suckering, over-topped		Old tag #163, Old tag #4347	Forked at 2.5'	Desirable Species - DQ CONDITION
1842	Crataegus crus-galli	Cockspur Hawthorn	8	POOR	over-topped, thin crown, minor deadwood, decay		Old tag #4348		Desirable Species - DQ CONDITION
1843	Morus alba	White Mulberry (Common Mulberry)	13	FAIR	slight lean, multiple leaders				Undesirable Species
1844	Crataegus crus-galli	Cockspur Hawthorn	11	FAIR	slight sweep, suckering			Forked at 1'	Desirable Species
1845	Ulmus americana	American Elm	6	FAIR	slight sweep, thin crown				Landmark Species
1846	Crataegus crus-galli	Cockspur Hawthorn	11	POOR	decay, broken limbs, dieback		Old tag #4351		Desirable Species - DQ CONDITION
1847	Acer negundo	Boxelder Maple	14	FAIR	slight lean, minor deadwood				Undesirable Species

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Tag No.	Botanical Name	Common Name	Size	Cond.	Problems	Insect/Disease	Comments	Co-Leaders at DBH	LZ Tree Classification
1848	Acer negundo	Boxelder Maple	6	FAIR	over-topped, excessive lean				Undesirable Species
1849	Ulmus americana	American Elm	6	FAIR	over-topped, slight sweep, one-sided				Landmark Species
1850	Ulmus americana	American Elm	6	FAIR	over-topped, slight sweep, thin crown				Landmark Species
1851	Ulmus americana	American Elm	6	FAIR	over-topped, slight sweep, one-sided, thin crown				Landmark Species
1852	Ulmus americana	American Elm	9	FAIR	one-sided, slight sweep, double leader, weak crotch			Forked at 1.5'	Landmark Species
1853	Ulmus americana	American Elm	4	POOR	over-topped, slight sweep, trunk scar				Landmark Species - DQ CONDITION
1854	Ulmus americana	American Elm	6	FAIR	double leader, weak crotch, slight sweep				Landmark Species
1855	Fraxinus pennsylvanica	Green Ash	4	POOR	over-topped, twist in trunk, woodpecker damage	emerald ash borer		Forked at base with a 3" co-leader	Undesirable Species
1856	Crataegus crus-galli	Cockspur Hawthorn	11	POOR	broken limbs, minor deadwood, dieback, decay			Forked at 1'	Desirable Species - DQ CONDITION
1857	Crataegus crus-galli	Cockspur Hawthorn	11	FAIR	minor deadwood, weak crotch, multiple leaders			Forked at 1'	Desirable Species
1858	Morus alba	White Mulberry (Common Mulberry)	15	FAIR	slight lean, weak crotch			Forked at 1.5'	Undesirable Species
1859	Crataegus crus-galli	Cockspur Hawthorn	10	POOR	decay, over-topped, suckering, split trunk, broken limbs		Old tag #4354		Desirable Species - DQ CONDITION
1860	Crataegus crus-galli	Cockspur Hawthorn	12	FAIR	weak crotch, trunk scar, minor deadwood			Forked at 1'	Desirable Species
1861	Fraxinus pennsylvanica	Green Ash	4	POOR	over-topped, sweep, trunk scar, woodpecker damage	emerald ash borer			Undesirable Species
1862	Morus alba	White Mulberry (Common Mulberry)	10	FAIR	over-topped, one-sided, multiple leaders		dead/uprooted ash caught in crown		Undesirable Species
1863	Acer negundo	Boxelder Maple	15	POOR	basal scar, slight lean, slight sweep				Undesirable Species
1864	Acer negundo	Boxelder Maple	21	POOR	basal decay, excessive lean			Forked at 1'	Undesirable Species
1865	Acer negundo	Boxelder Maple	5	FAIR	over-topped, double leader, twist in trunk, minor deadwood				Undesirable Species
1866	Acer negundo	Boxelder Maple	8	FAIR	twist in trunk, over-topped, slight lean, suckering				Undesirable Species
1867	Acer negundo	Boxelder Maple	6	FAIR	slight lean, over-topped			Forked at base with a 6" co-leader	Undesirable Species
1868	Fraxinus pennsylvanica	Green Ash	4	POOR	sweep, trunk scar	emerald ash borer		Forked at base with a 4" co-leader	Undesirable Species
1869	Fraxinus pennsylvanica	Green Ash	4	POOR	sweep, trunk scar, suckering	emerald ash borer			Undesirable Species
1870	Quercus macrocarpa	Bur Oak	54	FAIR	dieback, minor deadwood, one-sided		Old tag #197		Heritage Species
1871	Acer negundo	Boxelder Maple	11	FAIR	suckering, minor deadwood, slight lean				Undesirable Species
1872	Acer platanoides	Norway Maple	5	FAIR	over-topped, slight lean, twist in trunk				Desirable Species
1873	Acer platanoides	Norway Maple	5	FAIR	over-topped, slight lean, twist in trunk, one-sided				Desirable Species
1874	Quercus macrocarpa	Bur Oak	41	POOR	dieback, minor deadwood, double leader, sparse foliage				Heritage Species - DQ CONDITION
1875	Acer platanoides	Norway Maple	6	FAIR	over-topped, sweep, twist in trunk, double leader				Desirable Species
1876	Acer platanoides	Norway Maple	19	FAIR	over-topped, multiple leaders, minor deadwood		Old tag swallowed		Desirable Species
1877	Quercus macrocarpa	Bur Oak	40	FAIR	sweep, heavy deadwood		Old tag #190		Heritage Species
1878	Quercus macrocarpa	Bur Oak	41	FAIR	minor deadwood, dieback, multiple leaders				Heritage Species
1879	Acer platanoides	Norway Maple	13	FAIR	excessive lean, trunk scar			Forked at base with a 6" (top dead) co-leader	Desirable Species
1880	Acer platanoides	Norway Maple	12	POOR	basal decay, double leader, excessive lean, girdling root	canker		Forked at 3'	Desirable Species - DQ CONDITION
1881	Carya ovata	Shagbark Hickory	26	FAIR	over-topped, twist in trunk		Old tag # 192		Heritage Species
1882	Picea abies	Norway Spruce	6	POOR	over-topped, sparse foliage, lower branches shaded out		Old tag #4364		Landmark Species - DQ CONDITION
1883	Morus alba	White Mulberry (Common Mulberry)	12	FAIR	basal decay, basal scar, weak crotch, over-topped, slight sweep			Forked at base with an 11" co-leader	Undesirable Species
1884	Quercus macrocarpa	Bur Oak	37	FAIR	multiple leaders, minor deadwood		Old tag #4367		Heritage Species
1885	Acer platanoides	Norway Maple	10	FAIR	over-topped, slight sweep				Desirable Species
1886	Picea abies	Norway Spruce	15	FAIR	limbed up, basal scar, trunk scar				Landmark Species
1887	Morus alba	White Mulberry (Common Mulberry)	9	FAIR	basal decay, basal scar, weak crotch			Forked at base with 9", 8", 7", 8", 6", 5" co-leaders	Undesirable Species
1888	Acer negundo	Boxelder Maple	13	FAIR	sweep, suckering, minor deadwood				Undesirable Species
1889	Juniperus virginiana	Eastern Red-cedar	9	POOR	one-sided, sparse foliage, lower branches shaded out				Desirable Species - DQ CONDITION

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1890	Juniperus virginiana	Eastern Red-cedar	8	FAIR	lower branches shaded out				Desirable Species
1891	Morus alba	White Mulberry (Common Mulberry)	7	FAIR	one-sided				Undesirable Species
1892	Juniperus virginiana	Eastern Red-cedar	7	FAIR	thin crown, lower branches shaded out				Desirable Species
1893	Juniperus virginiana	Eastern Red-cedar	8	FAIR	thin crown, lower branches shaded out		wire girdling the trunk		Desirable Species
1894	Juglans nigra	Black Walnut	8	FAIR	one-sided, double leader				Landmark Species
1895	Acer platanoides	Norway Maple	27	FAIR	minor deadwood, one-sided				Desirable Species
1896	Acer platanoides	Norway Maple	19	FAIR	one-sided, over-topped, slight lean, girdling root				Desirable Species
1897	Morus alba	White Mulberry (Common Mulberry)	23	POOR	shear plane crack, slight sweep, over-topped, weak crotch				Undesirable Species
1898	Morus alba	White Mulberry (Common Mulberry)	13	FAIR	double leader, over-topped, sweep, weak crotch		Old tag #179	Forked at 1'	Undesirable Species
1899	Acer platanoides	Norway Maple	15	FAIR	one-sided, thin crown			Forked at base with a 10" co-leader	Desirable Species
1900	Acer platanoides	Norway Maple	16	FAIR	thin crown			Forked at base with a 12" co-leader	Desirable Species
229	Acer negundo	Boxelder Maple	19	FAIR	over-topped, one-sided			Forked at base with a 5" co-leader	Undesirable Species
230	Acer platanoides	Norway Maple	10	FAIR	over-topped, twist in trunk			Forked at base with a 7" co-leader	Desirable Species
231	Acer saccharinum	Silver Maple	33	FAIR	slight sweep, slight sweep		Old tag #208		Desirable Species
232	Acer platanoides	Norway Maple	6	FAIR	slight sweep, over-topped				Desirable Species
233	Acer platanoides	Norway Maple	6	FAIR	over-topped, slight sweep, twist in trunk				Desirable Species
234	Acer negundo	Boxelder Maple	5	POOR	trunk scar, suckering, slight sweep, over-topped				Undesirable Species
235	Acer platanoides	Norway Maple	35	POOR	double leader, weak crotch, heavy deadwood, broken limbs		damage by cottonwood that lost its top		Desirable Species - DQ CONDITION
236	Acer negundo	Boxelder Maple	5	FAIR	minor deadwood, over-topped, excessive lean		co-leader dead at 6"		Undesirable Species
237	Quercus macrocarpa	Bur Oak	48	FAIR	heavy deadwood				Heritage Species
238	Ulmus americana	American Elm	21	FAIR	over-topped, one-sided, suckering				Landmark Species
239	Ulmus americana	American Elm	20	FAIR	over-topped, double leader, sweep		Old tag #204		Landmark Species
240	Acer platanoides	Norway Maple	10	FAIR	over-topped, twist in trunk				Desirable Species

Species Summary
173 W. Main Street
Lake Zurich, IL
Prepared by Urban Forest Management, Inc. 5/15/2025

Botanical Name	Common Name	GOOD	FAIR	POOR	Number of Trees Inventoried	Percentage of Trees Inventoried
Acer negundo	Boxelder Maple		10	5	15	13.4%
Acer platanoides	Norway Maple		24	2	26	23.2%
Acer saccharinum	Silver Maple		2	1	3	2.7%
Ailanthus altissima	Tree-of-Heaven		1		1	0.9%
Carya ovata	Shagbark Hickory		1		1	0.9%
Catalpa speciosa	Northern Catalpa	1		1	2	1.8%
Crataegus crus-galli	Cockspur Hawthorn		3	6	9	8.0%
Fraxinus pennsylvanica	Green Ash			5	5	4.5%
Juglans nigra	Black Walnut		3		3	2.7%
Juniperus virginiana	Eastern Red-cedar		4	1	5	4.5%
Morus alba	White Mulberry (Common Mulberry)		14	1	15	13.4%
Picea abies	Norway Spruce		1	1	2	1.8%
Populus deltoides	Eastern Cottonwood			1	1	0.9%
Quercus macrocarpa	Bur Oak		5	1	6	5.4%
Salix nigra	Black Willow		1		1	0.9%
Ulmus americana	American Elm		15	2	17	15.2%
		1	**84**	**27**	**112**	**100.0%**

LZ Tree Classification	Number of Trees
Desirable Species	35
Desirable Species - DQ CONDITION	12
Heritage Species	6
Heritage Species - DQ CONDITION	1
Landmark Species	19
Landmark Species - DQ CONDITION	3
Undesirable Species	36
	112

BRUCE'S SUBDIVISION
ST 1/4 OF SECTION
D PRINCIPAL MERIDIAN,
R 29, 1898 AS
AKE COUNTY, ILLINOIS.

G A PART OF THE
RTH, RANGE 10, EAST
PLAT THEREOF
IN BOOK 1066 OF

NORTH OF LAKE STREET,
I BLOCK 2, IN E.S.
OF THE NORTHWEST
10 EAST OF THE THIRD
RECORDED SEPTEMBER
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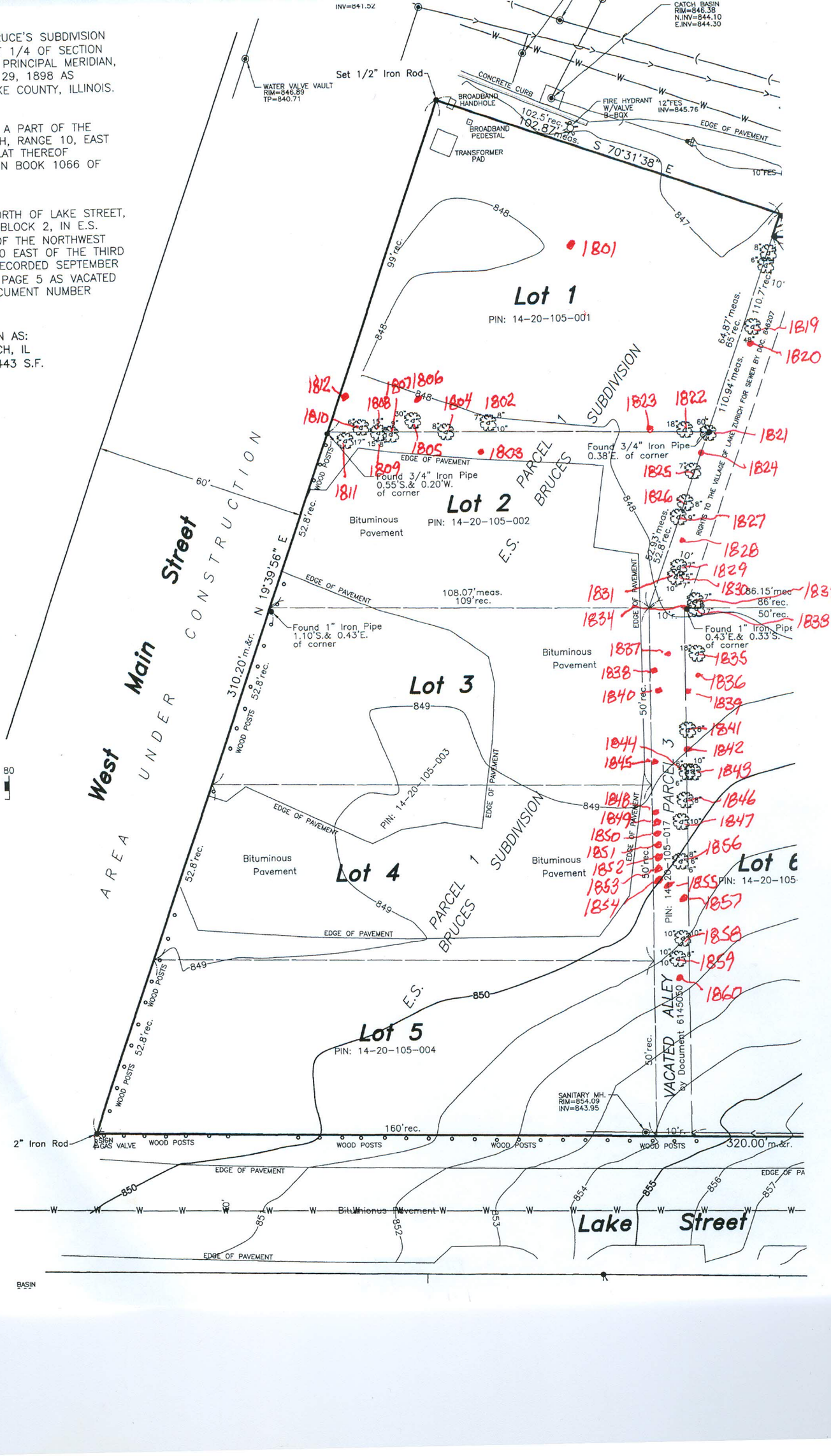
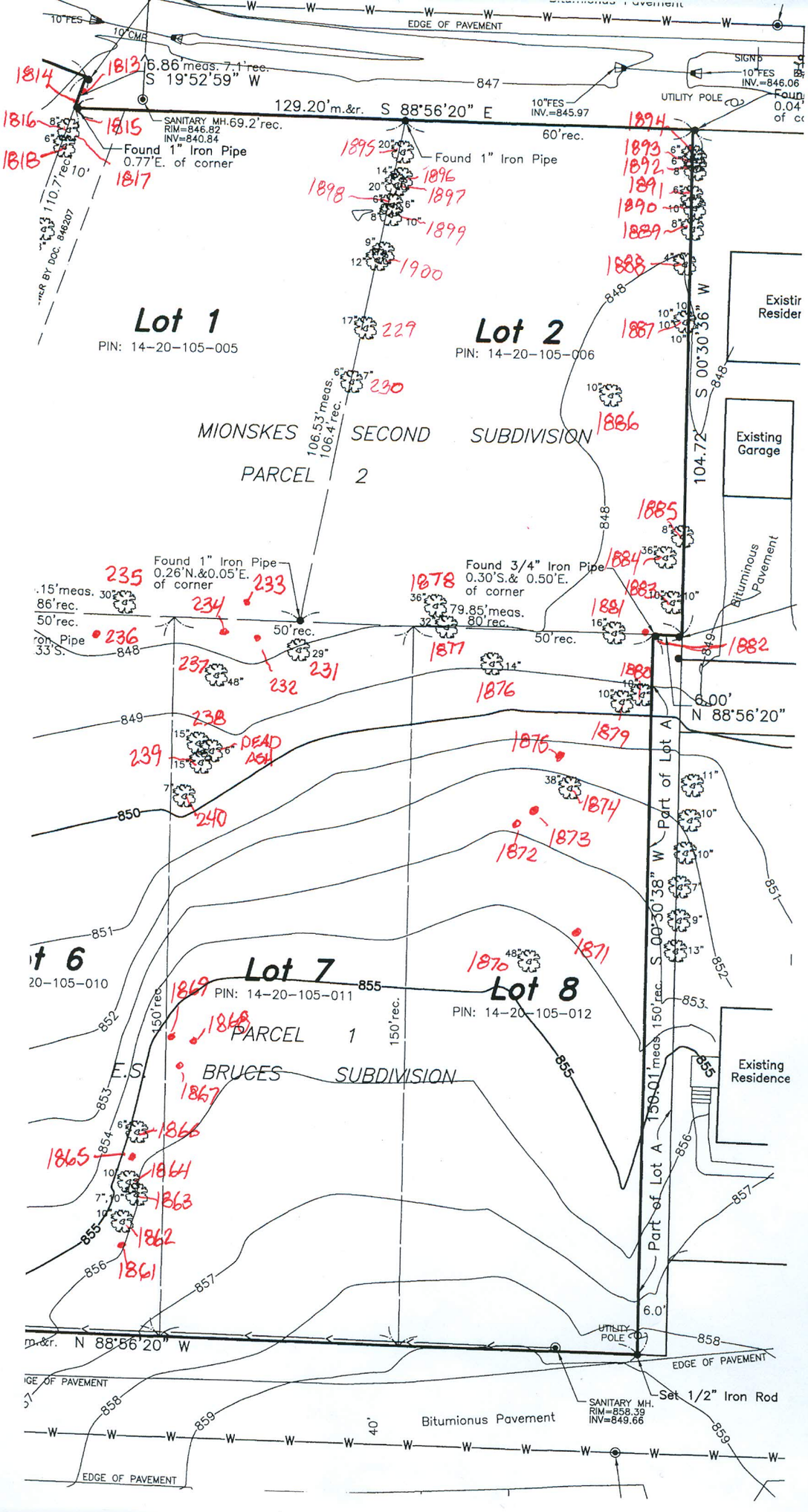
ICH, IL
,443 S.F.




EDGE OF PAVEMENT
10"FES
10"CMP
6.86'meas. 7.1'rec.
S 19°52'59" W
847
129.20'm.&r. S 88°56'20" E
60'rec.
10"FES
INV.=845.97
SIGN
10"FES
INV.=846.06
UTILITY POLE
SANITARY MH.69.2'rec.
RIM=846.82
INV=840.84
Found 1" Iron Pipe
0.77'E. of corner
110.7'rec.
Found 1" Iron Pipe
Lot 1
PIN: 14-20-105-005
Lot 2
PIN: 14-20-105-006
MIONSKES SECOND SUBDIVISION
PARCEL 2
106.53'meas.
106.4'rec.
S 00°30'36" W
104.72'
Existing Garage
Existing Residence
Bituminous Pavement
Found 1" Iron Pipe
0.26'N.&0.05'E.
of corner
Found 3/4" Iron Pipe
0.30'S.& 0.50'E.
of corner
79.85'meas.
80'rec.
50'rec.
6.00'
N 88°56'20"
Part of Lot A
150.01'meas.
150'rec.
S 00°30'38" W
DEAD ASH
Lot 7
PIN: 14-20-105-011
PARCEL 1
E.S. BRUCES SUBDIVISION
Lot 8
PIN: 14-20-105-012
150'rec.
6.0'
UTILITY POLE
N 88°56'20" W
EDGE OF PAVEMENT
SANITARY MH.
RIM=858.39
INV=849.66
Set 1/2" Iron Rod
Bituminous Pavement
40'
EDGE OF PAVEMENT

Urban Forest Management, Inc.

May 21, 2025

Mr. Derick B. Goodman, CEO
The Huron Group
747 Lake Cook Road, Suite 100W
Deerfield, IL 60015

RE: Tree Inventory and Report
173 W. Main St.
Lake Zurich, IL

Dear Mr. Goodman,

The following is the tree inventory listing and report for the property located at 173 W. Main St. in Lake Zurich, IL.

All trees measuring 4" in diameter at 6" above the existing grade and larger (per Village of Lake Zurich ordinance 7-6-6) were tagged and included in the inventory.

A total of one hundred and twelve (112) trees were included within this inventory, using tag #'s 1801 – 1900 and 229 – 240. Some of the trees had been previously tagged by others and some had 2 tags on them. A new set of tags with Urban Forest Management and the tag number stamped on them were nailed on the north face of the tree and this was the tag number utilized.

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

TREE INVENTORY & REPORT
173 W. MAIN ST.
LAKE ZURICH, IL

May 21, 2025

Prepared by:

URBAN FOREST MANAGEMENT, INC.
960 Route 22, Suite 207
Fox River Grove, IL 60021
(847) 516-9708

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III.	Tree Inventory	

I. Background and Methodology

A tree inventory was conducted on the property located at 173 W. Main St. in Lake Zurich, IL. All trees measuring 4" in diameter measured at 6" above the existing grade and larger were included within the inventory. Some of the trees had been previously tagged and inventoried by others, including several with two tags. A new tag with the wording Urban Forest Management and the tag number were nailed on the north face of the tree to differentiate the tag number used during this most recent inventory.

Trees were evaluated for species, size, condition and any observed problems were also noted. The tree conditions were rated using the format shown in Lake Zurich ordinance 10-6-18B3a(2). This rates each tree as either Poor, Fair or Good.

II. General Comments

A total of one hundred and twelve (112) trees were included within this inventory. Tag numbers used included #'s 1801 – 1900 and 229 -240.

Species inventoried include boxelder maple, Norway maple, silver maple, northern catalpa, cockspur hawthorn, green ash, black walnut, eastern red cedar, white mulberry, Norway spruce, bur oak, American elm and other species in smaller quantities. The most common species inventoried was Norway maple with 23.2% of all species inventoried, followed by American elm with 15.2%, and boxelder maple and white mulberry, each with 13.4%.

There are seven (7) trees considered Heritage trees by the Lake Zurich Tree Value Selection List inventoried on this property. One (1) of these Heritage trees is in poor condition. There are twenty two (22) trees considered Landmark trees on the list inventoried on this property. Three (3) of these considered Landmark trees are in poor condition. There are forty seven (47) trees considered Desirable species on the list inventoried on this property. Twelve (12) of these are in poor condition. There are thirty six (36) trees considered Undesireable on the list inventoried on this property.

The west third of the site is currently being used for construction parking and some of the trees have been impacted by compacted soil within their critical root zones. The rest of the site contains open turf with several fencerows composed of the inventoried trees along with medium density 10' tall buckthorn, honeysuckle understory with some green ash measuring less than 4' tall, American elm and few bur oak saplings measuring less than 3" diameter scattered throughout. With the exception of the remaining ash trees with emerald ash borer, very little disease or insect issues were present on this site. The top half of the single cottonwood on this property had broken off and covers a large area in the central section of this site.

173 W. Main St
Building Material Specifications

Arctic White

Night Gray

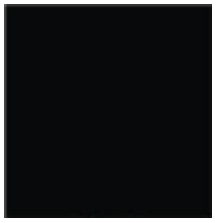
Siding
Manufacturer: James Hardie
Style: Hardie Select Cedarmill Plank & Panel
Color: Arctic White & Night Gray

Arctic White

Night Gray

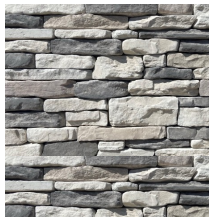
Trim & Corners
Manufacturer: James Hardie
Style: Hardie Select Cedarmill Plank & Panel
Color: Matches Color At Section

White

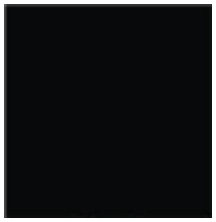


Black

Soffit, Fascia, Gutters
Manufacturer: ACM
Style: Aluminum
Fascia & Gutter Color: Black
Soffit: Matches Color At Section



Masonry
Manufacturer: QR Stone
Style: Rustic Ledgestone
Color: Pebble Beach



Windows
Manufacturer: MI
Style: Vinyl Single Hung
Color: Matte Black

173 W. Main St
Building Material Specifications

Garage Doors
Manufacturer: Clopay
Style: GLP-1 Long Panel Insulated Aluminum
Color: White

Lighting
Manufacturer: James Kent
Style: 14” Outdoor Wall Sconce
Color: Matte Black

Manufacturer: Kwikset
Style: Prescott Handle & Powerbolt 250 Lock
Color: Matte Black

Manufacturer: Ring
Style: Hardwired Doorbell
Color: Matte Black

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 2025-13 **AGENDA ITEM 4.B**
PZC Hearing Date: August 20, 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: August 20, 2025

Re: PZC 2025-13 Zoning Application for 2500 North Rand Road
Luxe Corsa Auto Suites

SUBJECT

Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC, (the "Applicants") and contract purchasers of the property commonly known as "The Calabrese Property" at 2500 North Rand Road (hereinafter referred to as the "Subject Property"), request approval to develop the Subject Property with automobile condominiums and retail buildings to be known as "Luxe Corsa Auto Suites."

The Subject Property is currently addressed as 24455 North Rand Road in unincorporated Lake County.

GENERAL INFORMATION

Requested Action:	Annexation, Zoning Classification, Subdivision, and Special Use Permit for a Planned Unit Development (PUD
Current Zoning:	GC General Commercial (Unincorporated Lake County)
Proposed Zoning:	B-1 Local & Community Business District I Industrial District
Existing Use:	Construction Company Storage and Office

Proposed Uses: Automobile Condominiums, Clubhouse and Retail Buildings

Property Location: 2500 North Rand Road

Applicant: Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC

Owner: Calabrese Family Living Trust

Staff Coordinator: Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Site Photos
D. Aerial Map
E. Zoning Map
F. Parcel Map
G. Development Application and Attachments
H. Development Review Comments

BACKGROUND

The Subject Property covers nearly 20 acres and is located north of the Village's municipal boundary, under the jurisdiction of Lake County. To facilitate development of the land and obtain access to Village utilities, the Applicant filed an application with the Village of Lake Zurich on July 16, 2025 (the "Application"), specifically seeking:

- Amendment to the Zoning Map of the Village of Lake Zurich for the annexation of the Subject Property
- Rezoning the Subject Property within the B-1 Local & Community Business and I Industrial Zoning Districts
- A Special Use Permit for a Planned Unit Development (PUD) and approval of a Development Concept Plan (Preliminary Plan) to develop the Subject Property
- Exterior Appearance and Site Plan Approval consistent with a Development Concept Plan
- The grant of modifications to the Zoning Code under the PUD:
    - Bulk requirements for commercial and industrial development
    - Parking requirements for commercial development

The Subject Property encompasses approximately 20 acres, with about 5 acres designated as wetlands located along the far eastern portion of the site. It is zoned GC General Commercial within unincorporated Lake County.

Historically, the site has functioned as a storage yard and office space for a construction business. Currently present on the site is a single-family residence and accessory garage, constructed in the 1940s, with a combined area of approximately 1,760 square feet. These structures have been repurposed for office and storage use. A large industrial storage building, approximately 7,500 square feet in size, is also present on the property and serves primarily for equipment and material storage. The site contains a substantial amount of outdoor storage, including semi-truck trailers, multiple vehicles, and construction-related materials. A single vehicular access off Rand Road serves as the only means of access to the Subject Property. All existing structures and material are proposed to be demolished and removed from the site.

Retail Automobile Dealership Building along Rand Road.
As part of the proposed development, the front portion of the site will be developed with a high-end automobile dealership with an attached coffee shop and an automobile detailing center. This portion of the Subject Property will be subdivided into a lot approximately 250 feet in depth from Rand Road and roughly 320 feet in length along the frontage. The new lot will be zoned B-1 Local and Community Business, which is consistent with existing development patterns along Rand Road but represents a lower-intensity commercial district, given the presence of nearby residential uses.

The proposed 2-story dealership building will contain approximately 14,000 square feet of floor area, with an additional 5,000-square-foot mezzanine. The building will front Rand Road, with 32 associated parking spaces located to the rear of the structure. A north-facing patio will serve the coffee shop component of the development. The detailing center will only provide prepping of vehicles, and no service work will be offered. The building's architecture is designed with high ceilings, glass windows, and a contemporary exterior with metal accents. The transparent glass corner of the building will showcase vehicles for sale.

Automobile Condominiums and Clubhouse on the Remaining Portion of the Site
The remaining portion of the site will be developed with an automotive clubhouse and 11 automobile condominium buildings.

Access to the site will be provided through the same access point from Rand Road. A southern drive aisle will function as a one-way entrance into the portion of the Subject Property that will be zoned within the I Industrial District. An electronic gate will separate the dealership lot from the rest of the site, while a large metal entry sign will brand the development and clearly distinguish the site's two uses. Additional fencing and landscaped buffers will further screen and separate the commercial lot from the industrial area.

Clubhouse Building.
The two-story clubhouse, standing 33 feet tall and encompassing 20,265 square feet, will house a variety of amenities along with the leasing office. The ground floor will feature a lounge and bar area, designed to accommodate catered food for events, along with a salon, leasing office, and outdoor patio. The second floor will include multiple golf and racing simulators, a fitness room, and an outdoor putting green with a terrace. The clubhouse is centrally located and will offer automobile condominium owners a recreational space to gather and enjoy a variety of amenities.

Automobile Condominium Buildings
The 11 automobile condominium buildings will be arranged throughout the site, with Buildings 1 through 6 located west of the clubhouse and the remaining buildings positioned to the east and south. East of Buildings 7 through 10, a stormwater retention pond will provide a natural buffer to the existing wetland beyond. The retention pond will be planted with a native seed mix, left in a natural state of vegetation, and remain undisturbed to protect the surrounding wetland.

Each automobile condominium building will be two stories in height, approximately 28 feet tall, and will feature individual balconies for each unit. Two floor plan options will be available:
- Type A units at approximately 1,500 square feet for 26 units; and
- Type B units at approximately 1,150 square feet for 95 units.

The development will offer a total of condominium 121 units.

The architecture incorporates fiber cement panels, accented by hangers above the garage doors. The buildings are differentiated by varying tones on the facades and a series of illuminated way-finding graphics on the end caps of each building.

Each automobile condominium will include a bathroom and utility room on the first floor, with stairs leading to a mezzanine level. The units will be delivered as "vanilla boxes," allowing owners to customize the interior layout and finishes to their specific preferences. Individual building permits will be required for each unit's buildout.

Pursuant to public notice published on July 26, 2025, in the Daily Herald, a public hearing has been scheduled with the Lake Zurich Planning & Zoning Commission for August 20, 2025, to consider the Application. On July 23, 2025, the Village posted a public hearing sign on the Subject Property (Exhibit B).

Staff offers the following additional information:

A. **Courtesy Review.** The Applicant presented their project at a courtesy review of the Village Board on April 21, 2025. The feedback was generally positive and the Village Board recommended that the Applicant proceed with a formal application to the PZC for consideration at a public hearing. Information on the Courtesy Review is enclosed along with this report and the video stream of the meeting can be viewed at the following link: https://play.champds.com/lakezurichil/event/153

B. **Zoning History.** As of the mid-1930s, the Subject Property consisted of vacant land with tree cover and a wetland. Between that time and 1946, a farmhouse was constructed on the site. Lake County tax records indicate that the large industrial building was constructed in the early-1980s. In the years that followed, the property's industrial use expanded as additional land was cleared for equipment and vehicle storage. The site is currently zoned GC General Commercial in unincorporated Lake County, and the present owners have used it for office space and equipment storage for their construction business.

C. **Surrounding Land Use and Zoning.** The Subject Property is located just north of the Village's municipal boundary. The far eastern portion of the lot directly abuts the Meadow

Wood East single-family subdivision, which was approved in January 2025 for development with 15 new Single-Family homes. Further east of the Subject Property are additional single-family residences within the Village of Hawthorn Woods.

To the south is the E-Z-Go property (Textron E Z Go LLC), a commercial business that sells golf carts, also located in unincorporated Lake County. To the west, across Rand Road, is the Wynstone Commercial Area, a commercial center within the Village of North Barrington. Behind this center and farther to the west is the Wynstone Subdivision, a large single-family residential neighborhood with an associated golf course, also in North Barrington. North of the Subject Property is the Mount Saint Joseph property, a non-profit immediate care facility situated in unincorporated Lake County.

D. **Trend of Development.** The construction of automobile condominiums is a relatively new development concept, with similar projects recently completed or underway in Naperville and Barrington. The Subject Property is well-suited for this use, given its substantial size and its location within a mixed-use corridor along Rand Road that supports both the commercial development of the automobile dealership and the industrial use. The surrounding area has the potential to undergo future development, in particular with the Meadow Wood East single-family subdivision soon to begin construction.

E. **Zoning District**. Three (3) zoning districts are provided for business and commercial uses. When taken together, these districts are intended to permit development of property for the full range of business and commercial uses needed to serve the citizens of Lake Zurich and the surrounding suburban area.

The commercial piece of the development is proposed to be zoned within the B-1 Local and Community Business district. The B-1 Local and Community Business District is intended to serve the everyday shopping needs of Village residents as well as to provide opportunities for specialty shops attractive to the wider suburban residential community around the Village. It permits uses that are necessary to satisfy most basic, frequently occurring shopping needs. It also permits compatible uses that, although not used as frequently, would be desirably located in close proximity to potential users. The district is located principally on primary or secondary thoroughfares, is relatively small in size, and has bulk standards that provide for compatibility with nearby residential uses.

The automobile condominiums and clubhouse are proposed to be zoned within the I-Industrial District. The I industrial district is intended to provide for a range of nuisance free manufacturing, warehousing, transportation, wholesaling, and industrial uses that are compatible with the suburban residential character of the village. The industrial district is also meant to accommodate certain professional offices and similar uses that may provide services to the industrial users and are compatible with the industrial character of the district. It is the goal of these regulations to provide and preserve an area within the village for industrial uses that create employment and economic benefits for the village and the industrial district.

F. **Annexation of Property.** Annexation is a function of the corporate authorities (Village Board) of the municipality. By statute, all land annexed to the village is typically classified automatically after such annexation within the R-1/2 single-family residential district, unless the owner requests a different classification (which in this case are B-1 Local and Community Business and I Industrial Districts). The process of annexation involves the undertaking of an annexation agreement requiring a public hearing of the Village Board. For every annexation agreement hearing, there must also be a notice of public hearing held before the Village Board. An annexation agreement can only be approved by a two-thirds vote of the Village Board (5 out of 7). Once approved, an annexation agreement can only be amended after the appropriate public hearings and by a similar extra majority vote. An annexation agreement is typically authorized for a period not exceeding 20 years.

Additionally, when an annexation agreement contains a promise of a zoning classification (B-1 Local and Community Business and I Industrial, in this case), all public hearings regarding zoning, including special uses and variances where necessary, need to take place before the annexation agreement can be considered and approved.

The Planning and Zoning Commission reviews a petition for annexation with a proposed development only if a zoning classification other than R-1/2, special use or otherwise a variation or modification in the zoning and/or subdivision ordinance is sought. In the case of the subject development, the request for classification within the B-1 Local and Community Business and I Industrial Districts (through an amendment of the village zoning map) and Preliminary Plan approval requires the review by the Planning and Zoning Commission at this public hearing.

GENERAL FINDINGS

Staff of the Village's Development Review Team (DRT) including the Village Engineer, has evaluated the development against the various standards and provisions of the Lake Zurich Municipal Code and offers findings on specific sections of the Code.

9-18-3: STANDARDS FOR AMENDMENTS:

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 (with the recommendation of the PZC) should 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 the application:

A. <u>The consistency of the proposed amendment with the purposes of this zoning code.</u>

Staff Response: Standard met. The proposed map amendment meets the purpose of the zoning code whose overall purpose is to maintain Lake Zurich as a community

with thriving business areas, in particular with respect to land use patterns, public infrastructure, community expectations and value.

The current Comprehensive Plan designates the Subject Property for annexation and future commercial use. The proposed development includes a commercial lot along Rand Road and an industrial portion to the rear. The commercial lot is consistent with the plan's designation, as an automobile dealership qualifies as a commercial use and will contribute to the Village's tax base. The industrially zoned portion is most compatible with that district's permitted uses for warehousing. The Clubhouse use is incidental to the over use of the property and is proposed to be allowed under the approvals granted by the PUD.

The amendment will continue to promote and protect the public health, safety, morals, and the general welfare of the village.

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

Staff Response: Standard met. The proposed uses permitted by the zoning map amendment—commercial and industrial—are consistent with the purpose and intent of the zoning code, which encourages the development of property with these uses in appropriate locations. The expansion of the Village's boundary to include this property will generate additional tax revenue and is consistent with its location within the Village's designated planning area.

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

1. Existing Uses and Classifications: The existing uses and zoning classifications for properties in the immediate vicinity of the subject property.

   Staff Response: Standard met. To the south is the E-Z-Go property (TEXTRON E Z GO LLC), a commercial business and the adjacent land zoned within the OS Open Space and contains wetlands maintained by the Meadow Wood East Homeowners' Association. The portion of the Subject Property that will be adjacent to the future Meadow Wood East single-family development consists of the detention pond area and wetland. Across Rand Road, the area is occupied by similar commercial uses that will complement the proposed development. To the north, the Subject Property abuts a large open space area owned and maintained by the Mount Saint Joseph care facility containing total land area of approximately 150 acres.

2. Trend of Development: The trend of development in the immediate vicinity of the subject property, including changes, if any, in such trend since the subject property was placed in its present zoning classification.

Staff Response: Standard met. The Subject Property is situated along Rand Road, a regional arterial that supports key commercial and retail uses for the community. The proposed development will serve as an extension of the established commercial corridor. While the automobile condominiums are not residential uses, they are proposed to house low-impact, passive uses that will not negatively impact the Meadow Wood East single-family subdivision in the immediate vicinity.

3. Diminution of Values: The extent to which the value of the subject property is diminished by the existing zoning classification applicable to it.

Staff Response: Standard met. The Subject Property's current GC General Commercial zoning in Lake County does not permit the proposed development. Annexation into the Village will enable connection to necessary utilities, and rezoning will allow the proposed development to proceed in compliance with Village regulations.

Currently, the site contains a single-family home with an accessory detached garage and a large industrial building, with the remainder of the Subject Property remaining vacant. The proposed development, including an automobile dealership and automobile condominiums, will enhance the property's overall value by allowing higher and more productive uses consistent with market demand.

4. Increase in Health, Safety, And Welfare: The extent, to which any such diminution in value is offset by an increase in the public health, safety, and welfare.

Staff Response: Standard met. There is no evidence that this diminution in value is offset by an increase in the overall public health, safety, and welfare.

5. Effects On Adjacent Properties: The extent to which the use and enjoyment of adjacent properties would be affected by the proposed amendment.

Staff Response. Standard met. The proposed development is designed to minimize any impact on surrounding properties. The requested zoning classification includes appropriate standards for land use and bulk, ensuring the development will not adversely affect neighboring properties. Additional measures, including supplemental landscaping, fencing, and lighting that conforms to Village standards, and preservation of the existing wetland will further protect adjacent properties and maintain the overall character of the area.

6. Value Of Adjacent Properties: The extent to which the value of adjacent properties would be affected by the proposed amendment.

Staff Response: Standard met. No evidence has been provided to demonstrate that the proposed development will have a negative impact on the value of adjacent properties. The development of the existing industrial property with an automobile dealership and automobile condominiums will serve to enhance the Subject Property.

7. Future Development: The extent to which the future orderly development of adjacent properties would be affected by the proposed amendment.

Staff Response: Standard met. The property to the southeast is planned for development with 15 single-family homes as part of the Meadow Wood East Subdivision. The properties to the east and west are already improved and incorporated within other municipalities. The property to the north is owned and maintained by the Mount Saint Joseph Care Facility whose southerly approximately 50 acres is largely undeveloped at this time; however, it may be developed in the future and annexed into the Village, as it is designated for mixed residential purposes in the Village's Comprehensive Plan. A significant portion of the land to the south remains undeveloped due to the presence of an existing wetland.

8. Suitability Of Text Amendment: The suitability of the proposed text amendment for the zoning district in which the amendment is being proposed.

Staff Response: Not Applicable.

9. Ingress and Egress: The availability, where relevant, of adequate ingress to and egress from the subject property and the extent to which traffic conditions in the immediate vicinity of the subject property would be affected by the proposed amendment.

Staff Response: Standard met. The Subject Property has direct frontage along Rand Road, a regional arterial that connects the Village to communities to the northwest and southeast. The planned access point will allow vehicles to turn either north or south onto Rand Road. Internal streets within the development will remain privately owned and be designed to Village standards that will allow for proper emergency access to all properties and buildings within the subdivision.

10. Utilities and Services: The availability, where relevant, of adequate utilities and essential public services to the subject property to accommodate the uses permitted or permissible under its present zoning classification.

Staff Response: Standard met. The development will be served with new water, sanitary and storm water utilities in accordance with the standards provided in the land development code.

11. Length of Vacancy: The length of time that the subject property has been vacant, considered in the context of the pace of development in the vicinity of the subject property.

Staff Response: Standard met. The majority of the Subject Property has remained vacant, aside from a single-family home, detached garage, and an industrial building near Rand Road that has primarily been used for storage. The Subject Property reflects a broader trend in the area, where larger vacant parcels are being subdivided and redeveloped with new subdivisions.

12. Positive Effect: The proposed amendment creating a positive effect for the zoning district, its purposes, and adjacent properties shall be placed before the benefits of the petitioner.

Staff Response: Standard met. The proposed development will introduce a new land use to Lake Zurich that is not currently available within the Village, enhancing the diversity of uses in the community. In addition, the inclusion of an automobile dealership will contribute to the Village's tax base, providing a direct economic benefit to the community.

9-22-5: STANDARDS FOR PLANNED UNIT DEVELOPMENTS (PUDs).

Planned unit developments are included in the zoning code as a distinct category of special use. As such, they are authorized for the same general purposes as all other special uses and in recognition of the fact that traditional bulk, space, and yard regulations that may be useful in protecting the character of substantially developed and stable areas may impose rigidities on the development or redevelopment of parcels or areas that lend themselves to an individual, planned approach.

A. Special Use Permit Standards: No special use permit for a planned unit development shall be recommended or granted pursuant to this chapter unless the applicant shall establish that the proposed development will meet each of the standards made applicable to special use permits pursuant to chapter 19 of this title.

Staff Response: Standard met. The Planned Unit Development is being requested as a Special Use Permit. Please refer to the "Standards for Special Use Permits" contained within this report.

B. Additional Standards for All Planned Unit Developments: No special use permit for a planned unit development shall be recommended or granted unless the applicant shall establish that the proposed development will meet each of the following additional standards:

1. Unified Ownership Required: The entire property proposed for planned unit development treatment shall be in single ownership or under such unified control as to ensure that the entire property will be developed as a unified whole. All owners

of the property shall be included as joint applicants on all applications and all approvals shall bind all owners. The violation of any owner as to any tract shall be deemed a violation as to all owners and all tracts.

Staff Response: Standard met. The entire property that is subject to the PUD is under contract to be purchased by the Applicant, Luxe Corsa Partners, LLC.

2. Minimum Area: The applicant shall have the burden of establishing that the subject property is of sufficient size and shape to be planned and developed as a unified whole capable of meeting the objectives for which planned unit developments may be established pursuant to this section.

Staff Response: Standard met. The approximately 20-acre property—including roughly 5 acres of existing wetlands—has the size and configuration necessary to be developed as a single planned unit development. The site can accommodate both the commercial and industrial lots, supporting the proposed automobile dealership and automobile condominiums.

3. Covenants and Restrictions to Be Enforceable by Village: All covenants, deed restrictions, easements, and similar restrictions to be recorded in connection with the planned unit development shall provide that they may not be modified, removed, or released without the express consent of the board of trustees and that they may be enforced by the village as well as by future landowners within the proposed development.

Staff Response: Standard met. Easements for onsite improvements will be provided at the time of Final Plan consideration. The automobile condominium development will need to be managed by a Property Owners Association (similar to an HOA) that will be required to adopt its declarations of covenants, rights, and restrictions. The declarations will need to be reviewed and approved by the Village prior to Final Plan approval.

4. Public Open Space and Contributions: Whenever the official comprehensive plan, zoning map, or official map indicates that development of a planned unit development will create a need for land for public purposes of the village within the proposed planned unit development, the board of trustees may require that such area be designated and to the extent such need is specifically and uniquely attributable to the proposed development, dedicated to the village for such use. In addition, the board of trustees may require evidence that all requirements of village ordinances pertaining to the dedication of land or the contribution of cash in connection with subdivisions or developments of land have been met as respects the proposed planned unit development.

Staff Response: Not Applicable. The nature and scope of the development does not create a need for land for public purposes of the Village within the

proposed planned unit development. The purpose and intent of such contributions are provided primarily for larger residential developments consisting of multiple properties with common areas to provide for or compensate for public amenities for the benefit of new residents that will move into the community to occupy such developments.

5. Common Open Space:

   a. Amount, Location, And Use: The failure of a planned unit development to provide common open space shall be considered to be an indication that it has not satisfied the objectives for which such developments may be approved pursuant to this zoning code. When common open space is provided in a planned unit development, the amount and location of such open space shall be consistent with its intended function as set forth in the application and planned unit development plans. No such open space shall be used for the construction of any structure or improvement except such structures and improvements as may be approved in the final plan as appropriate to the intended leisure and recreational uses for which such open space is intended.

   b. Preservation: Adequate safeguards, including recorded covenants or dedication of development rights, shall be provided to prevent the subsequent use of common open space for any use, structure, improvement, or development other than that shown on the approved final plan. The restrictions must be permanent and not for a given period of years and must run with the land. Such covenants and dedications may provide that they may be released, but only with the express written consent of the board of Trustees.

   c. Ownership And Maintenance: The final plan shall include such provisions for the ownership and maintenance of such open space and improvements as are reasonably necessary to ensure their continuity, care, conservation, maintenance, and operation in accordance with predetermined standards and to ensure that remedial measures will be available to the village if such open space or improvements are permitted to deteriorate or are not maintained in a condition consistent with the best interests of the planned unit development or the village.

   d. Property Owners' Association: When the requirements of subsection B5c of this section are to be satisfied by the ownership or maintenance of such open space or improvements by a property owners' association, such association shall meet each of the following standards:

      i. The bylaws and rules of the association and all declarations, covenants, and restrictions to be recorded must be approved as part of the final plan prior to becoming effective. Each such document shall provide that it shall not be amended in any manner that would result in it being in violation of the requirements of this subsection B5d(1); and

ii. The association must be established and all covenants and restrictions must be recorded prior to the sale of any property within the area of the planned unit development designated to have the exclusive use of the proposed open space or improvements; and

iii. The association must be responsible for casualty and liability insurance, taxes, and the maintenance of the open space and improvements to be deeded to it; and

iv. Membership in the association must be mandatory for each property owner and any successive owner having a right to the use or enjoyment of such open space or improvements; and

v. Every property owner having a right to the use or enjoyment of such open space or improvements must pay its pro rata share of the cost of the association by means of an assessment to be levied by the association that meets the requirements for becoming a lien on the property in accordance with state statutes; and

vi. The association must have the right to adjust the assessment to meet changed needs. The membership vote required to authorize such adjustment shall not be fixed at more than two-thirds (2/3) of the members voting on the issue; and

vii. The village must be given the right to enforce the covenants; and

viii. The village must be given the right, after ten (10) days' written notice to the association, to perform any maintenance or repair work that the association has neglected to perform, to assess the membership for such work and to have a lien against the property of any member failing to pay such assessment. For this purpose alone, the village shall have all the rights and powers of the association and its governing body under the agreements and declarations creating the association.

Staff Response: Standard Met. The industrial lot with the automobile condominium development contains common open space that includes private streets, land between the buildings, pedestrian pathways, the wetland, and stormwater management facilities. These areas are proposed to be owned and maintained by a Property Owner's Association (similar to an HOA). The specific responsibilities of the Association will be provided for through declarations of covenants, rights and restrictions that will be required to be submitted for review and approval at the time of final plan consideration.

6. Landscaping and Perimeter Treatment: Any area of a planned unit development not used for structures or circulation elements shall be landscaped or otherwise improved. The perimeter of the planned unit development shall be treated so as to ensure compatibility with surrounding uses by means such as provision of compatible uses and structures, setbacks, screening, or natural or manmade buffers.

   Staff Response: Standard partially met. The proposed landscape plan generally conforms to the landscape material requirements; however, the lot line abutting Rand Road will require additional plantings to provide adequate landscape material. The west lot line along Rand Road will require the installation of six plant units across the 340-foot frontage, consistent with the standard of two plant units per 100 feet of frontage. Additionally, areas planted with a native seed mix, such as the detention pond perimeter and locations to the north and south, will require "No Mow" signage to preserve the plantings that will remain in a state of natural vegetation.

7. Private Streets: Private streets are prohibited unless expressly approved by the board of trustees. If so approved, they shall meet all construction standards applicable to public streets. No such streets shall be approved except upon the condition that they shall be owned and maintained by a property owners' association meeting the requirements set forth in subsection B5d of this section

   Staff Response: Standard met. This standard is written within the framework of single-family detached homes, whose subdivisions are developed with public streets. However, due to the nature of the subdivision and at the recommendation of the Village's Development Review Team (DRT), all streets within the development are proposed to be maintained as private streets. Such streets will be constructed to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA

8. Sidewalks: A sidewalk meeting the standards of the Lake Zurich subdivision ordinance shall be provided along at least one side of every street in or abutting a planned unit development; provided, however, that such sidewalk may be constructed in a street right of way or as a specific element of the design of the planned unit development.

   Staff Response. Standard partially met. No sidewalk is currently proposed along Rand Road. Sidewalk construction along the Subject Property's frontage with Rand Road is required and must be installed in accordance with Village policies and standards. While the adjacent lots to the north and south do not currently have sidewalks, connections will be completed as those lots are developed in the future according to the Village's Comprehensive Plan.

9. Utilities: All utility lines shall be installed underground.

Staff Response: Currently, all private and public utilities proposed to serve the development itself are proposed to be installed underground.

10. Additional Standards for Specific Planned Unit Developments: When the district regulations authorizing any planned unit development use in a particular district impose standards to be met by such planned unit development in such district, a special use permit for such development shall not be recommended or granted unless the applicant shall establish compliance with such standards. (Ord., 10-2004)

Staff Response: Standard Met. There are no additional standards imposed through the establishment of a development within the B-1 or I district. Any conditions governing the development by the developer along with the future maintenance of common areas will be memorialized within a binding agreement between the Village and developer.

9-19-3: STANDARDS FOR SPECIAL USE PERMITS.

Staff has reviewed the application and found that the proposal will continue to remain in substantial conformance with the standards for Special Use Permits as outlined below.

A. General Standards: No special use permit shall be recommended or granted unless the applicant shall establish substantial conformance with the following:

1. Zoning Code and Plan Purposes: The proposed use and development will be in harmony with the general and specific purposes for which this zoning code was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official Comprehensive plan.

Staff Response: Standard met. The proposed development is in substantial conformance with the purpose and intent of the Rand Road Corridor as outlined in the adopted 2025 Comprehensive Plan, including the land use designation of the Subject Property as commercial. The North Rand Road corridor represents a key opportunity for mixed-use development on sizable parcels. The Subject Property lies within the Village's Planning Boundary and its development as a commercial use is consistent with the Comprehensive Plan's vision.

2. No Undue Adverse Impact. The proposed use and development will not have a substantial or undue adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

Staff Response: The developer has incorporated an on-site stormwater detention facility to mitigate potential flooding impacts on the Subject Property and surrounding properties. The proposed development will not have a substantial or undue adverse effect on adjacent properties. It is consistent with existing and planned land uses along Rand Road.

The design of the automobile condominium buildings, combined with landscaping and buffer areas, is intended to minimize impacts on the future Meadow Wood East single-family homes. These homes will be situated adjacent to the existing wetland and the proposed detention pond, providing a natural buffer between the development.

3. No Interference with Surrounding Development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.

Staff Response: Standard met. The proposed structures within the development will be constructed and arranged so as not to dominate the immediate vicinity, but instead strive for compatibility with surrounding uses.

The automobile condominium buildings are set back 17.5 feet from the interior side lot line, slightly less than the 20-foot minimum required in the I Industrial district, although this portion of the lot is will not be adjacent to the future single-family homes, but rather is adjacent to the OS Open Space wetland maintained by Meadow Wood East. The proposed setback is recommended to be granted through a modification.

4. Adequate Public Facilities. The proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and schools, or the applicant will provide adequately for such services.

Staff Response: Standard Met. Existing utilities currently run in the vicinity of the Subject Property and the Applicant will ensure with the Village Engineer and Village's Public Works Utilities Staff that the most efficient and viable layout for underground utilities are provided – including stormwater management, water and sanitary mains. The Property Owners Association will be required to provide snow removal, landscaping and private street maintenance services that will be in included in the declarations and memorialized in the binding development agreement.

5. No Traffic Congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through the surrounding streets.

Staff Response: Standard met. The proposed Luxe Corsa Auto Suites is projected to generate approximately 161 trips in the morning peak hours and 83 trips in the evening peak hours. Site access will be provided via a driveway on Rand Road, with outbound movements controlled by a stop sign and utilizing the existing southbound left-turn lane to enter the site. Traffic distribution and volumes were based on existing travel patterns and ITE trip

generation rates for recreational vehicle sales (used luxury automobiles), mini-warehouse storage, and a small coffee shop.

The capacity analysis indicates that traffic generated by the proposed Luxe Corsa Auto Suites will not significantly impact surrounding roadways. The existing access drive provides one inbound lane and one outbound lane under stop sign control, and southbound left-turn movements are accommodated by the existing left-turn lane. The site plan adequately accommodates the expected two to five vehicles exiting the site at a time. A northbound right-turn lane is not required, as IDOT volume criteria are not exceeded.

6. No Destruction of Significant Features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

Staff Response: Standard met. The proposed development will not cause the destruction, loss, or damage of any natural, scenic, or historic features of significance. The project will be located on the site of an existing industrial building and single-family home currently used for office and storage purposes. While these structures will be demolished, they are not designated as historic properties. Wetlands and other natural resource protection areas on the site will be preserved and maintained. The development will be required to comply with the Lake County Watershed Development Ordinance to ensure protection of these natural resources.

The removal of existing mature trees of significance on the Subject Property will be compensated with a landscape plan that proposes a number of trees and shrubs within the PUD.

7. Compliance with Standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this Code authorizing such use.

Staff Response: Standard met. The proposed development will comply with all other additional standards imposed through the building codes for commercial and industrial developments, with the exception of the bulk and parking requirement modifications to the code that are being requested by the developer.

8. Positive Effect. The proposed special use creating a positive effect for the zoning district, its purpose, and adjacent properties shall be placed before the benefits of the petitioner.

Staff Response: Standard met. The proposed development will revitalize an underutilized parcel and facilitate its annexation into the Village. It will introduce a new land use currently absent from the community and create additional commercial opportunities.

B. Special Standards for Specified Special Uses. When the district regulations authorizing any special use in a particular district impose special standards to be met by such use in such district, a permit for such use in such district shall not be recommended or granted unless the applicant shall establish compliance with such special standards.

Staff Response: Not Applicable. The development does not require the imposing of any special standards in addition to those that are currently in place as the proposed use of the Subject Property is for the establishment of the commercial and industrial lots.

C. Considerations. In determining whether the applicant's evidence establishes that the foregoing standards have been met, the Plan Commission and the Board of Trustees shall consider:

1. Benefit. Whether and to what extent the proposed use and development at the particular location requested is necessary or desirable to provide a service or a facility that is in the interest of the public convenience or that will contribute to the general welfare of the neighborhood or community.

   Staff Response: Standard met. The proposed Luxe Corsa Auto Suites development will provide a unique land use and recreational opportunity not currently available in the Village. By combining a luxury automobile dealership, automobile storage condominiums, and a clubhouse offering many amenities, the development will serve both local residents and the broader community, contributing to economic activity and the diversification of land uses along the Rand Road corridor.

2. Alternative Locations. Whether the purposes of the zoning code can be met by the location of the proposed use and development in some other area or zoning district that may be more appropriate than the proposed site.

   Staff Response: Standard met. The proposed location is suitable for this type of land use, and is based on its consistency with the land uses, comprehensive plan, architecture, and design surrounding the proposed development. No alternate locations are currently proposed.

3. Mitigation of Adverse Impacts. Whether all steps possible have been taken to minimize any substantial or undue adverse effects of the proposed use and development on the immediate vicinity through building design, site design, landscaping, and screening.

   Staff Response: Standard met. All steps necessary will be taken to minimize any substantial adverse effects of the proposed development.

IDENTIFICATION AND ANALYSIS OF ZONING RELIEF FOR THE PLANNED UNIT DEVELOPMENT (PUD)

On analysis of the proposed development against the various standards contained within the municipal code, staff has identified the following areas that will require zoning relief.

The Village Code includes several Planned Unit Development (PUD) objectives, which discuss desirability, creative approaches, architectural coordination, preservation of characteristics such as natural topography, use of and creation of open space.

1. **Off Street Parking Regulations.**

B-1 Local and Community Business Lot
Section 9-10-1. OFF STREET PARKING.
The proposed automobile dealership, coffee shop, and automobile detail center require a total of 72 parking spaces. The site plan provides a 32-space parking lot at the rear of the building, resulting in a deficit of 40 spaces. However, the high-end vehicle dealership will operate on an appointment-only basis, which will regulate parking demand and help mitigate the impact of the reduced on-site supply. The parking requirement for the dealership was calculated using the retail standard of one parking space per 200 square feet of net floor area. A substantial portion of the dealership's square footage may be intended for vehicle storage or warehouse use, which would instead align with the warehouse parking standard of one space per 6,000 square feet. Once a more detailed dealership floor plan is finalized, the actual parking requirement may be lower than the current estimate.

Additionally, for Eating Places, parking is calculated at a rate of 1 space per 3 persons of design capacity. However, due to the absence of specific occupancy data, the requirement has been calculated using the retail standard of 1 space per 200 square feet of net floor area

Standard	Required	Proposed
Eating and drinking places (1 for each 200 square feet of net floor area)	Coffee Shop: 8 spaces	
Services not otherwise listed (1 for each 250 square feet of net floor area)	Automobile Detail Center: 4 spaces	
All retail trade (1 for each 200 square feet of net floor area)	Automobile Dealership: 60 spaces	32 spaces (Deficient by 40 parking spaces)

I Industrial Lot

Section 9-10-1. OFF STREET PARKING.
The proposed auto clubhouse, amenities, and leasing office building requires a total of 104 parking spaces. The site plan provides 26 spaces, resulting in a deficiency of 78 spaces. However, the clubhouse will be used exclusively by automobile condominium owners and their guests, who will have ample parking available within their individual automobile units. As a privately used facility, those utilizing the clubhouse will have convenient parking nearby within the development.

Standard	Required	Proposed
Membership sports and recreation clubs and other commercial recreation uses (1 for each 3 persons of design capacity)	Clubhouse: 104 spaces	26 spaces (Deficient by 78 parking spaces)

The parking space relief is being granted based the use automobile parking and warehousing natire of the land use, thereby removing the requirement of large paved parking lots that would otherwise remain unused.

2. **Bulk Regulations.**

B-1 Local and Community Business Lot
Section 9-4-10. Bulk, Space and Yard Requirements

Standard	Required	Proposed
Special Yard Abutting Route 12 (feet)	50	30.18
Rear Yard (feet)	10	5

Special Yards Abutting Route 12 And Route 22: Notwithstanding any other provision of this section, all yards along every lot line abutting Route 12 or abutting Route 22 between Ela Road and the westernmost village limits shall be *not less than 50 feet*.

Rear Yard Regulation For Accessory Structures And Uses In The B-1 District: Accessory parking areas and lots shall not be required to maintain a rear yard or setback in the B-1 district *in excess of 10 feet* if no part of such rear yard is contiguous to any property zoned in any residential district; provided, however, that this regulation shall not apply to antennas and antenna support structures.

I Industrial Lot
Section 9-6-10. Bulk, Space and Yard Requirements.

Standard	Required	Proposed
Interior Side Yard (feet)	20	17.50

3. **Landscaping Regulations.**

Section 9-8A-3. Landscaping Requirement. All areas along a lot line abutting a street must be landscaped with at least the number of standard plant units specified in Section 9-8A-6 of this Article to achieve the required opacity levels. Opacity is expressed as a percentage, with zero percent (0%) being completely transparent and one hundred percent (100%) being completely opaque. For properties in the B-1 Zoning District abutting an arterial street (Rand Road), a 30% opacity level is required. The proposed landscape plan does not meet this requirement, as it provides less than the required 30% opacity.

4. **Sign Regulations.**

Section 12-1-7 General Sign Standards. The proposed illuminated wall-mounted signs exceed the maximum square footage permitted. Wall-mounted signage is allowed up to 1.5 square feet for each linear foot of the building façade on which it is located. The proposed building graphics surpass this allowance and therefore require zoning relief.

Additional modifications to the Zoning and Land development Code may be identified upon submission of the documents requested by staff.

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
- Section 9-22-5: Standards for Planned Unit Developments
- Section 9-19-3: Standards for Special Use Permits

Staff has determined that all standards for approval have been met or will be met through granting of modifications to the code and 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 2025-13, 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 and applicable governmental agencies:
    a. Zoning Application dated July 16, 2025, and prepared by Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC
    b. Exhibit A: Legal Description
    c. Petition for Annexation dated July 16, 2025
    d. Plat of Annexation dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
    e. Plat of Survey dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
    f. Architectural Design Plans dated July 11, 2025, and prepared by OKW Architects
    g. Architectural Narrative dated July 15, 2025, and prepared by OKW Architects
    h. Preliminary EOPC dated April 07, 2025, and prepared by Pearson, Brown & Associates, Inc.
    i. Ecological Compliance Assessment Tool dated February 12, 2025, and prepared by Illinois Department of Natural Resources
    j. Letter of exemption from archaeological survey dated June 18, 2025, and prepared by the Illinois Department of Natural Resources State Historic Preservation Office
    k. Preliminary Landscape Plan and Landscape Narrative dated July 15, 2025, prepared by Kathryn Talty Landscape Architecture
    l. Natural Recourses Information Report dated June 18, 2025, and prepared by McHenry-Lake County Soil & Water Conservation District
    m. Preliminary Engineering (sheets 1-25) dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
    n. Preliminary Stormwater Management Report dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
    o. Purchase Agreement prepared by Law Offices of Donald C. Battaglia, LTD.
    p. Site Lighting Diagram dated March 05, 2025, and prepared by OKW Architects

q. Traffic Impact Study dated July 16, 2025 and prepared by Kenig, Lindren, O'Hara, Aboona, Inc. (KLOA)
r. Wetland Delineation Report dated November 26, 2024 and prepared by ILM Environments

2. The Developer shall enter into a binding Annexation 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 Property Owner Association dissolution or its lack of required maintenance of these areas.

3. 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 roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

4. The Developer shall establish a Property Owners Association 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, consistent with the requirements herein. The provisions for such Association 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.

5. 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.

6. All sidewalks within and along the frontage of the Development on the Subject Property shall be constructed by the Developer as part of the development. Additionally, a 5-foot wide sidewalk shall be constructed along the frontage of the property along Rand Road.

7. 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.

8. 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

2500 North Rand Road
August 20, 2025

The Planning & Zoning Commission recommends approval of Application PZC 2025-13, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated August 20, 2025 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 and applicable governmental agencies:
   a. Zoning Application dated July 16, 2025, and prepared by Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC
   b. Exhibit A: Legal Description
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   r. Wetland Delineation Report dated November 26, 2024 and prepared by ILM Environments

2. The Developer shall enter into a binding Annexation 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 Property Owner Association dissolution or its lack of required maintenance of these areas.

3. 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 roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

4. The Developer shall establish a Property Owners Association 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, consistent with the requirements herein. The provisions for such Association 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.

5. 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.

6. All sidewalks within and along the frontage of the Development on the Subject Property shall be constructed by the Developer as part of the development. Additionally, a 5-foot wide sidewalk shall be constructed along the frontage of the property along Rand Road.

7. 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.

8. 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

EXHIBIT A
LEGAL DESCRIPTION OF SUBJECT PROPERTY

That part of the North half of the South East quarter of Section 7, Township 43 North, Range 10, East of the 3rd P.M., described as follows: Beginning at a point on the West line of said North half of the South East quarter, 990 feet North of the South West corner of said North half of the South East quarter; thence East parallel with the South line of said North half of the South East quarter, 1056 feet; thence South parallel with the West line of said North half of the South East quarter, 330 feet; thence East parallel with the South line of said North half of the South East quarter, 833.8 feet to a point which is 761.6 feet West of the East line of said North half of the South East quarter; thence North parallel with the East line of said North half of the South East quarter, 667.6 feet to the North line of said North half of the South East quarter; thence West on the North line of the North half of the South East quarter to the North West corner of said North half of the South East quarter; thence South on the West line of said North half of the South East quarter, 338.7 feet to the place of beginning, in Lake County, Illinois.

EXHIBIT B
PUBLIC HEARING SIGNS PRESENT AT SUBJECT PROPERTY

July 11, 2025

Mr. Orlando Stratman

Chairperson of Planning and Zoning Commission

Village of Lake Zurich

505 Telser Rd.

Lake Zurich, Illinois 60047

Re: 24455 N. Rand Rd. Lake County Illinois

Dear Mr. Stratman:

I represent Luxe Corsa LLC., who is the contract purchaser of the above reference property, which is approximately 20 acres which includes 5.037 acres of existing wetlands and currently has a zoning classification of General Commercial (GC) based on Lake County zoning.

Luxe Corsa, LLC. is seeking to annex the subject property and once it is annexed, our development plan is to provide a High-End Auto Dealership with an attached Coffee House to be located at the front of the property and 121 (maximum units) Condo Car Suites to be located in eleven (11) separate buildings along with a Clubhouse for the Condo Car Garage owners. As part of the annexation we are requesting the property be rezoned from R-1/2 to B1 (for the Dealership/Coffee House) and Industrial (for the Condo Car Suites and the Clubhouse).

Pertaining to access of the property, it is our plan to use the existing access off of Rt. 12 (Rand Rd.). Currently the property has access to sanitary sewer in the right of way along Rt. 12. For the storm sewer we plan to reroute the existing pipe on the property to the existing outlet and we plan on extending the water main from approx. 375' south of our project property to its northern property line. As part of our Annexation agreement we will include a Recapture agreement to any and all parties that in the future tie into this water line extension.

As mentioned above our project/development will include a High-End Auto Dealership, which is for sales only will provide the Village with sales tax revenue. The dealerships back of house will only provide prepping of vehicles, a detailing service and no service work will be performed. We are also planning on Coffee House which will be located on the northside of the Dealership will be an additional source of sales tax revenue to the Village.

The architecture of the Luxe Corsa Auto Suite development reflects a high level of refinement to match the expectations of a design-oriented group of buyers. The buildings on site include the car condo buildings (121 maximum units), a 2-story dealership / coffee shop, and a 2-story clubhouse. The architecture of all three building types evokes racing-oriented themes.

The dealership / coffee shop building fronts Rand Road and therefore creates the first impression of the site. The building architecture features a transparent corner of glass to showcase exotic vehicles. Punctuated by illuminated racing stripes and accent metal, the primary building façade material is a high-density fiber cement panel of varying textures.

Beyond an electronic gate, the bulk of the rest of the site is comprised of the car condo buildings. The buildings vary in size and depth, as some of the buildings are single-loaded and others have back-to-back units. The building architecture incorporates fiber cement panels, accented by wood-look headers above the garage doors. The buildings are differentiated by varying tones on the façade and by an intentional series of race track / wayfinding graphics on the end caps of each unit. These graphics will be illuminated by indirect lighting so that they are visible into the early evening hours. The theme of racing and movement is further illustrated through varying spacing on joints and reveals across the façade.

The clubhouse building creates a focal point in the middle of the site. The architecture is intentionally dramatic, through use of a dark fiber cement exterior accented by dark metal. The entry canopy is incorporates illuminated racing stripes and the second floor offers a welcoming terrace with string lights.

The Condo Car Suites will be constructed in two (2) different sizes with the ability to combine multiple units in order to accommodate larger vehicle collections. The interior of the units will include stairs to a mezzanine level. On the first floor will contain a bathroom with Shower and a Utility room, basically we will be providing a "White Box" which will allow the owners to build out the spaces to their own specifications (each build out will be required to secure a building permit).

The landscape design of the Luxe Corsa Auto Suites blends ornamental planting design with the context of the native landscape in which the site resides, focusing on aesthetic and ecologic attributes.

A full tree inventory and an extensive evaluation of the existing plant material was conducted. The landscape design considered the indigenous tree communities found while performing the inventory and utilized the same or similar species types throughout the plan. The site plan celebrates the existing wetlands and the stormwater basin is treated as an extension of such, by utilizing native, wetland plant communities.

The landscape treatment around the buildings is intended to compliment the architectural design and provide seasonal interest in areas of high visibility along Rand Road. Special attention was paid to the vehicular circulation and screening was provided in areas where headlight spillage may occur. Future, neighboring developments were considered with strategic plant placement, buffering the views into the site from the adjacent uses.

The following is a list of documents that we will be submitting via a Dropbox.

1. Application
2. Architectural Design Plans and Narrative
3. Civil Drawings
4. Landscaping Drawings and Narrative
5. Civil Estimate
6. Site Lighting Diagram
7. Stormwater Report
8. Survey, Topos and Legal Description
9. Auto Turns
10. Traffic Study
11. Tree Inventory
12. Evidence of Title/Ownership
13. Geotech Report
14. Miscellaneous Reports
15. Wetlands Report

Please let me know if you have any questions

Thank you,

Robbie Joseph

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: 24455 N. Rt. 12 Lake County
2. **Please attach complete legal description**
3. Property Identification number(s): 1407400001
4. Owner of record is: Calabrese Family Living Trust Phone: 847 812 9200
   E-Mail don.calabrese3669@gmail.com Address: see above
5. Applicant is (**if different from owner**): n/a
   E-Mail _____ Address: _____ Phone: _____
6. Applicant's interest in the property (owner, agent, realtor, etc.): Purchaser (Luxe Corsa Partners LLC)
7. All existing uses and improvements on the property are: Construction Company Storage
   Single Family Home used as an Office & Several Storage Buildings
8. The proposed uses on the property are: 1. Auto Dealership, Coffee House, Condo Car Garages
   and Club house for the Development
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:
   No overnight stays and 34' height restriction per the Village
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    Outside of our Contract/Agreement to purchase the property, nothing that we know
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.

Rodrigo Kapudija
(Name of applicant)

(Signature of applicant)

Subscribed and sworn to before me this 16 day of July, 2025.

OFFICIAL SEAL
ROBERT JOSEPH
Notary Public - State of Illinois
Commission No. 561686
My Commission Expires July 19, 2027

(Notary Public)

My Commission Expires _____

Don Calabrese
(Name of Owner, if different)

Don Calabrese
(Signature of Owner, if different)

Subscribed and sworn to before me this 16th day of July, 2025.

OFFICIAL SEAL
ROBERT JOSEPH
Notary Public - State of Illinois
Commission No. 561686
My Commission Expires July 19, 2027

(Notary Public)

My Commission Expires _____

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

☑ Zoning Code **Map** Amendment to change zoning of Subject Property from GC to BT & Indust

☐ 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 _____

July 15, 2025

Luxe Corsa Auto Suites
Architectural Narrative

The architecture of the Luxe Corsa Auto Suite development reflects a high level of refinement to match the expectations of a design-oriented group of buyers. The buildings on site include the car condo buildings (121 maximum units), a 2-story dealership / coffee shop, and a 2-story clubhouse. The architecture of all three building types evokes racing-oriented themes.

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OKW Architects

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, Illinois 60661
P: 312.798.7700
okwarchitects.com

LUXE CORSA

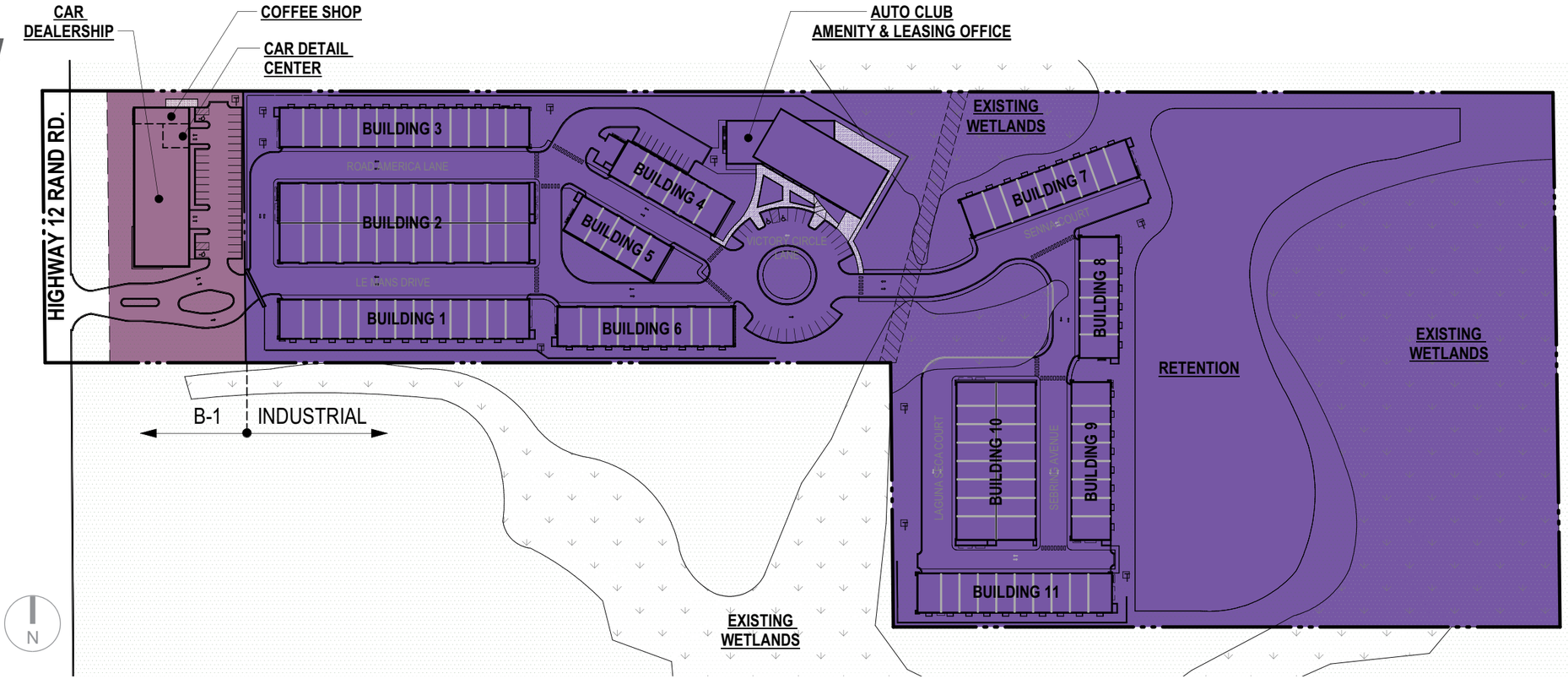
AUTO SUITES

DESIGN PRESENTATION

July 11, 2025

OKW Architects

ZONING OVERVIEW



SITE PLAN
SCALE: 1” = 160’ - 0”

DEVELOPMENT SUMMARY

DEALERSHIP : B-1 (BUSINESS)

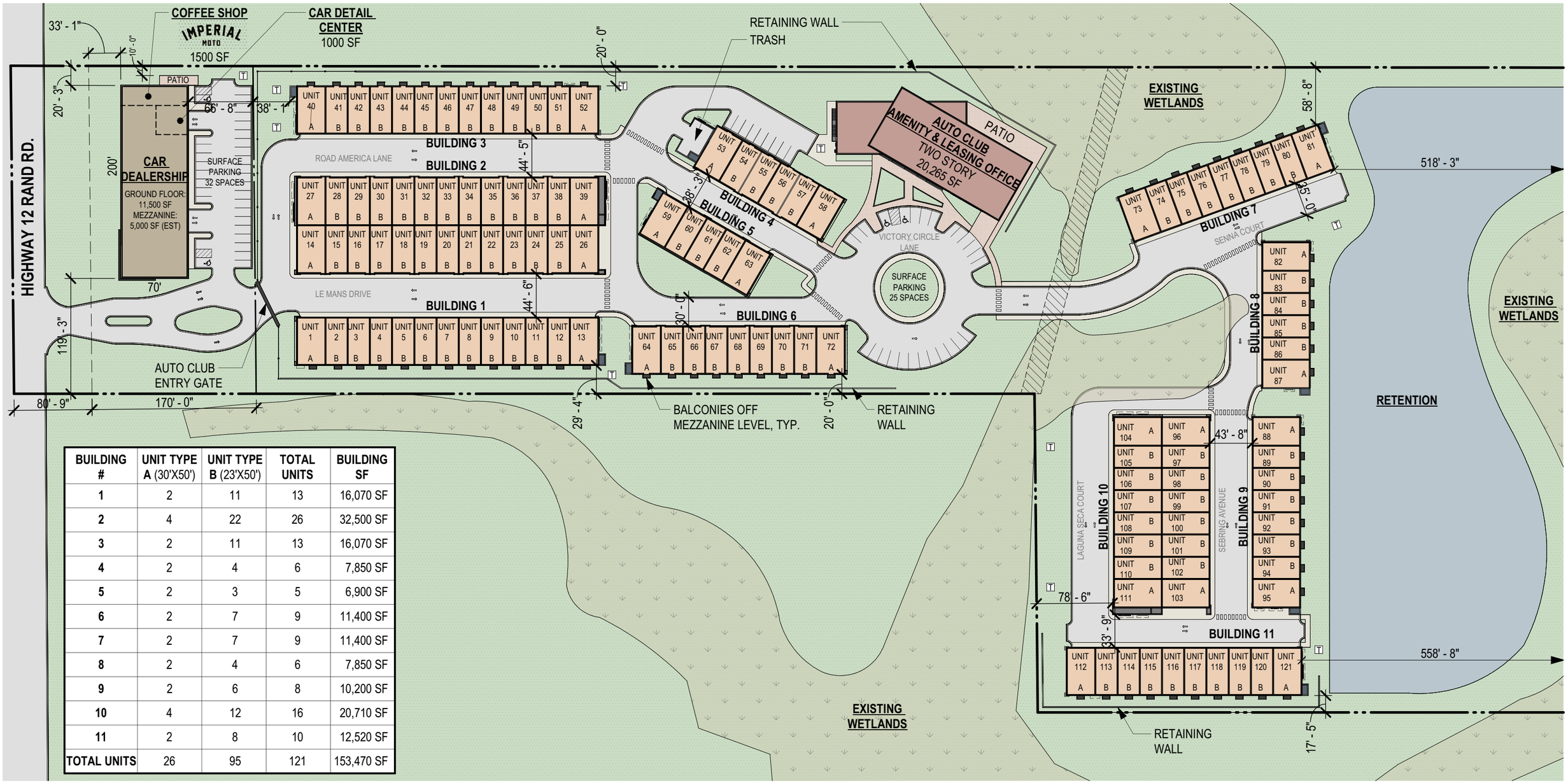
SECTION		ZONING REQ	PROPOSED	NOTES
9-4-2, 9-4-3	PLANNED UNIT DEVELOPMENTS PER CH. 22	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	
			USE: CAR DEALERSHIP	
			USE: COFFEE SHOP, NO DRIVE THRU	
			USE: AUTO DETAILING	
9-4-10	HEIGHT	MAX 35', 2 STORIES	30'-0" , 2 STORIES	
	LOT AREA	20,000 SF	57,576 SF	
	LOT WIDTH	100'	339.32'	
	SETBACKS			
	FRONT	25'	32' TO HWY 12 R.O.W., NOT PROPERTY LINE	
	SIDE	10'	20', 119'	
	REAR	25'	66' - 8"	DIMENSION TO REAR OF B-1 ZONE, NOT TO OVERALL SITE
	FAR		19,000 SF / 57,576 SF = 0.33	NOT INCLUDING HWY 12 R.O.W.
	MIN LANDSCAPE AREA			
9-10-1	PARKING		32 SPACES PROVIDED	

DEVELOPMENT SUMMARY

CAR CONDOS AND CLUB HOUSE : INDUSTRIAL

SECTION		ZONING REQ	PROPOSED	NOTES
9-6-2, 9-6-3	PLANNED UNIT DEVELOPMENTS PER CH. 22	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	
			USE: CAR CONDOMINIUM STORAGE UNITS	
			USE: CLUBHOUSE ACCESSORY TO MAIN USE	
9-9-1	ACCESSORY STRUCTURE: CLUBHOUSE		CLUBHOUSE ACCESSORY TO MAIN USE	
9-4-10	HEIGHT	MAX 55'	CAR CONDO : 28'-0", 2 STORY CLUBHOUSE : 33'-0", 2 STORY	
	LOT AREA	20,000 SF	828,098 SF	
	LOT WIDTH	100'	339.32'	
	SETBACKS			
	FRONT	35'	30'	DIMENSION TO FRONT OF INDUSTRIAL ZONE NOT TO OVERALL SITE
	SIDE	10'	VARIES, 17' MIN	
	REAR	25'	VARIES, 518' MIN	
	FAR		173,735 SF / 828,098 SF = 0.20	
	MIN LANDSCAPE AREA			
9-10-1	PARKING		PARKING IN PRIVATE UNITS FOR CONDO OWNERS + 26 PROVIDED AT CLUBHOUSE	

SITE PLAN



BUILDING #	UNIT TYPE A (30'X50')	UNIT TYPE B (23'X50')	TOTAL UNITS	BUILDING SF
1	2	11	13	16,070 SF
2	4	22	26	32,500 SF
3	2	11	13	16,070 SF
4	2	4	6	7,850 SF
5	2	3	5	6,900 SF
6	2	7	9	11,400 SF
7	2	7	9	11,400 SF
8	2	4	6	7,850 SF
9	2	6	8	10,200 SF
10	4	12	16	20,710 SF
11	2	8	10	12,520 SF
TOTAL UNITS	26	95	121	153,470 SF

SITE PLAN
SCALE: 1" = 100' - 0"

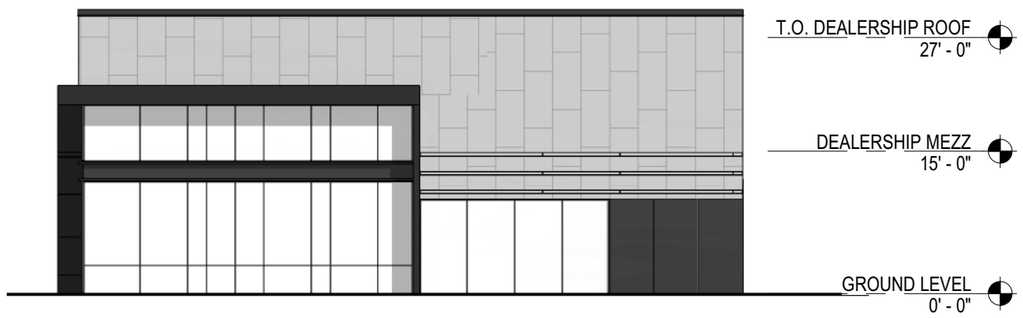
OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

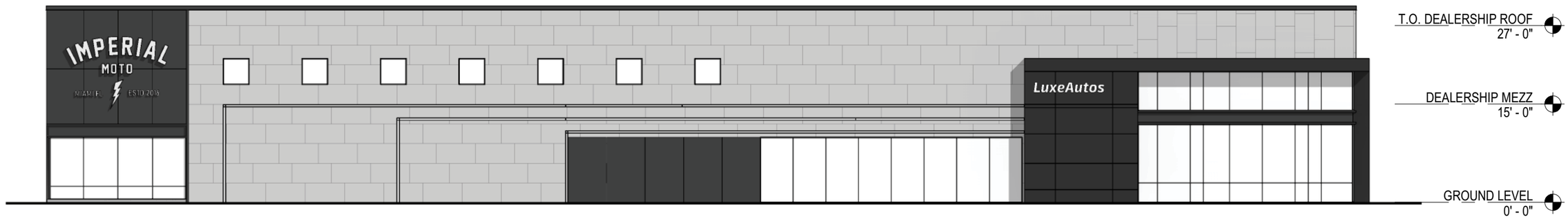
VIEW OF DEALERSHIP

VIEW OF DEALERSHIP

DEALERSHIP ELEVATIONS



SOUTH ELEVATION
SCALE: 1/16” = 1’ - 0”



WEST ELEVATION
SCALE: 1/16” = 1’ - 0”

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Chicago, IL 60661

LUXE CORSA

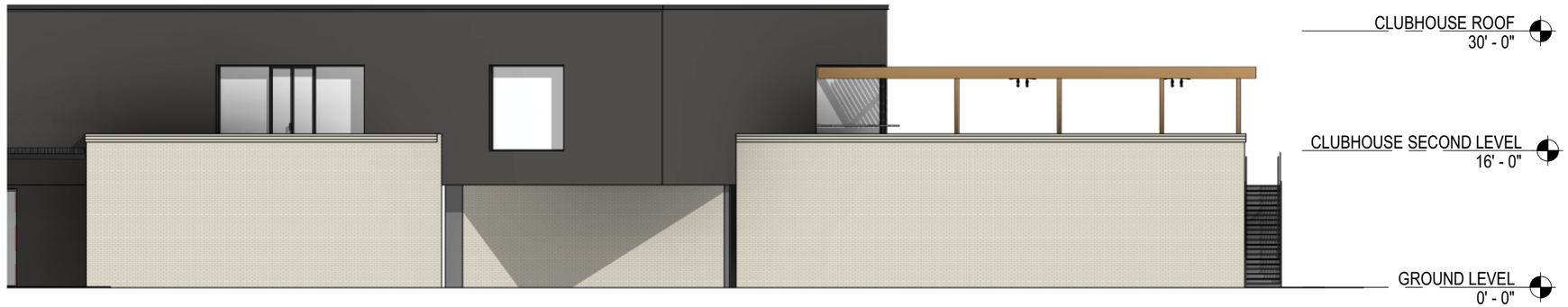
LUXE CORSA AUTO SUITES
Lake Zurich, IL
July 11, 2025 Project #: 25009

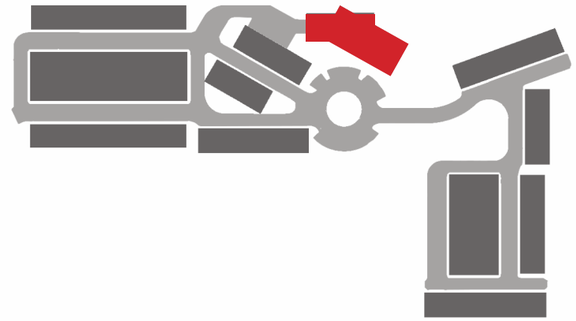
AUTO CLUB ENTRANCE

AUTO CLUB CLUBHOUSE

AUTO CLUB CLUBHOUSE

ELEVATIONS - CLUBHOUSE





NORTH ELEVATION 1
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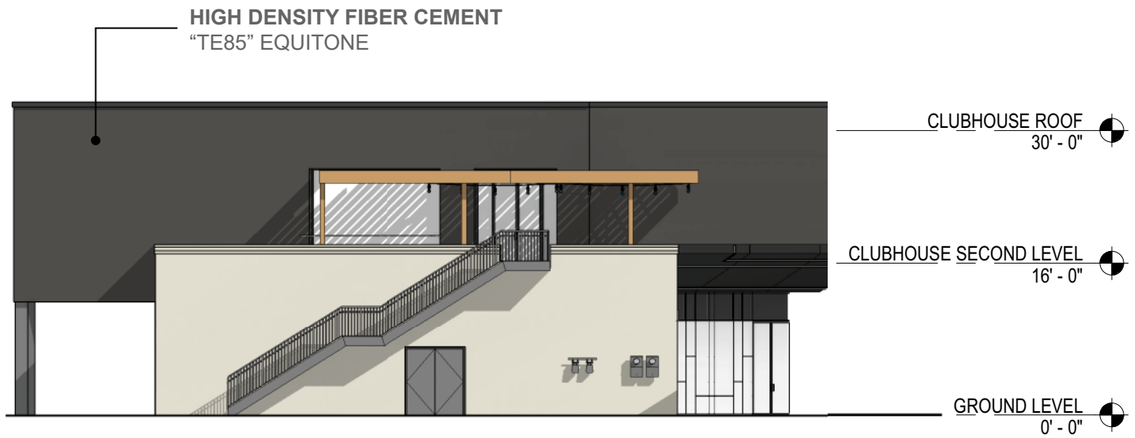
NORTH ELEVATION 2
SCALE: 1/16” = 1’ - 0”



WEST ELEVATION
SCALE: 1/16” = 1’ - 0”

SOUTH ELEVATION
SCALE: 1/16” = 1’ - 0”

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LUXE CORSA

CLUBHOUSE

GROUND LEVEL
SCALE: 1” = 20’ - 0”

N

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OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

CLUBHOUSE

GROUND LEVEL
SCALE: 1” = 20’ - 0”

N

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

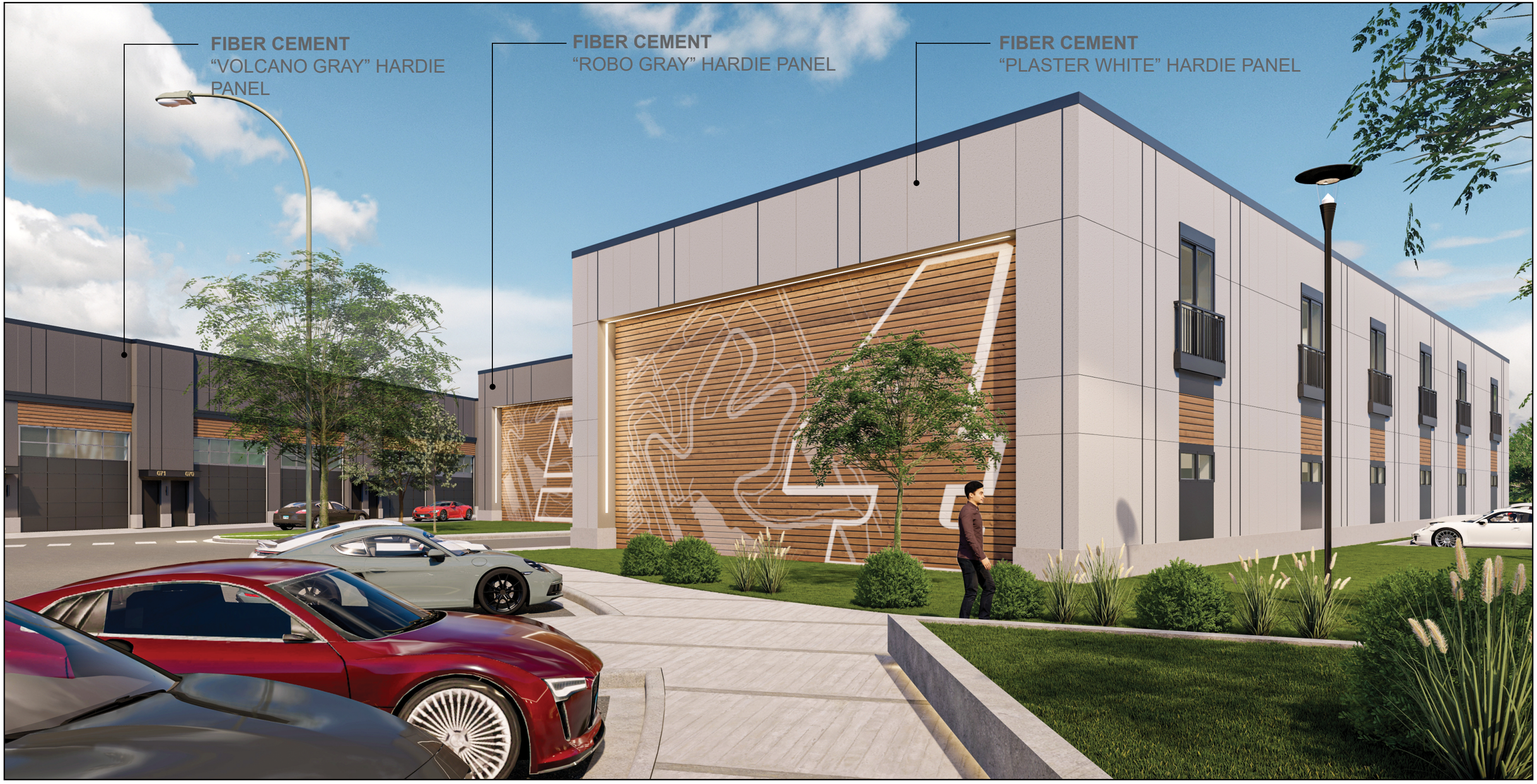
LUXE CORSA

AUTO CLUB VIEW OF BUILDINGS 3 THROUGH 5

AUTO CLUB VIEW OF BUILDING 4

AUTO CLUB VIEW OF BUILDING 5

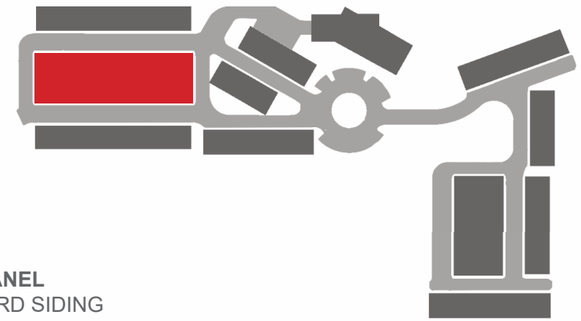
AUTO CLUB VIEW OF BUILDING 4

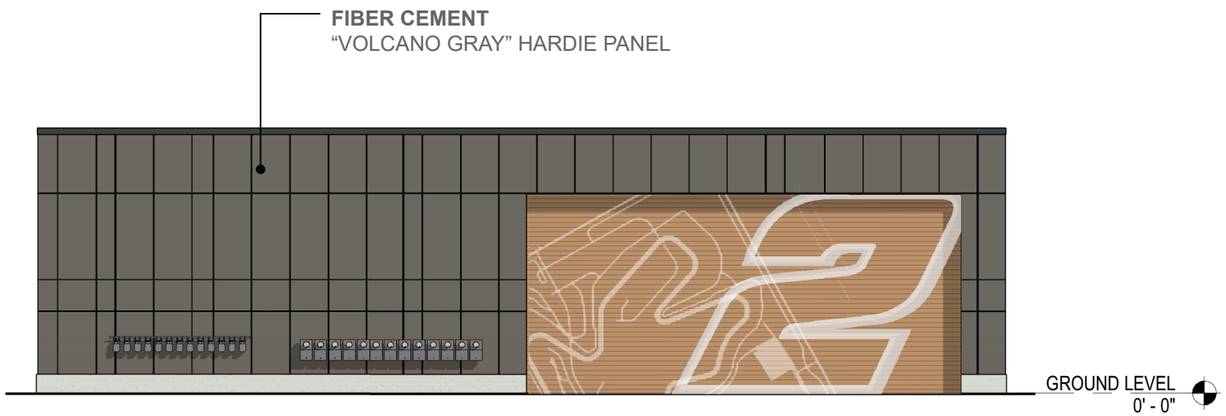


AUTO CLUB VIEW OF BUILDINGS 3 THROUGH 5

AUTO CLUB ELEVATIONS

BUILDING 2





WEST ELEVATION
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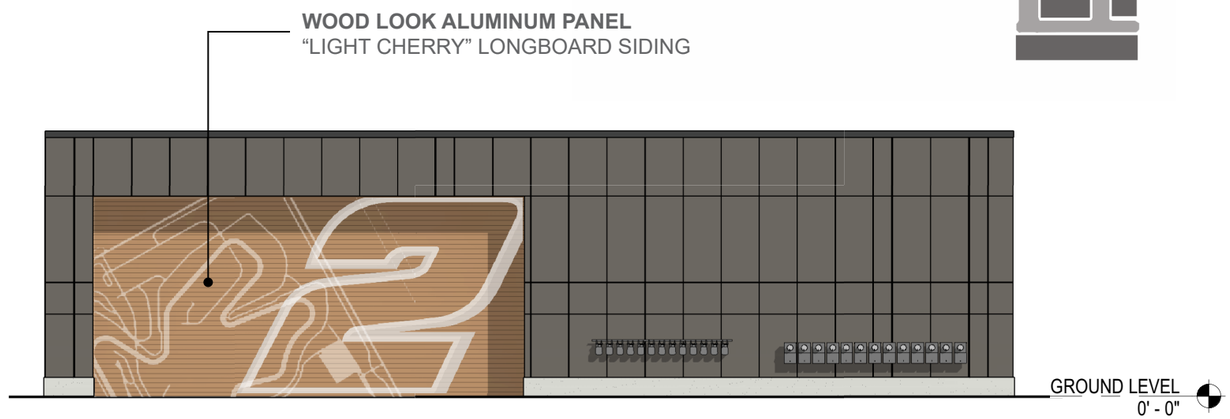


EAST ELEVATION
SCALE: 1/16” = 1’ - 0”

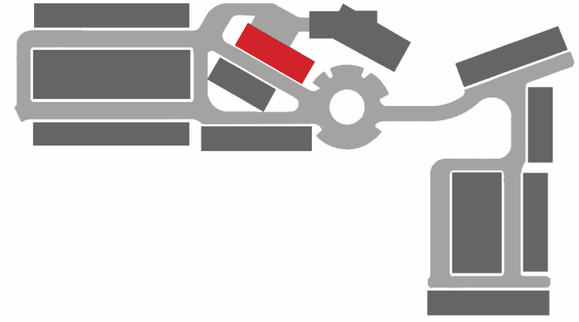
SOUTH ELEVATION
SCALE: 1/16” = 1’ - 0”

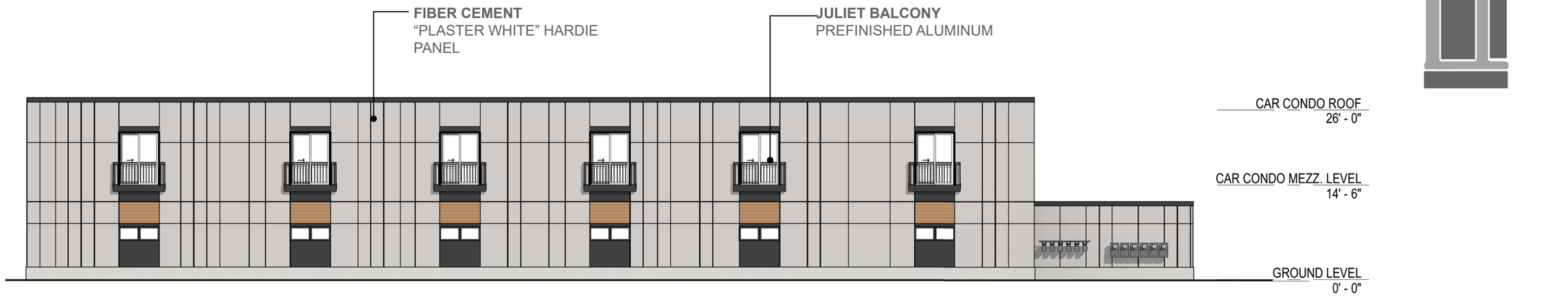
OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

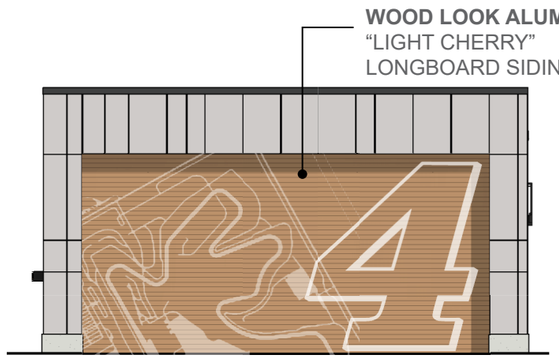
AUTO CLUB ELEVATIONS

BUILDING 4





NORTH ELEVATION
SCALE: 1/16” = 1’ - 0”



EAST ELEVATION
SCALE: 1/16” = 1’ - 0”

SOUTH ELEVATION
SCALE: 1/16” = 1’ - 0”

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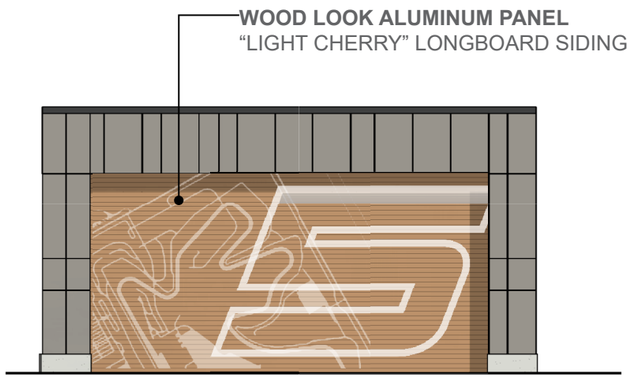
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

AUTO CLUB ELEVATIONS

BUILDING 5



EAST ELEVATION
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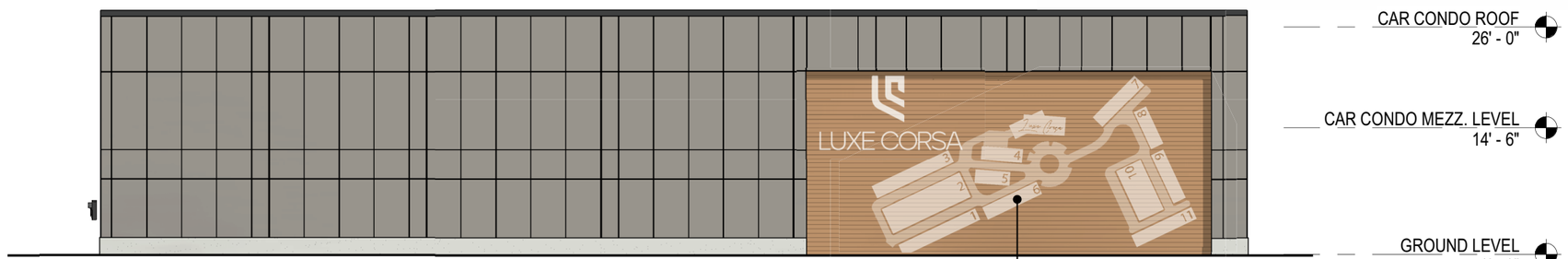

SOUTH ELEVATION
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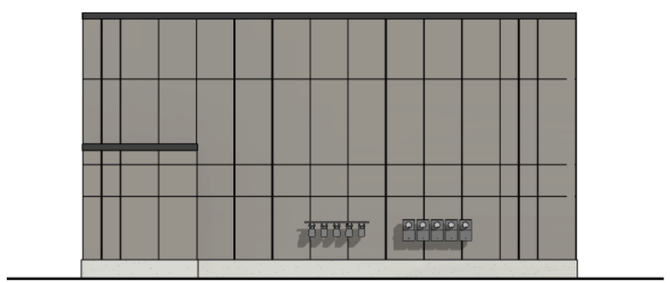

WEST ELEVATION
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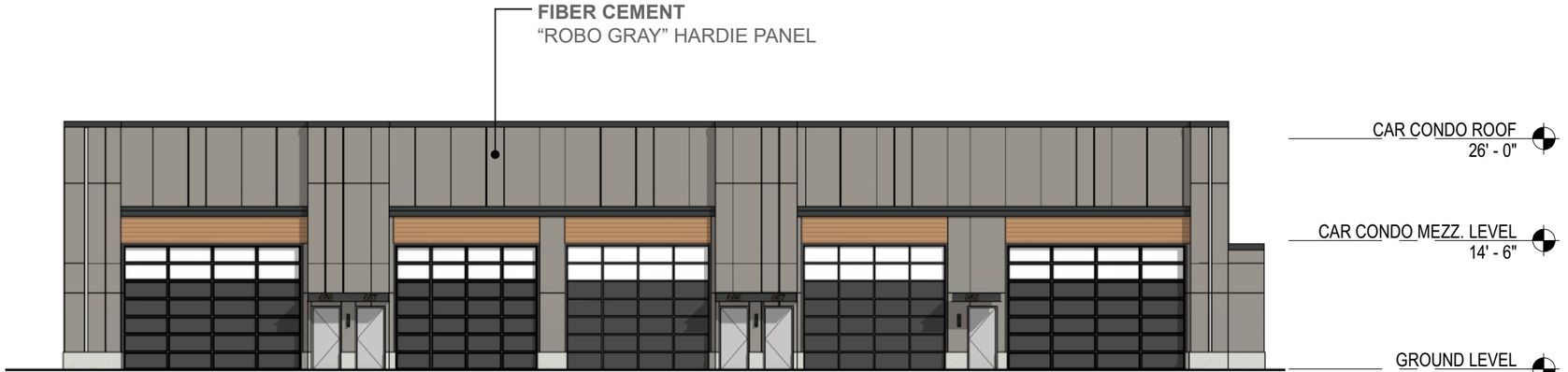

NORTH ELEVATION
SCALE: 1/16” = 1’ - 0”

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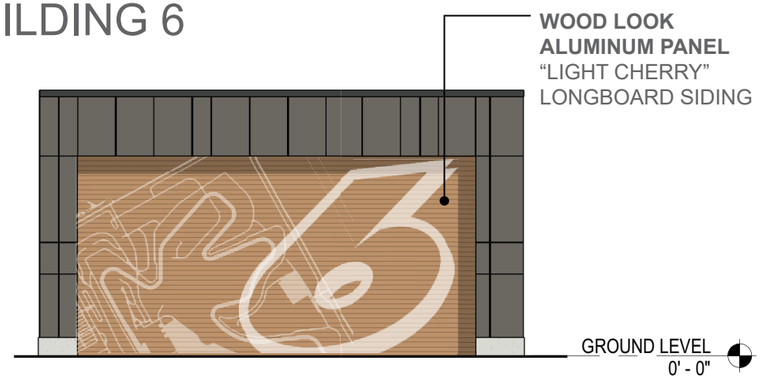
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
July 11, 2025 Project #: 25009

AUTO CLUB ELEVATIONS

BUILDING 6



EAST ELEVATION
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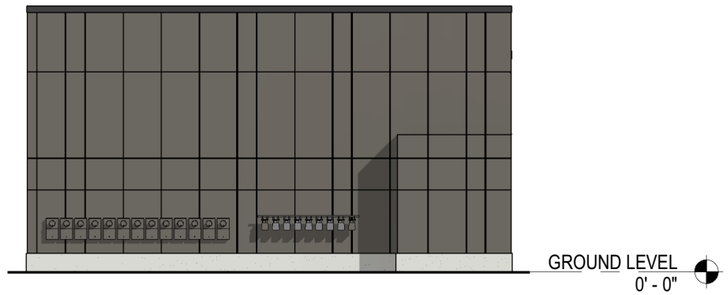

WEST ELEVATION
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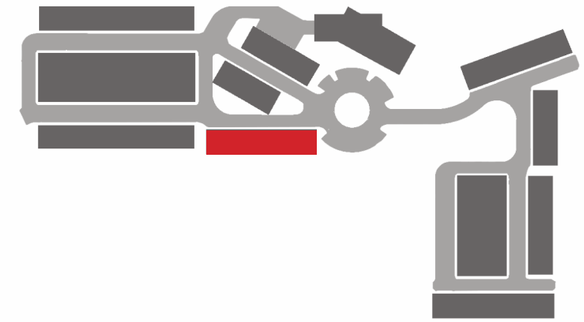
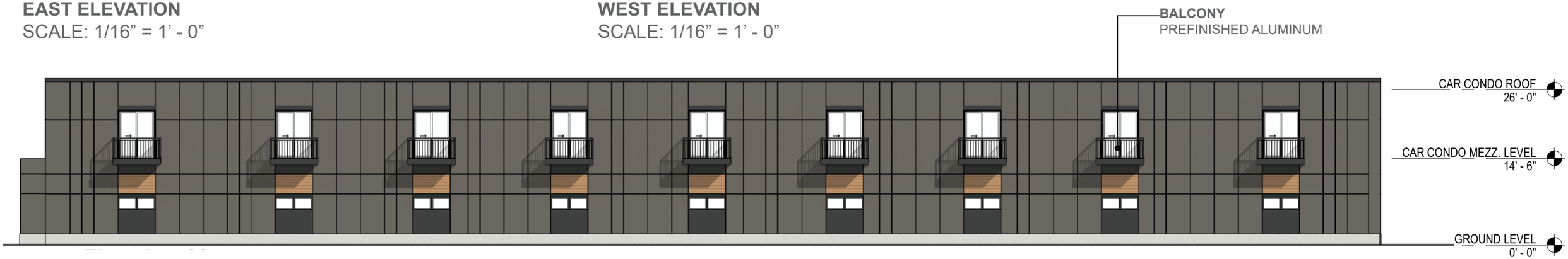




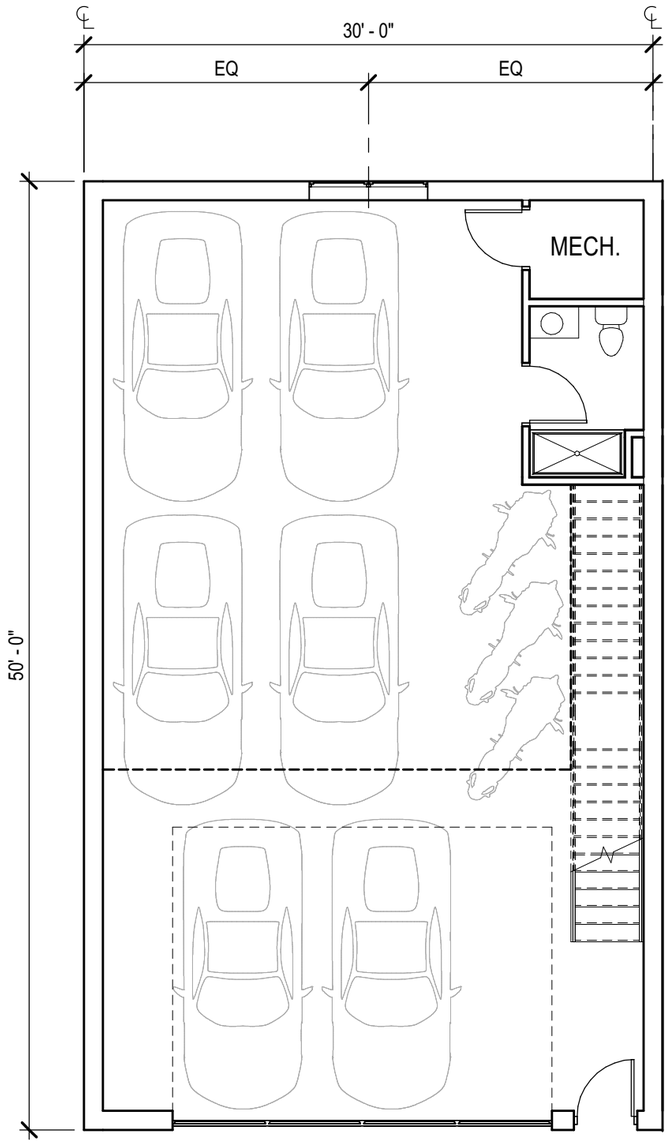
SOUTH ELEVATION
SCALE: 1/16” = 1’ - 0”

NORTH ELEVATION
SCALE: 1/16” = 1’ - 0”

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

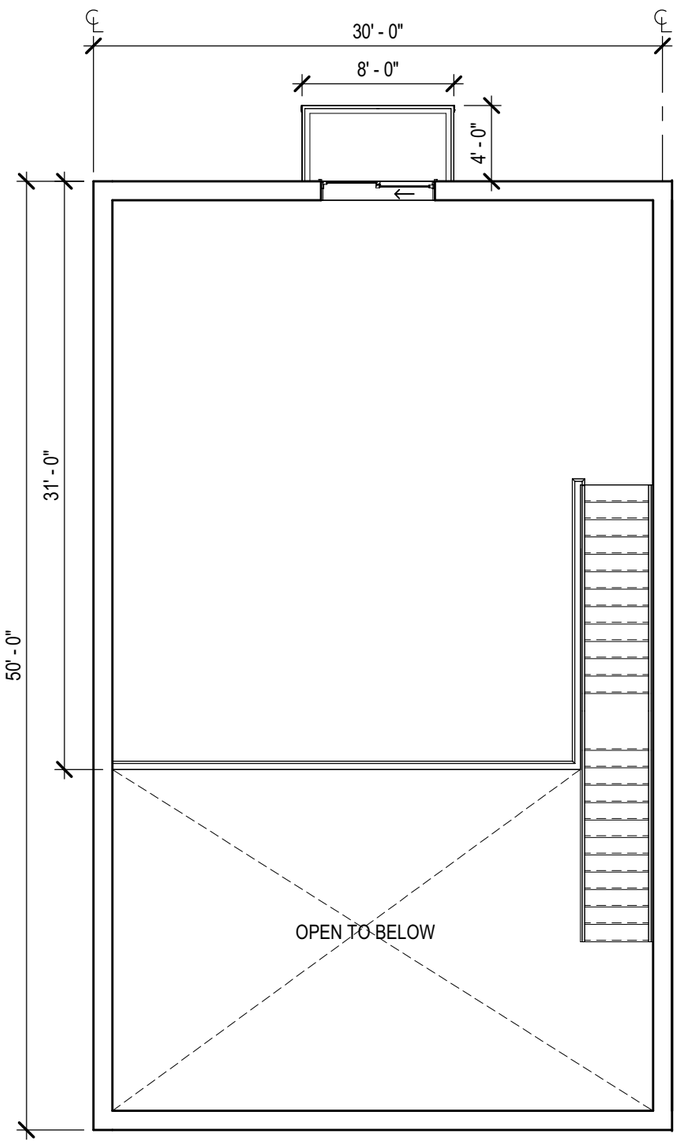
UNIT PLANS - TYPE A



UNIT 1ST FLOOR

1,500 SF

SCALE: 1/8” = 1’ - 0”

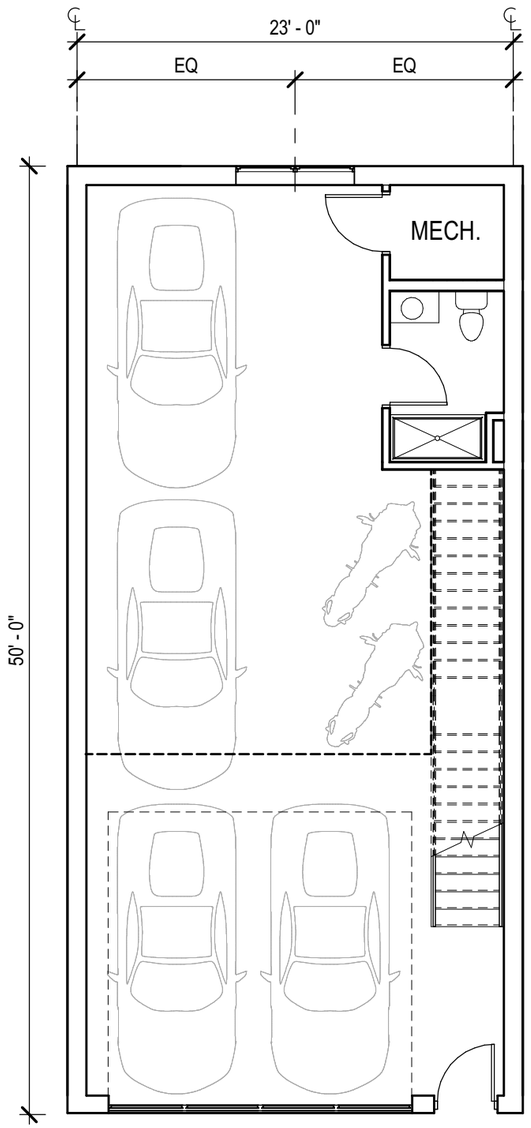


UNIT MEZZANINE

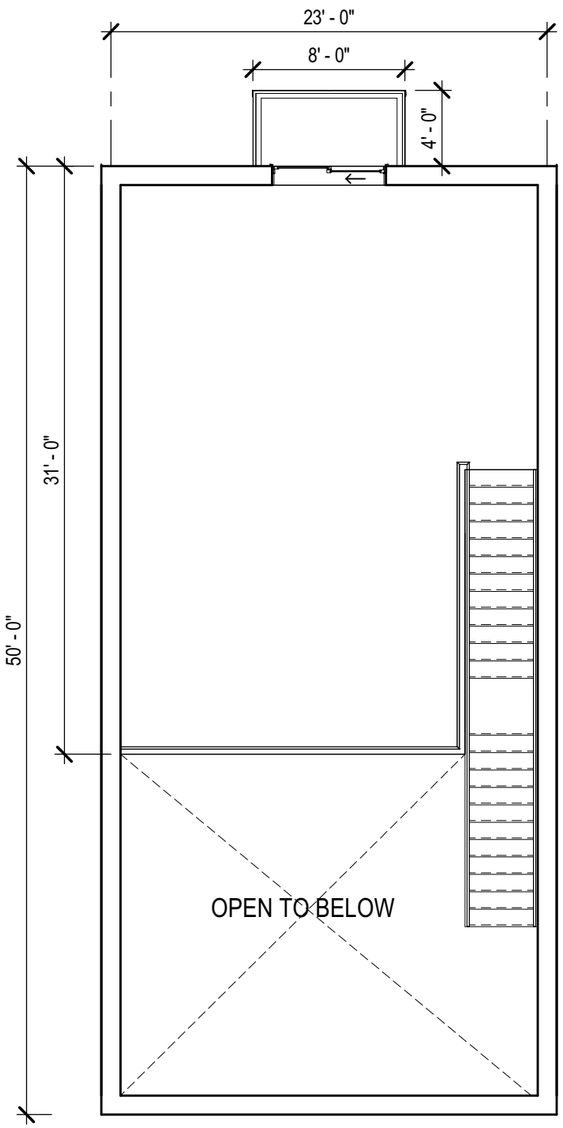
930 SF

SCALE: 1/8” = 1’ - 0”

UNIT PLANS - TYPE B



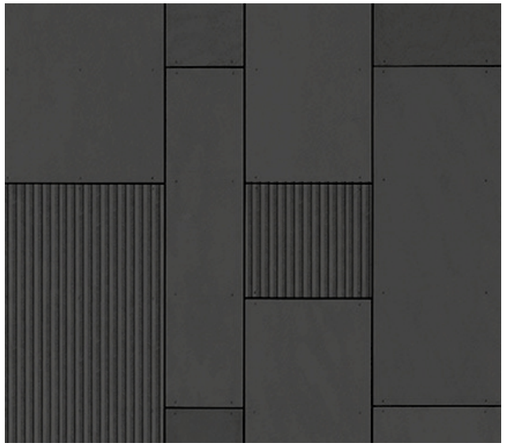
UNIT 1ST FLOOR
1,150 SF
SCALE: 1/8” = 1’ - 0”



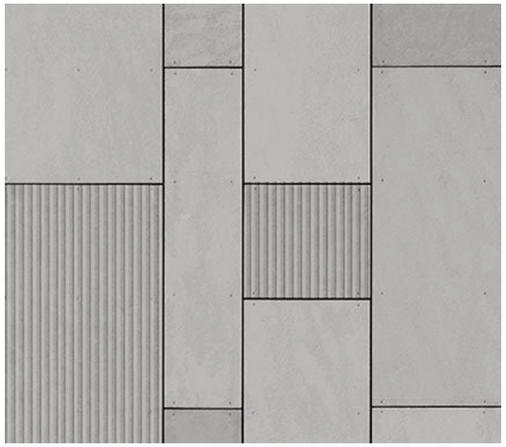
UNIT MEZZANINE
713 SF
SCALE: 1/8” = 1’ - 0”

MATERIALS

HIGH DENSITY FIBER CEMENT
BASIS OF DESIGN:
EQUITONE TECTIVA TE85



HIGH DENSITY FIBER CEMENT
BASIS OF DESIGN:
EQUITONE TECTIVA TE15



WOOD LOOK ALUMINUM SIDING
BASIS OF DESIGN:
LONGBOARD TONGUE AND GROOVE PLANKS
FINISH: LIGHT CHERRY

METAL PANEL

FIBER CEMENT PANEL
BASIS OF DESIGN:
HARDIE ARCHITECTURAL COLLECTION
DREAM COLLECTION: VOLCANO GRAY

FIBER CEMENT PANEL
BASIS OF DESIGN:
HARDIE ARCHITECTURAL COLLECTION
DREAM COLLECTION: ROBO GRAY

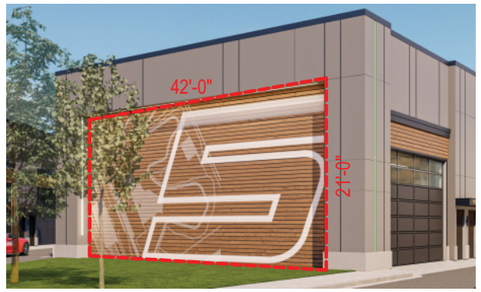
FIBER CEMENT PANEL
BASIS OF DESIGN:
HARDIE ARCHITECTURAL COLLECTION
DREAM COLLECTION: PLASTER WHITE

SIGNAGE DIAGRAM

WALL MOUNTED TENANT SIGN
INTERNALLY ILLUMINATED
18' X 14'

WALL MOUNTED TENANT SIGN
INTERNALLY ILLUMINATED
16' X 5'

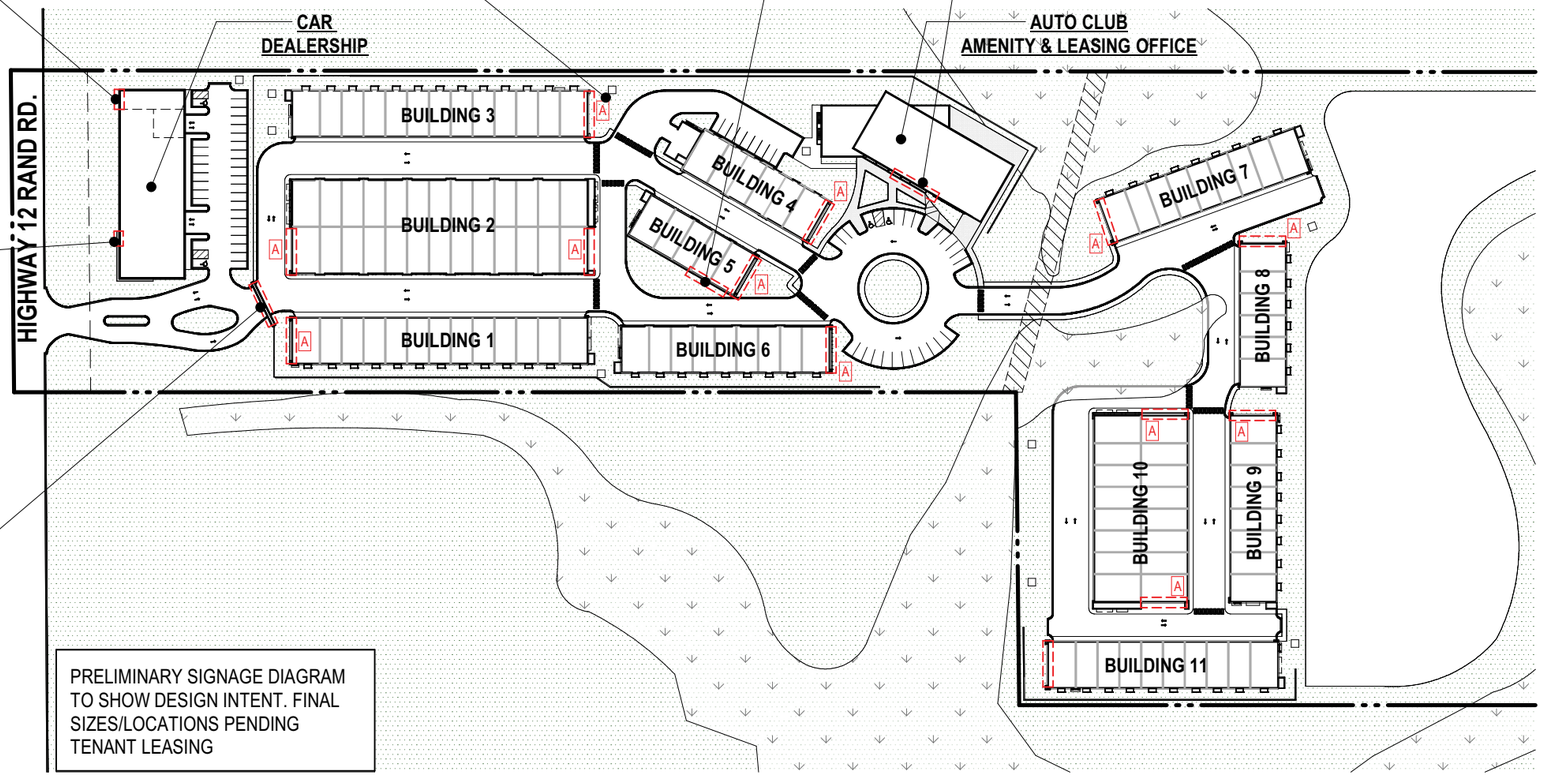
WALL MOUNTED AUTOSUITE SIGN
INTERNALLY ILLUMINATED
18' X 6'



A BUILDING NUMBER GRAPHIC, TYP
EXTERNALLY ILLUMINATED
42' X 21'

BUILDING NUMBER GRAPHIC
EXTERNALLY ILLUMINATED
47' X 21'

WALL MOUNTED
AUTO SUITE SIGN
INTERNALLY ILLUMINATED
35' X 16' , 7' X 4'



PRELIMINARY SIGNAGE DIAGRAM
TO SHOW DESIGN INTENT. FINAL
SIZES/LOCATIONS PENDING
TENANT LEASING

Kathryn Talty
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1926 Waukegan Road | Suite 340
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July 15, 2025

Luxe Corsa Auto Suites
Landscape Architecture Narrative

The landscape design of the Lux Corsa Auto Suites blends ornamental planting design with the context of the native landscape in which the site resides, focusing on aesthetic and ecologic attributes.

A full tree inventory and an extensive evaluation of the existing plant material was conducted. The landscape design considered the indigenous tree communities found while performing the inventory and utilized the same or similar species types throughout the plan. The site plan celebrates the existing wetlands and the stormwater basin is treated as an extension of such, by utilizing native, wetland plant communities.

The landscape treatment around the buildings is intended to compliment the architectural design and provide seasonal interest in areas of high visibility along Rand Road. Special attention was paid to the vehicular circulation and screening was provided in areas where headlight spillage may occur. Future, neighboring developments were considered with strategic plant placement, buffering the views into the site from the adjacent uses.

OVERALL LANDSCAPE PLAN

SCALE: 1" = 60'-0"

N

0 30' 60' 120'

GROUND TREATMENT KEY

BASE OF DETENTION AREAS BELOW THE NWL

Areas below the NWL to be planted with emergent plugs. See Sheet L2.0 for schedule and Sheet L2.1 for preferred installation method.

DETENTION AREAS BETWEEN THE NWL & HWL

Area of detention between the NWL & HWL to be seeded with "Swale Seed Mix" as supplied by Stantec Native Plant Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

Open areas not including detention, unless otherwise specified, to be seeded with "Low-Profile Prairie Seed Mix" as supplied by Stantec Native Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

Areas within the wetland buffer to be seeded with "Emergent Wetland Seed Mix". See Sheet L2.0 for schedule.

TURF GRASS - MOWED LAWN

All areas of restoration, not designated to be planted or mulched, are to be seeded with standard turf seed grass and covered with an erosion control blanket.

NOTE: All other areas disturbed by construction activities, excluding shrub beds, to be restored with turf grass seed and covered with an erosion control blanket.

PRELIMINARY

Kathryn Talty
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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-0015
STATE OF ILLINOIS

no.	revision description	initial	date
1	ISSUED FOR REVIEW	KMT	07-11-25
2	ENTITLEMENT PROCESS	KMT	07-16-25

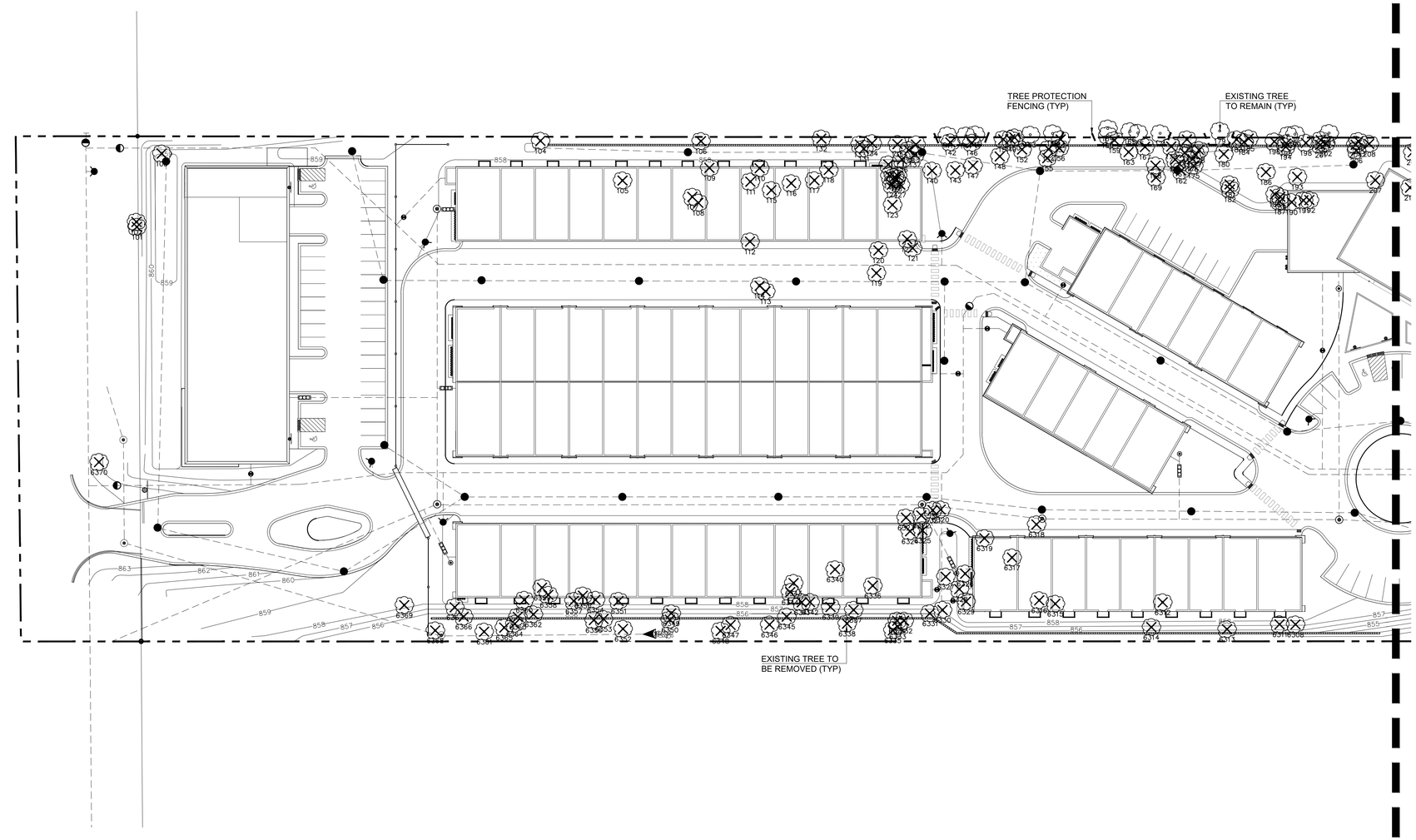
LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

OVERALL LANDSCAPE PLAN
GROUND TREATMENT KEY

date. 06-18-25
drawn DSP
checked KMT

job no. 25210

sheet no. L1.0



TREE PRESERVATION PLAN - WEST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-001194
STATE OF ILLINOIS

no.	revision description	initial	date
	ISSUED FOR REVIEW	KMT	07-11-25
	ENTITLEMENT PROCESS	KMT	07-16-25

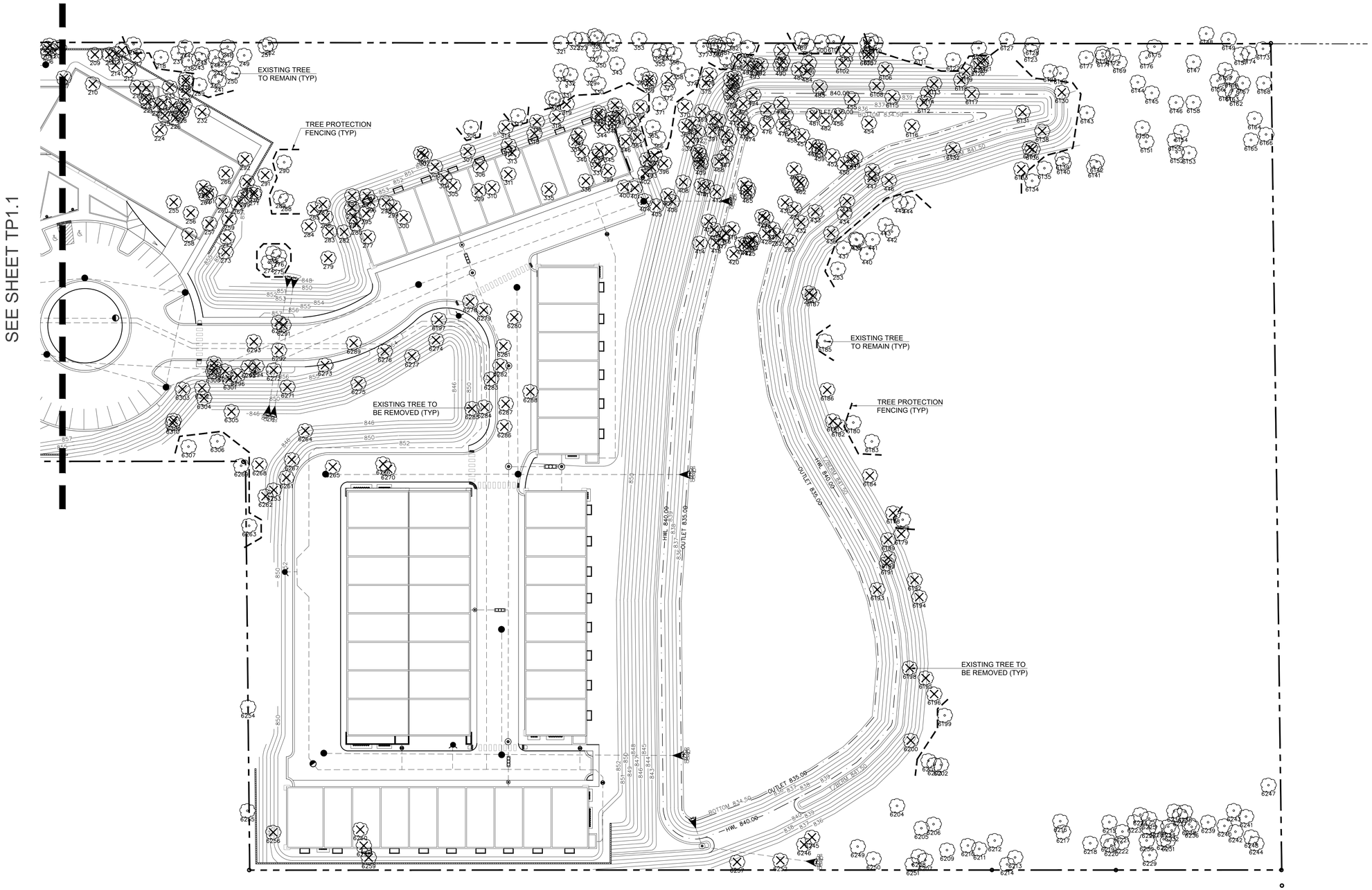
LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

TREE PRESERVATION PLAN
WEST

date: 06-18-25
drawn: DSP
checked: KMT

job no.
25210

sheet no.
TP1.1



TREE PRESERVATION PLAN - EAST

SCALE: 1" = 40'-0"

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landscape architecture
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Glenview, Illinois 60025
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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-001196
STATE OF ILLINOIS

no.	revision description	initial	date
	ISSUED FOR REVIEW	KMT	07-11-25
	ENTITLEMENT PROCESS	KMT	07-16-25

LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

TREE PRESERVATION PLAN
EAST

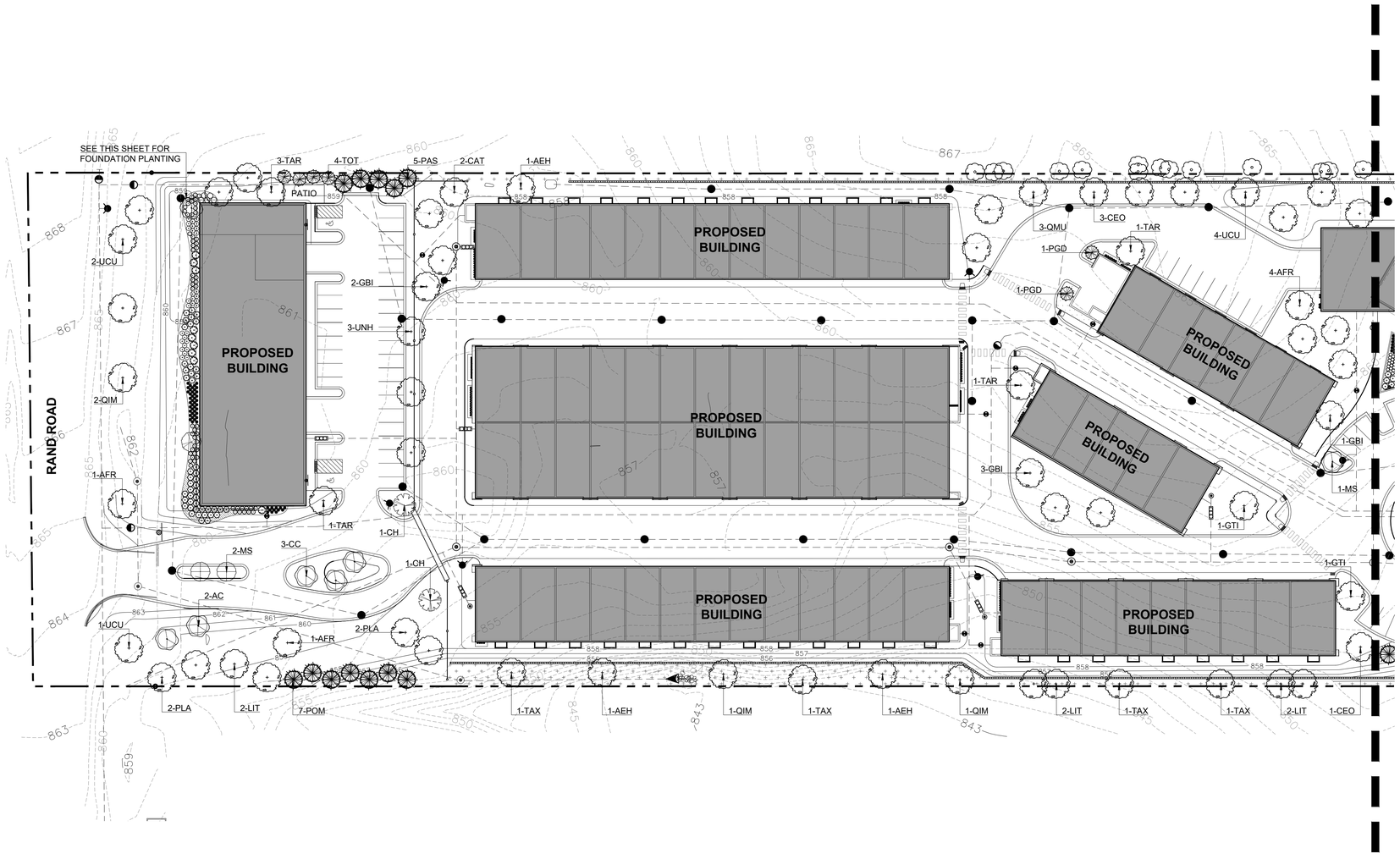
date.	drawn	checked
06-18-25	DSP	KMT

job no. 25210

sheet no. TP1.2

EXISTING TREE INVENTORY

Tree Tag	Common Name	Scientific Name	DBH (inches)	Condition	Action
101	White oak	Quercus alba	6	Good	Remove
102	Boxelder	Acer negundo	12	Fair	Remove
103	Bur oak	Quercus macrocarpa	28	Poor	Remove
104	Pear	Pyrus spp.	6	Fair	Remove
105	Ash	Fraxnus spp	4	Fair	Remove
106	Mulberry	Morus spp.	10	Poor	Remove
107	Bur oak	Quercus macrocarpa	25	Dead	Remove
108	Bur oak	Quercus macrocarpa	16	Fair	Remove
109	Bur oak	Quercus macrocarpa	27	Fair	Remove
110	Buckthorn	Rhamnus spp.	4	Good	Remove
111	Bur oak	Quercus macrocarpa	28	Fair	Remove
112	Bur oak	Quercus macrocarpa	30	Fair	Remove
113	Black walnut	Juglans nigra	4	Good	Remove
114	Boxelder	Acer negundo	4	Good	Remove
115	Bur oak	Quercus macrocarpa	16	Fair	Remove
116	Bur oak	Quercus macrocarpa	30	Fair	Remove
117	Buckthorn	Rhamnus spp.	5	Fair	Remove
118	Bur oak	Quercus macrocarpa	30	Fair	Remove
119	Mulberry	Morus spp.	5	Fair	Remove
120	Boxelder	Acer negundo	8	Fair	Remove
121	Mulberry	Morus spp.	4	Good	Remove
122	Mulberry	Morus spp.	6	Good	Remove
123	Shagbark hickory	Carya ovata	16	Good	Remove
124	Bur oak	Quercus macrocarpa	8	Good	Remove
125	Buckthorn	Rhamnus spp.	4	Dead	Remove
126	Shagbark hickory	Carya ovata	6	Good	Remove
127	Northern red oak	Quercus palustris	20	Dead	Remove
128	Bur oak	Quercus macrocarpa	6	Good	Remove
129	Northern red oak	Quercus palustris	12	Fair	Remove
130	American elm	Ulmus americana	10	Fair	Remove
131	Silver maple	Acer saccharinum	34	Poor	Remove
132	Northern red oak	Quercus palustris	17	Fair	Remove
133	Buckthorn	Rhamnus spp.	6	Good	Remove
134	Buckthorn	Rhamnus spp.	4	Fair	Remove
135	Shagbark hickory	Carya ovata	34	Good	Remove
136	Bur oak	Quercus macrocarpa	6	Good	Remove
137	Bur oak	Quercus macrocarpa	9	Fair	Remove
138	Bur oak	Quercus macrocarpa	7	Fair	Remove
139	Black cherry	Prunus serotina	7	Good	Remove
140	Bur oak	Quercus macrocarpa	6	Good	Remove
141	Buckthorn	Rhamnus spp.	5	Fair	Remove
142	Shagbark hickory	Carya ovata	4	Good	Remove
143	Bur oak	Quercus macrocarpa	7	Dead	Remove
144	Buckthorn	Rhamnus spp.	4	Fair	Preserve
145	Bur oak	Quercus macrocarpa	10	Fair	Preserve
146	Shagbark hickory	Carya ovata	9	Good	Remove
147	Bur oak	Quercus macrocarpa	7	Fair	Remove
148	Bur oak	Quercus macrocarpa	14	Fair	Remove
149	Bur oak	Quercus macrocarpa	11	Fair	Remove
150	Shagbark hickory	Carya ovata	8	Good	Remove
151	Buckthorn	Rhamnus spp.	4	Fair	Remove
152	Bur oak	Quercus macrocarpa	12	Fair	Remove
153	Shagbark hickory	Carya ovata	8	Good	Preserve
154	Bur oak	Quercus macrocarpa	4	Good	Remove
155	Silver maple	Acer saccharinum	13	Good	Remove
156	Shagbark hickory	Carya ovata	10	Fair	Remove
157	Shagbark hickory	Carya ovata	12	Good	Remove
158	Shagbark hickory	Carya ovata	8	Fair	Preserve
159	Bur oak	Quercus macrocarpa	13	Fair	Remove
160	Buckthorn	Rhamnus spp.	14	Fair	Preserve
161	White poplar	Populus alba	6	Good	Remove
162	White poplar	Populus alba	8	Good	Remove
163	Bur oak	Quercus macrocarpa	7	Good	Remove
164	Shagbark hickory	Carya ovata	6	Good	Preserve
165	Buckthorn	Rhamnus spp.	8	Fair	Remove
166	Shagbark hickory	Carya ovata	10	Good	Preserve
167	Shagbark hickory	Carya ovata	8	Good	Remove
168	White poplar	Populus alba	5	Good	Remove
169	Eastern cottonwood	Populus deltoides	8	Good	Remove
170	White poplar	Populus alba	6	Good	Remove
171	Shagbark hickory	Carya ovata	9	Good	Preserve
172	Buckthorn	Rhamnus spp.	5	Fair	Remove
173	Black cherry	Prunus serotina	8	Fair	Remove
174	Northern pin oak	Quercus palustris	13	Fair	Remove
175	White poplar	Populus alba	6	Good	Remove
176	White poplar	Populus alba	7	Good	Remove
177	Black cherry	Prunus serotina	7	Dead	Remove
178	Black cherry	Prunus serotina	7	Good	Remove
179	Black cherry	Prunus serotina	10	Fair	Preserve
180	White poplar	Populus alba	9	Good	Remove
181	Northern pin oak	Quercus palustris	20	Poor	Remove
182	White poplar	Populus alba	5	Good	Remove
183	Bur oak	Quercus macrocarpa	4	Fair	Preserve
184	Bur oak	Quercus macrocarpa	6	Fair	Preserve
185	Shagbark hickory	Carya ovata	19	Good	Remove
186	White poplar	Populus alba	9	Good	Remove
187	White poplar	Populus alba	9	Dead	Remove
188	White poplar	Populus alba	9	Dead	Remove
189	White poplar	Populus alba	8	Fair	Remove
190	White poplar	Populus alba	9	Good	Remove
191	White poplar	Populus alba	9	Good	Remove
192	White poplar	Populus alba	9	Good	Remove
193	White poplar	Populus alba	5	Fair	Remove
194	Bur oak	Quercus macrocarpa	10	Fair	Remove
195	Buckthorn	Rhamnus spp.	7	Dead	Remove
196	Northern pin oak	Quercus palustris	17	Fair	Remove
197	Bur oak	Quercus macrocarpa	8	Good	Preserve
198	Bur oak	Quercus macrocarpa	6	Good	Remove
199	Northern pin oak	Quercus palustris	15	Dead	Preserve
200	American elm	Ulmus americana	7	Dead	Remove
201	Shagbark hickory	Carya ovata	10	Good	Remove
202	Northern pin oak	Quercus palustris	21	Fair	Remove
203	Bur oak	Quercus macrocarpa	8	Fair	Preserve
204	Bur oak	Quercus macrocarpa	6	Fair	Remove
205	Shagbark hickory	Carya ovata	7	Good	Remove
206	Buckthorn	Rhamnus spp.	10	Fair	Remove
207	Shagbark hickory	Carya ovata	6	Good	Remove
208	Buckthorn	Rhamnus spp.	11	Fair	Remove
209	Bur oak	Quercus macrocarpa	14	Fair	Remove
210	Shagbark hickory	Carya ovata	5	Good	Remove
211	Bur oak	Quercus macrocarpa	8	Fair	Remove
212	Bur oak	Quercus macrocarpa	12	Fair	Remove
213	Bur oak	Quercus macrocarpa	5	Fair	Remove
214	Bur oak	Quercus macrocarpa	8	Dead	Remove
215	Bur oak	Quercus macrocarpa	8	Fair	Remove
216	Bur oak	Quercus macrocarpa	12	Good	Preserve
217	Northern pin oak	Quercus palustris	30	Fair	Remove
218	Bur oak	Quercus macrocarpa	32	Fair	Preserve
219	Bur oak	Quercus macrocarpa	10	Fair	Remove
220	Bur oak	Quercus macrocarpa	8	Fair	Remove
221	Bur oak	Quercus macrocarpa	15	Fair	Remove
222	Bur oak	Quercus macrocarpa	12	Fair	Remove
223	Bur oak	Quercus macrocarpa	10	Fair	Remove
224	Northern pin oak	Quercus palustris	25	Fair	Remove
225	Bur oak	Quercus macrocarpa	12	Fair	Remove
226	Mulberry	Morus spp.	9	Fair	Remove
227	Black cherry	Prunus serotina	8	Fair	Remove
228	Bur oak	Quercus macrocarpa	10	Fair	Remove
229	Bur oak	Quercus macrocarpa	7	Good	Remove
230	Bur oak	Quercus macrocarpa	11	Fair	Remove
231	Bur oak	Quercus macrocarpa	5	Good	Remove
232	Bur oak	Quercus macrocarpa	7	Fair	Remove
233	Bur oak	Quercus macrocarpa	10	Fair	Remove
234	Northern pin oak	Quercus palustris	16	Fair	Remove
235	Bur oak	Quercus macrocarpa	5	Fair	Remove
236	Bur oak	Quercus macrocarpa	7	Good	Remove
237	Bur oak	Quercus macrocarpa	10	Fair	Preserve
238	Northern pin oak	Quercus palustris	20	Fair	Preserve
239	Northern pin oak	Quercus palustris	20	Fair	Preserve
240	Bur oak	Quercus macrocarpa	7	Fair	Preserve
241	Bur oak	Quercus macrocarpa	5	Fair	Preserve
242	Bur oak	Quercus macrocarpa	6	Fair	Preserve
243	Bur oak	Quercus macrocarpa	8	Fair	Preserve
244	Mulberry	Morus spp.	15	Poor	Preserve
245	Buckthorn	Rhamnus spp.	7	Fair	Preserve
246	Unknown	Unknown	9	Dead	Preserve
247	Buckthorn	Rhamnus spp.	5	Fair	Remove
248	Buckthorn	Rhamnus spp.	6	Fair	Remove
249	Black cherry	Prunus serotina	19	Fair	Preserve
250	Buckthorn	Rhamnus spp.	8	Fair	Preserve
251	Bur oak	Quercus macrocarpa	15	Fair	Preserve
252	Bur oak	Quercus macrocarpa	24	Fair	Preserve
253	Black cherry	Prunus serotina	17	Fair	Preserve
254	Black cherry	Prunus serotina	11	Fair	Remove
255	Silver maple	Acer saccharinum	14	Fair	Remove
256	Buckthorn	Rhamnus spp.	6	Fair	Remove
257	Buckthorn	Rhamnus spp.	6	Fair	Remove
258	Buckthorn	Rhamnus spp.	9	Fair	Remove
259	Boxelder	Acer negundo	18	Fair	Remove
260	Boxelder	Acer negundo	14	Poor	Remove
261	Buckthorn	Rhamnus spp.	5	Fair	Remove
262	Bur oak	Quercus macrocarpa	6	Fair	Remove
263	Bur oak	Quercus macrocarpa	10	Fair	Remove
264	Buckthorn	Rhamnus spp.	5	Fair	Remove
265	Buckthorn	Rhamnus spp.	5	Fair	Remove
266	Buckthorn	Rhamnus spp.	4	Fair	Remove
267	Buckthorn	Rhamnus spp.	6	Fair	Remove
268	Buckthorn	Rhamnus spp.	6	Fair	Remove
269	Buckthorn	Rhamnus spp.	6	Fair	Remove
270	Buckthorn	Rhamnus spp.	6	Fair	Remove
271	Buckthorn	Rhamnus spp.	4	Fair	Remove
272	Buckthorn	Rhamnus spp.	11	Fair	Remove
273	Boxelder	Acer negundo	12	Fair	Remove
274	Bur oak	Quercus macrocarpa	25	Good	Preserve
275	Bur oak	Quercus macrocarpa	20	Good	Preserve
276	Bur oak	Quercus macrocarpa	17	Fair	Preserve
277	Buckthorn	Rhamnus spp.	10	Fair	Remove
278	Bur oak	Quercus macrocarpa	17	Good	Preserve
279	Boxelder	Acer negundo	8	Fair	Remove
280	Black cherry	Prunus serotina	12	Fair	Remove
281	Black cherry	Prunus serotina	8	Fair	Remove
282	Buckthorn	Rhamnus spp.	12	Fair	Remove
283	Buckthorn	Rhamnus spp.	7	Fair	Remove
284	Boxelder	Acer negundo	6	Good	Remove
285	Black cherry	Prunus serotina	8	Fair	Remove
286	Buckthorn	Rhamnus spp.	5	Fair	Remove
287	Boxelder	Acer negundo	9	Fair	Remove
288	Buckthorn	Rhamnus spp.	6	Fair	Preserve
289	Buckthorn	Rhamnus spp.	10	Fair	Preserve
290	Boxelder	Acer negundo	19	Fair	Preserve
291	Buckthorn	Rhamnus spp.	7	Fair	Remove
292	Mulberry	Morus spp.	43	Fair	Remove
293	Black cherry	Prunus serotina	7	Fair	Remove
294	Black cherry	Prunus serotina	13	Fair	Remove
295	Boxelder	Acer negundo	8	Fair	Remove
296	Mulberry	Morus spp.	10	Fair	Remove
297	Black cherry	Prunus serotina	10	Fair	Remove
298	Boxelder	Acer negundo	8	Fair	Remove
299	Buckthorn	Rhamnus spp.	4	Fair	Remove
300	Buckthorn	Rhamnus spp.	53	Fair	Remove
301	Mulberry	Morus spp.	14	Fair	Remove
302	Black cherry	Prunus serotina	5	Fair	Remove
303	Black cherry	Prunus serotina	5	Fair	Remove
304	Eastern redcedar	Juniperus virginiana	10	Good	Remove
305	Ash	Fraxnus spp.	8	Dead	Remove
306	Buckthorn	Rhamnus spp.	4	Fair	Remove
307	Mulberry	Morus spp.	7	Fair	Remove
308	American elm	Ulmus americana	5	Good	Preserve
309	Black cherry	Prunus serotina	4	Fair	Remove
310	Buckthorn	Rhamnus spp.	4	Fair	Remove
311	Northern red oak	Quercus palustris	14	Dead	Remove
312	Buckthorn	Rhamnus spp.	4	Dead	Remove
313	Buckthorn	Rhamnus spp.	8	Dead	Remove
314	American elm	Ulmus americana	23	Fair	Remove
315	Black cherry	Prunus serotina	6	Fair	Remove
316	Bur oak	Quercus macrocarpa	20	Fair	Remove
317	American elm	Ulmus americana	11	Good	Preserve
318	Shagbark hickory	Carya ovata	11	Good	Remove
319	Northern red oak	Quercus palustris	18	Dead	Remove
320	Bur oak	Quercus macrocarpa	14	Fair	Preserve
321	Northern red oak	Quercus palustris	11	Fair	Preserve
322	Bur oak	Quercus macrocarpa	8	Fair	Preserve
323	Bur oak	Quercus macrocarpa	6	Good	Preserve
324	Shagbark hickory	Carya ovata	11	Fair	Preserve
325	Bur oak	Quercus macrocarpa	10	Good	Preserve
326	Bur oak	Quercus macrocarpa	13	Fair	Remove
327	Bur oak	Quercus macrocarpa	11	Good	Preserve
328	Northern red oak	Quercus palustris	11	Dead	Remove
329	Bur oak	Quercus macrocarpa	16	Fair	Preserve
330	Bur oak	Quercus macrocarpa	14	Fair	Preserve
331	Bur oak	Quercus macrocarpa	16	Fair	Preserve
332	Bur oak	Quercus macrocarpa	7	Good	Preserve
333	Shagbark hickory	Carya ovata	8	Good	Preserve
334	Bur oak	Quercus macrocarpa	6	Fair	Remove
335	Eastern redcedar	Juniperus virginiana	5	Good	Remove
336	Shagbark hickory	Carya ovata	5	Good	Remove
337	Northern red oak	Quercus palustris	15	Dead	Remove
338	Bur oak	Quercus macrocarpa	9	Dead	Remove
339	Northern red oak	Quercus palustris	5	Dead	Remove
340	American elm	Ulmus americana	7	Dead	Remove
341	Northern red oak	Quercus palustris	17	Dead	Remove
342	Black cherry	Prunus serotina	19	Dead	Remove
343	Boxelder	Acer negundo	7	Poor	Preserve
344	Bur oak	Quercus macrocarpa	18	Poor	Remove
345	Bur oak	Quercus macrocarpa	8	Good	Remove
346	Bur oak	Quercus macrocarpa	12	Dead	Remove
347	Black cherry	Prunus serotina	8	Fair	Remove
348	Buckthorn	Rhamnus spp.	6	Fair	Remove
349	Bur oak	Quercus macrocarpa	6	Dead	Remove
350	Bur oak	Quercus macrocarpa	16	Fair	Preserve
351	Bur oak	Quercus macrocarpa	4	Good	Remove
352	Black cherry	Prunus serotina	8	Fair	Remove
353	Bur oak	Quercus macrocarpa	40	Fair	Preserve
354	Black cherry	Prunus serotina	7	Fair	Preserve
355	Black cherry	Prunus serotina	10	Fair	Preserve
356	Buckthorn	Rhamnus spp.	5	Fair	Preserve
357	Bur oak	Quercus macrocarpa	36	Fair	Preserve
358	Buckthorn	Rhamnus spp.	7	Fair	Remove
359	Unknown	Unknown	9	Dead	Preserve
360	Shagbark hickory	Carya ovata	14	Good	Preserve
361	Bur oak	Quercus macrocarpa	13	Fair	Remove
362	Bur oak	Quercus macrocarpa	19	Poor	Remove
363	Bur oak	Quercus macrocarpa	8	Dead	Remove
364	Bur oak	Quercus macrocarpa	9	Dead	Remove
365	Black cherry	Prunus serotina	8	Fair	Preserve
366	Black cherry	Prunus serotina	7	Dead	Preserve
367	Bur oak	Quercus macrocarpa	7	Dead	Remove
368	Black cherry	Prunus serotina	11	Good	Remove
369	Bur oak	Quercus macrocarpa	5	Good	Remove
370	Buckthorn	Rhamnus spp.	6	Fair	Remove
371	Buckthorn	Rhamnus spp.	5	Fair	Preserve
372	Bur oak	Quercus macrocarpa	9	Fair	Preserve
373	Black cherry	Prunus serotina	7	Poor	Remove
374	Bur oak	Quercus macrocarpa	36	Dead	Preserve
375	Buckthorn	Rhamnus spp.	12	Fair	Remove
376	Black cherry	Prunus serotina	8	Fair	Remove
377	Bur oak	Quercus macrocarpa	8	Good	Preserve
378	Bur oak	Quercus macrocarpa	9	Good	Remove
379	Bur oak	Quercus macrocarpa	9	Good	Preserve
380	Bur oak	Quercus macrocarpa	11	Good	Preserve
381	Bur oak	Quercus macrocarpa	14	Fair	Preserve
382	Shagbark hickory	Carya ovata	11	Good	Preserve
383	Bur oak	Quercus macrocarpa	10	Fair	Preserve
384	Bur oak	Quercus macrocarpa	8	Fair	Remove
385	Bur oak	Quercus macrocarpa	8	Good	Remove
386	Bur oak	Quercus macrocarpa	9	Good	Remove
387	Black cherry	Prunus serotina	6	Dead	Remove
388	Bur oak	Quercus macrocarpa	15	Fair	Remove
389	Bur oak	Quercus macrocarpa	12	Fair	Remove
390	Bur oak	Quercus macrocarpa	5	Fair	Remove
391	Bur oak	Quercus macrocarpa	12	Fair	Remove
392	Bur oak	Quercus macrocarpa	8	Fair	Remove
393	Black cherry	Prunus serotina	7	Dead	Remove
394	Black cherry	Prunus serotina	9	Fair	Remove
395	Buckthorn	Rhamnus spp.	9	Fair	Remove
396	Bur oak	Quercus macrocarpa	58	Fair	Preserve
397	Black cherry	Prunus serotina	7	Dead	Remove
398	Black cherry	Prunus serotina	10	Fair	Remove
399	Bur oak	Quercus macrocarpa	6	Dead	Remove
400	Shagbark hickory	Carya ovata	5	Good	Remove
401	Bur oak	Quercus macrocarpa	10	Fair	Remove
402	Black cherry	Prunus serotina	13	Fair	Remove
403	Buckthorn	Rhamnus spp.	5	Fair	Remove
404	Bur oak	Quercus macrocarpa	9	Fair	Remove
405	Shagbark hickory	Carya ovata	6	Good	Remove
406	Bur oak	Quercus macrocarpa	6	Dead	Remove
407	Buckthorn	Rhamnus spp.	10	Fair	Remove
408	Black cherry	Prunus serotina	9	Dead	Remove
409	Buckthorn	Rhamnus spp.	6	Fair	Remove
410	Bur oak	Quercus macrocarpa	7	Dead	Remove
411	Bur oak	Quercus macrocarpa	7	Fair	Remove
412	Buckthorn	Rhamnus spp.	7	Fair	Remove
413	Buckthorn	Rhamnus spp.	6	Fair	Remove
414	Unknown	Unknown	12	Dead	Remove
415	Bur oak	Quercus macrocarpa	10	Fair	Remove
416	Bur oak	Quercus macrocarpa	9	Fair	Remove
417	Bur oak	Quercus macrocarpa	6	Fair	Remove
418	Bur oak	Quercus macrocarpa	6	Fair	Remove
419	Bur oak	Quercus macrocarpa	9	Fair	Remove
420	Unknown	Unknown	15	Dead	Remove
421	Bur oak	Quercus macrocarpa	5	Dead	Remove
422	Bur oak	Quercus macrocarpa	6	Good	Remove
423	Bur oak	Quercus macrocarpa	8	Fair	Remove
424	Bur oak	Quercus macrocarpa	4	Good	Remove
425	Bur oak	Quercus macrocarpa	6	Fair	Remove
426	Black cherry	Prunus serotina	8	Fair	Remove
427	Bur oak	Quercus macrocarpa	9	Dead	Remove
428	Buckthorn	Rhamnus spp.	9	Fair	Remove
429	Buckthorn	Rhamnus spp.	7	Fair	Remove
430	Black cherry	Prunus serotina	9	Fair	Remove
431	Bur oak	Quercus macrocarpa	10	Poor	Remove
432	Buckthorn	Rhamnus spp.	8	Fair	Remove
433	Bur oak	Quercus macrocarpa	14	Fair	Remove
434	Bur oak	Quercus macrocarpa	7	Dead	Remove
435	Bur oak	Quercus macrocarpa	17	Fair	Remove
436	Northern red oak	Quercus palustris	17	Dead	Remove
437	Hawthorn	Crataegus spp.	6	Dead	Remove
438	Bur oak	Quercus macrocarpa	9	Fair	Preserve
439	Boxelder	Acer negundo	6	Fair	Remove
440	Bur oak	Quercus macrocarpa	11	Good	Preserve
441	Black cherry	Prunus serotina	11	Fair	Preserve
442	Bur oak	Quercus macrocarpa	14	Fair	Preserve
443	Black cherry	Prunus serotina	12	Fair	Preserve
444	Bur oak	Quercus macrocarpa	16	Fair	Preserve
445	Bur oak	Quercus macrocarpa	19	Fair	Preserve
446	Bur oak	Quercus macrocarpa	7	Fair	Remove
447	Black cherry	Prunus serotina	10	Dead	Remove
448	Black cherry	Prunus serotina	10	Dead	Remove
449	Shagbark hickory	Carya ovata	16	Good	Remove
450	Northern red oak	Quercus palustris	12	Fair	Remove
451	Shagbark hickory	Carya ovata	14	Good	Remove
452	Bur oak	Quercus macrocarpa	9	Fair	Remove
453	Northern red oak	Quercus palustris	17	Dead	Remove
454	Shagbark hickory	Carya ovata	13	Good	Remove
455	Shagbark hickory	Carya ovata	12	Good	Remove
456	Bur oak	Quercus macrocarpa	12	Fair	Remove
457	Bur oak	Quercus macrocarpa	12	Dead	Remove
458	Bur oak	Quercus macrocarpa	8	Fair	Remove
459	Bur oak	Quercus macrocarpa	9	Good	Remove
460	Buckthorn	Rhamnus spp.	8	Fair	Remove
461	Black cherry	Prunus serotina	9	Fair	Remove
462	Black cherry	Prunus serotina	6	Fair	Remove
463	Buckthorn	Rhamnus spp.	8	Fair	Remove
464	Bur oak	Quercus macrocarpa	68	Fair	Remove
465	Buckthorn	Rhamnus spp.	5	Fair	Remove
466	Black cherry	Prunus serotina	5	Fair	Remove
467	Bur oak	Quercus macrocarpa	12	Fair	Remove
468	Bur oak	Quercus macrocarpa	5	Fair	Remove
469	Bur oak	Quercus macrocarpa	7	Fair	Remove
470	Bur oak	Quercus macrocarpa	15	Fair	Remove
471	Bur oak	Quercus macrocarpa	7	Dead	Remove
472	Bur oak	Quercus macrocarpa	12	Fair	Remove
473	Bur oak	Quercus macrocarpa	8	Dead	Remove
474	Bur oak	Quercus macrocarpa	9	Fair	Remove
475	Bur oak	Quercus macrocarpa	10	Fair	Remove
476	Bur oak	Quercus macrocarpa	10	Fair	Remove
477	Bur oak	Quercus macrocarpa	13	Fair	Remove
478	Buckthorn	Rhamnus spp.	5	Fair	Remove
479	Bur oak	Quercus macrocarpa	13	Dead	Remove
480	Bur oak	Quercus macrocarpa	5	Dead	Remove
481	Black cherry	Prunus serotina	12	Fair	Remove
482	Bur oak	Quercus macrocarpa	16	Fair	Preserve
483	Shagbark hickory	Carya ovata	9	Good	Remove
484	Shagbark hickory	Carya ovata	13	Good	Remove
485	Bur oak	Quercus macrocarpa	13	Fair	Remove
486	Bur oak	Quercus macrocarpa	14	Fair	Remove
487	Bur oak	Quercus macrocarpa	10	Fair	Remove
488	Bur oak	Quercus macrocarpa	8	Fair	Remove
489	Bur oak	Quercus macrocarpa	10	Fair	Remove
490	Bur oak	Quercus macrocarpa	14	Fair	Remove
491	Bur oak	Quercus macrocarpa	12	Fair	Remove
492	Bur oak	Quercus macrocarpa	5	Fair	Remove
493	Bur oak	Quercus macrocarpa	13	Fair	Remove
494	Bur oak	Quercus macrocarpa	15	Fair	Remove
495	Bur oak	Quercus palustris	11	Fair	Remove
496	Bur oak	Quercus macrocarpa	12	Fair	Remove
497	Bur oak	Quercus macrocarpa	10	Fair	Remove
498	Bur oak	Quercus macrocarpa	13	Fair	Preserve
499	Bur oak	Quercus macrocarpa	13	Fair	Remove
500	Buckthorn	Rhamnus spp.	7	Fair	Remove
6101	Black cherry	Prunus serotina	10	Fair	Preserve
6102	Bur oak	Quercus macrocarpa	15	Fair	Remove
6103	Shagbark hickory	Carya ovata	10	Good	Remove
6104	Buckthorn	Rhamnus spp.	6	Fair	Remove
6105	Bur oak	Quercus macrocarpa	14	Fair	Remove
6106	Buckthorn	Rhamnus spp.	5	Fair	Remove
6107	Bur oak	Quercus macrocarpa	15	Fair	Remove
6108	Bur oak	Quercus macrocarpa	19	Fair	Remove
6109	Bur oak	Quercus macrocarpa	5	Good	Remove
6110	Bur oak	Quercus macrocarpa	9	Fair	Preserve
6111	Shagbark hickory	Carya ovata	15	Good	Preserve
6112	Bur oak	Quercus macrocarpa	18	Good	Remove
6113	Buckthorn	Rhamnus spp.	5	Fair	Remove
6114	Buckthorn	Rhamnus spp.	8	Fair	Remove
6115	Bur oak	Quercus macrocarpa	11	Fair	Remove
6116	Buckthorn	Rhamnus spp.	10	Fair	Remove
6117	Black cherry	Prunus serotina	15	Dead	Remove
6118	Black cherry	Prunus serotina	9	Fair	Remove
6119	Buckthorn	Rhamnus spp.	7	Fair	Remove
6120	Buckthorn	Rhamnus spp.	6	Fair	Remove
6121	Buckthorn	Rhamnus spp.	5	Fair	Remove
6122	Bur oak	Quercus macrocarpa	12	Fair	Preserve
6123	Buckthorn	Rhamnus spp.	6	Fair	Preserve
6124	Black cherry	Prunus serotina	20	Fair	Preserve
6125	Shagbark hickory	Carya ovata	8	Good	Preserve
6126	Bur oak	Quercus macrocarpa	11	Fair	Remove
6127	Bur oak	Quercus macrocarpa	13	Fair	Preserve
6128	Buckthorn	Rhamnus spp.	8	Fair	Preserve
6129	Bur oak	Quercus macrocarpa	6	Good	Preserve
6130	Buckthorn	Rhamnus spp.	5	Fair	Remove
6131	Buckthorn	Rhamnus spp.	7	Fair	Remove
6132	Shagbark hickory	Carya ovata	12	Good	Remove
6133	Buckthorn	Rhamnus spp.	6	Fair	Remove
6134	Buckthorn	Rhamnus spp.	5	Fair	Preserve
6135	Black cherry	Prunus serotina	10	Dead	Preserve
6136	Black cherry	Prunus serotina	13	Fair	Remove
6137	Black cherry	Prunus serotina	10	Dead	Remove
6138	Buckthorn	Rhamnus spp.	5	Fair	Remove
6139	Northern pin oak	Quercus palustris	24	Fair	Remove
6140	Bur oak	Quercus macrocarpa	5	Good	Preserve
6141	Bur oak	Quercus macrocarpa	11	Fair	Preserve
6142	Black cherry	Prunus serotina	8	Good	Preserve
6143	Black cherry	Prunus serotina	17	Dead	Remove
6144	Buckthorn	Rhamnus spp.	9	Fair	Preserve
6145	Northern pin oak	Quercus palustris	33	Fair	Remove
6146	Bur oak	Quercus macrocarpa	17	Fair	Preserve
6147	Bur oak	Quercus macrocarpa	15	Fair	Preserve
6148	Shagbark hickory	Carya ovata	10	Good	Preserve
6149	Shagbark hickory	Carya ovata	14	Good	Preserve
6150	Bur oak	Quercus macrocarpa	10	Fair	Preserve
6151	Black cherry	Prunus serotina	7	Dead	Preserve
6152	Bur oak	Quercus macrocarpa	10	Fair	Preserve
6153	Bur oak	Quercus macrocarpa	15	Fair	Preserve
6154	Shagbark hickory	Carya ovata	8	Good	Preserve
6155	Shagbark hickory	Carya ovata	4	Good	Preserve
6156	Bur oak	Quercus macrocarpa	13	Fair	Preserve
6157	Shagbark hickory	Carya ovata	9	Good	Preserve
6158	Black cherry	Prunus serotina	19	Fair	Preserve
6159	Bur oak	Quercus macrocarpa	14	Fair	Preserve
6160	Buckthorn	Rhamnus spp.	6	Fair	Preserve
6161	Bur oak	Quercus macrocarpa	7	Fair	Preserve
6162	Shagbark hickory	Carya ovata	9	Good	Preserve
6163	Bur oak	Quercus macrocarpa	9	Dead	Preserve
6164	Shagbark hickory	Carya ovata	9	Good	Preserve
6165	Black cherry	Prunus serotina	8	Fair	Preserve
6166	Black cherry	Prunus serotina	9	Fair	Preserve
6167	Northern red oak	Quercus palustris	26	Fair	Preserve
6168	Shagbark hickory	Carya ovata	8	Good	Preserve
6169	Northern red

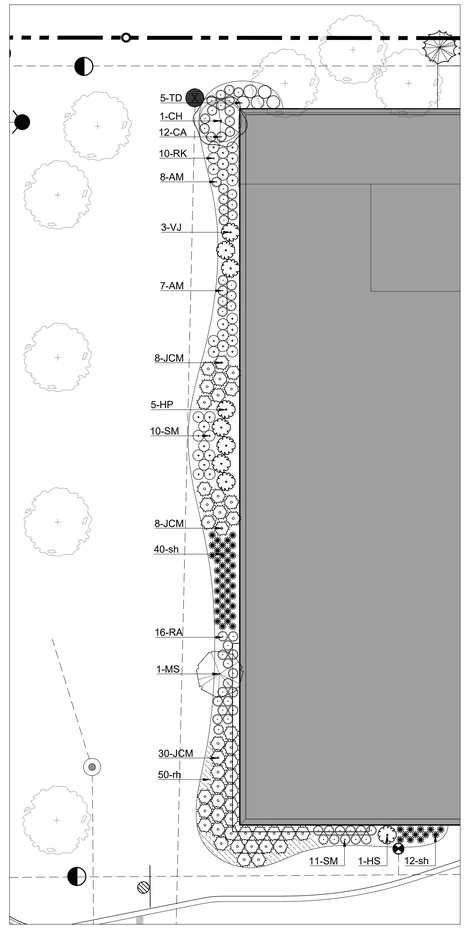


LANDSCAPE PLAN - WEST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'



DEALERSHIP PLANTING PLAN

SCALE: 1" = 20'-0"

N

PRELIMINARY

Kathryn Talty
landscape architecture
1926 Waukegan Road | Suite 340
Glenview, Illinois 60025
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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-001196
STATE OF ILLINOIS

no.	revision description	initial	date
1	ISSUED FOR REVIEW	KMT	07-11-25
2	ENTITLEMENT PROCESS	KMT	07-16-25

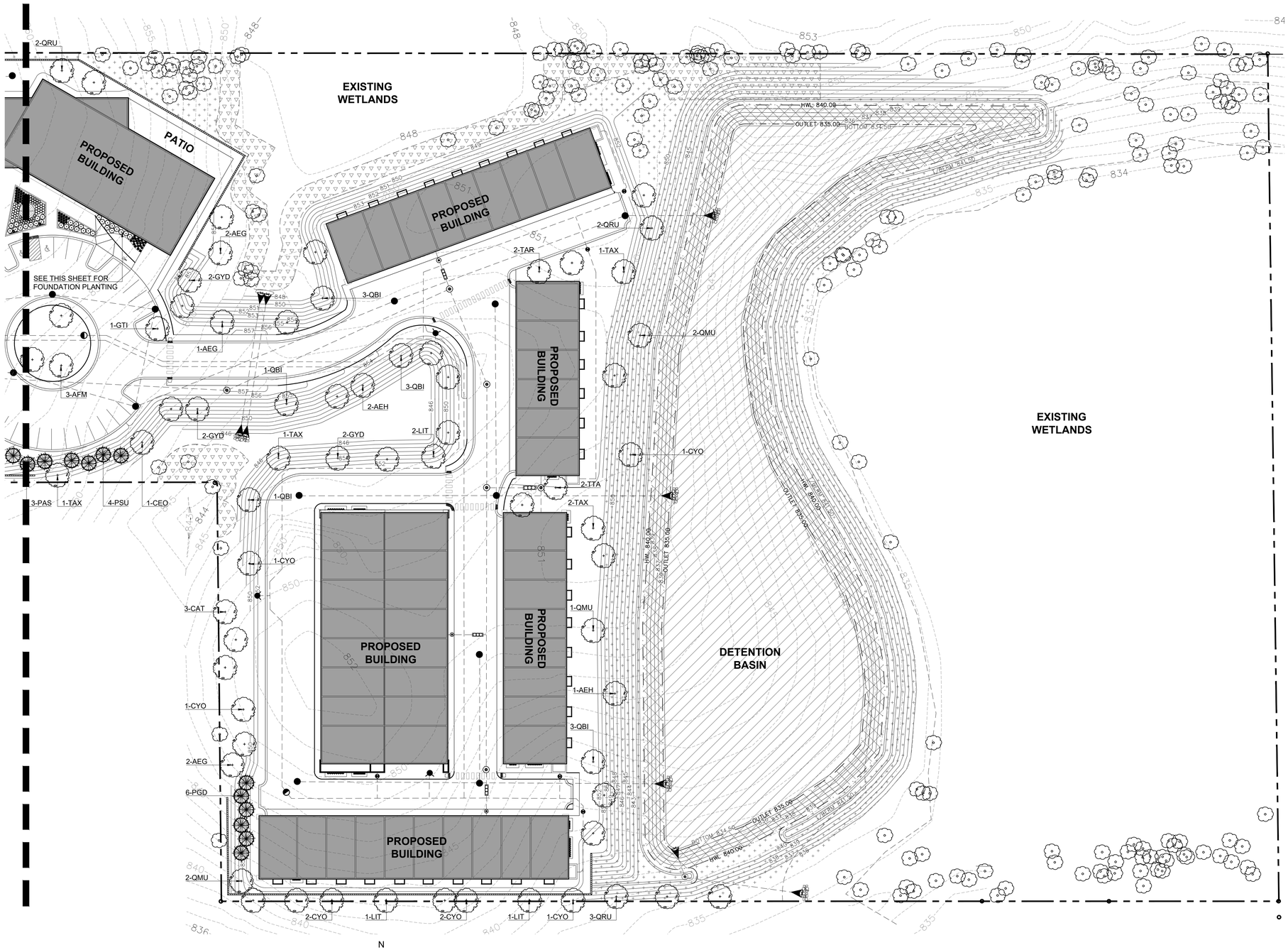
LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN WEST

date. 08-18-25
drawn DSP
checked KMT

job no. 25210

sheet no. L1.1



AUTO CLUB & LEASING OFFICE PLANTING PLAN

SCALE: 1" = 20'-0"

N

LANDSCAPE PLAN - EAST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

PRELIMINARY

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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-0015
STATE OF ILLINOIS

no.	revision description	initial	date
1	ISSUED FOR REVIEW	KMT	07-11-25
2	ENTITLEMENT PROCESS	KMT	07-16-25

LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN - EAST

date. 06-18-25
drawn DSP
checked KMT

job no. 25210

sheet no. L1.2

Master Plant List

Symbol	Quantity	Botanical Name	Common Name	Size	Origin	Notes
		Shade Trees				
AFR	6	ACER X.FREEMANII 'AUTUMN BLAZE'	AUTUMN BLAZE FREEMAN MAPLE	3" BB	NATIVAR	
AEG	5	AESCULUS GLABRA	OHIO BUCKEYE	3" BB	NATIVE	
AEH	6	AESCULUS HIPPOCASTANUM	COMMON HORSECHESTNUT	3" BB	NATIVE	
CYO	8	CARYA OVATA	SHAGBARK HICKORY	3" BB	NATIVE	
CAT	5	CATALPA SPECIOSA	NORTHERN CATALPA	3" BB	NATIVE	
CEO	5	CELTUS OCCIDENTALIS	HACKBERRY	3" BB	NATIVE	
GBI	6	GINKGO BILOBA 'AUTUMN GOLD'	GINKGO	3" BB		MALE SPEC. ONLY
GTI	3	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	3" BB		
GYD	6	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE	3" BB	NATIVE	
LIT	10	LIRODENDRON TULIPIFERA	TULIPTREE	3" BB	NATIVE	
PLA	4	PLATANUS X ACERIFOLIA 'MORTON CIRCLE'	EXCLAMATION LONDON PLANETREE	3" BB		
QBI	11	QUERCUS BICOLOR	SWAMP WHITE OAK	3" BB	NATIVE	
QIM	4	QUERCUS IMBRICARIA	SHINGLE OAK	3" BB	NATIVE	
QMU	8	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	3" BB	NATIVE	
QRU	7	QUERCUS RUBRA	RED OAK	3" BB	NATIVE	
TAX	9	TAXODIUM DISTICHUM	BALD-CYPRESS	3" BB		
TAR	8	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	3" BB	NATIVAR	
TTA	2	TILIA TORMENTOSA	SILVER LINDEN	3" BB		
UCU	7	ULMUS x 'MORTON'	ACCOLADE ELM	3" BB		
UNH	3	ULMUS x NEW 'HORIZON	NEW HORIZON ELM	3" BB		
		Evergreen Trees				
PAS	5	PICEA AIBES	NORWAY SPRUCE	8' BB		
PGD	8	PICEA GLAUCA VAR. DENSATA	BLACK HILLS SPRUCE	8' BB		
POM	7	PICEA OMORIKA	SERBIAN SPRUCE	8' BB		
PSU	4	PSEUDOSTUGA MENZIESII	DOUGLAS FIR	8' BB		
TOT	3	THUJA OCCIDENTALIS 'TECHNY'	TECHNY ARBORVITAE	6' BB	NATIVAR	
		Ornamental Trees				
AC	2	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6' BB	NATIVE	
CC	3	CERCIS CANADENSIS	EASTERN REDBUD	8' BB	NATIVE	
CH	3	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	6' BB	NATIVE	
COK	1	CORNUS KOUSA	KOUSA DOGWOOD	6' BB		
MS	4	MALUS SARGENT	SARGENT CRABAPPLE	6' BB		
		Evergreen Shrubs				
JCM	78	JUNIPERUS CHINENSIS 'MINT JULIP'	MINT JULIP SPREADING JUNIPER	24" BB		
TD	5	TAXUS x MEDIA 'DENSI'	DENSE YEW	24" BB		
		Deciduous Shrubs				
AM	15	ARONIA MELANOCARPA 'IROQUOIS BEAUTY'	IROQUOIS BEAUTY BLACK CHOKEBERRY	5 GAL	NATIVAR	
CA	12	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD CLETHRA	5 GAL	NATIVAR	
HS	1	HIBISCUS SYRIACUS	ROSE OF SHARON	6' BB		
HP	5	HYDRANGEA PANICULATA 'TARDIVA'	TARDIVA HYDRANGEA	36" BB		
RA	16	RHUS AROMATICA 'GRO LOW'	GRO LOW SUMAC	5 GAL	NATIVAR	
RK	10	ROSA 'KNOCKOUT'	KNOCKOUT SHRUB ROSE	2 GAL		
SM	21	SYRINGA MEYERI 'PALIBIN'	DWARF KOREAN LILAC	24" BB		
VJ	3	VIBURNUM X JUDDI	JUDD VIBURNUM	36" BB		
		Groundcover				
lr	50	LIRIOPE SPICATA	CREEPING LILYTURF	3" POTS		
rh	50	RUELLIA HUMILIS	WILD PETUNIA	3" POTS	NATIVE	
		Perennials				
ep	15	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 GAL	NATIVE	
ls	15	LEUCANTHEMUM X SUPERBUM 'BECKY'	SHASTA DAISY	1 GAL		
rf	15	RUDBECKIA FULGIDA var. SPECIOSA	BLACK-EYED SUSAN	1 GAL	NATIVE	
sn	15	SALVIA NEMEROSA 'CARADONNA'	CARADONNA SALVIA	1 GAL		
		Grasses				
cg	45	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	3 GAL		
sh	52	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL	NATIVE	

Emergent Plugs - Permanent Standing Water

Symbol	Quantity	Botanical Name	Common Name	Size	Mean height	Notes
	12	ACORUS AMERICANUS	SWEET FLAG	3" PLUG	2'	12" O.C. - FORB
	8	ALISMA SUBCORDATUM	MUD PLAINTAIN	3" PLUG	3'	24" O.C. - FORB
	8	ASCLEPIAS INCARNATA	SWAMP MILKWEED	3" PLUG	4'	24" O.C. - FORB
	12	CALTHA PALUSTRIS	MARSH MARIGOLD	3" PLUG	2'	12" O.C. - FORB
	3	CAREX AQUATILIS	WATER SEDGE	3" PLUG	5'	48" O.C. - GSR
	6	CAREX LACUSTRIS	COMMON LAKE SEDGE	3" PLUG	3'	36" O.C. - GSR
	6	CAREX VULPINOIDEA	FOX SEDGE	3" PLUG	3'	36" O.C. - GSR
	8	IRIS VERSICOLOR	BLUE FLAG IRIS	3" PLUG	3'	24" O.C. - FORB
	8	JUNCUS EFFUSUS	COMMON RUSH	3" PLUG	2'	24" O.C. - GSR
	6	LOBELIA CARDINALIS	CARDINAL FLOWER	3" PLUG	4'	36" O.C. - FORB
	8	PONTEDERIA CORDATA	PICKERELWEED	3" PLUG	3'	24" O.C. - FORB
	8	SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	3" PLUG	3'	24" O.C. - FORB
	3	SCHOENOPLECTUS ACUTUS	HARD-STEMMED BULRUSH	3" PLUG	6'	48" O.C. - GSR
	3	SCHOENOPLECTUS TABERNAEMONTANI	GREAT BULRUSH	3" PLUG	6'	48" O.C. - GSR
	8	SOLIDAGO OHIOENSIS	OHIO GOLDENROD	3" PLUG	3'	24" O.C. - FORB
	8	SPARGANIUM EURYCARPUM	GREAT BUR REED	3" PLUG	4'	24" O.C. - GSR

Notes:
- Plant quantities are estimated based on spacing recommended. Quantity reflects 1,000 SF - Multiply across total area to be treated with emergents
- Plugs to be planted in groupings of "like species"
- Final layout to be approved by Landscape Architect

Swale Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses/Sedges:		
Andropogon gerardii	Big Bluestem	4.00
Carex cristatella	Crested Oval Sedge	0.50
Carex lurida	Bottlebrush Sedge	3.00
Carex spp.	Prairie Sedge Species	8.00
Carex vulpinoidea	Brown Fox Sedge	3.00
Elymus canadensis	Canada Wild Rye	16.00
Elymus virginicus	Virginia Wild Rye	16.00
Juncus canadensis	Canadian Rush	1.00
Panicum virgatum	Switch Grass	3.00
Scirpus atrovirens	Dark Green Rush	2.00
Scirpus cyperinus	Wool Grass	0.50
Spartina pectinata	Prairie Cord Grass	3.00
	Total	**60.00**
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	**512.00**
Forbs:		
Alisma subcordatum	Common Water Plantain	1.00
Asclepias incarnata	Swamp Milkweed	2.00
Coreopsis tripteris	Tall Coreopsis	1.00
Euthamia graminifolia	Common Grass-Leaved Goldenrod	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	1.00
Iris virginica v. shrevei	Blue Flag	4.00
Liatris spicata	Marsh Blazing Star	1.00
Lycopus americanus	Common Water Horehound	0.50
Mimulus ringens	Monkey Flower	0.50
Penthorum sedoides	Ditch Stonecrop	1.00
Pycnanthemum virginianum	Common Mountain Mint	0.50
Rudbeckia triloba	Brown-Eyed Susan	1.00
Senna hebecarpa	Wild Senna	1.00
Silphium terebinthinaceum	Prairie Dock	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Verbena hastata	Blue Vervain	1.50
Zizia aurea	Golden Alexanders	2.00
	Total	**20.00**

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	1.25	1,181,855	27.13	31.09%
Grasses	3.75	2,619,949	60.15	68.91%
Total Natives	5.00	3,801,804	87.28	100.00%
Cover	32.00	576,000	13.22	
Totals	37.00	4,377,804	100.50	

Emergent Wetland Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses/Sedges/Rushes:		
Bolboschoenus fluviatilis	River Bulrush	1.00
Carex comosa	Bristly Sedge	2.50
Carex lacustris	Common Lake Sedge	0.50
Carex lurida	Bottlebrush Sedge	4.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	2.00
Eleocharis palustris	Great Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	3.00
Schoenoplectus acutus	Hard-Stemmed Bulrush	2.50
Schoenoplectus pungens	Chairmaker's Rush	1.50
Schoenoplectus tabernaemontani	Great Bulrush	6.00
	Total	**26.00**
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	**512.00**
Forbs:		
Acorus americanus	Sweet Flag	1.00
Alisma subcordatum	Common Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	1.00
Boehmeria cylindrica	False Nettle	1.00
Cephalanthus occidentalis	Buttonbush	6.00
Decodon verticillatus	Swamp Loosestrife	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	0.50
Hibiscus spp.	Rose Mallow Species	4.00
Iris virginica v. shrevei	Blue Flag	6.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	1.00
Mimulus ringens	Monkey Flower	1.00
Peltandra virginica	Arrow Arum	16.00
Penthorum sedoides	Ditch Stonecrop	0.50
Persicaria spp.	Pinkweed Species	2.00
Pontederia cordata	Pickerel Weed	4.00
Sagittaria latifolia	Common Arrowhead	2.00
Sparganium eurycarpum	Common Bur Reed	6.00
Verbena hastata	Blue Vervain	1.00
	Total	**56.00**

Mix Statistcs

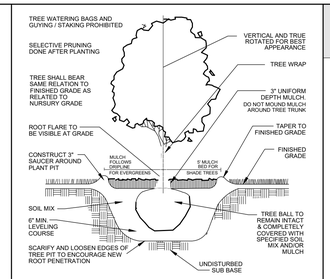
Native Component	PLS lbs./Acre	PLS Seeds/Ac	PLS Seeds/Sq	% Native Mix
Forbs	3.50	1,354,097	31.09	34.63%
Grasses	1.63	2,556,083	58.68	65.37%
Total Natives	5.13	3,910,179	89.77	100.00%
Cover	32.00	576,000	13.22	
Totals	37.13	4,486,179	102.99	

Low-Profile Prairie Seed Mix

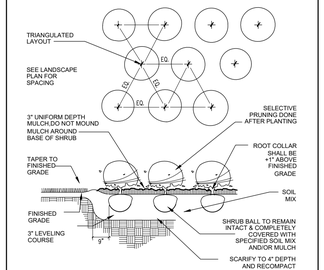
Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses:		
Bouteloua curtipendula	Side-Oats Grama	16.00
Carex spp.	Prairie Sedge Species	4.00
Elymus canadensis	Canada Wild Rye	32.00
Koeleria macrantha	June Grass	1.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	36.00
	Total	**90.00**
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	**512.00**
Forbs:		
Amorpha canescens	Lead Plant	0.50
Asclepias syriaca	Common Milkweed	2.00
Asclepias tuberosa	Butterfly Weed	2.00
Baptisia alba	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	10.00
Coreopsis lanceolata	Sand Coreopsis	5.00
Coreopsis palmata	Prairie Coreopsis	1.00
Dalea candida	White Prairie Clover	1.50
Dalea purpurea	Purple Prairie Clover	1.50
Desmanthus illinoensis	Illinois Sensitive Plant	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	8.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Lespedeza capitata	Round-Headed Bush Clover	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis v. occidentalis	Wild Lupine	4.00
Monarda fistulosa	Wild Bergamot	0.50
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Penstemon digitalis	Foxglove Beard Tongue	0.50
Penstemon hirsutus	Hairy Beard Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	5.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium terebinthinaceum	Prairie Dock	1.00
Solidago speciosa	Showy Goldenrod	0.50
Symphyotrichum ericoides	Heath Aster	0.25
Symphyotrichum laeve	Smooth Blue Aster	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Tradescantia ohiensis	Common Spiderwort	1.00
Verbena stricta	Hoary Vervain	1.00
Vernonia gigantea	Smooth Tall Ironweed	1.50
Veronicastrum virginicum	Culver's Root	0.25
	Total	**66.00**

Mix Statistcs

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft	% of Native Mix
Forbs	4.13	1,731,814	39.76	66.02%
Grasses	5.63	891,416	20.46	33.98%
Total Natives	9.75	2,623,230	60.22	100.00%
Cover	32.00	576,000	13.22	
Totals	41.75	3,199,230	73.44	



1 L2.0 TREE PLANTING DETAIL
SCALE: NO SCALE



2 L2.0 SHRUB PLANTING DETAIL
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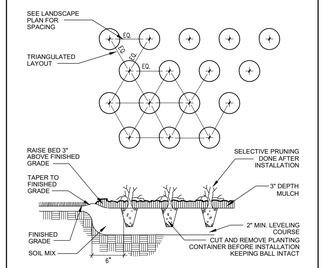

3 L2.0 GROUNDCOVER DETAIL
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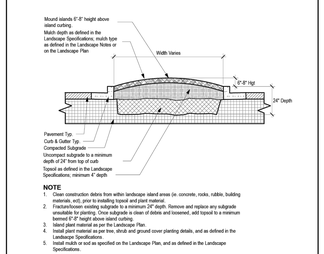
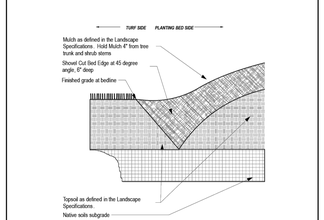


4 L2.0 PARKING ISLAND DETAIL
SCALE: NO SCALE



5 L2.0 SPADED PLANTING BED EDGE DETAIL
SCALE: NO SCALE

GENERAL CONSTRUCTION NOTES

1. REQUIRED LANDSCAPE MATERIAL SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE STAKED, WRAPPED, WATERED AND MULCHED PER ORDINANCE.
2. BEFORE ANY EXCAVATION ON THE SITE, CALL TO LOCATE ANY EXISTING UTILITIES ON THE SITE. THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. THE CONTRACTOR SHALL BE LIABLE FOR THE COST OF REPAIRING OR REPLACING ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THIS WORK.
3. FOUR FOOT HIGH FENCING OR OTHER RIGID MATERIAL IS TO BE ERECTED AROUND THE DRIP-LINE OF ALL TREES TO BE SAVED.
4. PLANT QUANTITIES ON PLANT LIST INTENDED TO BE A GUIDE. ALL QUANTITIES SHALL BE CHECKED AND VERIFIED ON PLANTING PLAN. ANY DISCREPANCIES SHALL BE DISCUSSED WITH THE LANDSCAPE ARCHITECT.
5. ANY DEVIATIONS FROM OR MODIFICATIONS TO THIS PLAN SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT UPON DELIVERY OF PLANT MATERIAL TO THE SITE. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL THAT DOESN'T MEET STANDARDS OR SPECIFICATIONS OF THE PROJECT.
7. ALL PLANT MATERIAL TO BE INSTALLED PER THE PLANTING DETAILS PROVIDED ON THIS PLAN SET.
8. ALL BED EDGES TO BE WELL SHAPED, SPADE CUT, WITH LINES AND CURVES AS SHOWN ON THIS PLAN SET.
9. ALL PLANTING BEDS TO BE PREPARED WITH PLANTING MIX: 50% TOPSOIL, 50% SOIL AMENDMENTS (3 PARTS PEATMOSS, 1 PART COMPOST, 1 PART SAND)
10. ALL PARKING LOT ISLANDS SHALL BE BACKFILLED WITH THE FOLLOWING: 2' OF BLENDED GARDEN SOIL MIX (60% TOPSOIL, 30% COMPOST, 10% SAND) OR 6" OF *ONE STEP* BY MIDWEST TRADING, TOP DRESSED AND TILLED INTO 18" OF TOPSOIL.
11. ALL SPECIFIED LANDSCAPE MATERIAL INDICATED ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED TO BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AND MUST BE REPLACED SHOULD IT DIE OR BECOME DAMAGED.
12. ALL PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE FROM SUBSTANTIAL COMPLETION AS DETERMINED BY THE LANDSCAPE ARCHITECT, AND SHALL BE REPLACED SHOULD IT DIE WITHIN THAT PERIOD.
13. PROTECT STRUCTURES, SIDEWALKS, PAVEMENTS AND UTILITIES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS AND OTHER HAZARDS CAUSED BY SITE IMPROVEMENT OPERATIONS.
14. ALL LAWN AREAS TO BE SEEDED WITH STANDARD TURF GRASS SEED AND COVERED WITH EROSION CONTROL BLANKET. UNLESS OTHERWISE SPECIFIED ON THE PLAN.
15. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, EXCLUDING SHRUB BEDS, TO BE RESTORED WITH TURF GRASS SEED AND COVERED WITH AN EROSION CONTROL BLANKET.
16. CAREFULLY MAINTAIN PRESENT GRADE AT BASE OF ALL EXISTING TREES TO REMAIN. PREVENT ANY DISTURBANCE OF EXISTING TREES INCLUDING ROOT ZONES. USE TREE PROTECTION BARRICADES WHERE INDICATED. PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING OF BARK OR SMOTHERING OF TREES. DRIVING, PARKING, DUMPING, STOCKPILING AND/OR STORAGE OF VEHICLES, EQUIPMENT, SUPPLIES, MATERIALS OR DEBRIS ON TOP THE ROOT ZONES AND/OR WITHIN THE DRIPLINE OF EXISTING TREES OR OTHER PLANT MATERIAL TO REMAIN IS STRICTLY PROHIBITED.
17. THE CONTRACTOR AT ALL TIMES SHALL KEEP THE PREMISES ON WHICH WORK IS BEING DONE, CLEAR OF RUBBISH AND DEBRIS. ALL PAVEMENT AND DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF LEGALLY
18. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

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KATHRYN MAXWELL TALTY
157-001196
STATE OF ILLINOIS

no.	revision	initial	date
1.	ISSUED FOR REVIEW	KMT	07-11-25
2.	ENTITLEMENT PROCESS	KMT	07-16-25

LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

MASTER PLANT LIST
SEED MIX SCHEDULE
CONSTRUCTION NOTES
PLANTING DETAILS

date. 06-18-25
drawn DSP
checked KMT

job no. 25210

sheet no. L2.0

NATIVE PLANT & SEED INSTALLATION MANAGEMENT AND MONITORING PLAN

ALL NATIVE PLANTING AND SEEDING INSTALLATION, MANAGEMENT AND MONITORING TO BE CONDUCTED BY A QUALIFIED, EXPERIENCED CONTRACTOR SPECIALIZING IN RESTORING AND MANAGING NATURAL LANDSCAPES IN THE MIDWEST.
THE SELECTED CONTRACTOR IS TO BE HELD ACCOUNTABLE FOR THE APPROPRIATE INSTALLATION METHODS AND MANAGEMENT AND MONITORING OF ALL NATIVE AREAS.

PLANT MATERIAL INSTALLATION - NATIVE SEEDING

PREPARE AREA FOR SEEDING - PREPARE THE SOIL AND CREATE OPTIMAL PLANT CONDITIONS, BEFORE DISTURBING ANY GROUND:

- CHECK FOR ANY BURIED UTILITIES
- CLEAR AREA OF DEBRIS THAT WOULD INTERFERE WITH PLANTING
- MOW ANY EXCESS EXISTING VEGETATION GROWTH
- APPLY BROAD-SPECTRUM OR TARGETED HERBICIDE, DEPENDING ON SPECIES PRESENT
- DE-COMPACT ANY AREAS OF SPECIAL CONCERN
  - LIGHTLY DE-COMPACT TILLED OR LOOSE SOIL WITH A ROLLER, CULTIPACKER, OR SIMILAR EQUIPMENT. IF USING A NO-TILL SEED DRILL, TILLING CAN USUALLY BE OMITTED.
  - IF GROUND IS WET, TILLING SHOULD NOT OCCUR UNTIL THE SOIL DRIES ENOUGH TO BREAK APART WHEN TILLED.

FOLLOW THE APPROPRIATE TIMING:

- THE OPTIMAL TIME TO INSTALL SEED IS FROM THE FALL (NOVEMBER 1) TO LATE SPRING (JUNE 15).
- WETLANDS SHOULD BE SEEDED IN THE WINTER WHILE THE SITE IS FROZEN AND EQUIPMENT CAN MORE EASILY ACCESS THE SITE.

METHOD FOR SEEDING AND EROSION CONTROL:

- BROADCASTING:
  - FOR SMALL (TYPICALLY TWO ACRES OR LESS) OR IRREGULARLY SHAPED AREAS, SEED CAN BE PLANTED BY HAND BROADCASTING. TO AID SEED DISTRIBUTION, COMBINE THE SEED MIX WITH FILLER MATERIALS, SUCH AS DRY SAWDUST, SAND, OR VERMICULITE.
  - USING A HAND-CRANK OR TOW-BEHIND BROADCASTER, START WITH HALF OF THE SEED AND TRY TO COVER THE ENTIRE AREA WITH THAT AMOUNT OF SEED. TAKE THE REMAINING HALF OF THE SEED, GO TO THE OPPOSITE END OF THE SITE AND COVER IT AGAIN. AFTER BROADCASTING IS COMPLETE, IT IS IMPORTANT TO USE A CULTIPACKER OR ROLLER OVER THE AREA TO MAKE GOOD SEED-TO-SOIL CONTACT. DO NOT COVER SEED MORE THAN 1/4-INCH DEEP.
- NO-TILL DRILL:
  - FOR LARGER AREAS AND SITES WITH EXISTING VEGETATION, USE A NO-TILL SEED DRILL, WHICH DOES NOT REQUIRE THE SOIL TO BE TILLED BEFORE PLANTING, RESULTING IN MINIMAL SOIL DISTURBANCE. NO-TILL DRILLS PLANT SEED IN ROWS BY OPENING SLITS IN THE SOIL, INTO WHICH SEED IS DEPOSITED. IF USING A NO-TILL DRILL, SEED SHOULD NOT BE BURIED BELOW 1/8" DEPTH PER SPECIFIC MANUFACTURER'S RECOMMENDATIONS. BECAUSE THE DIVERSITY OF SEED SIZES MAKES DRILL CALIBRATION A CHALLENGE, PERFORM A FEW TEST AREAS FIRST TO HELP PREVENT RUNNING OUT OF SEED.
- EROSION CONTROL METHOD:
  - INSTALL BIODEGRADABLE EROSION CONTROL BLANKET (NAG S75BN OR EQUAL) UNTIL SEED HAS GERMINATED.

PLANT MATERIAL MANAGEMENT - NATIVE SEEDING - 5-YEAR PERIOD

TO HELP ENSURE SUCCESS, PROJECTS NEED A MAINTENANCE AND MONITORING PLAN THAT IS FLEXIBLE AND SUPPORTS SITE DEVELOPMENT GOALS. WHILE NATIVE PLANTS TEND TO GERMINATE AND DEVELOP AT A SLOWER RATE THAN ORNAMENTAL PERENNIALS OR TURF GRASS, REGULAR MAINTENANCE DURING THE ESTABLISHMENT PERIOD GREATLY IMPROVES PROJECT SUCCESS. REGULAR MAINTENANCE AND MONITORING CONTROLS INVASIVE SPECIES, ENSURES OPTIMAL MOISTURE LEVELS ARE PRESENT, AND IDENTIFIES OTHER NECESSARY MANAGEMENT ACTIONS.

- NATIVE AREAS NEED BETWEEN 3 TO 5 YEARS TO ESTABLISH.
- PREFERRED PLANTING LATE FALL (ANY TIME AFTER NOVEMBER 1; IF THE SOIL SURFACE IS DRY AND COLD ENOUGH TO PREVENT GERMINATION AND SEED CAN BE WORKED INTO SOIL.
- LET SEED GERMINATE AND GROW FOR ONE FULL SEASON. **DO NOT** APPLY HERBICIDES FOR WEED CONTROL WITHIN THE FIRST GROWING SEASON. IF LARGE WEEDS ARE UNSIGHTLY, CLIP OFF; **DO NOT PULL** WEEDS TO KEEP GROWTH DOWN. **DO NOT** ALLOW SEED HEADS TO FORM.
- MOW FIRST TIME WHEN ESTABLISHED IN FIRST SEASON TO 12"-18" HIGH, TO SCATTER SEED HEADS. IF CLUMPING OCCURS LIGHTLY RAKE TO DISBURSE SEED.
- MOW 2-3 ADDITIONAL TIMES TO MAINTAIN 6-9 INCHES IN HEIGHT.
- SOME PERENNIAL SEEDS MAY NOT GERMINATE UNTIL THE FOLLOWING YEAR.
- IF FALL PLANTING IS NOT POSSIBLE, SPRING SEEDING CAN BE DONE (WEATHER PERMITTING) AS EARLY AS JANUARY - PREFERABLY BEFORE APRIL 15.
- SECOND SEASON MOW 3-4 TIMES TO MAINTAIN 8-10 INCHES IN HEIGHT.
- AT THE END OF THE THIRD SEASON A CONTROLLED BURN PROGRAM TO BE PERFORMED.
- 4 (FOUR) ANNUAL WEED CONTROL EVENTS (SELECTIVE HERBICIDE AND MECHANICAL) TO BE PERFORMED THROUGHOUT ALL NATIVE PLAN COMMUNITIES STARTING ONCE THE SEED IS SOWN UNTIL SIGN-OFF IS GRANTED.

MINIMUM PERFORMANCE STANDARDS AND MONITORING ACTIVITIES

NATIVE PLANT MATERIALS

PERFORMANCE STANDARDS ARE ESTABLISHED FOR ALL PROPOSED PROJECTS INVOLVING NATURALIZED AREAS SO THAT THE RELATIVE SUCCESS OF CREATION AND ENHANCEMENT EFFORTS MAY BE EVALUATED. IF THE PERFORMANCE STANDARDS ARE NOT ACHIEVED BY THE END OF THE FIVE-YEAR MANAGEMENT AND MONITORING PROGRAM, ACCEPTANCE MEETINGS SHALL BE HELD TO DETERMINE THE FUTURE COURSE OF ACTION. IT IS LIKELY THAT IN SUCH A CASE THAT THE MAINTENANCE AND MONITORING PERIOD WILL BE EXTENDED.

- NOTIFICATION - THE DEVELOPER SHALL NOTIFY [MUNICIPALITY] UPON COMPLETION OF PLANTINGS.
  - THE OWNER'S ENVIRONMENTAL SPECIALIST SHALL INSPECT THE PLANTINGS UPON COMPLETION OF ALL MAINTENANCE PROCEDURES AND NOTIFY [MUNICIPALITY] OF THE REMEDIAL ACTIONS TAKEN.
- NATIVE AREAS ARE TO BE MONITORED FOR A MINIMUM OF 5 (FIVE) YEARS FROM DATE OF INSTALLATION.
  - MONITOR ALL NATIVE AREAS 2 (TWO) TIMES ANNUALLY AT A TIME OF YEAR WHEN PLANTS ARE EVIDENT AND IDENTIFIABLE. VISITS SHOULD OCCUR AT SPACED INTERVALS THROUGHOUT THE GROWING SEASON.
  - CONDUCT MONITORING VISITS UTILIZING SYSTEMATIC FIELD TECHNIQUES. TRAVERSE ENTIRE NATIVE AREA, DOCUMENT FLORA AND NOTE TOP 3 DOMINANT SPECIES.
- WITHIN 3 MONTHS OF SEED INSTALLATION, AT LEAST 90% OF THE SEEDED AREAS ("LOW PROFILE", "STORMWATER" AND "SWALE" SEED MIX), AS MEASURED BY AERIAL COVERAGE, SHALL BE VEGETATED. A MINIMUM 100% VEGETATIVE COVERAGE SHALL BE MAINTAINED THROUGHOUT, AND AT THE END OF, THE FIVE-YEAR PERIOD FOR THESE AREAS.
  - THIS STANDARD DOES NOT APPLY TO THE EMERGENT ZONES.
- THE NATURALIZED AREAS SHALL NOT CONTAIN ANY RILLS GREATER THAN 4 INCHES WIDE AND 4 INCHES DEEP THROUGHOUT, AND AT THE END, OF THE THREE-YEAR PERIOD.
- AT THE END OF THE SECOND GROWING SEASON, 30% SEED MIX PRESENCE FOR THE "LOW PROFILE", "STORMWATER" AND "SWALE" SEED MIXES SHALL BE ACHIEVED. AT THE END OF THE THIRD GROWING SEASON, 50% SEED MIX PRESENCE FOR THE "LOW PROFILE", "STORMWATER" AND "SWALE" SEED MIXES SHALL BE ACHIEVED.
  - SEED MIX PRESENCE SHALL BE EVALUATED SEPARATELY FOR THESE THREE MIXES.
- NO AREA OVER THE ENTIRE NATIVE PLANTED SITE GREATER THAN 1 SQUARE METER WILL BE DEVOID OF VEGETATION (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION), UNLESS SPECIFIED ON APPROVED PLANS.
  - THIS ANNUAL PERFORMANCE STANDARD DOES NOT APPLY TO EMERGENT AND AQUATIC COMMUNITIES.
- THE NATIVE PLANTED AREAS WILL MEET THE FOLLOWING ANNUAL STANDARDS FOR THE PRESENCE OF NATIVE, NON-INVASIVE PERENNIAL SPECIES (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION): YEAR 1 - 15%, YEAR 2 - 50%, YEAR 3 - 75%, YEAR 4 & 5 - 85%
  - THIS STANDARD TO BE MEASURED SEPARATELY FOR EACH SEED MIX ZONE.
- AT THE END OF THE THIRD GROWING SEASON, NONE OF THE THREE MOST DOMINANT SPECIES WITHIN THE PLANTED AREAS WILL BE INVASIVE OR NON-NATIVE SPECIES AS INSPECTED ANNUALLY. THE PROJECT MANAGER WILL DETERMINE THE APPROPRIATE TARGET INVASIVE OR NON-NATIVE SPECIES. THEY WILL TYPICALLY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: RAGWEED (AMBROSIA SPP.), CATTAIL (TYPHA SPP.), REED CANARY GRASS (PHALARIS ARUNDINACEA), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), CANADIAN THISTLE (CIRSIUM ARVENSE), SANDBAR WILLOW (SALIX INTERIOR), KENTUCKY BLUE GRASS (POA PRATENSIS), YELLOW SWEET-CLOVER (MELILOTUS OFFICINALIS), TEASEL (DIPSACUS SPP.), JAPANESE-KNOTWEED (REYNOUTRIA JAPONICA), AND ASIAN BITTERSWEET (CELASTRUS ORBICULATUS), BUCKTHORN (RHAMNUS SPP.).
  - THIS STANDARD TO BE MEASURED SEPARATELY FOR EACH SEED MIX ZONE.
- SEED: AT THE END OF THE THIRD GROWING SEASON, 50% VEGETATIVE COVERAGE SHALL BE ACHIEVED (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION).
- EMERGENTS: RELATIVE COVERAGE OF CATTAILS (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION) SHALL BE LESS THAN 5% THROUGHOUT, AND AT THE END OF, THE THREE YEAR MONITORING PERIOD.
- PLUGS: 90% OF THE PLANTS WILL BE ALIVE, IN HEALTHY CONDITION, AND REPRESENTATIVE OF THE INDIVIDUAL SPECIES AT THE END OF EACH GROWING SEASON. REPLANTING WILL TAKE PLACE UNTIL THIS STANDARD IS ACHIEVED.
- WOODY PLANTS: 100% OF THE PLANTED TREES AND SHRUBS WILL BE ALIVE, IN HEALTHY CONDITION, AND REPRESENTATIVE OF THE INDIVIDUAL SPECIES AT THE END OF THE 3RD GROWING SEASON.
  - ANNUAL REPLACEMENTS ARE REQUIRED TO ACHIEVE THIS STANDARD.
- RELATIVE COVERAGE (DETERMINED BY OCULAR ESTIMATION) OF INVASIVE SPECIES (I.E., COMMON REED, REED CANARY GRASS, PURPLE LOOSESTRIFE, ETC.) IN AGGREGATE SHALL BE LESS THAN 5% THROUGHOUT, AND AT THE END OF, THE THREE-YEAR PERIOD.
  - THIS STANDARD SHALL BE EVALUATED SEPARATELY FOR EACH SEED AND PLANT MIX ZONE (I.E., "LOW PROFILE", "STORMWATER" AND "SWALE" SEED MIX, EMERGENT).
- NATIVE MEAN C VALUE > 3.0 AND NATIVE FQI VALUE > 20.0 FOR ALL NATIVE PLANT COMMUNITIES.
  - THIS STANDARD SHALL BE EVALUATED SEPARATELY FOR EACH SEED AND PLANT MIX ZONE (I.E., "LOW PROFILE", "STORMWATER" AND "SWALE" SEED MIX, EMERGENT).
- SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY MAINTAINED. ANY EROSION OBSERVED ON-SITE SHALL BE REPAIRED TO THE DESIGNED CONDITION WITHIN 30 DAYS OF OBSERVATION.

PLANTING NOTES FOR DETENTION AREAS

1. REFER TO CIVIL ENGINEERING DRAWINGS FOR CONSTRUCTION DETAILS OF DETENTION AREAS
2. REQUIRED LANDSCAPE MATERIAL SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE WATERED AND MULCHED PER CONSTRUCTION DOCUMENTS.
3. ALL PROPOSED PLANT SUBSTITUTIONS WITHIN DETENTION AREAS MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. ALL REQUIRED LANDSCAPE MATERIAL INDICATED ON THE APPROVED PLANS WILL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AND MUST BE REPLACED SHOULD IT DIE.
5. CONTRACTOR RESPONSIBLE FOR THE MAINTENANCE ALL PLANT MATERIAL WITHIN DETENTION AREAS AS SPECIFIED BY THE LANDSCAPE ARCHITECT FOR THE FIRST YEAR AFTER INSTALLATION.
6. ALL PLANT MATERIAL WITHIN DETENTION AREAS TO HAVE A 1 YEAR WARRANTEE STARTING UPON LANDSCAPE ARCHITECT ISSUING "SUBSTANTIAL COMPLETION".
7. WATER FOWL BARRIER CONTROL TO BE INSTALLED AT 8" O.C. IN ALL DETENTION AREAS PLANTED WITH PLUGS.
8. METAL SIGNS (12"x18") TO BE INSTALLED AT 150' INTERVALS AROUND ALL NATIVE AREAS STATING "NATIVE PLANTING DO NOT MOW".
9. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

GROUND TREATMENT KEY

BASE OF DETENTION AREAS BELOW THE NWL

Areas below the NWL to be planted with emergent plugs. See Sheet L2.0 for schedule and Sheet L2.1 for preferred installation method.

DETENTION AREAS BETWEEN THE NWL & HWL

Area of detention between the NWL & HWL to be seeded with "Swale Seed Mix" as supplied by Stantec Native Plant Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

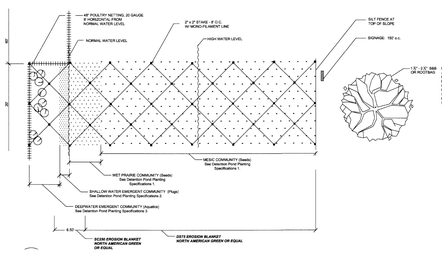
Open areas not including detention, unless otherwise specified, to be seeded with "Low-Profile Prairie Seed Mix" as supplied by Stantec Native Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

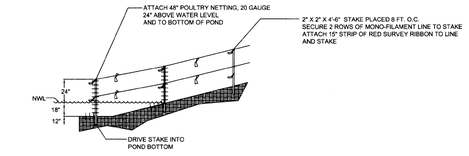
Areas within the wetland buffer to be seeded with "Emergent Wetland Seed Mix". See Sheet L2.0 for schedule.

TURF GRASS - MOWED LAWN

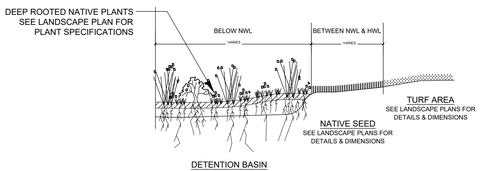
All areas of restoration, not designated to be planted or mulched, are to be seeded with standard turf seed grass and covered with an erosion control blanket.



1 L2.2 GOOSE BARRIER PLAN DETAIL
SCALE: NO SCALE



2 L2.2 GOOSE BARRIER SECTION DETAIL
SCALE: NO SCALE



3 L2.2 BIODETENTION PLANTING DETAIL
SCALE: NO SCALE

LANDSCAPE MAINTENANCE SPECIFICATIONS

THE CONTRACTOR SHALL PROVIDE AS A SEPARATE BID, MAINTENANCE FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT LANDSCAPING. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER OR PROVIDE THE NAME OF A REPUTABLE LANDSCAPE CONTRACTOR WHO CAN PROVIDE MAINTENANCE.

STANDARDS

ALL LANDSCAPE MAINTENANCE SERVICES SHALL BE PERFORMED BY TRAINED PERSONNEL USING CURRENT, ACCEPTABLE HORTICULTURAL PRACTICES.

ALL WORK SHALL BE PERFORMED IN A MANNER THAT MAINTAINS THE ORIGINAL INTENT OF THE LANDSCAPE DESIGN.

ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT COUNTY, STATE AND FEDERAL LAWS, USING EPA REGISTERED MATERIALS AND METHODS OF APPLICATION. THESE APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR.

APPROVALS

ANY WORK PERFORMED IN ADDITION TO THAT WHICH IS OUTLINED IN THE CONTRACT SHALL ONLY BE DONE UPON WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE.

ALL SEASONAL COLOR SELECTIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING AND INSTALLATION.

SOIL TESTING

THE MAINTENANCE CONTRACTOR SHALL PERFORM SOIL TESTS AS NEEDED TO IDENTIFY ANY IMBALANCES OR DEFICIENCIES CAUSING PLANT MATERIAL DECLINE. THE OWNER SHALL BE NOTIFIED OF THE RECOMMENDATION FOR APPROVAL, AND THE NECESSARY CORRECTIONS MADE AT AN ADDITIONAL COST TO THE OWNER.

ACCEPTABLE SOIL TEST RESULTS:

	LANDSCAPE TREES & SHRUBS	TURF
PH RANGE	5.0-7.0	6.0-7.0
ORGANIC MATTER	>1.5%	>2.5%
MAGNESIUM (MG)	100+LBS./ACRE	100+LBS./ACRE
PHOSPHORUS (P2O5)	150+LBS./ACRE	150+LBS./ACRE
POTASSIUM (K2O)	120+LBS./ACRE	120+LBS./ACRE
SOLUBLE SALTS	NOT TO EXCEED 900PPM/1.9 MMHOS/CM	NOT TO EXCEED 750PPM/0.75 MMHOS/CM
	IN SOIL; NOT TO EXCEED 1400 PPM/2.5	IN SOIL; NOT TO EXCEED 2000 PPM/2.0
	MMHOS/CM IN HIGH ORGANIC MIX	MMHOS/CM IN HIGH ORGANIC MIX

FOR UNUSUAL SOIL CONDITIONS, THE FOLLOWING OPTIONAL TESTS ARE RECOMMENDED WITH LEVELS NOT TO EXCEED:

BORON	3 POUNDS PER ACRE
MANGANESE	50 POUNDS PER ACRE
POTASSIUM (K2O)	450 POUNDS PER ACRE
SODIUM	20 POUNDS PER ACRE

WORKMANSHIP

DURING LANDSCAPE MAINTENANCE OPERATIONS, ALL AREAS SHALL BE KEPT NEAT AND CLEAN. PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING STRUCTURES. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER TO THE OPERATORS, THE OCCUPANTS AND ANY PEDESTRIANS.

UPON COMPLETION OF MAINTENANCE OPERATIONS, ALL DEBRIS AND WASTE MATERIAL SHALL BE CLEANED UP AND REMOVED FROM THE SITE, UNLESS PROVISIONS HAVE BEEN GRANTED BY THE OWNER TO USE ON-SITE TRASH RECEPTACLES. ANY DAMAGE TO THE LANDSCAPE, STRUCTURES, OR IRRIGATION SYSTEMS CAUSED BY THE MAINTENANCE CONTRACTOR, SHALL BE REPAIRED BY THE MAINTENANCE CONTRACTOR WITHOUT CHARGE TO THE OWNER.

TURF

GENERAL CLEAN UP

PRIOR TO MOWING, ALL TRASH, STICKS, AND OTHER UNWANTED DEBRIS SHALL BE REMOVED FROM LAWNS, PLANT BEDS, AND PAVED AREAS.

MOWING

TURF GRASSES, INCLUDING BLUE GRASS, TALL FESCUE, PERENNIAL RYEGRASS, ETC., SHALL BE MAINTAINED AT A HEIGHT OF 2" TO 3" IN SPRING AND FALL. FROM JUNE THROUGH SEPTEMBER, MOWING HEIGHT SHALL BE MAINTAINED AT NO LESS THAN 3".

THE MOWING OPERATION INCLUDES TRIMMING AROUND ALL OBSTACLES, RAKING EXCESSIVE GRASS CLIPPINGS AND REMOVING DEBRIS FROM WALKS, CURBS, AND PARKING AREAS. CAUTION: MECHANICAL WEEDERS SHOULD NOT BE USED AROUND TREES BECAUSE OF POTENTIAL DAMAGE TO THE BARK.

EDGING

EDGING OF ALL SIDEWALKS, CURBS AND OTHER PAVED AREAS SHALL BE PERFORMED ONCE EVERY OTHER MOWING. DEBRIS FROM THE EDGING OPERATIONS SHALL BE REMOVED AND THE AREAS SWEPT CLEAN. CAUTION SHALL BE USED TO AVOID FLYING DEBRIS.

FERTILIZING

SEASONALLY STEPPED FERTILIZER SHALL BE APPLIED IN AREAS BASED ON THE EXISTING TURF SPECIES.

LAWN WEED CONTROL: HERBICIDES

SELECTION AND PROPER USE OF HERBICIDES SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY. ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR. READ THE LABEL PRIOR TO APPLYING ANY CHEMICAL.

INSECT & DISEASE CONTROL FOR TURF

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE SITE CONDITIONS ON EACH VISIT TO DETERMINE IF ANY INSECT PEST OR DISEASE PROBLEMS EXIST. THE CONTRACTOR SHALL IDENTIFY THE INSECT PEST OR DISEASE, AS WELL AS THE HOST PLANT, AND THEN CONSULT THE MOST CURRENT EDITION OF THE COOPERATIVE EXTENSION SERVICE'S "COMMERCIAL INSECTICIDE RECOMMENDATION FOR TURF" FOR CONTROL. THE LICENSED APPLICATOR SHALL BE FAMILIAR WITH THE LABEL PROVIDED FOR THE SELECTED PRODUCT PRIOR TO APPLICATION.

INSPECTION AND TREATMENT TO CONTROL INSECT PESTS SHALL BE INCLUDED IN THE CONTRACT PRICE.

TREES, SHRUBS, & GROUND COVER

PRUNING

ALL ORNAMENTAL TREES, SHRUBS AND GROUND COVER SHALL BE PRUNED WHEN APPROPRIATE TO REMOVE DEAD OR DAMAGED BRANCHES, DEVELOP THE NATURAL SHAPES. DO NOT SHEAR TREES OR SHRUBS. IF PREVIOUS MAINTENANCE PRACTICE HAS BEEN TO SHEAR AND BALL, THEN A NATURAL SHAPE WILL BE RESTORED GRADUALLY.

PRUNING GUIDELINES:

1. PRUNE PLANTS THAT FLOWER BEFORE THE END OF JUNE (SPRING BLOOMING) IMMEDIATELY AFTER FLOWERING. FLOWER BUDS DEVELOP DURING THE PREVIOUS GROWING SEASON. FALL, WINTER OR SPRING PRUNING WOULD REDUCE THE SPRING FLOWERING DISPLAY.
2. PRUNE PLANTS THAT FLOWER IN JULY – SEPTEMBER (SUMMER OR AUTUMN BLOOMING) IN WINTER OR SPRING BEFORE NEW GROWTH BEGINS, SINCE THESE PLANTS DEVELOP FLOWERS ON NEW GROWTH.
3. DELAY PRUNING PLANTS GROWN FOR ORNAMENTAL FRUITS, SUCH AS COTONEASTERS AND VIBURNUMS.
4. HOLLIES AND OTHER EVERGREENS MAY BE PRUNED DURING WINTER IN ORDER TO USE THEIR BRANCHES FOR SEASONAL DECORATION. HOWEVER, SEVERE PRUNING OF EVERGREENS SHOULD BE DONE IN EARLY SPRING ONLY.
5. BROADLEAF EVERGREEN SHRUBS SHALL BE HAND-PRUNED TO MAINTAIN THEIR NATURAL APPEARANCE AFTER THE NEW GROWTH HARDENS OFF.
6. HEDGES OR SHRUBS THAT REQUIRE SHEARING TO MAINTAIN A FORMAL APPEARANCE SHALL BE PRUNED AS REQUIRED. DEAD WOOD SHALL BE REMOVED FROM SHEARED PLANTS BEFORE THE FIRST SHEARING OF THE SEASON.
7. CONIFERS SHALL BE PRUNED, IF REQUIRED, ACCORDING TO THEIR GENUS.
   A. YEWS, JUNIPERS, HEMLOCKS AND ARBORVITAE MAY BE PRUNED AFTER NEW GROWTH HAS HARDENED OFF IN LATE SUMMER. IF SEVERE PRUNING IS NECESSARY, IT MUST BE DONE IN EARLY SPRING.
   B. FIRS AND SPRUCES MAY BE LIGHTLY PRUNED IN LATE SUMMER, FALL, OR WINTER AFTER COMPLETING GROWTH. LEAVE SIDE BUDS. NEVER CUT CENTRAL LEADER.
   C. PINES MAY BE LIGHTLY PRUNED IN EARLY JUNE BY REDUCING CANDLES.
8. GROUNDCOVER SHALL BE EDGED AND PRUNED AS NEEDED TO CONTAIN IT WITHIN ITS BORDERS.
9. THINNING: REMOVE BRANCHES AND WATER SPROUTS BY CUTTING THEM BACK TO THEIR POINT OF ORIGIN ON PARENT STEMS. THIS METHOD RESULTS IN A MORE OPEN PLANT, WITHOUT STIMULATING EXCESSIVE GROWTH. THINNING IS USED ON CRAB APPLES, LILACS, VIBURNUMS, ETC.
10. RENEWAL PRUNING: REMOVE OLDEST BRANCHES OF SHRUB AT GROUND, LEAVING THE YOUNGER, MORE VIGOROUS BRANCHES. ALSO REMOVE WEAK STEMS. ON OVERGROWN PLANTS, THIS METHOD MAY BE BEST DONE OVER A THREE-YEAR PERIOD. RENEWAL PRUNING MAY BE USED ON FORSYTHIA, HYDRANGEA, SPIRAEA, ETC.

PLANTS OVERHANGING PASSAGEWAYS AND PARKING AREAS AND DAMAGED PLANTS SHALL BE PRUNED AS NEEDED.

SHADE TREES THAT CANNOT BE ADEQUATELY PRUNED FROM THE GROUND SHALL NOT BE INCLUDED IN THE MAINTENANCE CONTRACT. A CERTIFIED ARBORIST UNDER A SEPARATE CONTRACT SHALL PERFORM THIS TYPE OF WORK.

SPRING CLEANUP

PLANT BEDS SHALL RECEIVE A GENERAL CLEANUP BEFORE FERTILIZING AND MULCHING. CLEANUP INCLUDES REMOVING DEBRIS AND TRASH FROM BEDS AND CUTTING BACK HERBACEOUS PERENNIALS LEFT STANDING THROUGH WINTER, E.G. ORNAMENTAL GRASSES, SEDUM AUTUMN JOY.

FERTILIZING

FOR TREES, THE RATE OF FERTILIZATION DEPENDS ON THE TREE SPECIES, TREE VIGOR, AREA AVAILABLE FOR FERTILIZATION, AND GROWTH STAGE OF THE TREE. MATURE SPECIMENS BENEFIT FROM FERTILIZATION EVERY 3 TO 4 YEARS; YOUNGER TREES SHALL BE FERTILIZED MORE OFTEN DURING RAPID GROWTH STAGES.

THE CURRENT RECOMMENDATION IS BASED ON THE RATE OF 1000 SQUARE FEET OF AREA UNDER THE TREE TO BE FERTILIZED. FOR DECIDUOUS TREES, 2 TO 6 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR NARROW-LEAF EVERGREENS, 1 TO 4 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR BROADLEAF EVERGREENS, 1 TO 3 POUNDS OF NITROGEN PER 1000 SQUARE FEET.

SHRUBS AND GROUNDCOVER SHALL BE TOP-DRESSED WITH COMPOST 1" DEEP OR FERTILIZED ONCE IN MARCH WITH 10-6-4 ANALYSIS FERTILIZER AT THE RATE OF 3 POUNDS PER 100 SQUARE FEET OF BED AREA.
ERICACEOUS MATERIAL SHALL BE FERTILIZED WITH AN ERICACEOUS FERTILIZER AT THE MANUFACTURER'S RECOMMENDATION RATE. IF PLANTS ARE GROWING POORLY, A SOIL SAMPLE SHOULD BE TAKEN.

TREES, SHRUBS, & GROUND COVER (CONT.)

MULCHING

ANNUALLY, ALL TREE AND SHRUB BEDS WILL BE PREPARED AND MULCHED, TO A MINIMUM DEPTH OF 3" WITH QUALITY MULCH TO MATCH EXISTING. BED PREPARATION SHALL INCLUDE REMOVING ALL WEEDS, CLEANING UP SAID BED, EDGING AND CULTIVATING DECAYED MULCH INTO THE SOIL. DEBRIS FROM EDGING IS TO BE REMOVED FROM BEDS WHERE APPLICABLE. IF DEEMED NECESSARY, A PRE-EMERGENT HERBICIDE MAY BE APPLIED TO THE SOIL TO INHIBIT THE GROWTH OF FUTURE WEEDS.

ORGANICALLY MAINTAINED GARDENS SHALL NOT RECEIVE ANY PRE-EMERGENT HERBICIDES. MULCH IN EXCESS OF 4" WILL BE REMOVED FROM THE BED AREAS. SPECIAL CARE SHALL BE TAKEN IN THE MULCHING OPERATION NOT TO OVER-MULCH OR COVER THE BASE OF TREES AND SHRUBS. THIS CAN BE DETRIMENTAL TO THE HEALTH OF THE PLANTS.

WEEDING

ALL BEDS SHALL BE WEEDED ON A CONTINUOUS BASIS THROUGHOUT THE GROWING SEASON TO MAINTAIN A NEAT APPEARANCE AT ALL TIMES.

PRE-EMERGENT (SOIL-APPLIED) AND POST-EMERGENT (FOLIAR-APPLIED) HERBICIDES SHALL BE USED WHERE AND WHEN APPLICABLE AND IN ACCORDANCE WITH THE PRODUCT'S LABEL.

INSECT & DISEASE CONTROL: TREES, SHRUBS & GROUNDCOVER

THE MAINTENANCE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE LANDSCAPE SITE ON A REGULAR BASIS. THE MONITORING FREQUENCY SHALL BE MONTHLY EXCEPT FOR GROWING SEASON, WHICH WILL BE EVERY OTHER WEEK. TRAINED PERSONNEL SHALL MONITOR FOR PLANT DAMAGING INSECT ACTIVITY, PLANT PATHOGENIC DISEASES AND POTENTIAL CULTURAL PROBLEMS IN THE LANDSCAPE. THE PEST OR CULTURAL PROBLEM WILL BE IDENTIFIED UNDER THE SUPERVISION OF THE CONTRACTOR.

FOR PLANT DAMAGING INSECTS AND MITES IDENTIFIED IN THE LANDSCAPE, THE CONTRACTOR SHALL CONSULT AND FOLLOW THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE STATE COOPERATIVE SERVICE PUBLICATION ON INSECT CONTROL ON LANDSCAPE PLANT MATERIAL.

PLANT PATHOGENIC DISEASE PROBLEMS IDENTIFIED BY THE CONTRACTOR THAT CAN BE RESOLVED BY PRUNING OR PHYSICAL REMOVAL OF DAMAGED PLANT PARTS WILL BE PERFORMED AS PART OF THE CONTRACT. FOR AN ADDITIONAL CHARGE, PLANT PATH

PLAT OF ANNEXATION

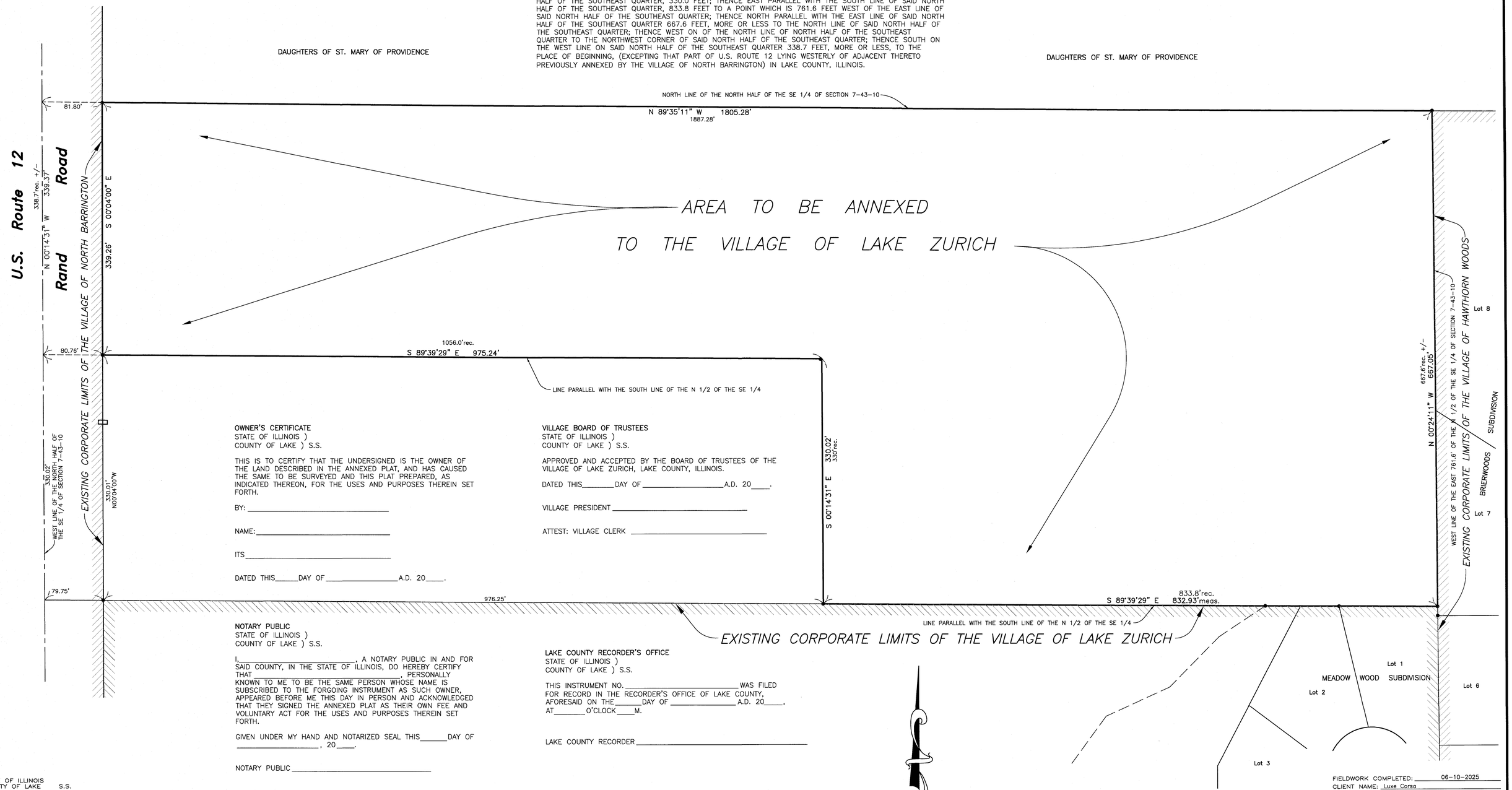
TO THE

VILLAGE OF LAKE ZURICH

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE SAID NORTH HALF OF THE SOUTHEAST QUARTER, 990.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 1056.0 FEET; THENCE SOUTH PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER 667.6 FEET, MORE OR LESS TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON OF THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, (EXCEPTING THAT PART OF U.S. ROUTE 12 LYING WESTERLY OF ADJACENT THERETO PREVIOUSLY ANNEXED BY THE VILLAGE OF NORTH BARRINGTON) IN LAKE COUNTY, ILLINOIS.

THE PREMISES COMMONLY KNOWN AS:
24455 N. US HIGHWAY 12, LAKE ZURICH, IL
PARCEL AREA =20.327 ACRES, 885,453 S.F.
PIN: 14-07-400-001

AFTER RECORDING RETURN TO:
VILLAGE OF LAKE ZURICH
70 E. MAIN STREET
LAKE ZURICH, IL 60047



OWNER'S CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND HAS CAUSED THE SAME TO BE SURVEYED AND THIS PLAT PREPARED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH.

BY: _____

NAME: _____

ITS _____

DATED THIS_____DAY OF _____A.D. 20____.

VILLAGE BOARD OF TRUSTEES
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

APPROVED AND ACCEPTED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS.

DATED THIS_____DAY OF _____A.D. 20____.

VILLAGE PRESIDENT _____

ATTEST: VILLAGE CLERK _____

NOTARY PUBLIC
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I,_____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE OF ILLINOIS, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FORGOING INSTRUMENT AS SUCH OWNER, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FEE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIZED SEAL THIS_____DAY OF _____, 20____.

NOTARY PUBLIC _____

LAKE COUNTY RECORDER'S OFFICE
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS INSTRUMENT NO._____WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF LAKE COUNTY, AFORESAID ON THE_____DAY OF _____A.D. 20____, AT_____O'CLOCK____M.

LAKE COUNTY RECORDER _____

STATE OF ILLINOIS
COUNTY OF LAKE S.S.

I, BRYAN J. LEE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I HAVE PREPARED THE PLAT OF ANNEXATION FROM EXISTING RECORDS AS OF THIS DATE AND THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID ANNEXATION.

DATED AT GRAYSLAKE, ILLINOIS THIS 25TH DAY OF JULY, A.D. 20 25.

ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

PROFESSIONAL LAND SURVEYOR
BRYAN J. LEE
3616
GRAYSLAKE
ILLINOIS
STATE OF ILLINOIS

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.
File No. 112-25
F11225 ANNEXATION.DWG

NORTH

FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Luxe Corsa
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118

NOTES:
PLAT IS VOID if the Impressed Surveyors Seal does not appear. Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

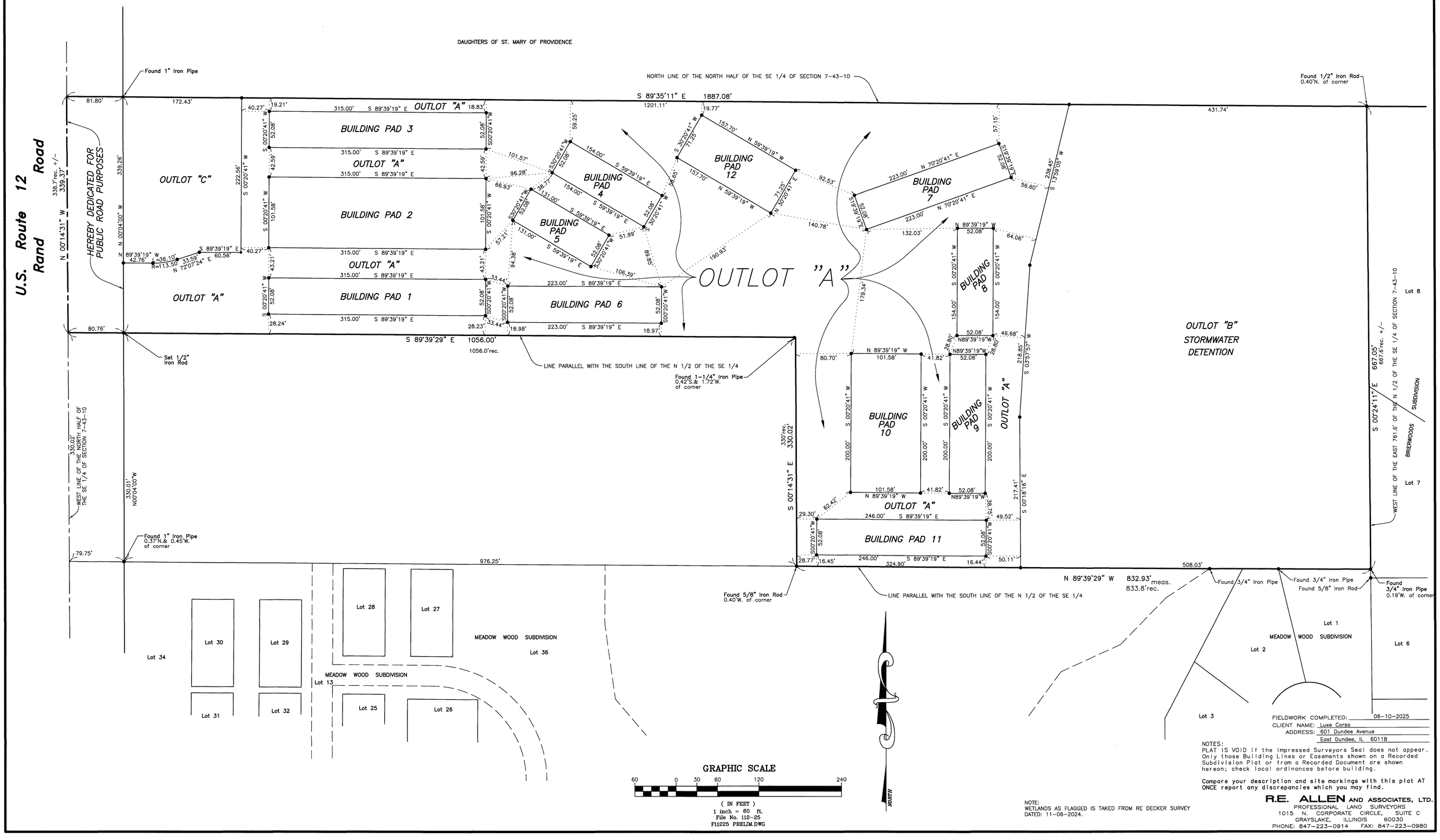
Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

PRELIMINARY PLAT
OF
LUXE CORSA AUTO SUITES

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

THE PREMISES COMMONLY KNOWN AS:
24455 N. US HIGHWAY 12, LAKE ZURICH, IL
GROSS PARCEL AREA =20.960 ACRES, 913,031 S.F.
NET PARCEL AREA =20.327 ACRES, 885,453 S.F.
PIN: 14-07-400-001



GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.
File No. 112-25
F11225 PRELIM.DWG

NOTE:
WETLANDS AS FLAGGED IS TAKED FROM RE DECKER SURVEY DATED: 11-06-2024.

FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Luxe Corsa
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118

NOTES:
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Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

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PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

PRELIMINARY PLAT
OF
LUXE CORSA AUTO SUITES

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

THIS PLAT SUBMITTED FOR RECORDING BY, AND RETURN TO:

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

OWNERS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AN HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.
THE UNDERSIGNED HEREBY DEDICATED FOR PUBLIC USE OF THE LANDS SHOWN ON THIS PLAT FOR THOROUGHFARES, STREETS, ALLEYS AND PUBLIC SERVICES; AND HEREBY ALSO RESERVES FOR AMERITECH AND THE PUBLIC SERVICE COMPANY, DIVISION OF COMMONWEALTH EDISON COMPANY AND THE EASEMENT PROVISIONS WHICH ARE STATED ON THEIR STANDARD FORM WHICH IS ATTACHED HERETO.
WE FURTHER CERTIFY THAT I, AS OWNER OF THE PROPERTY DESCRIBED AS THE SUBDIVISION AND LEGALLY DESCRIBED ON THE SAME NAME, HAVE DETERMINED TO THE BEST OF MY KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIES.
LAKE ZURICH ELEMENTARY SCHOOL DISTRICT AND
LAKE ZURICH COMMUNITY HIGH SCHOOL DISTRICT .

DATED THIS_____ DAY OF _____A.D. 20 _____.

SIGNATURE_____ ADDRESS:

PRINTED NAME:_____

TITLE _____

NOTARY PUBLIC

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, HEREBY CERTIFY THAT OF_____, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED AND DELIVERED SAID INSTRUMENT AS HIS/HER FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID _____, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS_____ DAY OF _____
_____A.D. 20 _____.

NOTARY PUBLIC_____

SURVEYORS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, BRYAN J. LEE , ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 3616, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED TRACT OF LAND:

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE SAID NORTH HALF OF THE SOUTHEAST QUARTER, 990.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 1056.0 FEET; THENCE SOUTH PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER 667.6 FEET, MORE OR LESS TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON OF THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

AS SHOWN ON THE ANNEXED PLAT, WHICH IS TRUE AND CORRECT REPRESENTATION THEREOF. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF, BEARINGS ARE BASED ON TRUE NORTH DETERMINED BY GPS MEASUREMENT, AND THE AREA OF THE SUBDIVISION IS 20.237 ACRES. I HAVE MONUMENTED THE CORNERS OF THE LOTS SHOWN HEREON AND ALL POINTS OF CURVATURE AND POINTS OF TANGENCY WITH IRON RODS. CONCRETE MONUMENTS SET AT OPPOSITE CORNERS OF SUBDIVISION.

I FURTHER CERTIFY THAT THE PROPERTY BASED UPON EXAMINATION OF THE F.E.M.A. MAPS, HAS BEEN DETERMINED THAT NONE OF THE PROPERTY SHOWN HEREON IS SUBJECT TO FLOOD RISK (THE PROPERTY FALLS WITHIN A ZONE " ") AS PORTRAYED ON FLOOD INSURANCE RATE MAP NO._____, EFFECTIVE DATE: _____
AND I HEREBY DESIGNATE THE VILLAGE OF LAKE ZURICH TO RECORD THIS PLAT OF SUBDIVISION.
I ALSO CERITFY THAT THIS SUBDIVISION IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF LAKE ZURICH.
GIVEN UNDER MY HAND AND SEAL THIS_____ DAY OF _____A.D. 20_____.

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I,_____ COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THE DESCRIBED PROPERTY. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE SUBJECT PLAT.

DATED THIS_____DAY OF_____, 20_____.

LAKE COUNTY CLERK_____

OWNERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT THE OWNER OF THE LAND HEREIN DESCRIBED OR DULY AUTHORIZED ATTORNEY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION

DATED THIS_____DAY OF _____, 20_____.

_____
OWNER OR OWNERS ATTORNEY

ENGINEERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT I, REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF SUCH SUBDIVISION OF ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH WATERS IN TO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____DAY OF _____, 20_____.

_____
ILLINOIS REGISTERED PROFESSIONAL ENGINEER
LICENSE NO.

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THIS IS TO CERTIFY THAT THE MEMBERS OF THE PLAN COMMISSION HAVE REVIEWED AND APPROVED THE ANNEXED PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____DAY OF _____A.D. 20 _____.

_____
PLAN COMMISSION CHAIRMAN

PLAT SUBMITTED BY CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

THE PERSON LISTED IN THE FOLLOWING NOTE IS HEREBY GRANTED PERMISSION TO RECORD THIS PLAT ON BEHALF OF BRYAN J. LEE , ILLINOIS PROFESSIONAL LAND SURVEYOR.

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
DATED:
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

THIS PLAT SUBMITTED FOR RECORDING BY:

NAME:_____

BUSINESS:_____

ADDRESS: _____

CITY: _____

STATE/ZIP:_____

DATE: _____

File No. 112-25
F11225 PRELIM.DWG

VILLAGE CLERK CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

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 _____, 20_____, AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE VILLAGE OF LAKE ZURICH, ILLINOIS THIS_____DAY OF _____A.D. 20_____.

_____
VILLAGE CLERK

VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I,_____, VILLAGE ENGINEER FOR THE VILLAGE OF LAKE ZURICH, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE ANNEXED PLAT AND THE PLANS AND SPECIFICATIONS THEREFOR, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____DAY OF _____A.D. 20_____.

_____
VILLAGE ENGINEER

MAYOR'S CERTIFICATE

STATE OF ILLINOIS)
COUNT OF LAKE) S.S.

I,_____, MAYOR OF THE VILLAGE OF LAKE ZURICH HAVE APPROVED AND ACCEPTED THIS PLAT BY THE BOARD OF TRUSTEES OF THE VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____DAY OF _____A.D. 20_____.

_____
VILLAGE MAYOR

CERTIFICATE AS TO SPECIAL ASSESSMENTS

STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.

I, FINANCE DIRECTOR OF THE VILLAGE OF LAKE ZURICH, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THE PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS, THIS_____ DAY OF _____A.D. 20_____.

_____
FINANCE DIRECTOR

UTILITY EASEMENT PROVISIONS

A NON-EXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND THE PROPERTY OWNER'S ASSOCIATION AS MAY BE FURTHER DEFINED IN THE PROPERTY OWNER'S ASSOCIATION BYLAWS AND DECLARATIONS AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, WITHIN THE AREAS SO DESIGNATED ON THE PLAT AND MARKED MUNICIPAL UTILITY EASEMENT TO INSTALL, REPAIR, REMOVE, REPLACE, INSPECT AND MAINTAIN STRUCTURES AS DEPICTED ON THE SUBDIVISION PLAN IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE EASEMENT INCLUDING WITHOUT LIMITATION ALL NECESSARY FACILITIES APPURTENANT THERETO, TOGETHER WITH THE RIGHT OF ACCESS THERETO FOR THE PERSONNEL AND EQUIPMENT NECESSARY AND REQUIRED FOR SUCH USES AND PURPOSES. NO PERMANENT BUILDINGS, STRUCTURES OR FENCES SHALL BE CONSTRUCTED OR MAINTAINED ON, ACROSS, OVER OR THROUGH SAID EASEMENT THAT ARE NOT SHOWN ON THE PLANS. THE VILLAGE SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER WITH PERSONNEL AND EQUIPMENT UPON SAID EASEMENT AT ANY TIME FOR THE PURPOSES OF ACCESS TO AND INSPECTION OF SAID EASEMENT. IF THE OWNER FAILS TO MAINTAIN SAID FACILITIES AND, AFTER RECEIPT OF NOTICE FROM THE VILLAGE OF SAID FAILURE, THE OWNER FAILS TO MAKE REQUIRED REPAIRS IN A REASONABLE PERIOD OF TIME, THE VILLAGE MAY MAKE THE REQUIRED REPAIRS AND SEEK REIMBURSEMENT FROM THE OWNER FOR THE COSTS INCURRED BY THE VILLAGE TO MAKE THE REPAIR AND/OR FILE A LIEN ON THE PROPERTY. IN ADDITION, A NONEXCLUSIVE EASEMENT IS HEREBY RESERVED AND GRANTED TO THE VILLAGE, ILLINOIS AND ITS RESPECTIVE SUCCESSORS AND ASSIGNS, WITHIN THE AREAS SO DESIGNATED ON THE PLAT AND MARKED MUNICIPAL UTILITY EASEMENT TO CONSTRUCT, INSTALL, RECONSTRUCT, REPAIR, REMOVE, REPLACE, INSPECT, MAINTAIN AND OPERATE UNDERGROUND TRANSMISSION AND DISTRIBUTION SYSTEMS AND LINES IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE MUNICIPAL UTILITY AND LANDSCAPE EASEMENT INCLUDING WITHOUT LIMITATION WATER MAINS, STORM SEWERS, SANITARY SEWERS, FORCE MAINS, ELECTRIC LINES, STREET LIGHTS, AND ALL NECESSARY FACILITIES APPURTENANT THERETO, 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 THEREON. TOGETHER WITH THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLE REQUIRED INCIDENTAL TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS, INCLUDING FENCES, SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON, OR OVER THE PROPERTY WITHIN SAID EASEMENT WITHOUT PRIOR WRITTEN CONSENT OF THE GRANTEE.

STORMWATER MANAGEMENT EASEMENT PROVISIONS

A PERMANENT, NON-EXCLUSIVE EASEMENT, TOGETHER WITH THE RIGHT OF ACCESS THERETO, IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND TO ITS RESPECTIVE SUCCESSORS AND ASSIGNS, TO ENTER IN, ON, UPON, UNDER, OVER, THROUGH, ALONG, AND ACROSS THE AREAS DESIGNATED ON THE PLAT AS STORMWATER MANAGEMENT EASEMENT FOR THE PURPOSE OF INSPECTING SUCH AREAS TO DETERMINE WHETHER THE IMPROVEMENTS AND SYSTEMS WHICH CONSTITUTE THE SAME HAVE BEEN AND ARE BEING PROPERLY MAINTAINED IN CONFORMITY WITH THE APPLICABLE ORDINANCES AND REGULATIONS.
THE VILLAGE OF LAKE ZURICH TOGETHER WITH THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, RETAINS THE RIGHTS, BUT NOT THE OBLIGATION, TO ENTER THE EASEMENT AND PERFORM ANY NECESSARY MAINTENANCE IF THE OWNER FAILS TO ADEQUATELY MAINTAIN THE AREA. THE OWNER 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 BE A TACIT DECLARATION THEREOF.
NO BUILDINGS, SIGNS, CONDUITS, CABLES, WIRES, SEWERS, PIPES, WATERMAINS, VAULTS, TRANSMISSION LINES, FENCING, LANDSCAPING, OR OTHER SUCH FEATURES, FACILITIES OR STRUCTURES SHALL BE CONSTRUCTED OR MAINTAINED FOR ANY PURPOSE WITHIN THE SAID EASEMENT WITHOUT PRIOR WRITTEN CONSENT OF THE VILLAGE OF LAKE ZURICH. THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE OPERATION AND MAINTENANCE THEREOF. NOTHING SHALL BE CONSTRUCTED OR PLACED WITHIN, ABOVE, OR OVERHEAD WITHOUT THE WRITTEN PERMISSION OF THE VILLAGE OF LAKE ZURICH.
THE EASEMENT DESCRIBED IN THIS SECTION IS AN EASEMENT APPURTENANT, RUNNING WITH THE LANDS. IT SHALL BE AT ALL TIMES BINDING UPON THE OWNER AND ALL OF ITS GRANTEES AND THEIR RESPECTIVE HEIRS, SUCCESSORS, ASSIGNS, AND TRANSFEREES. THIS EASEMENT MAY NOT BE AMENDED IF IT WOULD RESULT IN NONCOMPLIANCE WITH ANY ORDINANCES OR REGULATIONS (OR OTHER APPLICABLE REQUIREMENTS) CONCERNING THE STORMWATER MANAGEMENT EASEMENT AND THAT RESPONSIBILITY FOR CONTINUED MAINTENANCE, OPERATION, AND PRESERVATION OF SAID STORMWATER MANAGEMENT EASEMENT SHALL NOT BE ABROGATED EXCEPT BY APPROVAL OF THE VILLAGE OF LAKE ZURICH.

EASEMENT PROVISIONS
AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO
COMMONWEALTH EDISON COMPANY
AND
ILLINOIS BELL TELEPHONE COMPANY DBA AT&T, GRANTEES,
THEIR RESPECTIVE LICENSEES, SUCCESSORS AND ASSIGNS JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, COMMUNICATIONS, SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E" (OR SIMILAR DESIGNATION), THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHTS TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE 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 OR IN, UPON OR OVER THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E" (OR SIMILAR DESIGNATION) 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 THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(C), 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 AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING" AND "COMMON AREA". THE TERM "COMMON AREA OR AREAS", AND "COMMON ELEMENTS" INCLUDE REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL , RETENTION POND OR MECHANICAL EQUIPMENT.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF THE GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Luxe Corsa
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118

NOTES:
PLAT IS VOID if the Impressed Surveyors Seal does not appear.
Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

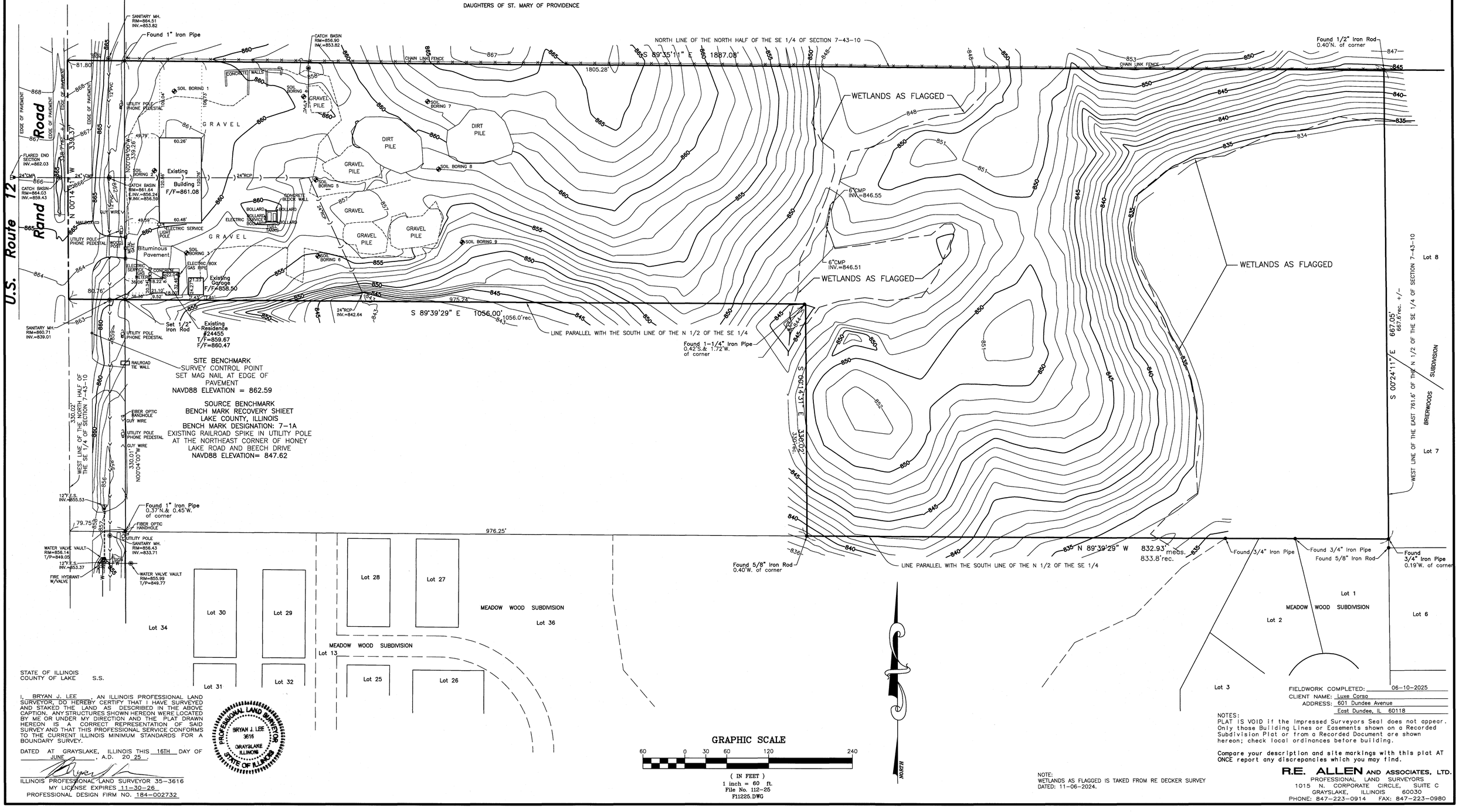
Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

PLAT OF SURVEY
OF

THE PREMISES COMMONLY KNOWN AS:
24455 N. US HIGHWAY 12, LAKE ZURICH, IL
GROSS PARCEL AREA =20.960 ACRES, 913,031 S.F.
NET PARCEL AREA =20.327 ACRES, 885,453 S.F.
PIN: 14-07-400-001

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE SAID NORTH HALF OF THE SOUTHEAST QUARTER, 990.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 1056.0 FEET; THENCE SOUTH PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER 667.6 FEET, MORE OR LESS TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON OF THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.



STATE OF ILLINOIS
COUNTY OF LAKE S.S.

I, BRYAN J. LEE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND STAKED THE LAND AS DESCRIBED IN THE ABOVE CAPTION. ANY STRUCTURES SHOWN HEREON WERE LOCATED BY ME OR UNDER MY DIRECTION AND THE PLAT DRAWN HEREON IS A CORRECT REPRESENTATION OF SAID SURVEY AND THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED AT GRAYSLAKE, ILLINOIS THIS 16TH DAY OF JUNE, A.D. 20 25.

PROFESSIONAL LAND SURVEYOR BRYAN J. LEE 3616 GRAYSLAKE ILLINOIS STATE OF ILLINOIS

ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
MY LICENSE EXPIRES 11-30-26.
PROFESSIONAL DESIGN FIRM NO. 184-002732

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.
File No. 112-25
P11225.DWG

NOTE:
WETLANDS AS FLAGGED IS TAKED FROM RE DECKER SURVEY DATED: 11-06-2024.

FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Luxe Corsa
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118

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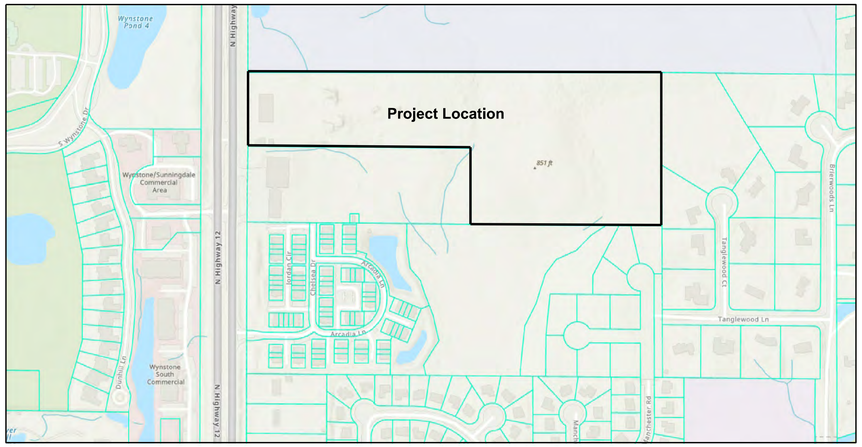
R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
1015 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

PRELIMINARY ENGINEERING FOR

LUXE CORSA AUTO SUITES

LOCATION MAP

NORTH



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LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED	
		SANITARY SEWER			CENTER LINE
		FORCE MAIN			EASEMENT
		STORM SEWER			BUILDING SETBACK
		P.V.C. STORM SEWER			CURB & GUTTER
		COMBINED SEWER			CURB & REVERSE GUTTER PITCH
		DRAIN TILE			DEPRESSED CURB & GUTTER
		WATER MAIN			GUARD RAIL
		TRENCH BACKFILL			FENCE
		MANHOLE			RETAINING WALL
		CATCH BASIN			CURB RAMP
		INLET			DRIVEWAY HAND
		2' STORM MANHOLE			SIGN
		INLET MANHOLE	MB	MB	MAIL BOX
		FLARED END SECTION			SOIL BORING
		HEAD WALL			DECIDIOUS TREE, DIAMETER
LS	LS	LIFT STATION			EVERGREEN TREE, HEIGHT
		CLEAN-OUT	T/F 600.00	T/F 600.00	TOP OF FOUNDATION
M	M	METER VAULT	F/G 600.00	F/G 600.00	FINISHED GRADE
		VALVE VAULT	600.00	600.00	SPOT ELEVATION
		VALVE BOX	T/C 600.00	T/C 600.00	TOP OF CURB ELEVATION
		BUFFALO BOX	F/L 600.00	F/L 600.00	FLOW LINE OF GUTTER
		FIRE HYDRANT	600	600	CONTOUR
		CONFLICT			DITCH
		CROSSING			DRAINAGE FLOW
		TRIPLE BASIN			OVERLAND FLOW
GB	GB	GREASE BASIN	R-600.00	R-600.00	RIM ELEVATION
G	G	GAS MAIN	I-600.00	I-600.00	INVERT ELEVATION
E	E	ELECTRIC CABLE			
T	T	TELEPHONE CABLE			
F	F	FIBER OPTIC CABLE			
C	C	CABLE			
		STREET LIGHT			
		UTILITY POLE			
		PEDESTAL			
		TRANSFORMER			
G	G	GAS VALVE			
E	E	ELECTRIC BOX			

LEGAL DESCRIPTION:

That part of the North half of the South East quarter of Section 7, Township 43 North, Range 10, East of the 3rd P. M., described as follows: Beginning at a point on the West line of said North half of the South East quarter, 990 feet North of the South West corner of said North half of the South East quarter; thence East parallel with the South line of said North half of the South East quarter, 1056 feet; thence South parallel with the West line of said North half of the South East quarter, 330 feet; thence East parallel with the South line of said North half of the South East quarter, 833.8 feet to a point which is 761.6 feet West of the East line of said North half of the South East quarter; thence North parallel with the East line of said North half of the South East quarter, 667.6 feet to the North line of said North half of the South East quarter; thence West on the North line of the North half of the South East quarter to the North West corner of said North half of the South East quarter; thence South on the West line of said North half of the South East quarter, 338.7 feet to the place of beginning, in Lake County, Illinois.

BENCHMARKS:

SOURCE BENCHMARK
BENCH MARK RECOVERY SHEET
LAKE COUNTY, ILLINOIS
BENCH MARK DESIGNATION: 7-1A
EXISTING RAILROAD SPIKE IN UTILITY POLE AT THE NORTHEAST CORNER OF HONEY LAKE ROAD AND BEECH DRIVE
NAVD88 ELEVATION= 847.62

SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59

LOCATED APPROXIMATELY 56' SOUTH OF SOUTH PROPERTY LINE ALONG ROUTE 12 SHOULDER

PROPERTY INDEX NUMBER:

14-07-400-001

DRAINAGE CERTIFICATE

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS DEVELOPMENT OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE DEVELOPER 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 PROPERTY BECAUSE OF THE CONSTRUCTION OF THIS DEVELOPMENT.

PEARSON, BROWN & ASSOCIATES, INC. — 7/16/25
REGISTERED PROFESSIONAL ENGINEER — DATE

OWNER OR OWNER'S DULY AUTHORIZED AGENT — DATE

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PREPARED FOR:

LUXE CORSA PARTNERS, LLC

601 DUNDEE AVENUE, EAST DUNDEE, ILLINOIS 60118

CONSULTING ENGINEERS:

PEARSON, BROWN & ASSOCIATES, INC.

A PROFESSIONAL DESIGN FIRM - ILLINOIS PROFESSIONAL ENGINEERING CORPORATION - LICENSE NUMBER 184-001058 EXPIRES 04/30/27
1850 W. WINCHESTER ROAD - SUITE 205 LIBERTYVILLE, IL. 60048 (847) 367-6707

NOT FOR CONSTRUCTION

CONTACT JULIE AT 8-1-1 OR 800-892-0123
With the following:
Call Before You Dig
County Lake
City/Twnship Lake Zurich / T43N-R10E
Sec 1/4 Sec No. Sec 7, SE 1/4
illinois1call.com
Call 2 working days BEFORE YOU DIG.

PERMIT	NUMBER	DATE ISSUED

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JOHN F. CERBUS
062-052376
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP 11/30/25
ENGINEER'S SEAL & SIGNATURE

ORIGINAL ISSUE DATE: 07/16/25

SHEET NUMBER 1 OF 23 SHEETS

JOB No. 2541

LUXE CORSA AUTO SUITES

SPECIAL PROVISIONS

THE FOLLOWING SPECIAL PROVISIONS ASSUME A TYPICAL OWNER/DEVELOPER AND FOUR PRIME CONTRACTORS (EXCAVATION, UNDERGROUND, PAVING, AND LIGHTING). IF A GENERAL CONTRACTOR IS INVOLVED, REQUIREMENTS AND RESPONSIBILITIES SHALL APPLY ACCORDINGLY BASED ON CONTRACT RELATIONSHIPS BETWEEN THE GENERAL CONTRACTOR, RELEVANT SUBCONTRACTORS AND THE OWNER/DEVELOPER.

I. GENERAL NOTES

1. THE CONSTRUCTION OF ALL IMPROVEMENTS OF THE PROJECT SHALL BE GOVERNED BY THE LATEST CODES AND ORDINANCES OF THE MUNICIPALITY.

   THE CONSTRUCTION OF ALL SEWER AND WATER MAIN IMPROVEMENTS ON THIS PROJECT SHALL BE GOVERNED BY THE FOLLOWING:
   - A. THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", LATEST REVISION, EXCEPT AS NOTED IN THE PLANS AND SPECIFICATIONS
   - B. THE "ILLINOIS ADMINISTRATIVE CODE, TITLE 77, PART 890" THE "ILLINOIS PLUMBING CODE", LATEST REVISION
   - C. THE "ILLINOIS ADMINISTRATIVE CODE, TITLE 35, SUBTITLE C, PART 370" THE "ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS", LATEST REVISION
   - D. THE "ILLINOIS ADMINISTRATIVE CODE, TITLE 35, SUBTITLE F" "PUBLIC WATER SUPPLIES", LATEST REVISION

   THE CONSTRUCTION OF ALL PAVING AND GRADING IMPROVEMENTS SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" (SPECIAL PROVISIONS), LATEST REVISIONS, PREPARED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT). IN CASE OF CONFLICT THE "SPECIAL PROVISIONS" SHALL TAKE PRECEDENCE AND GOVERN, BOTH THE IDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS SHALL HEREINAFTER BE REFERRED TO AS THE "IDOT STANDARD SPECIFICATIONS".

   SOIL EROSION AND SEDIMENT CONTROL ON THIS PROJECT SHALL BE GOVERNED BY THE "ILLINOIS URBAN MANUAL", LATEST REVISION.

2. **OWNER AND MUNICIPALITY**
   THE WORD "OWNER" AS USED IN THE SPECIAL PROVISIONS SHALL, WHERE APPLICABLE. INCLUDE THE LOCAL MUNICIPALITY OR GOVERNING AUTHORITY.

3. **GUARANTEE PERIOD**
   ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF FINAL ACCEPTANCE BY THE LOCAL MUNICIPALITY, GOVERNING AUTHORITY, OR PRIVATE OWNER OF THE WORK AGAINST DEFECTS IN WORKMANSHIP AND FAULTY OR IMPROPER MATERIALS.

4. **BONDS AND INSURANCE**
   CONTRACTOR SHALL FURNISH PERFORMANCE AND PAYMENT BONDS AS SECURITY FOR THE FAITHFUL PERFORMANCE AND PAYMENT OF ALL HIS OBLIGATIONS UNDER THE PLANS AND SPECIFICATIONS. THESE BONDS SHALL BE IN AMOUNTS AT LEAST EQUAL TO THE CONTRACT PRICE, AND IN SUCH FORM AND WITH SUCH SURETY AS MAY BE ACCEPTABLE TO CONSULTANT. SURETIES ON BONDS IN THE STATE WHERE THE PROJECT IS LOCATED AND ARE NAMED IN THE CURRENT LIST OF "SURETY COMPANIES ACCEPTABLE ON FEDERAL BONDS" AS PUBLISHED IN THE FEDERAL REGISTER BY THE AUDIT STAFF BUREAU OF ACCOUNTS, U. S. TREASURY DEPARTMENT. IF THE SURETY ON ANY BOND FURNISHED BY THE CONTRACTOR IS DECLARED BANKRUPT OR BECOMES INSOLVENT OR ITS RIGHT TO DO BUSINESS IS TERMINATED IN ANY STATE WHERE ANY PART OF THE PROJECT IS LOCATED IS REVOKED, CONTRACTOR SHALL WITHIN FIVE DAYS THEREAFTER SUBSTITUTE ANOTHER BOND AND SURETY, BOTH OF WHICH SHALL BE ACCEPTABLE TO OWNER. CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT HIM FROM CLAIMS UNDER WORKMEN'S COMPENSATION LAWS, DISABILITY BENEFIT LAWS OR OTHER SIMILAR EMPLOYEE BENEFIT LAWS; FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY, OCCUPATIONAL SICKNESS OR DISEASE, OR DEATH OF HIS EMPLOYEES, AND CLAIMS INSURED BY USUAL PERSONAL INJURY LIABILITY COVERAGE; FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY, SICKNESS OR DISEASE, OR DEATH OF ANY PERSON OTHER THAN HIS EMPLOYEES INCLUDING CLAIMS INSURED BY USUAL PERSONAL INJURY LIABILITY COVERAGE; FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY OR PROPERTY DAMAGE OUT OF THE OWNERSHIP MAINTENANCE OR USE OF ANY AUTOMOBILE OR VEHICLE; AND FROM CLAIMS FOR INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING LOSS OF USE RESULTING THEREFROM - ANY OR ALL OF WHICH MAY ARISE OUT OF OR RESULT FROM CONTRACTOR'S OPERATIONS UNDER THE PLANS AND SPECIFICATIONS, WHETHER SUCH OPERATIONS BE BY HIMSELF OR BY ANY SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR FOR WHOSE ACTS ANY OF THEM MAY BE LEGALLY LIABLE. THIS INSURANCE SHALL INCLUDE THE SPECIFIC COVERAGES AND BE WRITTEN FOR NOT LESS THAN ANY LIMITS OF LIABILITY AND MAXIMUM DEDUCTIBLES SPECIFIED OR REQUIRED BY LAW, WHICHEVER IS GREATER, SHALL INCLUDE CONTRACTUAL LIABILITY INSURANCE AND SHALL INCLUDE OWNER AND CONSULTANT AS ADDITIONAL INSURED PARTIES. BEFORE STARTING THE WORK, CONTRACTOR SHALL FILE WITH OWNER AND CONSULTANT CERTIFICATES OF SUCH INSURANCE, ACCEPTABLE TO OWNER; THESE CERTIFICATES SHALL CONTAIN A PROVISION THAT THE COVERAGE AFFORDED UNDER THE POLICIES WILL NOT BE CANCELLED OR MATERIALLY CHANGED UNTIL AT LEAST FIFTEEN DAYS' PRIOR WRITTEN NOTICE HAS BEEN GIVEN TO OWNER AND CONSULTANT. CERTIFICATE OF INSURANCE SHALL BE FILED WITH THE MUNICIPAL CLERK NAMING THE MUNICIPALITY ITS ELECTIVE AND APPOINTIVE BOARDS, COMMISSIONS, OFFICERS AGENTS AND EMPLOYEES AS ADDITIONAL INSURED TO COVER, CLAIMS, WHICH MAY ARISE OUT OF THE PERFORMANCE OF THE WORK BY THE APPLICANT OR HIS AGENTS OR CONTRACTORS.

5. **INDEMNIFICATION**
   CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE MUNICIPALITY, OWNER AND CONSULTANT, AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEYS' FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS OR EXPENSE (A) IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THEREFROM AND (B) IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT IT IS CAUSED IN PART BY A PARTY INDEMNIFIED HEREUNDER. IN ANY AND ALL CLAIMS AGAINST OWNER OR CONSULTANT OR ANY OF THEIR AGENTS OR EMPLOYEES BY ANY EMPLOYEE OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKMEN'S COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

6. **LIABILITY LIMITATIONS**
   THE CONTRACTOR AND HIS SUBCONTRACTORS ARE SKILLED AND EXPERIENCED IN THE USE AND INTERPRETATIONS OF PLANS AND SPECIFICATIONS SUCH AS THOSE INCLUDED IN THE BID DOCUMENTS FOR THIS CONTRACT. THEY HAVE CAREFULLY REVIEWED THE PLANS AND SPECIFICATIONS, AND HAVE FOUND THEM FREE OF AMBIGUITIES AND SUFFICIENT FOR BID PURPOSES. FURTHER, THEY HAVE BASED THEIR BID SOLELY ON THESE DOCUMENTS, NOT RELYING IN ANY WAY ON ANY EXPLANATION OR INTERPRETATION, ORAL OR WRITTEN, FROM ANY OTHER SOURCE. HAVING ASSURED HIMSELF OF THE ADEQUACY OF THE DOCUMENTS AND THE ACCURACY OF HIS BID, THE CONTRACTOR AGREES AND SHALL REQUIRE HIS SUBCONTRACTORS TO AGREE TO LIMIT THE LIABILITY OF THE OWNER AND OF THE CONSULTANT TO A TOTAL AGGREGATE LIABILITY TO THE CONTRACTOR OF THE AMOUNT OF THE TOTAL FEE FOR SERVICES RENDERED ON THIS PROJECT. NEITHER THE CONTRACTOR NOR ANY OF HIS SUBCONTRACTORS ASSUME ANY LIABILITY FOR THE ERRORS, OMISSIONS OR NEGLIGENT ACTS OF THE CONSULTANT.

7. **SAFETY AND PROTECTION**
   CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. HE SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
   - A. ALL EMPLOYEES ON THE WORK AND OTHER PERSONS WHO MAY BE AFFECTED THEREBY.
   - B. ALL THE WORK AND ALL MATERIALS OR EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE.
   - C. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES AND UTILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT IN COURSE OF CONSTRUCTION.

   CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS. HE SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR ITS SAFETY AND PROTECTION. HE SHALL NOTIFY OWNERS OF ADJACENT UTILITIES WHEN PROSECUTION OF THE WORK MAY AFFECT THEM. ALL DAMAGE, INJURY OR LOSS TO ANY PROPERTY REFERRED TO CAUSE, DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, BY CONTRACTOR, ANY SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY CONTRACTOR. CONTRACTOR'S DUTIES AND RESPONSIBILITIES FOR THE SAFETY AND PROTECTION OF THE WORK SHALL CONTINUE UNTIL SUCH TIME AS ALL THE WORK IS COMPLETED AND CONSULTANT HAS ISSUED A NOTICE TO OWNER AND CONTRACTOR THAT WORK IS ACCEPTABLE. CONTRACTOR SHALL DESIGNATE A RESPONSIBLE MEMBER OF HIS ORGANIZATION AT THE SITE WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS. THIS PERSON SHALL BE THE CONTRACTOR'S SUPERINTENDENT UNLESS OTHERWISE DESIGNATED IN WRITING BY CONTRACTOR TO OWNER. IN EMERGENCIES AFFECTING THE SAFETY OF PERSONS OR THE WORK OR PROPERTY AT THE SITE OR ADJACENT THERETO, CONTRACTOR, WITHOUT SPECIAL INSTRUCTION OR AUTHORIZATION FROM CONSULTANT OR OWNER, IS OBLIGATED TO ACT, AT HIS DISCRETION, TO PREVENT THREATENED DAMAGE, INJURY OR LOSS.

8. **SUPERVISION AND SUPERINTENDENCE**
   CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK EFFICIENTLY AND WITH HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, BUT HE SHALL NOT BE SOLELY RESPONSIBLE FOR THE NEGLIGENCE OF OTHERS IN THE DESIGN OR SELECTION OF A SPECIFIC MEANS, METHOD, TECHNIQUE, SEQUENCE OR PROCEDURE OF CONSTRUCTION WHICH IS INDICATED IN AND REQUIRED BY THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO SEE THAT THE FINISHED WORK COMPLIES ACCURATELY WITH THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL KEEP ON THE WORK AT ALL TIMES DURING ITS PROGRESS A COMPETENT RESIDENT SUPERINTENDENT, WHO SHALL NOT BE REPLACED WITHOUT WRITTEN NOTICE TO OWNER AND CONSULTANT, EXCEPT UNDER EXTRAORDINARY CIRCUMSTANCES. THE SUPERINTENDENT WILL BE CONTRACTOR'S REPRESENTATIVE AT THE SITE AND SHALL HAVE AUTHORITY TO ACT ON BEHALF OF CONTRACTOR. ALL COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING AS IF GIVEN TO CONTRACTOR.

9. **SUBSTITUTE MATERIAL OR EQUIPMENT**
   IF THE GENERAL REQUIREMENTS, LAWS, ORDINANCES OR APPLICABLE RULES OR REGULATIONS PERMIT CONTRACTOR TO FURNISH OR USE A SUBSTITUTE THAT IS EQUAL TO ANY MATERIAL OR EQUIPMENT SPECIFIED, AND IF ANY CONTRACTOR MAY FURNISH OR USE A PROPOSED SUBSTITUTE, HE SHALL MAKE WRITTEN APPLICATION TO CONSULTANT, OWNER AND VILLAGE FOR APPROVAL OF SUCH A SUBSTITUTE CERTIFYING IN WRITING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTION CALLED FOR BY THE GENERAL DESIGN, BE SIMILAR AND OF EQUAL SUBSTANCE TO THAT SPECIFIED AND BE SUITED TO THE SAME USE AND CAPABLE OF PERFORMING THE SAME FUNCTION AS THAT SPECIFIED; STATING WHETHER OR NOT ITS INCORPORATION IN OR USE IN CONNECTION WITH THE PROJECT IS SUBJECT TO THE PAYMENT OF ANY LICENSE FEE OR ROYALTY; AND IDENTIFYING ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED AND INDICATING AVAILABLE MAINTENANCE SERVICE. NO SUBSTITUTE SHALL BE ORDERED OR INSTALLED WITHOUT THE WRITTEN APPROVAL OF CONSULTANT WHO WILL BE THE JUDGE OF EQUALITY AND MAY REQUIRE CONTRACTOR TO FURNISH SUCH OTHER DATA ABOUT THE PROPOSED SUBSTITUTE AS HE CONSIDERS PERTINENT. NO SUBSTITUTE SHALL BE ORDERED OR INSTALLED WITHOUT SUCH PERFORMANCE GUARANTEE AND BONDS AS OWNER MAY REQUIRE WHICH SHALL BE FURNISHED AT CONTRACTOR'S EXPENSE.

10. **RECORD DRAWINGS**
    CONTRACTOR SHALL KEEP ONE RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE SITE IN GOOD ORDER AND ANNOTATED TO SHOW ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE SHALL BE AVAILABLE TO CONSULTANT AND SHALL BE DELIVERED TO HIM OR OWNER UPON COMPLETION OF THE PROJECT. CONSULTANT OR OWNER SHALL SUPPLY RECORD DRAWINGS TO THE LOCAL MUNICIPALITY.

11. **INSTRUCTIONS TO CONTRACTORS FROM CONSULTANT**
    THE CONTRACTOR SHALL ONLY ACCEPT INSTRUCTIONS, EITHER VERBAL OR WRITTEN, FROM AUTHORIZED PERSONNEL OF PEARSON, BROWN & ASSOCIATES, INC. THE PERSONNEL SO AUTHORIZED TO ISSUE INSTRUCTIONS TO CONTRACTORS ARE EXCLUSIVELY RONALD ADAMS, GUS ZOGRAFOS AND JOHN CERBUS, NOT WITHOUT OWNERS PERMISSION.

12. **APPLICATION FOR PAYMENT**
    IF APPROVAL BY THE CONSULTANT AND THE MUNICIPALITY IS REQUIRED FOR THE PROCESSING OF THE APPLICATION FOR PAYMENT, THEN CONTRACTOR SHALL SUBMIT TO CONSULTANT AN APPLICATION FOR PAYMENT ACCEPTABLE TO CONSULTANT AND SHALL PROVIDE TO THE CONSULTANT ANY AND ALL INFORMATION PERTINENT TO SAID APPLICATION WHETHER REQUESTED SPECIFICALLY OR NOT. CONSULTANT'S APPROVAL IS BASED ON WORK COMPLETED TO DATE OF APPLICATION SUBMITTAL IF CONTRACTOR HAS AGREED BY CONTRACT AGREEMENT OR IN THE SCOPE OF WORK TO A QUANTITY OF EQUIPMENT WITH OPERATORS OR TO A NUMBER OF CREWS TO START WORK ON A SPECIFIC DATE AND PROCEED AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE, AND CONTRACTOR DOES NOT PROVIDE THE EQUIPMENT WITH OPERATORS OR THE NUMBER OF CREWS AS DIRECTED BY OWNER OR HIS REPRESENTATIVE, AND, AS A RESULT, CAUSES DELAYS TO THE PROJECT, THE OWNER OR HIS REPRESENTATIVE RESERVES THE RIGHT TO WITHHOLD APPROVAL FOR PAYMENT UNTIL SUCH TIME AS CONTRACTOR HAS COMPLIED WITH SAID CONTRACT AGREEMENT OR SCOPE OF WORK.

13. **RETENTION**
    ANY AND ALL APPLICATIONS FOR PAYMENT SUBMITTED TO CONSULTANT SHALL HAVE A TEN PERCENT (10%) RETAINER UNTIL SUCH TIME AS ONE HUNDRED PERCENT (100%) OF THE WORK REQUESTED OF SAID CONTRACTOR HAS BEEN COMPLETED. UPON COMPLETION OF ONE HUNDRED (100%) PERCENT OF THE WORK, THE RETAINER SHALL BE REDUCED TO FIVE PERCENT (5%) AT THIS TIME AS CONTRACTOR HAS APPLIED FOR AND OBTAINED TESTING AND OBTAINED IN WRITING FINAL ACCEPTANCE FOR MAINTENANCE OF THIS WORK BY SAID GOVERNING AUTHORITIES. UPON TESTING, APPROVAL AND ACCEPTANCE OF THE WORK, THE RETAINER SHALL BE REDUCED TO TWO PERCENT (2%) UNTIL ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AT WHICH TIME ALL MONIES DUE CONTRACTOR SHALL BE APPROVED FOR PAYMENT UNLESS CONTRACTOR HAD FAILED TO PERFORM IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND/OR WRITTEN OR VERBAL INSTRUCTIONS FROM ENGINEER REGARDING FAULTY MATERIAL AND/OR WORKMANSHIP.

14. **CONFLICT BETWEEN COMPONENT PARTS OR SPECIFICATIONS**
    IN THE EVENT THAT ANY PROVISION IN ANY OF THE FOLLOWING COMPONENT PARTS OF THESE SPECIFICATIONS CONFLICT WITH ANY PROVISION IN ANY OTHER OF THE COMPONENT PARTS, THE PROVISION IN THE COMPONENT PART FIRST LISTED BELOW SHALL GOVERN OVER ANY OTHER COMPONENT PART WHICH FOLLOWS IT, EXCEPT AS MAY OTHERWISE SPECIFICALLY BE STATED. SAID COMPONENT PARTS ARE THE FOLLOWING:
    - A. SPECIAL PROVISIONS
    - B. PLANS
    - C. RECURRING SPECIAL PROVISIONS
    - D. SUPPLEMENTAL SPECIFICATIONS
    - E. STANDARD SPECIFICATIONS

15. **PERMITS**
    THE OWNER OR CONSULTANT SHALL MAKE APPLICATION FOR THE FOLLOWING PERMITS:
    MUNICIPALITY: WATERSHED DEVELOPMENT PERMIT
    IEPA: NOI, SANITARY SEWER, AND WATER SUPPLY

II. GENERAL NOTES

1. NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION,THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO THE CONSULTANT BEFORE DOING ANY WORK. OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE CONSULTANT PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS ORDISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE CONSULTANT SHALL BE FINAL AND CONCLUSIVE.

2. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS BEFORE CONSTRUCTION BEGINS. HE SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE CONSULTANT.

3. IF LINE AND GRADE STAKES ARE PROVIDED BY CONSULTANT, STAKES WILL BE SET AT THE OWNER'S EXPENSE ONE TIME AND ONE TIME ONLY. CONTRACTORS SHALL NOTIFY THE CONSULTANT THAT STAKES WILL BE NEEDED AT LEAST 3 WORKING DAYS IN ADVANCE OF STARTING THEIR WORK. (ADDITIONAL NOTIFICATION SHALL BE PROVIDED PRIOR TO THE START OF INITIAL PROJECT CONSTRUCTION OPERATIONS.) ANY AND ALL REQUIRED RESTAKING WILL BE PERFORMED BY THE CONSULTANT AT THE EXPENSE OF THAT CONTRACTOR REQUIRING THE RESTAKING. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT STAKES PROVIDED FOR HIS USE AND TO REPORT TO THE OWNER'S SUPERINTENDENT ANY SPECIFIC INSTANCES OF DAMAGED STAKES AND/OR MONUMENTS PROVIDED. LOT CORNER IRONS ARE TO BE CONSIDERED AS MONUMENTS.

   OFTEN TIMES, CURB GRADE STAKES ARE PLACED AT 4'-6" OFFSET TO BACK OF CURB AT THE REQUEST OF THE CONTRACTOR. IN MOST INSTANCES, THIS AREA IS LOCATED OVER THE WATERMAIN, SANITARY SEWER,OR STORM SEWER TRENCH, AND NOT SOLID GROUND. CURB GRADE STAKES MAY LOSE THEIR INTEGRITY DUE TO A RAIN EVENT, HEAVY MACHINERY TRAFFIC, AND THE LIKE.THEREFORE, THE CURB CONTRACTOR SHALL CHECK THE CURB GRADE STAKES DURING THE SETTING OF THE STRING LINE AND REPORT ANY IRREGULARITIES TO THE CONSULTANT. THE CURB CONTRACTOR SHALL ALSO VERIFY THAT ALL STAKES FOR CURB DEPRESSIONS (SIDEWALKS, DRIVEWAYS, BIKE PATHS, EMERGENCY ACCESSES, ETC.) ARE IN PLACE PRIOR TO POURING OF ANY CURB.

4. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DURING CONSTRUCTION OPERATIONS. LOCATING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CONSULTANT IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

5. WHENEVER THE PERFORMANCE OF WORK IS INDICATED ON THE PLANS, AND NO ITEM IS INCLUDED IN THE CONTRACT FOR PAYMENT, THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. BARRICADES AND WARNING SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH THE I.D.O.T. STANDARD SPECIFICATIONS. ADEQUATE LIGHTING SHALL BE MAINTAINED FROM DUSK TO DAWN AT ALL LOCATIONS WHERE CONSTRUCTION OPERATIONS WARRANT, OR AS DESIGNATED BY THE CONSULTANT. MUNICIPALITY OR GOVERNING AGENCY. ALL TRAFFIC CONTROL WORK SHALL BE DONE IN ACCORDANCE WITH THE I.D.O.T. HIGHWAY STANDARDS, AND THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

7. CONTRACTORS SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS AND, WHEN NECESSARY, CLEAN PAVEMENTS ON A DAILY BASIS.

8. PRIOR TO COMMENCEMENT OF UNDERGROUND CONSTRUCTION, THE GRADING CONTRACTOR SHALL OBTAIN FROM THE OWNER AND/OR CONSULTANT VERIFICATION OF ELEVATIONS TO PLUS OR MINUS ONE TENTH OF A FOOT (0.10') OF PROPOSED SUB-GRADE AND APPROVALS OF COMPACTION.

9. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER ACCEPTABLE METHOD. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

10. IT SHALL BE THE RESPONSIBILITY OF EACH RESPECTIVE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS DEEMED UNSUITABLE WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

11. THE CONSULTANT, MUNICIPALITY AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

12. ELECTRIC,TELEPHONE, NATURAL GAS, AND OTHER UTILITY COMPANIES HAVE UNDERGROUND AND/OR OVERHEAD SERVICE FACILITIES IN THE VICINITY OF THE PROPOSED WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE CONTRACTOR SHALL CALL J.U.L.I.E AT (800)892-0123 AND THE MUNICIPALITY FOR UTILITY LOCATIONS.

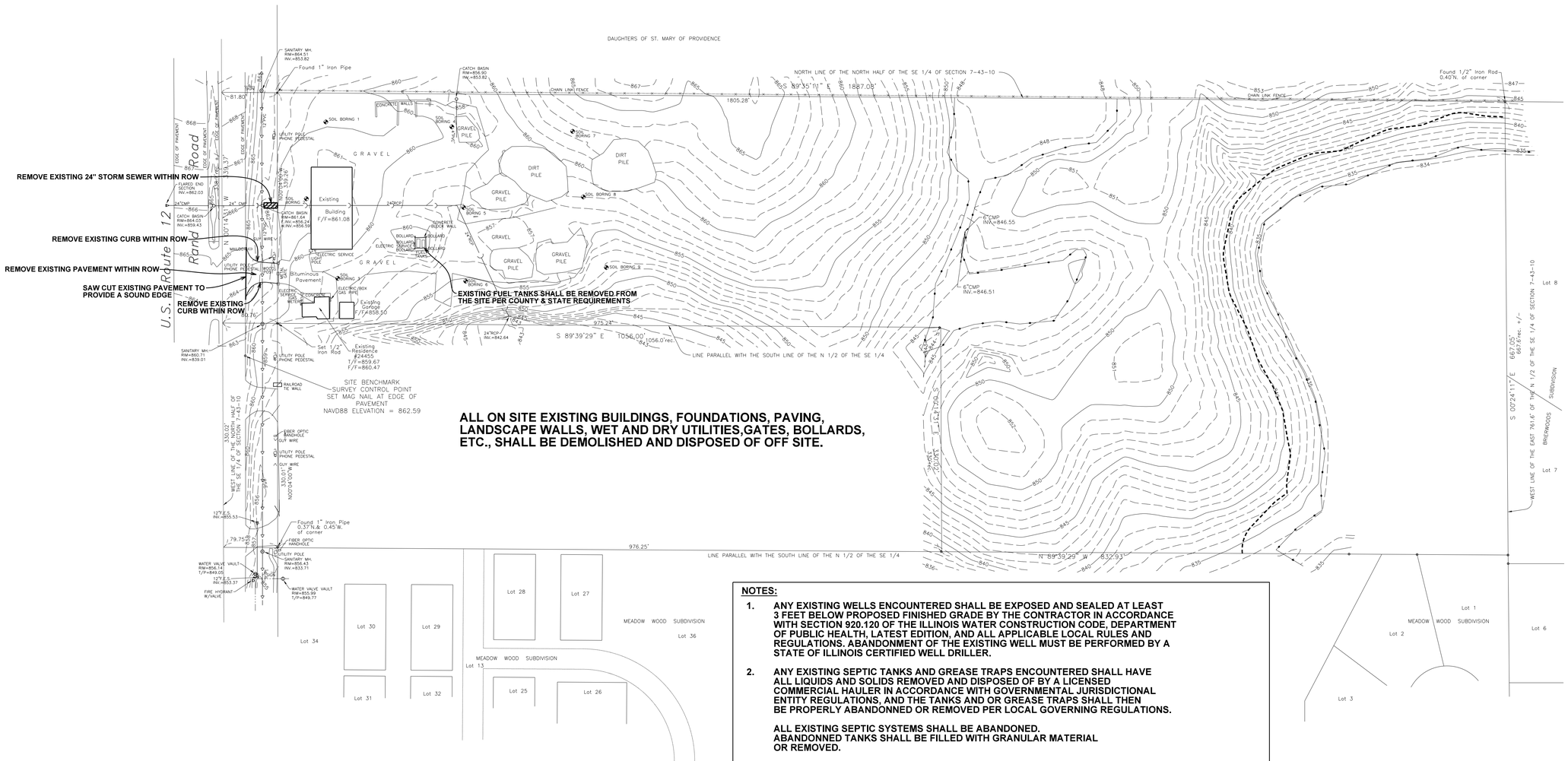
13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE RELOCATION OR BRACING OF EXISTING UTILITY POLES THAT MAY BE WITHIN THE WORKING LIMITS OF THE CONTRACT. IT IS EXPRESSLY UNDERSTOOD THAT ALL WORK AND COSTS CONNECTED WITH THESE UTILITY POLES, THEIR TEMPORARY RELOCATIONS, ETC., SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER OR RELEVANT CONTRACTOR.

14. ALL PAVEMENT, CURB AND GUTTER, DRIVEWAYS, SIDEWALKS, TREES, SHRUBS, BUSHES, LAWNS, FENCES, AND ALL OTHER STRUCTURES REQUIRED TO BE REMOVED, SHALL BE REPLACED AND/OR RESTORED AS DIRECTED BY THE ENGINEER TO ORIGINAL CONDITION. ALL RESTORATION NOT COVERED IN THE CONTRACT QUANTITIES OR SPECIFICATIONS SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

15. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND FEDERAL SAFETY REGULATIONS AS OUTLINED IN THE LATEST REVISIONS OF THE FEDERAL CONSTRUCTION SAFETY STANDARDS (SERIES 1926) AND WITH APPLICABLE PROVISIONS AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA/STANDARDS OF THE WILLIAMS STELGER OCCUPATIONAL HEALTH STATE SAFETY ACT OF 1970(REVISED). THE CONTRACTOR, CONSULTANT AND OWNER SHALL EACH BE RESPONSIBLE FOR HIS OWN RESPECTIVE AGENTS AND EMPLOYEES.

16. CHANGES IN THE CONSULTANT'S ENGINEERING PLANS MUST BE APPROVED BY BOTH THE DESIGN CONSULTANT AND THE MUNICIPAL ENGINEER. A WRITTEN REQUEST, ACCOMPANIED BY REVISED ENGINEERING PLANS, IS TO BE SUBMITTED TO BOTH AND APPROVED BY BOTH BEFORE CHANGES ARE STARTED.

17. DRAIN TILES MAY EXIST ON THE SUBJECT PROPERTY; THEIR LOCATIONS MAY BE KNOWN AND/OR UNKNOWN AND MAY EXTEND OFFSITE EITHER UPSTREAM OR DOWNSTREAM, ALL EXISTING ONSITE MAINLINE DRAIN TILES SHALL BE ABANDONED BY TRENCH REMOVAL PRIOR TO OTHER DEVELOPMENT ACTIVITIES. IF ANY EXISTING DRAIN TILE (MAINLINE, SUB-MAIN OR LATERAL) CONTINUE OFFSITE TO UPLAND WATERSHEDS,THE CONTRACTOR (GRADING AND/OR UNDERGROUND) SHALL NOTIFY CONSULTANT FOR DIRECTION AND MUST MAINTAIN DRAINAGE SERVICE DURING CONSTRUCTION UNTIL NEW STORM SEWER CAN BE INSTALLED FOR A PERMANENT CONNECTION OR BE REROUTED WITH NEW PIPE OF SIMILAR SIZE, MATERIAL, CAPACITY AND GRADIENT AND PUT INTO ACCEPTABLE OPERATION. SUCH CONNECTION OR RELOCATION SHALL BE RECORDED ON "RECORD DRAWINGS". NORMAL CONSTRUCTION ACTIVITY INCLUDING GRADING, UNDERGROUND PIPING AND BUILDING EXCAVATION SHOULD ADEQUATELY REMOVE OR TAK



NOTES:

1. ANY EXISTING WELLS ENCOUNTERED SHALL BE EXPOSED AND SEALED AT LEAST 3 FEET BELOW PROPOSED FINISHED GRADE BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 920.120 OF THE ILLINOIS WATER CONSTRUCTION CODE, DEPARTMENT OF PUBLIC HEALTH, LATEST EDITION, AND ALL APPLICABLE LOCAL RULES AND REGULATIONS. ABANDONMENT OF THE EXISTING WELL MUST BE PERFORMED BY A STATE OF ILLINOIS CERTIFIED WELL DRILLER.
2. ANY EXISTING SEPTIC TANKS AND GREASE TRAPS ENCOUNTERED SHALL HAVE ALL LIQUIDS AND SOLIDS REMOVED AND DISPOSED OF BY A LICENSED COMMERCIAL HAULER IN ACCORDANCE WITH GOVERNMENTAL JURISDICTIONAL ENTITY REGULATIONS, AND THE TANKS AND OR GREASE TRAPS SHALL THEN BE PROPERLY ABANDONNED OR REMOVED PER LOCAL GOVERNING REGULATIONS.

   ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONNED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
3. EXISTING WATER SERVICE LINES SHALL BE ABANDONED AT THE EXISTING WATERMAIN.
4. THE VILLAGE SHALL BE PROVIDED WITH EVIDENCE OF SIGN-OFF FROM THE LAKE COUNTY HEALTH DEPARTMENT.
5. SILT FENCE SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE VILLAGE PRIOR TO START OF CONSTRUCTION.
6. ADJACENT ROADWAYS SHALL BE KEPT FREE AND CLEAR OF ALL SEDIMENT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SOIL TRACKED ONTO THE ADJACENT ROADWAYS AT THE END OF EACH DAY AND AS DIRECTED BY THE VILLAGE.
8. EXISTING HOUSE (INCLUDING FOUNDATION), STOOPS, SIDEWALKS, WALLS, DRIVEWAY, AND PATIO, SHALL BE REMOVED, AND ALL DEBRIS SHALL BE DISPOSED OF OFFSITE.
9. CONSTRUCTION DEBRIS IS PROHIBITED FROM BEING BURIED ON-SITE INCLUDING BACKFILL AREAS.
10. DUST MUST BE CONTROLLED ON SITE AT ALL TIMES.
11. FULL DEPTH SAW-CUT IS REQUIRED FOR ALL REMOVALS
12. PAVEMENT RESTORATION SHALL MATCH EXISTING BY TYPE & THICKNESS.
13. ALL DISTURBED AREAS SHALL BE RESTORED WITH A MINIMUM 4-INCHES OF TOPSOIL, SEED AND NAG S75 BLANKET (SECURED PER MANUFACTURERS SPECIFICATIONS), OR TOPSOIL AND SOD, OR APPROVED EQUAL.

UTILITY NOTES:

1. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL WET AND DRY UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES THAT ARE FOUND.
2. ALL UTILITIES (WET AND DRY) MUST BE DISCONNECTED PRIOR TO DEMOLITION OF THE STRUCTURE.

NORTH

SCALE: 1" = 80'

LUXE CORSA AUTO SUITES

24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
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DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION	BY	DATE

REVISIONS

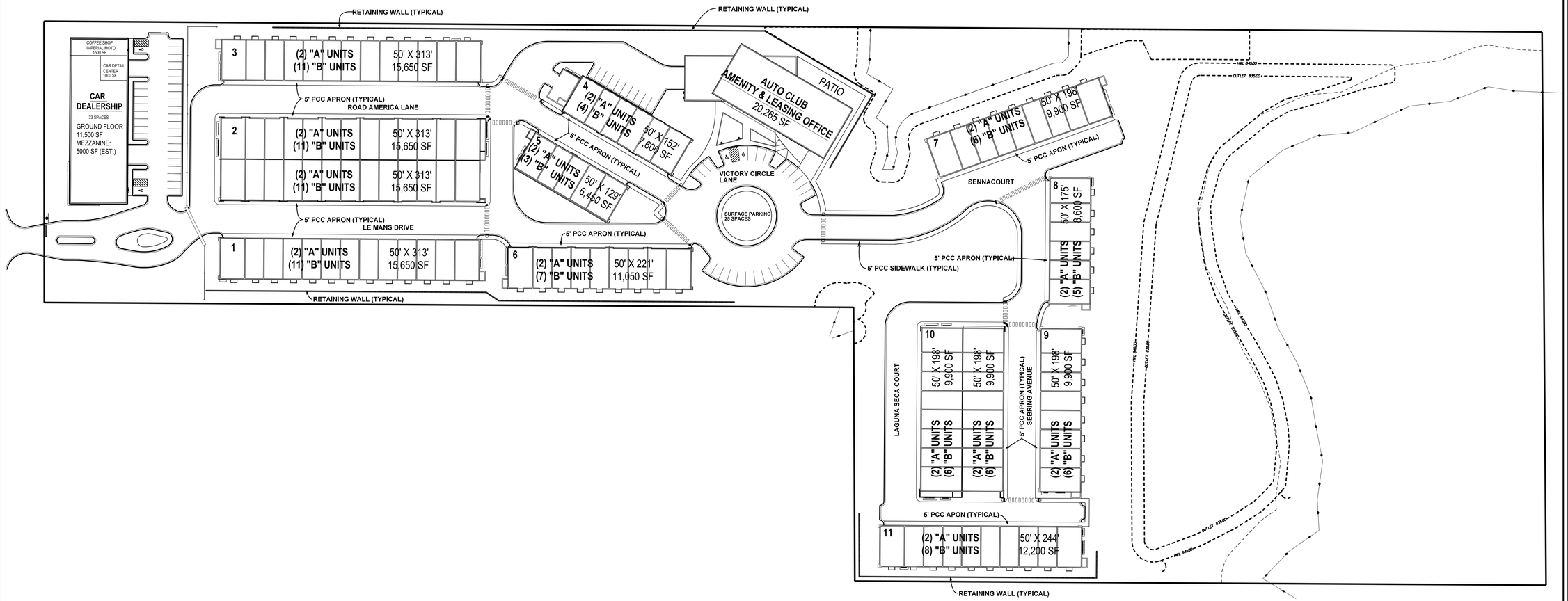
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NUMBER 3 OF 23 SHEETS

JOB No. 2541

BUILDING HEIGHT TABLE:

CAR CONDO BUILDINGS: 28' TO TOP OF PARAPET
DEALERSHIP: 30' TO TOP OF PARAPET
CLUBHOUSE: 33' TO TOP OF PARAPET



NORTH

SCALE: 1" = 60'

LUXE CORSA AUTO SUITES

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DESCRIPTION	DATE	BY

REVISIONS

OVERALL SITE PLAN

SHEET NUMBER 4 OF 23 SHEETS

JOB No. 2541

NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES

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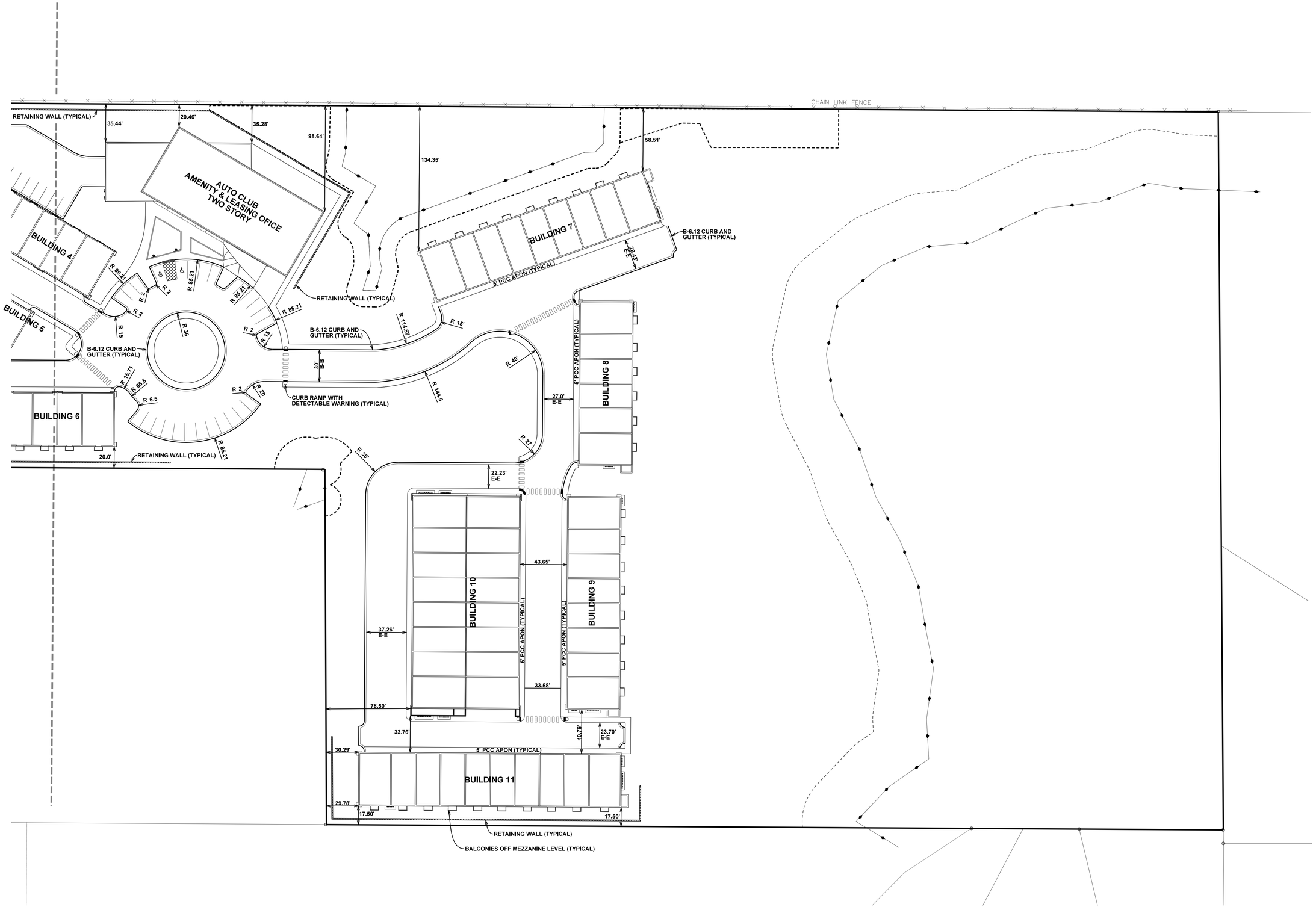
DESCRIPTION	DATE	BY

GEOMETRIC PLAN - WEST

SHEET NUMBER 5 OF 23 SHEETS

JOB No. 2541



NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES

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DESCRIPTION	DATE	BY

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GEOMETRIC PLAN - EAST

SHEET NUMBER

6

OF 23 SHEETS

JOB No. 2541

DAUGHTERS OF ST. MARY OF PROVIDENCE

SANITARY MH.
RIM=864.51
INV.=853.82

CATCH BASIN
RIM=856.90
INV.=853.82

CHAIN LINK FENCE

SIGN

EDGE OF PAVEMENT

Road

12"PVC

UTILITY POLE
PHONE PEDESTAL

FF=860.20

FF=858.50

FF=858.50

FF=858.50

FF=858.00

FF=858.00

FF=859.00

FF=859.00

FLARED END
SECTION
INV.=862.03

24"CMP

24" CMP

CATCH BASIN
RIM=864.03
INV.=859.43

CATCH BASIN
RIM=861.64
E.INV.=856.24
W.INV.=856.59

12"PVC

CUT WIRE

MAILBOX

UTILITY POLE

3.17%

2.00%

3.04%

1.09%

U.S. Route 12

SANITARY MH.
RIM=860.71
INV.=839.01

UTILITY POLE
PHONE PEDESTAL

RAILROAD
TIE WALL

SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF
PAVEMENT
NAVD88 ELEVATION = 862.59

FIBER OPTIC
HANDHOLE

GUY WIRE

UTILITY POLE
PHONE PEDESTAL

GUY WIRE

12"F.E.S.
INV.=855.53

FIBER OPTIC
HANDHOLE

UTILITY POLE

SANITARY MH.
RIM=856.43
INV.=833.71

WATER VALVE VAULT
RIM=856.14
T/P=849.05

SIGN

12"F.E.S.
INV.=853.37

FIRE HYDRANT
W/VALVE

WATER VALVE VAULT
RIM=855.99
T/P=849.77

Lot 28

Lot 27

NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES

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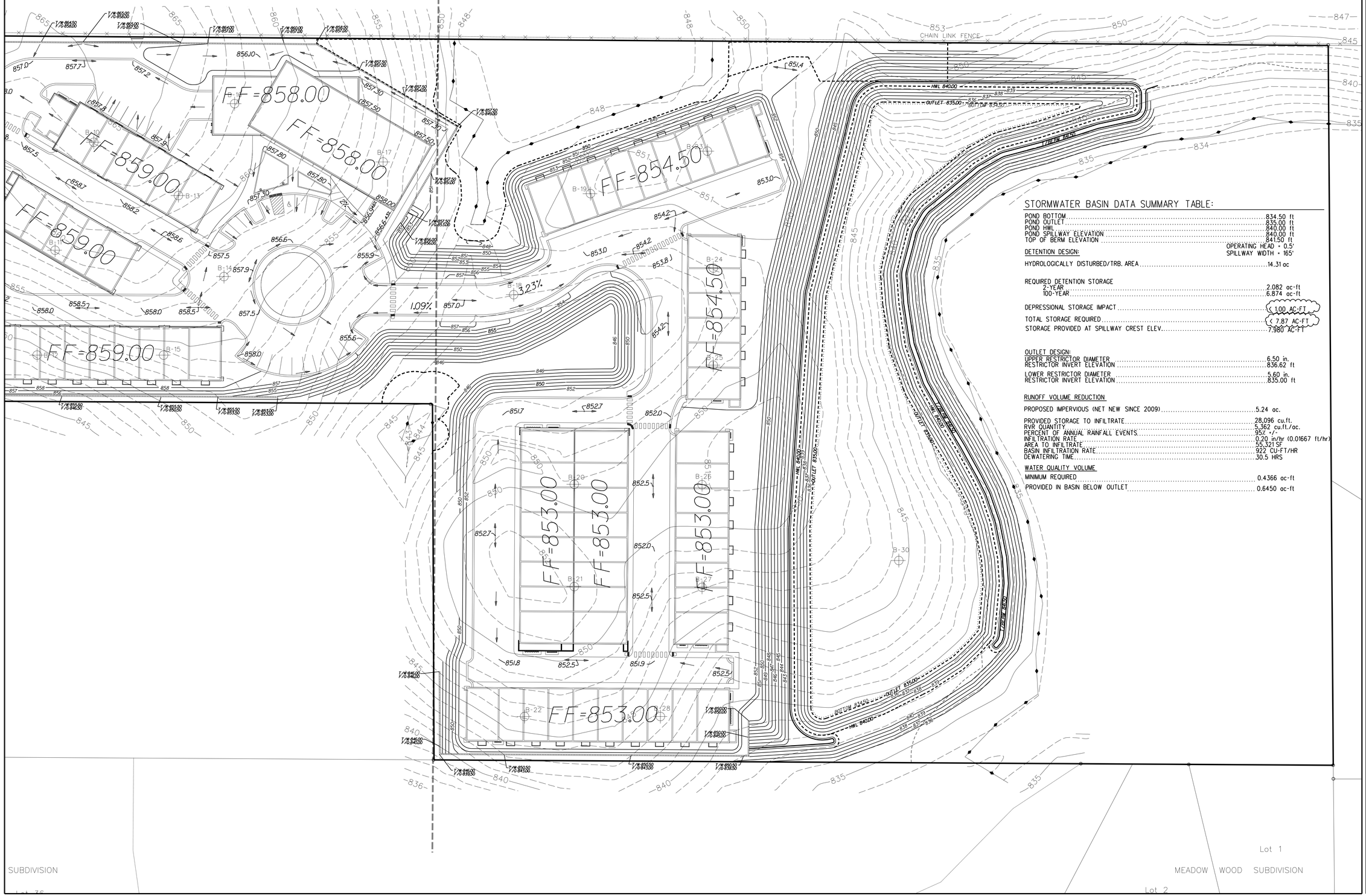
DESCRIPTION	BY	DATE

GRADING PLAN - WEST

SHEET NUMBER
7
OF 23 SHEETS

JOB No. 2541



STORMWATER BASIN DATA SUMMARY TABLE:

POND BOTTOM	834.50 ft
POND OUTLET	835.00 ft
POND HWL	840.00 ft
POND SPILLWAY ELEVATION	840.00 ft
TOP OF BERM ELEVATION	841.50 ft
DETENTION DESIGN:	OPERATING HEAD = 0.5' SPILLWAY WIDTH = 165'
HYDROLOGICALLY DISTURBED/TRB. AREA	14.31 ac
REQUIRED DETENTION STORAGE	
2-YEAR	2.082 ac-ft
100-YEAR	6.874 ac-ft
DEPRESSIONAL STORAGE IMPACT	1.00 AC-FT
TOTAL STORAGE REQUIRED	< 7.87 AC-FT
STORAGE PROVIDED AT SPILLWAY CREST ELEV.	7.980 AC-FT
OUTLET DESIGN:	
UPPER RESTRICTOR DIAMETER	6.50 in.
RESTRICTOR INVERT ELEVATION	836.62 ft
LOWER RESTRICTOR DIAMETER	5.60 in.
RESTRICTOR INVERT ELEVATION	835.00 ft
RUNOFF VOLUME REDUCTION	
PROPOSED IMPERVIOUS (NET NEW SINCE 2009)	5.24 ac.
PROVIDED STORAGE TO INFILTRATE	28,096 cu.ft.
RVR QUANTITY	5,362 cu.ft./ac.
PERCENT OF ANNUAL RAINFALL EVENTS	95% +/-
INFILTRATION RATE	0.20 in/hr (0.01667 ft/hr)
AREA TO INFILTRATE	55,321 SF
BASIN INFILTRATION RATE	922 CU-FT/HR
DEWATERING TIME	30.5 HRS
WATER QUALITY VOLUME	
MINIMUM REQUIRED	0.4366 ac-ft
PROVIDED IN BASIN BELOW OUTLET	0.6450 ac-ft

NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES

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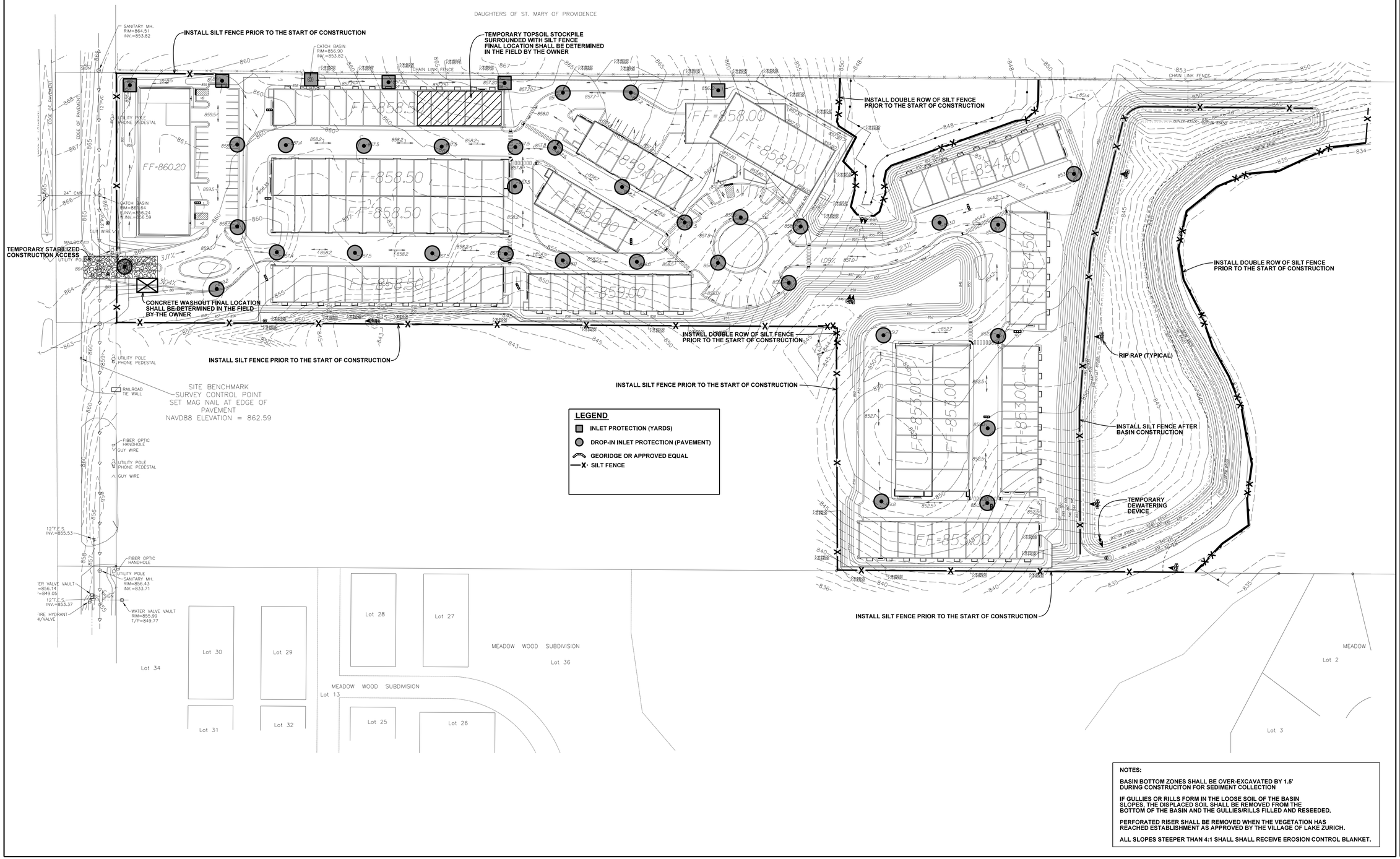
GRADING PLAN - EAST

SHEET NUMBER 8 OF 23 SHEETS

JOB No. 2541



NOTES:

BASIN BOTTOM ZONES SHALL BE OVER-EXCAVATED BY 1.5' DURING CONSTRUCITON FOR SEDIMENT COLLECTION

IF GULLIES OR RILLS FORM IN THE LOOSE SOIL OF THE BASIN SLOPES, THE DISPLACED SOIL SHALL BE REMOVED FROM THE BOTTOM OF THE BASIN AND THE GULLIES/RILLS FILLED AND RESEEDED.

PERFORATED RISER SHALL BE REMOVED WHEN THE VEGETATION HAS REACHED ESTABLISHMENT AS APPROVED BY THE VILLAGE OF LAKE ZURICH.

ALL SLOPES STEEPER THAN 4:1 SHALL SHALL RECEIVE EROSION CONTROL BLANKET.

NORTH

SCALE: 1" = 60'

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EROSION CONTROL PLAN

SHEET NUMBER 9 OF 23 SHEETS

JOB No. 2541

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 IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY 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 MEASURESAS 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.

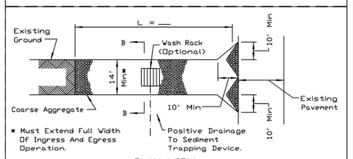
O. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.

TYPICAL CONSTRUCTION SEQUENCING

1. INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL SE/SC MEASURES
   - A. SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
   - B. SILT / CONSTRUCTION FENCE INSTALLATION
   - C. CONSTRUCTION FENCING AROUND AREAS NOT TO BE DISTURBED
   - D. STABILIZED CONSTRUCTION ENTRANCE
2. TREE REMOVAL WHERE NECESSARY (CLEAR & GRUB)
3. CONSTRUCT WATER QUALITY / RVR / SEDIMENT COLLECTION BASIN
4. STRIP TOPSOIL, STOCKPILE TOPSOIL AND GRADE SITE
5. TEMPORARILY STABILIZE TOPSOIL STOCKPILES (SEED AND SILT FENCE AROUND TOE OF SLOPE)
6. INSTALL STORM SEWER, SANITARY SEWER, WATER AND ASSOCIATED INLET & OUTLET PROTECTION
7. PERMANENTLY STABILIZE UPPER ZONES OF THE WATER QUALITY / RVR BASIN WITH SEED AND EROSION CONTROL BLANKET PER LANDSCAPE PLANS LOWER ZONE TO REMAIN OVER-EXCAVATED FOR SEDIMENT COLLECTION UNTIL CONTRIBUTING DRAINAGE AREAS ARE STABILIZED.
8. TEMPORARILY STABILIZE ALL AREAS INCLUDING LOTS THAT HAVE REACHED TEMPORARY GRADE
9. INSTALL ROADWAYS
10. PERMANENTLY STABILIZE ALL OUTLOT AREAS
11. INSTALL STRUCTURES AND GRADE INDIVIDUAL LOTS
12. PERMANENTLY STABILIZE LOTS
13. COMPLETE FINAL GRADING AND SEEEDING/PLANTING OF WATER QUALITY / RVR BASIN.
14. REMOVE ALL TEMPORARY SE/SC MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION

* SOIL EROSION AND SEDIMENT CONTROL MAINTENANCE MUST OCCUR WEEKLY AND AFTER EVERY ONE-HALF INCH (1/2") OR GREATER RAINFALL EVENT

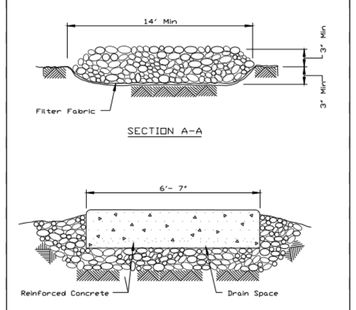
STABILIZED CONSTRUCTION ENTRANCE PLAN



NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

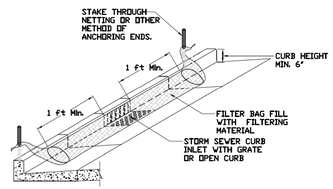
REFERENCE		STANDARDS DWG. NO.
Project		
Designed	Date	NRCS Natural Resources Conservation Service
Checked	Date	IL-630
Approved	Date	SHEET 1 OF 2
		DATE 8-18-94

STABILIZED CONSTRUCTION ENTRANCE PLAN



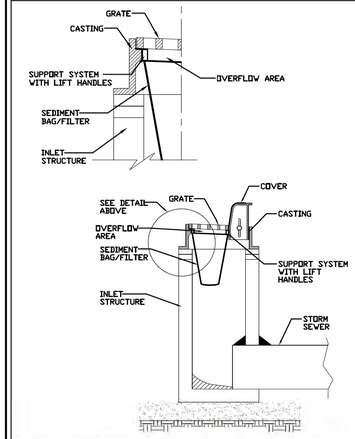
REFERENCE		STANDARDS DWG. NO.
Project		
Designed	Date	NRCS Natural Resources Conservation Service
Checked	Date	IL-630
Approved	Date	SHEET 2 OF 2
		DATE 8-18-94

INLET PROTECTION - PAVED AREAS CURB PROTECTION

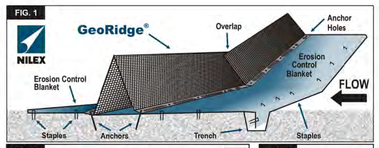


REFERENCE		STANDARDS DWG. NO.
Project		
Designed	Date	IUM-561C
Checked	Date	SHEET 1 OF 1
Approved	Date	DATE 02-11-11

INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION



REFERENCE		STANDARDS DWG. NO.
Project		
Designed	Date	IUM-561D
Checked	Date	SHEET 1 OF 1
Approved	Date	DATE 02-11-11



GEORIDGE

INSTALLATION INSTRUCTIONS

Select an erosion control blanket (ECB) grade based on the channel geometry and flow conditions. Follow manufacturer's recommended installation procedures.

Refer to the diagram for steps 1-4

Step 1: A section of ECB shall be placed across the flowline direction of the channel prior to the installation of the GeoRidge®. The ECB section must span the entire width of the channel, while the width of the blanket must be at least one roll width or no less than 1.22m (4 ft.).

Step 2: The upstream edge of the ECB must be secured in a 100mm (4") trench. Secure the blanket in the trench using 150mm or 6 inch minimum staples placed at 500mm (1.67 ft.) intervals along the edge. Backfill and re-compact the soil in the upstream edge trench.

Step 3: Secure the downstream edge of the blanket with 150mm or 6 inch minimum staples placed at 300mm (1 ft.) intervals along the edge.

Step 4: Place the GeoRidge® berm in the middle of the ECB and anchor with 10 inch spiral spikes. Anchor spacing depends on soil condition and density. Minimum recommendation is 3 anchors on the upstream side and 2 anchors on the downstream side. The anchors will prevent water from going around or under the GeoRidge®. (See figure 3.)

NOTE: If multiple GeoRidge® panels are required to span a channel, ensure that the anchor holes line-up when you overlap each panel. (See figure 2.)

SPACING: When positioning GeoRidge® panels in a channel, the gradient plays a key role in the distance between panels as follows:

GRADIENT	SPACING
1%	23.0 m
2%	11.5 m
3%	7.7 m
4%	5.8 m
5%	4.6 m
6%	3.8 m
7%	3.3 m
8%	2.9 m
9%	2.6 m
10%	2.3 m

Spacing is based on calculating the height of GeoRidge® divided by the gradient.

Example: On a 2% gradient...
0.230 m (height of GeoRidge®) / 0.02 Gradient = 11.5 m spacing.

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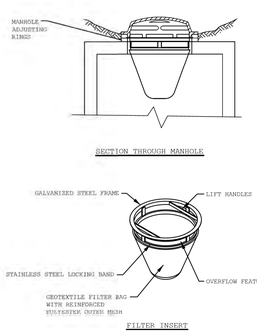
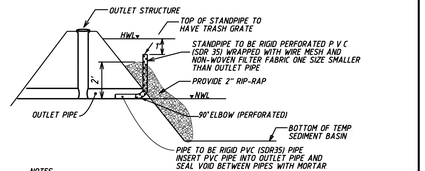
1-800-667-4811

NILEX

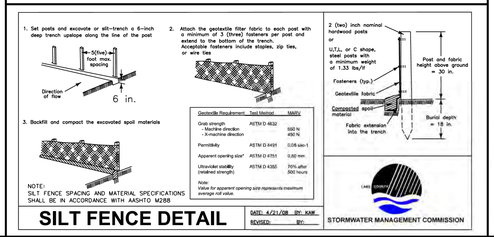
TEMPORARY SILTATION BASKET INSTALLATION BETWEEN INLET FRAME AND GRADE





NOTES
1. A PERFORATED STANDPIPE SHALL BE PROVIDED AS PART OF THE SEDIMENT BASIN EROSION CONTROL MEASURES DURING CONSTRUCTION PVC PIPE SHALL BE ONE SIZE SMALLER THAN OUTLET PIPE
2. NON-WOVEN FILTER FABRIC SHALL BE WRAPPED OVER THE WIRE MESH AND FASTENED TO THE PERFORATED STANDPIPE WITH STRAPPING OR CONNECTING BANDS
3. WHEN THE SEDIMENT BASIN IS NO LONGER REQUIRED FOR SEDIMENT CONTROL, THE ENTIRE STANDPIPE ASSEMBLY SHALL BE REMOVED

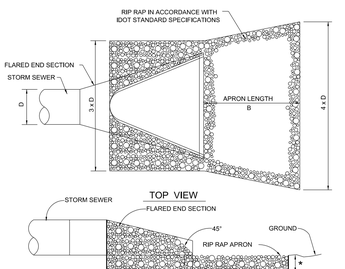
DEWATERING DEVICE



SILT FENCE DETAIL

STORMWATER MANAGEMENT COMMISSION

DATE: 4/21/08 BY: KAW
REVISED: BY:



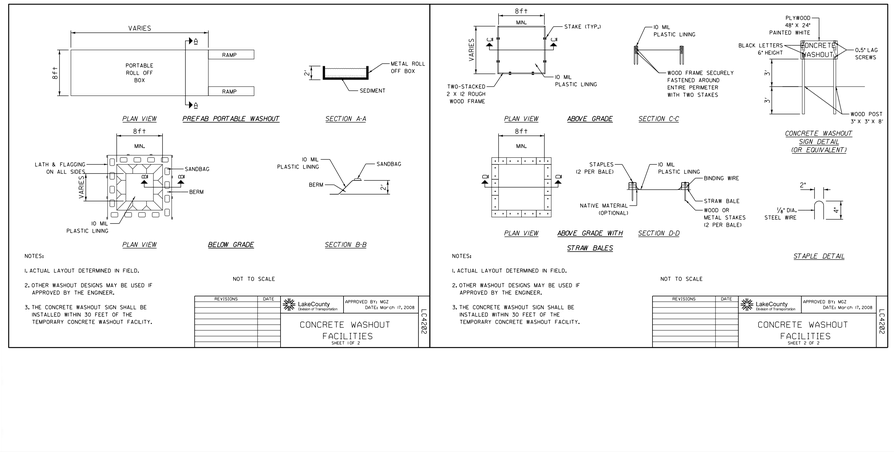
NOTE: D = PIPE I.D.

CLASS	* MIN. THICKNESS
A3	8"
A4	16"
A5	22"
A6	26"
A7	32"

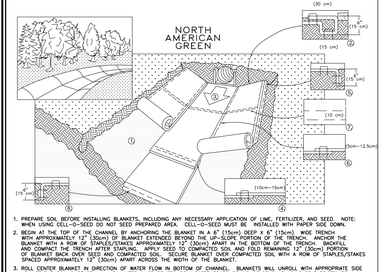
PIPE DIAMETER (IN.)	STONE RIP-RAP								BEDDING	
	QUALITY DESIGNATION	GRADATION (RR) NUMBER	MINIMUM THICKNESS (IN.)	MINIMUM APRON LENGTH (FT.) B	WEIGHT RANGE (#)	WEIGHT AVERAGE (#)	SIZE AVERAGE (IN.)	GRADATION (RR) NUMBER	MINIMUM THICKNESS (IN.) C
12	C	3	12"	4'	1-50	10	4.5	NOT	REQ'D.
15	C	3	14"	5'	1-50	10	4.5	NOT	REQ'D.
18	C	4	16"	6'	1-50	40	7	1	6"
24	B	4	20"	8'	1-150	40	7	1	6"
27 / 30	B	4	22"	10'	1-150	40	7	1	6"
36	B	5	24"	12'	3-400	90	10	1	8"
42 / 48	B	6	28"	16'	6-600	170	12	2	10"
60	B	6	36"	20'	6-600	170	12	2	10"
72	B	6	44"	24'	6-600	170	12	2	10"

NOTE:
1. FOR PIPE 72" AND LARGER A SPECIAL DESIGN OF RIP-RAP OR APRON IS REQUIRED.
2. GRADATION REFER TO I.D.O.T. SPECIFICATIONS AND STANDARDS.

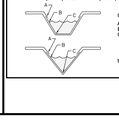
STONE RIP RAP DETAIL



CHANNEL INSTALLATION



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS SPLICED DOWN THE CHANNEL WITH 4" (10cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 3"-5" (5cm-12.5cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

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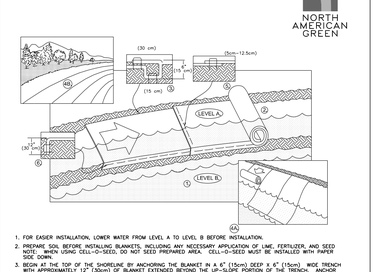
SHORELINE INSTALLATION



1. FOR EASIER INSTALLATION, LOWER WATER FROM LEVEL A TO LEVEL B BEFORE INSTALLATION.
2. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
3. BEGIN AT THE TOP OF THE SHORELINE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
4. ROLL BLANKETS EITHER (A) DOWN THE SHORELINE FOR LONG BANKS, (TOP TO BOTTOM) OR (B.) HORIZONTALLY ACROSS THE SHORELINE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. THE EDGES OF ALL HORIZONTAL AND VERTICAL BLANKET SEAMS MUST BE STAPLED WITH APPROXIMATELY 3"-5" (5cm-12.5cm) OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT BETWEEN ADJACENT BLANKETS, PLACE THE EDGE OF THE OVERLAPPING BLANKET UNDERNEATH BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH™ON THE PREVIOUSLY INSTALLED BLANKET. SECURE ALL OVERLAPS WITH STAPLES SPACED 12" (30cm) APART.
   NOTE:
   * SEAM OVERLAP SHOULD BE SHINGLED ACCORDING TO PREDOMINANT EROSIVE ACTION.
6. THE EDGE OF THE BLANKET AT OR BELOW NORMAL WATER LEVEL MUST BE ANCHORED BY PLACING THE BLANKET IN A 12" (30cm) DEEP X 6" (15cm) WIDE ANCHOR TRENCH. ANCHOR THE BLANKET WITH 4 ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING (STONE OR SOIL MAY BE USED AS BACKFILL).
   NOTE:
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

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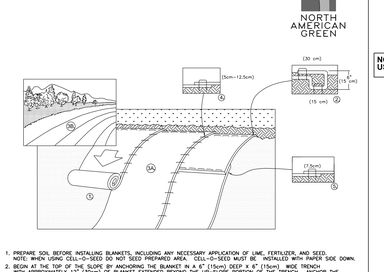
SLOPE INSTALLATION



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH™ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

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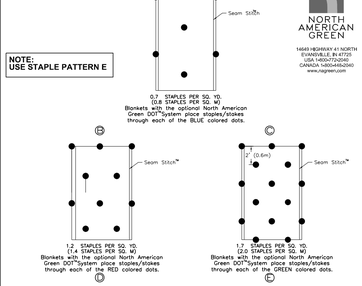
STAPLE PATTERN GUIDE

NOTE:
USE STAPLE PATTERN E

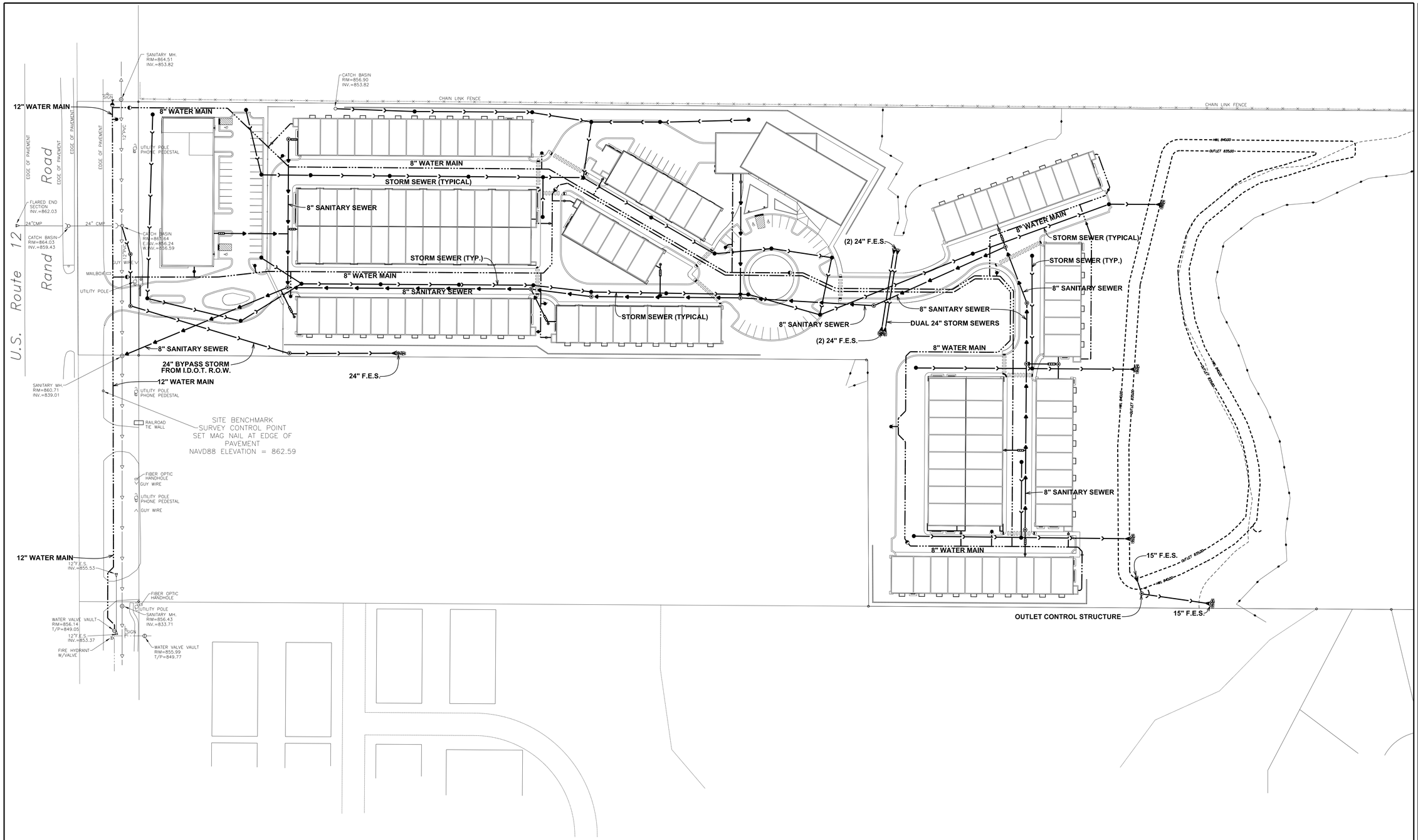


*Location of Seam Stitch™ will vary depending on North American Green product type: ~Approx. 5" seam overlap for BioNet erosion control blankets

LUXE CORSA AUTO SUITES

24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-6707
FAX: (847) 367-2867
E-MAIL ADDRESS: pba@pbaeng



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DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION	DATE	BY

REVISIONS

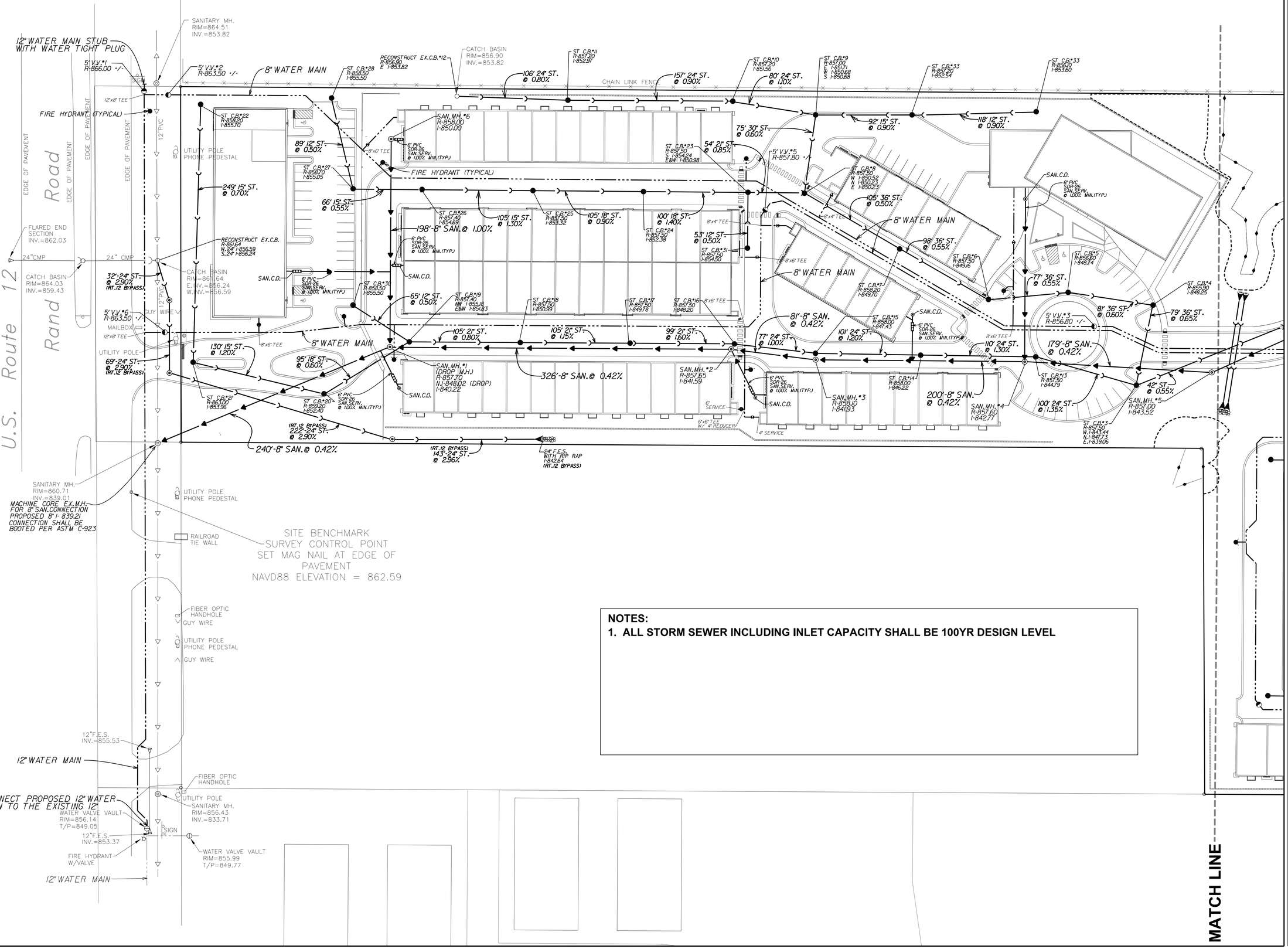
GENERAL UTILITY PLAN

SHEET NUMBER

11

OF 23 SHEETS

JOB No. 2541



NOTES:
1. **ALL STORM SEWER INCLUDING INLET CAPACITY SHALL BE 100YR DESIGN LEVEL**

NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES

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CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION	DATE	BY

REVISIONS

UTILITY PLAN - WEST

SHEET NUMBER 12 OF 23 SHEETS

JOB No. 2541

DAUGHTERS OF ST. MARY OF PROVIDENCE

CHAIN LINK FENCE

CHAIN LINK FENCE

8" WATER MAIN

SAN.MH.*5
R-857.00
I-843.52

ST. C.B.*3
R-857.50
W.I-843.44
N.I-847.73
E.I-839.06

24" F.E.S.(2) W/RIP RAP
24' I-846.00

ST. C.B.*2
R-853.00
I-837.85

220' 42" ST. @ 0.55% (MINIMUM)

DUAL (2) 112' 24" ST.@ 0.67%

24" F.E.S.(2) W/RIP RAP
24' I-845.25

ST. C.B.*36
R-851.70
I-849.20

193'-8" SAN. @ 0.42%

151' 12" ST. @ 2.00%

8"x8" TEE

195' 42" ST. @ 0.55% (MINIMUM)

SAN.C.O.

6" PVC SDR-26 SAN.SERV. @ 1.00% MIN.(TYP.)

8"x8"TEE W/ 6" & 4" REDUCERS

6" SERVICE

4" SERVICE

SAN.MH.*7
R-854.00
I-844.33

ST. C.B.*37
R-853.90
I-850.80

81'-8" SAN. @ 0.42%

SAN.MH.*8
R-854.20
I-844.67

81'-8" SAN. @ 0.42%

SAN.MH.*9
R-852.10
I-845.01

156' 12" ST.@ 0.90%

137' 15" ST.@ 2.50%

SAN.MH.*10
R-8
I-845.87

ST. C.B.*35
R-852.00
W&N I-847.80
E I-838.43

43'-8" SAN. @ 2.00%

FIRE HYDRANT (TYPICAL)

6" PVC SDR-26 SAN.SERV. @ 1.00% MIN.(TYP.)

SAN.C.O.

ST. C.B.*42
R-852.00
I-849.00

101' 12" ST.@ 2.36%

8" WATER MAIN

221'-8" SAN. @ 0.42%

ST. C.B.*40
R-851.80
I-848.80

ST. C.B.*39
R-851.90
W&N I-846.62
E I-837.63

SAN.MH.*11
R-852.00
I-845.94

146' 18" ST.@ 1.80%

145' 12" ST.@ 1.50%

8"x8" TEE

5' V.V.*4
R-852.00 +/-

6" PVC SDR-26 SAN.SERV. @ 1.00% MIN.(TYP.)

SAN.C.O.

8"x8"TEE W/ 6" & 4" REDUCERS

6" SERVICE

4" SERVICE

ST. C.B.*2
R-853.00
W I-835.78
E I-835.43

70' 42" ST. @ 0.61% (MINIMUM)

42" F.E.S. W/RIP RAP
I-835.00

HWL 840.00

OUTLET 835.00

15" F.E.S. W/RIP RAP
I-835.00

18" F.E.S. W/RIP RAP
I-835.00

15" F.E.S.
I-835.00

23' 15" ST. FLAT

93' 15" ST.@ 0.34%

15" F.E.S.
I-834.68

NOTES:
1. ALL STORM SEWER INCLUDING INLET CAPACITY SHALL BE 100YR DESIGN LEVEL

Lot 27

MEADOW WOOD SUBDIVISION

Lot 36

MATCH LINE

Lot 2

NORTH

SCALE: 1" = 40'

40' 20' 0 40'

LUXE CORSA AUTO SUITES

24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-6707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pbaengineers.com

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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25.

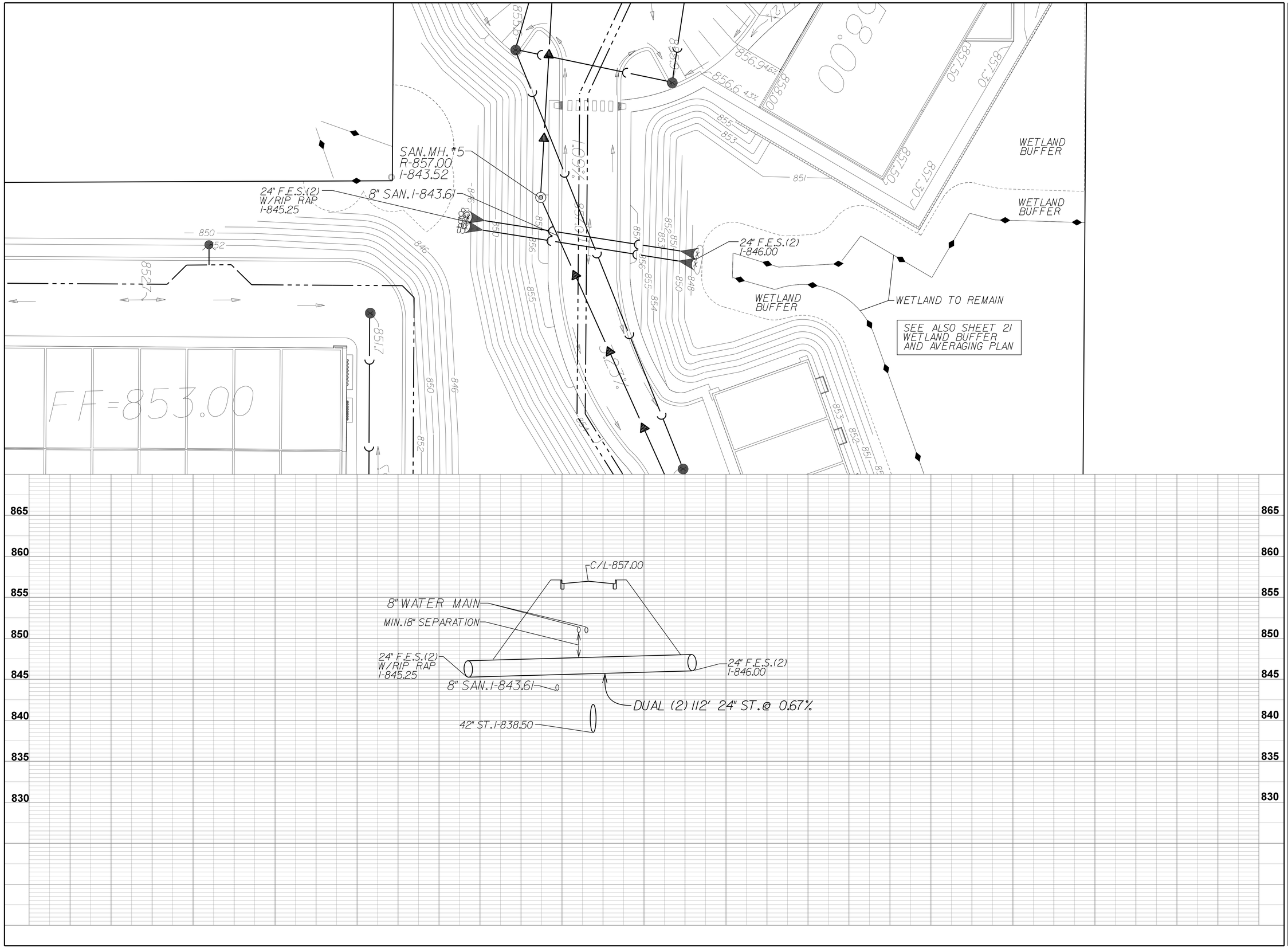
DATE	BY	DESCRIPTION

REVISIONS

UTILITY PLAN - EAST

SHEET NUMBER
13
OF 23 SHEETS

JOB No. 2541



NORTH

SCALE: 1" = 20'

LUXE CORSA AUTO SUITES

LAKE ZURICH, ILLINOIS

PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
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DESIGNED BY: R.A.A.
DRAWN BY: A.K.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DATE	BY	DESCRIPTION

REVISIONS

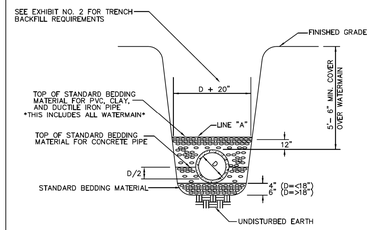
PLAN AND PROFILE

SHEET NUMBER
14
OF 23 SHEETS

JOB No. 2541

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.

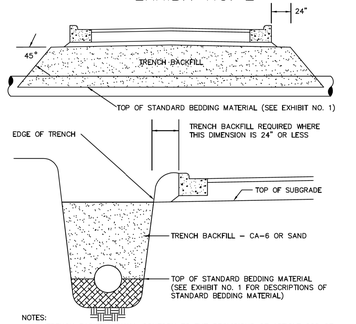
EXHIBIT NO. 1



NOTES:
1. STANDARD BEDDING MATERIAL FOR NON-PLASTIC PIPE INCLUDING ALL WATERMAIN SHALL BE 1/4" TO 3/4" CRUSHED STONE, ASTM 448, SIZE CA-7 TO CA-11.
2. STANDARD BEDDING MATERIAL FOR PLASTIC PIPE SHALL CONFORM TO ASTM D2321, CLASS II NON-ANGULAR AGGREGATE.
3. SELECT, WELL COMPACTED EXCAVATED MATERIAL SHALL BE PLACED TO LINE "A" IF STANDARD BEDDING MATERIAL IS NOT REQUIRED TO LINE "A."
4. VOIDS LEFT BY SHEETING SHALL BE FILLED WITH STANDARD BEDDING MATERIAL AS THE SHEETING IS REMOVED.

TYPICAL TRENCH AND STANDARD BEDDING

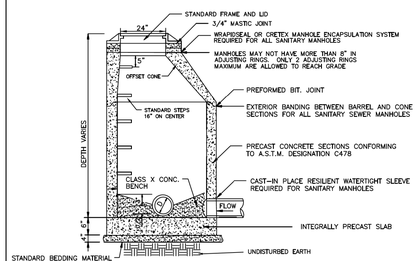
EXHIBIT NO. 2



NOTES:
1. TRENCH BACKFILL SHALL CONFORM TO THE PROVISIONS OF ARTICLE 208 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. TRENCH DIMENSIONS AS DETAILED ELSEWHERE SHALL BE USED TO CALCULATE PAYMENT LIMITS. ADDITIONAL TRENCH BACKFILL NECESSARY TO FILL A TRENCH WIDER THAN THAT DETAILED SHALL BE PROVIDED AND PLACED AT NO ADDITIONAL COST TO THE DEVELOPER, OWNER, OR VILLAGE.

TRENCH BACKFILL

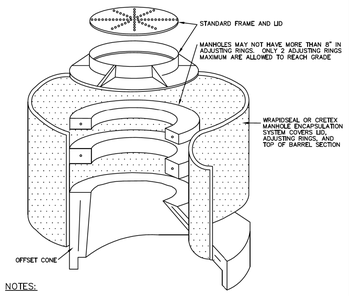
EXHIBIT NO. 3



NOTES:
1. FOR SEWERS 24 INCHES OR LESS IN DIAMETER, USE 48 INCH MANHOLES; FOR SEWERS MORE THAN 24" INCHES IN DIAMETER, USE 60" INCH MANHOLES.
2. FOR VITRIFIED CLAY PIPE SEWERS, LOCATE A BELL OR SPIGOT AS APPROPRIATE JUST OUTSIDE THE MANHOLE WALL TO PROVIDE A PIVOT POINT FOR ANY DIFFERENT MOVEMENT.
3. WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM REQUIRED FOR ALL SANITARY SEWER MANHOLES. (SEE EXHIBIT NO. 4)
4. WATER TIGHT SEALENT REQUIRED FOR ALL SANITARY SEWER MANHOLES.

STANDARD MANHOLE

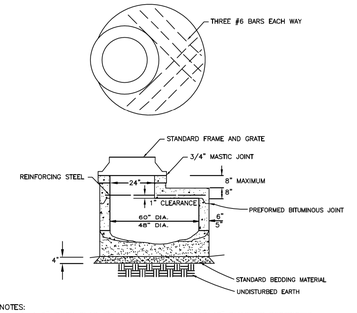
EXHIBIT NO. 4



NOTES:
1. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED ON ALL SANITARY SEWER MANHOLES.
2. WRAPIDSEAL OR CRETEX MANHOLE ENCAPSULATION SYSTEMS ARE REQUIRED. ANY OTHER PRODUCTS OR OTHER DESIGN SOLUTIONS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER OR DIRECTOR OF PUBLIC WORKS.
3. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND INSTRUCTIONS.

WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM

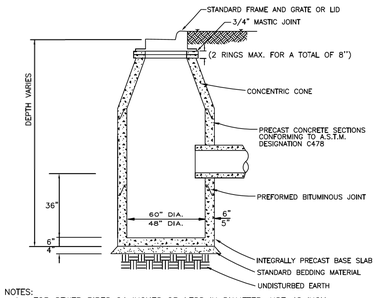
EXHIBIT NO. 5



NOTES:
1. A 6" THICK SLAB TOP MAY BE ALLOWED FOR 48" DIAMETER RESTRICTED DEPTH CATCH BASINS NOT IN PAVEMENT.
2. A WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM SHALL BE REQUIRED IN LOCATIONS WHERE WRAPIDSEAL IS CALLED FOR.
3. NO STEPS ARE REQUIRED IN RESTRICTED DEPTH CATCH MANHOLES.

FLAT TOP FOR RESTRICTED DEPTH MANHOLE

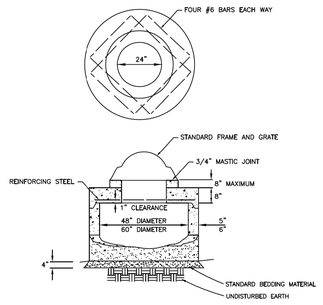
EXHIBIT NO. 7



NOTES:
1. FOR SEWER PIPES 24 INCHES OR LESS IN DIAMETER, USE 48 INCH DIAMETER CATCH BASIN; FOR SEWER PIPES MORE THAN 24 INCHES IN DIAMETER, USE 60 INCH DIAMETER CATCH BASIN.
2. OUTLET PIPE SHALL BE NO LESS THAN 12 INCHES IN DIAMETER.
3. STEPS ARE REQUIRED IF THE CATCH BASIN IS OVER 7' IN DEPTH.
4. STEPS ARE TO BE 16" ON CENTER, ON THE OPPOSITE SIDE FROM THE OUTLET PIPE.

CATCH BASIN

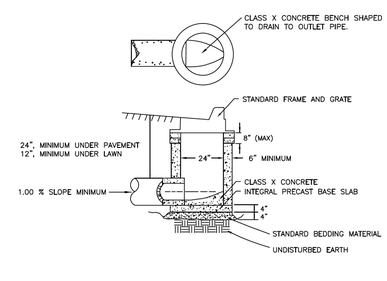
EXHIBIT NO. 8



NOTES:
1. A 6" THICK SLAB TOP MAY BE ALLOWED FOR 48" DIAMETER RESTRICTED DEPTH CATCH BASINS NOT IN PAVEMENT.
2. NO STEPS ARE REQUIRED IN RESTRICTED DEPTH CATCH BASINS.

FLAT SLAB TOP FOR RESTRICTED DEPTH C.B.

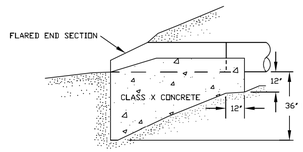
EXHIBIT NO. 9



NOTES:
1. INLET BARREL SECTIONS SHALL CONFORM TO A.S.T.M. DESIGNATION C478.
2. MINIMUM PIPE SIZE FOR INLETS IN PUBLIC STREETS IS 10" DIAMETER.
3. DUCTILE IRON PIPE SHALL BE USED IN PAVED AREAS OF PUBLIC STREETS FOR INLET PROTECTION IF LESS THAN 3 FEET OF COVER IS PROVIDED.

INLET

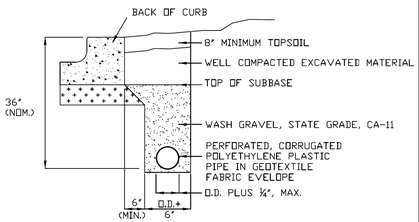
EXHIBIT NO. 10



NOTES:
1. WIDTH OF THE FOUNDATION SHALL BE THE SAME AS THE WIDTH OF THE FLARED END SECTION. THE TOP OF FOUNDATION SHALL EXTEND HALF-WAY UP THE SIDE OF THE FLARED END SECTION.
2. THE BOTTOM OF THE FOUNDATION SHALL REST ON UNDISTURBED EARTH. THE BOTTOM OF THE FOUNDATION SHALL BE NO LESS THAN THREE (3') DEEP AT THE OPEN END OF THE FLARED END SECTION.
3. A FOUNDATION SIMILAR TO THIS FOUNDATION SHALL BE CONSTRUCTED UNDER ALL PRECAST HEADWALLS.

FOUNDATION FOR FLARED END SECTION

EXHIBIT NO. 11



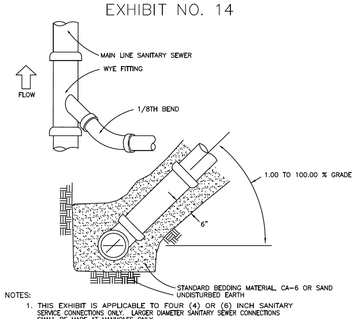
UNDERDRAIN

EXHIBIT NO. 12

~~MINIMUM STANDARDS FOR STREET DESIGN~~

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

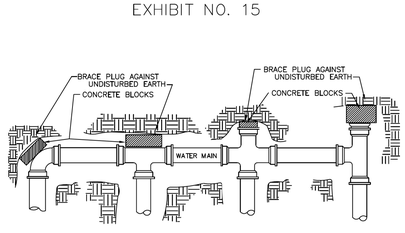
EXHIBIT NO. 14



NOTES:
1. THIS EXHIBIT IS APPLICABLE TO FOUR (4) OR (6) INCH SANITARY SERVICE CONNECTIONS ONLY. LARGER DIAMETER SANITARY SEWER CONNECTIONS SHALL BE MADE AT MANHOLES ONLY.
2. THE BEDDING UNDER THE WYE FITTING AND STUB SHALL BE CAREFULLY COMPACTED TO PREVENT THE WYE FITTING FROM ROTATING.
3. THE SANITARY SERVICE CONNECTION PIPE SHALL BE LAID IN A STRAIGHT LINE AND AT A UNIFORM GRADIENT FROM THE TOP OF THE RISE FROM THE MAIN LINE TO THREE (3) FEET BEYOND THE RIGHT-OF-WAY LINE.
4. SECURELY PLUG THE END OF THE SERVICE CONNECTION.

SANITARY SERVICE CONNECTION

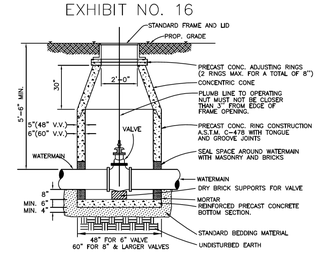
EXHIBIT NO. 15



NOTES:
1. PROVIDE THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT ALL BENDS, TEES, CAPS, VALVES, HYDRANTS, AND AT POINTS SPECIFIED BY THE ENGINEER.
2. ALL BLOCKING SHALL BE MADE WITH CONCRETE BLOCKS AGAINST UNDISTURBED VERTICAL EARTH SURFACE.
3. ALTERNATE METHODS OF RESTRAINING WATER MAIN COMPONENTS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER.
4. NO WOOD IS ALLOWED IN THE THRUST BLOCKS.
5. MEGALUGS SERIES 1100 OR APPROVED EQUAL ARE REQUIRED AT ALL JOINTS.

THRUST BLOCK

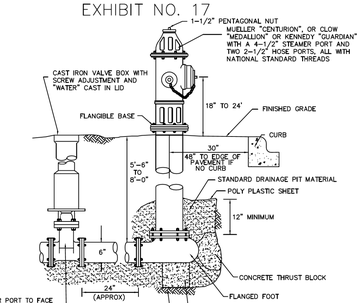
EXHIBIT NO. 16



NOTES:
1. WATER MAIN 8 INCHES OR MORE IN DIAMETE SHALL REQUIRE A 60 INCH DIAMETER VALVE VAULT; WATER MAIN LESS THAN 8 INCHES IN DIAMETER SHALL REQUIRE A 48 INCH VALVE VAULT
2. INSTALL MINIMUM 4" OF SELECTED GRANULAR BACKFILL UNDER STRUCTURE BOTTOM SECTION AND FILL ENTIRE EXCAVATION ALL AROUND STRUCTURE UP TO C.L. OF PIPE WITH BEDDING MATERIAL.
3. PIPE OPENINGS SHALL BE CAST INTO WALL.
4. STRUCTURE FRAME, ADJUSTING RINGS, AND ALL CONCRETE SECTIONS SHALL BE SET ON AND SEALED WITH BITUMINOUS MASTIC JOINT MATERIAL.
5. FILL LUG HOLES WITH BITUMINOUS JOINING COMPOUND.
6. VALVE VAULT BARREL SECTIONS SHALL CONFORM TO A.S.T.M. 478 AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, 5TH EDITION MAY 1996.

VALVE VAULT

EXHIBIT NO. 17



NOTES:
1. STEAMER PORT TO FACE PAVEMENT
2. PROVIDE 2 FOOT DIAMETER BY 2 FEET DEEP DRAINAGE PIT FILLED WITH 1 INCH WASHED STONE BELOW AND ADJACENT TO HYDRANT.
3. HYDRANT TO BE PAINTED ALKYD ENAMEL SAFETY RED

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

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VILLAGE OF LAKE ZURICH DETAILS

LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION | DATE BY

REVISIONS

DETAILS

SHEET NUMBER 15 OF 23 SHEETS

JOB No. 2541

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 & SERVICES — PRESSURE PIPE SHALL BE PVC ASTM D2241 SDR 26, WITH INTEGRATED BELL JOINING SYSTEM
~~PVC, SDR 26, meeting requirements of ASTM D 3034~~ PER ASTM D-3139 AND ELASTOMERIC SEAL PER ASTM F477.
Gasketed Joint / Cell Classification 12454 - B
Depth over 15 feet - SDR 12 or 18
~~Service Laterals: PVC SCH 40 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"
WrapidSeal Manhole Encapsulation System is required on all sanitary manholes
Contractor shall be qualified by manufacturer's rep. to install WrapidSeal
Exterior banding between barrel and cone sections is required
Manhole must be water tight and sealed from the outside
Fiberglass steps
Casing — The casing 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
Forcemain — If PVC pipe (C900) is used, #6 solid copper tracing wire is required for locating purposes

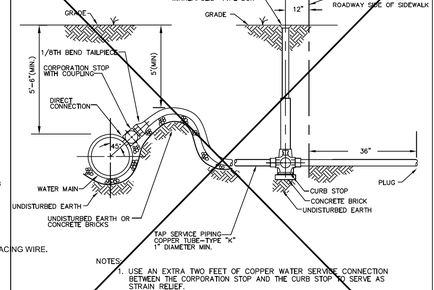
WATERMAIN
Fire Hydrants — Clow Medallion, 5 1/4 " with Auxiliary Valve
Kennedy Guardian, 5 1/4 " with Auxiliary Valve
Mueller Centurion A - 423 with Auxiliary Valve
5 1/4 " three-way (2 hose nozzles and 1 pumper nozzle)
Painted Safety Red PVC C-900, AWWA C-900-07 WITH AWWA F477 GASKETS WITH TRACING WIRE.
Pipe — ~~Class 52 Ductile Iron, cement lined, Megalugs Series 1100 required at all fittings.~~
Wrapping the watermain 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
American Flow Control AFC series 500 NRS
Resilient Wedge Valve UL/FM General
Mueller Resilient Wedge Valve
Non-Rising Stem, Mechanical Joint
Manholes — Cast Iron Frames and Lids: Neenah Type 1 self-sealing Marked "Water"
Casing — The casing 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
Corporation Stop — Mueller H - 15000 - 1" Size
AY McDonald 4701
Roundway — Mueller H-15154 - 1" Stop, Minneapolis Pattern
AY McDonald 6104
B-Box — Mueller H - 10300 Upper section inside diameter 1 1/4"
Mueller H - 10302 Upper section inside diameter 1 1/2"
Service Line — 1" Type K Copper, or as required by plumbing code.
Tapping Saddle — 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 first permanent water valves are installed.
9. Water vaults for 8" valves and larger must have an inside diameter of 60".

UTILITY MATERIAL STANDARDS

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

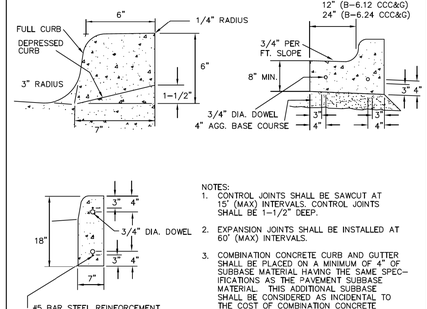
STREET	RIGHT-OF WAY WIDTH	PAVEMENT WIDTH*	RADIUS OF HORIZ. CURVES	LENGTH OF VERT. CURVES	TANGENT BETWEEN HORIZ. REVERSE CURVES	MAXIMUM GRADIENT	MINIMUM GRADIENT	CLEAR SIGHT DISTANCE
MAJOR	100 FT.	54 FT.	500 FT.	200 FT. (a)	200 FT.	5%	0.5%	500 FT.
COLLECTOR	80 FT.	44 FT.	400 FT.	200 FT. (a)	200 FT.	5%	0.5%	400 FT.
MINOR	60 FT.	30 FT.	150 FT.	100 FT. (b)	–	6%	0.5%	200 FT.
CUL-DE-SAC	120 FT.	88 FT.	150 FT.	100 FT. (b)	–	6%	0.5%	200 FT.
MARGINAL ACCESS	60 FT.	30 FT.	400 FT.	200 FT. (a)	100 FT.	6%	0.5%	200 FT.
IN BUSINESS AND INDUSTRIAL DIST.	80–100 FT.	54 FT.	500 FT.	200 FT. (a)	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) FORTY (40) 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

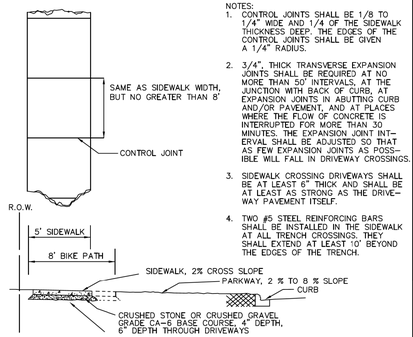
EXHIBIT NO. 24



NOTES:
1. CONTROL JOINTS SHALL BE SAWCUT AT 15' (MAX) INTERVALS. CONTROL JOINTS SHALL BE 1-1/2" DEEP.
2. EXPANSION JOINTS SHALL BE INSTALLED AT 60' (MAX) INTERVALS.
3. COMBINATION CONCRETE CURB AND GUTTER SHALL BE PLACED ON A MINIMUM OF 4" OF SUBBASE MATERIAL HAVING THE SAME SPECIFICATIONS AS 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

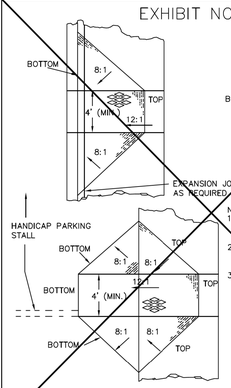
EXHIBIT NO. 25



NOTES:
1. CONTROL JOINTS SHALL BE 1/8 TO 1/4" WIDE AND 1/4 OF THE SIDEWALK THICKNESS DEEP. THE EDGES OF THE CONTROL JOINTS SHALL BE GIVEN A 1/4" RADIUS.
2. 3/4", THICK TRANSVERSE EXPANSION JOINTS SHALL BE REQUIRED AT NO MORE THAN 50' INTERVALS, AT THE JUNCTION WITH BACK OF CURB, AT EXPANSION JOINTS IN ABUTTING CURB AND/OR PAVEMENT, AND AT PLACES WHERE THE FLOW OF CONCRETE IS INTERRUPTED FOR MORE THAN 30 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 AT LEAST AS STRONG AS 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

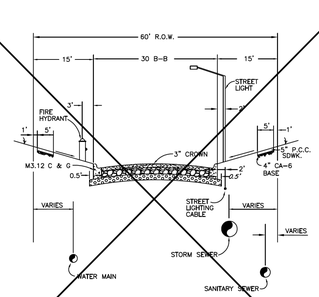
EXHIBIT NO. 26



NOTES:
1. WHERE 12:1 SLOPES ARE NOT POSSIBLE, SLOPES NO STEEPER THAN 8:1 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 FROM WET CONCRETE TO LEAVE A DIAMOND PATTERN. THE LONG AXIS OF THE PATTERN SHALL BE PERPENDICULAR TO THE CURB. GROOVES SHALL BE 1/8" DEEP AND 1/4" WIDE. ALL SLOPES ARE TO HAVE DIAMOND TEXTURE.

RAMP TEXTURE DETAIL
DIAMONDS ARE TO BE 1/2" WIDE, 1 1/4" LONG WITH 1/4" BETWEEN THEM, OR AS APPROVED

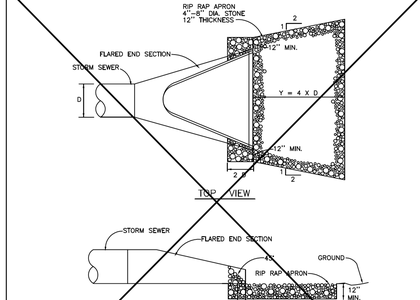
HANDICAP RAMP



3" AGGREGATE BASE COURSE
5" BITUMINOUS AGGREGATE MIXTURE
2" BITUMINOUS BINDER COURSE
1 1/2" BITUMINOUS SURFACE COURSE

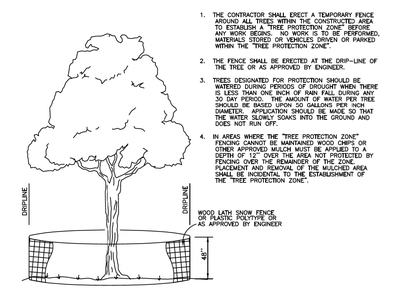
SEE EXHIBIT 12 AND EXHIBIT 19 FOR OTHER STREET DIMENSIONS

TYPICAL MINOR STREET DESIGN DETAIL



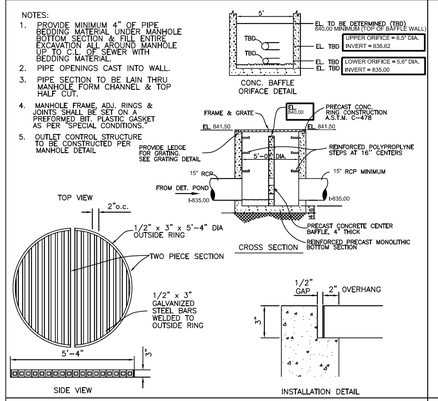
NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

FLARED END SECTION RIP RAP

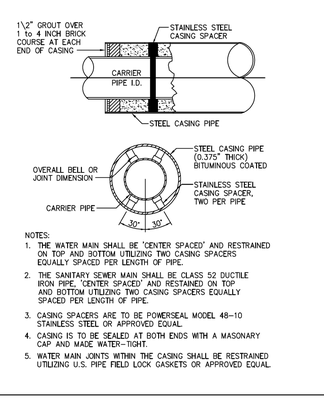


1. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES WITHIN THE CONSTRUCTED AREA TO ESTABLISH A "TREE PROTECTION ZONE" BEFORE ANY WORK BEGINS. NO WORK IS TO BE PERFORMED, MATERIALS STORED OR VEHICLES DRIVEN OR PARKED WITHIN THE "TREE PROTECTION ZONE".
2. THE FENCE SHALL BE ERECTED AT THE DRIP-LINE OF THE TREE OR AS APPROVED BY ENGINEER.
3. TREES DESIGNATED FOR PROTECTION SHOULD BE WATERED DURING PERIODS OF DROUGHT WHEN THERE IS LESS THAN ONE INCH OF RAIN FALL DURING ANY 30 DAY PERIOD. THE AMOUNT OF WATER PER TREE SHOULD BE BASED UPON 50 GALLONS PER INCH DIAMETER. APPLICATION SHOULD BE SUCH THAT THE WATER SLOWLY SOAKS INTO THE GROUND AND DOES NOT RUN OFF.
4. IN AREAS WHERE THE "TREE PROTECTION ZONE" FENCING CANNOT BE MAINTAINED WOOD CHIPS OR OTHER APPROVED MULCH MUST BE APPLIED TO A DEPTH OF 12" OVER THE AREA NOT PROTECTED BY FENCING OVER THE REMAINDER OF THE ZONE. PLACEMENT AND REMOVAL OF THE MULCHED AREA SHALL BE INCIDENTAL TO THE ESTABLISHMENT OF THE "TREE PROTECTION ZONE".

TREE PROTECTION FENCE

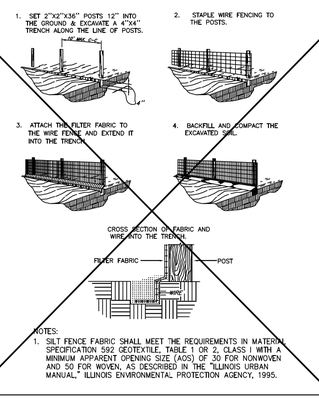


OUTLET CONTROL STRUCTURE



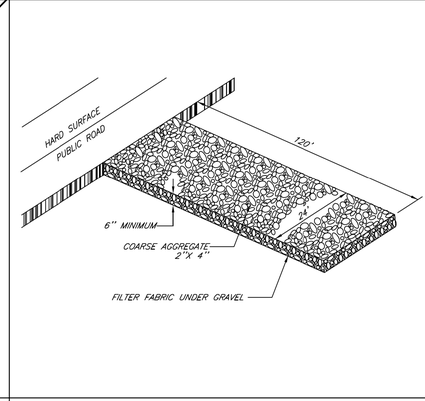
NOTES:
1. THE WATER MAIN SHALL BE 'CENTER SPACED' AND RESTRAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
2. THE SANITARY SEWER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE, 'CENTER SPACED' AND RESTAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
3. CASING SPACERS ARE TO BE POWERSEAL MODEL 48-10 STAINLESS STEEL OR APPROVED EQUAL.
4. CASING IS TO BE SEALED AT BOTH ENDS WITH A MASONARY CAP AND MADE WATER-TIGHT.
5. WATER MAIN JOINTS WITHIN THE CASING SHALL BE RESTRAINED UTILIZING U.S. PIPE FIELD LOCK GASKETS OR APPROVED EQUAL.

PIPE CASING DETAIL

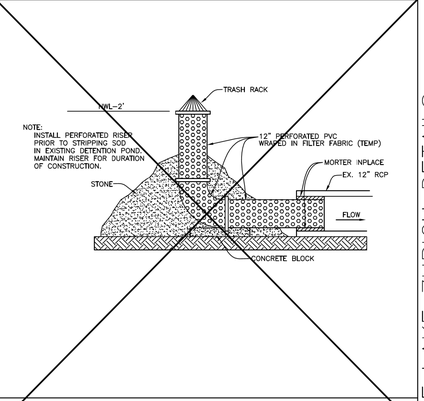


NOTES:
1. SILT FENCE FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS 1 WITH A MINIMUM APPARENT OPENING SIZE (AOS) OF 30 FOR NONWOVEN AND 50 FOR WOVEN, AS DESCRIBED IN THE "ILLINOIS URBAN MANUAL," ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, 1995.

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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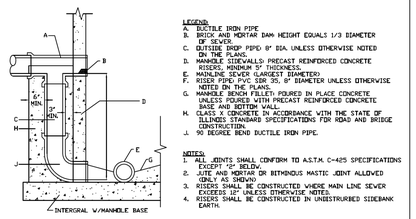
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25.

DESCRIPTION
DATE BY
REVISIONS

DETAILS

SHEET NUMBER 16 OF 23 SHEETS
JOB No. 2541

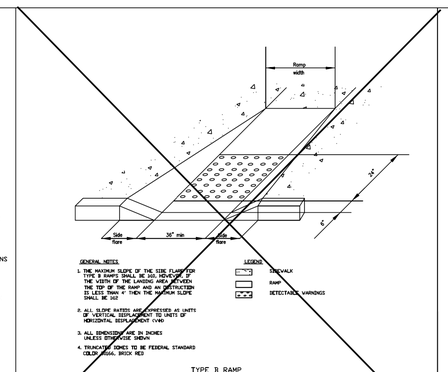
NOTE: DETAILS ARE NOT TO BE CHANGED IN any WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.



LEGEND:
A. DUCTILE IRON PIPE
B. BRICK AND MORTAR DAM HEIGHT EQUALS 1/3 DIAMETER OF SEWER.
C. OUTSIDE DROP PIPE 8" DIA. UNLESS OTHERWISE NOTED ON THE PLANS.
D. MANHOLE SIDEWALLS PRECAST REINFORCED CONCRETE RISERS, MINIMUM 5" THICKNESS.
E. MANHOLE SEWER (LARGEST DIAMETER)
F. FINISH PIPE 24" TO 30" DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
G. MANHOLE BENCH FILLET: POURED IN PLACE CONCRETE UNLESS POURED WITH PRECAST REINFORCED CONCRETE BASE AND BOTTOM WALL.
H. CLASS X CONCRETE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
I. 90 DEGREE BEND DUCTILE IRON PIPE.

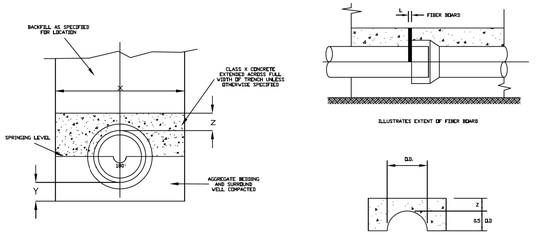
NOTES:
1. ALL JOINTS SHALL CONFORM TO A.S.T.M. C-425 SPECIFICATIONS EXCEPT "D" BELOW.
2. JUTE AND MORTAR OR BITMINOUS MASTIC JOINT ALLOWED ONLY AS SHOWN
3. RISERS SHALL BE CONSTRUCTED WHERE MAIN LINE SEWER EXCEEDS 10' UNLESS OTHERWISE NOTED.
4. RISERS SHALL BE CONSTRUCTED IN UNDISTURBED SIDEBANK EARTH.

OUTSIDE DROP PIPE DETAIL

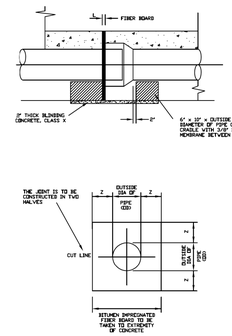


TYPE B RAMP

HANDICAP RAMP DETAIL



MASS CONCRETE ARCH



FLEXIBLE JOINT

PIPE DIA	Y MIN		Z MIN	DESIGN TRENCH WIDTH RANGE	L
	V1 MIN	V2 MIN			
4"	4"	9"	4"	1.6' - 2.6'	
6"	4"	9"	4"	1.6' - 2.6'	
8"	4"	9"	4"	1.8' - 3.0'	
10"	4"	9"	4"	2.0' - 3.2'	
12"	4"	9"	4"	2.2' - 3.3'	
15"	4"	9"	4"	2.6' - 3.9'	
18"	6"	9"	6"	3.0' - 4.3'	
21"	6"	9"	6"	3.2' - 4.3'	
24"	6"	10"	6"	3.3' - 4.6'	
27"	9"	12"	9"	4.3' - 5.6'	
30"	9"	12"	9"	4.3' - 5.6'	
36"	9"	12"	9"	4.9' - 7.2'	
42"	6"	10"	9"	5.6' - 7.9'	
48"	6"	10"	9"	6.6' - 8.5'	

18"
36"

NOTES
1. V1 SHALL BE USED IN ALL OCCASIONS EXCEPT WHERE V2 IS SPECIFIED OR DIRECTED BY THE ENGINEER.
2. V2 IS TO BE USED IN LIEU OF V1 WHERE THE EXCAVATION IS SOLELY IN MIXED SOILS CONTAINING BOULDERS, ROCK FILLETS, STONES OR OTHER UNREGULAR HARD SPOTS
3. DIMENSION Y2 SHALL BE INCREASED AT A RATE OF 3" PER ADDITIONAL 10' COVER IN EXCESS OF 16'.
4. ALL DIMENSIONS ARE IN INCHES AND FEET.
5. CONSTRUCTION WIDTHS FOR PIPE TRENCHES MUST BE WITHIN THE DESIGN RANGES GIVEN INCLUSIVE OF TEMPORARY WORKS AND PIPE SURROUND MATERIALS UNLESS OTHERWISE APPROVED BY THE ENGINEER FOLLOWING A COMPLETE DESIGN CHECK ON ANY ALTERNATIVE PROPOSAL.
6. JOINT HOLES SHALL BE PROVIDED IN TRENCHES AT SOCKETS.

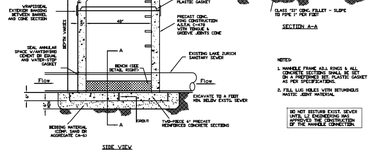
BEDDING DETAILS: PIPES IN SINGLE TRENCHES

LAKE ZURICH ENGINEERING DIVISION SANITARY MANHOLE CONSTRUCTION SEQUENCING

THE CONTRACTOR SHALL EXCAVATE AT LEAST 10" BELOW THE BOTTOM OF THE EXISTING SANITARY SEWER MAIN AND SET IN PLACE A 6" THICK TWO-PIECE PRE-CAST REINFORCED CONCRETE BOTTOM (SPLIT BOTTOM) ON A MINIMUM OF 4" THICK COMPACTED AGGREGATE BASE (CA-6). TWO-PIECE BOTTOM SHALL BE LEVEL AND THE SEAM ORIENTATED PERPENDICULAR TO THE MAIN SEWER.

SET-IN PLACE A 48" (INSIDE DIMENSION) PRE-CAST REINFORCED CONCRETE RISER SECTION WITH SUFFICIENTLY SIZED OPENINGS CAST-IN (OR CORE HOLED) TO PREVENT DIRECT CONTACT WITH THE EXISTING SEWER PIPE. THE RISER SECTION SHALL BE SET ON MASTIC STRIPS TO FORM A TIGHT SEAL BETWEEN THE RISER SECTION AND THE SPLIT BOTTOM. THE ANNULAR SPACE BETWEEN THE RISER SECTION AND THE SEWER PIPE SHALL BE FILLED WITH SOLID AND SEALED WITH NON-SHRINK CEMENT. THE REMAINING SECTIONS OF THE PROPOSED MANHOLE SHALL BE INSTALLED UPON FINISHED GRADE AS INDICATED.

THE REMAINING SPACE AT THE INSIDE BOTTOM OF THE PROPOSED MANHOLE SHALL BE FILLED WITH CLASS "SI" CONCRETE AND SHAPED TO PROVIDE A SMOOTH FLOW LINE FROM THE EXISTING SEWER PIPE. AFTER THE CONSTRUCTION IS COMPLETED AND ACCEPTANCE OF THE NEW SERVICES AND MANHOLE BY A LAKE ZURICH ENGINEERING OFFICIAL, EXISTING CONTRACTOR SHALL REMOVE THE TOP HALF OF THE EXISTING SEWER PIPE AND SMOOTH ALL SHARP EDGES WITH HYDRAULIC CEMENT. THE INVERT OF THE NEW PIPE SHALL BE FISHMES SO AS TO DIRECT SEWAGE INTO THE FLOW OF THE MAIN SEWER.



NOTES:
1. MANHOLE FRAME AND RINGS & ALL CONCRETE SECTIONS SHALL BE SET IN A PREFORMED RE-PLASTIC GASKET AS PER SPECIFICATIONS.
2. FILL S.W. HOLES WITH BITUMINOUS MASTIC JOINT MATERIAL.

DO NOT DISTURB EXIST. SEWER UNTIL ENGINEERING HAS APPROVED THE NEW SEWER AND THE COMPLETION OF THE MANHOLE CONNECTION.

STANDARD MH CONSTRN. OVER EXSTG SEWER

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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VILLAGE OF LAKE ZURICH DETAILS

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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25.

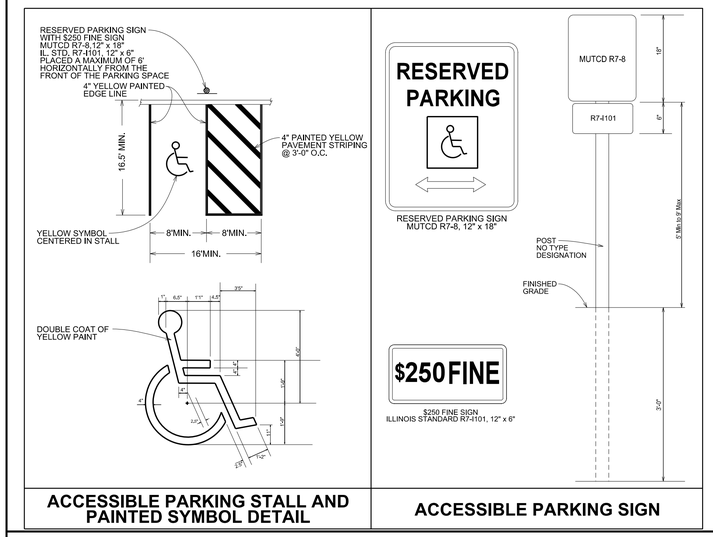
DATE	BY	DESCRIPTION

REVISIONS

DETAILS

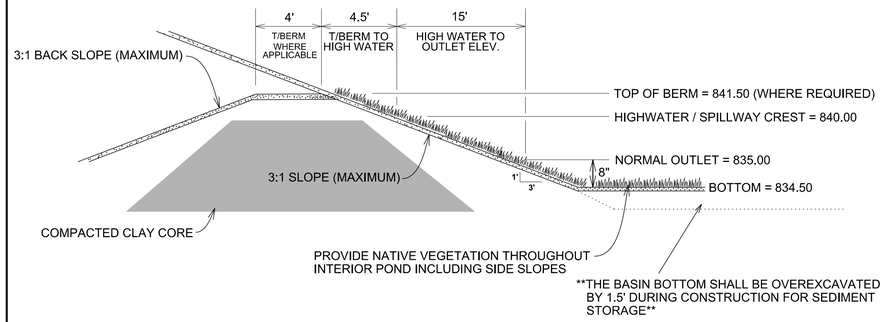
SHEET NUMBER 17 OF 23 SHEETS

JOB No. 2541



ACCESSIBLE PARKING STALL AND PAINTED SYMBOL DETAIL

ACCESSIBLE PARKING SIGN



STORMWATER BASIN DETAIL - NATURALIZED

HORIZONTAL SEPARATION - WATER MAINS AND SEWERS

1. Water mains shall be located at least ten feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

2. Water mains may be closer than ten feet to a sewer line when:
(a) local conditions prevent lateral separation of ten feet
and
(b) the water main invert is at least 18 inches above the crown of the sewer; and
(c) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

3. When it is impossible to meet 1. or 2. above, both the water main & drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe or P.V.C. pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

VERTICAL SEPARATION - WATER MAINS AND SEWERS

1. A water main shall be separated from a sewer so its invert is at least 18 inches above the crown of the sewer. This is required whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten feet horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or the drain.

2. Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe,prestressed concrete pipe or P.V.C.pipe equivalent to water main standards of construction when:
(a) It is impossible to obtain proper vertical separation as described in 1. above; or
(b) the water main passes under a sewer or drain.

3. A vertical separation of 18 inches between invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer or drain.Support the sewer or drain lines to prevent settling and breaking the water main, as shown on the plans or as approved by the ENGINEER.

4. Construction shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten feet.

WATER SERVICE LINES

1. The horizontal and the vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as water main separation described above.

2. Water pipe described above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

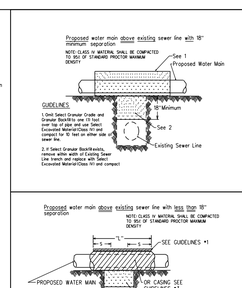
SPECIAL CONDITIONS

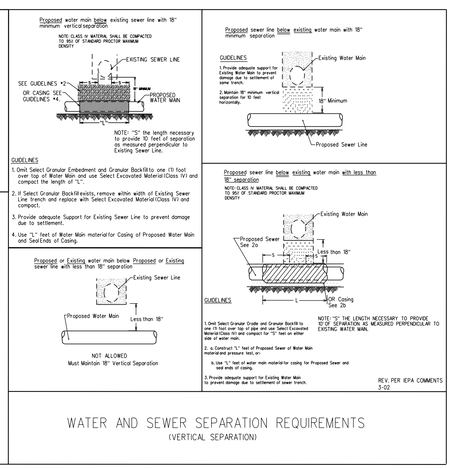
1. Alternate solutions shall be presented to IEPA when extreme topographical, geological, or existing structural conditions make strict compliance with above guidelines technically and economically impractical. Alternate solutions will be approved provided watertight construction structurally equivalent to approved water main material is proposed.

OTHER

1. Water mains shall be separated from septic tanks, disposal fields, and seepage beds by a minimum of 25 feet.

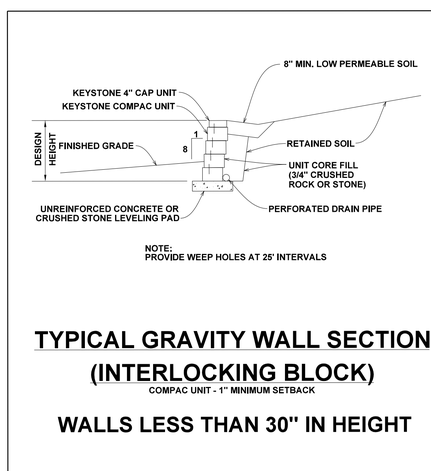
2. Water mains and water service lines shall be protected against entrance of hydrocarbons through diffusion through any material used in construction of the line.





REV. PER IEPA COMMENTS 3-02

WATER AND SEWER SEPARATION REQUIREMENTS
(VERTICAL SEPARATION)

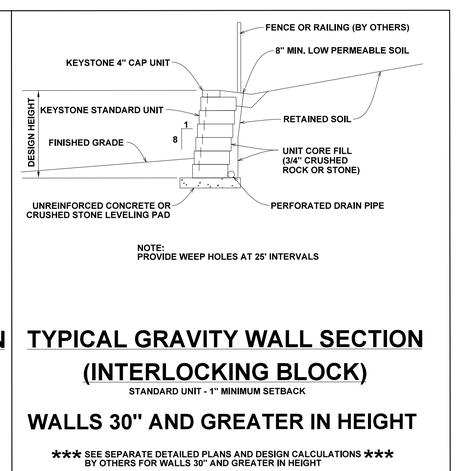


NOTE:
PROVIDE WEEP HOLES AT 25' INTERVALS

TYPICAL GRAVITY WALL SECTION (INTERLOCKING BLOCK)

COMPAC UNIT - 1" MINIMUM SETBACK

WALLS LESS THAN 30" IN HEIGHT



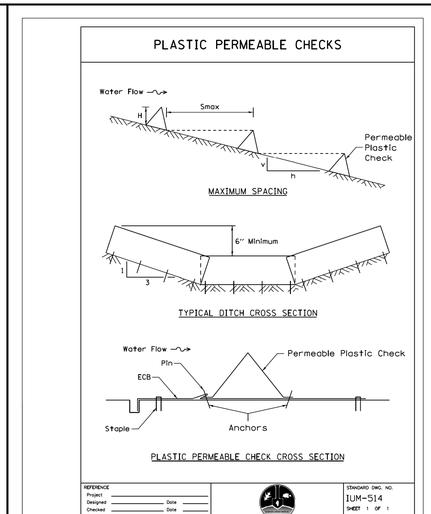
NOTE:
PROVIDE WEEP HOLES AT 25' INTERVALS

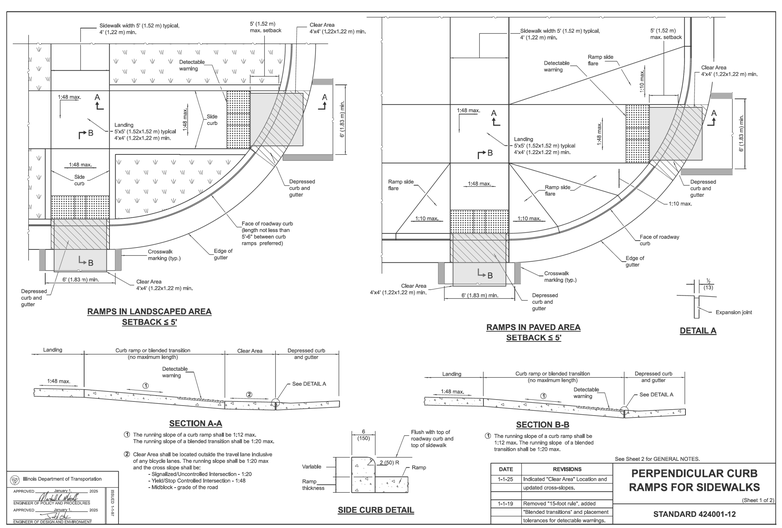
TYPICAL GRAVITY WALL SECTION (INTERLOCKING BLOCK)

STANDARD UNIT - 1" MINIMUM SETBACK

WALLS 30" AND GREATER IN HEIGHT

***** SEE SEPARATE DETAILED PLANS AND DESIGN CALCULATIONS *****
BY OTHERS FOR WALLS 30" AND GREATER IN HEIGHT





① The running slope of a curb ramp shall be 1:12 max. The running slope of a blended transition shall be 1:20 max.

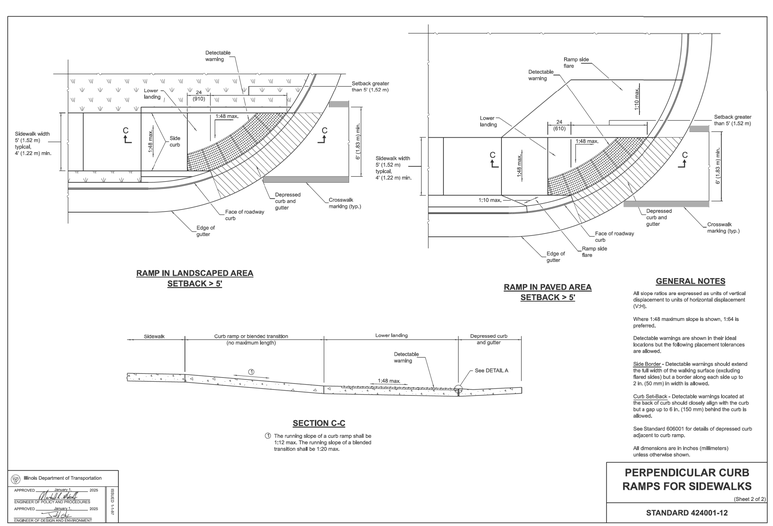
② Clear Area shall be located outside the travel lane lindustrial of any bicycle lanes. The running slope shall be 1:20 max and the cross slope shall be:
- Signalized/Uncontrolled Intersection - 1:20
- Yield/Stop Controlled Intersection - 1:48
- Midblock - grade of the road

See Sheet 2 for GENERAL NOTES.

DATE	REVISIONS
1-1-25	Indicated "Clear Area" Location and updated cross-slopes.
1-1-19	Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings.

Illinois Department of Transportation
APPROVED _____ 2020
ENGINEER OF BUREAU OF ROADWAY PROCEDURES
APPROVED _____ 2020
ENGINEER OF BUREAU OF TRAFFIC
JAN 1, 2020

PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 1 of 2)
STANDARD 424001-12



① The running slope of a curb ramp shall be 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:48 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

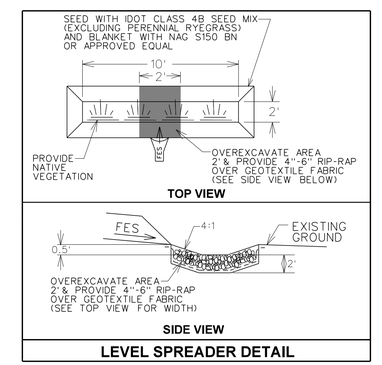
Curb Setback - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 8 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
APPROVED _____ 2020
ENGINEER OF BUREAU OF ROADWAY PROCEDURES
APPROVED _____ 2020
ENGINEER OF BUREAU OF TRAFFIC
JAN 1, 2020

PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 2 of 2)
STANDARD 424001-12



LEVEL SPREADER DETAIL

LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-6707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

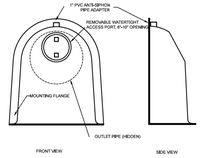
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION
DATE BY
REVISIONS

DETAILS

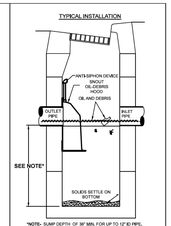
SHEET NUMBER 18
OF 23 SHEETS
JOB No. 2541

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



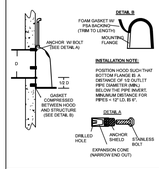
*NOTE- SUMP DEPTH OF 36" MIN. FOR UP TO 12"ID RPC OUTLET. FOR PIPES 15" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 5' DEEP for 24" PIPE)

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   100 GREAT MEADOW ROAD
   EAST HADDAM, CT. 06423
   TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES =12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    INSTALLATION KIT SHALL INCLUDE:
    A. INSTALLATION INSTRUCTIONS.
    B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D. 3/8" STAINLESS STEEL BOLTS
    E. ANCHOR SHIELDS

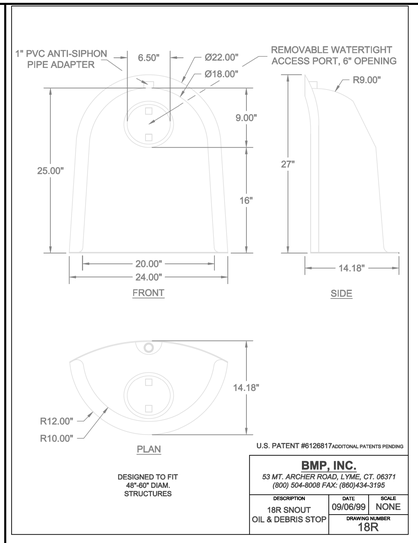
US Patent # 6126817, 7951294, 7857966, 8512556
Canada Patent # 2285146, 2690156, 2690156 others pending

INSTALLATION DETAIL



HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE
	DRAWING NUMBER	
	SP-SN	

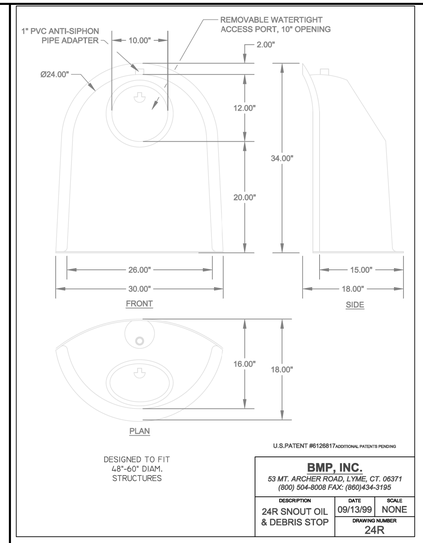


DESIGNED TO FIT 48"-60" DIAM. STRUCTURES

U.S. PATENT #6126817ADDITIONAL PATENTS PENDING

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
18R SNOUT OIL & DEBRIS STOP	09/06/99	NONE
	DRAWING NUMBER	
	18R	



DESIGNED TO FIT 48"-60" DIAM. STRUCTURES

U.S.PATENT #6126817ADDITIONAL PATENTS PENDING

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
24R SNOUT OIL & DEBRIS STOP	09/13/99	NONE
	DRAWING NUMBER	
	24R	

PAVEMENT LEGEND

ROADWAYS:

2" HMA SURFACE COURES, MIX. D, N50
3" HMA BINDER COURSE, IL 19.0, N50
10" CRUSHED AGGREGATE BASE COURSE CA-6

TRASH ENCLOSURE AREA:

4000 PSI 6" PCC SLAB W/ 6X6 [10 / 10] W.W.M.
COMPACTED 4" CA-6 AGGREGATE BASE

Luxe Corsa AutoSuites

6" dia. service sewer for all buildings - one service per building

Diameter (in.)	Minimum Slope (ft./ft.)	Capacity (cfs)	Capacity (gpd)	Velocity (ft/sec)
6	0.0100	0.5626	363628.8	2.87
			3636.29	P.E.
		Divide by 4 for peaking factor adjustment		
			909	P.E.

Receiving San considered 8" diameter at slightly above minimum slope

Diameter (in.)	Slope (ft./ft.)	Capacity (cfs)	Capacity (gpd)	Velocity (ft/sec)
8	0.0042	0.7852	507519.7	2.25
			5075.20	P.E.
		Divide by 4 for peaking factor adjustment		
			1269	P.E.

LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-6707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

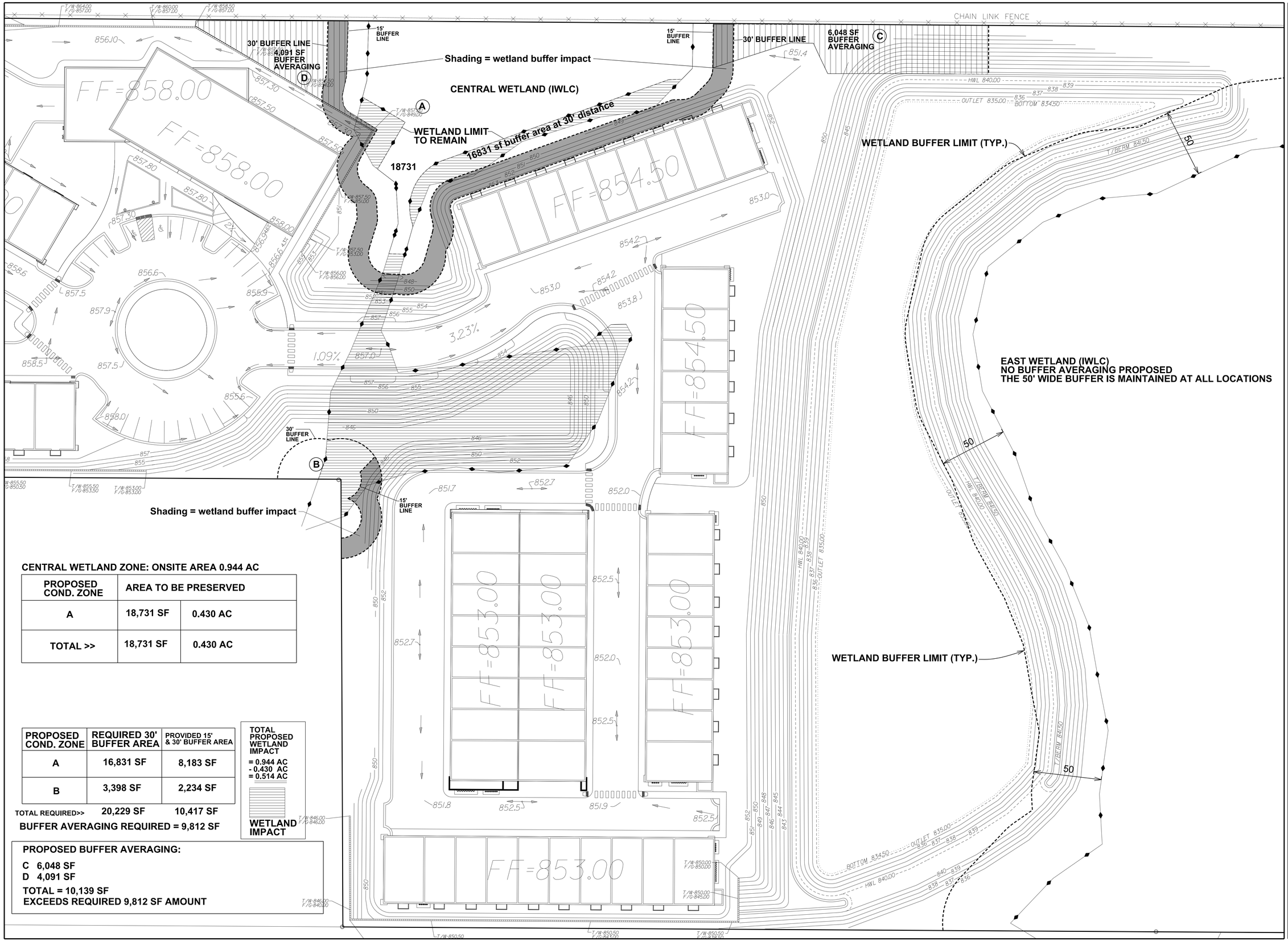
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

DESCRIPTION	DATE	BY

REVISIONS

DETAILS

SHEET NUMBER
19
OF 23 SHEETS
JOB No. 2541



CENTRAL WETLAND ZONE: ONSITE AREA 0.944 AC

PROPOSED COND. ZONE	AREA TO BE PRESERVED	
A	18,731 SF	0.430 AC
TOTAL >>	18,731 SF	0.430 AC

PROPOSED COND. ZONE	REQUIRED 30' BUFFER AREA	PROVIDED 15' & 30' BUFFER AREA
A	16,831 SF	8,183 SF
B	3,398 SF	2,234 SF
TOTAL REQUIRED>>	20,229 SF	10,417 SF

BUFFER AVERAGING REQUIRED = 9,812 SF

TOTAL PROPOSED WETLAND IMPACT
= 0.944 AC
- 0.430 AC
= 0.514 AC

WETLAND IMPACT

PROPOSED BUFFER AVERAGING:

C 6,048 SF
D 4,091 SF
TOTAL = 10,139 SF
EXCEEDS REQUIRED 9,812 SF AMOUNT

NORTH

SCALE: 1" = 30'

LUXE CORSA AUTO SUITES

24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25.

DESCRIPTION | DATE | BY

REVISIONS

WETLAND BUFFER PLAN

SHEET NUMBER 20 OF 23 SHEETS

JOB No. 2541

DAUGHTERS OF ST. MARY OF PROVIDENCE

Rand Road

EDGE OF PAVEMENT

SANITARY MH.
RIM=864.51
INV.=853.82

CATCH BASIN
RIM=856.90
INV.=853.82

SIGN

CHAIN LINK FENCE

12"PVC

UTILITY POLE
PHONE PEDESTAL

FLARED END
SECTION
INV.=862.03

24"CMP

CATCH BASIN
RIM=861.64
E.INV.=856.24
W.INV.=856.59

GUY WIRE

MAILBOX

UTILITY POLE

3.11%

2.00%

3.04%

SANITARY MH.
RIM=860.71
INV.=839.01

UTILITY POLE
PHONE PEDESTAL

RAILROAD
TIE WALL

SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF
PAVEMENT
NAVD88 ELEVATION = 862.59

FIBER OPTIC
HANDHOLE
GUY WIRE

UTILITY POLE
PHONE PEDESTAL

GUY WIRE

12"F.E.S.
INV.=855.53

FIBER OPTIC
HANDHOLE

UTILITY POLE

SANITARY MH.
RIM=856.43
INV.=833.71

WATER VALVE VAULT
RIM=856.14
T/P=849.05

12"F.E.S.
INV.=853.37

SIGN

WATER VALVE VAULT
RIM=855.99
T/P=849.77

FIRE HYDRANT
W/VALVE

FF=858.50

FF=860.20

FF=858.00

FF=859.00

FF=854.50

FF=853.00

232
ASHKUM

330A
PEOTONE

4103
HOUGHTON MUCK
NO CONSTRUCTION
PROPOSED

SOILS IN THE INDICATED ZONES MAY REQUIRE REMEDIATION AND/OR REPLACEMENT OF UNSUITABLE MATERIAL AS NEEDED UNDER THE SUPERVISION OF A QUALIFIED SOILS ENGINEER.

EMBANKMENT MATERIAL WITHIN BUILDING PADS, ROADWAYS, DRIVEWAYS, PARKING LOTS, AND OTHER STRUCTURAL CLAY FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF NINETY FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 MODIFIED PROCTOR METHOD), OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER.

Lot 34
Lot 30
Lot 29
Lot 31
Lot 32
Lot 28
Lot 27
Lot 25
Lot 26
Lot 13
Lot 36
Lot 2
Lot 3

MEADOW WOOD SUBDIVISION

MEADOW WOOD SUBDIVISION

MEADOW WOOD

NORTH

SCALE: 1" = 60'

60' 30' 0 60'

LUXE CORSA AUTO SUITES

24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
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E-MAIL ADDRESS: pba@pbaengineers.com

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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25.

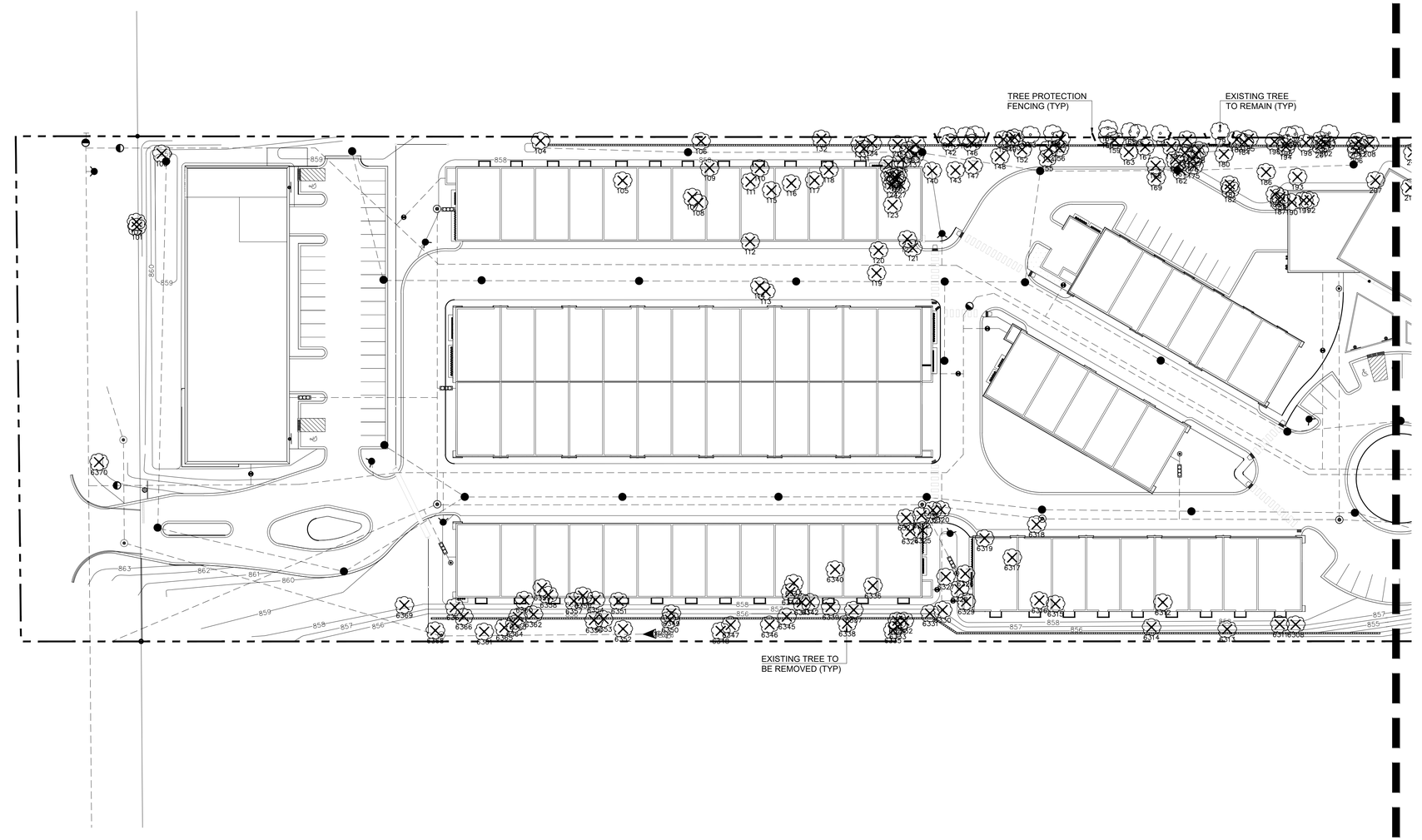
DESCRIPTION	DATE	BY

REVISIONS

CONSERVANCY SOIL MITIGATION PLAN

SHEET NUMBER
21
OF 23 SHEETS

JOB No. 2541



TREE PRESERVATION PLAN - WEST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

Kathryn Talty
landscape architecture
1926 Waukegan Road | Suite 340
Glenview, Illinois 60025
c 847.612.5154 | www.ktlandarch.com

REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-0011
STATE OF ILLINOIS

no.	revision description	initial	date
	ISSUED FOR REVIEW	KMT	07-11-25

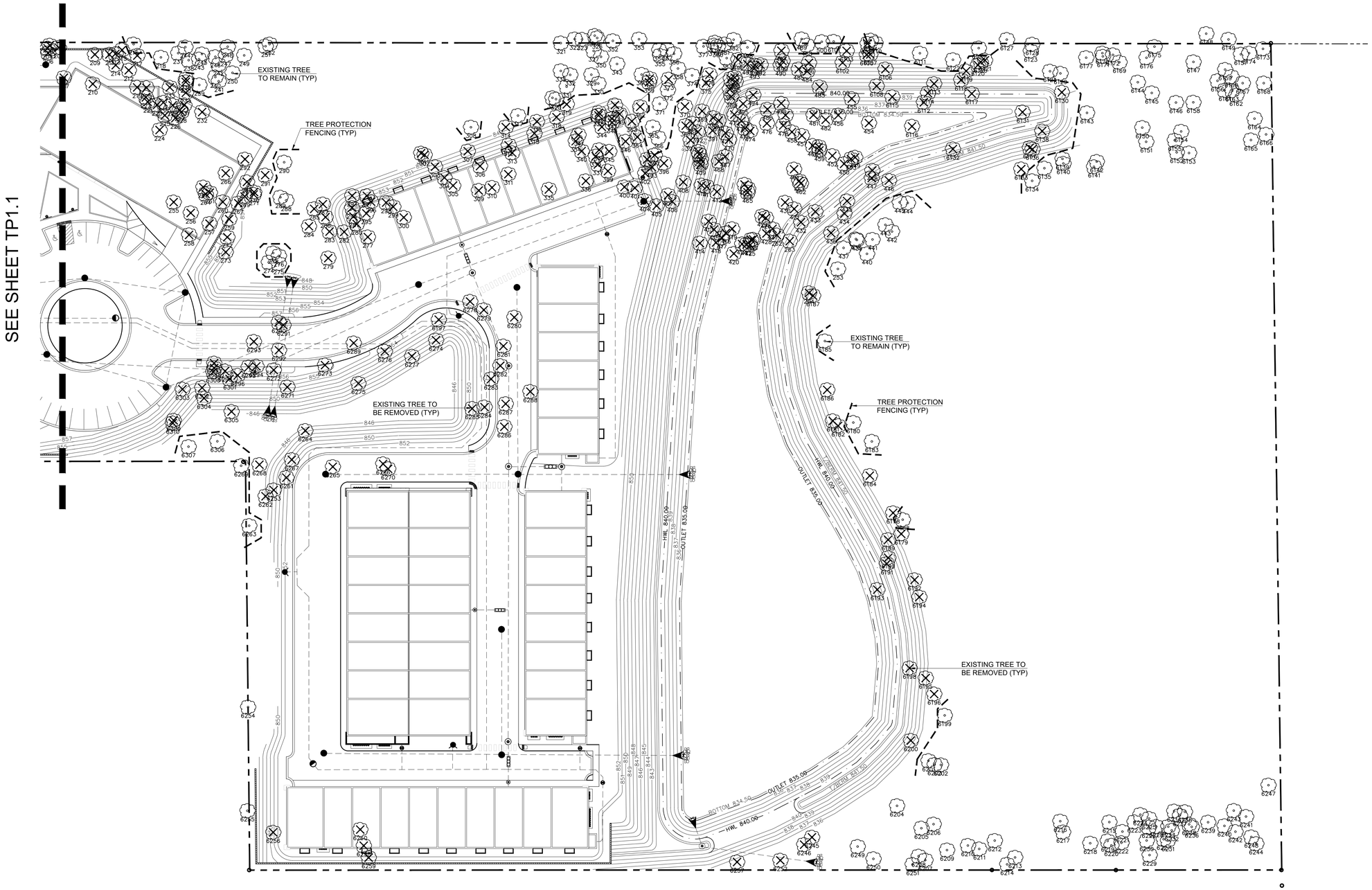
LAKE ZURICH
CAR CONDOS
LAKE ZURICH, ILLINOIS

TREE PRESERVATION PLAN
WEST

date: 06-18-25
drawn: DSP
checked: KMT

job no.
25210

sheet no.
TP1.1



TREE PRESERVATION PLAN - EAST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

Kathryn Talty
landscape architecture
1926 Waukegan Road | Suite 340
Glenview, Illinois 60025
c 847.612.5154 | www.ktlandarch.com

REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-0015
STATE OF ILLINOIS

no.	revision description	initial	date
	ISSUED FOR REVIEW	KMT	07-11-25

LAKE ZURICH CAR CONDOS

LAKE ZURICH, ILLINOIS

TREE PRESERVATION PLAN EAST

date. 06-18-25
drawn DSP
checked KMT

job no. 25210

sheet no. TP1.2

EXISTING TREE INVENTORY

Tree Tag	Common Name	Scientific Name	DBH (inches)	Condition	Action
101	White oak	Quercus alba	6	Good	Remove
102	Boxelder	Acer negundo	12	Fair	Remove
103	Bur oak	Quercus macrocarpa	28	Poor	Remove
104	Pear	Pyrus spp.	6	Fair	Remove
105	Ash	Fraxnus spp	4	Fair	Remove
106	Mulberry	Morus spp.	10	Poor	Remove
107	Bur oak	Quercus macrocarpa	25	Dead	Remove
108	Bur oak	Quercus macrocarpa	16	Fair	Remove
109	Bur oak	Quercus macrocarpa	27	Fair	Remove
110	Buckthorn	Rhamnus spp.	4	Good	Remove
111	Bur oak	Quercus macrocarpa	28	Fair	Remove
112	Bur oak	Quercus macrocarpa	30	Fair	Remove
113	Black walnut	Juglans nigra	4	Good	Remove
114	Boxelder	Acer negundo	4	Good	Remove
115	Bur oak	Quercus macrocarpa	16	Fair	Remove
116	Bur oak	Quercus macrocarpa	30	Fair	Remove
117	Buckthorn	Rhamnus spp.	5	Fair	Remove
118	Bur oak	Quercus macrocarpa	30	Fair	Remove
119	Mulberry	Morus spp.	5	Fair	Remove
120	Boxelder	Acer negundo	8	Fair	Remove
121	Mulberry	Morus spp.	4	Good	Remove
122	Mulberry	Morus spp.	6	Good	Remove
123	Shagbark hickory	Carya ovata	16	Good	Remove
124	Bur oak	Quercus macrocarpa	8	Good	Remove
125	Buckthorn	Rhamnus spp.	4	Dead	Remove
126	Shagbark hickory	Carya ovata	6	Good	Remove
127	Northern red oak	Quercus palustris	20	Dead	Remove
128	Bur oak	Quercus macrocarpa	6	Good	Remove
129	Northern red oak	Quercus palustris	12	Fair	Remove
130	American elm	Ulmus americana	10	Fair	Remove
131	Silver maple	Acer saccharinum	34	Poor	Remove
132	Northern red oak	Quercus palustris	17	Fair	Remove
133	Buckthorn	Rhamnus spp.	6	Good	Remove
134	Buckthorn	Rhamnus spp.	4	Fair	Remove
135	Shagbark hickory	Carya ovata	34	Good	Remove
136	Bur oak	Quercus macrocarpa	6	Good	Remove
137	Bur oak	Quercus macrocarpa	9	Fair	Remove
138	Bur oak	Quercus macrocarpa	7	Fair	Remove
139	Black cherry	Prunus serotina	7	Good	Remove
140	Bur oak	Quercus macrocarpa	6	Good	Remove
141	Buckthorn	Rhamnus spp.	5	Fair	Remove
142	Shagbark hickory	Carya ovata	4	Good	Remove
143	Bur oak	Quercus macrocarpa	7	Dead	Remove
144	Buckthorn	Rhamnus spp.	4	Fair	Preserve
145	Bur oak	Quercus macrocarpa	10	Fair	Preserve
146	Shagbark hickory	Carya ovata	9	Good	Remove
147	Bur oak	Quercus macrocarpa	7	Fair	Remove
148	Bur oak	Quercus macrocarpa	14	Fair	Remove
149	Bur oak	Quercus macrocarpa	11	Fair	Remove
150	Shagbark hickory	Carya ovata	8	Good	Remove
151	Buckthorn	Rhamnus spp.	4	Fair	Remove
152	Bur oak	Quercus macrocarpa	12	Fair	Remove
153	Shagbark hickory	Carya ovata	8	Good	Preserve
154	Bur oak	Quercus macrocarpa	4	Good	Remove
155	Silver maple	Acer saccharinum	13	Good	Remove
156	Shagbark hickory	Carya ovata	10	Fair	Remove
157	Shagbark hickory	Carya ovata	12	Good	Remove
158	Shagbark hickory	Carya ovata	8	Fair	Preserve
159	Bur oak	Quercus macrocarpa	13	Fair	Remove
160	Buckthorn	Rhamnus spp.	14	Fair	Preserve
161	White poplar	Populus alba	6	Good	Remove
162	White poplar	Populus alba	8	Good	Remove
163	Bur oak	Quercus macrocarpa	7	Good	Remove
164	Shagbark hickory	Carya ovata	6	Good	Preserve
165	Buckthorn	Rhamnus spp.	8	Fair	Remove
166	Shagbark hickory	Carya ovata	10	Good	Preserve
167	Shagbark hickory	Carya ovata	8	Good	Remove
168	White poplar	Populus alba	5	Good	Remove
169	Eastern cottonwood	Populus deltoides	8	Good	Remove
170	White poplar	Populus alba	6	Good	Remove
171	Shagbark hickory	Carya ovata	9	Good	Preserve
172	Buckthorn	Rhamnus spp.	5	Fair	Remove
173	Black cherry	Prunus serotina	8	Fair	Remove
174	Northern pin oak	Quercus palustris	13	Fair	Remove
175	White poplar	Populus alba	6	Good	Remove
176	White poplar	Populus alba	7	Good	Remove
177	Black cherry	Prunus serotina	7	Dead	Remove
178	Black cherry	Prunus serotina	7	Good	Remove
179	Black cherry	Prunus serotina	10	Fair	Preserve
180	White poplar	Populus alba	9	Good	Remove
181	Northern pin oak	Quercus palustris	20	Poor	Remove
182	White poplar	Populus alba	5	Good	Remove
183	Bur oak	Quercus macrocarpa	4	Fair	Preserve
184	Bur oak	Quercus macrocarpa	6	Fair	Preserve
185	Shagbark hickory	Carya ovata	19	Good	Remove
186	White poplar	Populus alba	9	Good	Remove
187	White poplar	Populus alba	9	Dead	Remove
188	White poplar	Populus alba	9	Dead	Remove
189	White poplar	Populus alba	9	Fair	Remove
190	White poplar	Populus alba	9	Good	Remove
191	White poplar	Populus alba	9	Good	Remove
192	White poplar	Populus alba	9	Good	Remove
193	White poplar	Populus alba	5	Fair	Remove
194	Bur oak	Quercus macrocarpa	10	Fair	Remove
195	Buckthorn	Rhamnus spp.	7	Dead	Remove
196	Northern pin oak	Quercus palustris	17	Fair	Remove
197	Bur oak	Quercus macrocarpa	8	Good	Preserve
198	Bur oak	Quercus macrocarpa	6	Good	Remove
199	Northern pin oak	Quercus palustris	15	Dead	Preserve
200	American elm	Ulmus americana	7	Dead	Remove
201	Shagbark hickory	Carya ovata	10	Good	Remove
202	Northern pin oak	Quercus palustris	21	Fair	Remove
203	Bur oak	Quercus macrocarpa	8	Fair	Preserve
204	Bur oak	Quercus macrocarpa	6	Fair	Remove
205	Shagbark hickory	Carya ovata	7	Good	Remove
206	Buckthorn	Rhamnus spp.	10	Fair	Remove
207	Shagbark hickory	Carya ovata	6	Good	Remove
208	Buckthorn	Rhamnus spp.	11	Fair	Remove
209	Bur oak	Quercus macrocarpa	14	Fair	Remove
210	Shagbark hickory	Carya ovata	5	Good	Remove
211	Bur oak	Quercus macrocarpa	8	Fair	Remove
212	Bur oak	Quercus macrocarpa	12	Fair	Remove
213	Bur oak	Quercus macrocarpa	5	Fair	Remove
214	Bur oak	Quercus macrocarpa	8	Dead	Remove
215	Bur oak	Quercus macrocarpa	8	Fair	Remove
216	Bur oak	Quercus macrocarpa	12	Good	Preserve
217	Northern pin oak	Quercus palustris	30	Fair	Remove
218	Bur oak	Quercus macrocarpa	32	Fair	Preserve
219	Bur oak	Quercus macrocarpa	10	Fair	Remove
220	Bur oak	Quercus macrocarpa	8	Fair	Remove
221	Bur oak	Quercus macrocarpa	15	Fair	Remove
222	Bur oak	Quercus macrocarpa	12	Fair	Remove
223	Bur oak	Quercus macrocarpa	10	Fair	Remove
224	Northern pin oak	Quercus palustris	25	Fair	Remove
225	Bur oak	Quercus macrocarpa	12	Fair	Remove
226	Mulberry	Morus spp.	9	Fair	Remove
227	Black cherry	Prunus serotina	8	Fair	Remove
228	Bur oak	Quercus macrocarpa	10	Fair	Remove
229	Bur oak	Quercus macrocarpa	7	Good	Remove
230	Bur oak	Quercus macrocarpa	11	Fair	Remove
231	Bur oak	Quercus macrocarpa	5	Good	Remove
232	Bur oak	Quercus macrocarpa	7	Fair	Remove
233	Bur oak	Quercus macrocarpa	10	Fair	Remove
234	Northern pin oak	Quercus palustris	16	Fair	Remove
235	Bur oak	Quercus macrocarpa	5	Fair	Remove
236	Bur oak	Quercus macrocarpa	7	Good	Remove
237	Bur oak	Quercus macrocarpa	10	Fair	Preserve
238	Northern pin oak	Quercus palustris	20	Fair	Preserve
239	Northern pin oak	Quercus palustris	20	Fair	Preserve
240	Bur oak	Quercus macrocarpa	7	Fair	Preserve
241	Bur oak	Quercus macrocarpa	5	Fair	Preserve
242	Bur oak	Quercus macrocarpa	6	Fair	Preserve
243	Bur oak	Quercus macrocarpa	8	Fair	Preserve
244	Mulberry	Morus spp.	15	Poor	Preserve
245	Buckthorn	Rhamnus spp.	7	Fair	Preserve
246	Unknown	Unknown	9	Dead	Preserve
247	Buckthorn	Rhamnus spp.	5	Fair	Remove
248	Buckthorn	Rhamnus spp.	6	Fair	Remove
249	Black cherry	Prunus serotina	19	Fair	Preserve
250	Buckthorn	Rhamnus spp.	8	Fair	Preserve
251	Bur oak	Quercus macrocarpa	15	Fair	Preserve
252	Bur oak	Quercus macrocarpa	24	Fair	Preserve
253	Black cherry	Prunus serotina	17	Fair	Preserve
254	Black cherry	Prunus serotina	11	Fair	Remove
255	Silver maple	Acer saccharinum	14	Fair	Remove
256	Buckthorn	Rhamnus spp.	6	Fair	Remove
257	Buckthorn	Rhamnus spp.	6	Fair	Remove
258	Buckthorn	Rhamnus spp.	9	Fair	Remove
259	Boxelder	Acer negundo	18	Fair	Remove
260	Boxelder	Acer negundo	14	Poor	Remove
261	Buckthorn	Rhamnus spp.	5	Fair	Remove
262	Bur oak	Quercus macrocarpa	6	Fair	Remove
263	Bur oak	Quercus macrocarpa	10	Fair	Remove
264	Buckthorn	Rhamnus spp.	5	Fair	Remove
265	Buckthorn	Rhamnus spp.	5	Fair	Remove
266	Buckthorn	Rhamnus spp.	4	Fair	Remove
267	Buckthorn	Rhamnus spp.	6	Fair	Remove
268	Buckthorn	Rhamnus spp.	6	Fair	Remove
269	Buckthorn	Rhamnus spp.	6	Fair	Remove
270	Buckthorn	Rhamnus spp.	6	Fair	Remove
271	Buckthorn	Rhamnus spp.	4	Fair	Remove
272	Buckthorn	Rhamnus spp.	11	Fair	Remove
273	Boxelder	Acer negundo	12	Fair	Remove
274	Bur oak	Quercus macrocarpa	25	Good	Preserve
275	Bur oak	Quercus macrocarpa	20	Good	Preserve
276	Bur oak	Quercus macrocarpa	17	Fair	Preserve
277	Buckthorn	Rhamnus spp.	10	Fair	Remove
278	Bur oak	Quercus macrocarpa	17	Good	Preserve
279	Boxelder	Acer negundo	8	Fair	Remove
280	Black cherry	Prunus serotina	12	Fair	Remove
281	Black cherry	Prunus serotina	8	Fair	Remove
282	Buckthorn	Rhamnus spp.	12	Fair	Remove
283	Buckthorn	Rhamnus spp.	7	Fair	Remove
284	Boxelder	Acer negundo	6	Good	Remove
285	Black cherry	Prunus serotina	8	Fair	Remove
286	Buckthorn	Rhamnus spp.	5	Fair	Remove
287	Boxelder	Acer negundo	9	Fair	Remove
288	Buckthorn	Rhamnus spp.	6	Fair	Preserve
289	Buckthorn	Rhamnus spp.	10	Fair	Preserve
290	Boxelder	Acer negundo	19	Fair	Preserve
291	Buckthorn	Rhamnus spp.	7	Fair	Remove
292	Mulberry	Morus spp.	43	Fair	Remove
293	Black cherry	Prunus serotina	7	Fair	Remove
294	Black cherry	Prunus serotina	13	Fair	Remove
295	Boxelder	Acer negundo	8	Fair	Remove
296	Mulberry	Morus spp.	10	Fair	Remove
297	Black cherry	Prunus serotina	10	Fair	Remove
298	Boxelder	Acer negundo	8	Fair	Remove
299	Buckthorn	Rhamnus spp.	4	Fair	Remove
300	Buckthorn	Rhamnus spp.	53	Fair	Remove
301	Mulberry	Morus spp.	14	Fair	Remove
302	Black cherry	Prunus serotina	5	Fair	Remove
303	Black cherry	Prunus serotina	5	Fair	Remove
304	Eastern redcedar	Juniperus virginiana	10	Good	Remove
305	Ash	Fraxnus spp.	8	Dead	Remove
306	Buckthorn	Rhamnus spp.	4	Fair	Remove
307	Mulberry	Morus spp.	7	Fair	Remove
308	American elm	Ulmus americana	5	Good	Preserve
309	Black cherry	Prunus serotina	4	Fair	Remove
310	Buckthorn	Rhamnus spp.	4	Fair	Remove
311	Northern red oak	Quercus palustris	14	Dead	Remove
312	Buckthorn	Rhamnus spp.	4	Dead	Remove
313	Buckthorn	Rhamnus spp.	8	Dead	Remove
314	American elm	Ulmus americana	23	Fair	Remove
315	Black cherry	Prunus serotina	6	Fair	Remove
316	Bur oak	Quercus macrocarpa	20	Fair	Remove
317	American elm	Ulmus americana	11	Good	Preserve
318	Shagbark hickory	Carya ovata	11	Good	Remove
319	Northern red oak	Quercus palustris	18	Dead	Remove
320	Bur oak	Quercus macrocarpa	14	Fair	Preserve
321	Northern red oak	Quercus palustris	11	Fair	Preserve
322	Bur oak	Quercus macrocarpa	8	Fair	Preserve
323	Bur oak	Quercus macrocarpa	6	Good	Preserve
324	Shagbark hickory	Carya ovata	11	Good	Preserve
325	Bur oak	Quercus macrocarpa	10	Good	Preserve
326	Bur oak	Quercus macrocarpa	13	Fair	Remove
327	Bur oak	Quercus macrocarpa	11	Good	Preserve
328	Northern red oak	Quercus palustris	11	Dead	Remove
329	Bur oak	Quercus macrocarpa	16	Fair	Preserve
330	Bur oak	Quercus macrocarpa	14	Fair	Preserve
331	Bur oak	Quercus macrocarpa	16	Fair	Preserve
332	Bur oak	Quercus macrocarpa	7	Good	Preserve
333	Shagbark hickory	Carya ovata	8	Good	Preserve
334	Bur oak	Quercus macrocarpa	6	Fair	Remove
335	Eastern redcedar	Juniperus virginiana	5	Good	Remove
336	Shagbark hickory	Carya ovata	5	Good	Remove
337	Northern red oak	Quercus palustris	15	Dead	Remove
338	Bur oak	Quercus macrocarpa	9	Dead	Remove
339	Northern red oak	Quercus palustris	5	Dead	Remove
340	American elm	Ulmus americana	7	Dead	Remove
341	Northern red oak	Quercus palustris	17	Dead	Remove
342	Black cherry	Prunus serotina	19	Dead	Remove
343	Boxelder	Acer negundo	7	Poor	Preserve
344	Bur oak	Quercus macrocarpa	18	Poor	Remove
345	Bur oak	Quercus macrocarpa	8	Good	Remove
346	Bur oak	Quercus macrocarpa	12	Dead	Remove
347	Black cherry	Prunus serotina	8	Fair	Remove
348	Buckthorn	Rhamnus spp.	6	Fair	Remove
349	Bur oak	Quercus macrocarpa	6	Dead	Remove
350	Bur oak	Quercus macrocarpa	16	Fair	Preserve
351	Bur oak	Quercus macrocarpa	4	Good	Remove
352	Black cherry	Prunus serotina	8	Fair	Remove
353	Bur oak	Quercus macrocarpa	40	Fair	Preserve
354	Black cherry	Prunus serotina	7	Fair	Preserve
355	Black cherry	Prunus serotina	10	Fair	Preserve
356	Buckthorn	Rhamnus spp.	5	Fair	Preserve
357	Bur oak	Quercus macrocarpa	36	Fair	Preserve
358	Buckthorn	Rhamnus spp.	7	Fair	Remove
359	Unknown	Unknown	9	Dead	Preserve
360	Shagbark hickory	Carya ovata	14	Good	Preserve
361	Bur oak	Quercus macrocarpa	13	Fair	Remove
362	Bur oak	Quercus macrocarpa	19	Poor	Remove
363	Bur oak	Quercus macrocarpa	8	Dead	Remove
364	Bur oak	Quercus macrocarpa	9	Dead	Remove
365	Black cherry	Prunus serotina	8	Fair	Preserve
366	Black cherry	Prunus serotina	7	Dead	Preserve
367	Bur oak	Quercus macrocarpa	9	Fair	Remove
368	Black cherry	Prunus serotina	11	Good	Remove
369	Bur oak	Quercus macrocarpa	5	Good	Remove
370	Buckthorn	Rhamnus spp.	6	Fair	Remove
371	Buckthorn	Rhamnus spp.	5	Fair	Preserve
372	Bur oak	Quercus macrocarpa	9	Fair	Preserve
373	Black cherry	Prunus serotina	7	Poor	Remove
374	Bur oak	Quercus macrocarpa	36	Dead	Preserve
375	Buckthorn	Rhamnus spp.	12	Fair	Remove
376	Black cherry	Prunus serotina	8	Fair	Remove
377	Bur oak	Quercus macrocarpa	8	Good	Preserve
378	Bur oak	Quercus macrocarpa	9	Good	Preserve
379	Bur oak	Quercus macrocarpa	9	Good	Preserve
380	Bur oak	Quercus macrocarpa	11	Good	Preserve
381	Bur oak	Quercus macrocarpa	14	Fair	Preserve
382	Shagbark hickory	Carya ovata	11	Good	Preserve
383	Bur oak	Quercus macrocarpa	10	Fair	Remove
384	Bur oak	Quercus macrocarpa	8	Fair	Remove
385	Bur oak	Quercus macrocarpa	8	Good	Remove
386	Bur oak	Quercus macrocarpa	9	Good	Remove
387	Black cherry	Prunus serotina	6	Dead	Remove
388	Bur oak	Quercus macrocarpa	15	Fair	Remove
389	Bur oak	Quercus macrocarpa	12	Fair	Remove
390	Bur oak	Quercus macrocarpa	5	Fair	Remove
391	Bur oak	Quercus macrocarpa	12	Fair	Remove
392	Bur oak	Quercus macrocarpa	8	Fair	Remove
393	Black cherry	Prunus serotina	7	Dead	Remove
394	Black cherry	Prunus serotina	9	Fair	Remove
395	Buckthorn	Rhamnus spp.	9	Fair	Remove
396	Bur oak	Quercus macrocarpa	58	Fair	Preserve
397	Black cherry	Prunus serotina	7	Dead	Remove
398	Black cherry	Prunus serotina	10	Fair	Remove
399	Bur oak	Quercus macrocarpa	6	Dead	Remove
400	Shagbark hickory	Carya ovata	5	Good	Remove
401	Bur oak	Quercus macrocarpa	10	Fair	Remove
402	Black cherry	Prunus serotina	13	Fair	Remove
403	Buckthorn	Rhamnus spp.	5	Fair	Remove
404	Bur oak	Quercus macrocarpa	9	Fair	Remove
405	Shagbark hickory	Carya ovata	6	Good	Remove
406	Bur oak	Quercus macrocarpa	6	Dead	Remove
407	Buckthorn	Rhamnus spp.	10	Fair	Remove
408	Black cherry	Prunus serotina	9	Dead	Remove
409	Buckthorn	Rhamnus spp.	6	Fair	Remove
410	Bur oak	Quercus macrocarpa	7	Dead	Remove
411	Bur oak	Quercus macrocarpa	7	Fair	Remove
412	Buckthorn	Rhamnus spp.	7	Fair	Remove
413	Buckthorn	Rhamnus spp.	6	Fair	Remove
414	Unknown	Unknown	12	Dead	Remove
415	Bur oak	Quercus macrocarpa	10	Fair	Remove
416	Bur oak	Quercus macrocarpa	9	Fair	Remove
417	Bur oak	Quercus macrocarpa	6	Fair	Remove
418	Bur oak	Quercus macrocarpa	6	Fair	Remove
419	Bur oak	Quercus macrocarpa	9	Fair	Remove
420	Unknown	Unknown	15	Dead	Remove
421	Bur oak	Quercus macrocarpa	5	Dead	Remove
422	Bur oak	Quercus macrocarpa	6	Good	Remove
423	Bur oak	Quercus macrocarpa	8	Fair	Remove
424	Bur oak	Quercus macrocarpa	4	Good	Remove
425	Bur oak	Quercus macrocarpa	6	Fair	Remove
426	Black cherry	Prunus serotina	8	Fair	Remove
427	Bur oak	Quercus macrocarpa	9	Dead	Remove
428	Buckthorn	Rhamnus spp.	9	Fair	Remove
429	Buckthorn	Rhamnus spp.	7	Fair	Remove
430	Black cherry	Prunus serotina	9	Fair	Remove
431	Bur oak	Quercus macrocarpa	10	Poor	Remove
432	Buckthorn	Rhamnus spp.	8	Fair	Remove
433	Bur oak	Quercus macrocarpa	14	Fair	Remove
434	Bur oak	Quercus macrocarpa	7	Dead	Remove
435	Bur oak	Quercus macrocarpa	17	Fair	Remove
436	Northern red oak	Quercus palustris	17	Dead	Remove
437	Hawthorn	Crataegus spp.	6	Dead	Remove
438	Bur oak	Quercus macrocarpa	9	Fair	Preserve
439	Boxelder	Acer negundo	6	Fair	Remove
440	Bur oak	Quercus macrocarpa	11	Good	Preserve
441	Black cherry	Prunus serotina	11	Fair	Preserve
442	Bur oak	Quercus macrocarpa	14	Fair	Preserve
443	Black cherry	Prunus serotina	12	Fair	Preserve
444	Bur oak	Quercus macrocarpa	16	Fair	Preserve
445	Bur oak	Quercus macrocarpa	19	Fair	Preserve
446	Bur oak	Quercus macrocarpa	7	Fair	Remove
447	Black cherry	Prunus serotina	10	Dead	Remove
448	Black cherry	Prunus serotina	10	Dead	Remove
449	Shagbark hickory	Carya ovata	16	Good	Remove
450	Northern red oak	Quercus palustris	12	Fair	Remove
451	Shagbark hickory	Carya ovata	14	Good	Remove
452	Bur oak	Quercus macrocarpa	9	Fair	Remove
453	Northern red oak	Quercus palustris	17	Dead	Remove
454	Shagbark hickory	Carya ovata	13	Good	Remove
455	Shagbark hickory	Carya ovata	12	Good	Remove
456	Bur oak	Quercus macrocarpa	12	Fair	Remove
457	Bur oak	Quercus macrocarpa	12	Dead	Remove
458	Bur oak	Quercus macrocarpa	8	Fair	Remove
459	Bur oak	Quercus macrocarpa	9	Good	Remove
460	Buckthorn	Rhamnus spp.	8	Fair	Remove
461	Black cherry	Prunus serotina	9	Fair	Remove
462	Black cherry	Prunus serotina	6	Fair	Remove
463	Buckthorn	Rhamnus spp.	8	Fair	Remove
464	Bur oak	Quercus macrocarpa	68	Fair	Remove
465	Buckthorn	Rhamnus spp.	5	Fair	Remove
466	Black cherry	Prunus serotina	5	Fair	Remove
467	Bur oak	Quercus macrocarpa	12	Fair	Remove
468	Bur oak	Quercus macrocarpa	5	Fair	Remove
469	Bur oak	Quercus macrocarpa	7	Fair	Remove
470	Bur oak	Quercus macrocarpa	15	Fair	Remove
471	Bur oak	Quercus macrocarpa	7	Dead	Remove
472	Bur oak	Quercus macrocarpa	12	Fair	Remove
473	Bur oak	Quercus macrocarpa	8	Dead	Remove
474	Bur oak	Quercus macrocarpa	9	Fair	Remove
475	Bur oak	Quercus macrocarpa	10	Fair	Remove
476	Bur oak	Quercus macrocarpa	10	Fair	Remove
477	Bur oak	Quercus macrocarpa	13	Fair	Remove
478	Buckthorn	Rhamnus spp.	5	Fair	Remove
479	Bur oak	Quercus macrocarpa	13	Dead	Remove
480	Bur oak	Quercus macrocarpa	5	Dead	Remove
481	Black cherry	Prunus serotina	12	Fair	Remove
482	Bur oak	Quercus macrocarpa	16	Fair	Preserve
483	Shagbark hickory	Carya ovata	9	Good	Remove
484	Shagbark hickory	Carya ovata	13	Good	Remove
485	Bur oak	Quercus macrocarpa	13	Fair	Remove
486	Bur oak	Quercus macrocarpa	14	Fair	Remove
487	Bur oak	Quercus macrocarpa	10	Fair	Remove
488	Bur oak	Quercus macrocarpa	8	Fair	Remove
489	Bur oak	Quercus macrocarpa	10	Fair	Remove
490	Bur oak	Quercus macrocarpa	14	Fair	Remove
491	Bur oak	Quercus macrocarpa	12	Fair	Remove
492	Bur oak	Quercus macrocarpa	5	Fair	Remove
493	Bur oak	Quercus macrocarpa	13	Fair	Remove
494	Bur oak	Quercus macrocarpa	15	Fair	Remove
495	Bur oak	Quercus macrocarpa	14	Fair	Remove
496	Bur oak	Quercus macrocarpa	12	Fair	Remove
497	Bur oak	Quercus macrocarpa	10	Fair	Remove
498	Bur oak	Quercus macrocarpa	13	Fair	Preserve
499	Bur oak	Quercus macrocarpa	13	Fair	Remove
500	Buckthorn	Rhamnus spp.	7	Fair	Remove
6101	Black cherry	Prunus serotina	10	Fair	Preserve
6102	Bur oak	Quercus macrocarpa	15	Fair	Remove
6103	Shagbark hickory	Carya ovata	10	Good	Remove
6104	Buckthorn	Rhamnus spp.	6	Fair	Remove
6105	Bur oak	Quercus macrocarpa	14	Fair	Remove
6106	Buckthorn	Rhamnus spp.	5	Fair	Remove
6107	Bur oak	Quercus macrocarpa	15	Fair	Remove
6108	Bur oak	Quercus macrocarpa	19	Fair	Remove
6109	Bur oak	Quercus macrocarpa	5	Good	Remove
6110	Bur oak	Quercus macrocarpa	9	Fair	Preserve
6111	Shagbark hickory	Carya ovata	15	Good	Preserve
6112	Bur oak	Quercus macrocarpa	18	Good	Remove
6113	Buckthorn	Rhamnus spp.	5	Fair	Remove
6114	Buckthorn	Rhamnus spp.	8	Fair	Remove
6115	Bur oak	Quercus macrocarpa	11	Fair	Remove
6116	Buckthorn	Rhamnus spp.	10	Fair	Remove
6117	Black cherry	Prunus serotina	15	Dead	Remove
6118	Black cherry	Prunus serotina	9	Fair	Remove
6119	Buckthorn	Rhamnus spp.	7	Fair	Remove
6120	Buckthorn	Rhamnus spp.	6	Fair	Remove
6121	Buckthorn	Rhamnus spp.	5	Fair	Remove
6122	Bur oak	Quercus macrocarpa	12	Fair	Preserve
6123	Buckthorn	Rhamnus spp.	6	Fair	Preserve
6124	Black cherry	Prunus serotina	20	Fair	Preserve
6125	Shagbark hickory	Carya ovata	8	Good	Preserve
6126	Bur oak	Quercus macrocarpa	11	Fair	Remove
6127	Bur oak	Quercus macrocarpa	13	Fair	Preserve
6128	Buckthorn	Rhamnus spp.	8	Fair	Preserve
6129	Bur oak	Quercus macrocarpa	6	Good	Preserve
6130	Buckthorn	Rhamnus spp.	5	Fair	Remove
6131	Buckthorn	Rhamnus spp.	7	Fair	Remove
6132	Shagbark hickory	Carya ovata	12	Good	Remove
6133	Buckthorn	Rhamnus spp.	6	Fair	Remove
6134	Buckthorn	Rhamnus spp.	5	Fair	Preserve
6135	Black cherry	Prunus serotina	10	Dead	Preserve
6136	Black cherry	Prunus serotina	13	Fair	Remove
6137	Black cherry	Prunus serotina	10	Dead	Remove
6138	Buckthorn	Rhamnus spp.	5	Fair	Remove
6139	Northern pin oak	Quercus palustris	24	Fair	Remove
6140	Bur oak	Quercus macrocarpa	5	Good	Preserve
6141	Bur oak	Quercus macrocarpa	11	Fair	Preserve
6142	Black cherry	Prunus serotina	8	Good	Preserve
6143	Black cherry	Prunus serotina	17	Dead	Remove
6144	Buckthorn	Rhamnus spp.	9	Fair	Preserve
6145	Northern pin oak	Quercus palustris	33	Fair	Preserve
6146	Bur oak	Quercus macrocarpa	17	Fair	Preserve
6147	Bur oak	Quercus macrocarpa	15	Fair	Preserve
6148	Shagbark hickory	Carya ovata	10	Good	Preserve
6149	Shagbark hickory	Carya ovata	14	Good	Preserve
6150	Bur oak	Quercus macrocarpa	10	Fair	Preserve
6151	Black cherry	Prunus serotina	7	Dead	Preserve
6152	Bur oak	Quercus macrocarpa	10	Fair	Preserve
6153	Bur oak	Quercus macrocarpa	15	Fair	Preserve
6154	Shagbark hickory	Carya ovata	8	Good	Preserve
6155	Shagbark hickory	Carya ovata	4	Good	Preserve
6156	Bur oak	Quercus macrocarpa	13	Fair	Preserve
6157	Shagbark hickory	Carya ovata	9	Good	Preserve
6158	Black cherry	Prunus serotina	19	Fair	Preserve
6159	Bur oak	Quercus macrocarpa	14	Fair	Preserve
6160	Buckthorn	Rhamnus spp.	6	Fair	Preserve
6161	Bur oak	Quercus macrocarpa	7	Fair	Preserve
6162	Shagbark hickory	Carya ovata	9	Good	Preserve
6163	Bur oak	Quercus macrocarpa	9	Dead	Remove
6164	Shagbark hickory	Carya ovata	9	Good	Preserve
6165	Black cherry	Prunus serotina	8	Fair	Preserve
6166	Black cherry	Prunus serotina	9	Fair	Preserve
6167	Northern red oak	Quercus palustris	26	Fair	Preserve
6168	Shagbark hickory	Carya ovata	8	Good	Preserve
6169	North

20S04RS125

20 Foot Round Straight Steel Light Pole, 4 Inch Diameter, 11 Gauge

Energy Light, Inc.

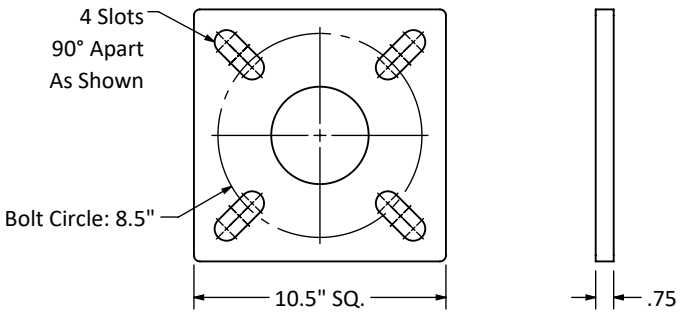
Job: _____

Job Site: _____ State: _____ Client Name: _____

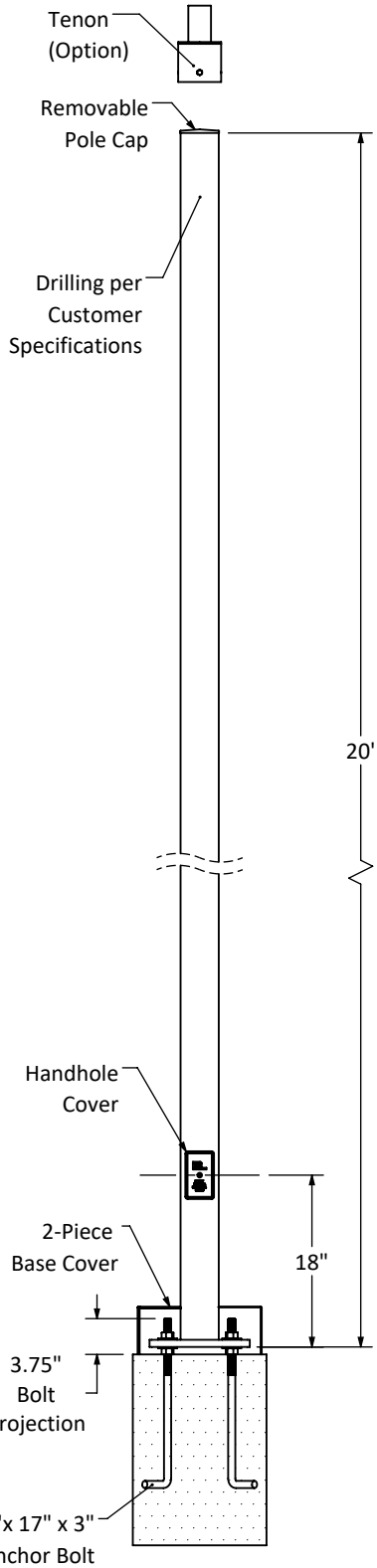
Notes: _____ Approvals: _____ Date: _____

Pole Top Options: A removable pole cap is provided if the pole is drilled for attaching light fixtures. The drill pattern and drill orientation needs to be provided by the customer unless Energy Light fixtures are used for the project. If tenon option is selected, a 2-3⁄8 inch diameter tenon with 4 inch length is provided.
Pole Shaft: Pole shaft shall be weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B 11 gauge.
Handhole: Reinforced, 3" x 5" Handhole with cover, stainless steel screw and backbar is located at 18 inches from the base. Ground lug is included.
Finish: Commercial grade, super durable powder coat finish.
Dark Bronze, White, Black, Gray colors are provided at no extra charge.
Other colors and custom colors are available with extended lead times and additional surcharge.
Anchor Bolts: A set of 4 galvanized steel anchor bolts is provided with each pole assembly. Each anchor bolt includes 2 nuts and 2 washers. Top portion of the anchor bolt is threaded for securing and leveling the pole with the provided nuts and washers. An actual size paper anchor bolt template is provided.
Bolt Circle Range: 8.5" (Bolt circle range: 8"-11").
Base Cover: Two-piece steel square base cover. Stainless steel screws are included to attach the 2 pieces together after pole installation.
Other Options: The following options are available at an extra charge:
Custom tenon sizes, custom colors, electric/GFI outlets, custom pole heights, additional handholes and custom base plate dimensions.
Warranty: 1 Year.
Foundation design: Foundation should be designed by an engineer familiar with local soil and wind conditions as well as local code where the pole(s) will be installed.

Maximum EPA with 1.3 Gust Factor (ft^2)						Pole Weight (lbs)
90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	
5.6	3.9	3.5	2.4	1.5	1.1	124



Base Plate



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91094-AL

150/200/240/300 Watt Selectable Wattage & Color Temperature LED Area Light

Energy Light, Inc.

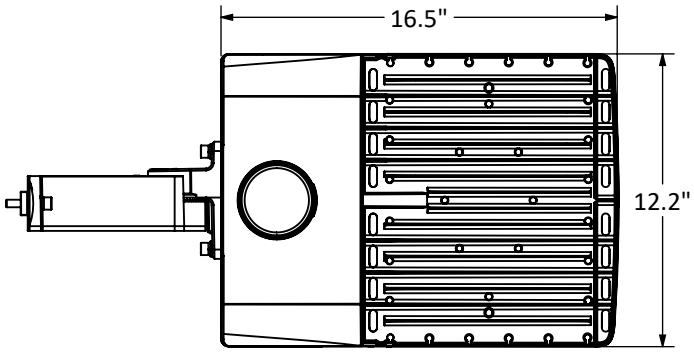
Job: _____

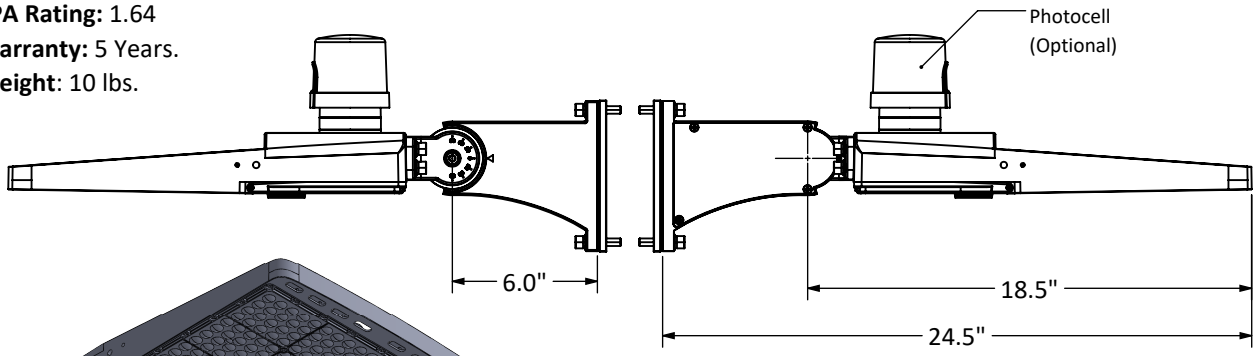
Job Site: _____ State: _____ Client Name: _____

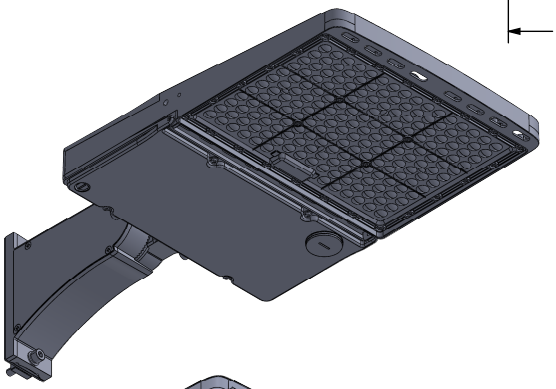
Notes: _____ Approvals: _____ Date: _____

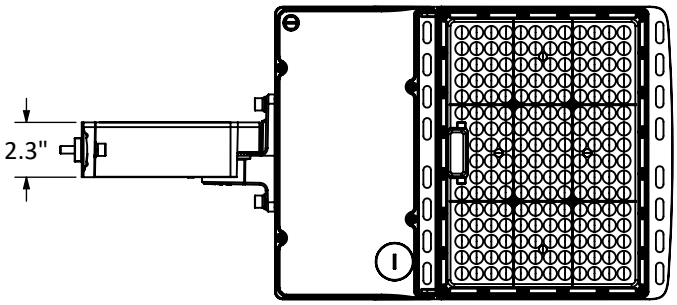
Material: Aluminum construction with integrated fins to maximize heat dissipation.
Color: Dark Bronze.
Preset Power: 300 Watts
Voltage: 120-277 Volt standard.
Selectable Colors: 3000K; 4000K; 5000K
Preset Color Temperature: 5000K.
Light Distribution: Type 3 standard.
Type 4 and Type 5 options as special order.
Photocell: Photocell is optional.
Dimming: 0-10V Dimming Capable.
Dimming control not provided (field install).
UL Listing: UL Listed for Wet Locations.
DLC Listing: DLC Premium.
IP Rating: IP66
EPA Rating: 1.64
Warranty: 5 Years.
Weight: 10 lbs.

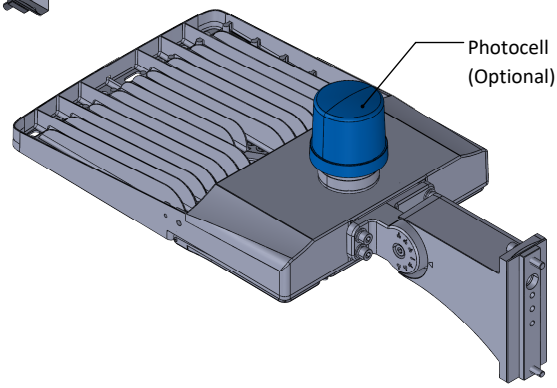
WET LOCATION Dimmable IP66











POWER (W)	150	200	240	300
AMPS	1.39 @ 120V/ 0.60 @ 277V	1.85 @ 120V/ 0.80 @ 277V	2.22 @ 120V/ 0.97 @ 277V	2.78 @ 120V/ 1.20 @ 277V
LUMENS/WATT	160			
LUMENS	24,000	32,000	38,400	48,000

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BOLRR2

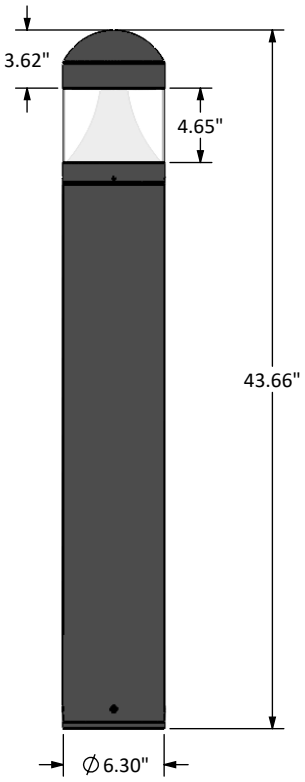
22 Watt Round Dome Top LED Bollard Light with Adjustable Power and Color temperature

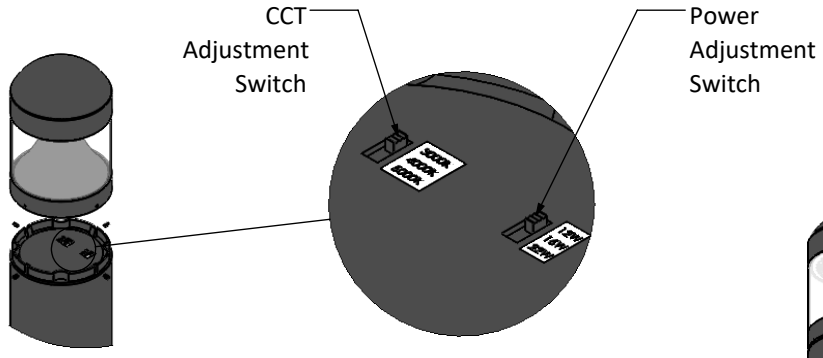
Job: _____

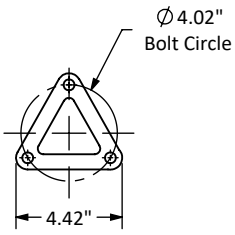
Job Site: _____ State: _____ Client Name: _____

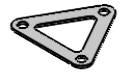
Notes: _____ Approvals: _____ Date: _____

Material: Corrosion Resistant Aluminum Housing
Lens: Anti-UV PC Lens
Power: 22W (MAX); 16W (MID); 12W (MIN)
Color Temperature (CCT): 5000K, 4000K, 3000K
Voltage: 120-277V
Lumens: 2,860 Lm (22W), 2,080 Lm (16W), 1,560 Lm (12W)
Color: Black
Power Factor: >0.9
CRI: >80
Surge Protection: 10KV
Dimming: 0-10V
UL Listing: UL Listed for Wet Location
IP Rating: IP65
Warranty: 5 Years
Weight: 12 lbs





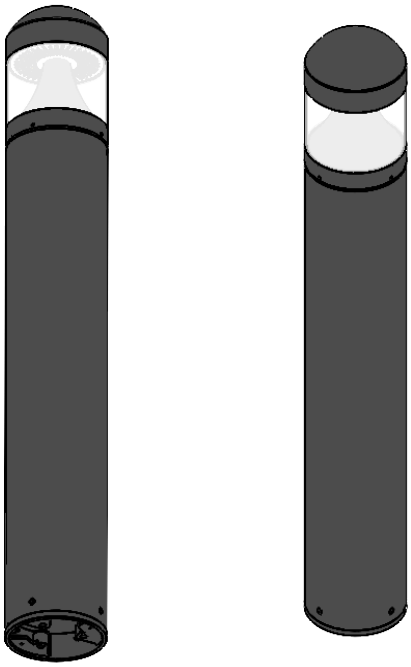




Anchor Bolt Plate

Hardware includes:

	Description	QTY:
	Anchor Bolt	3
	Nut	12
	Flat Washer	6
	Lock Washer	3
	Allen Wrench	1



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Project Name

Location | Prepared By

NUVO 62-1146R1

2 LT LED LG UP & DOWN SCONCE

Notes

[www] 07-18-2025 00:18:25

General	
Status	Active
Finish	Bronze
Wattage	20W
Style	Utility
CCT (Kelvin)	3000K
Color Temperature	Warm White
Width (in.)	4.53
Height (in.)	11.69
Extension (in.)	4.21
Indoor or Outdoor Fixture	Outdoor

Smart Product Info	
IOT Enabled	No
Integrated Camera	No

Specifications	
Technology	LED
CRI	90+
Lumen Output	1800L
Rated Hours	50000
Voltage	120V/277V
Dimmable	Non-Dimmable
Photocell or Sensor	No Photocell
Weight (lb.)	2.51
Up/Down Installation	Universal
Fixture Material	Die-Cast Aluminum
Fixture Type	Sconce
Operating Temperature	-30C (-22F) to +50C (+122F)

Dimensions	
Back Plate or Canopy Width (in.)	4.53
Back Plate or Canopy Height (in.)	4.53

Compliance	
Safety Listing	cULus - Certified
Location Rating	Wet
UL Application	Outdoor
ENERGY STAR	No
DLC Approved	No
ADA Compliant	No
B.U.G. Rating	B1-U3-G2
California Status	Lawful for sale in California
Title 20 / 24 Status	Lawful for sale
California Prop 65	Lead
RoHS Compliant	Yes
FCC Compliant	Yes
Canadian Standard ICES-005	Class A
SDS Sheet	LED_Fixture

Additional Information	
Installation Notes	Mounts Up and Down
Warranty	5-Years

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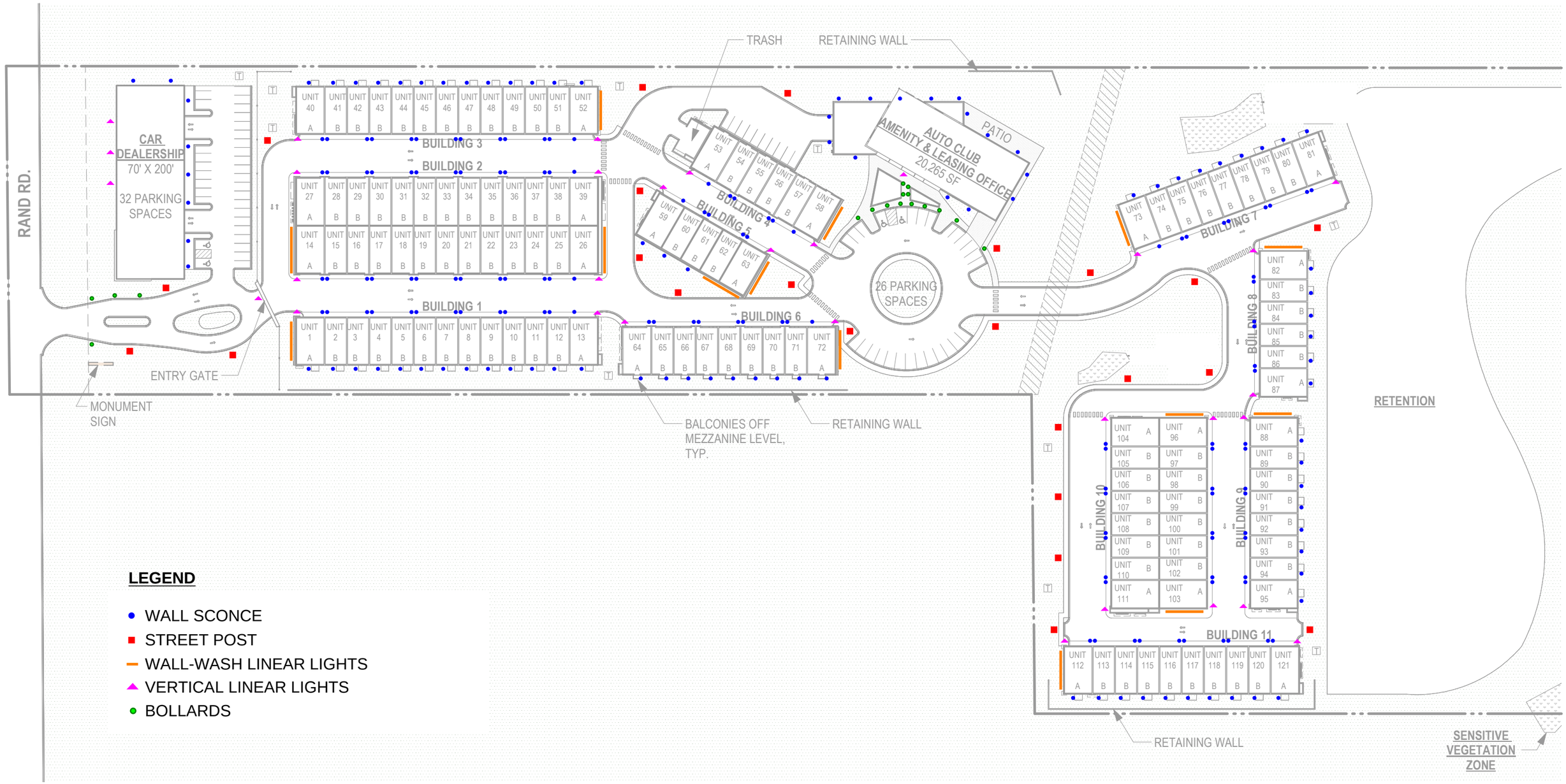
https://www.satco.com/



LEGEND

- WALL SCONCE
- STREET POST
- WALL-WASH LINEAR LIGHTS
- VERTICAL LINEAR LIGHTS
- BOLLARDS

1 SITE PLAN - LIGHTING DIAGRAM

SCALE: 1" = 100'-0"

OKW Architects

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

N

SCALE: 1" = 100'

0 25' 50' 100'

PROJECT

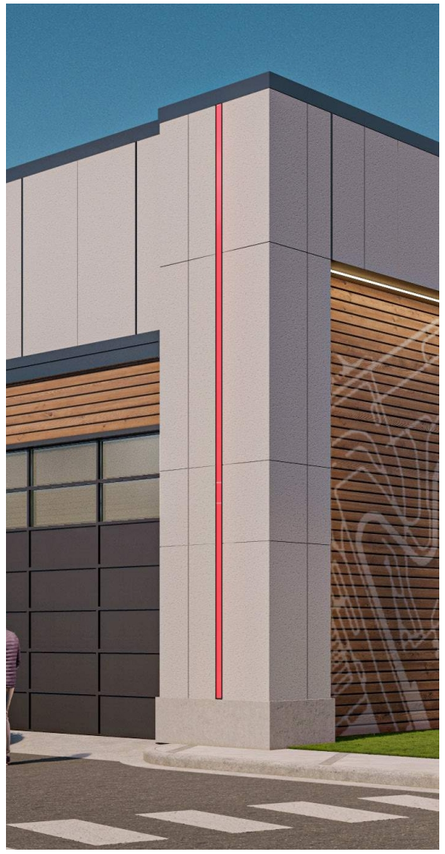
LUXE CORSA AUTO SUITES

24455 N. HIGHWAY 12 LAKE ZURICH, IL

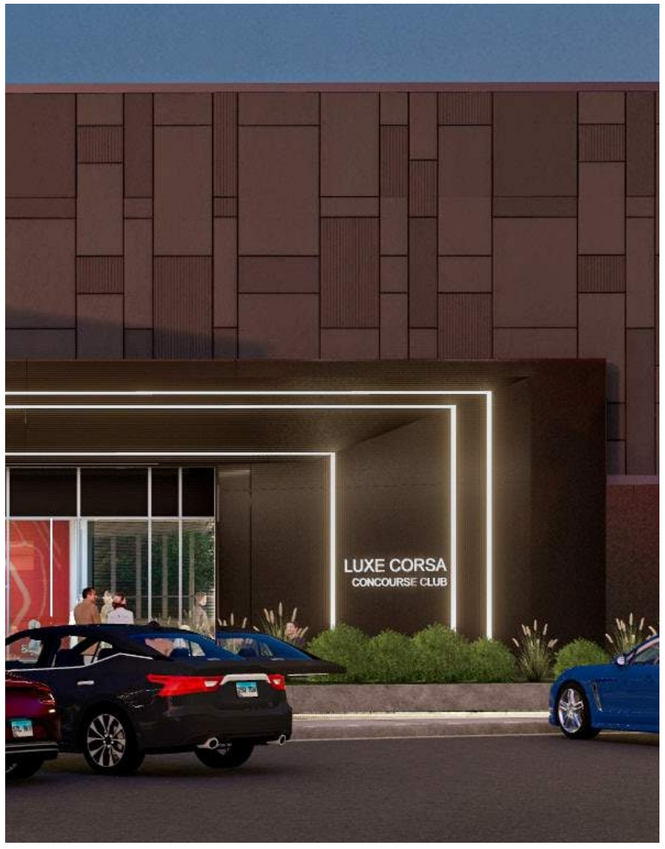
03-05-2025 Project #: 25009

00

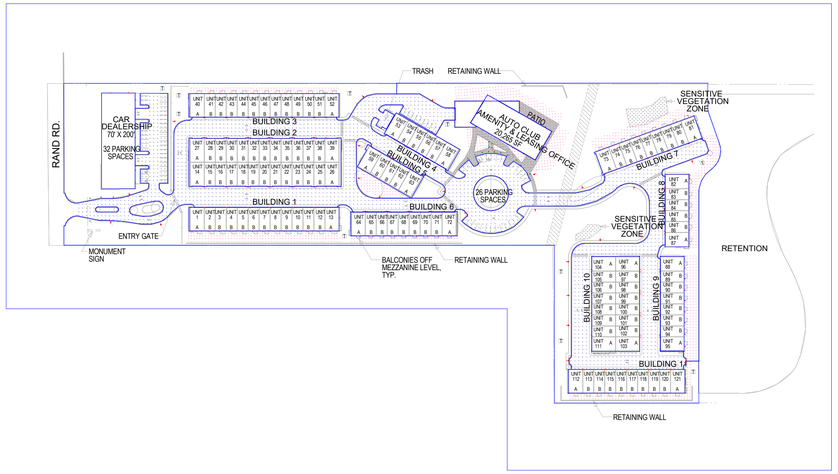
REFERENCE IMAGES



VERTICAL LINEAR LIGHTS



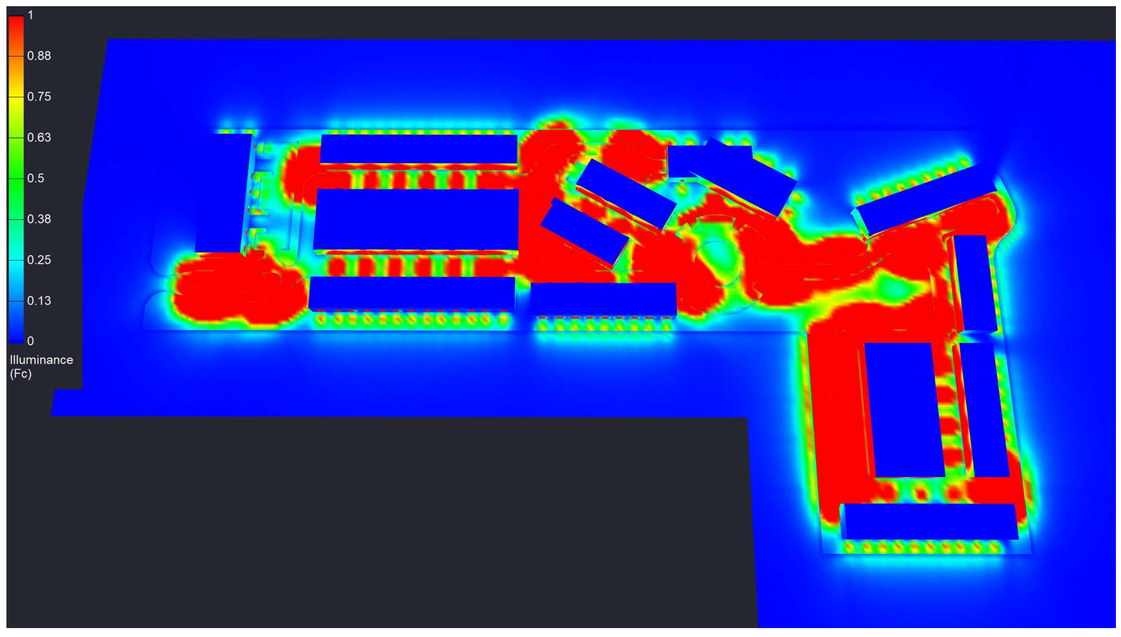
WALL-WASH LINEAR LIGHTS



LIGHTING DETAILS:

Luminaire Schedule							
Label	**Symbol**	**[MANUFAC]**	**Qty**	**LLF**	**Description**	**Lum. Lumens**	**Lum. Watts**
A		ENERGY LIGHT	23	0.900	HD-SB03-300W-FL2835-5070-T4 - Single Head	44651	301.2
B		ENERGY LIGHT	17	0.900	22W Round Bollard	2915	21.9
C		ENERGY LIGHT	215	0.900	62-1146R1_Photometrics	1472	20.0385

Calculation Summary								
Label	**CalcType**	**Units**	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**	**Grid Z**
#1 CAR DEALERSHIP PARKING	Illuminance	Fc	0.61	4.8	0.1	6.10	48.00	0
#10 BUILDING BACK 5	Illuminance	Fc	7.89	24.6	1.6	4.93	15.38	0.6
#2 BUILDING 4 PARKING	Illuminance	Fc	1.10	1.8	0.6	1.83	3.00	0
#3 ROUNDABOUT PARKING	Illuminance	Fc	3.09	18.0	0.2	15.45	90.00	0
#4 DRIVEWAY	Illuminance	Fc	3.63	23.0	0.2	18.15	115.00	0
#6 BUILDING BACK 1 & 6	Illuminance	Fc	0.55	1.6	0.0	N.A.	N.A.	0.6
#7 BUILDING BACK 7, 8, 9 & 11	Illuminance	Fc	1.17	22.9	0.0	N.A.	N.A.	0.6
#8 BUILDING BACK 3	Illuminance	Fc	0.60	1.4	0.1	6.00	14.00	0.6
#9 AUTOCLUB PATIO	Illuminance	Fc	2.22	67.7	0.1	22.20	677.00	0.6



Note on this Design:
This report does not provide any assertions regarding Lighting Design or Specification. Instead, its aim is to faithfully represent the photometric outcomes of a design as approved by external parties.

Regarding the Photometric Calculations:
These calculations are based on a mathematical model and are only as precise as permitted by the third-party software and the IES standards utilized. While the digital CAD data may appear accurate, this precision is a result of the techniques used for its generation and does not necessarily imply real-world accuracy.

Several factors may influence the actual performance of lighting in the built environment, including the accuracy of the original source (.ies) files, variations in input voltage and ballast, actual surface finishes, manufacturing discrepancies in both the lamp and luminaire, placement of luminaires, obstacles, and installation quality. Furthermore, errors may arise in field measurements due to the chosen measuring methods or technology, as well as the expertise of the measuring party. While every effort is made to ensure accuracy in this lighting study, the creator cannot be held accountable for any discrepancies. The recipient of this study acknowledges that the likelihood of scaling errors increases in the absence of a .DWG file or other properly dimensioned drawing provided to the designer.

Reflective values significantly impact light levels, and it is recommended that the end-user confirms these values before accepting the results of any photometric report. The managing contractor, architect, or engineer holds the responsibility for ensurin compliance with all relevant lighting ordinances and energy codes applicable to the project.

DESIGN NOTES:
1. MOUNTING HEIGHTS: Poles 20ft / Wall Mount 7ft
2. MEASUREMENTS TAKEN AT GRADE LEVEL
3. SURFACE REFLECTANCE: .7 /.5 /.2

LightMart® Solutions Professionals Trust

Lux Corsa Site Lighting

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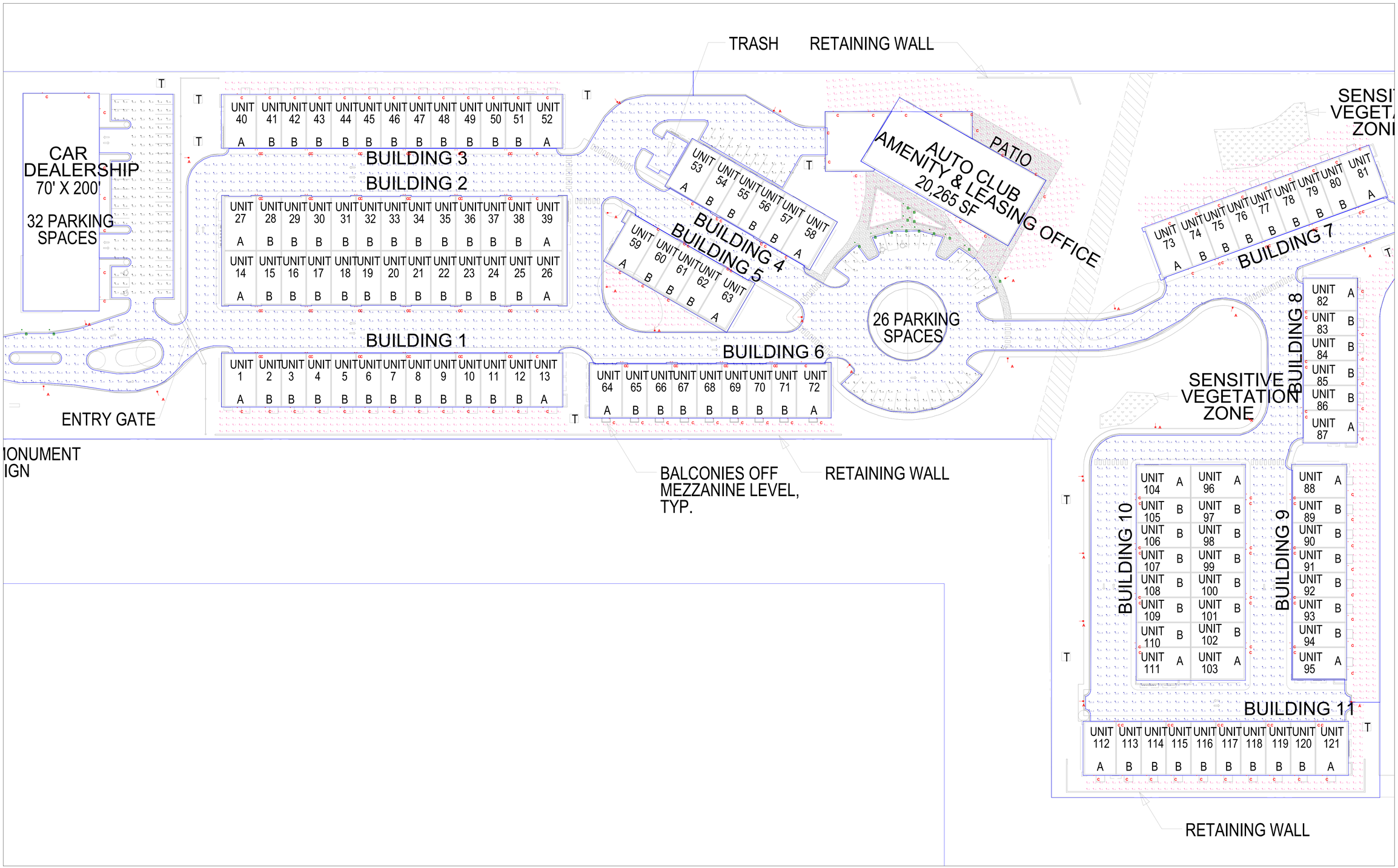
Date:7/31/2025
Drawn By: AG
Revision #: 0

Overall Layout:



Scale: 1 inch= 40 Ft.

LightMart® Solutions Professionals Trust

Lux Corsa Site Lighting

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Date:7/31/2025
Drawn By: AG
Revision #: 0
Page 2 of 2

Traffic Impact Study
Proposed Luxe Corsa Auto Suites

Lake Zurich, Illinois

Prepared For:

Luxe Corsa Partners LLC

Kenig, Lindgren, O'Hara, Aboona, Inc.

July 16, 2025

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed Luxe Corsa Auto Suites to be located on the east side of Rand Road approximately 900 feet north of the intersection of Rand Road with Bailey Lane in Lake Zurich, Illinois.

As proposed, the site, which is currently occupied by a vacant warehouse building, is proposed to be developed with a Luxe Corsa Auto Suites. The plans call for developing the site with 121 car condominium units across 11 buildings, a 14,000 square-foot building containing a 12,500 square-foot used luxury car dealership, a 1,500 square-foot coffee shop, and an ancillary clubhouse building with amenities and leasing office. Access to the site will be provided via a single access drive on Rand Road. **Figure 1** shows the location of the site relative to the area roadway system and **Figure 2** shows an aerial view of the site.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate the traffic generated by the proposed car condominium.

The sections of this report present the following:

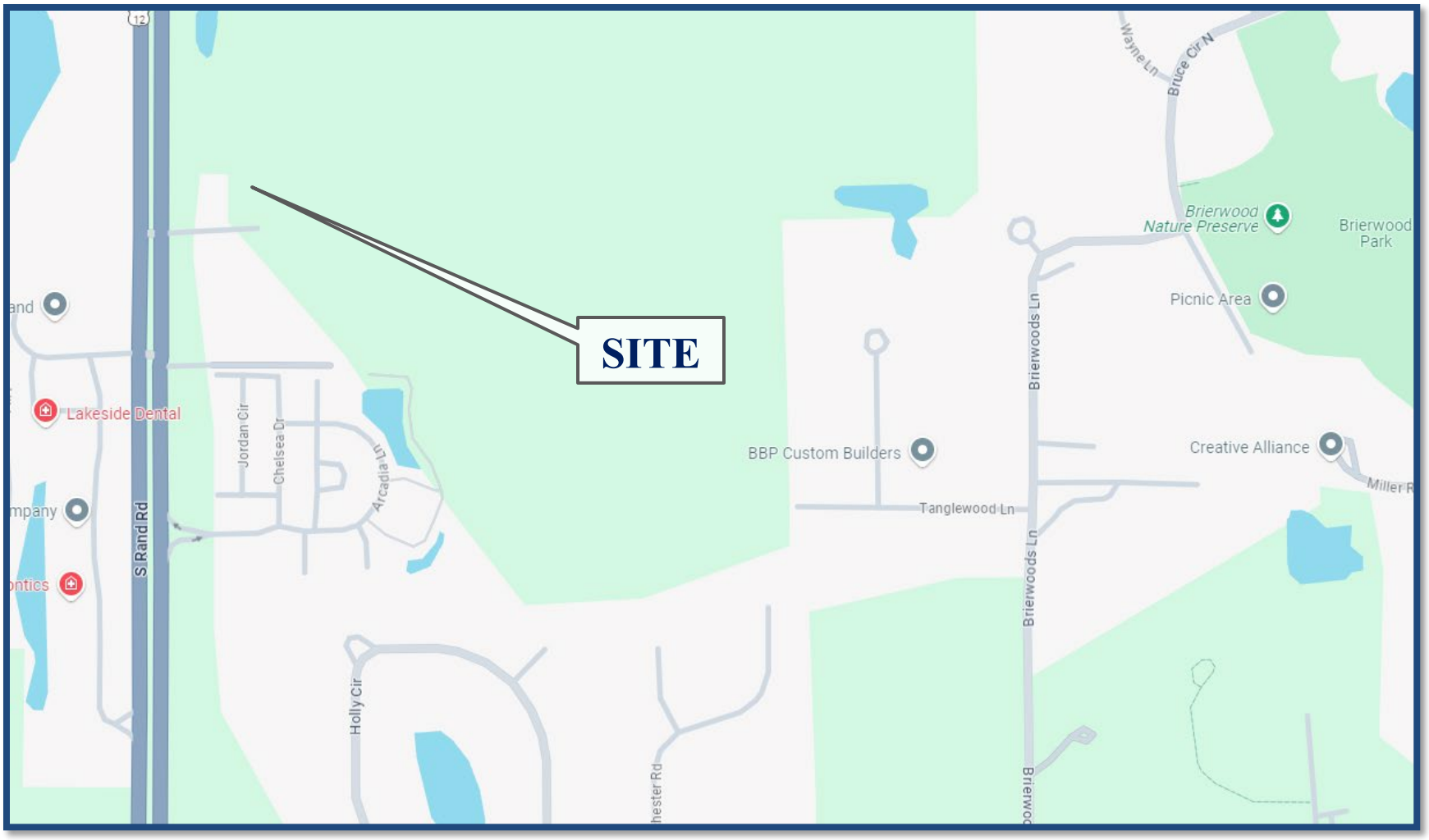
- Existing roadway conditions
- A description of the proposed Luxe Corsa Auto Suites
- Directional distribution of the Luxe Corsa Auto Suites traffic
- Vehicle trip generation for the Luxe Corsa Auto Suites
- Future traffic conditions including access to the Luxe Corsa Auto Suites
- Traffic analyses for the weekday midday and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyze the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Year 2031 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development and the traffic volumes estimated to be generated by other proposed developments in the area.

3. Year 2031 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2031 no-build volumes and the traffic estimated to be generated by the proposed car condominium.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

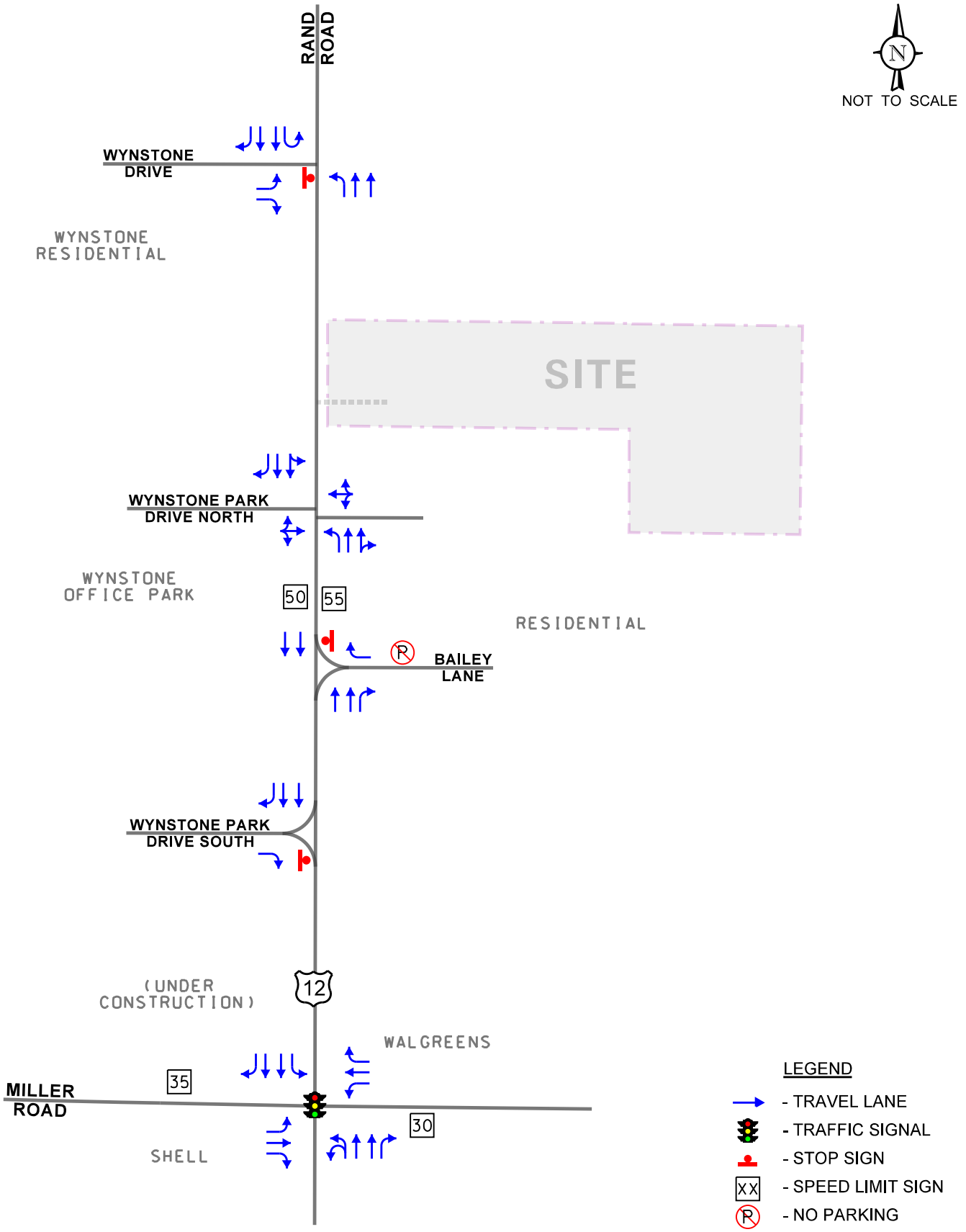
Site Location

The proposed Luxe Corsa Auto Suites will be located on the east side of Rand Road approximately 900 feet north of its intersection with Bailey Lane in Lake Zurich, Illinois. The site is bounded by vacant land owned by Mount St. Joseph to the north, a storage building to the south, vacant land to the east, and Rand Road to the west. Land uses in the vicinity are primarily residential with some commercial buildings to the south on the west side of Rand Road.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the site are described below and illustrated in **Figure 3**.

Rand Road (N US-12) is a northwest-southeast principal arterial roadway that in the vicinity of the site provides two travel lanes in each direction. At its signalized intersection with Miller Road, Rand Road provides a shared U-turn/left-turn lane, two through lanes, and an exclusive right-turn lane on the northbound approach and an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with Arcadia Lane/ Bailey Lane, Rand Road provides two through lanes and an exclusive right-turn lane on the northbound approach and two through lanes on the southbound approach. At its unsignalized intersection with North Winston Park Drive, Rand Road provides an exclusive left-turn lane and two through lanes on the northbound approach and two through lanes and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with south Wynston Park Drive, Rand Road provides two through lanes on the northbound approach and two through lanes and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with Wynston Drive, Rand Road provides an exclusive left-turn lane and two through lanes on the northbound approach and an exclusive U-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with the site access drive, Rand Road provides a through lane and a shared through/right-turn lane on the northbound approach and an exclusive left-turn lane and two through lanes on the southbound approach. Rand Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is classified as a Strategic Regional Arterial (SRA) route, carries an Annual Average Daily Traffic (AADT) of 32,200 vehicles (IDOT 2023), and has a posted speed limit of 55 miles per hour on the northbound approach and a posted speed limit of 50 miles per hour on the southbound approach.



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 25-159 Figure: 3

Miller Road is an east-west minor arterial roadway that in the vicinity of the site provides one travel lane in each direction. At its signalized intersection with Rand Road, Miller Road provides an exclusive left-turn lane, through lane, and exclusive right-turn lane on the eastbound and westbound approaches. Miller Road is under the jurisdiction of Lake County Division of Transportation (LCDOT) west of Rand Road and Village of Lake Zurich east of Rand Road carries an AADT of 4,800 vehicles west of Rand Road and 2,600 vehicles east of Rand Road, and has a posted speed limit of 35 miles per hour west of Rand Road and a posted speed limit of 30 miles per hour east of Rand Road.

Arcadia Lane/Bailey Lane is an east-west local roadway that provides one travel lane in each direction. At its unsignalized intersection with Rand Road, Bailey Lane provides a split inbound and outbound lane on the westbound approach. The outbound lane is under stop sign control. Arcadia Lane/Bailey Lane has a posted speed limit of 20 miles per hour.

Wynstone Park Drive is an access drive that serves the commercial buildings on the west side of Rand Road. At the north unsignalized intersection with Rand Road, Wynston Park Drive provides left-turn/through/right-turn lane on the eastbound and westbound approaches. At the south unsignalized intersection with Rand Road, Wynston Park Drive provides an inbound lane and outbound lane on the eastbound approach. The outbound lane is under stop sign control.

Wynstone Drive is a local roadway that provides one travel lane in each direction. At its unsignalized intersection with Rand Road, Wynstone Drive provides an exclusive left-turn/right-turn lane on the eastbound approach and is under stop sign control.

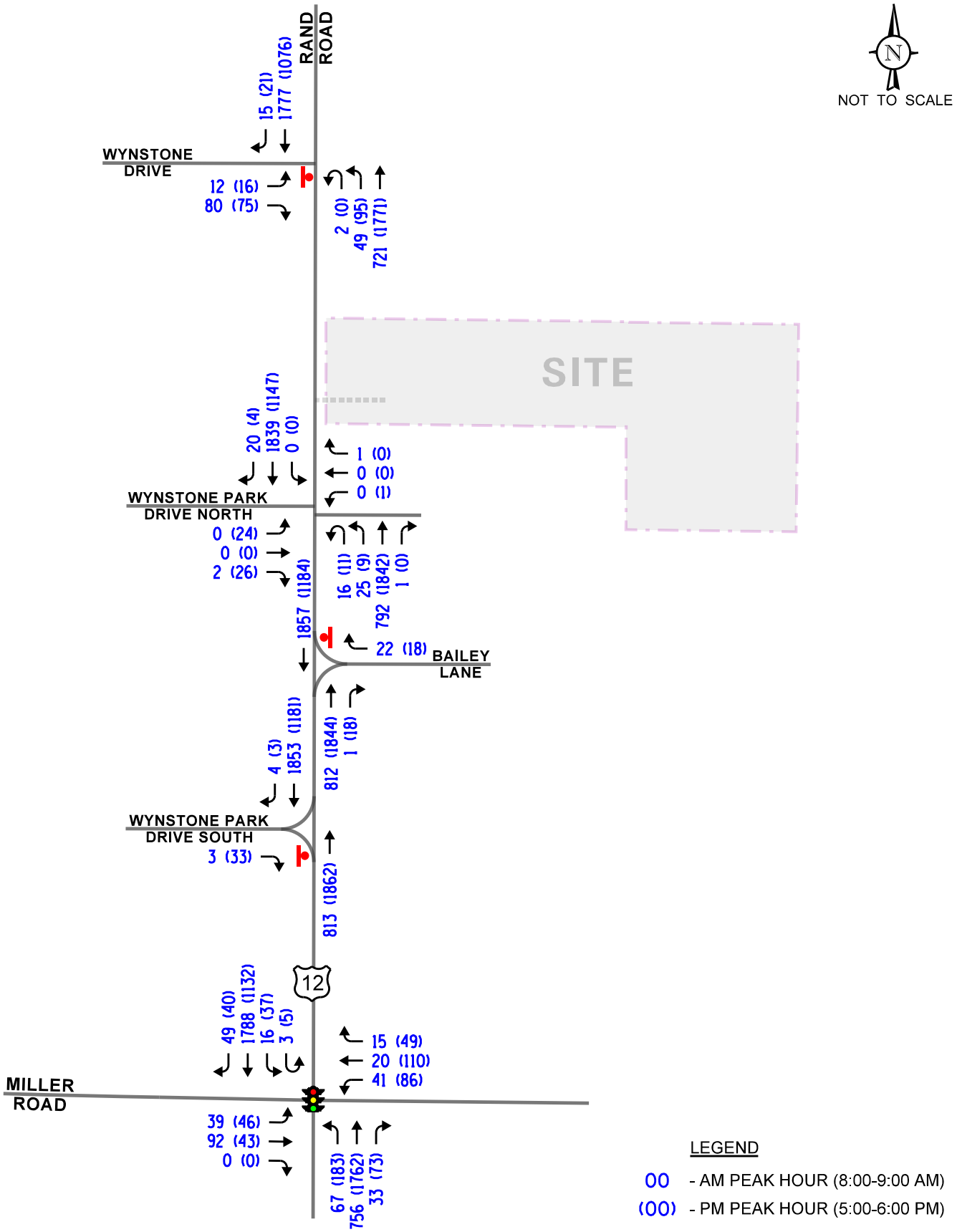
Site Access Drive is an east-west driveway that provides access to the existing vacant storage building at the site. At its unsignalized intersection with Rand Road, the site access drive provides a shared left-turn/right-turn lane on the westbound approach.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units on Tuesday, July 8, 2025 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Rand Road with Miller Road
- Rand Road with Wynstone Park Drive (north and south)
- Rand Road with Wynstone Drive
- Rand Road with Arcadia Lane/Bailey Lane

The results of the traffic counts indicated that the weekday morning peak hour occurs from 7:15 A.M. to 8:15 A.M. and the weekday evening peak hour occurs from 4:30 P.M. to 5:30 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Existing Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 25-159 Figure: 4

Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2019 to 2023) for the intersections of Rand Road with Miller Road, Rand Road with Arcadia Lane/Bailey Lane, Rand Road with Wynstone Park Drive (north and south), and Rand Road with Wynstone Drive. The intersections of Rand Road with Arcadia Lane/Bailey Lane, Rand Road with Wynstone Park Drive (north), Rand Road with Wynstone Park Drive (south), and Rand Road with Wynstone Drive averaged less than one crash per year. The crash data from the intersection of Rand Road with Miller Road is summarized in **Table 1**. A review of the data indicated that no fatalities were reported at this intersection during the reviewed period.

Table 1
RAND ROAD WITH MILLER ROAD – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2019	1	0	0	8	0	0	0	9
2020	1	0	0	4	0	2	0	7
2021	1	0	1	2	0	0	0	4
2022	0	0	0	5	0	2	1	8
2023	1	0	0	8	0	1	0	10
Total	**4**	**0**	**1**	**27**	**0**	**5**	**1**	**38**
Average	**<1.0**	**--**	**<1.0**	**5.4**	**--**	**1.0**	**<1.0**	**7.6**

3. Traffic Characteristics

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed Luxe Corsa Auto Suites, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will primarily be developed with 121 car storage condominiums distributed over 11 buildings with an ancillary clubhouse building with amenities and leasing office. Additionally, fronting Rand Road will be a 14,000 square-foot building containing a 12,500 square-foot used luxury car dealership and a 1,500 square-foot coffee shop. Access to the proposed Luxe Corsa Auto Suites will be provided via a full-movement access drive on Rand Road that will be located in the approximate location of the existing access drive serving the site. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It should be noted that Rand Road already provides a southbound left-turn lane serving the existing access drive.

A copy of the proposed site plan is included in the Appendix.

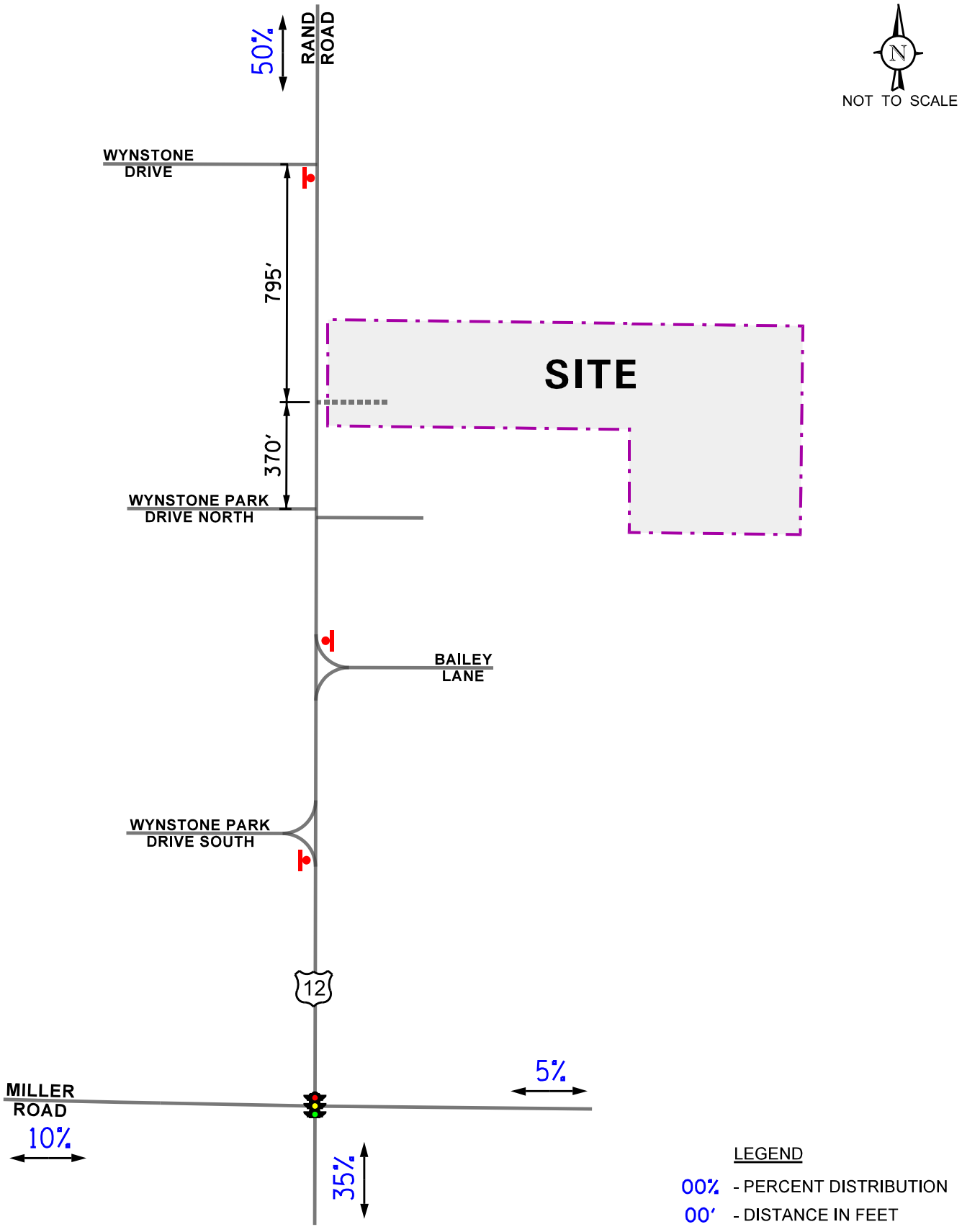
Directional Distribution

The directions from which vehicles will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the restaurant-generated traffic.

Peak Hour Traffic Volumes

The estimate of vehicle traffic to be generated by the proposed Luxe Corsa Auto Suites is based upon the proposed land use types and sizes. The vehicle trip generation for the proposed car condominium was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Land-Use Codes 936 (Coffee/Donut Shop without Drive-Thru Window), 842 (Recreational Vehicle Sales), and 151 (Mini Warehouse) were utilized. The Recreational Vehicle Sales code was used over a standard Automobile Sales (new or used) land-use code as the proposed car dealership will be selling used luxury/vintage vehicles that will be utilized for the purposes of collection and recreational use. While it is anticipated that trips generated by the coffee shop will be pass-by trips of existing vehicles along Rand Road or coffee shop customers will be owners of a car storage unit, no trip generation reductions were applied. A copy of the ITE trip generation sheets are included in the Appendix.

Table 2 shows the estimated vehicle trip generation for the weekday morning peak hour, weekday evening peak hour, and daily trips.



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Directional Distribution

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Job No: 25-159 Figure: 5

Table 2
ESTIMATED TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
936	Coffee/Donut Shop without Drive-Through Window (1,500 s.f.)	71	69	140	24	24	48	333	334	667
842	Recreational Vehicle Sales (12,500 s.f.)	5	1	6	3	7	10	31	32	63
151	Mini Warehouse (121 Units)	8	7	15	13	12	25	122	123	245
	Total	**84**	**77**	**161**	**40**	**43**	**83**	**486**	**489**	**975**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed Luxe Corsa Auto Suites.

Traffic Assignment

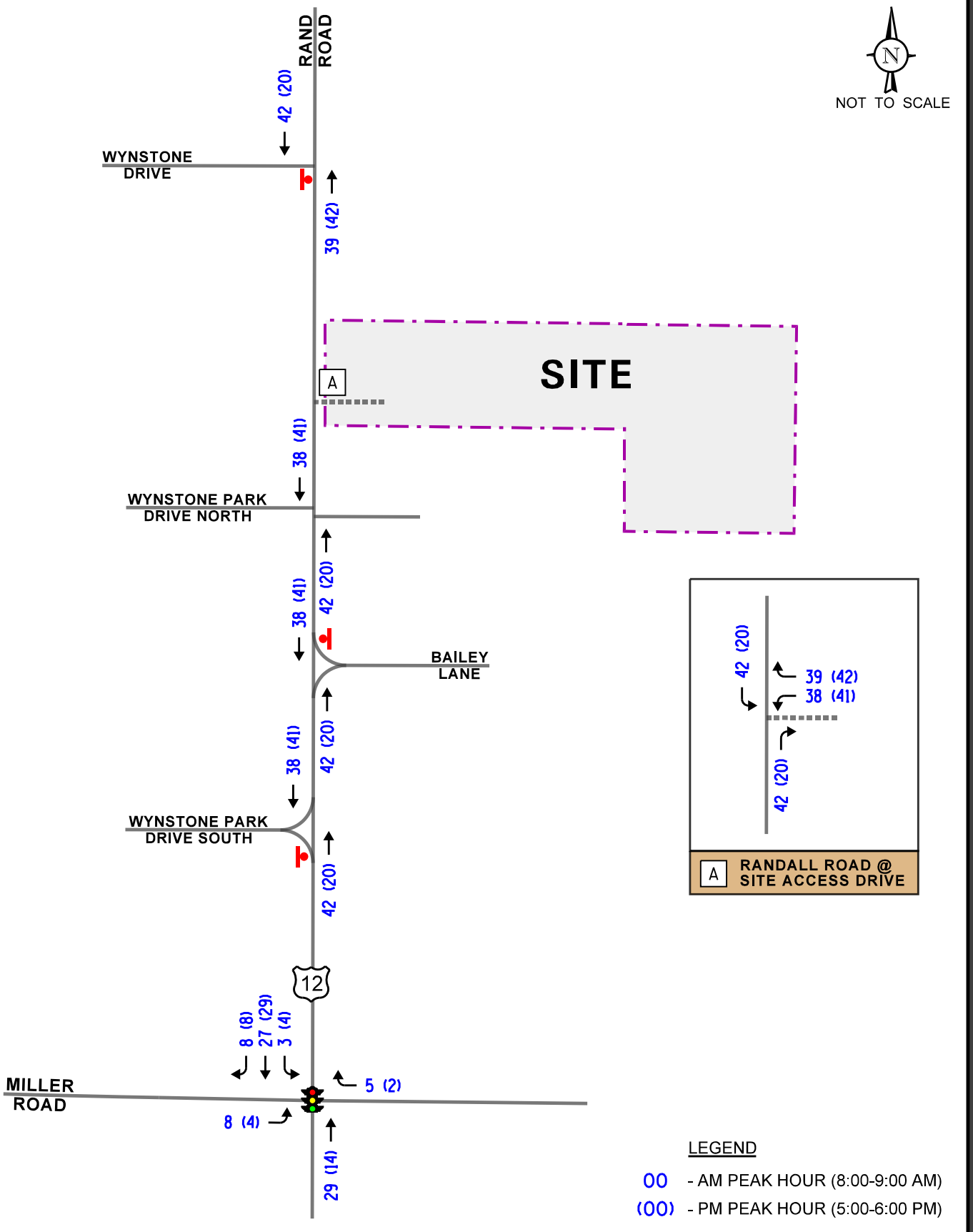
The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed Luxe Corsa Auto Suites were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the generated traffic volumes.

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.71 percent per year for six years (buildout year plus five years) for a total of approximately 4.5 percent to project Year 2031 background (no-build) conditions. A copy of the CMAP 2050 projections letter is included in the Appendix. **Figure 7** illustrates the Year 2031 no-build traffic volumes.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2031 no-build traffic volumes (Figure 7) to determine the Year 2031 total projected traffic volumes, shown in **Figure 8.**



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Site-Generated Traffic Volumes

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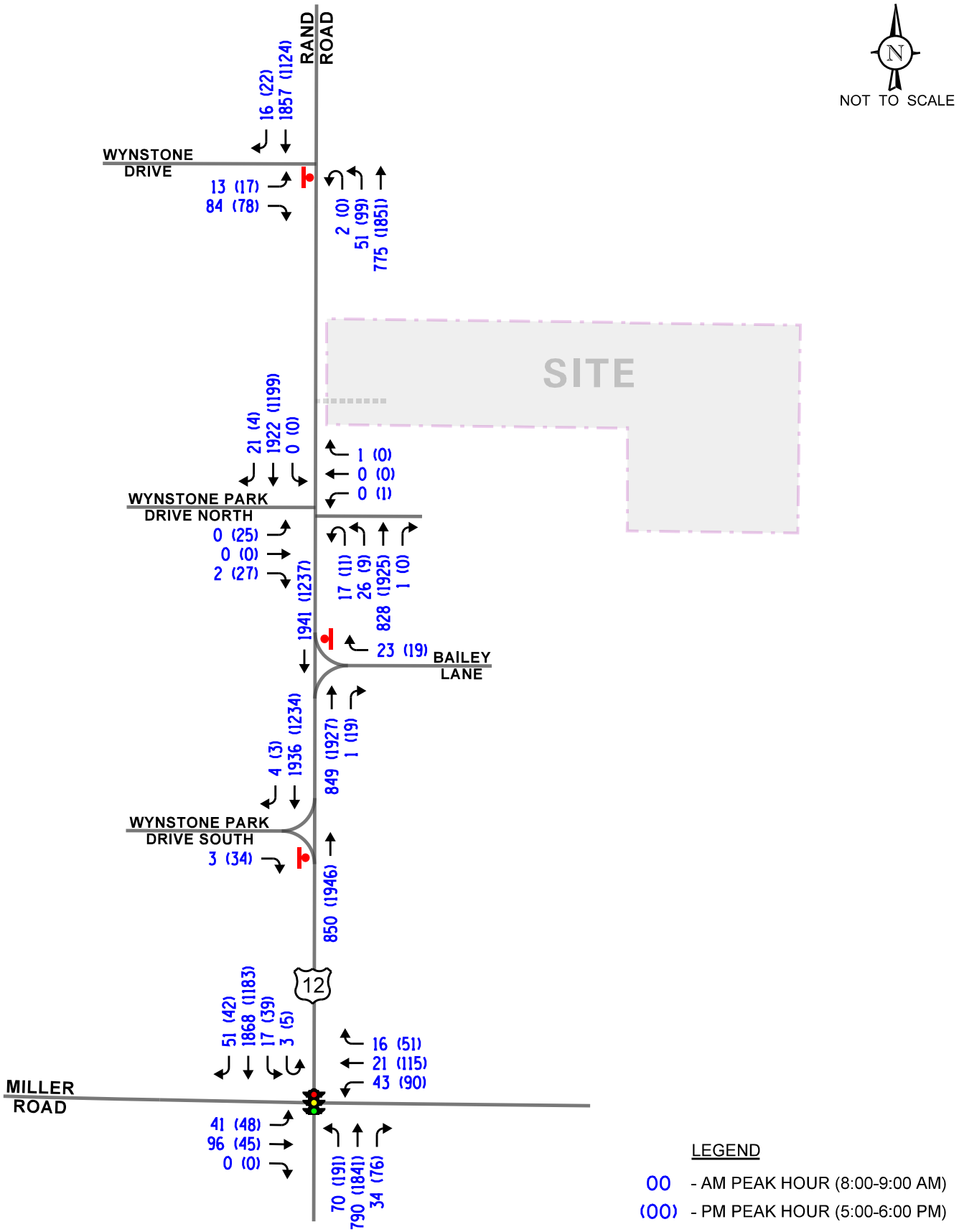
Job No: 25-159 Figure: 6



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Year 2031 No-Build Traffic Volumes

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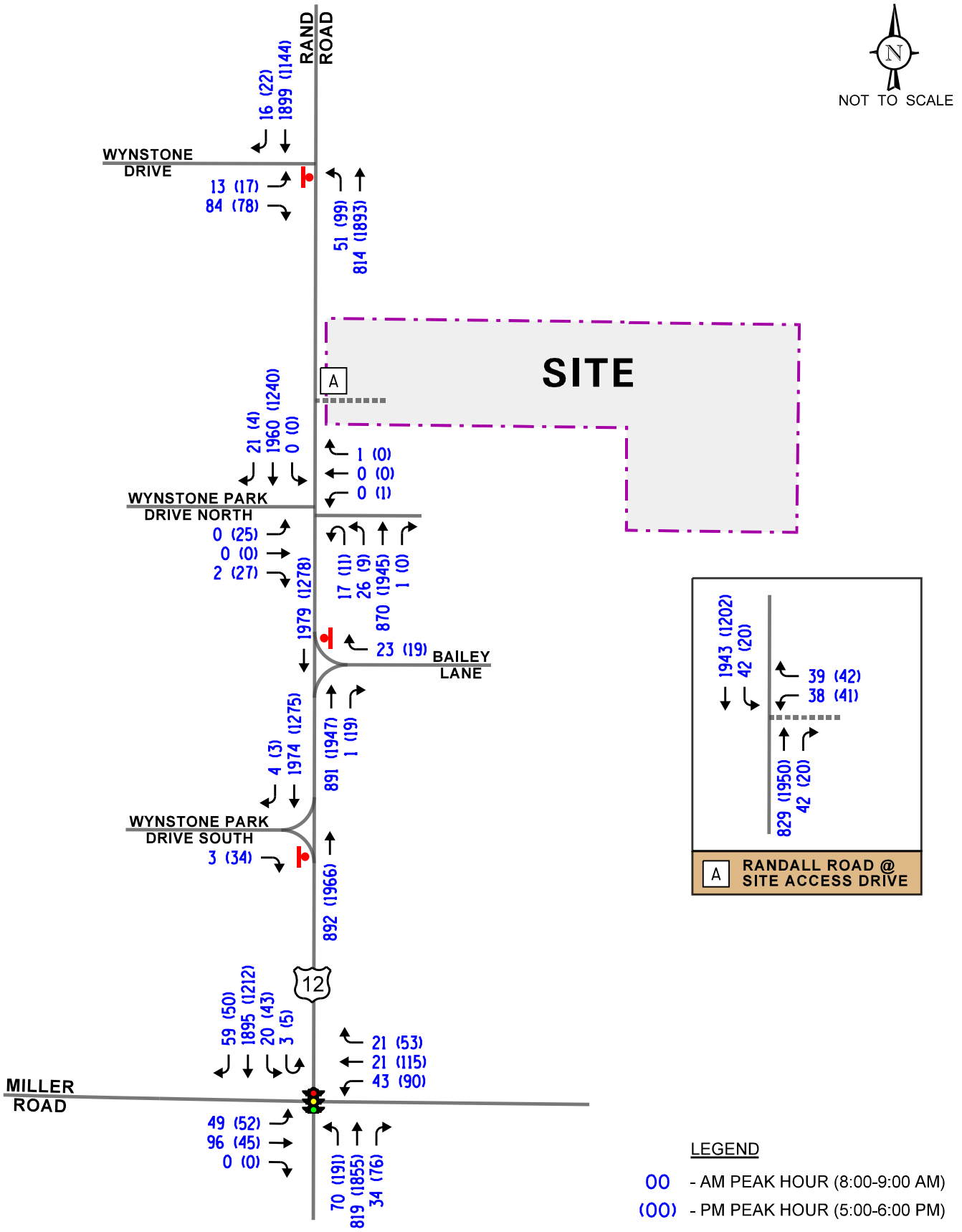
Job No: 25-159 Figure: 7



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Year 2031 Total Traffic Volumes

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Job No: 25-159 Figure: 8

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drive is projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing (Year 2025), Year 2031 no-build, and Year 2031 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 6th Edition* and analyzed using the Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersection was accomplished using actual cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2031 no-build, and Year 2031 total projected conditions are presented in **Tables 3** through **6**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS – RAND ROAD WITH MILLER ROAD – SIGNALIZED

	Peak Hour	Eastbound		Westbound			Northbound			Southbound		Overall
		L	T/R	L	T	R	L	T	R	L	T	
Existing Conditions	Weekday Morning	D 49.9	E 77.2	D 53.1	E 63.6	A 0.5	D 35.3	B 10.9	A 0.1	A 6.1	C 25.6	C 23.7
		E – 69.2		D – 45.6			B – 12.4			C – 24.8		
	Weekday Evening	D 49.9	E 66.8	D 53.5	E 74.9	A 1.5	B 10.9	B 18.5	A 1.8	A 9.9	B 15.9	B 20.0
		E – 58.0		D – 52.8			B – 17.2			B – 15.1		
No-Build Conditions	Weekday Morning	D 50.0	E 78.3	D 50.9	E 63.0	A 0.6	D 37.0	B 11.1	A 0.1	A 6.2	C 28.5	C 25.6
		E – 69.7		D – 44.2			B – 12.8			C – 27.6		
	Weekday Evening	D 49.8	E 66.7	D 53.6	E 75.5	A 1.6	B 12.2	B 19.9	A 2.0	B 11.9	B 17.0	C 21.1
		E – 58.0		D – 52.9			B – 18.6			B – 16.3		
Projected Conditions	Weekday Morning	D 51.0	E 78.3	D 51.0	E 63.9	A 0.8	D 37.1	B 11.3	A 0.1	A 6.2	C 29.5	C 26.0
		E – 69.0		D – 41.8			B – 12.9			C – 28.3		
	Weekday Evening	D 50.2	E 66.4	D 53.4	E 75.9	A 1.7	B 12.7	C 20.5	A 2.1	B 13.7	B 17.7	C 21.6
		E – 57.6		D – 52.7			B – 19.1			B – 16.8		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 4
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	C	22.5	B	11.9
• Eastbound Left Turn	F	65.9	E	38.7
• Eastbound Right Turn	C	24.9	B	14.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	E	43.5	C	16.4
• Eastbound Approach	C	19.8	D	30.7
• Westbound Approach	B	11.3	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.3	C	21.3
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	20.9	B	14.0

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 5
CAPACITY ANALYSIS RESULTS
YEAR 2031 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	C	24.9	B	12.4
• Eastbound Left Turn	F	78.6	E	42.5
• Eastbound Right Turn	D	27.5	B	14.5
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	F	52.7	C	17.3
• Eastbound Approach	C	20.9	D	33.8
• Westbound Approach	B	11.5	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.6	C	22.6
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	22.1	B	14.4

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 6
CAPACITY ANALYSIS RESULTS
YEAR 2031 TOTAL PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	D	26.2	B	12.5
• Eastbound Left Turn	F	85.6	E	43.9
• Eastbound Right Turn	D	28.7	B	14.7
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	F	57.0	C	18.1
• Eastbound Approach	C	21.4	E	35.6
• Westbound Approach	B	11.7	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.9	C	23.0
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	22.7	B	14.8
Rand Road with Proposed Access Drive				
• Westbound Approach	D	25.9	F	99+
• Southbound Left Turn	B	10.1	C	19.3

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the restaurant-generated traffic.

Rand Road with Miller Road

The results of the capacity analysis indicate that this intersection currently operates at an overall Level of Service (LOS) C during the weekday morning peak hour and LOS B during the weekday evening peak hour. As Rand Road is designated as an SRA, the majority of the green time is assigned to Rand Road. As such, Miller Road approaches operate at lower levels of service, as expected. Furthermore, the northbound and southbound approaches operate at LOS C or better and the eastbound and westbound approaches operate at LOS E or better during the peak hours.

Under Year 2031 no-build and total projected conditions, this intersection is projected to operate at an overall LOS C during the weekday morning and weekday evening peak hours with an increase in delay of less than three seconds from existing conditions. All the approaches are projected to continue to operate at the existing levels of service during both peak hours with increases in delays of less than four seconds. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control modifications will be required.

It is important to note that the traffic signal at this intersection is currently under construction. Signal timing data provided by LCDOT was utilized in the analysis and is reflected in the capacity results presented.

Rand Road with Wynstone Drive

The results of the capacity analysis indicate that the northbound left-turn, southbound left-turn and eastbound right-turn movements currently operate at LOS C or better during the weekday morning and weekday evening peak hours. Furthermore, the eastbound left-turn movement currently operates at LOS F during the weekday morning peak hour and LOS E during the weekday evening peak hour. It should be noted that the eastbound left-turn movement is expected to operate at a low level of service due to the high volumes on Rand Road.

Under Year 2031 no-build and total projected conditions, the northbound left-turn and the eastbound right-turn are expected to operate at LOS D or better during the peak hours and the eastbound left-turn and the southbound left-turn are expected to continue to operate at existing levels of service with an increase in delay of less than 20 seconds. It should be noted that the eastbound approach is expected to operate at a low level of service due to the high volume on Rand Road. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Rand Road with Wynstone Park Drive (north)

The results of the capacity analysis indicate that the northbound left-turn is expected to operate at LOS E or better during the peak hours, the eastbound approach is expected to operate at LOS D or better during the peak hours, the westbound approach is expected to operate at LOS B or better during the peak hours, and the southbound left-turn is expected to operate at LOS A during both peak hours.

Under Year 2031 no-build conditions, all approaches and movements are expected to continue to operate at existing levels of service as exiting conditions with an increase in delay of less than one second except for the northbound left-turn during the weekday morning peak hour which is expected to operate at LOS F with an increase in delay of less than ten seconds.

Under Year 2031 total projected conditions, all approaches and movements are expected to continue to operate at the same levels of service as no-build conditions except the eastbound approach during the weekday evening peak hour which is expected to operate at LOS E with an increase in delay of less than two seconds. It's important to note that the northbound left-turn is expected to experience an increase in delays of approximately four seconds during the weekday morning peak hour. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Rand Road with Arcadia Lane/Bailey Lane

The results of the capacity analysis indicate that the westbound approach currently operates at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour.

Under Year 2031 no-build and total projected conditions, the westbound approach is expected to continue to operate at existing levels of service with an increase in delay of approximately two seconds or less. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control adjustments will be required.

Rand Road with Wynstone Park Drive (south)

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS C or better during the weekday morning and weekday evening peak hours. Under Year 2031 no-build and total projected conditions, the eastbound approach is projected to continue to operate at existing levels of service as existing conditions with increases in delay of approximately two seconds or less. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control adjustments will be required.

Rand Road with Proposed Access Drive

As proposed, the existing access drive that will serve the proposed development provides one inbound lane and one outbound lane with outbound movement under stop sign control. Vehicles traveling southbound on Rand Road and then turning left onto the site can be accommodated by the exiting southbound exclusive left-turn lane.

The results of the capacity analysis indicate that the westbound approach of the proposed access drive at this intersection is projected to operate at LOS F during the weekday evening peak hour and LOS D during the weekday morning peak hour. Furthermore, the southbound left-turn is projected to operate at LOS C or better during both peak hours. It should be noted that the 95*th* percentile queue of the westbound approach is two to five vehicles during the peak hours which can be accommodated by the proposed access drive without blocking any internal intersections. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Additionally, a northbound right-turn lane is not warranted as it does not meet IDOT's volume criteria. The turn lane warrant guidelines are included in the appendix.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The results of the capacity analysis indicate that the traffic that will be generated by the proposed Luxe Corsa Auto Suites will not have a significant impact on the area roadways.
- The existing access drive that will serve the proposed development provides one inbound lane and one outbound lane with outbound movement under stop sign control.
- Southbound left-turn movements can be accommodated by the existing left-turn lane.
- The site plans provides adequate accommodation for the expected two to five vehicles exiting the site.
- A northbound right-turn lane is not warranted as it does not meet IDOT's volume criteria.

Appendix

Traffic Count Summary Sheets
Site Plan
CMAP Projections Letter
Level of Service Table
Capacity Analysis Summary Sheets
Right-Turn Lane Warrant

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Rand Road with Bailey Lane/Arcadia Lane TMC
Site Code:
Start Date: 07/09/2025

Turning Movement Data

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	0	0	4	0	4	0	148	0	0	148	0	0	525	0	525	677
7:15 AM	0	0	7	0	7	0	154	0	0	154	0	0	365	0	365	526
7:30 AM	0	0	3	0	3	0	198	0	0	198	0	0	373	0	373	574
7:45 AM	0	0	4	0	4	0	197	1	0	198	0	0	360	0	360	562
Hourly Total	0	0	18	0	18	0	697	1	0	698	0	0	1623	0	1623	2339
8:00 AM	0	0	8	0	8	0	244	0	0	244	0	0	429	0	429	681
8:15 AM	0	0	5	0	5	0	223	0	0	223	0	0	400	0	400	628
8:30 AM	0	0	11	0	11	0	196	0	0	196	0	0	365	0	365	572
8:45 AM	0	0	4	0	4	0	224	1	0	225	0	0	345	0	345	574
Hourly Total	0	0	28	0	28	0	887	1	0	888	0	0	1539	0	1539	2455
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	5	0	5	0	354	2	0	356	0	0	270	0	270	631
4:15 PM	0	0	2	0	2	0	432	9	0	441	0	0	264	0	264	707
4:30 PM	0	0	3	0	3	0	414	4	0	418	0	0	261	0	261	682
4:45 PM	0	0	5	0	5	0	441	6	0	447	0	0	284	0	284	736
Hourly Total	0	0	15	0	15	0	1641	21	0	1662	0	0	1079	0	1079	2756
5:00 PM	0	0	5	0	5	0	460	4	0	464	0	0	257	0	257	726
5:15 PM	0	0	4	0	4	0	409	4	0	413	0	0	261	0	261	678
5:30 PM	0	0	1	0	1	0	462	3	0	465	0	0	258	0	258	724
5:45 PM	0	0	5	0	5	0	363	3	0	366	0	0	277	0	277	648
Hourly Total	0	0	15	0	15	0	1694	14	0	1708	0	0	1053	0	1053	2776
Grand Total	0	0	76	0	76	0	4919	37	0	4956	0	0	5294	0	5294	10326
Approach %	0.0	0.0	100.0	-	-	0.0	99.3	0.7	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.7	-	0.7	0.0	47.6	0.4	-	48.0	0.0	0.0	51.3	-	51.3	-
Lights	0	0	73	-	73	0	4692	36	-	4728	0	0	5108	-	5108	9909
% Lights	-	-	96.1	-	96.1	-	95.4	97.3	-	95.4	-	-	96.5	-	96.5	96.0
Buses	0	0	2	-	2	0	8	1	-	9	0	0	1	-	1	12
% Buses	-	-	2.6	-	2.6	-	0.2	2.7	-	0.2	-	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	1	-	1	0	157	0	-	157	0	0	129	-	129	287
% Single-Unit Trucks	-	-	1.3	-	1.3	-	3.2	0.0	-	3.2	-	-	2.4	-	2.4	2.8
Articulated Trucks	0	0	0	-	0	0	60	0	-	60	0	0	56	-	56	116
% Articulated Trucks	-	-	0.0	-	0.0	-	1.2	0.0	-	1.2	-	-	1.1	-	1.1	1.1
Bicycles on Road	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Site Code:
Start Date: 07/09/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:15 AM	0	0	7	0	7	0	154	0	0	154	0	0	365	0	365	526
7:30 AM	0	0	3	0	3	0	198	0	0	198	0	0	373	0	373	574
7:45 AM	0	0	4	0	4	0	197	1	0	198	0	0	360	0	360	562
8:00 AM	0	0	8	0	8	0	244	0	0	244	0	0	429	0	429	681
Total	0	0	22	0	22	0	793	1	0	794	0	0	1527	0	1527	2343
Approach %	0.0	0.0	100.0	-	-	0.0	99.9	0.1	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.9	-	0.9	0.0	33.8	0.0	-	33.9	0.0	0.0	65.2	-	65.2	-
PHF	0.000	0.000	0.688	-	0.688	0.000	0.813	0.250	-	0.814	0.000	0.000	0.890	-	0.890	0.860
Lights	0	0	20	-	20	0	734	0	-	734	0	0	1478	-	1478	2232
% Lights	-	-	90.9	-	90.9	-	92.6	0.0	-	92.4	-	-	96.8	-	96.8	95.3
Buses	0	0	2	-	2	0	0	1	-	1	0	0	1	-	1	4
% Buses	-	-	9.1	-	9.1	-	0.0	100.0	-	0.1	-	-	0.1	-	0.1	0.2
Single-Unit Trucks	0	0	0	-	0	0	46	0	-	46	0	0	37	-	37	83
% Single-Unit Trucks	-	-	0.0	-	0.0	-	5.8	0.0	-	5.8	-	-	2.4	-	2.4	3.5
Articulated Trucks	0	0	0	-	0	0	13	0	-	13	0	0	11	-	11	24
% Articulated Trucks	-	-	0.0	-	0.0	-	1.6	0.0	-	1.6	-	-	0.7	-	0.7	1.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Rand Road with Bailey Lane/Arcadia Lane TMC
Site Code:
Start Date: 07/09/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
4:30 PM	0	0	3	0	3	0	414	4	0	418	0	0	261	0	261	682
4:45 PM	0	0	5	0	5	0	441	6	0	447	0	0	284	0	284	736
5:00 PM	0	0	5	0	5	0	460	4	0	464	0	0	257	0	257	726
5:15 PM	0	0	4	0	4	0	409	4	0	413	0	0	261	0	261	678
Total	0	0	17	0	17	0	1724	18	0	1742	0	0	1063	0	1063	2822
Approach %	0.0	0.0	100.0	-	-	0.0	99.0	1.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.6	-	0.6	0.0	61.1	0.6	-	61.7	0.0	0.0	37.7	-	37.7	-
PHF	0.000	0.000	0.850	-	0.850	0.000	0.937	0.750	-	0.939	0.000	0.000	0.936	-	0.936	0.959
Lights	0	0	17	-	17	0	1671	18	-	1689	0	0	1025	-	1025	2731
% Lights	-	-	100.0	-	100.0	-	96.9	100.0	-	97.0	-	-	96.4	-	96.4	96.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	43	0	-	43	0	0	23	-	23	66
% Single-Unit Trucks	-	-	0.0	-	0.0	-	2.5	0.0	-	2.5	-	-	2.2	-	2.2	2.3
Articulated Trucks	0	0	0	-	0	0	10	0	-	10	0	0	15	-	15	25
% Articulated Trucks	-	-	0.0	-	0.0	-	0.6	0.0	-	0.6	-	-	1.4	-	1.4	0.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Rosemont, Illinois, United States 60018
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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Data

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	8	21	0	0	29	0	8	5	1	0	14	0	10	151	6	0	167	0	2	377	8	0	387	597
7:15 AM	0	9	14	0	0	23	0	7	6	1	0	14	0	12	165	7	0	184	2	5	429	3	0	439	660
7:30 AM	0	7	29	0	0	36	0	10	5	3	0	18	0	19	185	9	0	213	1	2	418	17	2	438	705
7:45 AM	0	13	31	0	0	44	0	10	6	7	0	23	0	14	210	12	0	236	0	4	464	13	0	481	784
Hourly Total	0	37	95	0	0	132	0	35	22	12	0	69	0	55	711	34	0	800	3	13	1688	41	2	1745	2746
8:00 AM	0	10	18	0	3	28	0	14	3	4	0	21	0	22	179	5	0	206	0	4	334	12	1	350	605
8:15 AM	0	17	14	0	16	31	0	12	9	5	0	26	0	10	219	9	0	238	1	3	328	10	1	342	637
8:30 AM	0	14	14	0	19	28	0	10	10	5	1	25	0	7	194	14	0	215	0	8	364	18	0	390	658
8:45 AM	0	11	32	3	3	46	0	13	4	4	0	21	0	22	203	9	0	234	0	3	314	7	0	324	625
Hourly Total	0	52	78	3	41	133	0	49	26	18	1	93	0	61	795	37	0	893	1	18	1340	47	2	1406	2525
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	12	16	0	0	28	0	25	17	9	0	51	0	46	425	20	0	491	1	8	253	14	0	276	846
4:15 PM	0	11	14	0	0	25	0	15	27	10	0	52	0	57	362	22	0	441	2	2	283	13	0	300	818
4:30 PM	0	12	16	0	0	28	0	17	38	13	0	68	0	38	426	12	0	476	3	18	242	17	0	280	852
4:45 PM	0	13	10	0	0	23	0	20	24	14	0	58	0	44	427	21	0	492	0	4	284	11	0	299	872
Hourly Total	0	48	56	0	0	104	0	77	106	46	0	229	0	185	1640	75	0	1900	6	32	1062	55	0	1155	3388
5:00 PM	0	10	6	0	0	16	0	23	19	13	0	55	0	50	432	21	0	503	0	9	290	5	0	304	878
5:15 PM	0	11	11	0	0	22	0	26	29	9	0	64	0	51	415	19	0	485	2	5	273	5	0	285	856
5:30 PM	0	10	7	0	0	17	0	14	26	4	0	44	0	38	405	16	0	459	1	4	249	6	0	260	780
5:45 PM	0	9	6	0	0	15	0	21	19	6	0	46	0	43	375	21	0	439	1	4	268	1	0	274	774
Hourly Total	0	40	30	0	0	70	0	84	93	32	0	209	0	182	1627	77	0	1886	4	22	1080	17	0	1123	3288
Grand Total	0	177	259	3	41	439	0	245	247	108	1	600	0	483	4773	223	0	5479	14	85	5170	160	4	5429	11947
Approach %	0.0	40.3	59.0	0.7	-	-	0.0	40.8	41.2	18.0	-	-	0.0	8.8	87.1	4.1	-	-	0.3	1.6	95.2	2.9	-	-	-
Total %	0.0	1.5	2.2	0.0	-	3.7	0.0	2.1	2.1	0.9	-	5.0	0.0	4.0	40.0	1.9	-	45.9	0.1	0.7	43.3	1.3	-	45.4	-
Lights	0	173	236	3	-	412	0	241	244	107	-	592	0	476	4541	219	-	5236	13	83	4966	156	-	5218	11458
% Lights	-	97.7	91.1	100.0	-	93.8	-	98.4	98.8	99.1	-	98.7	-	98.6	95.1	98.2	-	95.6	92.9	97.6	96.1	97.5	-	96.1	95.9
Buses	0	0	0	0	-	0	0	2	0	1	-	3	0	1	9	0	-	10	1	1	7	1	-	10	23
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.8	0.0	0.9	-	0.5	-	0.2	0.2	0.0	-	0.2	7.1	1.2	0.1	0.6	-	0.2	0.2
Single-Unit Trucks	0	2	5	0	-	7	0	2	2	0	-	4	0	6	101	2	-	109	0	1	92	1	-	94	214
% Single-Unit Trucks	-	1.1	1.9	0.0	-	1.6	-	0.8	0.8	0.0	-	0.7	-	1.2	2.1	0.9	-	2.0	0.0	1.2	1.8	0.6	-	1.7	1.8
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	120	2	-	122	0	0	104	2	-	106	230
% Articulated Trucks	-	1.1	0.0	0.0	-	0.5	-	0.0	0.0	0.0	-	0.0	-	0.0	2.5	0.9	-	2.2	0.0	0.0	2.0	1.3	-	2.0	1.9
Bicycles on Road	0	0	18	0	-	18	0	0	1	0	-	1	0	0	2	0	-	2	0	0	1	0	-	1	22

% Bicycles on Road	-	0.0	6.9	0.0	-	4.1	-	0.0	0.4	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	-	-	-	-	41	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	9	14	0	0	23	0	7	6	1	0	14	0	12	165	7	0	184	2	5	429	3	0	439	660
7:30 AM	0	7	29	0	0	36	0	10	5	3	0	18	0	19	185	9	0	213	1	2	418	17	2	438	705
7:45 AM	0	13	31	0	0	44	0	10	6	7	0	23	0	14	210	12	0	236	0	4	464	13	0	481	784
8:00 AM	0	10	18	0	3	28	0	14	3	4	0	21	0	22	179	5	0	206	0	4	334	12	1	350	605
Total	0	39	92	0	3	131	0	41	20	15	0	76	0	67	739	33	0	839	3	15	1645	45	3	1708	2754
Approach %	0.0	29.8	70.2	0.0	-	-	0.0	53.9	26.3	19.7	-	-	0.0	8.0	88.1	3.9	-	-	0.2	0.9	96.3	2.6	-	-	-
Total %	0.0	1.4	3.3	0.0	-	4.8	0.0	1.5	0.7	0.5	-	2.8	0.0	2.4	26.8	1.2	-	30.5	0.1	0.5	59.7	1.6	-	62.0	-
PHF	0.000	0.750	0.742	0.000	-	0.744	0.000	0.732	0.833	0.536	-	0.826	0.000	0.761	0.880	0.688	-	0.889	0.375	0.750	0.886	0.662	-	0.888	0.878
Lights	0	37	89	0	-	126	0	38	18	14	-	70	0	63	659	29	-	751	2	14	1574	45	-	1635	2582
% Lights	-	94.9	96.7	-	-	96.2	-	92.7	90.0	93.3	-	92.1	-	94.0	89.2	87.9	-	89.5	66.7	93.3	95.7	100.0	-	95.7	93.8
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	1	2	0	-	3	1	1	6	0	-	8	13
% Buses	-	0.0	0.0	-	-	0.0	-	2.4	0.0	6.7	-	2.6	-	1.5	0.3	0.0	-	0.4	33.3	6.7	0.4	0.0	-	0.5	0.5
Single-Unit Trucks	0	0	2	0	-	2	0	2	1	0	-	3	0	3	26	2	-	31	0	0	25	0	-	25	61
% Single-Unit Trucks	-	0.0	2.2	-	-	1.5	-	4.9	5.0	0.0	-	3.9	-	4.5	3.5	6.1	-	3.7	0.0	0.0	1.5	0.0	-	1.5	2.2
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	52	2	-	54	0	0	39	0	-	39	95
% Articulated Trucks	-	5.1	0.0	-	-	1.5	-	0.0	0.0	0.0	-	0.0	-	0.0	7.0	6.1	-	6.4	0.0	0.0	2.4	0.0	-	2.3	3.4
Bicycles on Road	0	0	1	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	3
% Bicycles on Road	-	0.0	1.1	-	-	0.8	-	0.0	5.0	0.0	-	1.3	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	12	16	0	0	28	0	17	38	13	0	68	0	38	426	12	0	476	3	18	242	17	0	280	852
4:45 PM	0	13	10	0	0	23	0	20	24	14	0	58	0	44	427	21	0	492	0	4	284	11	0	299	872
5:00 PM	0	10	6	0	0	16	0	23	19	13	0	55	0	50	432	21	0	503	0	9	290	5	0	304	878
5:15 PM	0	11	11	0	0	22	0	26	29	9	0	64	0	51	415	19	0	485	2	5	273	5	0	285	856
Total	0	46	43	0	0	89	0	86	110	49	0	245	0	183	1700	73	0	1956	5	36	1089	38	0	1168	3458
Approach %	0.0	51.7	48.3	0.0	-	-	0.0	35.1	44.9	20.0	-	-	0.0	9.4	86.9	3.7	-	-	0.4	3.1	93.2	3.3	-	-	-
Total %	0.0	1.3	1.2	0.0	-	2.6	0.0	2.5	3.2	1.4	-	7.1	0.0	5.3	49.2	2.1	-	56.6	0.1	1.0	31.5	1.1	-	33.8	-
PHF	0.000	0.885	0.672	0.000	-	0.795	0.000	0.827	0.724	0.875	-	0.901	0.000	0.897	0.984	0.869	-	0.972	0.417	0.500	0.939	0.559	-	0.961	0.985
Lights	0	46	43	0	-	89	0	86	110	49	-	245	0	181	1662	73	-	1916	5	36	1064	38	-	1143	3393
% Lights	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	-	98.9	97.8	100.0	-	98.0	100.0	100.0	97.7	100.0	-	97.9	98.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	24	0	-	26	0	0	13	0	-	13	39
% Single-Unit Trucks	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	1.1	1.4	0.0	-	1.3	0.0	0.0	1.2	0.0	-	1.1	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	14	0	-	14	0	0	12	0	-	12	26
% Articulated Trucks	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.8	0.0	-	0.7	0.0	0.0	1.1	0.0	-	1.0	0.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Data

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	5	5	0	10	0	10	148	0	158	0	349	2	0	351	519
7:15 AM	0	0	21	0	21	0	11	160	0	171	0	393	2	0	395	587
7:30 AM	0	5	23	0	28	0	9	196	0	205	0	400	2	0	402	635
7:45 AM	0	3	22	0	25	1	13	206	0	220	0	417	6	0	423	668
Hourly Total	0	13	71	0	84	1	43	710	0	754	0	1559	12	0	1571	2409
8:00 AM	0	4	14	0	18	1	16	159	0	176	0	423	5	0	428	622
8:15 AM	0	2	18	0	20	0	18	195	0	213	0	394	2	0	396	629
8:30 AM	0	2	25	0	27	0	15	175	0	190	0	419	5	0	424	641
8:45 AM	0	3	25	0	28	0	13	182	0	195	0	323	11	0	334	557
Hourly Total	0	11	82	0	93	1	62	711	0	774	0	1559	23	0	1582	2449
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	3	18	0	21	0	14	408	0	422	0	242	7	0	249	692
4:15 PM	0	1	8	0	9	2	21	369	0	392	0	276	4	0	280	681
4:30 PM	0	3	20	0	23	0	19	390	0	409	0	233	3	0	236	668
4:45 PM	0	5	19	0	24	0	22	399	0	421	0	272	9	0	281	726
Hourly Total	0	12	65	0	77	2	76	1566	0	1644	0	1023	23	0	1046	2767
5:00 PM	0	7	17	0	24	0	21	427	0	448	0	259	6	0	265	737
5:15 PM	0	1	19	0	20	0	33	435	0	468	0	264	3	0	267	755
5:30 PM	0	2	26	0	28	1	31	363	0	395	0	232	9	0	241	664
5:45 PM	0	1	17	0	18	0	14	381	0	395	0	236	8	0	244	657
Hourly Total	0	11	79	0	90	1	99	1606	0	1706	0	991	26	0	1017	2813
Grand Total	0	47	297	0	344	5	280	4593	0	4878	0	5132	84	0	5216	10438
Approach %	0.0	13.7	86.3	-	-	0.1	5.7	94.2	-	-	0.0	98.4	1.6	-	-	-
Total %	0.0	0.5	2.8	-	3.3	0.0	2.7	44.0	-	46.7	0.0	49.2	0.8	-	50.0	-
Lights	0	46	295	-	341	5	278	4367	-	4650	0	4929	83	-	5012	10003
% Lights	-	97.9	99.3	-	99.1	100.0	99.3	95.1	-	95.3	-	96.0	98.8	-	96.1	95.8
Buses	0	0	1	-	1	0	0	9	-	9	0	10	0	-	10	20
% Buses	-	0.0	0.3	-	0.3	0.0	0.0	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	1	-	1	0	1	104	-	105	0	86	0	-	86	192
% Single-Unit Trucks	-	0.0	0.3	-	0.3	0.0	0.4	2.3	-	2.2	-	1.7	0.0	-	1.6	1.8
Articulated Trucks	0	0	0	-	0	0	0	112	-	112	0	107	0	-	107	219
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	2.4	-	2.3	-	2.1	0.0	-	2.1	2.1
Bicycles on Road	0	1	0	-	1	0	1	1	-	2	0	0	1	-	1	4
% Bicycles on Road	-	2.1	0.0	-	0.3	0.0	0.4	0.0	-	0.0	-	0.0	1.2	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 dfreeman@kloainc.com

Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	21	0	21	0	11	160	0	171	0	393	2	0	395	587
7:30 AM	0	5	23	0	28	0	9	196	0	205	0	400	2	0	402	635
7:45 AM	0	3	22	0	25	1	13	206	0	220	0	417	6	0	423	668
8:00 AM	0	4	14	0	18	1	16	159	0	176	0	423	5	0	428	622
Total	0	12	80	0	92	2	49	721	0	772	0	1633	15	0	1648	2512
Approach %	0.0	13.0	87.0	-	-	0.3	6.3	93.4	-	-	0.0	99.1	0.9	-	-	-
Total %	0.0	0.5	3.2	-	3.7	0.1	2.0	28.7	-	30.7	0.0	65.0	0.6	-	65.6	-
PHF	0.000	0.600	0.870	-	0.821	0.500	0.766	0.875	-	0.877	0.000	0.965	0.625	-	0.963	0.940
Lights	0	12	79	-	91	2	47	643	-	692	0	1562	15	-	1577	2360
% Lights	-	100.0	98.8	-	98.9	100.0	95.9	89.2	-	89.6	-	95.7	100.0	-	95.7	93.9
Buses	0	0	1	-	1	0	0	3	-	3	0	7	0	-	7	11
% Buses	-	0.0	1.3	-	1.1	0.0	0.0	0.4	-	0.4	-	0.4	0.0	-	0.4	0.4
Single-Unit Trucks	0	0	0	-	0	0	1	25	-	26	0	22	0	-	22	48
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	2.0	3.5	-	3.4	-	1.3	0.0	-	1.3	1.9
Articulated Trucks	0	0	0	-	0	0	0	50	-	50	0	42	0	-	42	92
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	6.9	-	6.5	-	2.6	0.0	-	2.5	3.7
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	2.0	0.0	-	0.1	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	3	20	0	23	0	19	390	0	409	0	233	3	0	236	668
4:45 PM	0	5	19	0	24	0	22	399	0	421	0	272	9	0	281	726
5:00 PM	0	7	17	0	24	0	21	427	0	448	0	259	6	0	265	737
5:15 PM	0	1	19	0	20	0	33	435	0	468	0	264	3	0	267	755
Total	0	16	75	0	91	0	95	1651	0	1746	0	1028	21	0	1049	2886
Approach %	0.0	17.6	82.4	-	-	0.0	5.4	94.6	-	-	0.0	98.0	2.0	-	-	-
Total %	0.0	0.6	2.6	-	3.2	0.0	3.3	57.2	-	60.5	0.0	35.6	0.7	-	36.3	-
PHF	0.000	0.571	0.938	-	0.948	0.000	0.720	0.949	-	0.933	0.000	0.945	0.583	-	0.933	0.956
Lights	0	15	75	-	90	0	95	1612	-	1707	0	1006	21	-	1027	2824
% Lights	-	93.8	100.0	-	98.9	-	100.0	97.6	-	97.8	-	97.9	100.0	-	97.9	97.9
Buses	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	23	-	23	0	12	0	-	12	35
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	1.4	-	1.3	-	1.2	0.0	-	1.1	1.2
Articulated Trucks	0	0	0	-	0	0	0	15	-	15	0	10	0	-	10	25
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.9	-	0.9	-	1.0	0.0	-	1.0	0.9
Bicycles on Road	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	-	6.3	0.0	-	1.1	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Data

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	155	0	0	158	0	0	389	0	0	389	547
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	166	0	0	172	0	0	454	3	0	457	629
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	4	187	0	0	194	0	0	470	2	0	472	666
7:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	5	11	206	0	0	222	0	0	489	9	0	498	721
Hourly Total	0	0	0	1	0	1	0	0	0	0	0	0	12	20	714	0	0	746	0	0	1802	14	0	1816	2563
8:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	5	7	178	1	0	191	0	0	426	6	0	432	625
8:15 AM	0	3	0	1	0	4	0	0	0	0	0	0	4	21	208	0	0	233	0	0	422	5	0	427	664
8:30 AM	0	4	0	1	0	5	0	0	0	0	0	0	8	10	190	0	0	208	0	0	447	11	0	458	671
8:45 AM	0	1	0	3	0	4	0	0	0	0	0	0	4	13	203	0	0	220	0	0	349	5	0	354	578
Hourly Total	0	8	0	6	0	14	0	0	0	1	0	1	21	51	779	1	0	852	0	0	1644	27	0	1671	2538
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	0	3	0	5	0	0	0	0	0	0	4	2	427	0	0	433	0	0	265	2	0	267	705
4:15 PM	0	4	0	3	0	7	0	0	0	0	0	0	5	3	402	0	0	410	0	0	292	3	0	295	712
4:30 PM	0	8	0	9	0	17	0	1	0	0	0	1	2	3	438	0	0	443	0	0	267	1	0	268	729
4:45 PM	0	5	0	5	0	10	0	0	0	0	1	0	0	2	459	0	0	461	0	0	300	2	0	302	773
Hourly Total	0	19	0	20	0	39	0	1	0	0	1	1	11	10	1726	0	0	1747	0	0	1124	8	0	1132	2919
5:00 PM	0	8	0	8	0	16	0	0	0	0	0	0	4	1	453	0	0	458	0	0	289	1	0	290	764
5:15 PM	0	3	0	4	0	7	0	0	0	0	0	0	5	3	459	0	0	467	0	0	286	0	0	286	760
5:30 PM	0	2	0	7	0	9	0	0	0	0	0	0	3	4	413	0	0	420	0	0	253	1	0	254	683
5:45 PM	0	2	0	2	0	4	0	0	0	0	0	0	4	1	396	0	0	401	0	0	265	2	0	267	672
Hourly Total	0	15	0	21	0	36	0	0	0	0	0	0	16	9	1721	0	0	1746	0	0	1093	4	0	1097	2879
Grand Total	0	42	0	48	0	90	0	1	0	1	1	2	60	90	4940	1	0	5091	0	0	5663	53	0	5716	10899
Approach %	0.0	46.7	0.0	53.3	-	-	0.0	50.0	0.0	50.0	-	-	1.2	1.8	97.0	0.0	-	-	0.0	0.0	99.1	0.9	-	-	-
Total %	0.0	0.4	0.0	0.4	-	0.8	0.0	0.0	0.0	0.0	-	0.0	0.6	0.8	45.3	0.0	-	46.7	0.0	0.0	52.0	0.5	-	52.4	-
Lights	0	41	0	48	-	89	0	1	0	1	-	2	60	90	4717	1	-	4868	0	0	5405	53	-	5458	10417
% Lights	-	97.6	-	100.0	-	98.9	-	100.0	-	100.0	-	100.0	100.0	100.0	95.5	100.0	-	95.6	-	-	95.4	100.0	-	95.5	95.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	11	0	-	11	0	0	10	0	-	10	21
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	-	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	129	0	-	129	0	0	159	0	-	159	289
% Single-Unit Trucks	-	2.4	-	0.0	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	2.6	0.0	-	2.5	-	-	2.8	0.0	-	2.8	2.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	83	0	-	83	0	0	88	0	-	88	171
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	1.7	0.0	-	1.6	-	-	1.6	0.0	-	1.5	1.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1

% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	166	0	0	172	0	0	454	3	0	457	629
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	4	187	0	0	194	0	0	470	2	0	472	666
7:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	5	11	206	0	0	222	0	0	489	9	0	498	721
8:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	5	7	178	1	0	191	0	0	426	6	0	432	625
Total	0	0	0	2	0	2	0	0	0	1	0	1	16	25	737	1	0	779	0	0	1839	20	0	1859	2641
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	0.0	0.0	100.0	-	-	2.1	3.2	94.6	0.1	-	-	0.0	0.0	98.9	1.1	-	-	-
Total %	0.0	0.0	0.0	0.1	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.6	0.9	27.9	0.0	-	29.5	0.0	0.0	69.6	0.8	-	70.4	-
PHF	0.000	0.000	0.000	0.500	-	0.500	0.000	0.000	0.000	0.250	-	0.250	0.800	0.568	0.894	0.250	-	0.877	0.000	0.000	0.940	0.556	-	0.933	0.916
Lights	0	0	0	2	-	2	0	0	0	1	-	1	16	25	659	1	-	701	0	0	1748	20	-	1768	2472
% Lights	-	-	-	100.0	-	100.0	-	-	-	100.0	-	100.0	100.0	100.0	89.4	100.0	-	90.0	-	-	95.1	100.0	-	95.1	93.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	8	0	-	8	10
% Buses	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	0.3	0.0	-	0.3	-	-	0.4	0.0	-	0.4	0.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	38	0	-	38	0	0	61	0	-	61	99
% Single-Unit Trucks	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	5.2	0.0	-	4.9	-	-	3.3	0.0	-	3.3	3.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	38	0	-	38	0	0	21	0	-	21	59
% Articulated Trucks	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	5.2	0.0	-	4.9	-	-	1.1	0.0	-	1.1	2.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	0.1	0.0	-	0.1	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	8	0	9	0	17	0	1	0	0	0	1	2	3	438	0	0	443	0	0	267	1	0	268	729
4:45 PM	0	5	0	5	0	10	0	0	0	0	1	0	0	2	459	0	0	461	0	0	300	2	0	302	773
5:00 PM	0	8	0	8	0	16	0	0	0	0	0	0	4	1	453	0	0	458	0	0	289	1	0	290	764
5:15 PM	0	3	0	4	0	7	0	0	0	0	0	0	5	3	459	0	0	467	0	0	286	0	0	286	760
Total	0	24	0	26	0	50	0	1	0	0	1	1	11	9	1809	0	0	1829	0	0	1142	4	0	1146	3026
Approach %	0.0	48.0	0.0	52.0	-	-	0.0	100.0	0.0	0.0	-	-	0.6	0.5	98.9	0.0	-	-	0.0	0.0	99.7	0.3	-	-	-
Total %	0.0	0.8	0.0	0.9	-	1.7	0.0	0.0	0.0	0.0	-	0.0	0.4	0.3	59.8	0.0	-	60.4	0.0	0.0	37.7	0.1	-	37.9	-
PHF	0.000	0.750	0.000	0.722	-	0.735	0.000	0.250	0.000	0.000	-	0.250	0.550	0.750	0.985	0.000	-	0.979	0.000	0.000	0.952	0.500	-	0.949	0.979
Lights	0	24	0	26	-	50	0	1	0	0	-	1	11	9	1770	0	-	1790	0	0	1115	4	-	1119	2960
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	-	-	-	100.0	100.0	100.0	97.8	-	-	97.9	-	-	97.6	100.0	-	97.6	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	30	0	-	30	0	0	17	0	-	17	47
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	1.7	-	-	1.6	-	-	1.5	0.0	-	1.5	1.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	9	0	-	9	0	0	10	0	-	10	19
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.5	-	-	0.5	-	-	0.9	0.0	-	0.9	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 dfreeman@kloainc.com

Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Data

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	158	0	158	0	385	0	0	385	543
7:15 AM	0	0	0	0	0	0	0	174	0	174	0	451	1	0	452	626
7:30 AM	0	0	1	0	1	0	0	183	0	183	0	461	0	0	461	645
7:45 AM	0	0	2	0	2	0	0	235	0	235	0	496	2	0	498	735
Hourly Total	0	0	3	0	3	0	0	750	0	750	0	1793	3	0	1796	2549
8:00 AM	0	0	0	0	0	0	0	195	0	195	0	418	1	0	419	614
8:15 AM	0	0	1	0	1	0	0	243	0	243	0	446	1	0	447	691
8:30 AM	0	0	1	0	1	0	0	216	0	216	0	439	0	0	439	656
8:45 AM	0	0	1	0	1	0	0	226	0	226	0	373	0	0	373	600
Hourly Total	0	0	3	0	3	0	0	880	0	880	0	1676	2	0	1678	2561
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	2	0	2	0	0	439	0	439	0	274	0	0	274	715
4:15 PM	0	0	7	0	7	0	0	421	0	421	0	311	1	0	312	740
4:30 PM	0	0	6	0	6	0	0	446	0	446	0	274	0	0	274	726
4:45 PM	0	0	8	0	8	0	0	457	0	457	0	306	1	0	307	772
Hourly Total	0	0	23	0	23	0	0	1763	0	1763	0	1165	2	0	1167	2953
5:00 PM	0	0	15	0	15	0	0	454	0	454	0	302	1	0	303	772
5:15 PM	0	0	4	0	4	0	0	505	0	505	0	299	1	0	300	809
5:30 PM	0	0	2	0	2	0	0	416	0	416	0	275	0	0	275	693
5:45 PM	0	0	2	0	2	0	0	453	0	453	0	280	0	0	280	735
Hourly Total	0	0	23	0	23	0	0	1828	0	1828	0	1156	2	0	1158	3009
Grand Total	0	0	52	0	52	0	0	5221	0	5221	0	5790	9	0	5799	11072
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.5	-	0.5	0.0	0.0	47.2	-	47.2	0.0	52.3	0.1	-	52.4	-
Lights	0	0	52	-	52	0	0	5016	-	5016	0	5559	8	-	5567	10635
% Lights	-	-	100.0	-	100.0	-	-	96.1	-	96.1	-	96.0	88.9	-	96.0	96.1
Buses	0	0	0	-	0	0	0	13	-	13	0	10	0	-	10	23
% Buses	-	-	0.0	-	0.0	-	-	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	91	-	91	0	111	1	-	112	203
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	1.9	11.1	-	1.9	1.8
Articulated Trucks	0	0	0	-	0	0	0	101	-	101	0	109	0	-	109	210
% Articulated Trucks	-	-	0.0	-	0.0	-	-	1.9	-	1.9	-	1.9	0.0	-	1.9	1.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, Illinois, United States 60018
(847)518-9990 dfreeman@kloainc.com

Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	0	0	0	0	0	174	0	174	0	451	1	0	452	626
7:30 AM	0	0	1	0	1	0	0	183	0	183	0	461	0	0	461	645
7:45 AM	0	0	2	0	2	0	0	235	0	235	0	496	2	0	498	735
8:00 AM	0	0	0	0	0	0	0	195	0	195	0	418	1	0	419	614
Total	0	0	3	0	3	0	0	787	0	787	0	1826	4	0	1830	2620
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	30.0	-	30.0	0.0	69.7	0.2	-	69.8	-
PHF	0.000	0.000	0.375	-	0.375	0.000	0.000	0.837	-	0.837	0.000	0.920	0.500	-	0.919	0.891
Lights	0	0	3	-	3	0	0	725	-	725	0	1749	3	-	1752	2480
% Lights	-	-	100.0	-	100.0	-	-	92.1	-	92.1	-	95.8	75.0	-	95.7	94.7
Buses	0	0	0	-	0	0	0	4	-	4	0	8	0	-	8	12
% Buses	-	-	0.0	-	0.0	-	-	0.5	-	0.5	-	0.4	0.0	-	0.4	0.5
Single-Unit Trucks	0	0	0	-	0	0	0	18	-	18	0	30	1	-	31	49
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	2.3	-	2.3	-	1.6	25.0	-	1.7	1.9
Articulated Trucks	0	0	0	-	0	0	0	40	-	40	0	38	0	-	38	78
% Articulated Trucks	-	-	0.0	-	0.0	-	-	5.1	-	5.1	-	2.1	0.0	-	2.1	3.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.1	0.0	-	0.1	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

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(847)518-9990 dfreeman@kloainc.com

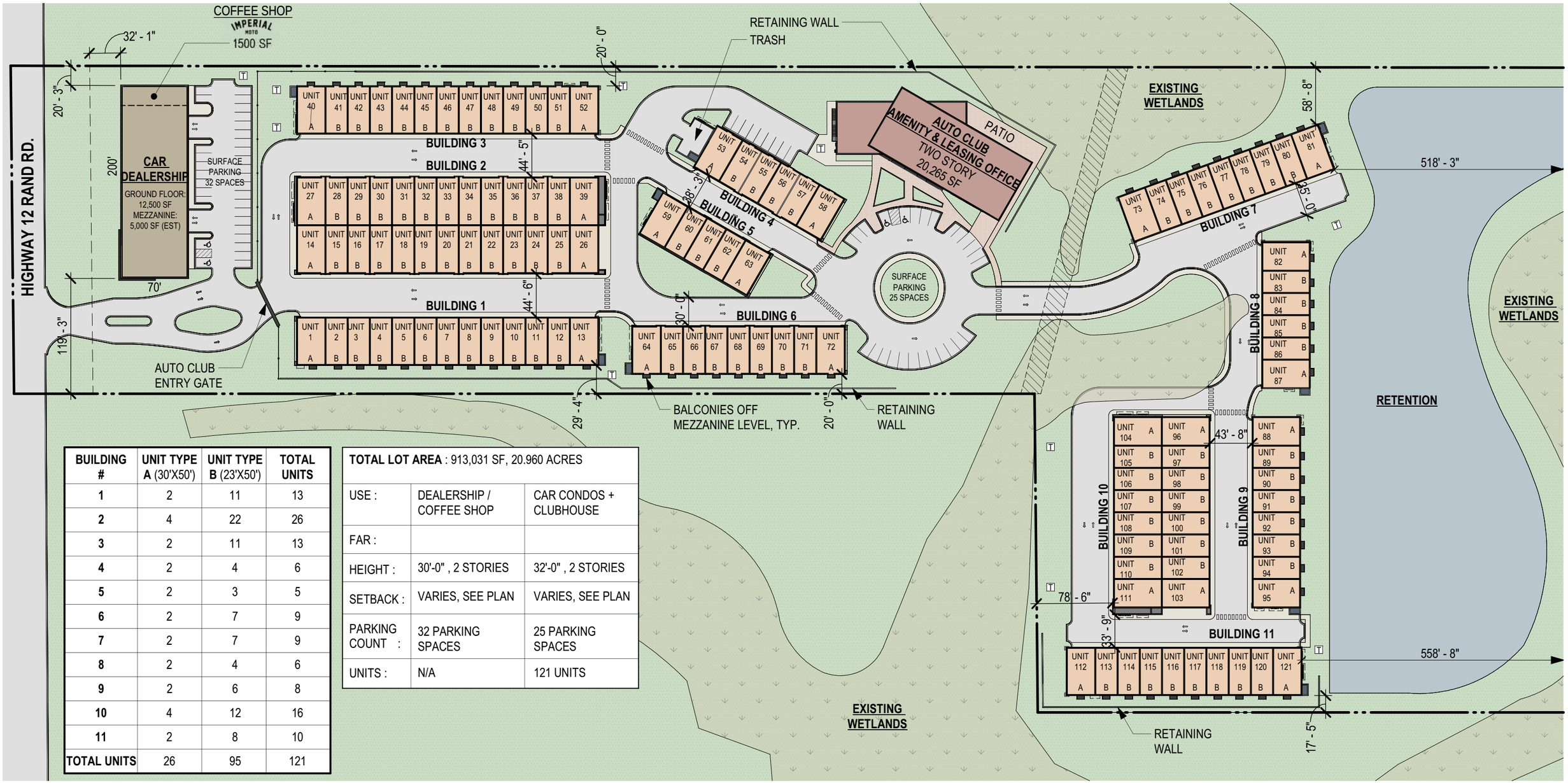
Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	6	0	6	0	0	446	0	446	0	274	0	0	274	726
4:45 PM	0	0	8	0	8	0	0	457	0	457	0	306	1	0	307	772
5:00 PM	0	0	15	0	15	0	0	454	0	454	0	302	1	0	303	772
5:15 PM	0	0	4	0	4	0	0	505	0	505	0	299	1	0	300	809
Total	0	0	33	0	33	0	0	1862	0	1862	0	1181	3	0	1184	3079
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.7	0.3	-	-	-
Total %	0.0	0.0	1.1	-	1.1	0.0	0.0	60.5	-	60.5	0.0	38.4	0.1	-	38.5	-
PHF	0.000	0.000	0.550	-	0.550	0.000	0.000	0.922	-	0.922	0.000	0.965	0.750	-	0.964	0.951
Lights	0	0	33	-	33	0	0	1825	-	1825	0	1152	3	-	1155	3013
% Lights	-	-	100.0	-	100.0	-	-	98.0	-	98.0	-	97.5	100.0	-	97.6	97.9
Buses	0	0	0	-	0	0	0	2	-	2	0	0	0	-	0	2
% Buses	-	-	0.0	-	0.0	-	-	0.1	-	0.1	-	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	0	-	0	0	0	23	-	23	0	16	0	-	16	39
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.2	-	1.2	-	1.4	0.0	-	1.4	1.3
Articulated Trucks	0	0	0	-	0	0	0	12	-	12	0	13	0	-	13	25
% Articulated Trucks	-	-	0.0	-	0.0	-	-	0.6	-	0.6	-	1.1	0.0	-	1.1	0.8
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan

SITE PLAN



BUILDING #	UNIT TYPE A (30'X50')	UNIT TYPE B (23'X50')	TOTAL UNITS
1	2	11	13
2	4	22	26
3	2	11	13
4	2	4	6
5	2	3	5
6	2	7	9
7	2	7	9
8	2	4	6
9	2	6	8
10	4	12	16
11	2	8	10
TOTAL UNITS	26	95	121

TOTAL LOT AREA : 913,031 SF, 20.960 ACRES		
USE :	DEALERSHIP / COFFEE SHOP	CAR CONDOS + CLUBHOUSE
FAR :		
HEIGHT :	30'-0" , 2 STORIES	32'-0" , 2 STORIES
SETBACK :	VARIES, SEE PLAN	VARIES, SEE PLAN
PARKING COUNT :	32 PARKING SPACES	25 PARKING SPACES
UNITS :	N/A	121 UNITS

SITE PLAN
SCALE: 1" = 100' - 0"

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
July 01, 2025 Project #: 25009

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607

cmap.illinois.gov | 312-454-0400

June 18, 2025

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 24455 US Route 12
IDOT

Dear Mr. May:

In response to a request made on your behalf and dated June 17, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Rand Road between Wynstone Drive and Miller Drive	32,200	34,700
Rand Road south of Miller Road	37,800	40,800
Miller Road west of Rand Road	4,800	6,200
Miller Road east of Rand Road	2,600	3,500

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2024 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)
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Level of Service Criteria

LEVEL OF SERVICE CRITERIA

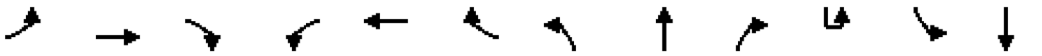
Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour



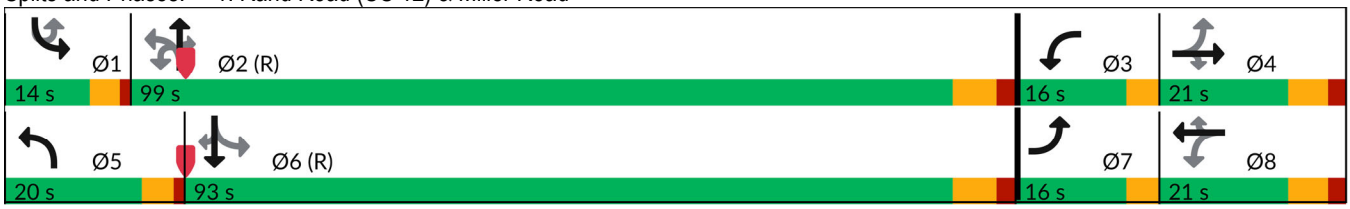
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	39	92	0	41	20	15	67	756	33	3	16	1788
Future Volume (vph)	39	92	0	41	20	15	67	756	33	3	16	1788
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1630	3654
Flt Permitted	0.573			0.689			0.039				0.313	
Satd. Flow (perm)	1037	1942	1900	1223	1818	1509	70	3423	1442	0	537	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	105	0	47	23	17	76	859	38	0	21	2032
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	25.5	14.2		22.0	13.4	13.4	113.3	105.2	105.2		107.5	98.9
Actuated g/C Ratio	0.17	0.09		0.15	0.09	0.09	0.76	0.70	0.70		0.72	0.66
v/c Ratio	0.19	0.57		0.23	0.14	0.07	0.54	0.36	0.04		0.05	0.84
Control Delay (s/veh)	49.9	77.2		53.1	63.6	0.5	35.3	10.9	0.1		6.1	25.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.9	77.2		53.1	63.6	0.5	35.3	10.9	0.1		6.1	25.6
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.2			45.6			12.4				24.8
Approach LOS		E			D			B				C
Queue Length 50th (ft)	36	99		38	21	0	24	191	0		5	786
Queue Length 95th (ft)	69	162		73	51	0	76	242	0		13	998

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	49
Future Volume (vph)	49
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	56
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.9
Actuated g/C Ratio	0.66
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	257	197		234	187	263	221	2399	1035		466	2409
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.53		0.20	0.12	0.06	0.34	0.36	0.04		0.05	0.84

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 23.7		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1104
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	813	1853	4
Future Vol, veh/h	0	3	0	813	1853	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	913	2082	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1041	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	230	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	230	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.87	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	230	-
HCM Lane V/C Ratio	-	0.015	-
HCM Ctrl Dly (s/v)	-	20.9	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	812	1	0	1857
Future Vol, veh/h	0	22	812	1	0	1857
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	26	944	1	0	2159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	472	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	520	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	520	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.28	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	520	-
HCM Lane V/C Ratio	-	0.049	-
HCM Ctrl Dly (s/v)	-	12.3	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	16	25	792	1	0	1839	20
Future Vol, veh/h	0	0	2	0	0	1	16	25	792	1	0	1839	20
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	17	27	861	1	0	1999	22

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2518	2950	999	1950	2971	431	1999	2021	0	0	862	0	0
Stage 1	1999	1999	-	951	951	-	-	-	-	-	-	-	-
Stage 2	520	951	-	999	2021	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	15	14	245	39	14	573	76	285	-	-	776	-	-
Stage 1	63	103	-	279	337	-	-	-	-	-	-	-	-
Stage 2	513	336	-	261	101	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	10	10	245	26	9	573	137	137	-	-	776	-	-
Mov Cap-2 Maneuver	51	69	-	26	9	-	-	-	-	-	-	-	-
Stage 1	63	103	-	188	227	-	-	-	-	-	-	-	-
Stage 2	345	227	-	258	101	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.81	11.3	2.14	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	137	-	-	245	573	776	-	-
HCM Lane V/C Ratio	0.325	-	-	0.009	0.002	-	-	-
HCM Ctrl Dly (s/v)	43.5	-	-	19.8	11.3	0	-	-
HCM Lane LOS	E	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	12	0	80	0	0	0	2	49	742	0	0	1777	15
Future Vol, veh/h	12	0	80	0	0	0	2	49	742	0	0	1777	15
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	13	0	85	0	0	0	2	52	789	0	0	1890	16

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2394	-	945	1890	1906	0	-	789	0	0
Stage 1	1890	-	-	-	-	-	-	-	-	-
Stage 2	503	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92	6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31	2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	29	0	265	90	300	-	0	839	-	-
Stage 1	107	0	-	-	-	-	0	-	-	-
Stage 2	578	0	-	-	-	-	0	-	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	23	0	265	260	260	-	-	839	-	-
Mov Cap-2 Maneuver	72	0	-	-	-	-	-	-	-	-
Stage 1	85	0	-	-	-	-	-	-	-	-
Stage 2	578	0	-	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	30.27	1.44	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	260	-	72	265	839	-	-
HCM Lane V/C Ratio	0.209	-	0.178	0.322	-	-	-
HCM Ctrl Dly (s/v)	22.5	-	65.9	24.9	0	-	-
HCM Lane LOS	C	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0.8	-	0.6	1.3	0	-	-

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

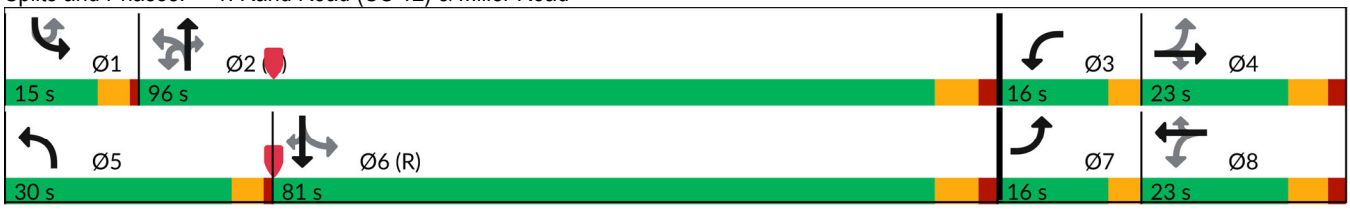
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	46	43	0	86	110	49	183	1762	73	5	37	1132
Future Volume (vph)	46	43	0	86	110	49	183	1762	73	5	37	1132
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.685			0.553			0.186				0.072	
Satd. Flow (perm)	1302	2000	1900	1051	2000	1615	350	3725	1615	0	137	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	43	0	87	111	49	185	1780	74	0	42	1143
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.0	12.6		27.2	14.9	14.9	113.2	102.3	102.3		105.6	96.6
Actuated g/C Ratio	0.15	0.08		0.18	0.10	0.10	0.75	0.68	0.68		0.70	0.64
v/c Ratio	0.21	0.26		0.35	0.56	0.18	0.51	0.70	0.07		0.25	0.48
Control Delay (s/veh)	49.9	66.8		53.5	74.9	1.5	10.9	18.5	1.8		9.9	15.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.9	66.8		53.5	74.9	1.5	10.9	18.5	1.8		9.9	15.9
LOS	D	E		D	E	A	B	B	A		A	B
Approach Delay (s/veh)		58.0			52.8			17.2				15.1
Approach LOS		E			D			B				B
Queue Length 50th (ft)	37	40		72	105	0	47	573	0		10	298
Queue Length 95th (ft)	72	80		120	169	0	82	750	17		23	415

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	40
Future Volume (vph)	40
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	40
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	96.6
Actuated g/C Ratio	0.64
v/c Ratio	0.04
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	266	220		257	225	288	509	2539	1127		216	2399
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.20		0.34	0.49	0.17	0.36	0.70	0.07		0.19	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 20.0		Intersection LOS: B	
Intersection Capacity Utilization 77.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1081
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.04

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	1862	1181	3
Future Vol, veh/h	0	33	0	1862	1181	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	35	0	1960	1243	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	622	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	435	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	435	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	435	-
HCM Lane V/C Ratio	-	0.08	-
HCM Ctrl Dly (s/v)	-	14	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	18	1844	18	0	1184
Future Vol, veh/h	0	18	1844	18	0	1184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
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	0	20	2004	20	0	1287

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1002	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	241	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	241	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	21.28	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	241	-
HCM Lane V/C Ratio	-	0.081	-
HCM Ctrl Dly (s/v)	-	21.3	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	24	0	26	0	0	0	11	9	1842	0	0	1147	4
Future Vol, veh/h	24	0	26	0	0	0	11	9	1842	0	0	1147	4
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	24	0	27	0	0	0	11	9	1880	0	0	1170	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2151	3091	585	2506	3095	940	1170	1174	0	0	1880	0	0
Stage 1	1170	1170	-	1920	1920	-	-	-	-	-	-	-	-
Stage 2	981	1920	-	585	1174	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	28	12	459	14	12	265	263	602	-	-	315	-	-
Stage 1	208	265	-	69	113	-	-	-	-	-	-	-	-
Stage 2	272	113	-	464	264	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	26	11	459	13	11	265	337	337	-	-	315	-	-
Mov Cap-2 Maneuver	116	73	-	13	11	-	-	-	-	-	-	-	-
Stage 1	208	265	-	65	106	-	-	-	-	-	-	-	-
Stage 2	255	106	-	437	264	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	30.71	0	0.18	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	337	-	-	190	-	315	-	-
HCM Lane V/C Ratio	0.061	-	-	0.268	-	-	-	-
HCM Ctrl Dly (s/v)	16.4	-	-	30.7	0	0	-	-
HCM Lane LOS	C	-	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	-	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	0	75	0	0	0	95	1771	0	0	1076	21
Future Vol, veh/h	16	0	75	0	0	0	95	1771	0	0	1076	21
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	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	17	0	78	0	0	0	99	1845	0	0	1121	22

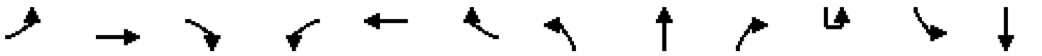
Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2241	-	560	1143	0	-	1845	0	0
Stage 1	1121	-	-	-	-	-	-	-	-
Stage 2	1120	-	-	-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	34	0	477	619	-	0	334	-	-
Stage 1	265	0	-	-	-	0	-	-	-
Stage 2	265	0	-	-	-	0	-	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	28	0	477	619	-	-	334	-	-
Mov Cap-2 Maneuver	123	0	-	-	-	-	-	-	-
Stage 1	223	0	-	-	-	-	-	-	-
Stage 2	265	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18.37	0.61	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	619	-	123	477	334	-	-
HCM Lane V/C Ratio	0.16	-	0.135	0.164	-	-	-
HCM Ctrl Dly (s/v)	11.9	-	38.7	14	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Morning Peak Hour



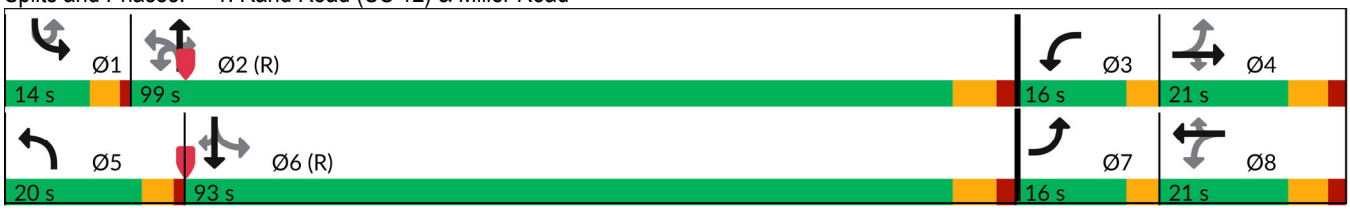
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	41	96	0	43	21	16	70	790	34	3	17	1868
Future Volume (vph)	41	96	0	43	21	16	70	790	34	3	17	1868
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1633	3654
Flt Permitted	0.742			0.567			0.039				0.300	
Satd. Flow (perm)	1343	1942	1900	1007	1818	1509	70	3423	1442	0	516	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	109	0	49	24	18	80	898	39	0	22	2123
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	24.9	14.3		25.5	14.6	14.6	113.2	105.0	105.0		107.0	98.4
Actuated g/C Ratio	0.17	0.10		0.17	0.10	0.10	0.75	0.70	0.70		0.71	0.66
v/c Ratio	0.19	0.59		0.23	0.14	0.07	0.55	0.37	0.04		0.05	0.89
Control Delay (s/veh)	50.0	78.3		50.9	63.0	0.6	37.0	11.1	0.1		6.2	28.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	50.0	78.3		50.9	63.0	0.6	37.0	11.1	0.1		6.2	28.5
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.7			44.2			12.8				27.6
Approach LOS		E			D			B				C
Queue Length 50th (ft)	38	103		40	22	0	28	205	0		5	885
Queue Length 95th (ft)	73	167		75	51	0	82	255	0		14	#1188

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	51
Future Volume (vph)	51
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	58
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.4
Actuated g/C Ratio	0.66
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	273	196		239	186	262	221	2395	1034		450	2398
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.56		0.21	0.13	0.07	0.36	0.37	0.04		0.05	0.89

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 25.6		Intersection LOS: C	
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1099
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	850	1936	4
Future Vol, veh/h	0	3	0	850	1936	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	955	2175	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1088	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	214	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	214	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22.06	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	214	-
HCM Lane V/C Ratio	-	0.016	-
HCM Ctrl Dly (s/v)	-	22.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	849	1	0	1941
Future Vol, veh/h	0	23	849	1	0	1941
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	27	987	1	0	2257

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	503	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	503	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.56	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	503	-
HCM Lane V/C Ratio	-	0.053	-
HCM Ctrl Dly (s/v)	-	12.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	17	26	828	1	0	1922	21
Future Vol, veh/h	0	0	2	0	0	1	17	26	828	1	0	1922	21
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	18	28	900	1	0	2089	23

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2633	3084	1045	2039	3106	451	2089	2112	0	0	901	0	0
Stage 1	2089	2089	-	994	994	-	-	-	-	-	-	-	-
Stage 2	543	995	-	1045	2112	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	12	12	229	33	11	556	67	263	-	-	750	-	-
Stage 1	55	93	-	263	321	-	-	-	-	-	-	-	-
Stage 2	496	321	-	245	90	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	7	7	229	20	7	556	120	120	-	-	750	-	-
Mov Cap-2 Maneuver	44	60	-	20	7	-	-	-	-	-	-	-	-
Stage 1	55	93	-	161	197	-	-	-	-	-	-	-	-
Stage 2	303	196	-	242	90	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.87	11.49	2.6	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	120	-	-	229	556	750	-	-
HCM Lane V/C Ratio	0.388	-	-	0.009	0.002	-	-	-
HCM Ctrl Dly (s/v)	52.7	-	-	20.9	11.5	0	-	-
HCM Lane LOS	F	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	0	84	0	0	0	2	51	775	0	0	1857	16
Future Vol, veh/h	13	0	84	0	0	0	2	51	775	0	0	1857	16
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	14	0	89	0	0	0	2	54	824	0	0	1976	17

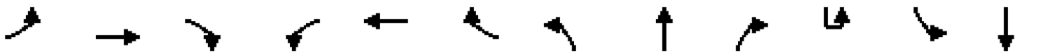
Major/Minor	Minor2					Major1				Major2		
Conflicting Flow All	2501	-	988			1976	1993	0	-	824	0	0
Stage 1	1976	-	-			-	-	-	-	-	-	-
Stage 2	525	-	-			-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92			6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-			-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-			-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31			2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	24	0	248			79	277	-	0	815	-	-
Stage 1	96	0	-			-	-	-	0	-	-	-
Stage 2	564	0	-			-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	19	0	248			237	237	-	-	815	-	-
Mov Cap-2 Maneuver	62	0	-			-	-	-	-	-	-	-
Stage 1	73	0	-			-	-	-	-	-	-	-
Stage 2	564	0	-			-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	34.34	1.59	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	237	-	62	248	815	-	-
HCM Lane V/C Ratio	0.238	-	0.222	0.36	-	-	-
HCM Ctrl Dly (s/v)	24.9	-	78.6	27.5	0	-	-
HCM Lane LOS	C	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.9	-	0.8	1.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Evening Peak Hour



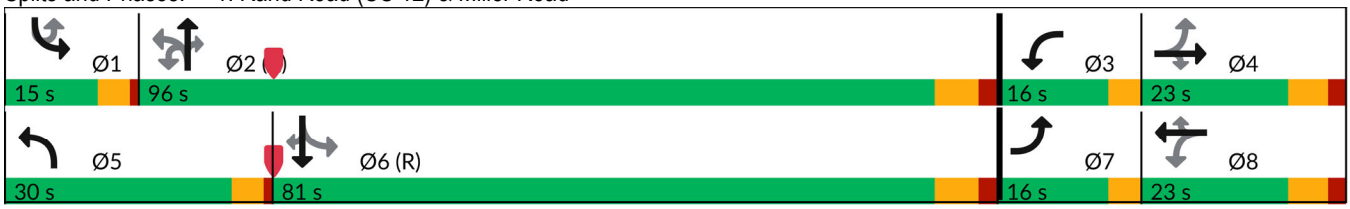
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	48	45	0	90	115	51	191	1841	76	5	39	1183
Future Volume (vph)	48	45	0	90	115	51	191	1841	76	5	39	1183
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.682			0.554			0.170				0.059	
Satd. Flow (perm)	1296	2000	1900	1053	2000	1615	320	3725	1615	0	112	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	45	0	91	116	52	193	1860	77	0	44	1195
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.4	12.8		27.5	15.1	15.1	113.0	101.9	101.9		104.6	95.5
Actuated g/C Ratio	0.15	0.09		0.18	0.10	0.10	0.75	0.68	0.68		0.70	0.64
v/c Ratio	0.22	0.26		0.36	0.57	0.19	0.56	0.74	0.07		0.29	0.50
Control Delay (s/veh)	49.8	66.7		53.6	75.5	1.6	12.2	19.9	2.0		11.9	17.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.8	66.7		53.6	75.5	1.6	12.2	19.9	2.0		11.9	17.0
LOS	D	E		D	E	A	B	B	A		B	B
Approach Delay (s/veh)		58.0			52.9			18.6				16.3
Approach LOS		E			D			B				B
Queue Length 50th (ft)	39	42		75	110	0	50	632	0		10	324
Queue Length 95th (ft)	75	83		124	177	0	85	818	18		24	461

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	42
Future Volume (vph)	42
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	42
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	95.5
Actuated g/C Ratio	0.64
v/c Ratio	0.04
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	267	220		259	225	288	491	2529	1123		199	2371
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.18	0.20		0.35	0.52	0.18	0.39	0.74	0.07		0.22	0.50

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 21.1		Intersection LOS: C	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1070
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.04

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1946	1234	3
Future Vol, veh/h	0	34	0	1946	1234	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	36	0	2048	1299	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	649	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	417	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	417	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.44	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	417	-
HCM Lane V/C Ratio	-	0.086	-
HCM Ctrl Dly (s/v)	-	14.4	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	1927	19	0	1237
Future Vol, veh/h	0	19	1927	19	0	1237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
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	0	21	2095	21	0	1345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1047	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	225	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	225	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	22.65	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	225	-
HCM Lane V/C Ratio	-	0.092	-
HCM Ctrl Dly (s/v)	-	22.6	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	0	27	0	0	0	11	9	1925	0	0	1199	4
Future Vol, veh/h	25	0	27	0	0	0	11	9	1925	0	0	1199	4
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	1	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	26	0	28	0	0	0	11	9	1964	0	0	1223	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2246	3229	612	2617	3233	982	1223	1228	0	0	1964	0	0
Stage 1	1223	1223	-	2005	2005	-	-	-	-	-	-	-	-
Stage 2	1023	2005	-	612	1228	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 23	9	441	12	9	248	243	575	-	-	292	-	-
Stage 1	193	250	-	61	103	-	-	-	-	-	-	-	-
Stage 2	256	103	-	447	249	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	~ 22	9	441	10	9	248	313	313	-	-	292	-	-
Mov Cap-2 Maneuver	107	66	-	48	65	-	-	-	-	-	-	-	-
Stage 1	193	250	-	57	96	-	-	-	-	-	-	-	-
Stage 2	239	96	-	419	249	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	33.83	0	0.18	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	313	-	-	177	-	292	-	-
HCM Lane V/C Ratio	0.065	-	-	0.3	-	-	-	-
HCM Ctrl Dly (s/v)	17.3	-	-	33.8	0	0	-	-
HCM Lane LOS	C	-	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2	-	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	78	0	0	0	99	1851	0	0	1124	22
Future Vol, veh/h	17	0	78	0	0	0	99	1851	0	0	1124	22
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	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	18	0	81	0	0	0	103	1928	0	0	1171	23

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2341	-	585	1194	0	-	1928	0	0
Stage 1	1171	-	-	-	-	-	-	-	-
Stage 2	1170	-	-	-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	29	0	459	592	-	0	310	-	-
Stage 1	249	0	-	-	-	0	-	-	-
Stage 2	249	0	-	-	-	0	-	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	24	0	459	592	-	-	310	-	-
Mov Cap-2 Maneuver	114	0	-	-	-	-	-	-	-
Stage 1	206	0	-	-	-	-	-	-	-
Stage 2	249	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.52	0.63	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	592	-	114	459	310	-	-
HCM Lane V/C Ratio	0.174	-	0.156	0.177	-	-	-
HCM Ctrl Dly (s/v)	12.4	-	42.5	14.5	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Morning Peak Hour

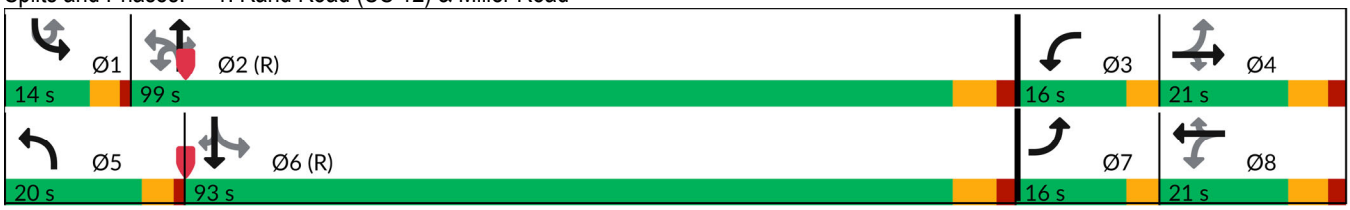
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	49	96	0	43	21	21	70	819	34	3	20	1897
Future Volume (vph)	49	96	0	43	21	21	70	819	34	3	20	1897
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1641	3654
Flt Permitted	0.721			0.595			0.039				0.288	
Satd. Flow (perm)	1305	1942	1900	1057	1818	1509	70	3423	1442	0	497	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	109	0	49	24	24	80	931	39	0	26	2156
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	25.5	14.3		24.8	13.9	13.9	113.3	105.0	105.0		107.2	98.5
Actuated g/C Ratio	0.17	0.10		0.17	0.09	0.09	0.76	0.70	0.70		0.71	0.66
v/c Ratio	0.23	0.59		0.23	0.14	0.10	0.55	0.39	0.04		0.06	0.90
Control Delay (s/veh)	51.0	78.3		51.0	63.9	0.8	37.1	11.3	0.1		6.2	29.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	51.0	78.3		51.0	63.9	0.8	37.1	11.3	0.1		6.2	29.5
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.0			41.8			12.9				28.3
Approach LOS		E			D			B				C
Queue Length 50th (ft)	45	103		40	22	0	28	216	0		6	920
Queue Length 95th (ft)	83	167		75	51	0	82	268	0		15	#1221

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	59
Future Volume (vph)	59
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	67
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.5
Actuated g/C Ratio	0.66
v/c Ratio	0.06
Control Delay (s/veh)	0.2
Queue Delay	0.0
Total Delay (s/veh)	0.2
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	269	196		241	181	258	222	2394	1034		438	2400
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.21	0.56		0.20	0.13	0.09	0.36	0.39	0.04		0.06	0.90

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay (s/veh): 26.0		Intersection LOS: C	
Intersection Capacity Utilization 78.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1100
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.06

Intersection Summary

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	892	1976	4
Future Vol, veh/h	0	3	0	892	1976	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	1002	2220	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1110	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	207	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	207	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22.67	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	207	-
HCM Lane V/C Ratio	-	0.016	-
HCM Ctrl Dly (s/v)	-	22.7	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	891	1	0	1979
Future Vol, veh/h	0	23	891	1	0	1979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	27	1036	1	0	2301

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	518	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	484	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	484	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.86	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	484	-
HCM Lane V/C Ratio	-	0.055	-
HCM Ctrl Dly (s/v)	-	12.9	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	17	26	870	1	0	1960	21
Future Vol, veh/h	0	0	2	0	0	1	17	26	870	1	0	1960	21
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	18	28	946	1	0	2130	23

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2697	3171	1065	2105	3193	473	2130	2153	0	0	947	0	0
Stage 1	2130	2130	-	1040	1040	-	-	-	-	-	-	-	-
Stage 2	566	1040	-	1065	2153	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	10	222	29	10	537	62	253	-	-	721	-	-
Stage 1	52	88	-	246	306	-	-	-	-	-	-	-	-
Stage 2	481	305	-	238	86	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	6	6	222	17	6	537	114	114	-	-	721	-	-
Mov Cap-2 Maneuver	42	57	-	17	6	-	-	-	-	-	-	-	-
Stage 1	52	88	-	145	180	-	-	-	-	-	-	-	-
Stage 2	283	180	-	235	86	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.39	11.71	2.68	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	114	-	-	222	537	721	-	-
HCM Lane V/C Ratio	0.41	-	-	0.01	0.002	-	-	-
HCM Ctrl Dly (s/v)	57	-	-	21.4	11.7	0	-	-
HCM Lane LOS	F	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	0	84	0	0	0	2	51	814	0	0	1899	16
Future Vol, veh/h	13	0	84	0	0	0	2	51	814	0	0	1899	16
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	14	0	89	0	0	0	2	54	866	0	0	2020	17

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2566	-	1010	2020	2037	0	-	866	0	0
Stage 1	2020	-	-	-	-	-	-	-	-	-
Stage 2	546	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92	6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31	2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	22	0	240	74	266	-	0	786	-	-
Stage 1	91	0	-	-	-	-	0	-	-	-
Stage 2	550	0	-	-	-	-	0	-	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	16	0	240	226	226	-	-	786	-	-
Mov Cap-2 Maneuver	58	0	-	-	-	-	-	-	-	-
Stage 1	68	0	-	-	-	-	-	-	-	-
Stage 2	550	0	-	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	36.33	1.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	226	-	58	240	786	-	-
HCM Lane V/C Ratio	0.25	-	0.239	0.373	-	-	-
HCM Ctrl Dly (s/v)	26.2	-	85.6	28.7	0	-	-
HCM Lane LOS	D	-	F	D	A	-	-
HCM 95th %tile Q(veh)	1	-	0.8	1.6	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	39	829	42	42	1943
Future Vol, veh/h	38	39	829	42	42	1943
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	-	-	-	210	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	40	41	873	44	44	2045

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2006	458	0	0	917	0
Stage 1	895	-	-	-	-	-
Stage 2	1111	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	53	555	-	-	752	-
Stage 1	364	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	50	555	-	-	752	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	264	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	25.86	0	0.21
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	252	752	-
HCM Lane V/C Ratio	-	-	0.321	0.059	-
HCM Ctrl Dly (s/v)	-	-	25.9	10.1	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.2	-

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Evening Peak Hour

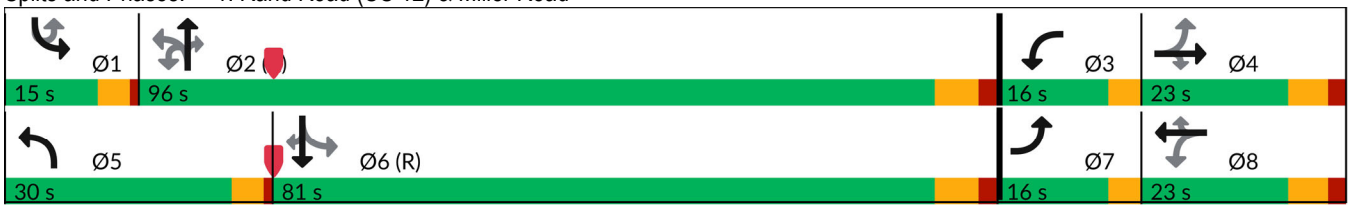
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	52	45	0	90	115	53	191	1855	76	5	43	1212
Future Volume (vph)	52	45	0	90	115	53	191	1855	76	5	43	1212
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.682			0.557			0.162				0.056	
Satd. Flow (perm)	1296	2000	1900	1058	2000	1615	305	3725	1615	0	106	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	45	0	91	116	54	193	1874	77	0	48	1224
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.9	13.0		27.4	15.0	15.0	112.7	101.5	101.5		104.2	95.0
Actuated g/C Ratio	0.15	0.09		0.18	0.10	0.10	0.75	0.68	0.68		0.69	0.63
v/c Ratio	0.23	0.26		0.36	0.58	0.20	0.57	0.74	0.07		0.32	0.52
Control Delay (s/veh)	50.2	66.4		53.4	75.9	1.7	12.7	20.5	2.1		13.7	17.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	50.2	66.4		53.4	75.9	1.7	12.7	20.5	2.1		13.7	17.7
LOS	D	E		D	E	A	B	C	A		B	B
Approach Delay (s/veh)		57.6			52.7			19.1				16.8
Approach LOS		E			D			B				B
Queue Length 50th (ft)	43	42		75	110	0	50	648	0		11	337
Queue Length 95th (ft)	81	83		124	178	0	85	839	19		28	483

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	50
Future Volume (vph)	50
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	51
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	95.0
Actuated g/C Ratio	0.63
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	269	220		259	224	287	482	2520	1119		195	2357
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.20	0.20		0.35	0.52	0.19	0.40	0.74	0.07		0.25	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 21.6		Intersection LOS: C	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1065
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1966	1275	3
Future Vol, veh/h	0	34	0	1966	1275	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	36	0	2069	1342	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	671	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	404	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	404	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.79	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	404	-
HCM Lane V/C Ratio	-	0.089	-
HCM Ctrl Dly (s/v)	-	14.8	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	1947	19	0	1278
Future Vol, veh/h	0	19	1947	19	0	1278
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
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	0	21	2116	21	0	1389

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1058	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	221	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	221	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	22.98	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	221	-
HCM Lane V/C Ratio	-	0.094	-
HCM Ctrl Dly (s/v)	-	23	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	0	27	0	0	0	11	9	1945	0	0	1240	4
Future Vol, veh/h	25	0	27	0	0	0	11	9	1945	0	0	1240	4
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	26	0	28	0	0	0	11	9	1985	0	0	1265	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2298	3291	633	2658	3295	992	1265	1269	0	0	1985	0	0
Stage 1	1265	1265	-	2026	2026	-	-	-	-	-	-	-	-
Stage 2	1033	2026	-	633	1269	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 21	9	428	11	8	244	228	554	-	-	287	-	-
Stage 1	182	239	-	59	100	-	-	-	-	-	-	-	-
Stage 2	252	100	-	435	238	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	~ 20	8	428	10	8	244	295	295	-	-	287	-	-
Mov Cap-2 Maneuver	103	64	-	10	8	-	-	-	-	-	-	-	-
Stage 1	182	239	-	55	93	-	-	-	-	-	-	-	-
Stage 2	235	93	-	407	238	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	35.65	0	0.18	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	295	-	-	169	-	287	-	-
HCM Lane V/C Ratio	0.069	-	-	0.313	-	-	-	-
HCM Ctrl Dly (s/v)	18.1	-	-	35.6	0	0	-	-
HCM Lane LOS	C	-	-	E	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	-	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	78	0	0	0	99	1893	0	0	1144	22
Future Vol, veh/h	17	0	78	0	0	0	99	1893	0	0	1144	22
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	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	18	0	81	0	0	0	103	1972	0	0	1192	23

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2384	-	596	1215	0	-	1972	0	0
Stage 1	1192	-	-	-	-	-	-	-	-
Stage 2	1192	-	-	-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	27	0	452	581	-	0	298	-	-
Stage 1	243	0	-	-	-	0	-	-	-
Stage 2	242	0	-	-	-	0	-	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	22	0	452	581	-	-	298	-	-
Mov Cap-2 Maneuver	110	0	-	-	-	-	-	-	-
Stage 1	200	0	-	-	-	-	-	-	-
Stage 2	242	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.94	0.62	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	581	-	110	452	298	-	-
HCM Lane V/C Ratio	0.177	-	0.161	0.18	-	-	-
HCM Ctrl Dly (s/v)	12.5	-	43.9	14.7	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	42	1950	20	20	1202
Future Vol, veh/h	41	42	1950	20	20	1202
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	-	-	-	210	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	44	2053	21	21	1265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2738	1037	0	0	2074	0
Stage 1	2063	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 17	232	-	-	272	-
Stage 1	86	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 15	232	-	-	272	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	86	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	115.49	0	0.32
HCM LOS	F		

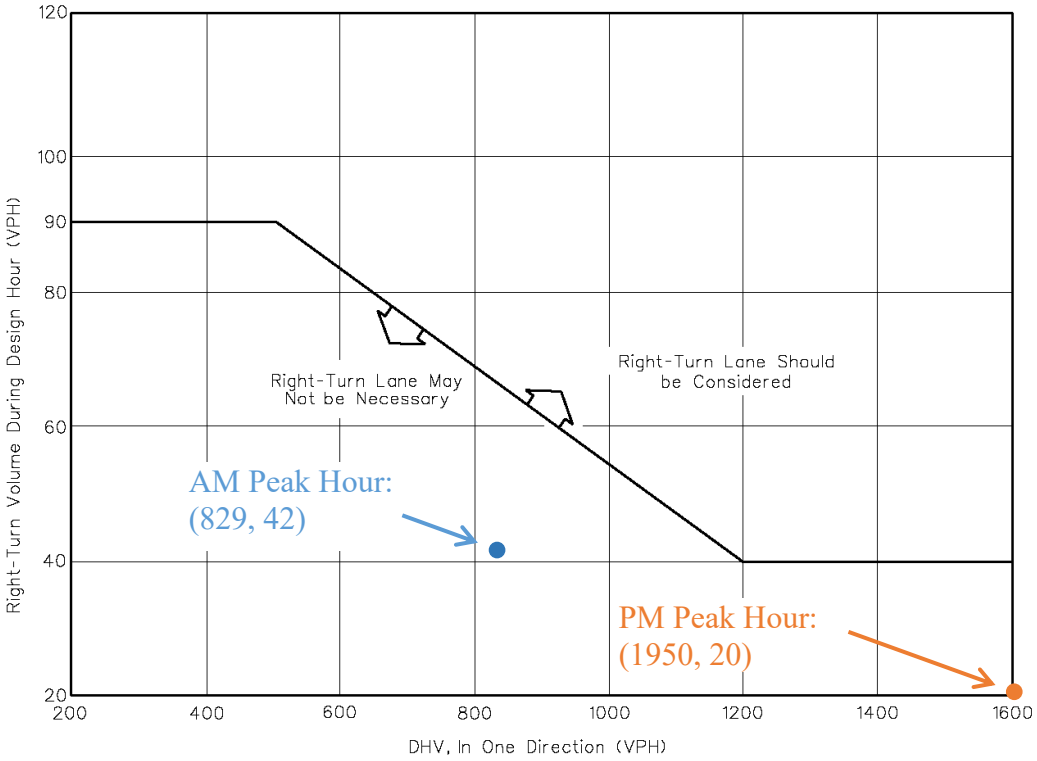
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	107	272	-
HCM Lane V/C Ratio	-	-	0.815	0.077	-
HCM Ctrl Dly (s/v)	-	-	115.5	19.3	-
HCM Lane LOS	-	-	F	C	-
HCM 95th %tile Q(veh)	-	-	4.6	0.2	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Right Turn Warrant

US Route 12 with Proposed Access Drive

Road with Road
Right Turn Lane Guidelines



Note: For speeds less than 50 mph (80 km/hr), see Section 36-3.01(a).

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTION ON FOUR-LANE HIGHWAYS
(Design Speed of 50 mph (80 km/hr) or Greater)

Figure 36-3.B

LAW OFFICES OF
DONALD C. BATTAGLIA, Ltd.
5543 W. Diversey Avenue
Chicago, Illinois 60639
TEL: (773) 292-0100 FAX: (312) 575-3510
don@battaglialaw.com

April 18th 2023

Don Calabrese
24455 N Hwy 12
Lake Zurich IL 60047

LETTER OF INTENT

Dear Mr. Calabrese:

This letter will confirm the intentions of Kapital Investment Partners LLC ("Purchaser") for the Purchase of the property located at 24455 N Hwy 12, Lake Zurich, IL together with approximately 28 acres of land east of Rand Road, (the "Subject Property"), from Calabrese Family Living Trust (collectively "Property Owner"), hereinafter collectively referred to as the "Proposed Transaction".

1. The Proposed Transaction will be effective pursuant to and subject to conditions to be contained in a Contract for the Purchase of Real Property (the "Purchase Agreement") and a Special Use Permit and Zoning Change for the use of the Land (the "License Agreement"), and all documents necessary to complete the Proposed Transaction will contain such representations, warranties, covenants and conditions as are customary and appropriate to transactions of this nature, and will be effectuated according to the following conditions and terms:

a. The Purchase Option Agreement, Special Use Permit and Zoning Change are each contingent upon the other.

b. Sale price of the Purchase of the Subject Property and all improvements thereon is $6,200,000.

c. The License Agreement will contain a provision whereby Kapital Investment Partners must obtain a Special Use Permit and Zoning Change for the use of the Subject Premises within 240 days.

d. Initial Deposit: $25,000 increased to a total of $100,000 upon acceptance of this agreement.

3. Notwithstanding the above, the Proposed Transaction may be terminated at the option of either party if the Agreement has not been executed within 30 days of acceptance of this Letter of Intent, and thereafter, neither of the parties will be obligated to continue further to bring about consummation of the Proposed Transaction without both of their written consents

and both Initial and increased Deposit Money shall be returned to Tenant.

4. Purchaser and Property Owner shall each pay its own expenses in connection with the transactions contemplated hereby.

5. The Proposed Purchase Transaction is contingent on obtaining financing and the Subject Property appraising at no less than the sale price.

6. Buyer for the Proposed Transaction may be a business entity formed by Buyer wherein Buyer is principal.

7. All information disclosed heretofore or hereafter by either party to the other shall not be used by such other party otherwise than as contemplated herein and shall be kept confidential by the other and disclosed only on a "need to know" basis to the other's members, managers, partners, directors, employees, counsel and accountant(s), and shall not be disclosed except to the extent that: it was known when received, it is or hereafter becomes lawfully obtainable from other sources; it is necessary to disclose such information to regulatory authorities having jurisdiction over either party or their subsidiaries or affiliated companies, or as may otherwise be required by law; or to the extent such duty as to confidentiality is waived by the party entitled to claim benefits of these confidentiality provisions. Such obligation as to confidentiality and nonuse shall survive the termination of this letter of intent. In the event of such termination, each party shall return upon request to the other all documents (and reproductions thereof) received from the other that include information not within the exceptions contained in this paragraph.

8. Until such time as the Agreement is executed or the Proposed Transaction is terminated pursuant to paragraph 3 above, Property Owner shall not solicit, authorize the solicitation of, or enter into any discussion with any third party concerning any offer or possible offer by a third party to acquire the Property. In addition, during this period, neither party shall offer, authorize the offering of, or enter into any discussions with any third party concerning, any confidential information applicable to the Proposed Transaction unless required to do so by law or regulation.

This letter states the intention of the parties made in good faith, and the representations made herein are intended to be and are binding obligations for the parties to consummate the Proposed Transaction. This letter replaces and supersedes all previous correspondence and discussions concerning the Proposed Transaction.

If you agree with the terms and conditions described above, please so indicate by signing the enclosed copy of this letter in the space provided and returning it to the undersigned.

Unless this letter is agreed to by Seller on or before 5 PM, C.S.T., on April 28, 2023, the offer made herein shall terminate except as Purchaser, at its option, may extend it. Purchaser

reserves the right to withdraw this letter by oral or written notice to Property Owner at any time before its receipt of Property Owners written acceptance of this letter.

By their signatures below, the persons signing this Letter of Intent represent and warrant that they have the authority to bind the Tenant and Property Owner to the terms set forth herein.

Kapital Investment Partners LLC (Romeo Kapudija)

ACCEPTED AND AGREED TO THIS 18 DAY of APRIL_____, 2023

_____

Calabrese Family Living Trust (Don Calabrese)

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

APPLICATION PZC 2025-16 **AGENDA ITEM 4.C**
PZC Hearing Date: August 20, 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 2025-16 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

BACKGROUND

The Village of Lake Zurich (the "Applicant"), is the Applicant for the proposed text amendment to the Lake Zurich Zoning and Land Development Codes. 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 sections of the Lake Zurich Municipal Code:

1. 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 clarifying the general prohibition of private roadways connecting to property outside the municipal boundaries of the Village of Lake Zurich.

Revisions are proposed to Chapter 24 of the Zoning Code and Chapters 2 and 6 of Title 10 of the Land Development Code of the Lake Zurich Municipal Code.

The Village of Lake Zurich has previously taken steps to clarify regulations concerning private roadways that connect to properties outside its municipal boundaries. These proposed revisions further clarify that such regulations are intended to address several concerns: the Village's lack of authority to permit access into another governmental jurisdiction, the adverse impacts on Village street infrastructure and traffic, the improper use of Village funds and resources to benefit external businesses or residents without reciprocal benefit, and the inability to regulate the use of property outside the Village that rely on Village infrastructure.

With these revisions, the Village also outlines the specific circumstances under which exceptions to the general prohibition may be considered. Such exceptions must demonstrably promote the public health, safety, and welfare of the Village of Lake Zurich, without causing undue adverse impacts. Considerations include financial benefits or detriments, additional traffic burdens, and the undertaking of a binding agreement with the adjoining municipality regarding roadway use, and the Village's ability to regulate the use and operations of the external property.

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.

Respectfully Submitted,

Sarosh Saher,
Community Development Director

Attachments:
1. Draft Ordinance Amending Chapter 24 of title 9 and Chapters 2 and 6 of Title 10 of the Lake Zurich Municipal Code

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

MISCELLANEOUS AND PROCEDURAL AMENDMENTS TO THE LAKE ZURICH ZONING AND LAND DEVELOPMENT CODE
August 20, 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 August 20, 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 1st day of August, 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 and Building Codes for the purpose of clarifying and further defining "Extrajurisdictional Roadways."

Submitted by:

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

Dated: July 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 August 20, 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 and Building Codes 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
Published in Daily Herald Aug. 2, 2025 (300084)

CERTIFICATE OF PUBLICATION

Paddock Publications, Inc.

Lake County

Daily Herald

Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the **Lake County DAILY HERALD**. That said **Lake County DAILY HERALD** is a secular newspaper, published in Libertyville, Lake County, State of Illinois, and has been in general circulation daily throughout Lake County, continuously for more than 50 weeks prior to the first Publication of the attached notice, and a newspaper as defined by 715 ILCS 5/5.

I further certify that the **Lake County DAILY HERALD** is a newspaper as defined in "an Act to revise the law in relation to notices" as amended in 1992 Illinois Compiled Statutes, Chapter 715, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published 08/02/2025 in said **Lake County DAILY HERALD**. This notice was also placed on a statewide public notice website as required by 5 ILCS 5/2.1.

BY _____
Designee of the Publisher of the Daily Herald

Control # 300084 *LAKE*

PADDOCK PUBLICATIONS, INC. Corporate SEAL ILLINOIS

Revisions are proposed to Chapter 24 of the Zoning Code and Chapters 2 and 6 of Title 10 of the Land Development Code of the Lake Zurich Municipal Code.

The Village of Lake Zurich has previously taken steps to clarify regulations concerning private roadways that connect to properties outside its municipal boundaries. These proposed revisions further clarify that such regulations are intended to address several concerns: the Village's lack of authority to permit access into another governmental jurisdiction, the adverse impacts on Village street infrastructure and traffic, the improper use of Village funds and resources to benefit external businesses or residents without reciprocal benefit, and the inability to regulate the use of property outside the Village that rely on Village infrastructure.

With these revisions, the Village also outlines the specific circumstances under which exceptions to the general prohibition may be considered. Such exceptions must demonstrably promote the public health, safety, and welfare of the Village of Lake Zurich, without causing undue adverse impacts. Considerations include financial benefits or detriments, additional traffic burdens, and the undertaking of a binding agreement with the adjoining municipality regarding roadway use, and the Village's ability to regulate the use and operations of the external property.

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 24 OF TITLE 9 AND CHAPTERS 2 AND 6 OF TITLE 10 OF THE LAKE ZURICH MUNICIPAL CODE
(Private Roadways Outside Jurisdiction)

WHEREAS, the Village of Lake Zurich ("Applicant") filed an application with the Village of Lake Zurich that was received on September 24, 2020, seeking to amend certain provisions of the Village Municipal Code within Title 9 ("Zoning Code") and Title 10 ("Land Development Code") of the Lake Zurich Municipal Code, said provisions set forth in Chapters 12 and 24 said Zoning Code; and Chapters 2 and 6 of said Land Development Code, ("Application"); and

WHEREAS, by previous amendments to the Village Code of the Village of Lake Zurich with the adoption of Ordinance No. 2020-11-388, approved November 2, 2020 and Ordinance No. 2023-10-529, approved October, 16, 2023, regarding the regulation of private roadways on private properties within the Village of Lake Zurich seeking to connect to properties outside the municipal boundaries, the Village of Lake Zurich has attempted to clarify Village authority and Code requirements that do not allow private property owners to install private roadways to connect to property outside the Village municipal boundaries (hereinafter referred to as “Extrajurisdictional Roadway”); and

WHEREAS, the street system of the Village of Lake Zurich is necessary municipal infrastructure, as are the sewer and water infrastructure systems of the Village, as public utilities, provided to the property owners, residents and businesses of the Village of Lake Zurich; and

WHEREAS, as a critical public utility and Village of Lake Zurich infrastructure, the street system has been designed, planned, supported and maintained with Village revenues with the primary goal of providing efficient and effective public roadway access and circulation for the Village of Lake Zurich residents and businesses within the Village of Lake Zurich; and

WHEREAS, the Village of Lake Zurich and its private property owners share extensive municipal boundaries with the Village of Hawthorn Woods, the Village of North Barrington, the Village of Deer Park and the Village of Kildeer and the private property owners of those municipalities; and

WHEREAS, the Village of Lake Zurich seeks to amend the current Code limitations which provide that private property owners are not permitted to install private roadways to connect to property outside the Village of Lake Zurich municipal boundaries to ensure such limitations serve the needs and benefit Village of Lake Zurich residents and businesses, while providing clarity and opportunity to properly regulate development in the community; and

WHEREAS, the Village of Lake Zurich lacks authority to approve roadway access and traffic from a property within the Village of Lake Zurich into an adjoining municipality, without the agreement of the adjoining municipality; and

WHEREAS, while there is no right in private property owners to install an Extrajurisdictional Roadway in the Village of Lake Zurich, the option and relevant criterion for the Village Board of Trustees to consider the approval of such a roadway, in the discretion of the Village, are included in these amendments; and

WHEREAS, the Village of Lake Zurich finds that the primary impacts of Extrajurisdictional Roadways to the Village of Lake Zurich, its residents and its businesses, do not result in benefits to nor protect the public health, safety or welfare of the Village of Lake Zurich, its residents and its businesses; and

WHEREAS, the Board of Trustees finds as follows regarding the primary impacts of Extrajurisdictional Roadways:

1. That the Village of Lake Zurich would not benefit financially nor otherwise to providing roadway access for the development of properties outside its municipal boundaries.
2. That providing public roadway infrastructure and access the Village of Lake Zurich street system to properties outside the Village of Lake Zurich municipal boundaries, devotes public resources of the Village of Lake Zurich to the private benefit of the property owner and to the residents of another municipality.
3. The Village of Lake Zurich would have no control over the development and use of properties outside of the Village of Lake Zurich connected to and being served by the Village of Lake Zurich public street system.
4. The Village of Lake Zurich would have no authority to regulate any properties outside of the Village of Lake Zurich connected to the Village of Lake Zurich public street system by private roadway, including the number, nature, intensity, frequency or type of properties or uses which would be using the Extrajurisdictional Roadway.
5. An Extrajurisdictional Roadway would impose added traffic burdens on the immediately adjoining properties and areas in the Village of Lake Zurich.
6. Multiple private Extrajurisdictional Roadways would impose added traffic burdens to the residents and businesses of the Village of Lake Zurich, providing no benefits to the Village of Lake Zurich, while undermining the planning and maintenance of the roadway systems in the Village for its residents and businesses.

and

WHEREAS, the Board of Trustees of the Village of Lake Zurich determines that it is in the best interests of the Village of Lake Zurich, its residents and businesses that the Village of Lake Zurich Land Use Code and Zoning Code be amended as provided herein to clarify that Extrajurisdictional Roadways are not permitted as of right, while further clarifying those special circumstances that could support an Extrajurisdictional Roadway, in the discretion of the Board of Trustees..

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

SECTION ONE: INCORPORATION OF RECITALS. The above recitals are hereby made, and incorporated herein as, the material findings of the Board of Trustees.

SECTION TWO: RATIFICATION. The amendments approved herein apply with equal force and effect to, and the Board of Trustees hereby affirms and ratifies, the prior clarifications of the Village of Lake Zurich Land Use Code and Zoning, consistent with the findings herein, said amendments enacted as Ordinance No. 2020-11-388, approved November 2, 2020 and Ordinance No. 2023-10-529, approved October, 16, 2023, in part, regarding the regulation of private roadways on private properties within the Village of Lake Zurich seeking to connect to properties outside the municipal boundaries.

SECTION THREE: APPROVAL OF AMENDMENTS TO SECTION 9-24-2 OF CHAPTER 24 OF TITLE 9 OF THE VILLAGE 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 approves the following amendments to Section 9-24-2 entitled “Definitions”, of Chapter 24 of Title 9 of the Lake Zurich Municipal Code, with the new provisions hereby added to the specific definitions set forth below, in bold print (bold print) and underscored (underscored), as follows:

CHAPTER 24
USAGE AND DEFINITIONS

SECTION:

9-24-1: Word Usage

9-24-2: Definition

RIGHT-OF-WAY, PRIVATE: A strip of land designated for use for vehicular or pedestrian access or passage, or for utility lines or similar facilities, that has not been dedicated to or accepted by any government agency. No new private or non-public right-of-way shall connect to property outside of the village’s municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent**

approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.

STREET: The paved portion of a public or private right-of-way, that affords the principal means of vehicular access to two or more lots of record which adjoin such right-of-way. All streets shall be constructed in conformance with all village standards and codes for design and construction. All streets within the Village of Lake Zurich require the prior review and approval of the Lake Zurich Village Board. No private or non-public road street shall connect to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

STREET, PRIVATE: Any street other than a public street serving two or more lots of record within a zoning lot, or a subdivision, the plat of which has been recorded in the Office of the Lake County Recorder of Deeds, or a parcel of land separately described in a recorded deed, all located wholly within the municipal boundary lines of the Village of Lake Zurich. Private streets are prohibited unless expressly authorized by a Planned Unit Development (PUD), or other zoning approval by the Lake Zurich Village Board. No private street shall connect to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

STREET STUB: A temporary street ending where the street is intended to be extended through adjacent property in the future, as such adjacent property develops. A street stub is not a permanent street-end or dead-end street. The control and disposal of the land composing such street stubs shall be placed under the express jurisdiction and approval of the Lake Zurich Village Board. No street stub shall be constructed to provide a future connection to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

VEHICLE CONNECTION: A hard surfaced or paved access way connection between two points that is intended and suitable for vehicle, motor vehicle or recreational vehicle use. Vehicle connections shall include but are not limited to public streets and roadways, private streets, street stubs, driveways, circulation aisles, drive through facility lanes. No vehicle connection shall connect from private property or properties to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

SECTION FOUR: APPROVAL OF AMENDMENTS TO SECTION 10-2-3 OF CHAPTER 2 OF TITLE 10 OF THE VILLAGE 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 approves the following amendments to Section 10-2-3 entitled "Definitions" of Chapter 2 of Title 10 of the Lake Zurich Municipal Code, with those current provisions to be deleted shown with strike thru (~~strike thru~~) and the new provisions hereby added to the specific definitions set forth below, in bold print (**bold print)** and underscored (underscored) as follows:

TITLE 10
LAND DEVELOPMENT CODE

CHAPTER 2
RULES AND DEFINITIONS

SECTION

10-2-1: Application of Rules and Definitions

10-2-2: Rules

10-2-3: Definitions

10-2-3: DEFINITIONS:

ACCESS WAY CONNECTION: A continuous, unobstructed, reasonably direct route between two points that is intended and suitable for vehicle, bicycle or pedestrian use. Access way connections shall include but are not limited to vehicle connections, bicycle and pedestrian connections. No new private or non-public access way connection shall connect to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.** No new public access way connection shall connect to property outside of the village's municipal boundary lines without the express recommendation and approval of the Lake Zurich Village Board.

STREET, PRIVATE: Any street other than a public street serving two or more lots of record within a zoning lot, a subdivision, the plat of which has been recorded in the Office of the Lake County Recorder of Deeds, or a parcel of land separately described in a recorded deed, all located wholly within the municipal boundary lines of the Village of Lake Zurich. ~~No private street shall connect to property outside of the village's municipal boundary lines without the express approval of the Lake Zurich Village Board.~~ Private streets are prohibited unless expressly authorized by a Planned Unit

Development (PUD), or other zoning approval by the Lake Zurich Village Board. No private street shall connect to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

STREET STUB: A temporary street ending where the street is intended to be extended through adjacent property in the future, as such adjacent property develops. A street stub is not a permanent street end or dead-end street. The control and disposal of the land composing such street stubs shall be placed under the express jurisdiction and approval of the Lake Zurich Village Board. No street stub shall be constructed to provide a future connection to property outside of the village's municipal boundary lines~~,~~ **except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

VEHICLE CONNECTION: A hard surfaced or paved access way connection between two points that is intended and suitable for vehicle, motor vehicle or recreational vehicle use. Vehicle connections shall include but are not limited to public streets and roadways, private streets, street stubs, driveways, circulation aisles, drive through facility lanes. No vehicle connection shall connect from private property or properties to property outside of the village's municipal boundary lines~~,~~ **except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the**

Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.

SECTION FIVE: APPROVAL OF AMENDMENTS TO SECTION 10-6-20 OF CHAPTER 6 OF TITLE 10 OF THE VILLAGE 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 approves the following amendments to Section 10-6-20 entitled "DRIVEWAY ENTRANCES, DRIVEWAYS AND OFF STREET PARKING" of Chapter 2 of Title 10 of the Lake Zurich Municipal Code, with those current provisions to be deleted shown with strike thru (~~strike thru~~) and the new provisions hereby added to the specific definitions set forth below, in bold print (**bold print)** and underscored (underscored) as follows:

An amendment to Paragraph C of Section 10-6-20, entitled "Driveway Entrances, Driveways And Off-Street Parking", of Chapter 6 entitled "Engineering and Land Improvements" of Title 10 of the Lake Zurich Municipal Code, by amending the Paragraph C to add those provisions shown in italics and underscored, to read as set forth below: 10-6-20:

CHAPTER 6

ENGINEERING AND LAND IMPROVEMENTS

SECTION:

10-6-1: Engineering Standards And Specifications

10-6-2: Protection And Restoration

10-6-3: Soil Erosion And Sedimentation Control (Rep. by Ord. 93-10-615, 10-4-1993)

10-6-4: Storm Sewerage System And Drainage

10-6-5: Stormwater Management Regulations

10-6-6: Sanitary Sewerage System

10-6-7: Water Distribution System

10-6-8: Streets And Pavements

10-6-9: Easements

10-6-10: Blocks

10-6-11: Lots

10-6-12: Building Setback Lines

10-6-13: Parks, School Sites And Public Areas

10-6-14: Sidewalks

10-6-15: Street Lighting System

10-6-16: Lot Grading

10-6-17: Conservancy Districts (Rep. by Ord. 91-04-444, 4-15-1991)

10-6-18: Landscaping

10-6-19: Public Utilities

10-6-20: Driveway Entrances, Driveways And Off-Street Parking

10-6-20: DRIVEWAY ENTRANCES, DRIVEWAYS AND OFF-STREET PARKING:

C. Definition Of Terms:

DRIVEWAY: A private accessway that provides direct access from a street to not more than one lot or one principal building or use, such private accessway being constructed primarily outside the street right of way and leading to a parking garage or structure, parking area, parking lot or parking space, loading dock or loading space. A private accessway that provides access to two or more lots of records shall be considered a private street. No new private or non-public driveway shall connect to property outside of the village's municipal boundary lines**, except upon specific request to and approval by the Board of Trustees of the Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.**

STREET, PRIVATE: Any street other than a public street serving two or more lots of record within a zoning lot, or a subdivision, the plat of which has been recorded in the Office of the Lake County Recorder of Deeds, or a parcel of land separately described in a recorded deed, all located wholly within the municipal boundary lines of the Village of Lake Zurich. Private streets are prohibited unless expressly authorized by a Planned Unit Development (PUD), or other zoning approval by the Lake Zurich Village Board. No private Street shall connect to property outside of the village's municipal boundary lines **, except upon specific request to and approval by the Board of Trustees of the**

Village of Lake Zurich, following its determination that such temporary or permanent approval would further the public health, safety and welfare of the Village of Lake Zurich, without undue adverse impacts, including consideration of any financial benefit or detriment, the additional traffic burden(s), a binding agreement with the adjoining municipality regarding use of such roadway and ability of the Village of Lake Zurich to control or regulate the use and operations on the property outside the Village.

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

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

PASSED THIS _____ day of _____, 2025.

Ayes:

Nays:

Absent:

APPROVED this ____ day of _____, 2025.

_____
Mayor Tom Poynton

ATTEST:

_____
Village Clerk
Kathleen Johnson