# AGENDA PACKET

## VILLAGE OF LAKE ZURICH

### Village Board of Trustees Meeting

**February 2, 2026**
**07:00 pm**

# VILLAGE OF LAKE ZURICH
## VILLAGE BOARD OF TRUSTEES MEETING

### FEBRUARY 2, 2026
### 07:00 PM
### AGENDA

1. **CALL TO ORDER**

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

3. **PLEDGE OF ALLEGIANCE**

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

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

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

   **A. Approval of Minutes from the Village Board Meeting of January 19, 2026**

   **Attachment:** 6a.pdf

   **B. Approval of Semi-Monthly Warrant Register Dated February 2, 2026 Totaling $4,707,840.01**

   **Attachment:** 6b.pdf

   **C. Ordinance Granting a Final Plan Approval for a Planned Unit Development and Ordinance Approving and Authorizing the Execution and Attestation of a Development Agreement Between the Village of Lake Zurich and 0 Manchester Road, LLC Relating to the Development of Meadow Wood East (0 Manchester Road)(Assign Ordinances #2026-02-648 and #2026-02-649)**

   **Summar**y: Applicants Mr. Mike Naumowicz and Mr. Kirk Rustman requests final plan approval of a Development Agreement for a Planned Unit Development to construct 15 single-family homes along with stormwater management facilities for the property known as Meadow Wood East located at Manchester Road.

   In January 2025, the Lake Zurich Village Board approved a planned unit development (PUD) to reconfigure nine existing lots into 15 lots. The PUD includes more stringent landscaping requirements, stricter timelines for road construction, and adherence to the latest Lake County stormwater management ordinance requirements. The developer has not requested any further changes to their plan, and will therefore have the right to proceed with their development if the Final Plan is approved, subject to the conditions outlined in the PUD Ordinance and Development Agreement.

   The Planning and Zoning Commission (PZC) considered the application at a public meeting on August 20, 2025 and found the Final Plan was in conformance with the approved development concept plan (Ordinance 2025-01-600) and all other applicable codes and ordinances. The PZC voted 6-0 to recommend approval of the final plan, subject to the conditions provided by the staff report.

   **Recommended Action #1**: Approve Ordinance #2026-02-648 granting final plan approval for a planned unit development for the property known as Meadow Wood East.

   **Recommended Action #2**: Approve Ordinance #2026-02-649 approving a development agreement between the Village of Lake Zurich and 0 Manchester Road, LLC approving the development of the property known as Meadow Wood East.

   **Attachment:** 6c.pdf

   **D. Resolution Appointing a Delegate and Alternate Delegate to the Intergovernmental Risk Management Agency (IRMA)**

**(Assign Reso #2026-02-110)**

**Summary**: As a member of the Intergovernmental Risk Management Agency (IRMA), the contract and bylaws of IRMA requires members to appoint an Alternate Delegate in addition to their Delegate to represent the Village of Lake Zurich on the Board of Directors of IRMA. Staff recommends to approve the appointment of Annette Weldon as the Alternate Delegate to the Intergovernmental Risk Management Agency representing Lake Zurich.

**Attachment:** 6d.pdf

## 7. NEW BUSINESS

This agenda item includes matters coming to the Board of Trustees for discussion and possible action.

### A. Agreement with Insituform Technologies, USA LLC for the 2026 Sanitary Sewer Lining Project in the Amount Not-to-Exceed $2,339,002.50

**Summary**: The FY 2026 budget includes $3,000,0000 in the Water and Sewer Fund for lining portions of the Village's sanitary sewer distribution system. This project is a continuation of the Public Works Department's ongoing effort to reduce the risk of costly emergency open-cut repairs by implementing proactive, trenchless rehabilitation through cured-in-place pipe (CIPP) lining.

CIPP lining is a proven method that can significantly extend the service life of existing sanitary sewer infrastructure, with an anticipated lifespan of 50 years or more under normal operating conditions. This work is critical due to the project's location adjacent to Buffalo Creek and within environmentally sensitive wetland areas.

The bid opening for the project occurred on December 19, 2025 and yielded five (5) bids, with the lowest bid received from Insituform Technologies, USA of Chesterfield, Missouri. Insituform have experience installing over 200,000 feet of similar-diameter CIPP liner for Lake Zurich and other municipalities in Lake and northern Cook Counties.

**Recommended Action**: A motion to approve an agreement with Insituform Technologies, USA LLC for the 2026 Sanitary Sewer Lining project in the amount not-to-exceed $2,339,002.50.

**Attachment:** 7a.pdf

## 8. TRUSTEE REPORTS

## 9. VILLAGE STAFF REPORTS

## 10. EXECUTIVE SESSION called for the purpose of:

- 5 ILCS 120 / 2(c)(21) review of executive session minutes
- 5 ILCS 120 / 2(c)(5) purchase or lease of real estate
- 5 ILCS 120 / 2(c)(6) setting price for sale of real estate
- 5 ILCS 120 / 2(c)(11) pending or imminent litigation

## 11. ADJOURNMENT

The next regularly scheduled Village Board meeting is on Tuesday, February 17, 2026.

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

Monday, January 19, 2026 7:00 p.m.

1. CALL TO ORDER by Mayor Thomas M. Poynton at 7.00pm.

2. ROLL CALL: Mayor Thomas Poynton, Trustee Sujatha Bharadwaj, Trustee Jake Marx, Trustee Marc Spacone, Trustee Roger Sugrue, Trustee Greg Weider. Trustee William Riley was absent and excused. A[so in attendance: Village Manager Ray Keller, Asst. Village Manager Michael Duebner, Village Atty. Scott Uhler, Finance Dir. Rita Kruse, Police Chief Steve Husak, Fire Chief Dave Pilgard, Dir. of Community Development Sarosh Saher, Public Works Dir. Mike Brown, Park and Rec. Dir Bonnie Caputo. Planner Colleen McCauley.

3. PLEDGE OF ALLEGIANCE

4. PUBLIC COMMENT

Brian Sullivan, Ancient Oaks Foundation Exec. Dir., stated the Foundation was in opposition to Agenda Item 7A and listed 3 concerns they have. They are reduction of green space; wildlife habitat; parking spaces.

Martin Jablonski, 68 Lakeview Pl, Lake Zurich, addressed the Board and echoed the comments of Brian Sullivan. He added some suggestions, including a traffic/parking study, to address the parking plan.

Alicia Timm, 1060 Browning Lane, Lake Zurich, addressed the Board about tree removal, fee for use of the gazebo and the proposed path at Kuechman Arboretum.

Sherri Bresn, 72 Lakeview Pl, Lake Zurich, addressed the Board and was opposed to the Park improvements and adding parking spots.

Shari Gullo, 585 Cypress Bridge Rd, Lake Zurich, addressed the Board on Agenda Item 7A and her opposition to the proposal.

Kevin Mulvey, 189 Alpine Dr., addressed the Board on his opposition to Agenda Item 7A.

Grace Turcich, 199 Alpine Dr., addressed the Board on Agenda Item 7A and urged rejection of the proposal.

5. PRESIDENT'S REPORT / COMMUNITY UPDATE

Proclamation Honoring Crossing Guard Ann Marie Arden for 49 Years of Service, Mayor Poynton introduced Ms. Arden and read the Proclamation for her service. LZPD presented her with flowers and thank you cards from students.

Public Oath of Office and Recognition of Police Officer Daniel Daigle: Police Chief Husak introduced Officer Daigle and shared his biography. Oath of Office was given by Mayor Poynton and he was pinned by his father.

Public Oath of Office of Deputy Fire Chief Mike Rutkowski: Fire Chief Pilgard introduced D.C. Fire Chief Rutkowski and shared his biography. The Mayor gave the Oath of Office and he was pinned by his wife.

Promotion of Lieutenant Jason Henriksen to Captain: Fire Chief Pilgard introduced and gave the biography of Captain Henrikson. Oath of office was administered by Mayor Poynton and he was pinned by his son and daughter.

Promotion of Firefighter/Paramedic Ryan Bene to Lieutenant: Fire Chief Pilgard gave Lt. Bene's biography and the Mayor administered the Oath of Office. He was pinned by his children.

Public Oath of Office of Firefighter/Paramedic Jack Lentz: Fire Chief Pilgard read Officer Lentz biography. Mayor Poynton administered the Oath of Office and he was pinned by his father.

6. CONSENT AGENDA

A. Approval of Minutes from the Village Board Meeting of January 5, 2026

B. Approval of Executive Session Minutes from the Meetings of August 4, September 2, October 6, November 3, and December 1, 2025

C. Approval of the Semi-Monthly Warrant Register Dated January 19, 2026 Totaling $370,538.30

D. Ordinance Granting a Map Amendment for the Lake Zurich Golf Club at 534 North Old Rand Road ORD. #2026-01-643

Summary: Applicant Ms. Barbara Jean Hildebrandt has filed a map amendment to rezone the property at 534 North Old Rand Road from OS Open Space district to R-5 Single-Family Residential district. The subject property consists of three parcels that are a part of the larger Lake Zurich Golf Club property, addresses at 564 North Old Rand Road. The Lake Zurich Golf Club intends to sell three parcels, which are located adjacent to a residential area along Old Rand Road and across from the lake. The Subject Property is comparable in size and configuration to the adjacent residential lakefront lots along Old Rand Road.

At the Planning and Zoning Commission meeting on December 17, 2025, the PZC conducted a public hearing and unanimously recommended approval of the Zoning Map Amendment. Staff requests the approval of an ordinance granting a map amendment to rezone the subject property to R-5 Single-Family Residential district.

E. Ordinance Approving an Amendment to a Special Use Permit for Milieu Landscaping at 525 Enterprise Parkway ORD. #2026-01-644

Summary: Applicant Mr. Brian Frank of Milieu Landscaping has filed a zoning application for a special use permit amendment to allow for the expansion of previously approved outdoor storage for the property at 525 Enterprise Parkway. The subject property was granted a Special Use Permit for an outdoor storage area in 2021 through Ordinance #2021-06-413.

The current amendment to the Special Use Permit proposes an additional 550 square feet of impervious area, the addition of chain link fencing along the north and east sides of the Subject property to enclose an additional plant storage area, and additional pallet racks for hardscape materials.

The Planning and Zoning Commission (PZC) held a public hearing on December 17, 2025 and voted 5-0 recommending approval of the Special Use

Permit Amendment. Staff requests the approval of an ordinance approving an amendment to a special use permit for Milieu Landscaping.

F. Authorization to Purchase a Dump Truck & Equipment from Currie Motors and Bonnell Industries in the Amount Not-to-Exceed $160,000

Summary: The FY 2026 Public Works budget includes $150,000 to replace a 2014 Ford F550 dump truck, snow plow, and salt spreader. This vehicle has had increased maintenance costs and has exceeded its useful life. The existing truck will be sold at auction.

The proposed replacement is a 2026 Ford F550 to be purchased from Currie Motors for $57,948.00. In addition to purchasing the truck, a snow plow, salt spreader, hydraulics, and body will be purchased from Bonnell Industries through the Sourcewell Joint Purchasing Contract in the amount of $99,440.21. The recommended vehicle is consistent with past purchases to standardize the fleet and reduce maintenance costs. Staff requests the purchase of a 2026 Ford F550 chassis, snow plow, salt spreader, hydraulic system and body, with the total purchase of the vehicle and equipment not-to-exceed $160,000.

G. Authorization to Purchase and Equip a Police Responder Truck from Currie Motors in the Amount Not-to-Exceed $115,000

Summary: The FY 2026 Public Works budget includes $115,000 to replace a 2013 Ford Expedition with 83,000 miles that is used daily by the Fire Department training captain and also serves as a backup command unit. The proposed replacement vehicle is a 2026 Ford F-150 Police Responder pickup truck, purchased under the Suburban Purchasing Cooperative Contract from Currie Motors for $48,180. The new truck will then be equipped for use as the shift commander's unit. Staff requests the purchase and equipping of a 2026 Ford F-150 Police Responder pickup truck in the amount not-to-exceed $115,000 from Currie Motors through the Suburban Purchasing Cooperative Contract.

H. Authorization to Purchase a Skid Steer Loader from Atlas Bobcat in the Amount Not-to-Exceed $75,000

Summary: The FY 2026 Public Works budget includes $75,000 for replacement of a skid steer loader. The proposed new unit is a 2026 Bobcat S770, purchased through the Sourcewell Purchasing Cooperative. Staff requests the purchase of a 2026 Bobcat S770 from Atlas Bobcat using the Sourcewell Purchasing Cooperative Contract in the amount not-to-exceed $75,000.

I. Waiver of Competitive Bid Process and Approval of Agreement with State Industrial Products for the Annual Hydrogen Sulfide Reduction Program in the Amount Not-to-Exceed $64,476

The FY 2026 Public Works budget includes $64,476 for the annual Hydrogen Sulfide Reduction Program. The proposed agreement with State Industrial Products aims to continue the successful mitigation of hydrogen sulfide levels in the Village's sanitary sewer system. Staff recommends waiving the competitive bid process due to the specialized nature of the product and service, and requests approval of the agreement with State Industrial Products in the amount not-to-exceed $64,476.

Summary: For the past several years, Public Works has implemented a program to feed a proprietary chemical blend from State Industrial Products to reduce and control the formation of hydrogen sulfide (H2S) at the Northwest and Quentin Road sanitary pump stations. The FY 2026 budget

includes $67,476 for a hydrogen sulfide reduction program to slow down corrosion and extend the life of sanitary sewers. Staff requests to waive the competitive bid process and approve a one-year agreement with State Industrial Products for the Quentin Road and Northwest Pumping Stations in the amount not-to-exceed $67,475

J. Resolution Authorizing Construction on State Highways RES. #2026-01-108

Summary: The Illinois Department of Transportation (IDOT) requires municipalities to adopt a resolution that allows municipal employees to maintain/repair public infrastructure within the State right-of-way. Staff requests adoption of a two-year resolution allowing Village employees to maintain public infrastructure within the State right-of-way.

K. Authorization to Purchase Two Pickup Trucks from Currie Motors in the Amount Not-to-Exceed $129,000

Summary: The FY 2026 Public Works budget contains $129,000 to replace and equip two pickup trucks. Two existing trucks have met the replacement criteria and will be declared surplus and sent to auction. Staff requests approval of the purchase of two 2026 Ford pickup trucks from Currie Motors for $100,894, with total purchase of vehicles and equipment not-to-exceed $129,000.

L. Parks and Recreation FY 2026 Internal Special Event Requests

Summary: The Parks and Recreation Department requests approval of internally run special events for the upcoming year. Special Events guidelines require only Park/Facility use with attendance over 100 must be reviewed and approved by the Village Board of Trustees.

M. Parks and Recreation FY 2026 External Special Event Requests

Summary: Village staff recommends the approval of the external special events for the upcoming year to be held at Paulus and Breezewald Parks. These events include the Purple Plunge, Water Lantern Festival, Gigi's Playhouse 5k, Lake Zurich Tri, Unplugged Fest, Alpine Races, Jack O' Lantern World, and My Density Matters Paint the Lake Pink Walk. The Park Advisory Board has reviewed the list of events and concurs with staff's recommendation.

N. Resolution Authorizing Road Closures for the Lake Zurich Triathlon RES. #2026-01-109

Summary: The annual Lake Zurich Triathlon has been approved by the Village Board and is scheduled to take place on Sunday, July 12, 2026 at Paulus Park. The proposed resolution authorizes a request to the Illinois Department of Transportation to close a portion of Route 22 and Route 12 from the hours of 6am – 1pm on July 12, 2026.

O. 2026-2027 Special Recreation Association of Central Lake County Member Agency Contribution in the Amount of $134,708

Summary: The Village is one of eight member agencies of the Special Recreation Association of Central Lake County (SRACLC), which provides community based therapeutic recreation programs and services to people of all ages with disabilities or special needs. As a SRACLC member, the Village is able to levy a tax ($390,000 in FY 2026) to support inclusion assistance and ADA accessible facilities and equipment. Throughout the year, numerous Lake Zurich

youth benefit from this investment in both Village programs (e.g. inclusion assistance with Dance, Day Camp, etc.) and SRA programs and events.

Ongoing participation in SRACLC requires an annual agency contribution, which was included in the FY 2026 budget. Staff recommends approval of the Special Recreation Association of Central Lake County member agency contribution for the amount of $134,708.

P. Agreement with Lucas Landscaping for the 2026 Tree Trimming Program in the Amount Not-to-Exceed $250,000

Summary: The FY 2026 budget allocates $250,000 for the trimming of trees located within public right-of-ways, municipal facilities, and parks within the Village. The 2026 tree trimming program is scheduled to occur in the Countryside West, Sparrow Ridge, Chasewood North, and Quail Run subdivisions. Maintenance trimming is also scheduled within Paulus Park and Breezewald Park.

The 2026 contract includes a three-year term with the option to renew up to two (2) additional one-year periods, contingent upon acceptable contractor performance and subject to an annual increase of three percent (3%), based on the Consumer Price index (CPI). A bid opening was held on December 23, 2025 and seven bids were received, with the lowest bid provided by Lucas Landscaping and Design.

Staff recommends awarding a contract for the 2026 Tree Trimming Program to Lucas Landscaping and Design in the amount not-to-exceed $250,000.

Q. Ordinance Amending Section 3.3 of the Tax Increment Finance Development Agreement between the Village of Lake Zurich and JGS Lake Zurich West LLC ORD. #2026-01-645

Summary: On April 19, 2023, the Village Board approved Ordinance 2023-04-512, a Tax Increment Financing (TIF) Development Agreement with JSG Lake Zurich West LLC. The developer notified staff in 2024 that the project was experiencing delays due to supply chain and construction challenges and would not meet the Certificate of Occupancy date specified in the agreement. In order to execute the Development Agreement and process the first payment to the developer, the Certificate of Occupancy date in the ordinance must be amended. Staff recommends amending the Certificate of Occupancy deadline in ordinance 2023-04-512 to July 31, 2025 to allow for execution of the agreement and fulfilment of the Village's obligations.

R. Public Engagement and Public Opinion Research Services Agreement with Beyond Your Base in the Amount of $65,000

Summary: The Village recently acquired a four-acre site for a new Fire Station #1 to address current and future service needs, improve response times, and enhance firefighter safety and operational efficiency. To ensure community input is incorporated into the station's design and funding decisions, staff solicited a proposal for consultant assistance from Beyond Your Base, a firm with extensive experience in public engagement for capital infrastructure and public safety projects throughout northern Illinois.

Beyond Your Base will develop and implement a public engagement process that includes informational materials, digital outreach, and surveys to communicate the need, benefits, and funding options for the new station. The proposed cost for these services is $65,000, with up to an additional $20,000 for

optional outreach materials, which was anticipated in the FY 2026 Budget. Staff recommends approving the Public Engagement and Public Opinion Research Services Agreement with Beyond Your Base in the amount of $65,000.

Recommended Action: A motion to accept the Consent Agenda as presented was made by Trustee Spacone, seconded by Trustee Marx.
AYES: 5 Trustees Bharadwaj, Marx, Spacone, Sugrue,Weider.
NAYS: 0
ABSENT: 1 Trustee Riley.
MOTION CARRIED.

7. NEW BUSINESS

A. Agreement with D'Land Construction for the Breezewald Park Improvement Project in the Amount Not-to-Exceed $1,161,384.30

Summary: The FY 2026 Budget allocates funds for the Breezewald Park Improvement Project, as identified in the Village's Capitol Investment Plan (CIP) to be completed in 2026. The Park Improvement Project includes several site, safety, and accessibility enhancements to improve park functionality and safety, with parking improvements to add nine (9) additional parking spaces. Under current conditions when the parking lot is full, vehicles are unable to turn around and must reverse uphill to exit the lot, creating unsafe conditions for motorists and pedestrians.

The proposed new layout introduces a flow-through traffic pattern to reduce conflicts between vehicles and pedestrians and improves overall traffic safety. Additional project improvements include new railings, a gazebo structure, earthwork, perennial plantings, decorative boulders, slope reshaping for ADA compliance for all pathways and parking, beach area enhancements, a new retaining wall with an integrated drainage system and permeable paver patio to prevent stormwater runoff causing erosion to the beach improving durability of the shoreline.

The project went out for a bid opening on January 8, 2026, yielding six (6) bids. Staff reviewed references for the lowest bidder, D'Land Construction, with references showing the contractor is qualified to perform the improvements.

Public Works Dir. Brown reviewed the areas to be addressed in the Park and stated the two trees are 30+yrs and 100+ yrs, the younger tree is in poor condition. The Board's questions were answered by Dir. Brown and Village Manager Keller

Recommended Action: A motion was made by Trustee Marx, seconded by Trustee Weider, to approve an agreement with D'Land Construction for the Breezewald Park Improvement Project for $1,001,193.36 with a total project cost including contingencies not-to-exceed $1,161,384.30.
AYES: 5 Trustees Bharadwaj, Marx, Spacone, Sugrue,Weider.
NAYS: 0
ABSENT: 1 Trustee Riley.
MOTION CARRIED.

B. Ordinance Authorizing the Issuance of Waterworks and Sewerage Revenue Bonds of the Village of Lake Zurich, Lake County, Illinois, in an Aggregate Principal Amount Not-to-Exceed $42,000,000 and An Ordinance Authorizing the Issuance of Waterworks and Sewerage Revenue Bonds of the Village of

Lake Zurich, Lake County, Illinois, in an Aggregate Principal Amount Not-to-Exceed $10,000,000 ORD. #2026-01-646, ORD. #2026-01-647

Summary: In 2024, the Village Board approved an Admissions Agreement to the Central Lake County Joint Action Water Agency (CLCJAWA). The agreement introduced a partnership with CLCJAWA and the Village of Lake Zurich to transition from the Village's current groundwater source to Lake Michigan water.

The Village must secure two Illinois Environmental Protection Agency (IEPA) loans as part of the transition to Lake Michigan water. The first loan for $42 million will be for the reservoir and pump station and is currently in the IEPA loan application process. The second loan for $10 million is for the internal water distribution improvements and is anticipated to be submitted to IEPA in 2027. The two loans will be funded by revenues of the Water and Sewer fund. The associated debt service has been incorporated into the current and projected water rates approved by the Board in December 2023.

Finance Dir. Rita Kruse and Public Works Dir. Brown explained the process of the loan applications

Recommended Action: A motion was made by Trustee Spacone, seconded by Trustee Marx, to approve Ordinance #2026-01-646 authorizing the issuance of waterworks and sewerage revenue bonds of the Village of Lake Zurich in an aggregate principal amount not-to-exceed $42,000,000.
AYES: 5 Trustees Bharadwaj, Marx, Spacone, Sugrue,Weider.
NAYS: 0
ABSENT: 1 Trustee Riley.
MOTION CARRIED.
A motion was made by Trustee Spacone, seconded by Trustee Marx, to approve Ordinance #2026-01-647 authorizing the issuance of waterworks and sewerage revenue bonds of the Village of Lake Zurich in an aggregate principal amount not-to-exceed $10,000,000.
AYES: 5 Trustees Bharadwaj, Marx, Spacone, Sugrue,Weider.
NAYS: 0
ABSENT: 1 Trustee Riley.
MOTION CARRIED.

C. Presentation of the Key Parks Master Plan

Summary: The FY 2025 Budget included $100,000 in funding for the development of a Master Plan for Key Parks. The Village's last comprehensive Park and Recreation Master Plan was completed in 2009 which included analysis and recommendations for all parks, programs, facilities, and resources. Given the age of the document and significant economic, social, and behavioral changes resulting from the COVID-19 pandemic, the Village determined an update was necessary.

The Key Parks Master Plan's purpose is to optimize the Village's key existing park priorities and establish a strategic framework for the allocation of resources and redevelopment over the next 5 to 10 years.

The Plan update was focused more on community parks, which were selected based on several criteria, including Placer AI data, infrastructure needs, and input from the Park and Recreation Advisory Board. The parks included in the plan are Kuechmann Arboretum, Oak Ridge Park, Old Mill Grove Park, Staples Park, and Zurites Park.

In March 2025, the Village issued a Request for Proposals (RFP) for the development of the Key Parks Master Plan, with 12 proposals received. A Village sub-task force was formed to review the proposals and the task force recommended Upland Design Ltd. in partnership with ETC Institute and Engineering Resource Associates to complete the plan.

In June 2025, Upland Design initiated a six-month planning process beginning with data collection and site analysis conducted concurrently with community engagement sessions for feedback on development of the parks plan. Throughout 2025, residents and park users were offered multiple opportunities to provide input on potential park improvements.

Upland Design has concluded all the agreed upon master plan phases and has prepared a draft plan for review by the Park and Recreation Advisory Board and the Village Board.

Park and Rec. Dir. Caputo introduced Liz Dafoe, Upland Design, who gave a 7999PowerPoint presentation on the draft plan and answered the Board's questions. Dir. Caputo and Dir. Brown also answered the Board's questions.

Recommended Action: This is a non-voting item. Upland Design and Village staff are seeking the Board's feedback on the proposed Key Parks Master Plan.

8. TRUSTEE REPORTS

Trustee Bharadwaj requested an update from Police Chief Husak on the recent hostage incident in Lake Zurich. Chief Husak gave the timeline, the department's involvement and successful conclusion.

9. VILLAGE STAFF REPORTS

A. Monthly data metrics

10. EXECUTIVE SESSION called for the purpose of:

5 ILCS 120 / 2 (c)(21) review of executive session minutes and
5 ILCS 120 / 2 (c)(11) pending or imminent litigation was CANCELLED.

11. ADJOURNMENT

Motion to adjourn the Open Meeting was made by Trustee Marx, seconded by Trustee Bharadwaj.
AYES: 5 Trustees Bharadwaj, Marx, Spacone, Sugrue,Weider.
NAYS: 0
ABSENT: 1 Trustee Riley.
MOTION CARRIED.

The meeting adjourned at 9.17pm

Respectfully submitted:

Kathleen Johnson, Village Clerk.

Approved by:

_____ _____

Mayor Thomas M. Poynton Date.

VILLAGE OF LAKE ZURICH

*At the Heart of Community*

FINANCE DEPARTMENT

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

January 27, 2026

The warrant report for the February 2, 2026 Village Board meeting totals $4,707,840.01. Details of the report is available upon request.

Sincerely,

/s/ Rita Kruse
Finance Director/Treasurer

VILLAGE OF LAKE ZURICH

*At the Heart of Community*

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
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AGENDA ITEM 6C

# MEMORANDUM

Date: February 2, 2026

To: Ray Keller, Village Manager RK

From: Sarosh Saher, Community Development Director

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

**RE: Meadow Wood East - Final Plan and Development Agreement Approval**
**Mr. Mike Naumowicz representing 0 Manchester Road, LLC**

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**Issue.** 0 Manchester Road, LLC represented by Mr. Mike Naumowicz, (the "Applicant" and "Owner"), in partnership with a consultant, Mr. Kirk Rustman, is requesting Final Plan Approval for a Planned Unit Development for the development of the property commonly referred to as Meadow Wood East and legally described in Exhibit A attached hereto (the "Subject Property").

Specifically, the applicant is seeking:

- Final Plan Approval for a Planned Unit Development (PUD) to construct 15 single-family detached residences along with stormwater management facilities.
- Approval of a Development Agreement providing for the terms and conditions of the development.

The Applicant acquired the property from Ms. Mary Christine Misik in July 2025.

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

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

**Background.** The Applicant was granted Development Concept Plan (Preliminary Plan) approval by the Village Board on January 6, 2025 through Ordinance 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.*"

The Meadow Wood Subdivision of which the Subject Property is a part was approved back in 2005. The single-family lots comprising Meadow Wood East have sat undeveloped for the past 20 years, but the right to build on those lots remains intact.

In January 2025, the Lake Zurich Village Board approved a planned unit development (PUD) to reconfigure the lots to reflect current preferences for lot layout, namely 15 lots. The PUD includes more stringent requirements for how the developer will complete the work, including increased landscaping, stricter timelines for road construction and adherence to the latest Lake County stormwater management ordinance requirements. The developer has not requested any further changes to their plan, and will therefore have the right to proceed with their development if this Final Plan is approved, and in compliance with the conditions outlined in the attached PUD Ordinance and Development Agreement. These property rights are set by state statute and are the same as those approved for other subdivisions in Lake Zurich, Hawthorn Woods or any other Illinois municipality.

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

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

No changes to the layout and configuration were proposed from what was approved in the Development Concept Plan (Preliminary Plan)

The Planning and Zoning Commission (PZC) considered the application at a public meeting on August 20, 2025 and found that the Final Plan was in substantial conformance with the approved development concept plan approved through Ordinance 2025-01-600 and other applicable codes and ordinances. The PZC therefore voted 6-0 in favor of recommending approval of the final plan for the development of the property, subject to the conditions outlined in the staff report.
The video from the PZC meeting can be accessed via the link:
https://play.champds.com/lakezurichil/event/164

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

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

1. Lots 1 and 2 of the Subdivision. The Developer has indicated that there is considerable interest from an adjacent homeowner in Hawthorn Woods (3 Tanglewood Court) to acquire Lots 1 and 2 within Meadow Wood East to maintain them as an open space buffer to their property. As such the developer has requested that if conveyed, that these two lots be allowed to remain vacant and not be developed within the two-year period required by the PUD ordinance. However, staff has conditioned the that the conveyance be completed within 6 months of the execution of the agreement failing which, the two lots will need to be developed within the 2-year time period required by the PUD ordinance, and subject to all remaining requirements of the ordinance.

2. Public Street Improvements (Manchester Road): Manchester Road, from Miller Road to the southern boundary of the Development, is a Village-owned public right-of-way and will serve as the sole access to the Development. It is proposed to be used for construction access. After substantial completion of the Development, the roadway must be reconstructed to Village standards, including required utilities, curb and gutter, utility relocations, and installation/activation of streetlights.

3. Contractor Qualification: The Developer must use only contractors prequalified under Illinois Administrative Code Title 44, Part 650 to bid on state highway and locally advertised projects in Illinois. Contractor prequalification must be current. The Village may reject any contractor it deems unfit to safely or competently perform the public improvements.

4. Backup SSA: A backup Special Service Area (SSA) will be established for open space and stormwater management, enabling the Village to recover costs for maintaining common areas, natural areas, stormwater facilities, and landscaping if the HOA fails to do so.

5. Performance Security: Letters of Credit will be required to guarantee completion of public right-of-way improvements, public infrastructure, and on-site stormwater management elements.

6. Construction Sequencing: The Developer must coordinate construction activities to minimize disruptions, control erosion, and ensure safe progress. A detailed construction sequence (Gantt chart or similar) must be provided, showing all activities from initial earthwork through final improvements, including phased clearing where needed. Ongoing communication with the Village and stakeholders is required.

7. Construction Observation: At the Developer's expense, the Village will hire a civil engineer to monitor and inspect key construction components such as water and sanitary utilities, roadway work, stormwater facilities, and work in wetlands or waterways.

8. Construction Time Limitations: Construction must begin within 2 years of Final Plan approval unless extended by the Village. Failure to begin voids the Final Plan and associated approvals. Once started, construction must be completed within 2 years unless an extension with a revised schedule is approved. Without an approved extension, the Village may draw on performance securities to complete the improvements, and later work will be subject to the then-current codes and fees.

9. Fees: At building permit issuance, the Developer must pay all applicable school, library, and park impact fees, along with required Lake Zurich and Lake County utility connection fees, including the Lake Michigan water connection fee.

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

**Recommendation.** At their meeting on August 20, 2025, the Planning and Zoning Commission recommended approval of the final plan incorporating the conditions for approval provided by staff in its report.

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

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

1. 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
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l. Construction Schedule (proposed)
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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. Conditions related to Lots 1 and 2: Upon execution of this Agreement by Owner, Village agrees to the following conditions with respect to Lots 1 and 2:
    a. Owner shall convey fee simple title of Lots 1 and 2 to and only to the owner of the adjacent residential property located at 3 Tanglewood Court, Hawthorn Woods, IL 60047. Such conveyance shall take place within six (6) months of the approval of this Ordinance with proof of title conveyance presented to the Village within such time. No building permits for development on any lots within the Subject Property will be issued unless and until the completion of this conveyance of Lots 1 and 2.

    b. Developer shall be required to connect Lots 1 and 2 into the public water and sanitary sewer lines to be constructed as part of Developer's development of the Subject Property and contingent upon the payment of all necessary connection fees by Developer. To the extent, if any, that any such approval is necessary, Village hereby agrees that Developer may tap into any other utility lines to be constructed by Developer (and/or Commonwealth Edison, Northern Illinois Gas or other utility supplier) as part of Developer's development of the Subject Property.

c. Developer shall be required to construct sidewalk across Lots 1 and 2, all stormwater management features such as stormwater pipes and other related drainage structures as well as all related street improvements in compliance with the Codes of the Village including this approved Final Plan for the PUD. Such improvements shall be completed concurrently with all subdivision improvements or within 6 months of commencement of construction, whichever comes first.

d. Notwithstanding the improvements required under the preceding paragraphs b. and c. of this section, Lots 1 and 2 shall be maintained as vacant open space for the duration of 20 years and shall be subject to all property maintenance codes and ordinances of the Village of Lake Zurich.

e. Lots 1 and 2 of the Subject Property shall remain classified within the R-5 single-family residential district and subject to all terms and conditions of the zoning bulk and other requirements the R-5 district as approved and modified by the PUD Ordinance Number 2025-01-600.

f. Failure to demonstrate proof of conveyance of Lots 1 and 2 within 6 months of approval of this Ordinance shall require such lots to be developed in conformance with all terms and conditions of this Development Agreement required hereunder, including in particular that construction of buildings on Lots 1 and 2 shall be completed within the required 2-year subdivision improvement period required by Village Code.

g. Following completion of the 2-year subdivision improvement construction period of the Village Code and with the understanding that remaining lots 3 through 15 have been completed and occupied, the development of Lots 1 and 2 with single-family residences shall only be permitted upon amendment to this PUD and Final Plan and the Development Agreement for the Subject Property, and conform to all remaining terms and conditions of this agreement.

3. 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.

4. 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.

5. 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.

6. 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 as referenced in Section 2.B.1.h above.

7. 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 as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and its Declarations shall be subject to the final review and approval of the Village.

8. As a condition of this Final Plan approval, the Developer shall enter into a binding Development Agreement (Development Agreement") with the Village which shall incorporate the 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 subdivision 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," Developer shall consent to and bear the costs of 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. The terms and conditions for the establishment of such SSA shall be as further provided for in the Development Agreement.

9. 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

c. 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.

d. 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 Lake Michigan Capital Reservation fee of $3,500 per residential unit for connection to Lake Michigan Water.

10. 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.

11. All streets within the development of the Subject Property 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 development.

Upon substantial completion of the subdivision 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 shall 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 construct the subdivision and public improvements outlined in this Development Agreement.

12. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Final 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 Zoning Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the Village Manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

    Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless 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 the required 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 requirements of the Watershed Development Ordinance of Lake County (Stormwater Ordinance), fees and codes effective at that time.

13. 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 Subject 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 subdivision development of the Subject Property shall be refunded to Developer within thirty (30) days following the completion of all plan reviews and inspections.

14. 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.

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

- Approval Ordinance for the Final Plan including the following exhibits:
  - Exhibit A – Legal description of the property
  - Exhibit B – Final Plan documents
  - Exhibit C – August 20, 2025 staff report and planning and zoning commission final recommendation/conditions
- Approval Ordinance for the Development Agreement including the following exhibit:
  - Exhibit A – Legal description of the property
  - Exhibit B – An Agreement by and between the Village of Lake Zurich and Michael Naumowicz Relating to the Development of Meadow Wood East (0 Manchester Road)

**VILLAGE OF LAKE ZURICH**

**ORDINANCE NO. 2026-02-648**

**AN ORDINANCE GRANTING FINAL PLAN APPROVAL FOR A PLANNED UNIT DEVELOPMENT**
***Meadow Wood East – Manchester Road***

**WHEREAS**, Mr. Mike Naumowicz representing 0 Manchester Road, LLC is the Applicant and Developer (the "Applicant" and "Developer") for a Planned Unit Development (the "PUD") for the property commonly referred to as Meadow Wood East, said Property legally described in Exhibit A hereto ("Subject Property"); and

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

**WHEREAS**, the Subject Property is approximately 8 acres in size and is currently subdivided into nine (9) single-family residential lots classified within the R-4 single-family residential district of the Zoning Code of the Village of Lake Zurich ("Zoning Code"); and

**WHEREAS**, the Applicant proposes to take the necessary steps to resubdivide the Subject Property into fifteen (15) single-family residential lots and rezone and reclassify such lots within the R-5 single-family residential district of the Zoning Code; and

**WHEREAS**, the Applicant has been granted approval of a planned unit development, including the initial development concept plan, special use permits and modifications to the Zoning Code and Land Development Code of the Village of Lake Zurich through Ordinance No. 2025-01-600, passed on January 6, 2025; and

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

**WHEREAS**, the Final Plan is intended to particularize, refine, and implement the initial development concept plan approved through Ordinance No. 2025-01-600, and to serve as a complete, thorough, and permanent public record of the PUD and the manner in which it is to be developed, and is required to be in substantial conformity with the approved development concept plan; and

**WHEREAS**, in compliance with the law, and the requirements of the Village of Lake Zurich Zoning Code ("Zoning Code"), notice of a public meeting was published on July 26, 2025, in *The Daily Herald,* and the Village posted a public meeting sign on the Property on July 26, 2025, both the newspaper and sign notices informing the public of a meeting to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on August 20, 2025, to consider the Application for the requested approvals; and

**WHEREAS**, the PZC received the STAFF REPORT dated August 20, 2025, and considered the request for Final Plan approval for a PUD to allow the development of the vacant Subject Property, and considered all information presented by the Applicant, and the applicable factors required under of the Zoning Code; and recommended that the Board of Trustees approve the requested final zoning approvals requested in this Application; and

**WHEREAS**, the President and Board of Trustees of the Village of Lake Zurich met on February 2, 2026, and considered the findings and recommendations of the PZC, including the STAFF REPORT dated August 20, 2025, along with the final findings and recommendations of the PZC, said required zoning standards, findings and recommendations attached hereto as Exhibit C including:

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

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

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

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

SECTION 2: *GRANT OF FINAL PLAN FOR A PLANNED UNIT DEVELOPMENT (PUD)*. The President and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois and Chapters 19, 20, 21 and 22 of the Lake Zurich Zoning Code and applicable law and ordinances, hereby grant the following zoning approval(s), as in substantial conformity with the development concept plan approval, as shown and provided in the STAFF REPORT dated August 20, 2025, and final findings and recommendations of the Planning and Zoning Commission attached as Exhibit C, all consisting of 9 pages:

A. The Final Plan for this PUD, attached hereto and made a part hereof as Exhibit B, to authorize the redevelopment of the vacant Subject Property as approved in accordance with the standards and provisions set forth in Ordinance No. 2025-01-600.

B. The foregoing approvals, including the Final Plan for the PUD, shall be further 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.
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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. Conditions related to Lots 1 and 2: Upon execution of the sales agreement by Owner, Village agrees to the following conditions with respect to Lots 1 and 2:

a. Owner shall convey fee simple title of Lots 1 and 2 to and only to the owner of the adjacent residential property located at 3 Tanglewood Court, Hawthorn Woods, IL 60047. Such conveyance shall take place within six (6) months of the approval of this Ordinance with proof of title conveyance presented to the Village within such time. No building permits for development on any lots within the Subject Property will be issued unless and until the completion of this conveyance of Lots 1 and 2.

b. Developer shall be required to connect Lots 1 and 2 into the public water and sanitary sewer lines to be constructed as part of Developer's development of the Subject Property and contingent upon the payment of all necessary connection fees by Developer. To the extent, if any, that any such approval is necessary, Village hereby agrees that Developer may tap into any other utility lines to be constructed by Developer (and/or Commonwealth Edison, Northern Illinois Gas or other utility supplier) as part of Developer's development of the Subject Property.

c. Developer shall be required to construct sidewalk across Lots 1 and 2, all stormwater management features such as stormwater pipes and other related drainage structures as well as all related street improvements in compliance with the Codes of the Village including this approved Final Plan for the PUD. Such improvements shall be completed concurrently with all subdivision improvements or within 6 months of commencement of construction, whichever comes first.

d. Notwithstanding the improvements required under the preceding paragraphs b. and c. of this section, Lots 1 and 2 shall be maintained as vacant open space for the duration of 20 years and shall be subject to all property maintenance codes and ordinances of the Village of Lake Zurich.

e. Lots 1 and 2 of the Subject Property shall remain classified within the R-5 single-family residential district and subject to all terms and conditions of the zoning bulk and other requirements the R-5 district as approved and modified by the PUD Ordinance Number 2025-01-600.

f. Failure to demonstrate proof of conveyance of Lots 1 and 2 within 6 months of approval of this Ordinance shall require such lots to be developed in conformance with all terms and conditions of this Development Agreement required hereunder, including in particular that construction of buildings on Lots 1 and 2 shall be completed within the required 2-year subdivision improvement period required by Village Code.

g. Following completion of the 2-year subdivision improvement construction period of the Village Code and with the understanding that remaining lots 3 through 15 have been completed and occupied, the development of Lots 1 and 2 with single-family residences shall only be permitted upon amendment to this PUD and Final Plan and the Development Agreement for the Subject Property, and conform to all remaining terms and conditions of this agreement.

3. 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.

4. 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.

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(the "Final Plan"), and its Declarations shall be subject to the final review and approval of the Village.

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      1 to 3-bedroom home - $2,545.80
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   b. The required library development impact per dwelling unit: - $125.00

   c. 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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11. All streets within the development of the Subject Property 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 development.

Upon substantial completion of the subdivision 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 shall 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 construct the subdivision and public improvements outlined in this Development Agreement.

12. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Final 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 Zoning Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the Village Manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

    Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless 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 the required 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 requirements of the Watershed Development Ordinance of Lake County (Stormwater Ordinance), fees and codes effective at that time.

13. 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 Subject 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 subdivision development of the Subject Property shall be refunded to Developer within thirty (30) days following the completion of all plan reviews and inspections.

14. 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.

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

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

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

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

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

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

SECTION 8: BINDING EFFECT; SUCCESSION IN INTEREST. This Ordinance shall constitute a covenant running with the land and be binding upon and inure to the benefit of the parties hereto, their successors in interest, assignees, lessees, and upon any successor municipal authorities of the Village and successor municipalities. Except as otherwise expressly provided herein, upon the conveyance or assignment by Applicant of its interest in the Property to any successor, assign or nominee, Applicant shall be released from any and all further liability or responsibility under this Ordinance except to the extent previously undertaken by Applicant, or for which Applicant has posted security to perform an obligation in which case Applicant shall be bound to continue to complete its performance unless a replacement bond or letter of credit is posted by the new owner

or Applicant, and accepted by the Village, which shall not be unreasonably withheld. In such event, the Applicant shall be released from the underlying obligation to perform. The Village shall thereafter look only to the successor, assign, or nominee of duties and obligations of Applicant hereby undertaken.

PASSED THIS _____ day of February, 2026.

Ayes:

Nays:

Absent:

Abstain:

APPROVED this _____ day of February, 2026.

_____
Thomas Poynton, Village President

ATTEST:

_____
Kathleen Johnson, Village Clerk

EXHIBIT A
Legal description of 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

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

EXHIBIT C

August 20, 2025 staff report and planning and zoning commission final recommendation/conditions consisting of 9 pages

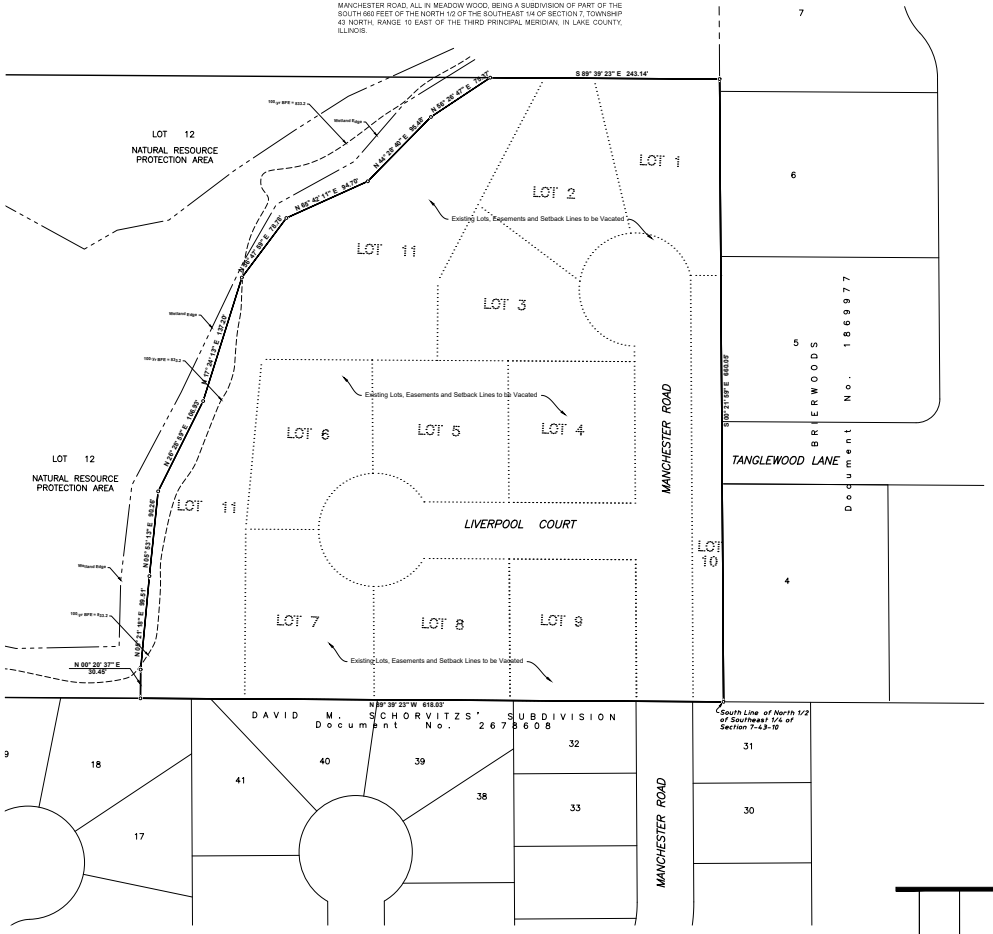
P.I.N. 14-07-402-041
14-07-402-042
14-07-402-043
14-07-402-044
14-07-402-045
14-07-402-046
14-07-402-047
14-07-402-048
14-07-402-049
14-07-402-050
14-07-402-051

# FINAL PLAT OF RESUBDIVISION
OF
# MEADOW WOOD EAST

SHEET 1 OF 3

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




SCALE: 1" = 50'

- Set Concrete Monument
- Set 1/2" Pipe Unless Otherwise Noted
- 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 |
|---|---|---|
| 2 | 10-31-2025 | Village Review |
| 1 | 09-26-2025 | Village Review |

Originally Prepared: 03.13.25 Project No. 24-136

HAEGER ENGINEERING
consulting engineers • land surveyors
150 East Olde Parkway, Schaumburg, IL 60173
tel 847.394.6600 fax 847.394.6608
Illinois Professional Design Firm License No. 184.005102
www.haegerengineering.com

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14-07-402-042
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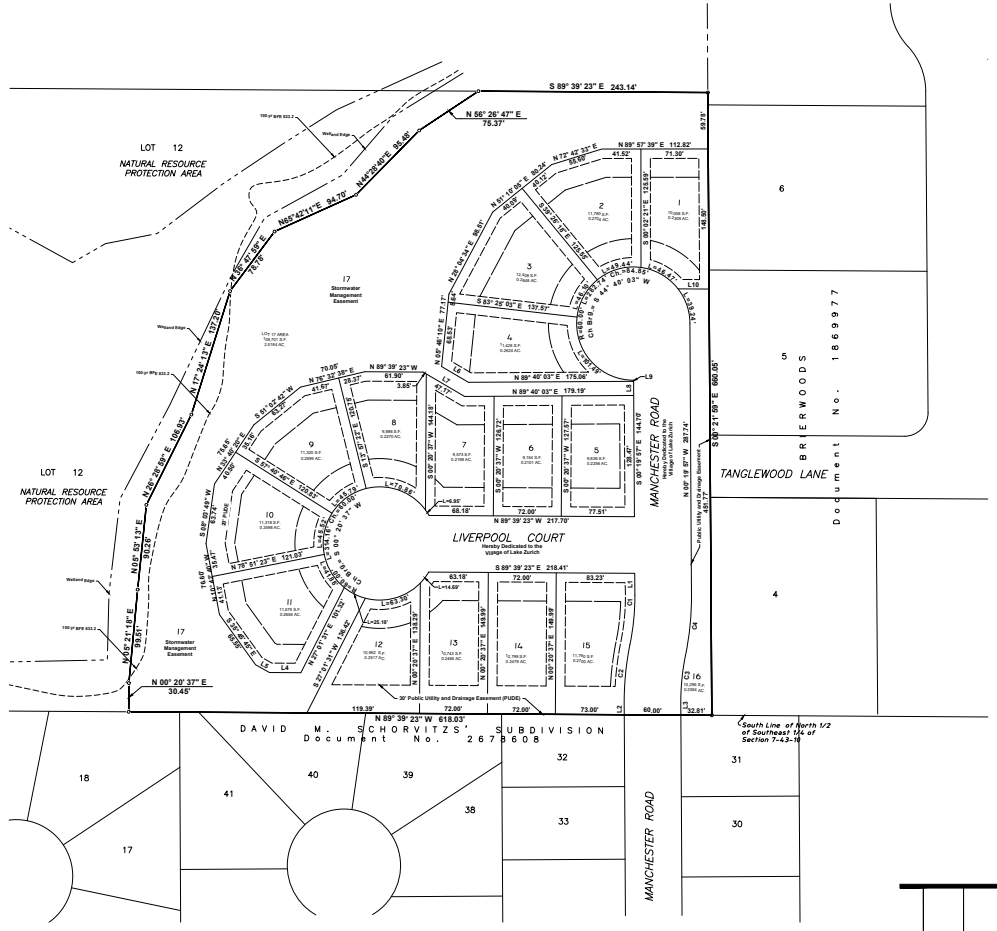
14-07-402-048
14-07-402-049
14-07-402-050
14-07-402-051

# FINAL PLAT OF RESUBDIVISION
OF
# MEADOW WOOD EAST

SHEET 2 OF 3

MAIL PLAT TO:

HAEGER ENGINEERING LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173


LOT 12
NATURAL RESOURCE PROTECTION AREA
LOT 12
NATURAL RESOURCE PROTECTION AREA
Stormwater Management Easement
Stormwater Management Easement
S 89° 39' 23" E 243.14'
N 56° 26' 47" E 75.37'
N 89° 57' 39" E 112.82'
N 72° 47' 33" E 85.00'
N 65° 42' 11" E 94.70'
N 45° 26' 40" E 26.46'
N 17° 24' 13" E 107.20'
N 05° 53' 13" E 90.45'
N 00° 26' 28" E 106.83'
N 00° 20' 37" E 30.45'
N 89° 39' 23" W 618.03'
S 00° 21' 59" E 660.05'
N 89° 19' 07" W 397.74'
S 89° 39' 23" E 218.41'
N 89° 40' 03" E 179.19'
S 89° 40' 03" W 175.06'
S 83° 26' 03" E 137.67'
N 89° 39' 23" W 61.90'
N 89° 39' 23" W 217.70'
S 89° 39' 23" E 144.78'
S 00° 19' 07" E 139.40'
N 00° 19' 07" E 85.17'
S 00° 20' 37" W 144.18'
S 00° 20' 37" W 139.72'
S 00° 20' 37" W 127.43'
S 00° 20' 37" W 68.18'
N 00° 20' 37" E 169.99'
N 00° 20' 37" E 169.99'
N 00° 20' 37" E 113.29'
N 27° 01' 31" W 106.06'
S 27° 01' 31" E 109.32'
S 62° 40' 29" E 83.74'
N 27° 51' 25" E 121.03'
S 62° 40' 46" E 120.67'
S 51° 52' 42" W 45.39'
N 75° 32' 35" E 29.37'
N 76° 32' 35" E 41.92'
S 89° 39' 23" E 72.00'
S 89° 39' 23" E 72.00'
S 89° 39' 23" E 73.00'
S 89° 39' 23" E 60.00'
S 89° 39' 23" E 32.81'
S 89° 39' 23" E 119.39'
S 89° 39' 23" E 72.00'
S 89° 39' 23" E 72.00'
S 89° 39' 23" E 83.23'
S 89° 39' 23" E 63.19'
N 89° 39' 23" W 77.51'
N 89° 39' 23" W 72.00'
N 89° 39' 23" W 68.18'
N 89° 39' 23" W 72.00'
N 89° 39' 23" W 72.00'
N 89° 39' 23" W 72.00

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14-07-402-049
14-07-402-050
14-07-402-051

# PRELIMINARY PLAT OF RESUBDIVISION
OF
# MEADOW WOOD EAST

SHEET 3 OF 3

**OWNER CERTIFICATE**

STATE OF ILLINOIS )
) SS
COUNTY OF LAKE )

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 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 DEDICATES FOR PUBLIC USE 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 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 COMMUNITY UNIT 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. 2025.

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. 2025.

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. 2025.

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. 2025.

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. 2025.

BY:_____ _____
FINANCE DIRECTOR PRINTED NAME

**MAYOR'S CERTIFICATE**

STATE OF ILLINOIS )
) SS
COUNTY OF LAKE )

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. 2025.

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.

**UTILITY VACATION AUTHORIZATION CERTIFICATE**

THE UNDERSIGNED DOES HEREBY RELEASE, VACATE, AND ABROGATE ALL RIGHTS AS GRANTED BY INSTRUMENT DATED OCTOBER 24, 2005 AS DOCUMENT NO. 5881470.

VILLAGE OF LAKE ZURICH

APPROVED BY: _____, THIS____DAY OF_____, 2025

AT&T

APPROVED BY: _____, THIS____DAY OF_____, 2025

COMMONWEALTH EDISON COMPANY

APPROVED BY: _____, THIS____DAY OF_____, 2025

NORTHERN ILLINOIS GAS COMPANY (NICOR),

APPROVED BY: _____, THIS____DAY OF_____, 2025

**SURVEYORS CERTIFICATE**

STATE OF ILLINOIS )
) SS:
COUNTY OF COOK )

THIS IS TO CERTIFY THAT I, JEFFREY W. GLUNT, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3695, 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 50 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.

PER 765 ILCS 205, ALL EXTERIOR CORNERS OF THE SUBDIVISION ARE TO BE MONUMENTED PRIOR TO RECORDING (THIS INCLUDES THE CONCRETE MONUMENTS). INTERIOR CORNERS SHALL BE IN PLACED WITHIN 12 MONTHS AFTER RECORDING THE SUBDIVISION.

THIS IS TO CERTIFY THAT PARTS OF LOT 17 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 FOR A BOUNDARY SURVEY.

SCHAUMBURG, ILLINOIS _____AUGUST 26, 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. THE RESERVATION AND THE RIGHTS AS CONFERRED HEREIN SHALL BE OVER THE ENTIRE AREA DESIGNATED ON THIS PLAT AS LOT 17 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 THIS LOT. 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 035-3695, 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. 035-3695
MY LICENSE EXPIRES NOVEMBER 30, 2026 AND IS RENEWABLE

**PREPARED BY:**
HAEGER ENGINEERING, LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
1000 E. OLIVE AVENUE
SCHAUMBURG, IL 60173
TEL: (847)394-6600
FAX: (847)394-6608
PROJECT NO. 24-080

**PLAT PREPARED FOR, SUBMITTED BY AND SEND NEW TAX BILL TO:**
SAM CHIANNA
NATIONAL LAND DEVELOPMENT GROUP LLC
514 STONE CANYON CIRCLE
INVERNESS, IL 60010

Originally Prepared: 03.13.2025 Project No. 24-136

| No. | Date | Revision |
|---|---|---|
| 2 | 10-31-2025 | Village Review |
| 1 | 08-26-2025 | Village Review |

HAEGER ENGINEERING
consulting engineers • land surveyors
150 East Palatine, Schaumburg, IL 60173
Tel 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003132
www.haegerengineering.com

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Plot Date: Oct 31, 2025 - 2:24pm Plotted By: tzuc Layout: 24x36 Plot (2)
File Name: P:\2024\24-136\Drawings\Final Survey\24-136 Plat of Subdivision_SHEET 3.dwg

# MEADOW WOOD EAST SUBDIVISION
# FINAL ENGINEERING
## MANCHESTER ROAD

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


**DEVELOPER / SUBDIVIDER:**

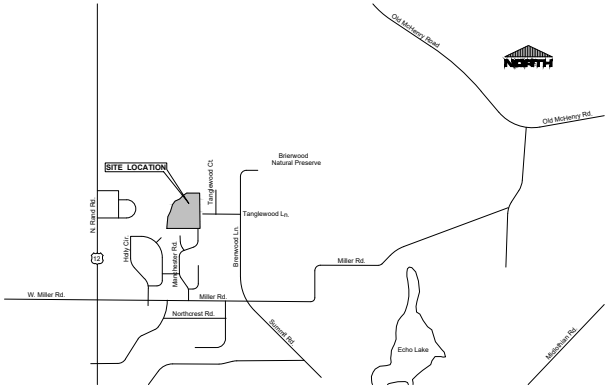
Casey Builders
509 W. Old Northwest Highway
Barrington, IL 60010

**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 |
| FT1.0 | FIRE TRUCK ROUTING PLAN |

**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 | |
| | Clean Out | |
| | Storm Sewer | |
| | Storm Sewer Service | |
| | Perforated Underdrain | |
| | Sanitary Sewer | |
| | Sanitary Sewer Service | |
| | Combined Sewer | |
| | Force Main | |
| | Water Main | |
| | Water Main Service | |
| | Fire Hydrant | |
| | Valve Vault | |
| | Valve Box | |
| | B-Box | |
| | Well Head | |
| | Light Pole | |
| | Light Pole With Mast Arm | |
| | Traffic Signal | |
| | Traffic Signal With Mast Arm | |
| | Hand Hole | |
| | Fence | |
| | Guardrail | |
| | Pipe Bollard | |
| | Sign | |
| | Gas Valve | |
| | Gas Line | |
| | Electric Line | |
| | Overhead Utility Line | |
| | Fiber Optic Line | |
| | Electrical Pedestal | |
| | Electric Manhole | |
| | Guy Wire | |
| | Utility Pole | |
| | Telephone Pedestal | |
| | Telephone Manhole | |
| | Telephone Line | |
| | Cable TV Line | |
| | Cable TV Pedestal | |
| | Flagpole | |
| | Mailbox | |
| | Handicapped Parking Stall | |
| | Number of Parking Stalls | |
| | Curb & Gutter | |
| | Reverse Pitch Curb & Gutter | |
| | Depressed Curb | |
| | Retaining Wall | |
| C XXX.XX<br>G/P XXX.XX | Curb Elevation and Gutter/Pavement Elevation | C XXX.XX<br>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 | TW XXX.XX |
| B/W XXX.XX | Bottom of Wall Elevation | BW 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 | |
| | Soil Boring | |
| | Over Land Flow Route | |

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

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

KEVIN M. LAMB
062-054121
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
EXPIRES 11-30-27

| No. | Date | Revisions |
|---|---|---|
| 1 | 12.02.2025 | Revised Grading per Village Comments |
| 2 | 12.31.2025 | Village Comments |
| 3 | 02.03.2026 | Village Comments |
| 4 | 04.06.2026 | Changed Storm Sewer in ROW to RCP |
| 5 | | |


HAEGER ENGINEERING
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Illinois Professional Design Firm 184.003152
www.haegerengineering.com


TITLE SHEET

MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
MANCHESTER ROAD

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

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Plot Date: Dec 02, 2025 - 1:32pm Plotted By: Ben I
File Name: P:\2024\24-136\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 Plans and Specifications 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 makes 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 reports. 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 likely to be different than 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
   150 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:
   a. Village of Lake Zurich
   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, codes, 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 all their work and fees required, and shall provide all 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 is considered to be proceeding 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 judgments 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 J.U.L.I.E 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 subsurface 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, construct, 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 swales 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, and such flow of water is obstructed, this material shall be removed by the responsible party.
19. 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 the securing 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 required by the permit, and inspection of the same and the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, forms, logs, etc. Inspections shall 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 attachments shall be kept on-site and be organized and ready for viewing.
20. No construction activity, maintenance 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 for which the work has been permitted. The Contractor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent properties, from sediment, debris, fuels, oils, lubricants, 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 remove 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, swamps, 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 restoration shall be performed immediately upon completion of each phase of the work or when directed to do so by the Owner, so that these areas 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 and shall not be compensated for separately from 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, concrete, concrete, gravel, soil stones, plant material or debris, trash, refuse, 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 personally responsible for the replacement of all damaged trees not designated 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 Village/City, Jurisdictional Agency, and Owner requirements 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, 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 the securing 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 required by the permit, and inspection of the same and the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, forms, logs, etc. Inspections shall 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 attachments shall be kept on-site and be organized and ready for viewing.
4. Clearing shall consist of the removal and 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 debris as shall be encountered within the limits of work or as found within the street right-of-ways or within the limits of construction. Trees to be saved or protected shall 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 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 on the Plans or in 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 or as approved by the Owner.
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 the limits of any excavation thereof shall be properly backfilled with suitable, backfill material and/or compacted as necessary by the Contractor.
10. The Contractor shall perform all dewatering and 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 demolished 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 maintained at all times when equipment or vehicles are using existing public or private 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 guarantees 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 he is to meet a healthy work site as determined by the Owner or Engineer. Water for shall include all items necessary for the complete project and no claims for extra work will be recognized unless approved 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 only 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 remedial work shall be performed without authorization by the Owner and documentation of 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 the 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 Detail Details.
4. When in the opinion of the Geotechnical/Soils Engineer, unsuitable soil conditions are encountered within utility trenches or other excavations, the respective removal of unsuitable below the depth of the bedding specified, the Contractor shall remove the unsuitable soils and replace the material with granular compacted backfill meeting requirements 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 shall be witnessed by the Owner. 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 and complete the work as specified.
5. All utility trenches for the proposed sanitary sewer, storm sewer, water main and services lying under or where the bearing angle 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 material 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 watertight 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 leaving 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.
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 D3241 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-seating, 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 connection is ready to be made. The plug shall be properly secured to withstand the required test p

## 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 C507and 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/H-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. Concrete 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. Polyvinyl Chloride (PVC) Pipe, SDR 18 conforming to AWWA C900 (4"-12" diameters) and AWWA C905 (14"-48" diameters) with a pressure rating of 255 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.
   b. 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/H-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 joints, 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 ½" 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 sidewalks 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 terminating concrete sidewalks.
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 the 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 40° 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 45° 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 workmanship 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 No. 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 outlet 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 | Description |
|---|---|---|
| 1 | 12.02.2025 | Revised Re-drop-off per Village Comments |
| 2 | 12.31.2025 | Village Comments |
| 3 | 01.31.2025 | Village Comments |
| 4 | 02.25.2025 | Revised Storm Sewer in EOFF |
| 5 | 04.02.2025 | Dumped Storm Sewer in EOFF |

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GENERAL NOTES AND SPECIFICATIONS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKEWOOD, MCHENRY COUNTY, 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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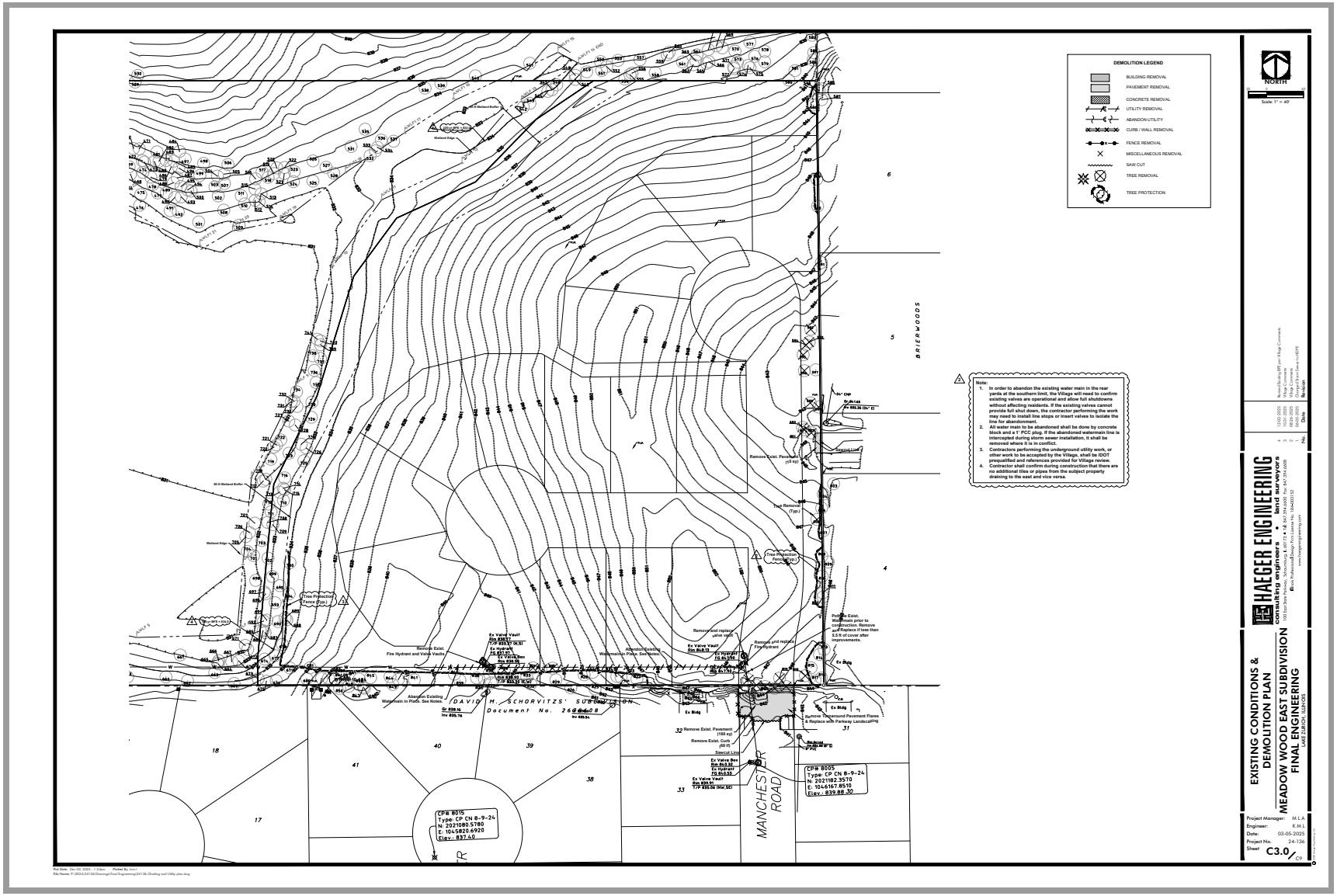
Plot Date: Dec 02, 2025 - 1:30pm Plotted By: kmc1
File Name: P:\2024\24-136\Drawings\Final Engineering\24136-Title Sheet and Details.dwg


DEMOLITION LEGEND
BUILDING REMOVAL
PAVEMENT REMOVAL
CONCRETE REMOVAL
UTILITY REMOVAL
ABANDON UTILITY
CURB / WALL REMOVAL
FENCE REMOVAL
MISCELLANEOUS REMOVAL
SAW CUT
TREE REMOVAL
TREE PROTECTION
NORTH
Scale: 1" = 40'
Notes:
1. In order to abandon the existing water main in the rear yards at the southern limit, the Village will need to confirm existing valves are operational and allow full shutdowns without affecting residents. If the existing valves cannot provide full shut down, the contractor performing the work may need to install line stops or insert valves to isolate the line for abandonment.
2. All water main to be abandoned shall be done by concrete block and a 1' PCC plug. If the abandoned watermain line is intercepted during storm sewer installation, it shall be removed where it is in conflict.
3. Contractors performing the underground utility work, or other work to be accepted by the Village, shall be IDOT prequalified and references provided for Village review.
4. Contractor shall confirm during construction that there are no additional tiles or pipes from the subject property draining to the east and vice versa.
BRIERWOODS
MANCHESTER ROAD
DAVID M. SCHORVITZS' SUBDIVISION
Document No. 26[illegible]0
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E: 1045820.6920
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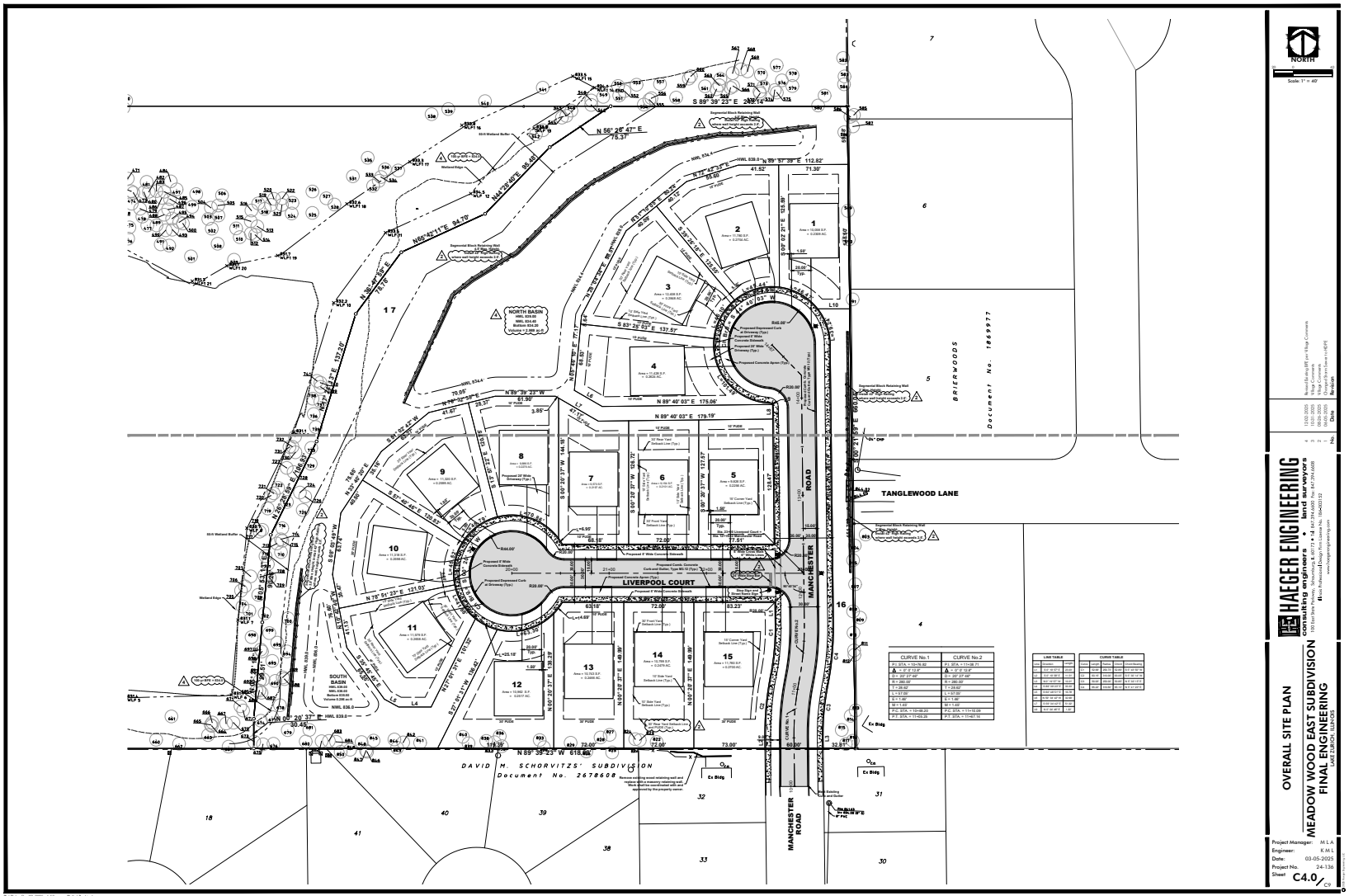
EXISTING CONDITIONS & DEMOLITION PLAN
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LOCATED IN HOFFMAN ESTATES
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C3.0/C9


NORTH
Scale: 1" = 40'
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OVERALL SITE PLAN
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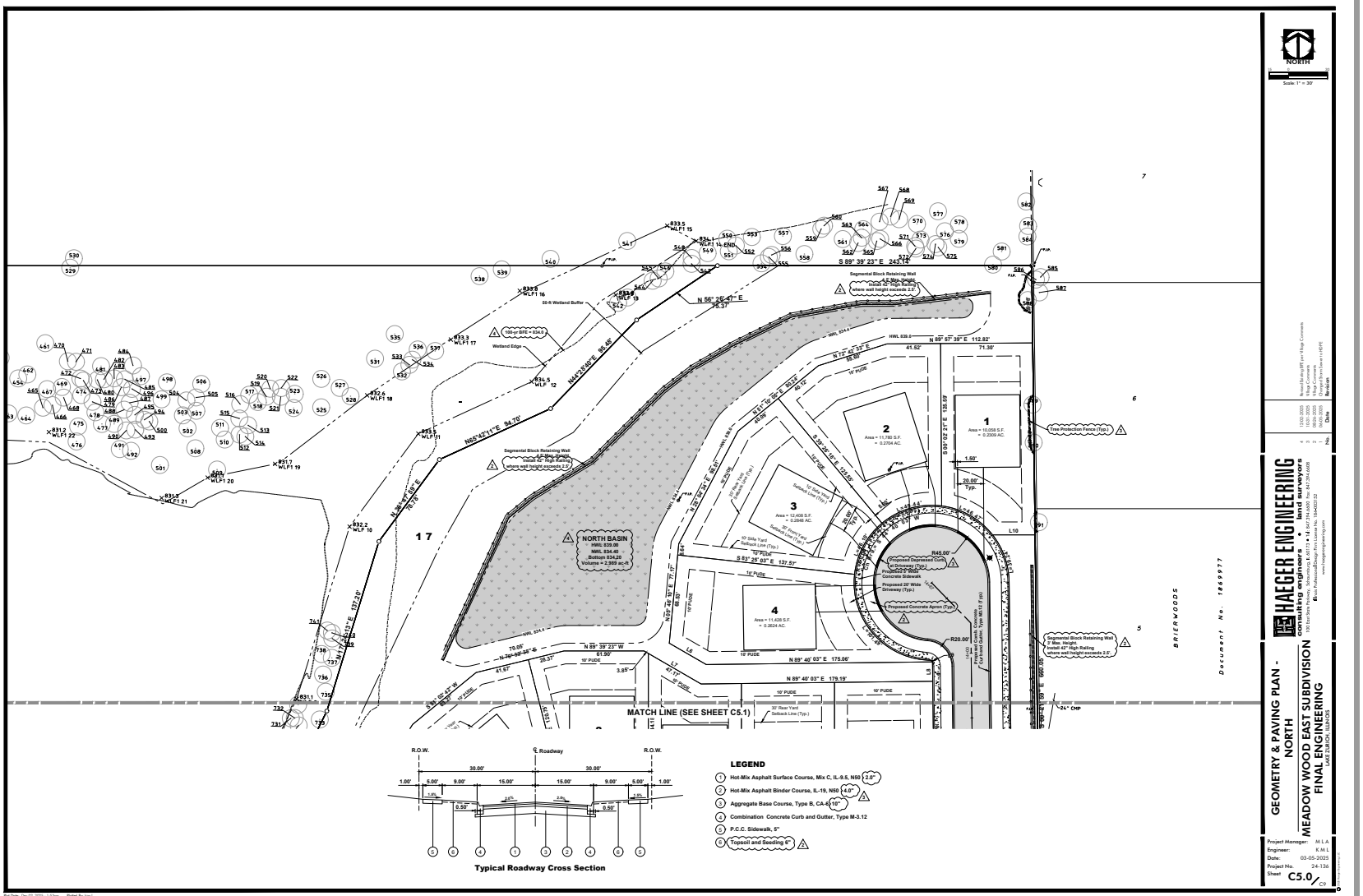
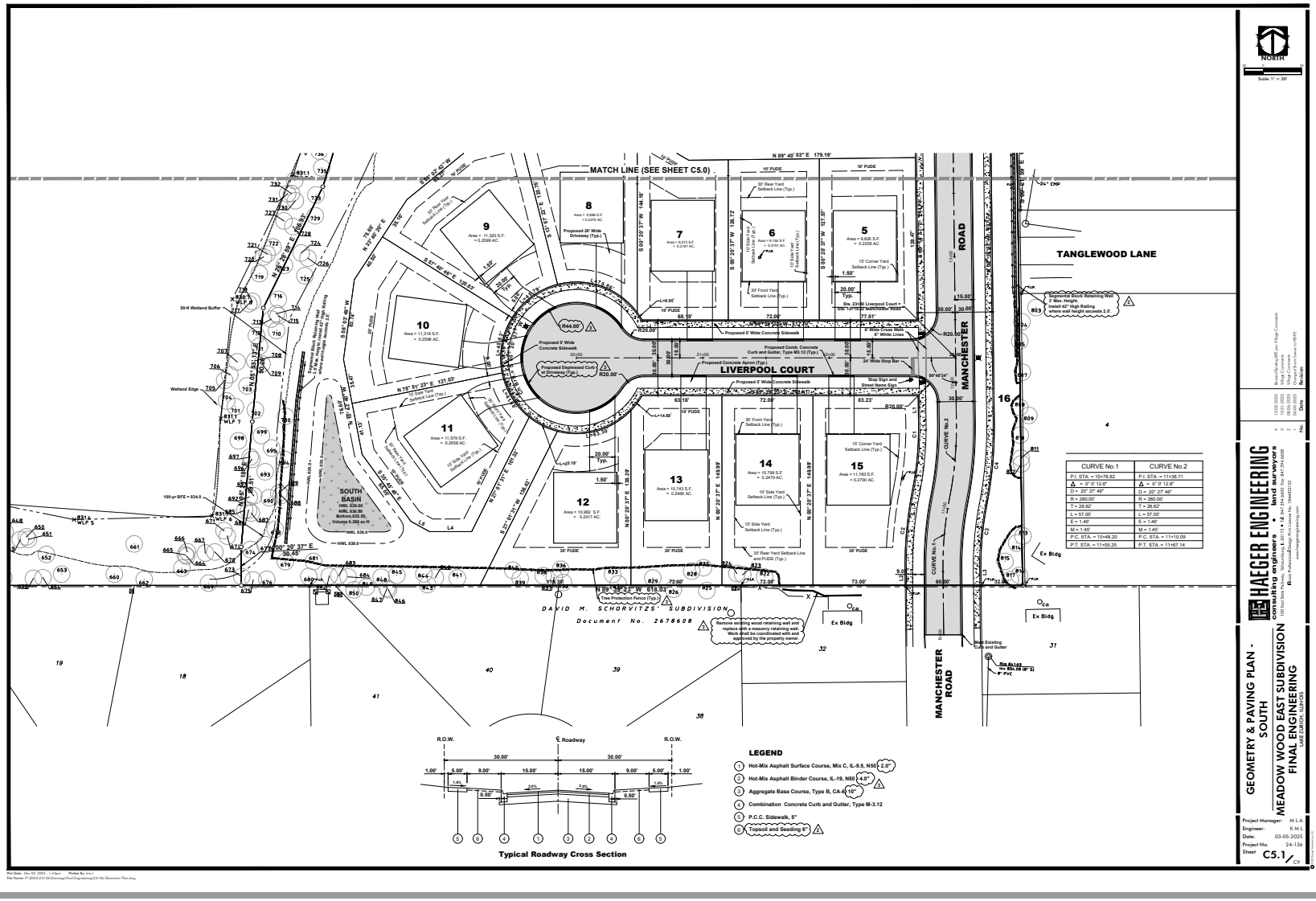
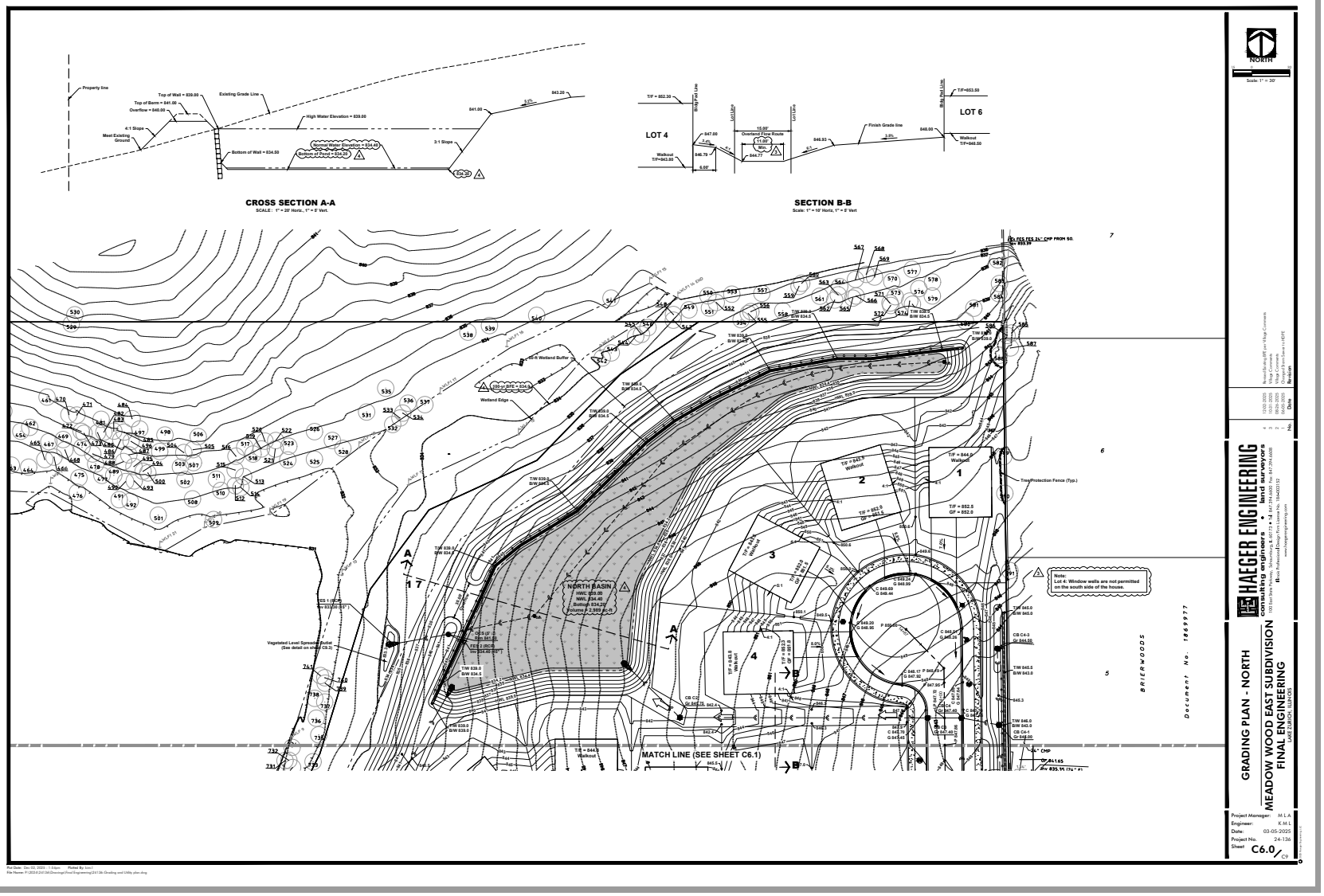
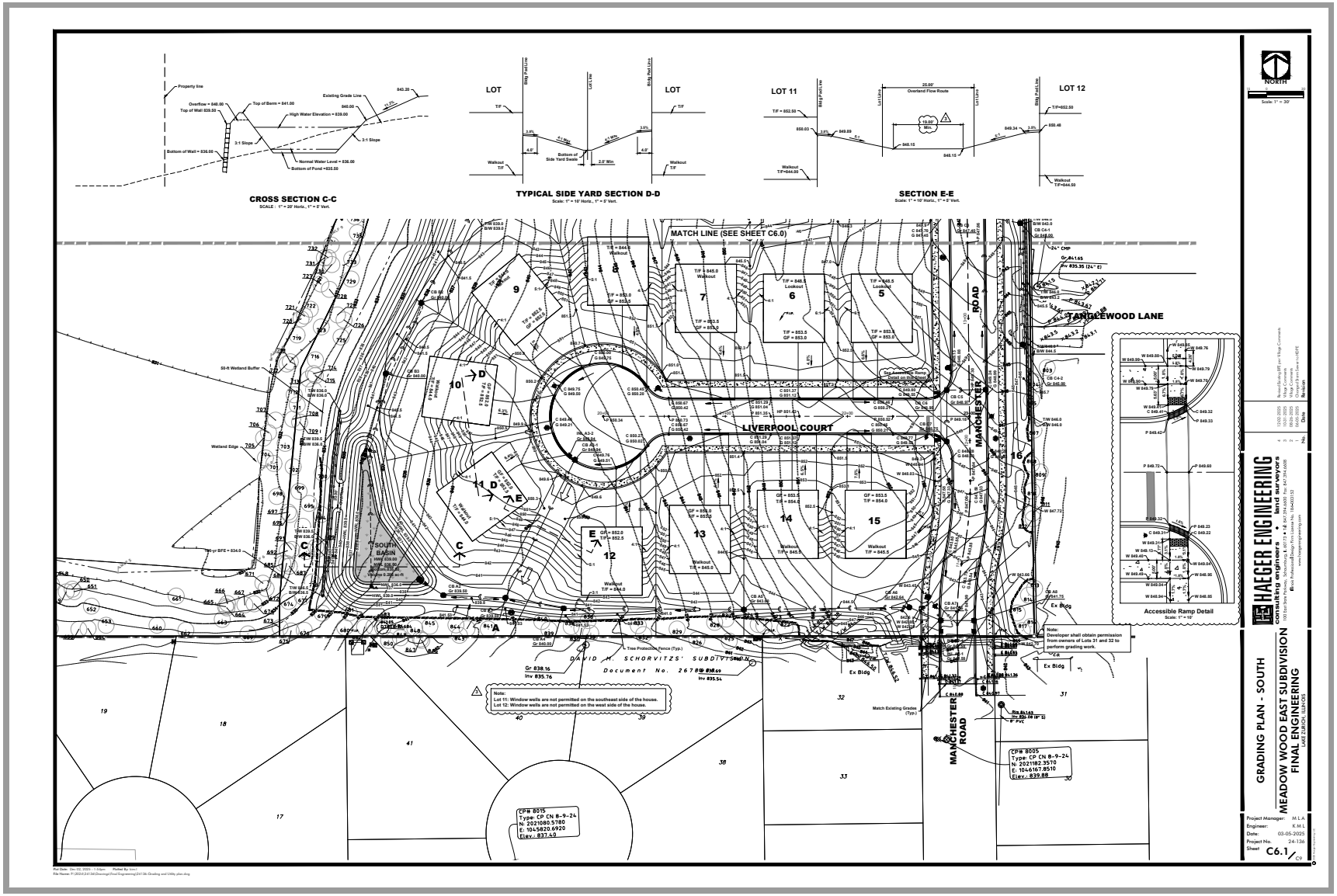
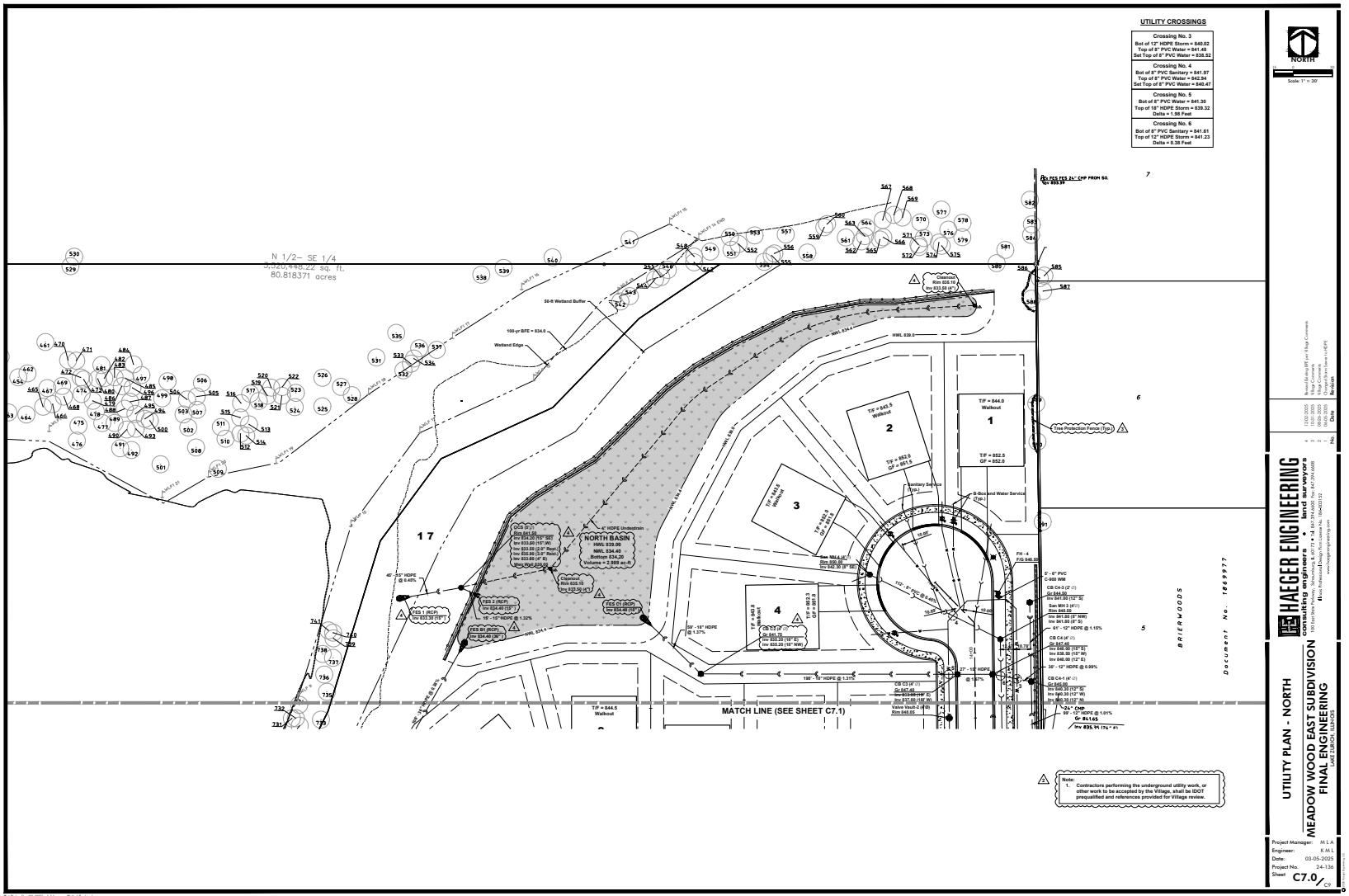
FINAL ENGINEERING
LIVERPOOL COURT
TANGLEWOOD LANE
MANCHESTER ROAD
BRIERWOODS
Document No. 1869977
DAVID M. SCHORVITZ' SUBDIVISION
Document No. 2678608
NORTH BASIN
SOUTH BASIN
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C4.0/C9

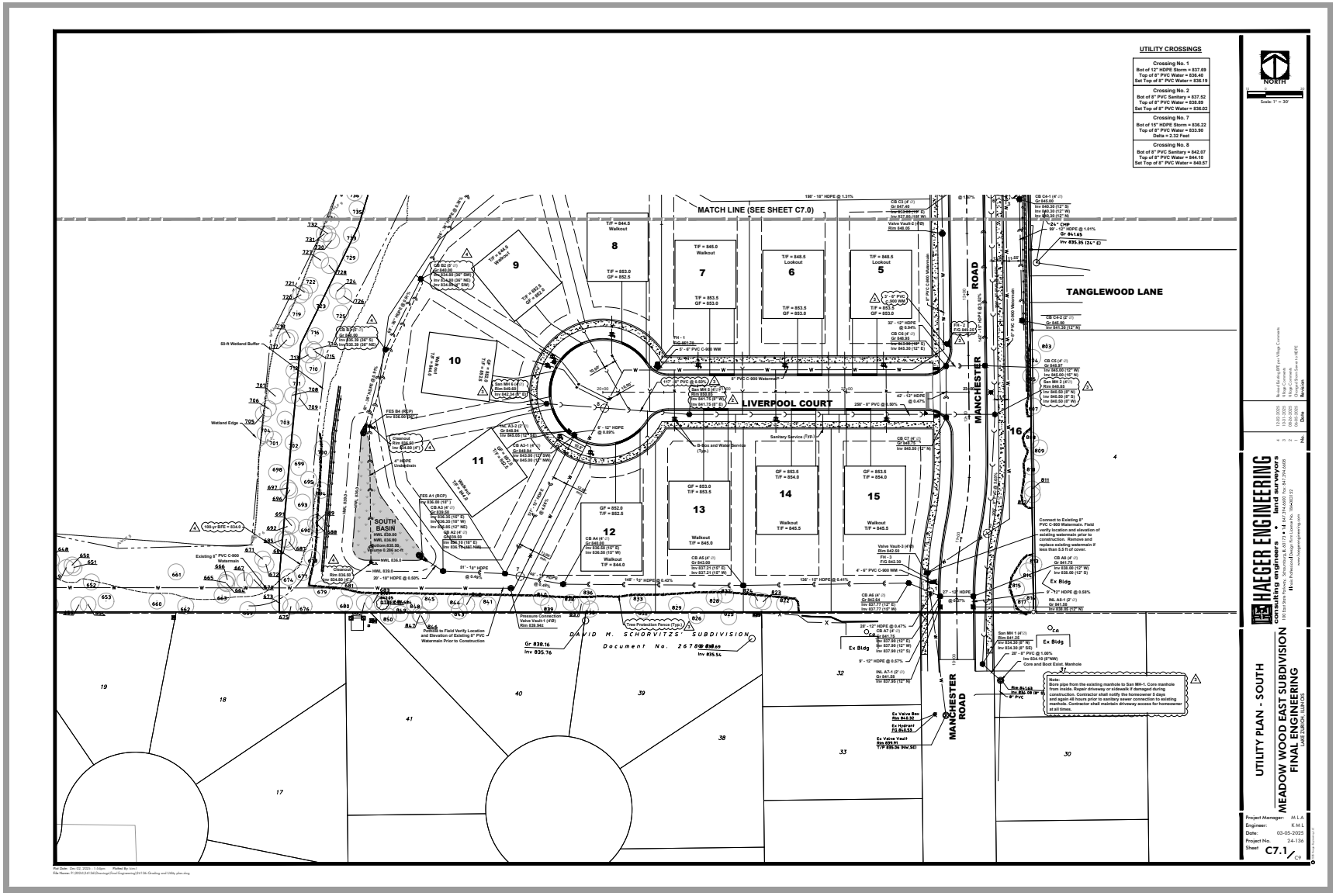

NORTH
Scale: 1" = 30'
S 89° 39' 23" E 242.18'
N 56° 26' 47" E 79.37'
N44°30'40"E 86.46'
N65°47'11"E 94.70'
N 89° 39' 23" W 67.00'
S 83° 25' 07" E 137.97'
N 89° 46' 03" E 175.06'
N 89° 40' 03" E 179.19'
S 89° 39' 23" E 600.00'
NORTH BASIN
HWL 839.00
NWL 834.40
Bottom 834.20
Volume = 2.869 ac-ft
MATCH LINE (SEE SHEET C5.1)
Segmental Block Retaining Wall 4' Max. Height. Install 42" High Railing where wall height exceeds 2.5'
Tree Protection Fence (Typ.)
Proposed Depressed Curb at Driveway (Typ.)
Proposed 6" Wide Concrete Sidewalk
Proposed 20' Wide Driveway (Typ.)
Proposed Concrete Apron (Typ.)
Proposed Curb Cut/Inlet to Detention Basin (Typ.)
50-ft Wetland Buffer
Wetland Edge
25" CMP
1
Area = 11,186 S.F. = 0.2569 AC.
2
Area = 11,186 S.F. = 0.2704 AC.
3
Area = 12,408 S.F. = 0.2848 AC.
4
Area = 11,408 S.F. = 0.2624 AC.
BRIERWOODS
Document No. 1869977
R.O.W.
Roadway
30.00'
1.00'
5.00'
9.00'
15.00'
0.50'
-2.0%
-4.0%
LEGEND
1 Hot-Mix Asphalt Surface Course, Mix C, IL-9.5, N50 2.0"
2 Hot-Mix Asphalt Binder Course, IL-19, N50 4.0"
3 Aggregate Base Course, Type B, CA-6 16"
4 Combination Concrete Curb and Gutter, Type M-3.12
5 P.C.C. Sidewalk, 5"
6 Topsoil and Seeding 6"
Typical Roadway Cross Section
HAEGER ENGINEERING
consulting engineers • land surveyors
GEOMETRY & PAVING PLAN - NORTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKEMOOR, ILLINOIS
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C5.0/C9

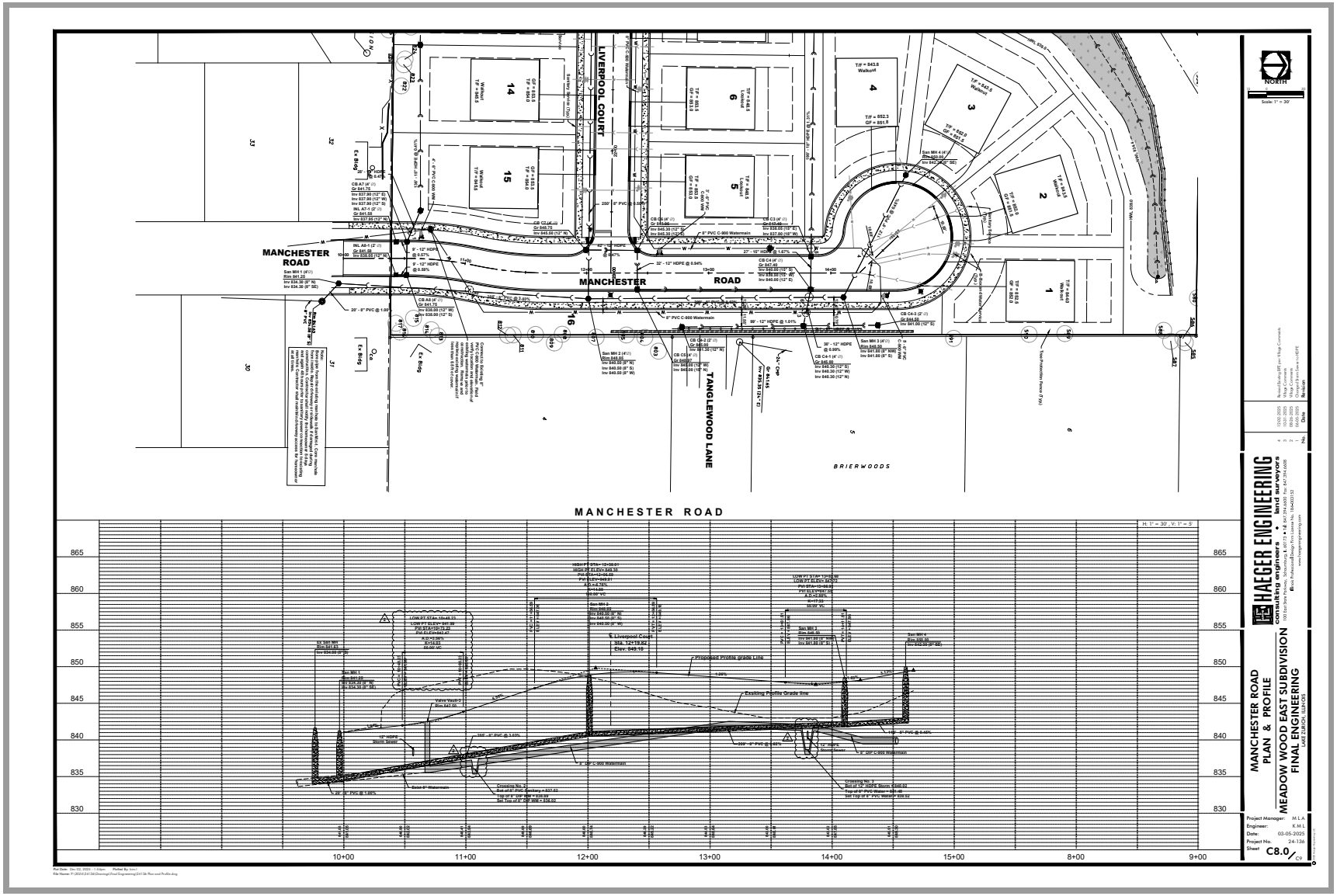

MATCH LINE (SEE SHEET C5.0)
LIVERPOOL COURT
TANGLEWOOD LANE
MANCHESTER ROAD
SOUTH BASIN
HWL 839.00
NWL 836.00
Bottom 835.00
Volume 0.260 ac-ft
DAVID H. SCHORVITZS' SUBDIVISION
Document No. 2678608
Typical Roadway Cross Section
LEGEND
1 Hot-Mix Asphalt Surface Course, Mix C, IL-9.5, N50 2.0"
2 Hot-Mix Asphalt Binder Course, IL-19, N50 4.0"
3 Aggregate Base Course, Type B, CA-6 10"
4 Combination Concrete Curb and Gutter, Type M-3.12
5 P.C.C. Sidewalk, 5"
6 Topsoil and Seeding 6"
CURVE No.1
CURVE No.2
HAEGER ENGINEERING
consulting engineers • land surveyors
GEOMETRY & PAVING PLAN - SOUTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C5.1/C9

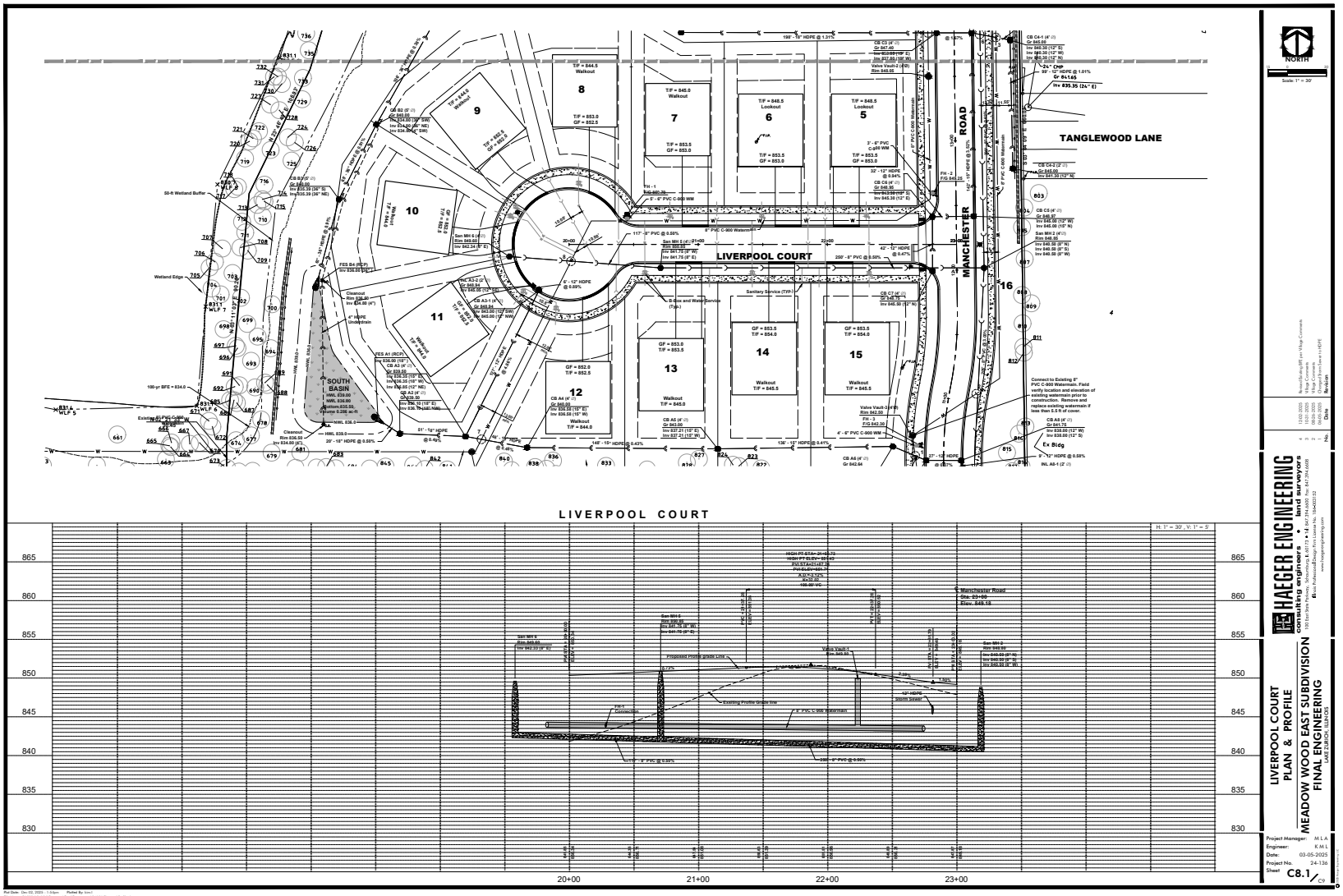

CROSS SECTION A-A
SCALE: 1" = 20' Horiz., 1" = 8' Vert.
SECTION B-B
Scale: 1" = 10' Horiz., 1" = 2' Vert
NORTH
Scale: 1" = 30'
NORTH BASIN
HWE 839.00
NWL 834.00
Bottom 834.00
Volume = 2,360 cu. ft.
MATCH LINE (SEE SHEET C6.1)
LOT 4
LOT 6
Note:
Lot 4: Window wells are not permitted on the south side of the house.
HAEGER ENGINEERING
consulting engineers • land surveyors
GRADING PLAN - NORTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C6.0


CROSS SECTION C-C
SCALE: 1" = 20' Horiz., 1" = 5' Vert.
TYPICAL SIDE YARD SECTION D-D
Scale: 1" = 10' Horiz., 1" = 5' Vert.
SECTION E-E
Scale: 1" = 10' Horiz., 1" = 5' Vert.
MATCH LINE (SEE SHEET C6.0)
MANCHESTER ROAD
LIVERPOOL COURT
TAMARACKWOOD LANE
SOUTH BASIN
DAVID H. SCHORVITZS' SUBDIVISION
Document No. 2678
Accessible Ramp Detail
Scale: 1" = 10'
Note: Developer shall obtain permission from owners of Lots 31 and 32 to perform grading work.
Note: Lot 11: Window wells are not permitted on the southeast side of the house. Lot 12: Window wells are not permitted on the west side of the house.
CPN 8015 Type: CP CN 8-9-24 N: 2021080.5780 E: 1045820.6920 Elev.: 837.43
CPN 8005 Type: CP CN 8-9-24 N: 2021182.3570 E: 1046167.8510 Elev.: 839.88
NORTH
Scale: 1" = 30'
HAEGER ENGINEERING
consulting engineers • land surveyors
GRADING PLAN - SOUTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C6.1


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 = 841.39
Top of 18" HDPE Storm = 839.32
Delta = 1.99 Feet
Crossing No. 6
Bot of 8" PVC Sanitary = 841.61
Top of 12" HDPE Storm = 841.23
Delta = 0.38 Feet
NORTH
Scale: 1" = 30'
N 1/2– SE 1/4
3,520,448.22 sq. ft.
80.818371 acres
NORTH BASIN
HWL 839.00
NWL 834.40
Bottom 834.20
Volume = 2.869 ac-ft
50-ft Wetland Buffer
100-yr BFE = 834.0
Wetland Edge
HWL 839.0
NWL 834.4
6" HDPE Underdrain
Cleanout
Rim 835.10
Inv 833.69 (4")
Tree Protection Fence (Typ.)
Sanitary Service Typ.)
S-Bouland Water Service (Typ.)
T/F = 844.0
Walkout
1
T/F = 852.5
GF = 852.0
2
T/F = 845.5
Walkout
T/F = 852.0
GF = 851.5
3
T/F = 843.5
Walkout
T/F = 850.5
GF = 850.0
4
T/F = 852.0
GF = 851.5
T/F = 852.3
GF = 851.8
T/F = 844.5
Walkout
17
MATCH LINE (SEE SHEET C7.1)
FES 1 (RCP)
Inv 833.30 (15")
FES 2 (RCP)
Inv 834.40 (15")
FES 3 (RCP)
Inv 834.40 (36")
FES 01 (RCP)
Inv 832.50 (24")
45' - 24" HDPE @ 6.48%
15' - 15" HDPE @ 1.32%
15' - 18" HDPE @ 1.37%
150' - 18" HDPE @ 1.37%
112' - 8" PVC @ 6.25%
FH - 4
FG 846.00
0' - 6" PVC
C-900 WM
CB C4-3 (2' D)
Gr 845.65
Inv 841.50 (12" E)
San MH 3 (4'D)
Rim 845.80
Inv 841.85 (8" NW)
Inv 841.85 (8" W)
61' - 12" HDPE @ 1.15%
CB C4-4' (4' D)
Gr 847.46
Inv 846.56 (15" E)
Inv 838.96 (15" W)
Inv 846.06 (12" E)
39' - 12" HDPE @ 0.99%
CB C4-1 (4' D)
Gr 845.66
Inv 840.33 (12" E)
Inv 840.33 (12" W)
Inv 840.33 (12" N)
24" CMP
20' - 12" HDPE @ 1.01%
Gr 84.165
Inv 835.91 (24" + 4')
CB C3 (4' D)
Gr 847.46
Inv 833.66 (18" E)
Inv 842.60 (18" W)
Valve Vault-2 (4'D)
Rim 849.00
Note:
1. Contractors performing the underground utility work, or other work to be accepted by the Village, shall be IDOT prequalified and references provided for Village review.
BRIERWOODS
Document No. 1869977
HAEGER ENGINEERING
consulting engineers • land surveyors
UTILITY PLAN - NORTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKEWOOD, ILLINOIS
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C7.0/C9

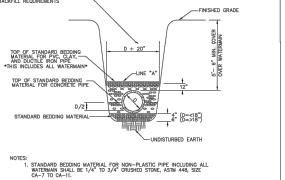

UTILITY CROSSINGS
Crossing No. 1
Bot of 12" HDPE Storm = 837.69
Top of 8" PVC Water = 836.40
Set Top of 8" PVC Water = 836.19
Crossing No. 2
Bot of 8" PVC Sanitary = 837.52
Top of 8" PVC Water = 838.89
Set Top of 8" PVC Water = 836.02
Crossing No. 7
Bot of 15" HDPE Storm = 836.22
Top of 8" PVC Water = 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 = 840.07
MATCH LINE (SEE SHEET C7.0)
LIVERPOOL COURT
TANGLEWOOD LANE
MANCHESTER ROAD
SOUTH BASIN
DAVID H. SCHORVITZS' SUBDIVISION
Document No. 2678
HAEGER ENGINEERING
consulting engineers • land surveyors
UTILITY PLAN - SOUTH
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C7.1


LIVERPOOL COURT
MANCHESTER ROAD
TANGLEWOOD LANE
BRIERWOODS
MANCHESTER ROAD
NORTH
Scale: 1" = 30'
HAEGER ENGINEERING
consulting engineers • land surveyors
MANCHESTER ROAD
PLAN & PROFILE
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet C8.0/C9


LIVERPOOL COURT
MANCHESTER ROAD
TANGLEWOOD LANE
SOUTH BASIN
LIVERPOOL COURT
PLAN & PROFILE
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
HAEGER ENGINEERING
consulting engineers • land surveyors
NORTH
Scale: 1" = 30'
H: 1" = 30', V: 1" = 5'
20+00
21+00
22+00
23+00

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.

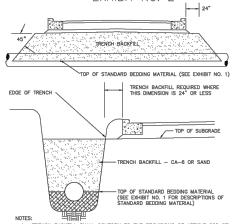
EXHIBIT NO. 1




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 ARTICLE 208.07 OF THE STANDARD SPECIFICATIONS.
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

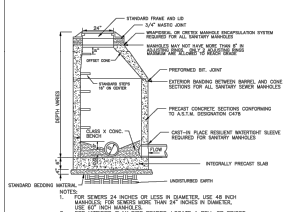
EXHIBIT NO. 2




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 QUANTITIES FOR PAYMENT. THE CONTRACTOR MAY EXCAVATE A TRENCH WIDER THAN THAT DETAILED SHALL BE PROVIDED AND PLACED AT NO ADDITIONAL COST TO THE DEVELOPER, OWNER, OR VILLAGE.

TRENCH BACKFILL

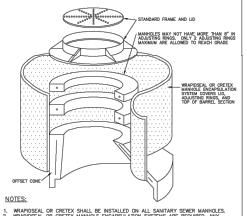
EXHIBIT NO. 3




NOTES:
1. ON 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 FOR FLEXION FOR SLIGHT DIFFERENT MOVEMENTS.
3. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. WATER TIGHT SEALENT REQUIRED FOR ALL SANITARY SEWER MANHOLES.

STANDARD MANHOLE

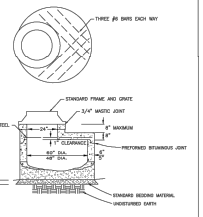
EXHIBIT NO. 4




NOTES:
1. WRAPIDSEAL OR CRETEX SHALL BE INSTALLED ON ALL SANITARY SEWER MANHOLES.
2. WRAPIDSEAL OR CRETEX MANHOLE ENCAPSULATION SYSTEMS ARE REQUIRED, ANY DEVIATIONS FROM THESE REQUIREMENTS 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

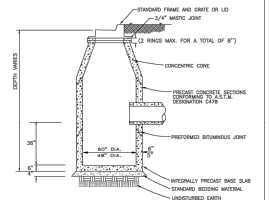
EXHIBIT NO. 5




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 GROUNDWATER IS ENCOUNTERED.
3. NO STEPS ARE REQUIRED IN RESTRICTED DEPTH CATCH MANHOLES.

FLAT TOP FOR RESTRICTED DEPTH MANHOLE

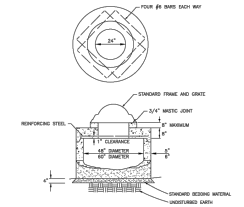
EXHIBIT NO. 7




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

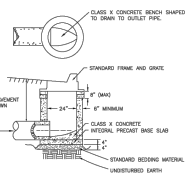
EXHIBIT NO. 8




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.

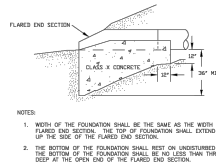
EXHIBIT NO. 9




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

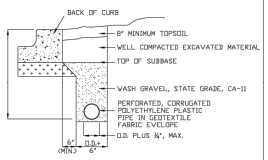
EXHIBIT NO. 10




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



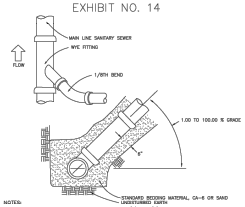

UNDERDRAIN

EXHIBIT NO. 12

| STREET | PAVEMENT DESIGN |
|---|---|
| MAJOR | 4" GRANULAR SUB-BASE<br>8" BITUMINOUS AGGREGATE MIXTURE<br>2" BITUMINOUS BINDER COURSE<br>2" BITUMINOUS SURFACE COURSE |
| COLLECTOR | 3" GRANULAR SUB-BASE<br>6" BITUMINOUS AGGREGATE MIXTURE<br>2" BITUMINOUS BINDER COURSE<br>1 1/2" BITUMINOUS SURFACE COURSE |
| MINOR | 3" AGGREGATE BASE COURSE<br>5" BITUMINOUS AGGREGATE MIXTURE<br>2" BITUMINOUS BINDER COURSE<br>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<br>8" BITUMINOUS AGGREGATE MIXTURE<br>3" BITUMINOUS CONCRETE |

MINIMUM STANDARDS FOR STREET DESIGN

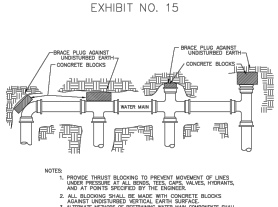
EXHIBIT NO. 14




NOTES:
1. THIS EXHIBIT IS APPLICABLE TO FOUR (4) OR SIX (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 SETTLING.
3. THE SANITARY SERVICE CONNECTION PIPE SHALL BE LAID IN A STRAIGHT LINE AND AT A UNIFORM GRADIENT FROM THE TOP OF THE WYE 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

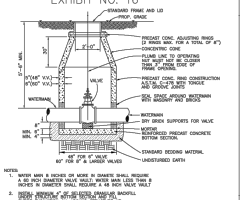
EXHIBIT NO. 15




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
3. CONCRETE SHALL BE POURED IN PLACE AGAINST UNDISTURBED EARTH.
4. ALTERNATE METHODS OF RESTRAINING WATER MAIN COMPONENTS SHALL REQUIRE THE APPROVAL OF THE VILLAGE ENGINEER.
5. NO WOOD IS ALLOWED IN THE THRUST BLOCKS.
6. MCGALLIOS SERIES 1100 OR APPROVED EQUAL ARE REQUIRED AT ALL JOINTS.

THRUST BLOCK

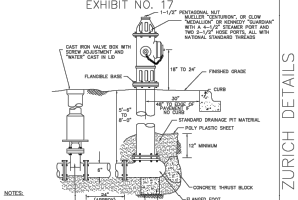
EXHIBIT NO. 16




NOTES:
1. WATER MAIN 8 INCHES OR MORE IN DIAMETER SHALL REQUIRE A 48 INCH VALVE VAULT. WATER MAIN LESS THAN 8 INCHES IN DIAMETER SHALL REQUIRE A 48 INCH VALVE VAULT.
2. REGULATING VALVES 4" AND SMALLER SHALL BE SET ON BRICK SUPPORTS AND BACKFILLED WITH GRAVEL UP TO CL. 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 CEMENTED TO ONE ANOTHER WITH MORTAR.
5. FILL JOINTS WITH BITUMINOUS JOINTING COMPOUND.
6. VALVE WILL BE OPENED TURNING COUNTER CLOCKWISE.

VALVE VAULT

EXHIBIT NO. 17




NOTES:
1. STEAMER PORT TO FACE PAVEMENT
2. PROVIDE 3 FOOT DIAMETER CLEAR GRAVEL DRAINAGE PIT FILLED WITH 1 INCH WASHED STONE BELOW AND ADJACENT TO HYDRANT
3. HYDRANT TO BE PAINTED AWWA CHANNEL 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

Revised drawing per Village Comments (12.02.2005)
Revised drawing per Village Comments (03.31.2005)
Revised drawing per Village Comments (04.06.2005)

| No. | Date | Revisions |
|---|---|---|
| 4 | 12.02.2005 | Revised drawing per Village Comments |
| 3 | 03.31.2005 | Revised drawing per Village Comments |
| 2 | 04.06.2005 | Revised drawing per Village Comments |
| 1 | 04.06.2005 | Revised drawing per Village Comments |

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Paul Haeger, Professional Engineer, 062-046022
www.haegerengineering.com

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

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

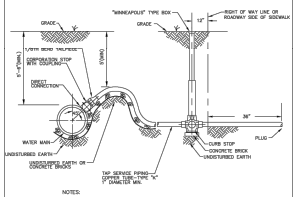
LAKE ZURICH UTILITY MATERIAL STANDARDS

| | |
|---|---|
| SANITARY SEWER | |
| Pipe | PVC, SDR – 26, sealing requirements of ASTM – 3034<br>Gasketed Joint / Cell Classification 12454 – B<br>Depth over 15 feet – SDR 17 or 18<br>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<br>Cast Iron Frames and Lids: Neenah Type 1 self-sealing Marked "Sanitary Sewer" |
| Casing | Wrapidseal Manhole Encapsulation System is required on all sanitary manholes<br>Exterior sanding between barrel and cone sections may be required<br>Exterior banding between barrel and cone sections is required<br>Manhole must be water tight and sealed from the outside<br>Fiberglass stairs<br>The casing must be ductile iron or steel<br>Manufactured pipe chocks must be used between the pipe and casing<br>Pea gravel must be jetted through the casing, with concrete mortar on the ends<br>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 (DR18) is used, #6 solid copper tracing wire is required for locating purposes |
| WATERMAIN | |
| Fire Hydrants | Clow Medallion, 5 1/4 ", with Auxiliary Valve<br>Kennedy Guardian, 5 1/4 " with Auxiliary Valve<br>Mueller Centurion A – 423 with Auxiliary Valve<br>5 1/4 " three-way (2 hose nozzles and 1 pumper nozzle)<br>Hydrant Color: Yellow |
| Pipe | Class 52 Ductile Iron, cement lined, Megalugs Series 1100 required at all fittings<br>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<br>Kennedy Resilient Wedge<br>American Flow Control AFC series 500 NRS<br>Mueller Resilient Wedge, 2360 General<br>Mueller Resilient Wedge, 2361<br>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<br>Manufactured pipe chocks must be used between the pipe and casing<br>Pea gravel must be jetted through the casing, with concrete mortar on the ends<br>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<br>AY McDonald 4701 |
| Roundway | Mueller H–15154 – 1" Stop, Minneapolis Pattern<br>AY McDonald 8104 |
| Bi-Box | Mueller H – 10300 Upper section inside diameter 1 1/4"<br>Mueller H – 10300 Lower section inside diameter 1 1/2" |
| Service Line | 1" Type K Copper, or as required by plumbing code |
| Tapping Saddle | Double Bevedail 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 test 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".
10. No joints will be permitted between the corporation stop and the roundway. ⚠

## 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 EXPANSION LOOP.
2. CURB BOX SHALL HAVE A PLUG TYPE LID.
3. SEE EXHIBIT NO. 13 FOR APPROVED FITTING DESCRIPTIONS.

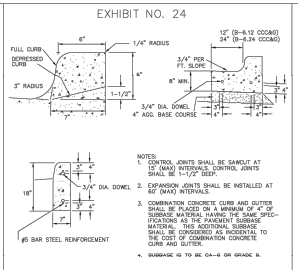
## EXHIBIT NO. 19

| STREET | RIGHT–OF WAY WIDTH | PAVEMENT WIDTH* | RADIUS OF HORIZ. CURVES | LENGTH OF VERT. CURVES | TANGENT BETWEEN HORIZ. CURVES | MINIMUM GRADIENT | MINIMUM GRADIENT | CLEAR SIGHT DISTANCE |
|---|---|---|---|---|---|---|---|---|
| MAJOR | 100 FT. | 54 FT. | 500 FT. | 200 FT. | 200 FT. | 5% | 0.5% | 500 FT. |
| COLLECTOR | 80 FT. | 44 FT. | 400 FT. | 200 FT. | 200 FT. | 5% | 0.5% | 400 FT. |
| MINOR | 60 FT. | 30 FT. | 150 FT. | 100 FT. | – | 6% | 0.5% | 200 FT. |
| CUL–DE–SAC | 120 FT. | 86 FT. | 150 FT. | 100 FT. | – | 6% | 0.5% | 200 FT. |
| MARGINAL ACCESS | 60 FT. | 30 FT. | 400 FT. | 200 FT. | 100 FT. | 6% | 0.5% | 200 FT. |
| IN BUSINESS AND INDUSTRIAL DIST. | 80–100 FT. | 54 FT. | 500 FT. | 200 FT. | 200 FT. | 2% | 0.5% | 500 FT. |

*PAVEMENT WIDTHS ARE MEASURED BACK OF CURB TO BACK OF CURB AND INCLUDE ADDITIONAL WIDTH FOR ON–STREET PARKING.

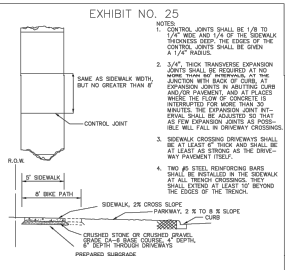
(a) FIFTY (50) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN TWO HUNDRED (200) FEET.
(b) FORTY (40) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN ONE HUNDRED (100) FEET.

## 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. SUBGRADE IS TO BE CA–6 OR GRADE B.

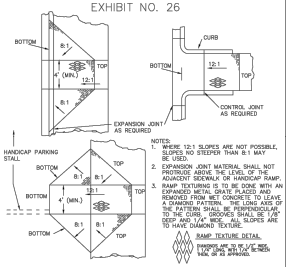
## EXHIBIT NO. 25




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 30' INTERVALS AND AT EVERY JUNCTION WITH BACK OF CURB, AT EXPANSION JOINTS IN ABUTTING CURB AND/OR PAVEMENT, AND AT PLACES WHERE THE FLOW OF CONCRETE IS INTERRUPTED BY MANHOLES OR OTHER 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.

WATER SERVICE CONNECTION

## EXHIBIT NO. 26

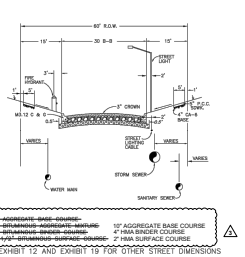



NOTES:
1. WHERE 12:1 SLOPES ARE NOT POSSIBLE, SLOPES NO STEEPER THAN R:1 MAY BE USED.
2. EXPANSION JOINT MATERIAL SHALL NOT PROTRUDE ABOVE THE LEVEL OF THE ADJACENT SIDEWALK OR HANDICAP RAMP.
3. RAMP TEXTURING IS TO BE DONE WITH AN EXPANDED METAL GRATE PLACED AND REMOVED FROM WET CONCRETE TO LEAVE A DIAMOND PATTERN IMPRINTED. SIDES 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

PARKING ARE TO BE 17' WIDE WITH 1'–0" CURB WIDTH ON BOTH SIDES, 19' WIDTH, OR AS APPROVED.

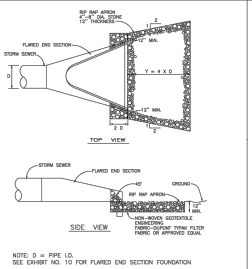
MINIMUM STANDARDS FOR STREET DESIGN




~~6" AGGREGATE BASE COURSE~~
~~2" BITUMINOUS AGGREGATE MIXTURE~~
~~4" BITUMINOUS BINDER COURSE~~
~~1 1/2" BITUMINOUS SURFACE COURSE~~
10" AGGREGATE BASE COURSE
4" HMA BINDER COURSE
2" HMA SURFACE COURSE ⚠

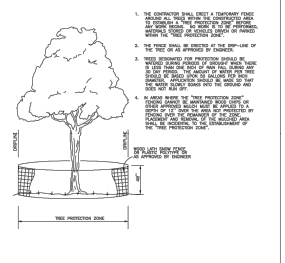
SEE EXHIBIT 12 AND EXHIBIT 19 FOR OTHER STREET DIMENSIONS

BARRIER CURB



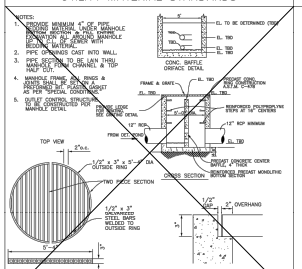

NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

SIDEWALK

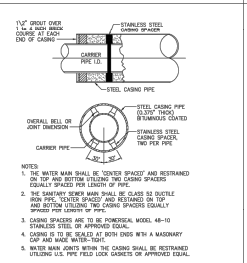



1. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND THE DRIP–LINE OF EACH TREE DESIGNATED TO REMAIN AS A "TREE PROTECTION ZONE" BEFORE ANY EARTH DISTURBANCE OR CONSTRUCTION IS PERFORMED. ANY TREES DESIGNATED TO REMAIN EITHER DIE OR ARE PAVED WITHIN THE "TREE PROTECTION ZONE".
2. THE FENCE SHALL BE ERECTED AT THE DRIP–LINE OF THE TREE OR AS APPROVED BY ENGINEER.
3. TREES DESIGNATED FOR PROTECTION SHOULD BE PROTECTED FROM EXCESS SHADE, FERTILIZER OR WATER DAMAGE DUE TO CONSTRUCTION. NO EQUIPMENT SHALL BE USED OR TRAVEL WITHIN THE DRIP–LINE OF ANY TREE TO BE PRESERVED. THE AMOUNT OF WATER PER TREE SHALL NOT BE ALTERED SIGNIFICANTLY DURING CONSTRUCTION. APPLICATION SHOULD BE MADE SO THAT THE WATER SLOWLY SOAKS INTO THE GROUND AND DOES NOT RUN OFF.
4. AN AREA WHERE THE "TREE PROTECTION ZONE" CANNOT BE ESTABLISHED AND MAINTAINED AS DESCRIBED ABOVE SHOULD NOT BE APPROVED TO A DISTANCE CLOSER THAN 5 FEET FROM THE TREE. ONLY SPECIFICALLY APPROVED ROOT PRUNING SHALL BE PERFORMED WITHIN THE "TREE PROTECTION ZONE". ALL ROOTS SHALL BE CLEANLY CUT AND NOT TORN. ANY EXPOSED ROOTS SHALL BE KEPT MOIST AND COVERED AS SOON AS POSSIBLE WITH SOIL. NO FILL SHALL BE PLACED OVER THE ROOT SYSTEM OF ANY TREE WITHIN THE "TREE PROTECTION ZONE".

UTILITY MATERIAL STANDARDS

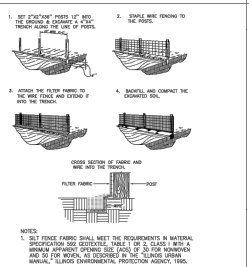



HANDICAP RAMP



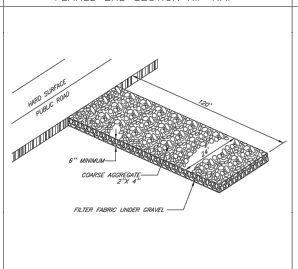

NOTES:
1. THE WATER MAIN SHALL BE "CENTER SPACED" AND RESTRAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
2. THE SANITARY SEWER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE, "CENTER SPACED" AND RESTAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED 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.

TYPICAL MINOR STREET DESIGN DETAIL

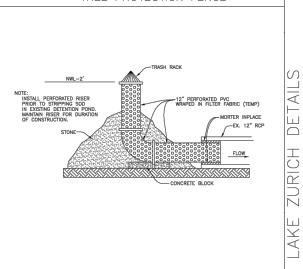



NOTES:
1. SILT FENCE FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS 1 WITH A MINIMUM APPARENT OPENING SIZE (AOS) OF 30 FOR NONWOVEN AND 50 FOR WOVEN, AS DESCRIBED IN THE "ILLINOIS URBAN MANUAL", ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, 1995.

FLARED END SECTION RIP RAP




TREE PROTECTION FENCE




OUTLET CONTROL STRUCTURE | PIPE CASING DETAIL | SILT FENCE DETAIL | GRAVEL CONSTRUCTION ENTRANCE | TEMPORARY PERFORATED RISER DETAIL

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540–1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 2

PROJECT NO. DETAILS
DATE 1/10/03
SCALE NTS
DESIGNED BY DESIGN
DRAWN BY DTM
CHECKED BY EL

SHEET 2 / 3

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VILLAGE OF LAKE ZURICH DETAILS

HAEGER ENGINEERING
consulting engineers • land surveyors
150 East Bonner Road, Wauconda, IL 60084 (847) 526–5010 Fax 847.294.4408
Web Site: www.haegerengineering.com

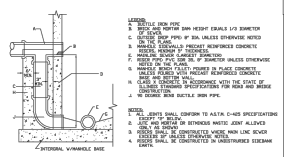
| No. | Date | Revisions |
|---|---|---|
| 4 | 11/22/2005 | Revised Grading per Village Comments |
| 3 | 10/31/2005 | Village Comments |
| 2 | 08/31/2005 | Village Comments |
| 1 | 04/05/2005 | Changed Storm Sewer to HDPE |

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

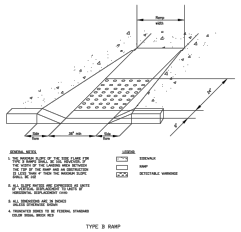
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03–05–2025
Project No. 24–136
Sheet C9.1/C9

Plot Date: Dec 02, 2005 - 1:50pm Plotted By: kmcl
File Name: P:\2024\24136\Drawings\Final Engineering\24136 Title Sheet and Details.dwg

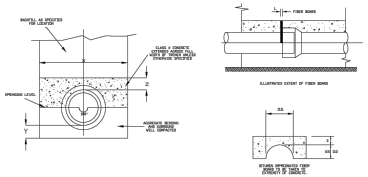
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.



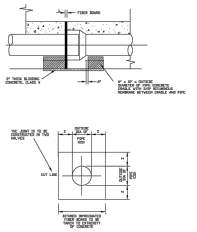
OUTSIDE DROP PIPE DETAIL



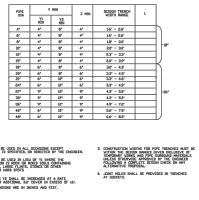
HANDICAP RAMP DETAIL



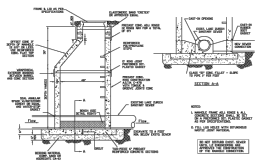
MASS CONCRETE ARCH



FLEXIBLE JOINT



BEDDING DETAILS: PIPES IN SINGLE TRENCHES



STANDARD MH CONSTRN. OVER EXSTG SEWER

VILLAGE OF LAKE ZURICH DETAILS

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540-1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 3

PROJECT NO. DETAILS
DATE 7/31/03
SCALE NTS
DESIGNED BY RK
DRAWN BY RK
CHECKED BY EL

SHEET 3

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

HAEGER ENGINEERING
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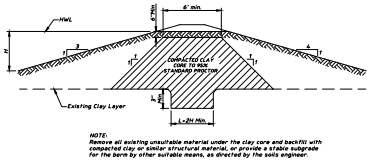
100 East State Parkway, Schaumburg, IL 60173 • tel 847.394.2400 fax 847.394.6608
An Equal Opportunity Employer
www.haegerengineering.com

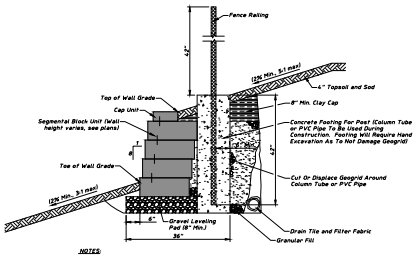
| No. | Date | Revision |
|---|---|---|
| 4 | 11.20.2025 | Revised Grading per Village Comments |
| 3 | 10.31.2025 | Village Comments |
| 2 | 08.01.2025 | Village Comments |
| 1 | 04.30.2025 | Changed from Curve to FDPE |

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



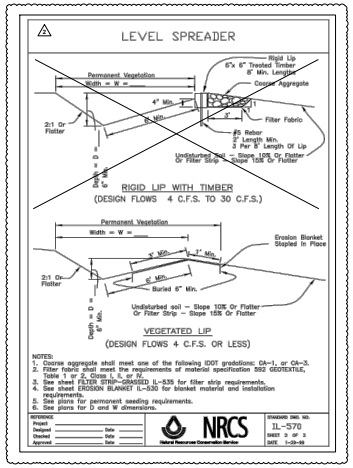

NOTE:
Remove all existing unsuitable material under the clay core and backfill with compacted clay or similar structural material, or provide a stable subgrade for the berm by other suitable means, as directed by the soils engineer.

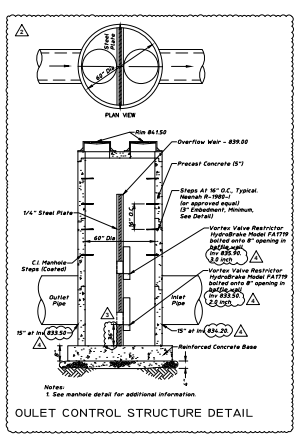
DETENTION POND BERM SECTION



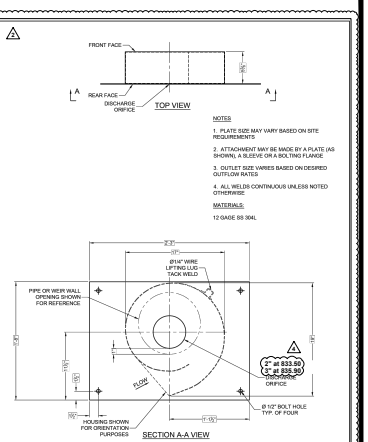

NOTES:
1. Wall shall be constructed in accordance with the specification guidelines of the selected manufacturer. Contractor shall submit shop drawings to the engineer for approval prior to construction. Drawings must be signed & sealed by a registered structural engineer.
2. This Detail Does Not Account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

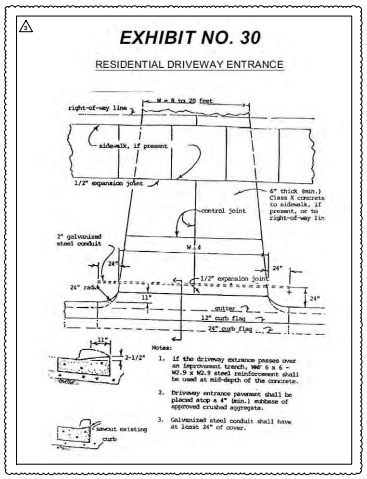
SEGMENTAL BLOCK RETAINING WALL WITH FENCE




OULET CONTROL STRUCTURE DETAIL

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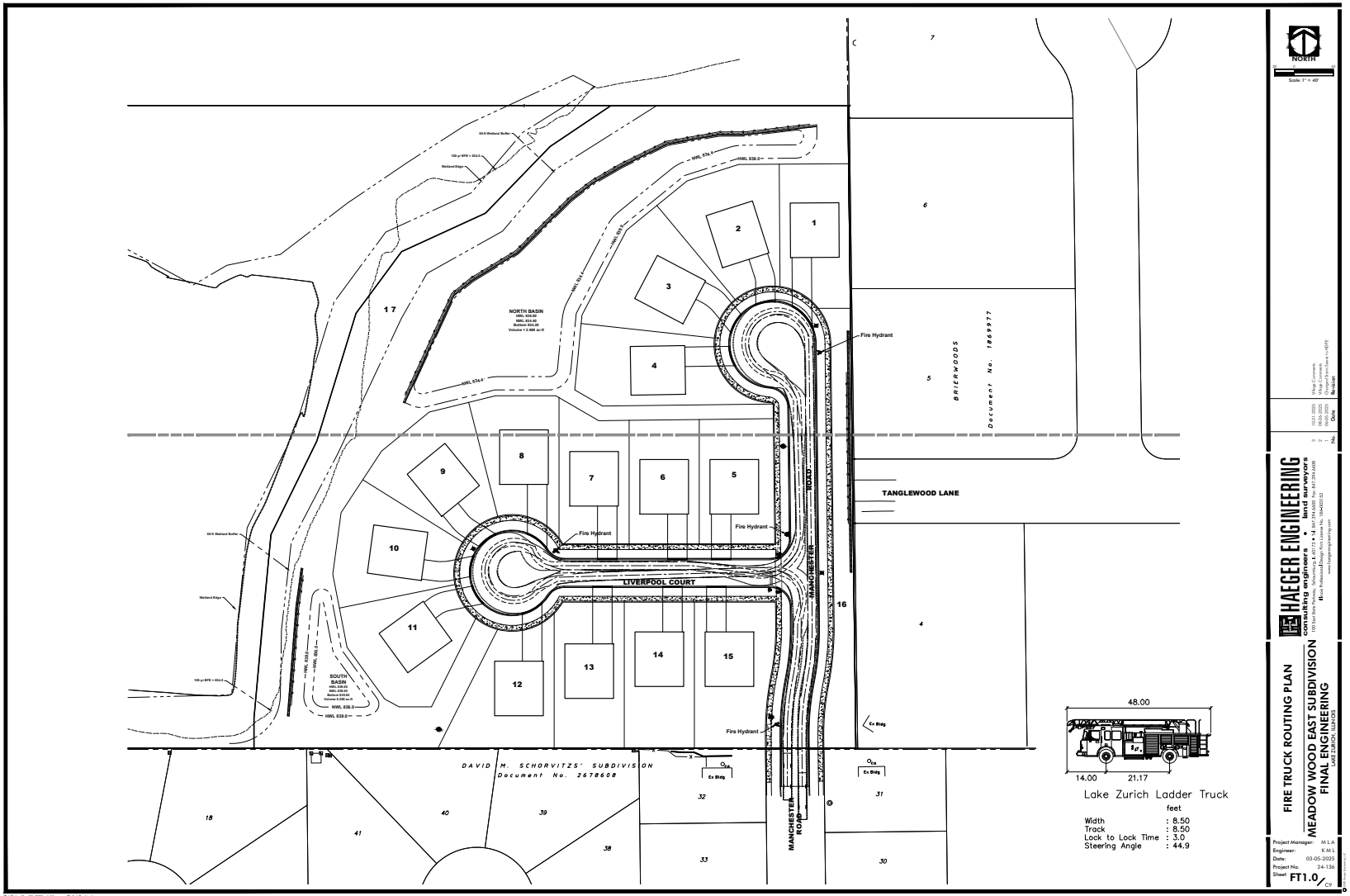
www.haegerengineering.com

STANDARD DETAILS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKEZURICH, ILLINOIS

| No. | Revisions | Date |
|---|---|---|
| 1 | Revised drawing per Village Comments | 12-02-2025 |
| 2 | Village Comments | 02-03-2025 |
| 3 | Village Comments | 03-03-2025 |
| 4 | Changed from Curve to KEPE | 04-02-2025 |
| 5 | Revised | 04-25-2025 |

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


NORTH
Scale: 1" = 40'
NORTH BASIN
SOUTH BASIN
LIVERPOOL COURT
TANGLEWOOD LANE
MANCHESTER ROAD
BRIERWOODS
Document No. 1869977
DAVID M. SCHORVITZS' SUBDIVISION
Document No. 2678608
Fire Hydrant
Ex Bldg
48.00
14.00
21.17
Lake Zurich Ladder Truck
feet
Width : 8.50
Track : 8.50
Lock to Lock Time : 3.0
Steering Angle : 44.9
HAEGER ENGINEERING
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FIRE TRUCK ROUTING PLAN
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet FT1.0

# 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:**

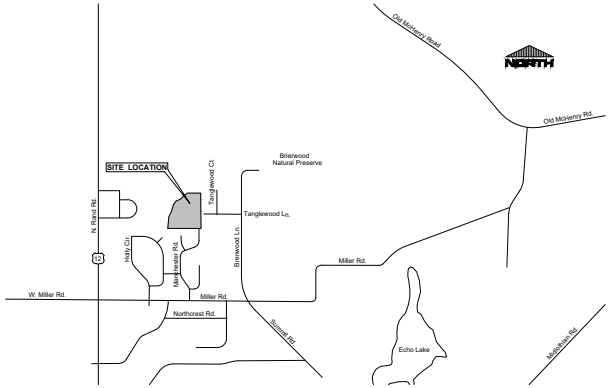
Casey Builders
509 W. Old Northwest Highway
Barrington, IL 60010

**PREPARED BY:**

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

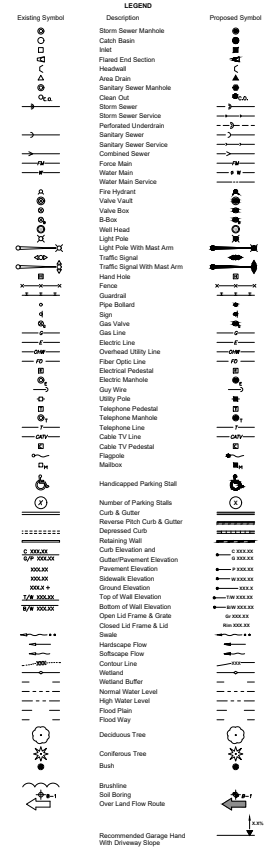
**VILLAGE OF LAKE ZURICH**

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


LOCATION MAP
Not To Scale

| 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.

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Illinois Professional Design Firm 184.003152
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| No. | Date | Revisions |
|---|---|---|
| 3 | 03-05-2025 | Village Comments |
| 2 | 02-21-2025 | Village Comments |
| 1 | 09-06-2023 | Dumpster/Trailer Detail Added |

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

Plot Date: Dec 02, 2025 - 1:30pm Plotted By: Ben I
File Name: P:\2024\24-136\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 ILR10ZQ729 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 northeast 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 of the sediment basins will occur. Next, construction and stabilization of the sediment basins, followed by mass grading. Then the underground utilities will be constructed. Finally, roadways 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. The Contractor shall monitor the slopes and provide stabilization and/or protection as necessary.

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 North Flint Creek.

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)(2), 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 miscellaneous 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.servicecore@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 Lake 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 siltinversion 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. Clearing and grubbing of the sediment basins
   d. Construction and stabilization of the sediment basins
   e. Clearing and grubbing of remaining site
   f. Strip and stockpile topsoil and mass grade the site
   g. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
   h. Construction of storm sewer system and other utilities, along with associated inlet protection
   i. Temporary stabilization of areas that have reached temporary grade
   j. Roadway construction
   k. Permanently stabilize site with topsoil, seed and blanket
   l. Remove all temporary SE/SC measures after the site is stabilized with vegetation

**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. ILR10ZQ729 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms and conditions 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*

All Contractors and Sub-Contractors 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.

HAEGER ENGINEERING
consulting engineers • land surveyors
150 East Street • Suite 202 • Naperville, IL 60563 • 630.245.1100 • Fax 630.245.1101
www.haegerengineering.com

| No. | Date | By |
|---|---|---|
| 1 | 10.31.2025 | VCC |
| 2 | 12.19.2025 | VCC |
| 3 | 04.02.2026 | VCC |

Village Comments
Village Comments
Revised per Storm Sewer Update

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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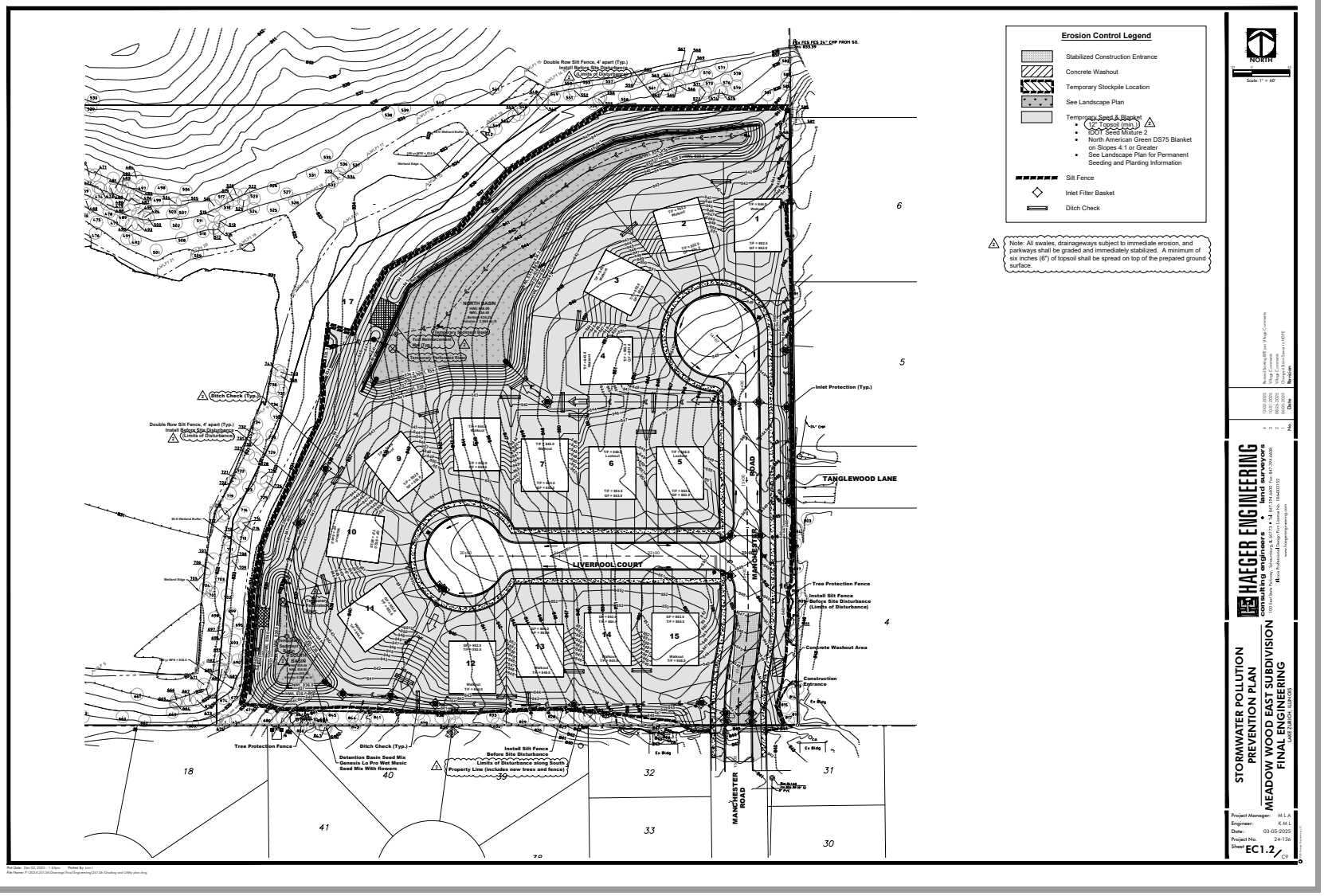
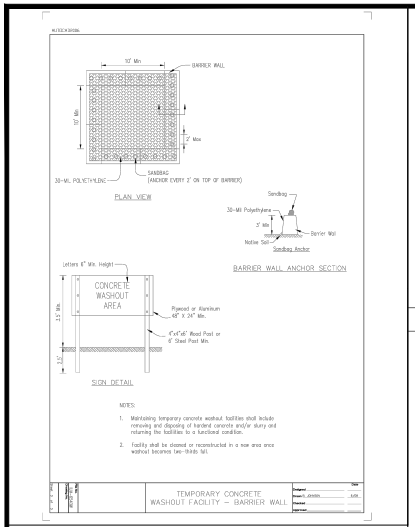
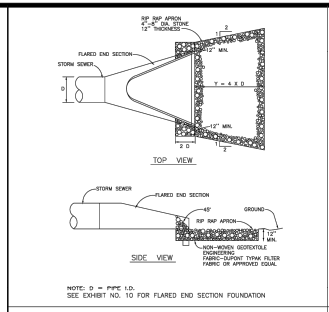
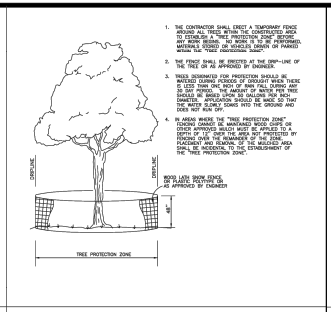
Plot Date: Dec 02, 2025 - 1:30pm Plotted By: Nino I
File Name: P:\2024\24-136\Drawings\Final Engineering\24136-SWPPP.dwg


Erosion Control Legend
Stabilized Construction Entrance
Concrete Washout
Temporary Stockpile Location
See Landscape Plan
Temporary Seed & Blanket
12" 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
Note: All swales, drainageways subject to immediate erosion, and parkways shall be graded and immediately stabilized. A minimum of six inches (6") of topsoil shall be spread on top of the prepared ground surface.
NORTH
Scale: 1" = 40'
TANGLEWOOD LANE
LIVERPOOL COURT
MANCHESTER ROAD
Inlet Protection (Typ.)
Ditch Check (Typ.)
Double Row Silt Fence, 4' apart (Typ.)
Install Before Site Disturbance
(Limits of Disturbance)
Tree Protection Fence
Install Silt Fence
Before Site Disturbance
(Limits of Disturbance)
Concrete Washout Area
Construction Entrance
Detention Basin Seed Mix
Genesis Lo Pro Wet Mesic
Seed Mix With Rinners
Property Line (Includes new trees and fence)
Limits of Disturbance along South
STORMWATER POLLUTION PREVENTION PLAN
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
HAEGER ENGINEERING
consulting engineers • land surveyors
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 03-05-2025
Project No. 24-136
Sheet EC1.2

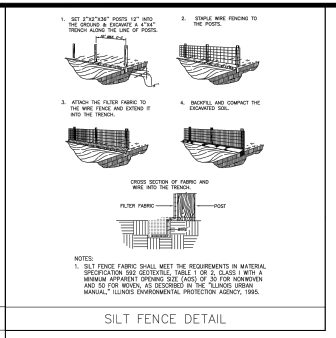


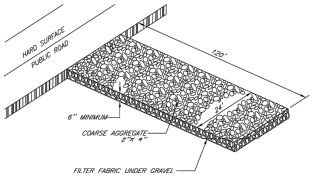

FLARED END SECTION RIP RAP



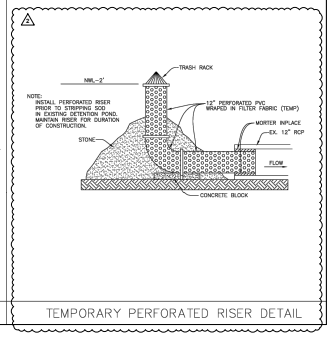

TREE PROTECTION FENCE



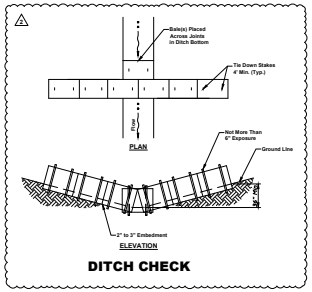

SILT FENCE DETAIL



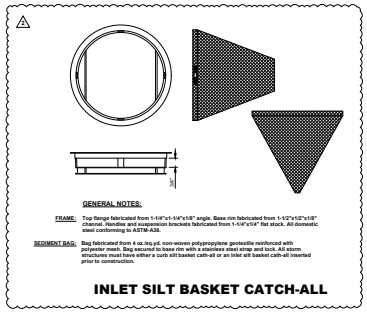

GRAVEL CONSTRUCTION ENTRANCE



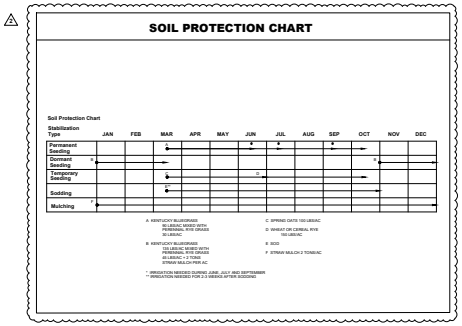

TEMPORARY PERFORATED RISER DETAIL




**DITCH CHECK**




**INLET SILT BASKET CATCH-ALL**



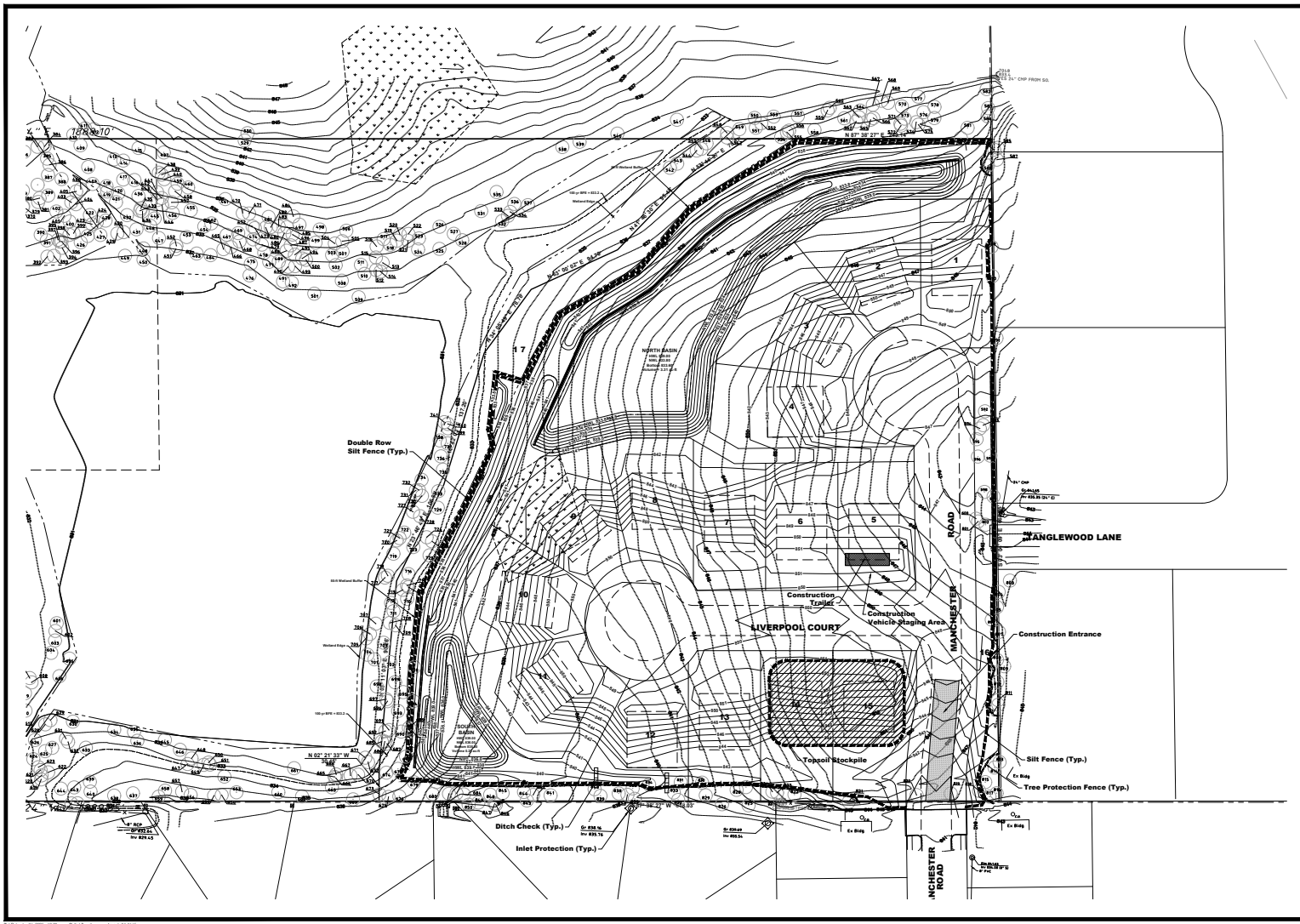

**SOIL PROTECTION CHART**

HAEGER ENGINEERING
consulting engineers • land surveyors
150 East Sibley Blvd., Dolton, Illinois 60419 • 847.244.3300 Fax 847.244.4008
Haeger Engineering, LLC 184.001.0012
www.haegerengineering.com

| No. | Revisions | Date |
|---|---|---|
| 1 | Village Comments | 10.31.2025 |
| 2 | Village Comments | 12.01.2025 |
| 3 | Revised per Comments of IEPA | 04.02.2026 |

SWPPP STANDARD DETAILS
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LOCATED IN MANTENO

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


NORTH
Scale: 1" = 40'
Double Row
Silt Fence (Typ.)
MANGLEWOOD LANE
ROAD
Construction
Trailer
Construction
Vehicle Staging Area
LIVERPOOL COURT
MANCHESTER
Construction Entrance
Topsoil Stockpile
Silt Fence (Typ.)
Tree Protection Fence (Typ.)
Ditch Check (Typ.)
Inlet Protection (Typ.)
NCHESTER
ROAD
N 67° 38' 27" E
N 02° 21' 33" W
HAEGER ENGINEERING
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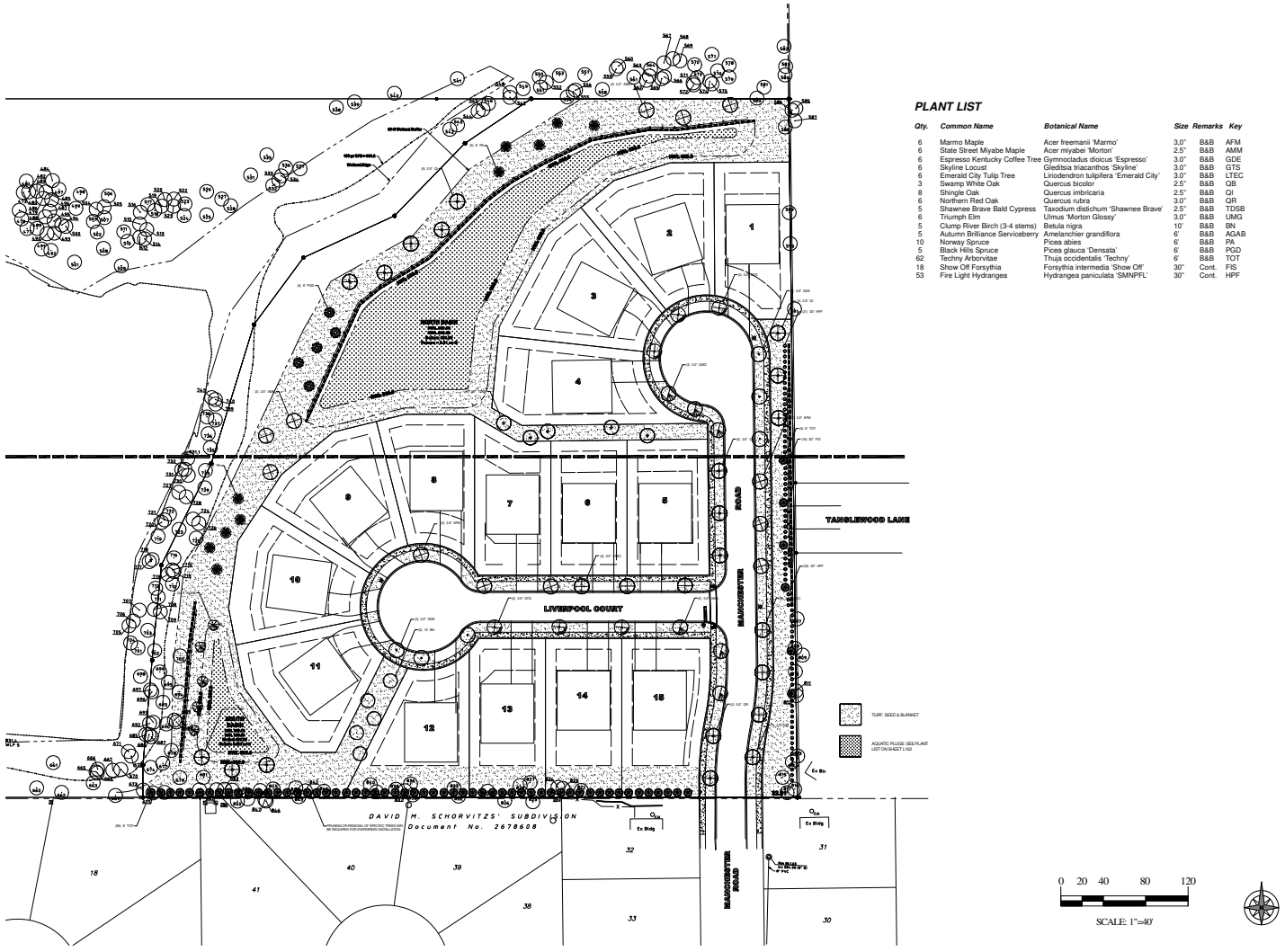
MASS GRADING AND
CONSTRUCTION STAGING PLAN
MEADOW WOODS EAST SUBDIVISION
FINAL ENGINEERING
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 06-25-2025
Project No. 24-136
Sheet 1/1




## PLANT LIST

| Qty. | Common Name | Botanical Name | Size | Remarks | Key |
|---|---|---|---|---|---|
| 6 | Marmo Maple | Acer freemanii 'Marmo' | 3.0" | B&B | AFM |
| 6 | State Street Miyabe Maple | Acer miyabei 'Morton' | 2.5" | B&B | AMM |
| 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 | 2.5" | B&B | QB |
| 8 | Shingle Oak | Quercus imbricaria | 2.5" | B&B | QI |
| 6 | Northern Red Oak | Quercus rubra | 3.0" | B&B | QR |
| 5 | Shawnee Brave Bald Cypress | Taxodium distichum 'Shawnee Brave' | 2.5" | B&B | TDSB |
| 6 | Triumph Elm | Ulmus 'Morton Glossy' | 3.0" | B&B | UMG |
| 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 |
| 62 | Techny Arborvitae | Thuja occidentalis 'Techny' | 6' | B&B | TOT |
| 18 | Show Off Forsythia | Forsythia intermedia 'Show Off' | 30" | Cont. | FIS |
| 53 | Fire Light Hydrangea | Hydrangea paniculata 'SMNPFL' | 30" | Cont. | HPF |

REVISIONS:
11.05.25 | UPDATED SITE PLAN)

DOWDEN DESIGN GROUP
LANDSCAPE ARCHITECTURE, DESIGN & PLANNING
P.O. BOX 415, LIBERTYVILLE, IL 60048
DOWDENDESIGNGROUP.COM PHONE: (847) 382-1254

MEADOW WOOD SUBDIVISION
MANCHESTER ROAD
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN

DATE: 01.28.25
SCALE: 1"=40'
DRAWN: CJD

L101

## GENERAL NOTES

1. ALL DIMENSIONS AND SITE CONDITIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO STARTING WORK. SITE PLAN, ARCHITECTURE PLAN AND SITE SURVEY USERS PROVIDED BY OTHERS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
3. SPECIES AND SIZES OF PLANTS LISTED IN THE PLANT LIST ARE SUBJECT TO AVAILABILITY AT TIME OF INSTALLATION. IF SUBSTITUTIONS ARE REQUIRED, THE CONTRACTOR SHALL SUBMIT REQUESTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
4. ALL OVERHEAD AND UNDERGROUND UTILITIES ARE TO BE LOCATED PRIOR TO DIGGING OR EXCAVATION. IF UTILITIES OR OTHER OBSTRUCTIONS ARE DISCOVERED TO CONFLICT WITH GRADING, PLANT OR MATERIALS PLACEMENT, NOTIFY THE LANDSCAPE ARCHITECT SO THAT ADJUSTMENTS MAY BE MADE PRIOR TO PROCEEDING.
5. CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT EXISTING PLANTS, LAWN AREA, FENCES, SITE FEATURES AND PAVING TO REMAIN. ANY DAMAGE TO THESE EXISTING AREAS OR FEATURES SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE. DAMAGED LAWN AREAS SHALL BE TILLED, RE-GRADED, TOPSOIL ADDED AS NEEDED AND RE-SODDED WITH SOD.
6. IMPORTED TOPSOIL FOR THIS PROJECT SHALL BE FRIABLE LOAM OR SANDY LOAM, COMPRISED OF BETWEEN (20% AND 50%) SILT, (5% AND 25%) CLAY, AND 30% AND 60%) SAND. THE PH LEVEL SHALL BE BETWEEN 6.0 AND 7.2 AND THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 3% AND 6%. TOPSOIL SHALL BE FREE OF SEEDS, STONES, LARGE CLUMPS, ROOTS, LEAVES AND DEBRIS, AND SHALL NOT BE DELIVERED WHILE IN A FROZEN OR MUDDY CONDITION. CONTRACTOR SHALL PROVIDE A RECENT SOIL TEST ANALYSIS FOR ALL SOIL TO BE USED. THE ANALYSIS MUST INCLUDE THE INFORMATION REQUIRED ABOVE.
7. SEED SHALL BE A BLEND OF KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS, TALL FESCUE, AND FINE FESCUE.
8. ALL TREES ARE TO HAVE FRESHLY DUG, BALLED AND BURLAPPED ROOT BALLS WITH SIZES THAT MEET THE STANDARDS OF THE AMERICAN NURSERYMEN'S ASSOCIATION. DECIDUOUS AND EVERGREEN SHRUBS MAY EITHER HAVE FRESHLY DUG, BALLED AND BURLAPPED ROOT BALLS OR MAY BE CONTAINER GROWN. ALL PERENNIALS, ORNAMENTAL GRASSES AND GROUNDCOVERS MUST BE CONTAINER GROWN. CONTAINER GROWN MATERIALS SHALL HAVE BEEN GROWN IN THEIR CURRENT CONTAINER FOR A PERIOD OF NO LESS THAN SIX MONTHS.
9. ALL TREES SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT, AT THE NURSERY, PRIOR TO DIGGING. TREES THAT ARE ACCEPTABLE WILL BE SEALED. ALL SEALS APPLIED BY THE LANDSCAPE ARCHITECT MUST REMAIN ON THE TREES AND ARE NOT TO BE REMOVED BY THE CONTRACTOR. ALL TREES MUST HAVE SEALS IN PLACE AT TIME OF ACCEPTANCE OR WILL BE AUTOMATICALLY REJECTED. HEELED-IN TREES WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT.
10. ALL SHRUBS MUST MEET THE MINIMUM SIZES GIVEN IN THE PLANT LIST AND BE SPECIMEN QUALITY. SHRUBS THAT DO NOT MEET THESE GUIDELINES WILL BE REJECTED.
11. PLANT MATERIAL SHALL ONLY BE INSTALLED WITHIN THE FOLLOWING DATES: MAY 1 THROUGH NOVEMBER 1.
12. TEST TREE PITS AND PLANT BEDS FOR ADEQUATE DRAINAGE. FILL PLANT PIT WITH 12" OF WATER. IF WATER LEVEL DOES NOT DROP A MINIMUM OF ONE INCH PER HOUR, NOTIFY THE LANDSCAPE ARCHITECT OF DRAINAGE ISSUES.
13. PLANTING MIX FOR ALL PLANTINGS SHALL BE A BLEND OF 50% APPROVED TOPSOIL AND 10% SOIL AMENDMENT. ACCEPTABLE AMENDMENTS INCLUDE ONE STEP SOIL CONDITIONER OR PRYOR PLANTER MIX FROM MIDWEST TRADING, OR APPROVED EQUAL. BLENDING OF PLANTING MIX COMPONENTS SHALL BE COMPLETED OUTSIDE OF THE PLANTING PITS, PRIOR TO PLANTING.
14. AREAS DESIGNATED WITH GRAVEL IS TO HAVE A 4" DEPTH OF AN ANGULAR DECORATIVE GRAVEL OVER A FILTER FABRIC. GRAVEL TO BE DARK COLOR, 3/4" TO 1" DIA. SUBMIT SAMPLES FOR OWNER APPROVAL.
15. EXCAVATE PARKING LOT ISLANDS AND CURBED PLANTERS TO A DEPTH OF 24". BACKFILL WITH A 12" DEPTH OF TOPSOIL, AND A 12" DEPTH OF PLANTING MIX. BERM PLANTERS AND ISLANDS TO A HEIGHT OF 3" ABOVE TOP OF CURB TO PREVENT PONDING.
16. ALL PLANT BEDS ARE TO BE WELL SHAPED 'SPADE CUT' EDGES, 3" DEPTH, IN LINES OR IN CURVES AS SHOWN ON THE DRAWINGS.
17. ALL PLANT MATERIAL, INCLUDING SEED, SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL 'ACCEPTANCE' IS GRANTED. MAINTENANCE SHALL INCLUDE, WATERING, WEEDING, PRUNING, STRAIGHTENING, SPRAYING, MULCH REPLACEMENT AND MOWING.

    THE CONTRACTOR SHALL REQUEST AN INSPECTION OF LANDSCAPE PLANTING UPON SUBSTANTIAL COMPLETION FOR 'ACCEPTANCE'. REQUEST MUST BE SUBMITTED TO LANDSCAPE ARCHITECT AT LEAST TEN DAYS PRIOR TO ANTICIPATED INSPECTION. UPON INSPECTION THE LANDSCAPE ARCHITECT SHALL PREPARE A PUNCH LIST OF UNACCEPTABLE OR OUTSTANDING ITEMS. AFTER THE ITEMS HAVE BEEN SATISFACTORILY COMPLETED AND REVIEWED, THE LANDSCAPE ARCHITECT WILL RECOMMEND 'ACCEPTANCE'. SEED SHALL BE REVIEWED FOR ACCEPTANCE, ONLY AFTER THEY HAVE FULLY
18. ROOTED AND HAVE BEEN MOWED AT LEAST TWICE.

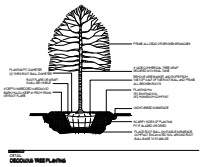
    ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF 'ACCEPTANCE'. AT OR NEAR THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL REQUEST AN INSPECTION OF LANDSCAPE PLANTING FOR 'FINAL ACCEPTANCE'. REQUEST MUST BE SUBMITTED TO LANDSCAPE ARCHITECT AT LEAST TEN DAYS PRIOR TO ANTICIPATED INSPECTION. UPON INSPECTION THE LANDSCAPE ARCHITECT SHALL PREPARE A PUNCH LIST OF UNACCEPTABLE ITEMS. AFTER THE ITEMS HAVE BEEN SATISFACTORILY REPLACED OR REPAIRED, REVIEWED AND APPROVED, THE LANDSCAPE ARCHITECT WILL RECOMMEND 'FINAL ACCEPTANCE'.
19.

## NORTH BASIN AQUATIC PLUGS *(24" O.C.)*

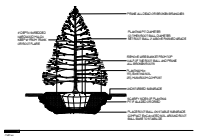
| Qty. | Common Name | Botanical Name | Units |
|---|---|---|---|
| 450 | Big Bluestem Grass | Andropogon gerardii | Plugs |
| 450 | Swamp Milkweed | Asclepias incarnata | Plugs |
| 450 | Plains Oval Sedge | Carex brevior | Plugs |
| 450 | Brown Fox Sedge | Carex vulpinoidea | Plugs |
| 900 | Virginiana Wild Rye | Elymus virginicus | Plugs |
| 450 | Northern Blue Flag | Iris versicolor | Plugs |
| 450 | Common Rush | Juncus effusus | Plugs |
| 450 | Common Mountain Mint | Pycnanthemum virginianum | Plugs |
| 450 | Black Eyed Susan | Rudbeckia triloba | Plugs |
| 450 | Wool Grass | Scirpus cyperinus | Plugs |
| 450 | New England Aster | Symphyotrichum novae-angliae | Plugs |
| 450 | Blue Vervain | Verbena hastata | Plugs |
| 450 | Golden Alexanders | Zizia aurea | Plugs |

## SOUTH BASIN AQUATIC PLUGS *(24" O.C.)*

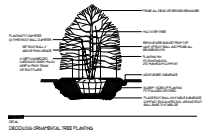
| Qty. | Common Name | Botanical Name | Units |
|---|---|---|---|
| 50 | Big Bluestem Grass | Andropogon gerardii | Plugs |
| 50 | Swamp Milkweed | Asclepias incarnata | Plugs |
| 50 | Plains Oval Sedge | Carex brevior | Plugs |
| 50 | Brown Fox Sedge | Carex vulpinoidea | Plugs |
| 100 | Virginiana Wild Rye | Elymus virginicus | Plugs |
| 50 | Northern Blue Flag | Iris versicolor | Plugs |
| 50 | Common Rush | Juncus effusus | Plugs |
| 50 | Common Mountain Mint | Pycnanthemum virginianum | Plugs |
| 50 | Black Eyed Susan | Rudbeckia triloba | Plugs |
| 50 | Wool Grass | Scirpus cyperinus | Plugs |
| 50 | New England Aster | Symphyotrichum novae-angliae | Plugs |
| 50 | Blue Vervain | Verbena hastata | Plugs |
| 50 | Golden Alexanders | Zizia aurea | Plugs |



DECIDUOUS TREE PLANTING



EVERGREEN TREE PLANTING



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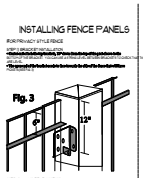

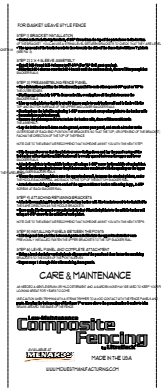

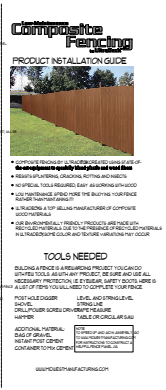

REVISIONS:
11.05.25 (UPDATED SITE PLAN)

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

# 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
Revised August 26, 2025
Revised October 31, 2025
Revised December 2, 2025


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

ENGINEERING | SURVEYING | CONSTRUCTION


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100 East State Parkway, Schaumburg, IL 60173 · tel 847.394.6600 fax 847.394.6608
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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. The peak elevation is 843.01.

The proposed critical duration peak elevation at the existing offsite catch basin in Tanglewood Lane right-of-way with a rim of 841.65 is 842.07 during the 100-year, 30-minute storm event. The proposed peak elevation will be less than the existing peak elevation.

# 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 0.973 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 2.0-inch restrictor with an invert elevation of 833.50 and a 3.0-inch restrictor with an invert elevation of 835.90. The peak discharge from the restrictor was calculated to be 0.663 cfs at a design HWL of 839.00. Stormwater modeling indicates that 0.221 acre-ft of detention storage is required for the South Basin and 2.801 acre-ft is required for the North Basin for the 100-year, 24-hour storm event. Adding these volumes to the 0.105 acre-ft of depressional storage yields a total required detention volume of 3.127 acre-ft. The South Basin provides 0.286 acre-ft of storage at the design HWL 839.00, and the North Basin provides 2.989 acre-ft of storage at the design HWL 839.00. The proposed north and south detention basins provide 3.275 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 | 24-Hr | 0.146 | 48-Hr | 0.417 | 48-Hr | 0.561 | 48-Hr | 0.638 |
| Total Flow | | 0.392 | | 1.112 | | 2.041 | | 2.510 |

# 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 0.131 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

Lake County Stormwater Management Commission approved a BFE of 834.0 for the adjacent Zone A floodplain on August 13, 2025. 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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100 East State Parkway, Schaumburg, IL 60173 Tel: 847.394.6600 Fax: 847.394.6608
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| | |
|---|---|
| Project Manager: | M L A |
| Engineer: | K M L |
| Date: | 03-05-2025 |
| Project No. | 24-136 |
| Sheet | 1 / 1 |

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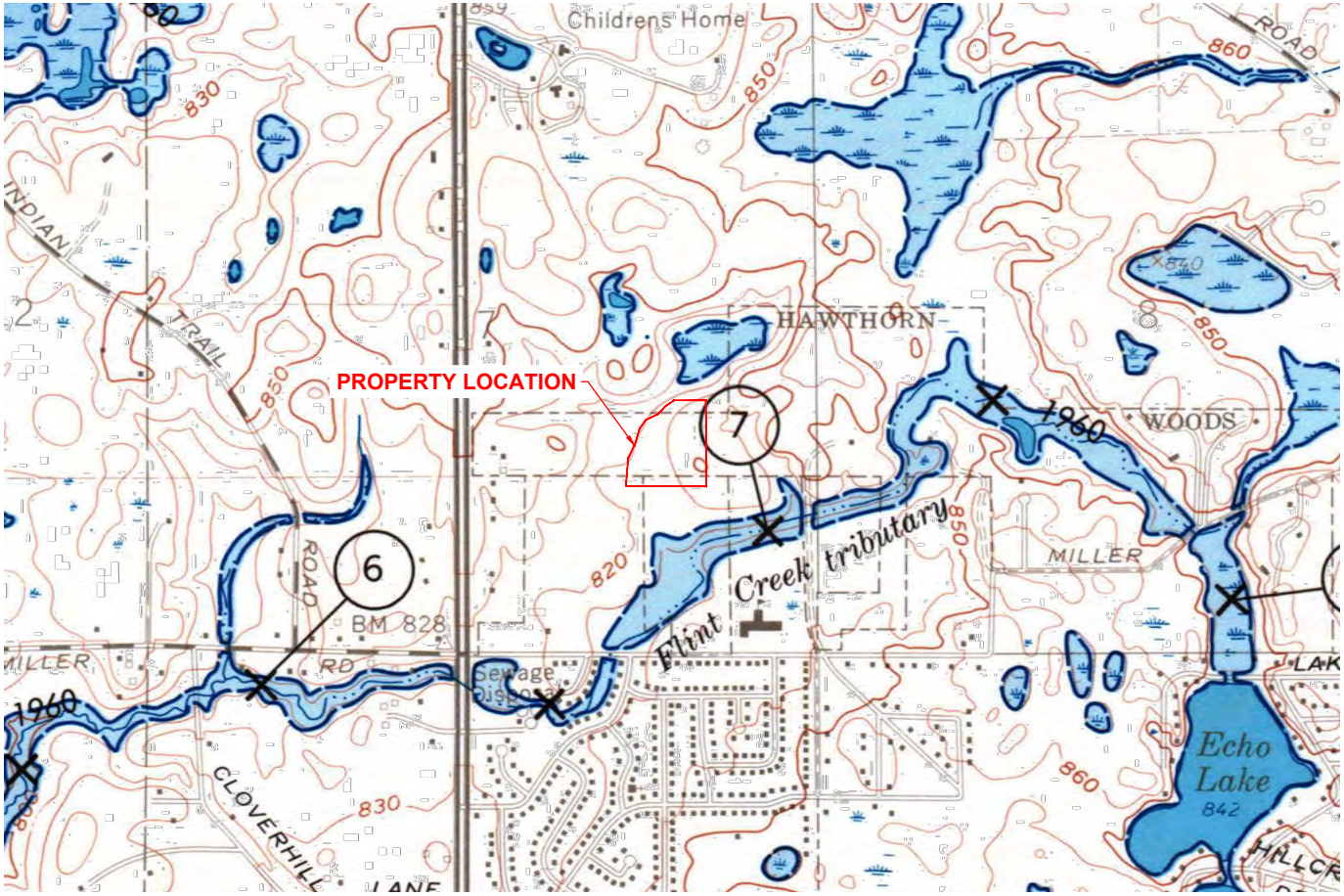


**HYDROLOGIC ATLAS EXHIBIT**

**MEADOW WOOD EAST SUBDIVISION**
**FINAL ENGINEERING**
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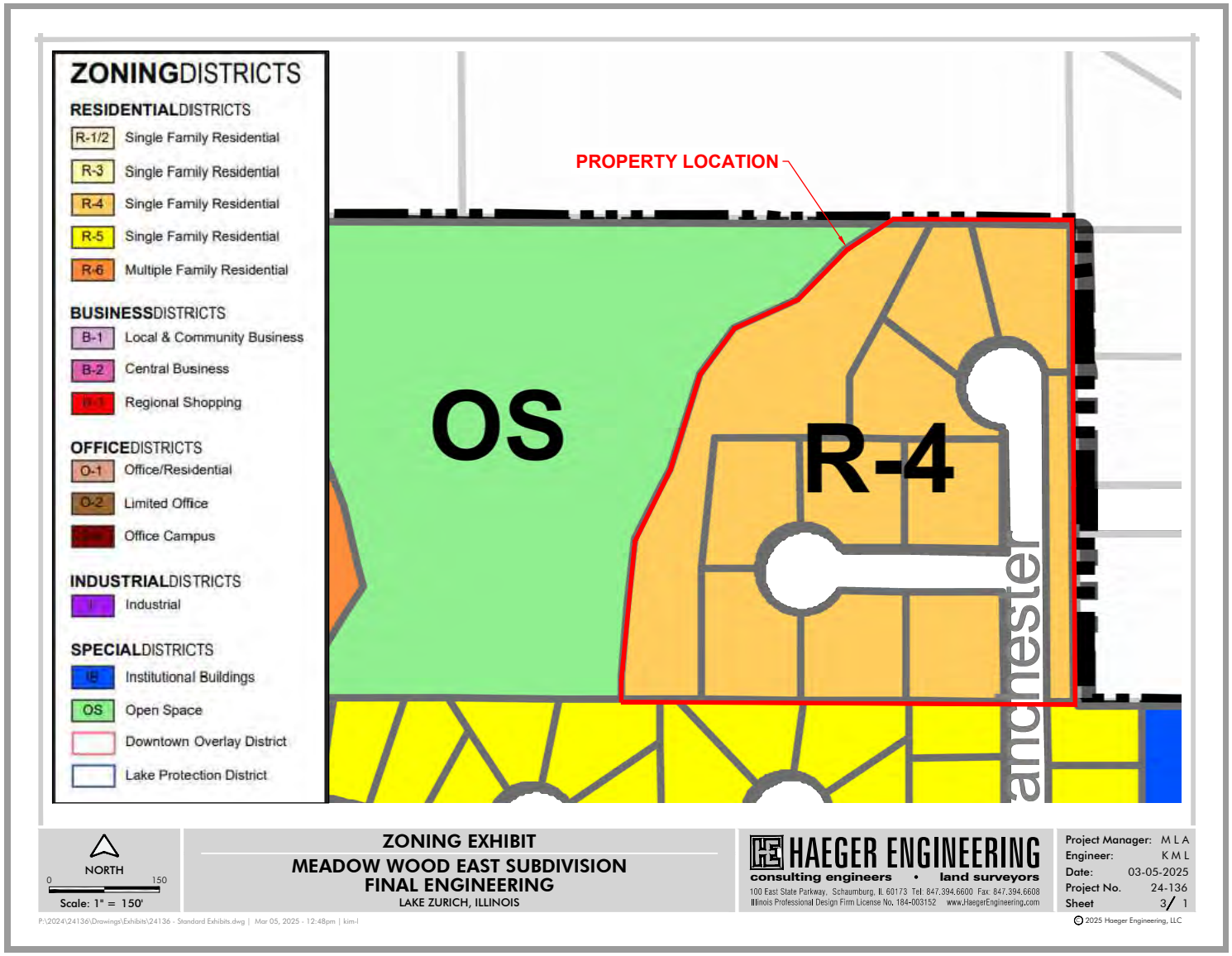
ZONINGDISTRICTS
RESIDENTIALDISTRICTS
R-1/2 Single Family Residential
R-3 Single Family Residential
R-4 Single Family Residential
R-5 Single Family Residential
R-6 Multiple Family Residential
BUSINESSDISTRICTS
B-1 Local & Community Business
B-2 Central Business
Regional Shopping
OFFICEDISTRICTS
O-1 Office/Residential
O-2 Limited Office
Office Campus
INDUSTRIALDISTRICTS
Industrial
SPECIALDISTRICTS
Institutional Buildings
OS Open Space
Downtown Overlay District
Lake Protection District
PROPERTY LOCATION
OS
R-4
anchester
NORTH
0
150
Scale: 1" = 150'
ZONING EXHIBIT
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
LAKE ZURICH, ILLINOIS
HAEGER ENGINEERING
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Project Manager: M L A
Engineer: K M L
Date: 03-05-2025
Project No. 24-136
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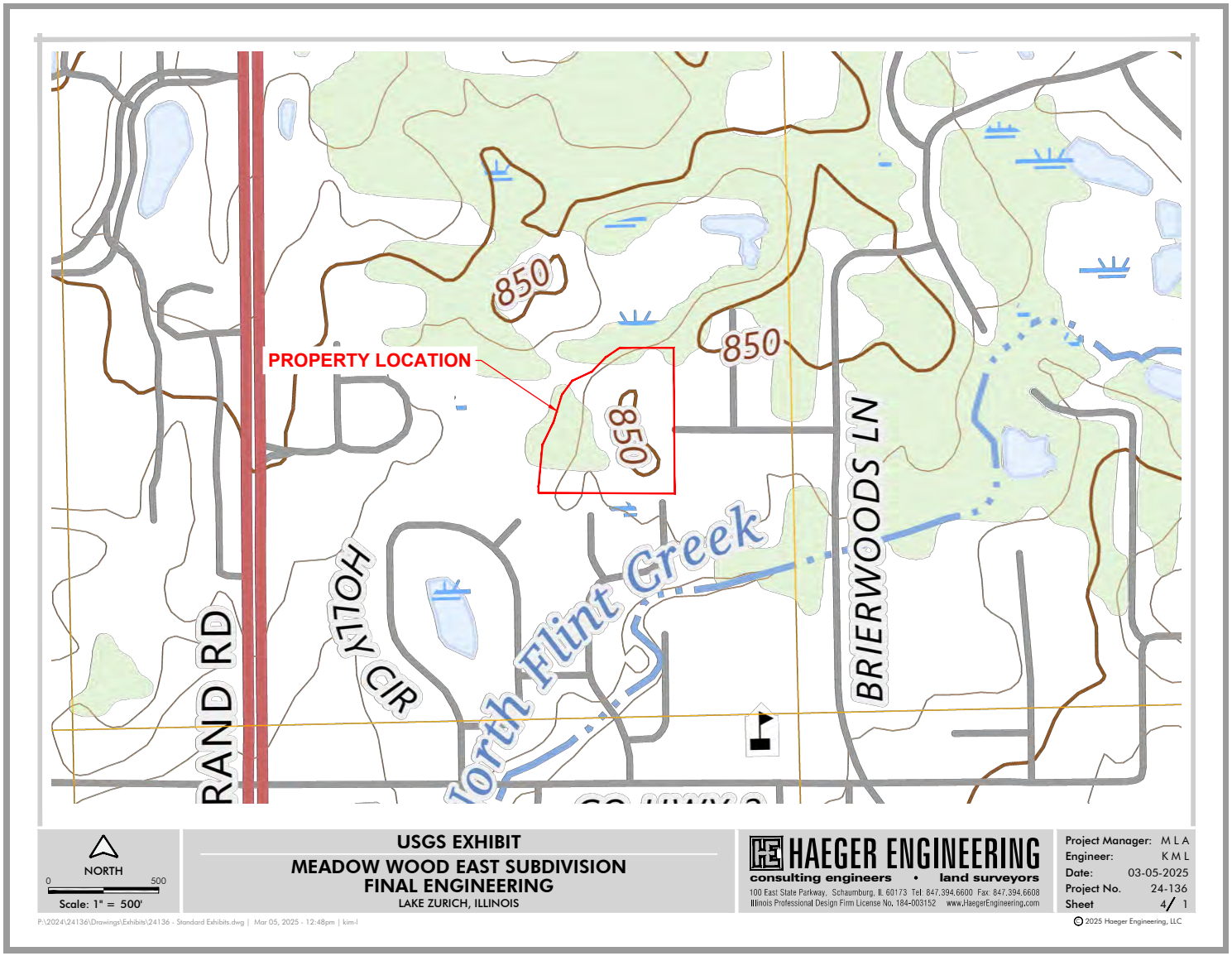
PROPERTY LOCATION
850
850
850
RAND RD
HOLLY CIR
North Flint Creek
BRIERWOODS LN
NORTH
0
500
Scale: 1" = 500'
USGS EXHIBIT
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING
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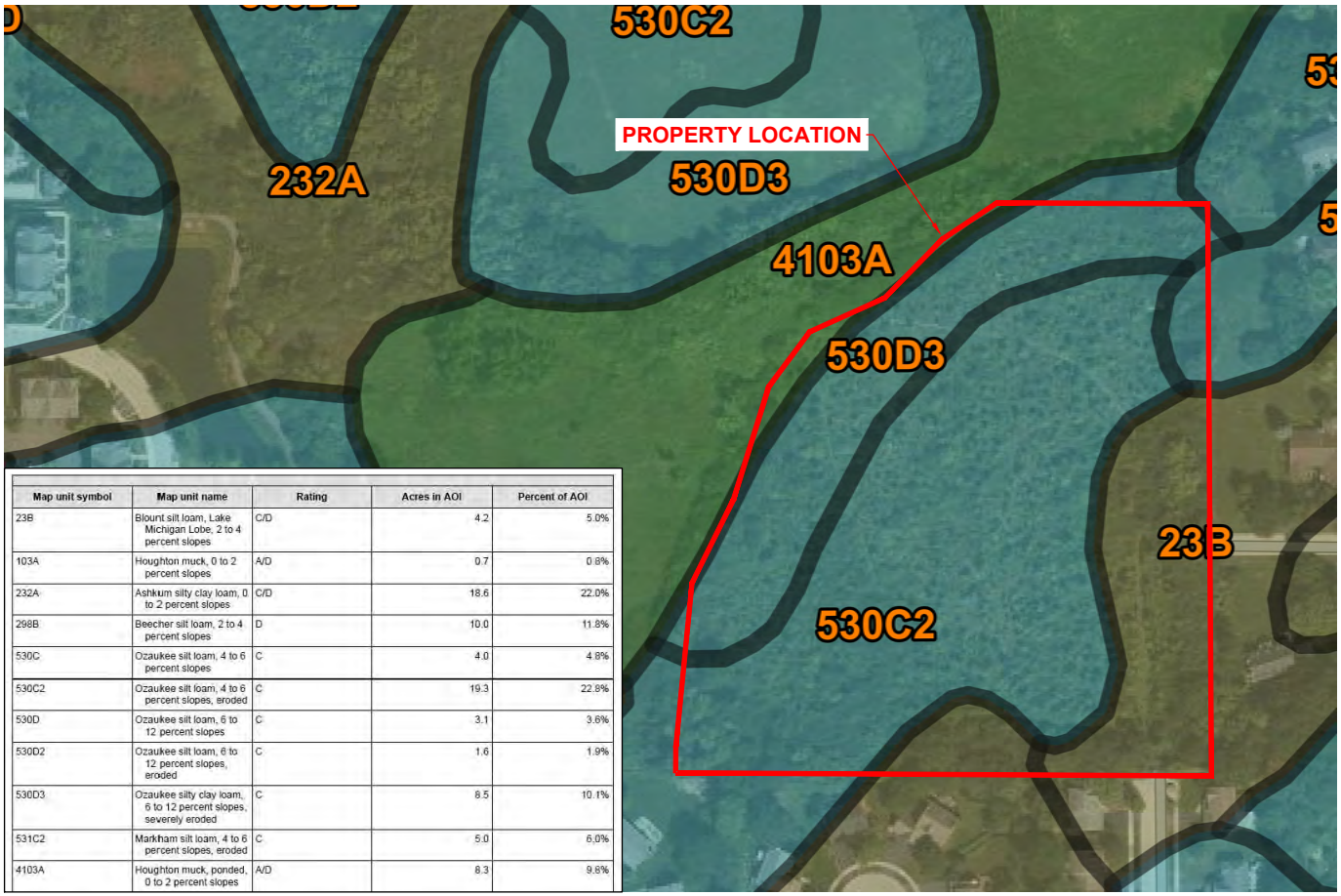


| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| 23B | Blount silt loam, Lake Michigan Lobe, 2 to 4 percent slopes | C/D | 4.2 | 5.0% |
| 103A | Houghton muck, 0 to 2 percent slopes | A/D | 0.7 | 0.8% |
| 232A | Ashkum silty clay loam, 0 to 2 percent 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**
LAKE ZURICH, ILLINOIS

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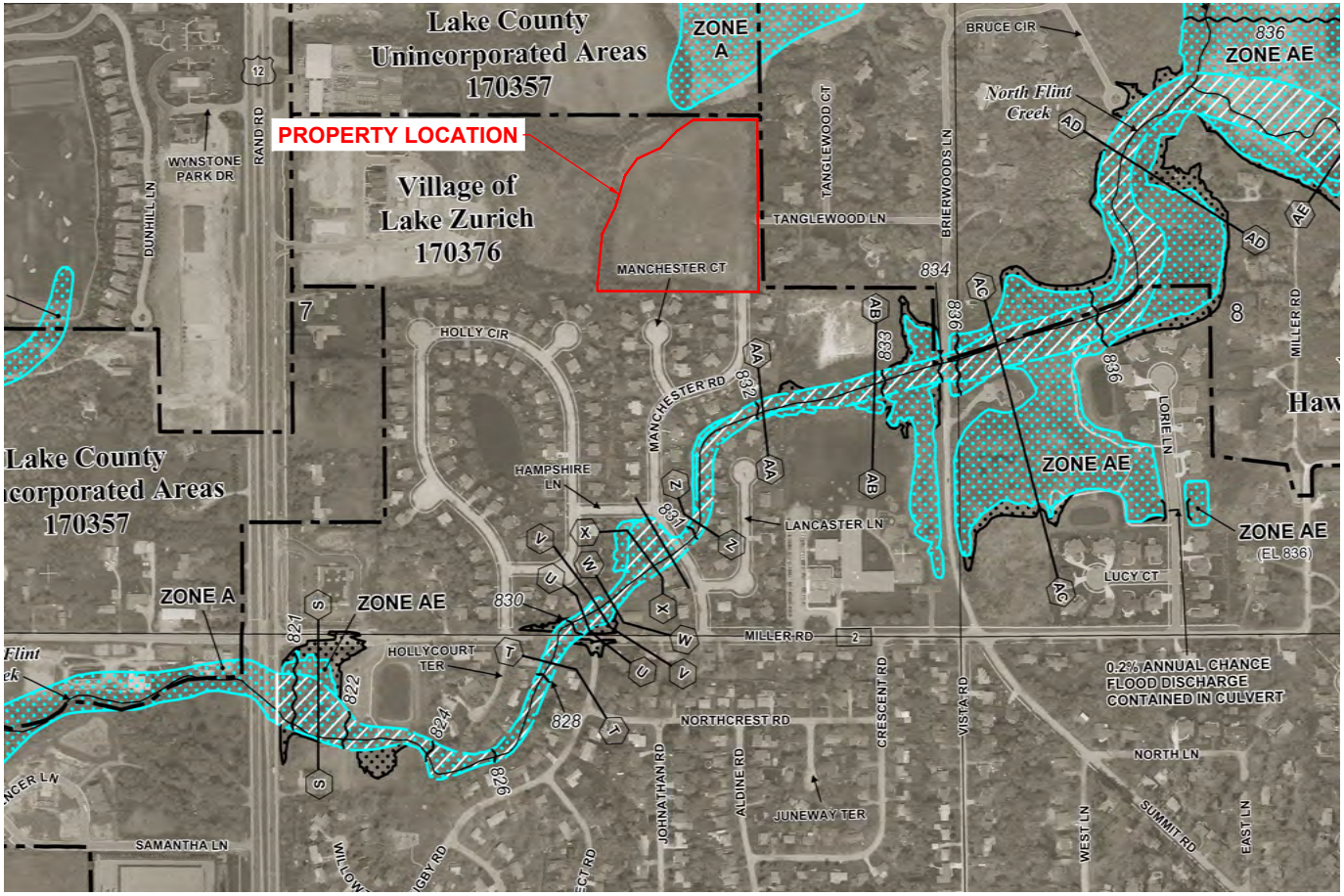


NORTH
0 500
Scale: 1" = 500'

**FEMA EXHIBIT**

**MEADOW WOOD EAST SUBDIVISION**
**FINAL ENGINEERING**
LAKE ZURICH, ILLINOIS

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| Engineer: | K M L |
| Date: | 03-05-2025 |
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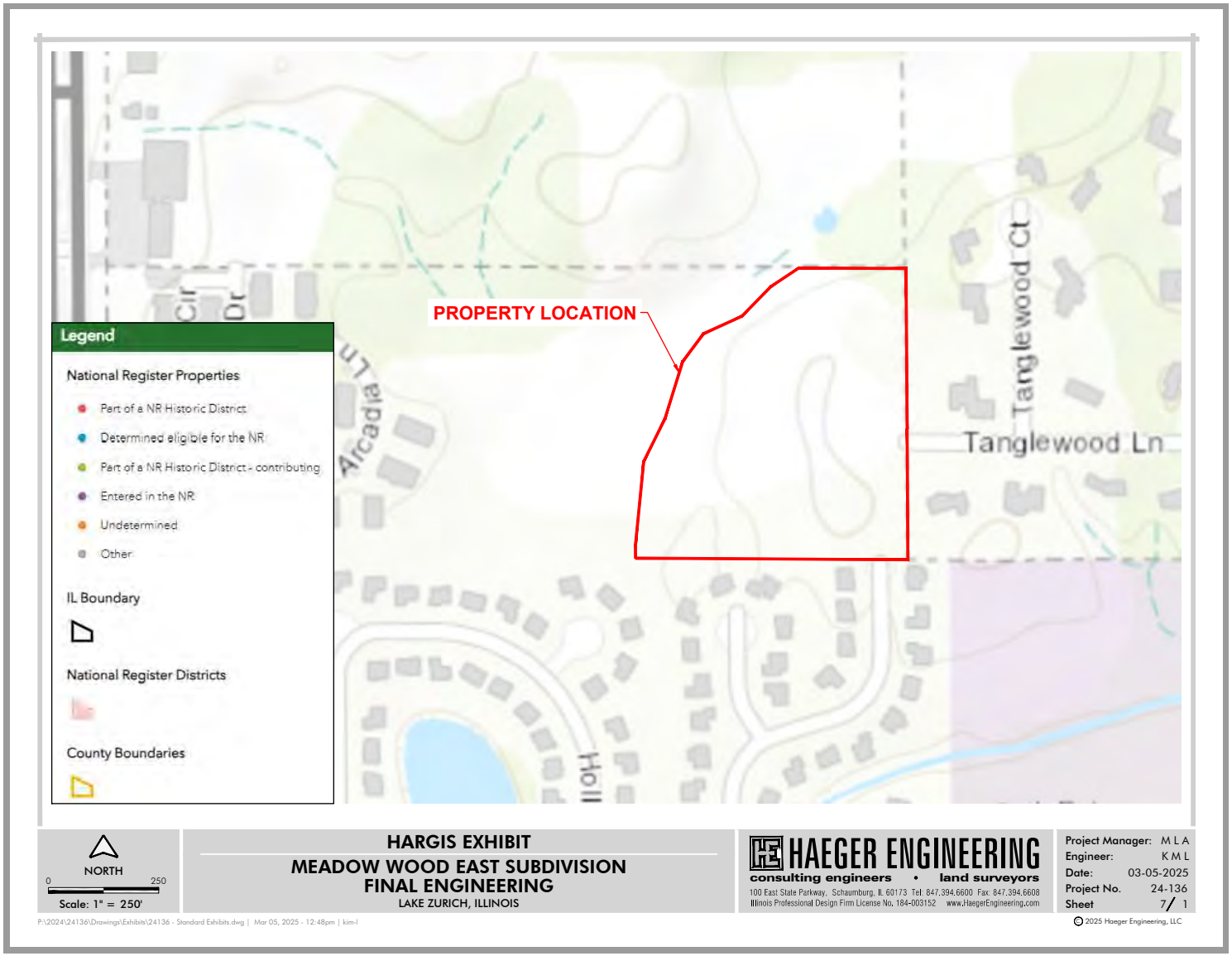
PROPERTY LOCATION
Tanglewood Ct
Tanglewood Ln
Arcadia Ln
Legend
National Register Properties
Part of a NR Historic District
Determined eligible for the NR
Part of a NR Historic District - contributing
Entered in the NR
Undetermined
Other
IL Boundary
National Register Districts
County Boundaries
NORTH
0
250
Scale: 1" = 250'
HARGIS EXHIBIT
MEADOW WOOD EAST SUBDIVISION
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Project Manager: M L A
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Date: 03-05-2025
Project No. 24-136
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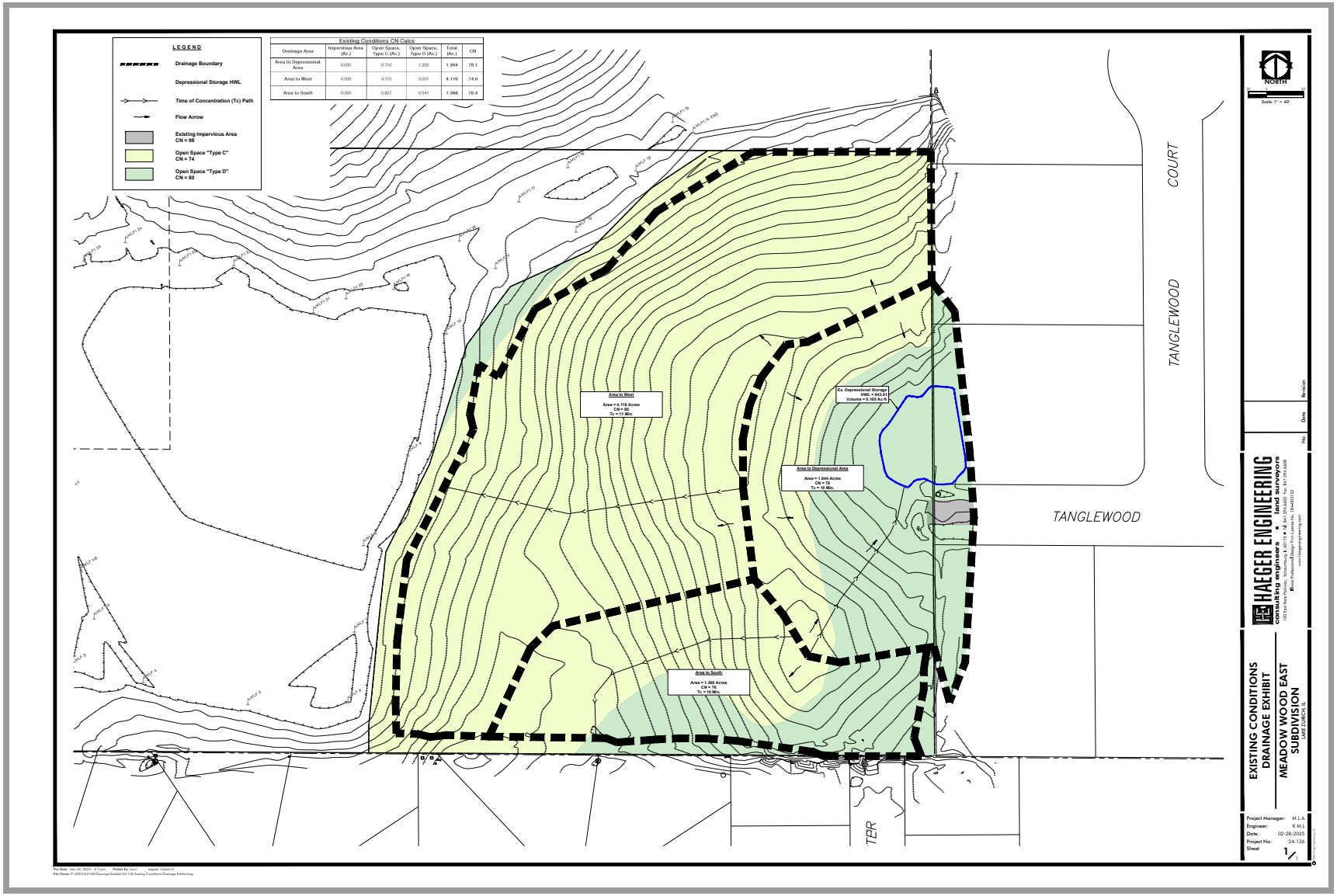
# APPENDIX B – Existing Conditions Drainage Exhibit and Calculations


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 | 1.200 | 1.944 | 78.1
Area to West | 0.000 | 4.115 | 0.001 | 4.116 | 74.0
Area to South | 0.000 | 0.927 | 0.541 | 1.368 | 76.4
Area to West
Area = 4.116 Acres
CN = 74
Tc = 11 Min.
Area to Depressional Area
Area = 1.944 Acres
CN = 78
Tc = 10 Min.
Area to South
Area = 1.368 Acres
CN = 76
Tc = 10 Min.
Ex. Depressional Storage HWL = 643.0+
Volume = 0.162 Ac-ft
TANGLEWOOD
COURT
TANGLEWOOD
NORTH
Scale: 1" = 40'
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EXISTING CONDITIONS DRAINAGE EXHIBIT
MEADOW WOOD EAST SUBDIVISION
Project Manager: M.L.A.
Engineer: K.M.L.
Date: 02-28-2025
Project No. 24-136
Sheet 1/1

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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

## 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

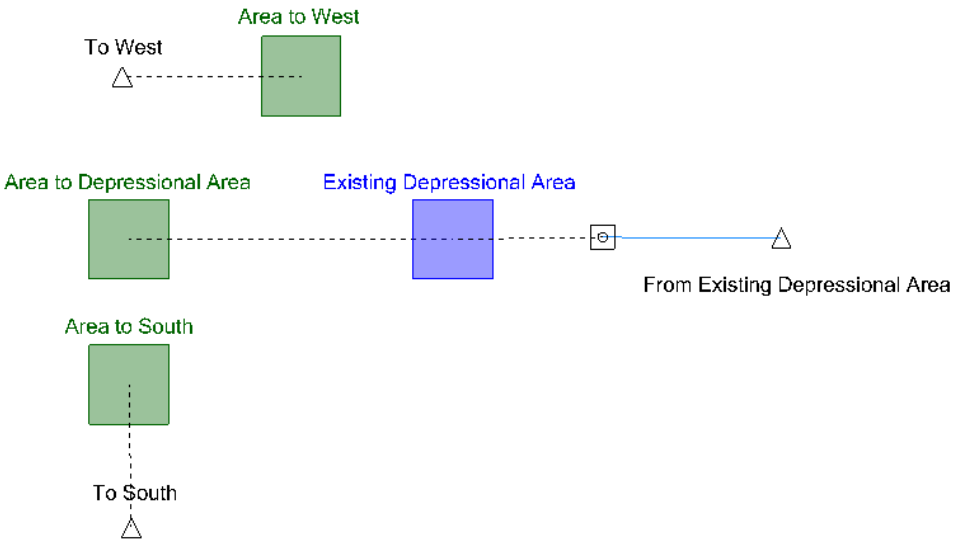
| Area to West | Sq. Ft | Acre | Percentage | CN | C-Value |
|---|---|---|---|---|---|
| Impervious Area = | 0 | 0.000 | 0.0% | 98.0 | 0.90 |
| Pervious Area (Soil Group C)= | 179,260 | 4.115 | 100.0% | 74.0 | 0.45 |
| Pervious Area (Soil Group D)= | 47 | 0.001 | 0.0% | 80.0 | 0.45 |
| **Total Area =**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

Subsection: Master Network Summary

**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 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) |



Subsection: Master Network Summary

**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 (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) |

Subsection: Time of Concentration Calculations
Label: Area to Depressional Area
Scenario: 2 yr 1 hr

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

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

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

Return Event: 2.00 years
Storm Event: 1 hr 2 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: Time of Concentration Calculations
Label: Area to West
Scenario: 2 yr 1 hr

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

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: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 hr 2 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: 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: Area to South
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: 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 |

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

| 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 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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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 Depressional Area
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) | 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 |

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

Return Event: 2.00 years
Storm Event: 15 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 18 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 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 Depressional Area
Scenario: 2 yr 2 hr

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

| | |
|---|---|
| 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 |

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

Return Event: 2.00 years
Storm Event: 2 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 Depressional Area
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 24 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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 240 hr

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

| | |
|---|---|
| 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 |

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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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 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) | 0.18 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 |



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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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 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) | 0.18 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 |

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

Return Event: 2.00 years
Storm Event: 30 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 48 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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 Depressional Area
Scenario: 2 yr 6 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) | 0.18 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 6 hr

Return Event: 2.00 years
Storm Event: 3 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 Depressional Area
Scenario: 2 yr 72 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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 South
Scenario: 2 yr 1 hr

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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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 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) | 0.17 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 |



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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 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) | 0.17 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 |

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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 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) | 0.17 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 |



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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 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) | 0.17 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 |

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

Return Event: 2.00 years
Storm Event: 15 min 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 18 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 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 2 hr

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

| | |
|---|---|
| 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 |

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

Return Event: 2.00 years
Storm Event: 2 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 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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



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

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

| | |
|---|---|
| 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 |

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

Return Event: 2.00 years
Storm Event: 30 min 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 48 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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 6 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 6 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 72 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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 West
Scenario: 2 yr 1 hr

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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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 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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 West
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) | 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 |

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

Return Event: 2.00 years
Storm Event: 15 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 West
Scenario: 2 yr 18 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 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 2 hr

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

| | |
|---|---|
| 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 |

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

Return Event: 2.00 years
Storm Event: 2 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 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 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 240 hr

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

| | |
|---|---|
| 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 |

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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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 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) | 0.18 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 |



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

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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 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) | 0.18 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 |

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

Return Event: 2.00 years
Storm Event: 30 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 West
Scenario: 2 yr 48 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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 6 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) | 0.18 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 6 hr

Return Event: 2.00 years
Storm Event: 3 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 72 hr

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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: Outlet Input Data
Label: Existing OCS
Scenario: 2 yr 1 hr

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

| 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<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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) |

Subsection: Master Network Summary

**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 (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 |



Subsection: Master Network Summary

**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 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 |

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

**==== 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: 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 | 0.060 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: 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: Time of Concentration Calculations
Label: Area to West
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 | 0.052 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) |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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 |



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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 18 hr

Return Event: 10.00 years
Storm Event: 18 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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 |



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

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 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 |

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

| | |
|---|---|
| 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 |



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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 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 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

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

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

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



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |



Subsection: Outlet Input Data
Label: Existing OCS
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| 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: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Structure ID: Existing CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 50-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 | 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 |

Subsection: Master Network Summary

**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 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) |



Subsection: Master Network Summary

**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 (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) |

Subsection: Time of Concentration Calculations
Label: Area to Depressional Area
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: Time of Concentration Calculations
Label: Area to West
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: Unit Hydrograph Summary
Label: Area to Depressional Area
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

| | |
|---|---|
| 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 |



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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 120 hr

Return Event: 50.00 years
Storm Event: 120 hr 50 ry

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 2 hr

Return Event: 50.00 years
Storm Event: 2 hr 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 50 yr 30 min

Return Event: 50.00 years
Storm Event: 30 min 50 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.12 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: 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) | 0.18 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 |



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

| | |
|---|---|
| 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 |

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

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

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



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 10 min

Return Event: 50.00 years
Storm Event: 10 min 50 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |



Subsection: Unit Hydrograph Summary
Label: Area 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 15 min

Return Event: 50.00 years
Storm Event: 15 min 50 yr

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

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 18 hr

Return Event: 50.00 years
Storm Event: 18 hr 50 yr

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



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 50 yr 3 hr

Return Event: 50.00 years
Storm Event: 3 hr 50 yr

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



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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) | 0.18 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |



Subsection: Outlet Input Data
Label: Existing OCS
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Structure ID: Existing CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 OCS (Outlet Input Data, 50.00 years (50 yr 1 hr))...112, 113

M

Master Network Summary...3, 4, 5, 6, 7

U

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 |

Subsection: Master Network Summary

**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 (OUT) | 100 yr 1 hr | 100.00 | 0.309 | 0.68 | 3.70 | 843.01 | 0.105 |
| Existing Depressional Area (IN) | 100 yr 2 hr | 100.00 | 0.435 | 0.56 | 5.98 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 2 hr | 100.00 | 0.435 | 0.82 | 3.70 | 843.01 | 0.105 |
| Existing Depressional Area (IN) | 100 yr 3 hr | 100.00 | 0.507 | 0.75 | 4.82 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 3 hr | 100.00 | 0.507 | 1.04 | 3.54 | 842.93 | 0.096 |
| Existing Depressional Area (IN) | 100 yr 6 hr | 100.00 | 0.641 | 1.29 | 3.16 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 6 hr | 100.00 | 0.641 | 1.61 | 2.88 | 842.64 | 0.066 |
| Existing Depressional Area (IN) | 100 yr 12 hr | 100.00 | 0.792 | 5.00 | 2.07 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 12 hr | 100.00 | 0.792 | 5.20 | 1.98 | 842.43 | 0.044 |
| Existing Depressional Area (IN) | 100 yr 18 hr | 100.00 | 0.882 | 11.90 | 1.61 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 18 hr | 100.00 | 0.882 | 12.10 | 1.59 | 842.33 | 0.034 |
| Existing Depressional Area (IN) | 100 yr 24 hr | 100.00 | 0.959 | 15.90 | 1.30 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 24 hr | 100.00 | 0.959 | 16.00 | 1.29 | 842.25 | 0.025 |
| Existing Depressional Area (IN) | 100 yr 48 hr | 100.00 | 1.067 | 41.50 | 0.90 | (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 (ft³/s) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Existing Depressional Area (OUT) | 100 yr 48 hr | 100.00 | 1.067 | 41.50 | 0.90 | 842.12 | 0.013 |
| Existing Depressional Area (IN) | 100 yr 72 hr | 100.00 | 1.154 | 62.50 | 0.64 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 72 hr | 100.00 | 1.154 | 62.50 | 0.64 | 842.03 | 0.004 |
| Existing Depressional Area (IN) | 100 yr 120 hr | 100.00 | 1.279 | 104.00 | 0.42 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 120 hr | 100.00 | 1.279 | 104.00 | 0.42 | 841.94 | 0.000 |
| Existing Depressional Area (IN) | 100 yr 240 hr | 100.00 | 1.587 | 208.50 | 0.25 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 240 hr | 100.00 | 1.587 | 208.50 | 0.25 | 841.86 | 0.000 |
| Existing Depressional Area (IN) | 100 yr 10 min | 500.00 | 0.113 | 0.19 | 7.05 | (N/A) | (N/A) |
| Existing Depressional Area (OUT) | 100 yr 10 min | 500.00 | 0.113 | 0.30 | 2.80 | 842.61 | 0.063 |



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

Subsection: Time of Concentration Calculations
Label: Area to West
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 | 0.052 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: 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



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 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 |

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

| | |
|---|---|
| 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 |



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

| | |
|---|---|
| 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 |

Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to Depressional Area
Scenario: 100 yr 10 min

Return Event: 500.00 years
Storm Event: 10 min 500 yr

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



Subsection: Unit Hydrograph Summary
Label: Area to South
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) | 0.17 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 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 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 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 |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
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 | 0.44 hours |
| Total unit time, Tb | 0.55 hours |

Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to South
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 West
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 West
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 West
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 West
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 West
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 West
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) | 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
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 |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area 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 | 0.12 hours |
| Unit receding limb, Tr | 0.47 hours |
| Total unit time, Tb | 0.59 hours |

Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 West
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 West
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) | 0.18 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 |



Subsection: Unit Hydrograph Summary
Label: Area to West
Scenario: 100 yr 10 min

Return Event: 500.00 years
Storm Event: 10 min 500 yr

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



Subsection: Elevation vs. Volume Curve
Label: Existing Depressional Area
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

**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 |



Subsection: Outlet Input Data
Label: Existing OCS
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| 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<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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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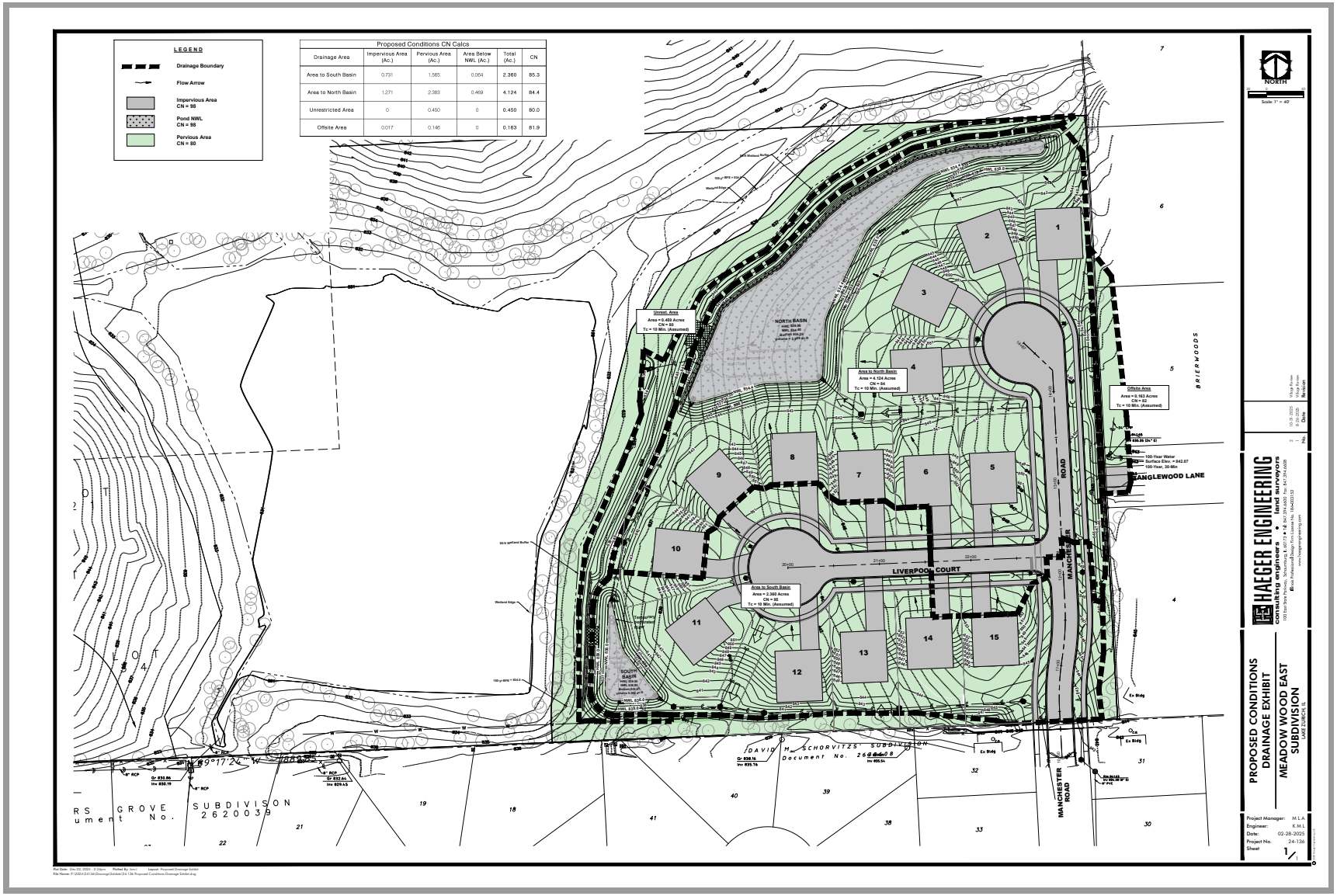
# APPENDIX D – Proposed Conditions Drainage Exhibit and Calculations


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
Offsite Area | 0.017 | 0.146 | 0 | 0.163 | 81.9
Unrest. Area
Area = 0.450 Acres
CN = 80
Tc = 10 Min. (Assumed)
Area to North Basin
Area = 4.124 Acres
CN = 84
Tc = 10 Min. (Assumed)
Offsite Area
Area = 0.163 Acres
CN = 82
Tc = 10 Min. (Assumed)
Area to South Basin
Area = 2.360 Acres
CN = 85
Tc = 10 Min. (Assumed)
NORTH BASIN
SOUTH BASIN
LIVERPOOL COURT
MANCHESTER ROAD
BRIERWOODS
LANGLEWOOD LANE
DAVID M. SCHORVITZ'S SUBDIVISION
Document No. 2620039
SUBDIVISION
2620039
NORTH
Scale: 1" = 40'
PROPOSED CONDITIONS DRAINAGE EXHIBIT
MEADOW WOOD EAST SUBDIVISION
HAEGER ENGINEERING
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Project Manager: M.L.A.
Engineer: K.M.L.
Date: 02-28-2025
Project No. 24-136
Sheet 1/1

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# Stormwater Management Calculations

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

Prepared: KML
Reviewed:
Date: 8/26/2025

## 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** |

### Offsite Area

| Unrest. Area | Sq. Ft | Acre | Percentage | CN | C-Value |
|---|---|---|---|---|---|
| Impervious Area = | 737 | 0.017 | 10.4% | 98.0 | 0.90 |
| Pervious Area = | 6,358 | 0.146 | 89.6% | 80.0 | 0.45 |
| **Total Area =** | **7,095** | **0.163** | **100.00%** | **81.9** | **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: | 8/26/2025 |

## 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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# RVR WATER QUALITY SUMMARY

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

Prepared: KML
Date: 12/2/2025

## 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) | |
| 834.20 | 20,895 | | | 0.000 | (Pond Bottom) |
| | | 4,463 | 0.102 | | |
| **834.40** | **23,737** | | | **0.102** | (Pond NWL) |

| | |
|---|---|
| **Provided Retention Storage Volume =** | **0.131 Ac-ft** |
| **RVR Credit (Water Quality Treatment) =** | **100%** |
| **RVR Quantity =** | **0.131 Ac-ft** |
| **RVR Quantity per Acre of Impervious Area =** | **2842.913 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: 12/2/2025

## North Basin Storage Calculations

| North Basin Detention Storage (Based on Contour Slice Method) | | | | | |
|---|---|---|---|---|---|
| Contour | Area (SF) | Incremental Volume (CF) | Incremental Volume (Ac-ft) | Accumulated Volume (Ac-ft) | |
| 834.20 | 20,895 | | | 0.000 | (Pond Bottom) |
| | | 4,463 | 0.102 | | |
| **834.40** | **23,737** | | | **0.000** | **Pond NWL** |
| | | 14,752 | 0.339 | | |
| 835.00 | 25,437 | | | 0.339 | |
| | | 23,580 | 0.541 | | |
| 835.90 | 26,963 | | | 0.880 | **(2-Yr Design HWL)** |
| | | 2,705 | 0.062 | | |
| 836.00 | 27,132 | | | 0.942 | |
| | | 27,989 | 0.643 | | |
| 837.00 | 28,846 | | | 1.585 | |
| | | 29,713 | 0.682 | | |
| 838.00 | 30,579 | | | 2.267 | |
| | | 31,455 | 0.722 | | |
| **839.00** | **32,330** | | | **2.989** | **(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 = | 28.13 | cfs (100-Year, 1-Hr Storm) |
| Required Weir Capacity = | 28.13 | 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 BASIN STORMWATER SUMMARY

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

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

## South Basin Storage Calculations

| South BasinDetention 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 = | 12.62 | cfs (100-Year, 30-Min Storm) |
| Required Weir Capacity = | 12.62 | 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 |
| **840.40** | **0.40** | **15.2** |
| 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: 12/2/2025

## 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 = | 833.50 | ft. | 835.90 | ft. |
| HWL = | 835.90 | ft. | 839.00 | ft. |
| h = | 2.31 | ft. | 2.97 | ft. |
| Max. Orifice Dia. = | 2.05 | in. | 3.00 | in. |
| Actual Orifice Dia. = | **2** | **in.** | **3** | **in.** |
| 2-Year Discharge = | 0.162 | cfs | 0.000 | cfs |
| 100-Year Discharge = | **0.248** | **cfs** | **0.414** | **cfs** |
| Total 100-Year Discharge = | **0.663** | **cfs** | | |

### C. Rating Table

| WATER ELEVATION (ft.) | HEAD (ft.) | Q (cfs) |
|---|---|---|
| 834.00 | 0.42 | 0.069 |
| 835.00 | 1.42 | 0.127 |
| 835.90 | 2.32 | 0.162 |
| 837.00 | 3.42 | 0.434 |
| 838.00 | 4.42 | 0.562 |
| 839.00 | 5.42 | 0.663 |

## 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

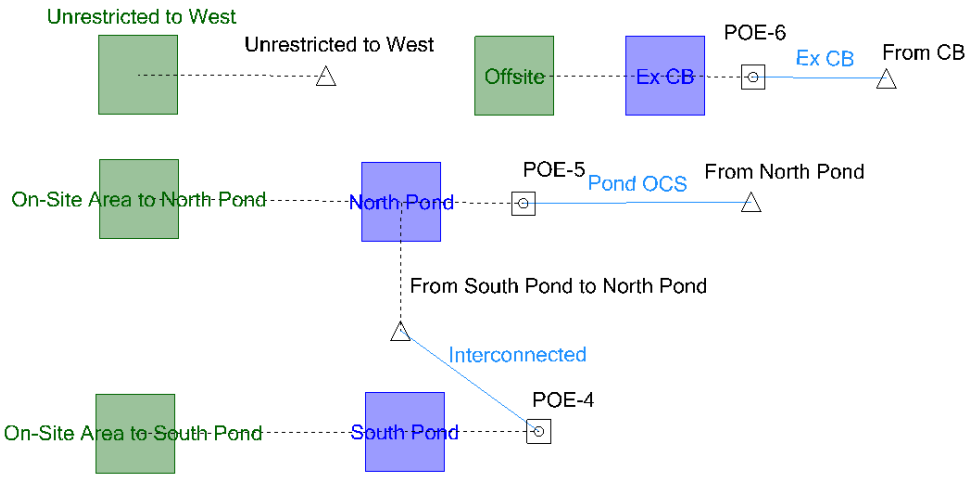
| | | | |
|---|---|---|---|
| Overflow Rate = | 1.0 | cfs/ac. | |
| Min. Q = | 28.130 | cfs | PondPack Crit Duration |
| C = | 3.30 | | |
| Weir Length = | 6.00 | ft. | |
| Weir Elevation = | 839.00 | ft. | |
| Water Level Above Weir = | **840.26** | **ft.** | |

### C. Rating Table

| WATER ELEVATION (ft.) | HEAD (ft.) | Q (cfs) |
|---|---|---|
| 839.40 | 0.40 | 5.009 |
| 839.60 | 0.60 | 9.202 |
| 839.90 | 0.90 | 16.906 |
| 840.15 | 1.15 | 24.418 |
| 840.40 | 1.40 | 32.799 |

# 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 Critical Duration |
| Engineer | KML |
| Company | Haeger Engineering LLC |
| Date | 12/2/2025 |

| Notes | Proposed Conditions Model. Critical Duration Analysis |
|---|---|



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 |



Subsection: User Notifications

**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 |



Subsection: User Notifications

**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 |

Subsection: User Notifications

**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 |



Subsection: Master Network Summary

**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 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 24 hr | 2.00 | 0.369 | 15.90 | 0.541 |
| 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 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 24 hr | 2.00 | 0.619 | 15.90 | 0.918 |
| 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 |



Subsection: Master Network Summary

**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 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 24 hr | 2.00 | 0.057 | 15.90 | 0.088 |
| 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 |
| Offsite | 2 yr 15 min | 2.00 | 0.001 | 0.25 | 0.060 |
| Offsite | 2 yr 30 min | 2.00 | 0.003 | 0.30 | 0.095 |
| Offsite | 2 yr 1 hr | 2.00 | 0.005 | 0.40 | 0.110 |
| Offsite | 2 yr 2 hr | 2.00 | 0.008 | 0.60 | 0.106 |
| Offsite | 2 yr 3 hr | 2.00 | 0.010 | 0.85 | 0.091 |
| Offsite | 2 yr 6 hr | 2.00 | 0.010 | 0.85 | 0.091 |
| Offsite | 2 yr 12 hr | 2.00 | 0.018 | 5.00 | 0.047 |
| Offsite | 2 yr 18 hr | 2.00 | 0.020 | 11.90 | 0.041 |
| Offsite | 2 yr 24 hr | 2.00 | 0.022 | 15.90 | 0.034 |
| Offsite | 2 yr 48 hr | 2.00 | 0.026 | 41.70 | 0.025 |
| Offsite | 2 yr 72 hr | 2.00 | 0.030 | 62.60 | 0.019 |
| Offsite | 2 yr 120 hr | 2.00 | 0.035 | 104.40 | 0.013 |
| Offsite | 2 yr 240 hr | 2.00 | 0.049 | 208.80 | 0.009 |

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 2 yr 15 min | 2.00 | 0.064 | 0.60 | 0.076 |
| From North Pond | 2 yr 30 min | 2.00 | 0.150 | 0.85 | 0.085 |
| From North Pond | 2 yr 1 hr | 2.00 | 0.255 | 1.30 | 0.096 |
| From North Pond | 2 yr 2 hr | 2.00 | 0.367 | 2.25 | 0.109 |
| From North Pond | 2 yr 3 hr | 2.00 | 0.395 | 3.25 | 0.115 |
| From North Pond | 2 yr 6 hr | 2.00 | 0.395 | 3.25 | 0.115 |
| From North Pond | 2 yr 12 hr | 2.00 | 0.793 | 12.20 | 0.135 |
| From North Pond | 2 yr 18 hr | 2.00 | 0.844 | 18.20 | 0.140 |
| From North Pond | 2 yr 24 hr | 2.00 | 0.869 | 24.10 | 0.143 |



Subsection: Master Network Summary

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 2 yr 48 hr | 2.00 | 1.137 | 48.20 | 0.146 |
| From North Pond | 2 yr 72 hr | 2.00 | 1.284 | 72.10 | 0.146 |
| From North Pond | 2 yr 120 hr | 2.00 | 1.501 | 120.10 | 0.145 |
| From North Pond | 2 yr 240 hr | 2.00 | 2.086 | 230.70 | 0.144 |
| 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 24 hr | 2.00 | 0.057 | 15.90 | 0.088 |
| 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 |
| From CB | 2 yr 15 min | 2.00 | 0.001 | 0.30 | 0.057 |
| From CB | 2 yr 30 min | 2.00 | 0.003 | 0.35 | 0.095 |
| From CB | 2 yr 1 hr | 2.00 | 0.005 | 0.40 | 0.107 |
| From CB | 2 yr 2 hr | 2.00 | 0.008 | 0.65 | 0.106 |
| From CB | 2 yr 3 hr | 2.00 | 0.010 | 0.85 | 0.090 |
| From CB | 2 yr 6 hr | 2.00 | 0.010 | 0.85 | 0.090 |
| From CB | 2 yr 12 hr | 2.00 | 0.018 | 5.10 | 0.047 |
| From CB | 2 yr 18 hr | 2.00 | 0.020 | 12.00 | 0.041 |
| From CB | 2 yr 24 hr | 2.00 | 0.022 | 15.90 | 0.034 |
| From CB | 2 yr 48 hr | 2.00 | 0.026 | 41.80 | 0.025 |
| From CB | 2 yr 72 hr | 2.00 | 0.030 | 62.60 | 0.019 |
| From CB | 2 yr 120 hr | 2.00 | 0.035 | 104.40 | 0.013 |
| From CB | 2 yr 240 hr | 2.00 | 0.049 | 208.80 | 0.009 |

**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 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 | 836.49 | 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 | 1.628 | 836.56 | 0.004 |

Subsection: Master Network Summary

**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 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 | 1.733 | 836.57 | 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 | 1.711 | 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 | 1.525 | 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 | 1.525 | 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) |
| South Pond (OUT) | 2 yr 18 hr | 2.00 | 0.336 | 12.00 | 0.660 | 836.35 | 0.000 |
| 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 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 15 min | 2.00 | 0.064 | 0.25 | 3.343 | (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 (ft³/s) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| North Pond (OUT) | 2 yr 15 min | 2.00 | 0.064 | 0.60 | 0.076 | 834.51 | 0.060 |
| North Pond (IN) | 2 yr 30 min | 2.00 | 0.150 | 0.30 | 4.531 | (N/A) | (N/A) |
| North Pond (OUT) | 2 yr 30 min | 2.00 | 0.150 | 0.85 | 0.085 | 834.66 | 0.145 |
| North Pond (IN) | 2 yr 1 hr | 2.00 | 0.255 | 0.40 | 4.993 | (N/A) | (N/A) |
| North Pond (OUT) | 2 yr 1 hr | 2.00 | 0.255 | 1.30 | 0.096 | 834.84 | 0.246 |
| North Pond (IN) | 2 yr 2 hr | 2.00 | 0.389 | 0.65 | 4.764 | (N/A) | (N/A) |
| North Pond (OUT) | 2 yr 2 hr | 2.00 | 0.367 | 2.25 | 0.109 | 835.06 | 0.372 |
| North Pond (IN) | 2 yr 3 hr | 2.00 | 0.467 | 0.85 | 4.135 | (N/A) | (N/A) |
| North Pond (OUT) | 2 yr 3 hr | 2.00 | 0.395 | 3.25 | 0.115 | 835.17 | 0.442 |
| North Pond (IN) | 2 yr 6 hr | 2.00 | 0.467 | 0.85 | 4.135 | (N/A) | (N/A) |
| North Pond (OUT) | 2 yr 6 hr | 2.00 | 0.395 | 3.25 | 0.115 | 835.17 | 0.442 |
| 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 | 0.793 | 12.20 | 0.135 | 835.60 | 0.702 |
| 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 | 0.844 | 18.20 | 0.140 | 835.73 | 0.778 |
| 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 | 0.869 | 24.10 | 0.143 | 835.81 | 0.827 |
| 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 | 0.146 | 835.86 | 0.859 |
| 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 | 0.146 | 835.88 | 0.872 |
| 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 | 120.10 | 0.145 | 835.84 | 0.844 |



Subsection: Master Network Summary

**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 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 | 230.70 | 0.144 | 835.83 | 0.839 |
| Ex CB (IN) | 2 yr 15 min | 2.00 | 0.001 | 0.25 | 0.060 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 15 min | 2.00 | 0.001 | 0.30 | 0.057 | 841.71 | 0.000 |
| Ex CB (IN) | 2 yr 30 min | 2.00 | 0.003 | 0.30 | 0.095 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 30 min | 2.00 | 0.003 | 0.35 | 0.095 | 841.75 | 0.000 |
| Ex CB (IN) | 2 yr 1 hr | 2.00 | 0.005 | 0.40 | 0.110 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 1 hr | 2.00 | 0.005 | 0.40 | 0.107 | 841.76 | 0.000 |
| Ex CB (IN) | 2 yr 2 hr | 2.00 | 0.008 | 0.60 | 0.106 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 2 hr | 2.00 | 0.008 | 0.65 | 0.106 | 841.76 | 0.000 |
| Ex CB (IN) | 2 yr 3 hr | 2.00 | 0.010 | 0.85 | 0.091 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 3 hr | 2.00 | 0.010 | 0.85 | 0.090 | 841.74 | 0.000 |
| Ex CB (IN) | 2 yr 6 hr | 2.00 | 0.010 | 0.85 | 0.091 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 6 hr | 2.00 | 0.010 | 0.85 | 0.090 | 841.74 | 0.000 |
| Ex CB (IN) | 2 yr 12 hr | 2.00 | 0.018 | 5.00 | 0.047 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 12 hr | 2.00 | 0.018 | 5.10 | 0.047 | 841.70 | 0.000 |
| Ex CB (IN) | 2 yr 18 hr | 2.00 | 0.020 | 11.90 | 0.041 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 18 hr | 2.00 | 0.020 | 12.00 | 0.041 | 841.69 | 0.000 |
| Ex CB (IN) | 2 yr 24 hr | 2.00 | 0.022 | 15.90 | 0.034 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 24 hr | 2.00 | 0.022 | 15.90 | 0.034 | 841.68 | 0.000 |
| Ex CB (IN) | 2 yr 48 hr | 2.00 | 0.026 | 41.70 | 0.025 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 48 hr | 2.00 | 0.026 | 41.80 | 0.025 | 841.66 | 0.000 |
| Ex CB (IN) | 2 yr 72 hr | 2.00 | 0.030 | 62.60 | 0.019 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 72 hr | 2.00 | 0.030 | 62.60 | 0.019 | 841.65 | 0.000 |
| Ex CB (IN) | 2 yr 120 hr | 2.00 | 0.035 | 104.40 | 0.013 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 120 hr | 2.00 | 0.035 | 104.40 | 0.013 | 841.64 | 0.000 |
| Ex CB (IN) | 2 yr 240 hr | 2.00 | 0.049 | 208.80 | 0.009 | (N/A) | (N/A) |
| Ex CB (OUT) | 2 yr 240 hr | 2.00 | 0.049 | 208.80 | 0.009 | 841.63 | 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 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: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 1 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.38 hours |
| Flow (Peak, Computed) | 0.110 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.40 hours |
| Flow (Peak Interpolated Output) | 0.110 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.38 in |
| Runoff Volume (Pervious) | 0.005 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.005 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 0.17 hours |
| Area (User Defined) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 5.02 hours |
| Flow (Peak, Computed) | 0.047 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 5.00 hours |
| Flow (Peak Interpolated Output) | 0.047 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 1.31 in |
| Runoff Volume (Pervious) | 0.018 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.018 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 12 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 0.17 hours |
| Area (User Defined) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 104.40 hours |
| Flow (Peak, Computed) | 0.013 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 104.40 hours |
| Flow (Peak Interpolated Output) | 0.013 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 2.57 in |
| Runoff Volume (Pervious) | 0.035 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.035 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 120 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 0.17 hours |
| Area (User Defined) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.24 hours |
| Flow (Peak, Computed) | 0.060 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.25 hours |
| Flow (Peak Interpolated Output) | 0.060 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.08 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 15 min

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 18 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 11.93 hours |
| Flow (Peak, Computed) | 0.041 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 11.90 hours |
| Flow (Peak Interpolated Output) | 0.041 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 1.49 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 2 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.62 hours |
| Flow (Peak, Computed) | 0.107 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.60 hours |
| Flow (Peak Interpolated Output) | 0.106 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.61 in |
| Runoff Volume (Pervious) | 0.008 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.008 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 2 hr

Return Event: 2.00 years
Storm Event: 2 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 | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 15.88 hours |
| Flow (Peak, Computed) | 0.034 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 15.90 hours |
| Flow (Peak Interpolated Output) | 0.034 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 1.65 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 240 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 208.78 hours |
| Flow (Peak, Computed) | 0.009 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 208.80 hours |
| Flow (Peak Interpolated Output) | 0.009 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 3.62 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.82 hours |
| Flow (Peak, Computed) | 0.091 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.85 hours |
| Flow (Peak Interpolated Output) | 0.091 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.74 in |
| Runoff Volume (Pervious) | 0.010 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.010 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.33 hours |
| Flow (Peak, Computed) | 0.096 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.30 hours |
| Flow (Peak Interpolated Output) | 0.095 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.21 in |
| Runoff Volume (Pervious) | 0.003 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.003 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 30 min

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 48 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 41.76 hours |
| Flow (Peak, Computed) | 0.025 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 41.70 hours |
| Flow (Peak Interpolated Output) | 0.025 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 1.92 in |
| Runoff Volume (Pervious) | 0.026 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 6 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.82 hours |
| Flow (Peak, Computed) | 0.091 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.85 hours |
| Flow (Peak Interpolated Output) | 0.091 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 0.74 in |
| Runoff Volume (Pervious) | 0.010 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.010 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 6 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 | 0.56 hours |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 72 hr

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

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 62.64 hours |
| Flow (Peak, Computed) | 0.019 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 62.60 hours |
| Flow (Peak Interpolated Output) | 0.019 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 2.18 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 1 hr

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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: 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) | 0.17 hours |
| Area (User Defined) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 12 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 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) | 0.17 hours |
| Area (User Defined) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 120 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 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) | 0.17 hours |
| Area (User Defined) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 15 min

Return Event: 2.00 years
Storm Event: 15 min 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: 2 yr 18 hr

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 18 hr

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

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 2 hr

Return Event: 2.00 years
Storm Event: 2 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: 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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: 2 yr 240 hr

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 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: 2 yr 48 hr

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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: 2 yr 6 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 6 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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 72 hr

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

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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 South Pond
Scenario: 2 yr 1 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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 South Pond
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) | 0.17 hours |
| Area (User Defined) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 12 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 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) | 0.17 hours |
| Area (User Defined) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 120 hr

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

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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 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) | 0.17 hours |
| Area (User Defined) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 15 min

Return Event: 2.00 years
Storm Event: 15 min 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 South Pond
Scenario: 2 yr 18 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 18 hr

Return Event: 2.00 years
Storm Event: 18 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 South Pond
Scenario: 2 yr 2 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 2 hr

Return Event: 2.00 years
Storm Event: 2 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 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



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

| 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 240 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 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 South Pond
Scenario: 2 yr 48 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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 South Pond
Scenario: 2 yr 6 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 6 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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 72 hr

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

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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: 2 yr 1 hr

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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: 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) | 0.17 hours |
| Area (User Defined) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted 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 | 0.11 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 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) | 0.17 hours |
| Area (User Defined) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted 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 | 0.11 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 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) | 0.17 hours |
| Area (User Defined) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



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

Return Event: 2.00 years
Storm Event: 15 min 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: 2 yr 18 hr

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 18 hr

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

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



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

Return Event: 2.00 years
Storm Event: 2 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: 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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: 2 yr 240 hr

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 30 min

Return Event: 2.00 years
Storm Event: 30 min 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: 2 yr 48 hr

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 48 hr

Return Event: 2.00 years
Storm Event: 48 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: 2 yr 6 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 6 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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 72 hr

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

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 2 yr 72 hr

Return Event: 2.00 years
Storm Event: 72 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: Elevation-Area Volume Curve
Label: Ex CB
Scenario: 2 yr 1 hr

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

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 841.58 | 0.0 | 0.000 | 0.000 | 0.000 | 0.000 |
| 842.00 | 0.0 | 205.000 | 205.000 | 0.001 | 0.001 |
| 842.50 | 0.0 | 500.000 | 1,025.156 | 0.004 | 0.005 |



Subsection: Volume Equations
Label: Ex CB
Scenario: 2 yr 1 hr

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

**Pond Volume Equations**
*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

**Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))**

where: EL1, EL2 — Lower and upper elevations of the increment
Area1, Area2 — Areas computed for EL1, EL2, respectively
Volume — Incremental volume between EL1 and EL2



Subsection: Elevation vs. Volume Curve
Label: North Pond
Scenario: 2 yr 1 hr

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

**Elevation-Volume**

| Pond Elevation (ft) | Pond Volume (ac-ft) |
|---|---|
| 833.50 | 0.000 |
| 834.40 | 0.000 |
| 835.00 | 0.339 |
| 836.00 | 0.942 |
| 837.00 | 1.585 |
| 838.00 | 2.267 |
| 839.00 | 2.989 |



Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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: Ex CB
Scenario: 2 yr 1 hr

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

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 841.65 ft |
| Increment (Headwater) | 0.05 ft |
| Maximum (Headwater) | 842.50 ft |

**Outlet Connectivity**

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Ex CB | Forward | TW | 841.58 | 842.50 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: Ex CB
Scenario: 2 yr 1 hr

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

| Structure ID: Ex CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 |



Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 2 yr 1 hr

Return Event: 2.00 years
Storm Event: 1 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 1 hr

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

| Structure ID: Interconnected Culvert<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.00 in |
| Length | 238.00 ft |
| Length (Computed Barrel) | 238.01 ft |
| Slope (Computed) | 0.007 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) | 1.092 |
| T2 ratio (HW/D) | 1.194 |
| 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 | 839.28 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 1 hr

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

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 833.50 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 | 833.50 | 839.00 |
| Orifice-Circular | North 100-Year Restrictor | Forward | TW | 835.90 | 839.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 2 yr 1 hr

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

| Structure ID: North 2-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 833.50 ft |
| Orifice Diameter | 2.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: North 100-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 835.90 ft |
| Orifice Diameter | 3.00 in |
| Orifice Coefficient | 0.610 |

# Proposed 10-yr Critical Duration

| Project Summary | |
|---|---|
| Title | 24-136 Proposed Conditions PondPack Critical Duration |
| Engineer | KML |
| Company | Haeger Engineering LLC |
| Date | 12/2/2025 |

| Notes | Proposed Conditions Model. Critical Duration Analysis |
|---|---|



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| Message Id | 7 |
| Scenario | 10 yr 15 min |
| Element Type | Catchment |
| Element Id | 827 |
| Label | Offsite |
| Time | (N/A) |
| Message | The difference between calculated peak flow and interpolated peak flow 2.8 % is greater than 1.5 %. Computed peak flow= 0.207 ft³/s Interp. peak flow= 0.202 ft³/s. Output increment for this catchment may be too large. |
| Source | Warning |
| 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 |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 |
| 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 |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 |
| 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 | 40 |
| Scenario | 10 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 %. (0.8 % of Inflow Volume)) |
| 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 |

Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 |
| 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 |
| Message Id | 40 |
| Scenario | 10 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 %. (1.7 % of Inflow Volume)) |
| Source | Warning |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| Message Id | 40 |
| Scenario | 10 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 %. (1.2 % of Inflow Volume)) |
| Source | Warning |



Subsection: Master Network Summary

**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 | 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 | 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 |
| 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 |



Subsection: Master Network Summary

**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 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 | 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 |
| Offsite | 10 yr 15 min | 10.00 | 0.004 | 0.20 | 0.202 |
| Offsite | 10 yr 30 min | 10.00 | 0.008 | 0.25 | 0.276 |
| Offsite | 10 yr 1 hr | 10.00 | 0.013 | 0.35 | 0.295 |
| Offsite | 10 yr 2 hr | 10.00 | 0.019 | 0.55 | 0.251 |
| Offsite | 10 yr 3 hr | 10.00 | 0.022 | 0.80 | 0.206 |
| Offsite | 10 yr 6 hr | 10.00 | 0.028 | 1.30 | 0.137 |
| Offsite | 10 yr 12 hr | 10.00 | 0.036 | 5.00 | 0.094 |
| Offsite | 10 yr 18 hr | 10.00 | 0.040 | 11.90 | 0.076 |
| Offsite | 10 yr 24 hr | 10.00 | 0.044 | 15.90 | 0.062 |
| Offsite | 10 yr 48 hr | 10.00 | 0.049 | 41.70 | 0.044 |
| Offsite | 10 yr 72 hr | 10.00 | 0.055 | 62.60 | 0.032 |
| Offsite | 10 yr 120 hr | 10.00 | 0.063 | 104.40 | 0.021 |
| Offsite | 10 yr 240 hr | 10.00 | 0.083 | 208.80 | 0.014 |

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 10 yr 15 min | 10.00 | 0.196 | 0.65 | 0.090 |
| From North Pond | 10 yr 30 min | 10.00 | 0.365 | 0.85 | 0.109 |
| From North Pond | 10 yr 1 hr | 10.00 | 0.435 | 1.30 | 0.125 |
| From North Pond | 10 yr 2 hr | 10.00 | 0.507 | 2.30 | 0.142 |
| From North Pond | 10 yr 3 hr | 10.00 | 0.544 | 3.25 | 0.165 |
| From North Pond | 10 yr 6 hr | 10.00 | 0.659 | 6.20 | 0.275 |
| From North Pond | 10 yr 12 hr | 10.00 | 1.295 | 12.10 | 0.354 |
| From North Pond | 10 yr 18 hr | 10.00 | 1.384 | 18.10 | 0.384 |
| From North Pond | 10 yr 24 hr | 10.00 | 1.471 | 24.10 | 0.399 |

Subsection: Master Network Summary

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 10 yr 48 hr | 10.00 | 2.083 | 48.10 | 0.417 |
| From North Pond | 10 yr 72 hr | 10.00 | 2.303 | 72.10 | 0.409 |
| From North Pond | 10 yr 120 hr | 10.00 | 2.637 | 115.40 | 0.383 |
| From North Pond | 10 yr 240 hr | 10.00 | 3.446 | 221.00 | 0.352 |
| 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 |
| From CB | 10 yr 15 min | 10.00 | 0.004 | 0.25 | 0.200 |
| From CB | 10 yr 30 min | 10.00 | 0.008 | 0.30 | 0.271 |
| From CB | 10 yr 1 hr | 10.00 | 0.013 | 0.40 | 0.288 |
| From CB | 10 yr 2 hr | 10.00 | 0.019 | 0.60 | 0.251 |
| From CB | 10 yr 3 hr | 10.00 | 0.022 | 0.80 | 0.206 |
| From CB | 10 yr 6 hr | 10.00 | 0.028 | 1.35 | 0.137 |
| From CB | 10 yr 12 hr | 10.00 | 0.036 | 5.00 | 0.094 |
| From CB | 10 yr 18 hr | 10.00 | 0.040 | 11.90 | 0.076 |
| From CB | 10 yr 24 hr | 10.00 | 0.044 | 15.90 | 0.062 |
| From CB | 10 yr 48 hr | 10.00 | 0.049 | 41.70 | 0.044 |
| From CB | 10 yr 72 hr | 10.00 | 0.055 | 62.60 | 0.032 |
| From CB | 10 yr 120 hr | 10.00 | 0.063 | 104.40 | 0.021 |
| From CB | 10 yr 240 hr | 10.00 | 0.083 | 208.80 | 0.014 |

**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 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 | 2.647 | 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 | 3.689 | 836.85 | 0.027 |



Subsection: Master Network Summary

**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 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 | 3.892 | 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 | 3.715 | 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 | 3.184 | 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 | 0.011 |
| 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 | 0.571 | 5.10 | 1.456 | 836.61 | 0.009 |
| 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 | 0.629 | 11.90 | 1.164 | 836.78 | 0.022 |
| 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 | 0.688 | 15.90 | 0.944 | 836.87 | 0.029 |
| 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 | 0.763 | 41.70 | 0.658 | 836.97 | 0.037 |
| 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 | 0.845 | 62.60 | 0.478 | 836.93 | 0.033 |
| 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 | 0.976 | 104.40 | 0.321 | 836.78 | 0.022 |
| 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 | 836.60 | 0.008 |
| North Pond (IN) | 10 yr 15 min | 10.00 | 0.196 | 0.25 | 8.381 | (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 (ft³/s) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| North Pond (OUT) | 10 yr 15 min | 10.00 | 0.196 | 0.65 | 0.090 | 834.74 | 0.191 |
| North Pond (IN) | 10 yr 30 min | 10.00 | 0.378 | 0.30 | 10.937 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 30 min | 10.00 | 0.365 | 0.85 | 0.109 | 835.05 | 0.371 |
| North Pond (IN) | 10 yr 1 hr | 10.00 | 0.582 | 0.40 | 11.627 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 1 hr | 10.00 | 0.435 | 1.30 | 0.125 | 835.38 | 0.570 |
| North Pond (IN) | 10 yr 2 hr | 10.00 | 0.829 | 0.60 | 10.509 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 2 hr | 10.00 | 0.507 | 2.30 | 0.142 | 835.78 | 0.807 |
| North Pond (IN) | 10 yr 3 hr | 10.00 | 0.969 | 0.80 | 8.790 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 3 hr | 10.00 | 0.544 | 3.25 | 0.165 | 835.99 | 0.937 |
| 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 | 0.659 | 6.20 | 0.275 | 836.32 | 1.149 |
| North Pond (IN) | 10 yr 12 hr | 10.00 | 1.532 | 5.00 | 3.971 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 12 hr | 10.00 | 1.295 | 12.10 | 0.354 | 836.61 | 1.334 |
| North Pond (IN) | 10 yr 18 hr | 10.00 | 1.702 | 11.90 | 3.164 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 18 hr | 10.00 | 1.384 | 18.10 | 0.384 | 836.78 | 1.444 |
| North Pond (IN) | 10 yr 24 hr | 10.00 | 1.859 | 15.90 | 2.564 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 24 hr | 10.00 | 1.471 | 24.10 | 0.399 | 836.87 | 1.500 |
| North Pond (IN) | 10 yr 48 hr | 10.00 | 2.083 | 41.70 | 1.794 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 48 hr | 10.00 | 2.083 | 48.10 | 0.417 | 836.97 | 1.566 |
| North Pond (IN) | 10 yr 72 hr | 10.00 | 2.303 | 62.60 | 1.304 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 72 hr | 10.00 | 2.303 | 72.10 | 0.409 | 836.93 | 1.537 |
| North Pond (IN) | 10 yr 120 hr | 10.00 | 2.637 | 104.40 | 0.876 | (N/A) | (N/A) |
| North Pond (OUT) | 10 yr 120 hr | 10.00 | 2.637 | 115.40 | 0.383 | 836.78 | 1.444 |



Subsection: Master Network Summary

**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) | 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 | 0.352 | 836.60 | 1.327 |
| Ex CB (IN) | 10 yr 15 min | 10.00 | 0.004 | 0.20 | 0.202 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 15 min | 10.00 | 0.004 | 0.25 | 0.200 | 841.83 | 0.000 |
| Ex CB (IN) | 10 yr 30 min | 10.00 | 0.008 | 0.25 | 0.276 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 30 min | 10.00 | 0.008 | 0.30 | 0.271 | 841.87 | 0.000 |
| Ex CB (IN) | 10 yr 1 hr | 10.00 | 0.013 | 0.35 | 0.295 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 1 hr | 10.00 | 0.013 | 0.40 | 0.288 | 841.88 | 0.000 |
| Ex CB (IN) | 10 yr 2 hr | 10.00 | 0.019 | 0.55 | 0.251 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 2 hr | 10.00 | 0.019 | 0.60 | 0.251 | 841.86 | 0.000 |
| Ex CB (IN) | 10 yr 3 hr | 10.00 | 0.022 | 0.80 | 0.206 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 3 hr | 10.00 | 0.022 | 0.80 | 0.206 | 841.83 | 0.000 |
| Ex CB (IN) | 10 yr 6 hr | 10.00 | 0.028 | 1.30 | 0.137 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 6 hr | 10.00 | 0.028 | 1.35 | 0.137 | 841.78 | 0.000 |
| Ex CB (IN) | 10 yr 12 hr | 10.00 | 0.036 | 5.00 | 0.094 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 12 hr | 10.00 | 0.036 | 5.00 | 0.094 | 841.75 | 0.000 |
| Ex CB (IN) | 10 yr 18 hr | 10.00 | 0.040 | 11.90 | 0.076 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 18 hr | 10.00 | 0.040 | 11.90 | 0.076 | 841.73 | 0.000 |
| Ex CB (IN) | 10 yr 24 hr | 10.00 | 0.044 | 15.90 | 0.062 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 24 hr | 10.00 | 0.044 | 15.90 | 0.062 | 841.71 | 0.000 |
| Ex CB (IN) | 10 yr 48 hr | 10.00 | 0.049 | 41.70 | 0.044 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 48 hr | 10.00 | 0.049 | 41.70 | 0.044 | 841.69 | 0.000 |
| Ex CB (IN) | 10 yr 72 hr | 10.00 | 0.055 | 62.60 | 0.032 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 72 hr | 10.00 | 0.055 | 62.60 | 0.032 | 841.67 | 0.000 |
| Ex CB (IN) | 10 yr 120 hr | 10.00 | 0.063 | 104.40 | 0.021 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 120 hr | 10.00 | 0.063 | 104.40 | 0.021 | 841.65 | 0.000 |
| Ex CB (IN) | 10 yr 240 hr | 10.00 | 0.083 | 208.80 | 0.014 | (N/A) | (N/A) |
| Ex CB (OUT) | 10 yr 240 hr | 10.00 | 0.083 | 208.80 | 0.014 | 841.64 | 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: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.36 hours |
| Flow (Peak, Computed) | 0.296 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.35 hours |
| Flow (Peak Interpolated Output) | 0.295 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 0.94 in |
| Runoff Volume (Pervious) | 0.013 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.013 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 4.98 hours |
| Flow (Peak, Computed) | 0.094 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 5.00 hours |
| Flow (Peak Interpolated Output) | 0.094 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 2.62 in |
| Runoff Volume (Pervious) | 0.036 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.036 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 104.40 hours |
| Flow (Peak, Computed) | 0.021 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 104.40 hours |
| Flow (Peak Interpolated Output) | 0.021 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 4.62 in |
| Runoff Volume (Pervious) | 0.063 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.063 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.22 hours |
| Flow (Peak, Computed) | 0.207 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.20 hours |
| Flow (Peak Interpolated Output) | 0.202 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 0.29 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) | 0.17 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 11.91 hours |
| Flow (Peak, Computed) | 0.076 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 11.90 hours |
| Flow (Peak Interpolated Output) | 0.076 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 2.94 in |
| Runoff Volume (Pervious) | 0.040 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.040 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.58 hours |
| Flow (Peak, Computed) | 0.252 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.55 hours |
| Flow (Peak Interpolated Output) | 0.251 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 1.37 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 15.86 hours |
| Flow (Peak, Computed) | 0.062 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 15.90 hours |
| Flow (Peak Interpolated Output) | 0.062 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 3.21 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 208.78 hours |
| Flow (Peak, Computed) | 0.014 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 208.80 hours |
| Flow (Peak Interpolated Output) | 0.014 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 6.10 in |
| Runoff Volume (Pervious) | 0.083 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.083 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.78 hours |
| Flow (Peak, Computed) | 0.206 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.80 hours |
| Flow (Peak Interpolated Output) | 0.206 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 1.62 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.27 hours |
| Flow (Peak, Computed) | 0.278 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.25 hours |
| Flow (Peak Interpolated Output) | 0.276 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 0.59 in |
| Runoff Volume (Pervious) | 0.008 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.008 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 41.76 hours |
| Flow (Peak, Computed) | 0.044 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 41.70 hours |
| Flow (Peak Interpolated Output) | 0.044 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 3.64 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 1.31 hours |
| Flow (Peak, Computed) | 0.137 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 1.30 hours |
| Flow (Peak Interpolated Output) | 0.137 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 2.08 in |
| Runoff Volume (Pervious) | 0.028 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.028 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 62.64 hours |
| Flow (Peak, Computed) | 0.032 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 62.60 hours |
| Flow (Peak Interpolated Output) | 0.032 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 4.03 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 12 hr

Return Event: 10.00 years
Storm Event: 12 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 120 hr

Return Event: 10.00 years
Storm Event: 120 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 2 hr

Return Event: 10.00 years
Storm Event: 2 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 24 hr

Return Event: 10.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 240 hr

Return Event: 10.00 years
Storm Event: 240 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 3 hr

Return Event: 10.00 years
Storm Event: 3 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 30 min

Return Event: 10.00 years
Storm Event: 30 min 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 48 hr

Return Event: 10.00 years
Storm Event: 48 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 6 hr

Return Event: 10.00 years
Storm Event: 6 hr 10 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 hr 10 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 10 yr 72 hr

Return Event: 10.00 years
Storm Event: 72 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 |



Subsection: Elevation-Area Volume Curve
Label: Ex CB
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 841.58 | 0.0 | 0.000 | 0.000 | 0.000 | 0.000 |
| 842.00 | 0.0 | 205.000 | 205.000 | 0.001 | 0.001 |
| 842.50 | 0.0 | 500.000 | 1,025.156 | 0.004 | 0.005 |



Subsection: Elevation vs. Volume Curve
Label: North Pond
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

**Elevation-Volume**

| Pond Elevation (ft) | Pond Volume (ac-ft) |
|---|---|
| 833.50 | 0.000 |
| 834.40 | 0.000 |
| 835.00 | 0.339 |
| 836.00 | 0.942 |
| 837.00 | 1.585 |
| 838.00 | 2.267 |
| 839.00 | 2.989 |



Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 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: Ex CB
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 841.65 ft |
| Increment (Headwater) | 0.05 ft |
| Maximum (Headwater) | 842.50 ft |

**Outlet Connectivity**

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Ex CB | Forward | TW | 841.58 | 842.50 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: Ex CB
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Structure ID: Ex CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 |



Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 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: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Structure ID: Interconnected Culvert<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.00 in |
| Length | 238.00 ft |
| Length (Computed Barrel) | 238.01 ft |
| Slope (Computed) | 0.007 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) | 1.092 |
| T2 ratio (HW/D) | 1.194 |
| 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 | 839.28 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: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 833.50 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 | 833.50 | 839.00 |
| Orifice-Circular | North 100-Year Restrictor | Forward | TW | 835.90 | 839.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 10 yr 1 hr

Return Event: 10.00 years
Storm Event: 1 hr 10 yr

| Structure ID: North 2-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 833.50 ft |
| Orifice Diameter | 2.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: North 100-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 835.90 ft |
| Orifice Diameter | 3.00 in |
| Orifice Coefficient | 0.610 |

# Proposed 50-yr Critical Duration

| Project Summary | |
|---|---|
| Title | 24-136 Proposed Conditions PondPack Critical Duration |
| Engineer | KML |
| Company | Haeger Engineering LLC |
| Date | 12/2/2025 |

| Notes | Proposed Conditions Model. Critical Duration Analysis |
|---|---|



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| Message Id | 39 |
| 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 |



Subsection: User Notifications

**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 | 40 |
| Scenario | 50 yr 3 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 %. (2.5 % of Inflow Volume)) |
| Source | Warning |
| Message Id | 40 |
| Scenario | 50 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 %. (5.8 % of Inflow Volume)) |
| 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 |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 %. (7.5 % 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 |
| 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 %. (8.4 % 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 %. (8.5 % of Inflow Volume)) |
| Source | Warning |

Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 |
| 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 |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 %. (7.8 % 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 %. (6.9 % of Inflow Volume)) |
| Source | Warning |
| Message Id | 40 |
| Scenario | 50 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 %. (2.0 % of Inflow Volume)) |
| Source | Warning |
| 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 %. (1.8 % of Outflow Volume)) |
| Source | Warning |



Subsection: Master Network Summary

**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 | 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 | 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 |
| 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 |



Subsection: Master Network Summary

**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 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 | 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 |
| Offsite | 50 yr 15 min | 50.00 | 0.009 | 0.20 | 0.482 |
| Offsite | 50 yr 30 min | 50.00 | 0.016 | 0.25 | 0.596 |
| Offsite | 50 yr 1 hr | 50.00 | 0.025 | 0.35 | 0.594 |
| Offsite | 50 yr 2 hr | 50.00 | 0.034 | 0.55 | 0.473 |
| Offsite | 50 yr 3 hr | 50.00 | 0.039 | 0.70 | 0.378 |
| Offsite | 50 yr 6 hr | 50.00 | 0.050 | 1.30 | 0.245 |
| Offsite | 50 yr 12 hr | 50.00 | 0.061 | 5.00 | 0.157 |
| Offsite | 50 yr 18 hr | 50.00 | 0.067 | 11.90 | 0.121 |
| Offsite | 50 yr 24 hr | 50.00 | 0.073 | 15.80 | 0.098 |
| Offsite | 50 yr 48 hr | 50.00 | 0.081 | 41.70 | 0.067 |
| Offsite | 50 yr 72 hr | 50.00 | 0.088 | 62.60 | 0.048 |
| Offsite | 50 yr 120 hr | 50.00 | 0.098 | 104.40 | 0.032 |
| Offsite | 50 yr 240 hr | 50.00 | 0.122 | 208.70 | 0.019 |

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 50 yr 15 min | 50.00 | 0.383 | 0.70 | 0.113 |
| From North Pond | 50 yr 30 min | 50.00 | 0.484 | 0.90 | 0.137 |
| From North Pond | 50 yr 1 hr | 50.00 | 0.596 | 1.35 | 0.228 |
| From North Pond | 50 yr 2 hr | 50.00 | 0.829 | 2.25 | 0.374 |
| From North Pond | 50 yr 3 hr | 50.00 | 0.964 | 3.20 | 0.420 |
| From North Pond | 50 yr 6 hr | 50.00 | 1.224 | 6.15 | 0.478 |
| From North Pond | 50 yr 12 hr | 50.00 | 2.051 | 12.10 | 0.529 |
| From North Pond | 50 yr 18 hr | 50.00 | 2.203 | 18.10 | 0.557 |
| From North Pond | 50 yr 24 hr | 50.00 | 2.347 | 24.10 | 0.568 |

Subsection: Master Network Summary

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 50 yr 48 hr | 50.00 | 3.287 | 48.10 | 0.580 |
| From North Pond | 50 yr 72 hr | 50.00 | 3.556 | 72.10 | 0.567 |
| From North Pond | 50 yr 120 hr | 50.00 | 4.012 | 115.40 | 0.537 |
| From North Pond | 50 yr 240 hr | 50.00 | 5.062 | 228.00 | 0.489 |
| 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 |
| From CB | 50 yr 15 min | 50.00 | 0.009 | 0.25 | 0.458 |
| From CB | 50 yr 30 min | 50.00 | 0.016 | 0.30 | 0.566 |
| From CB | 50 yr 1 hr | 50.00 | 0.025 | 0.35 | 0.579 |
| From CB | 50 yr 2 hr | 50.00 | 0.034 | 0.55 | 0.471 |
| From CB | 50 yr 3 hr | 50.00 | 0.039 | 0.75 | 0.377 |
| From CB | 50 yr 6 hr | 50.00 | 0.050 | 1.30 | 0.245 |
| From CB | 50 yr 12 hr | 50.00 | 0.061 | 5.00 | 0.157 |
| From CB | 50 yr 18 hr | 50.00 | 0.067 | 11.90 | 0.121 |
| From CB | 50 yr 24 hr | 50.00 | 0.073 | 15.90 | 0.098 |
| From CB | 50 yr 48 hr | 50.00 | 0.081 | 41.70 | 0.067 |
| From CB | 50 yr 72 hr | 50.00 | 0.088 | 62.60 | 0.048 |
| From CB | 50 yr 120 hr | 50.00 | 0.098 | 104.40 | 0.032 |
| From CB | 50 yr 240 hr | 50.00 | 0.122 | 208.80 | 0.019 |

**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) | 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 | 5.584 | 837.05 | 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 | 7.193 | 837.21 | 0.059 |



Subsection: Master Network Summary

**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) | 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 | 7.555 | 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 | 6.802 | 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 | 0.610 | 0.85 | 5.691 | 837.07 | 0.045 |
| South Pond (Reverse) | 50 yr 3 hr | 50.00 | 0.000 | 14.35 | -0.008 | (N/A) | (N/A) |
| South Pond (IN) | 50 yr 6 hr | 50.00 | 0.778 | 1.05 | 3.914 | (N/A) | (N/A) |
| South Pond (OUT) | 50 yr 6 hr | 50.00 | 0.732 | 1.35 | 3.809 | 837.40 | 0.077 |
| 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 | 0.874 | 5.10 | 2.379 | 837.81 | 0.116 |
| 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 | 0.955 | 11.10 | 1.751 | 838.06 | 0.141 |
| 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 | 1.031 | 14.40 | 1.380 | 838.16 | 0.153 |
| 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 | 1.150 | 41.20 | 0.753 | 838.27 | 0.166 |
| 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 | 1.250 | 61.80 | 0.554 | 838.15 | 0.152 |
| 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 | 1.456 | 107.40 | 0.405 | 837.88 | 0.123 |
| 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 | 1.881 | 216.10 | 0.398 | 837.49 | 0.085 |



Subsection: Master Network Summary

**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) | 50 yr 15 min | 50.00 | 0.424 | 0.20 | 17.595 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 15 min | 50.00 | 0.383 | 0.70 | 0.113 | 835.13 | 0.418 |
| North Pond (IN) | 50 yr 30 min | 50.00 | 0.737 | 0.25 | 22.163 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 30 min | 50.00 | 0.484 | 0.90 | 0.137 | 835.65 | 0.728 |
| North Pond (IN) | 50 yr 1 hr | 50.00 | 1.076 | 0.35 | 22.672 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 1 hr | 50.00 | 0.596 | 1.35 | 0.228 | 836.18 | 1.060 |
| North Pond (IN) | 50 yr 2 hr | 50.00 | 1.466 | 0.55 | 19.181 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 2 hr | 50.00 | 0.829 | 2.25 | 0.374 | 836.72 | 1.407 |
| North Pond (IN) | 50 yr 3 hr | 50.00 | 1.671 | 0.75 | 15.711 | (N/A) | (N/A) |
| North Pond (Reverse) | 50 yr 3 hr | 50.00 | 0.000 | 14.35 | -0.008 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 3 hr | 50.00 | 0.964 | 3.20 | 0.420 | 836.99 | 1.579 |
| North Pond (IN) | 50 yr 6 hr | 50.00 | 2.056 | 1.30 | 10.361 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 6 hr | 50.00 | 1.224 | 6.15 | 0.478 | 837.40 | 1.859 |
| North Pond (IN) | 50 yr 12 hr | 50.00 | 2.487 | 5.00 | 6.516 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 12 hr | 50.00 | 2.051 | 12.10 | 0.529 | 837.81 | 2.138 |
| North Pond (IN) | 50 yr 18 hr | 50.00 | 2.737 | 11.10 | 4.828 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 18 hr | 50.00 | 2.203 | 18.10 | 0.557 | 838.06 | 2.308 |
| North Pond (IN) | 50 yr 24 hr | 50.00 | 2.961 | 14.40 | 3.831 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 24 hr | 50.00 | 2.347 | 24.10 | 0.568 | 838.16 | 2.383 |
| North Pond (IN) | 50 yr 48 hr | 50.00 | 3.287 | 41.60 | 2.478 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 48 hr | 50.00 | 3.287 | 48.10 | 0.580 | 838.27 | 2.461 |
| North Pond (IN) | 50 yr 72 hr | 50.00 | 3.556 | 62.50 | 1.785 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 72 hr | 50.00 | 3.556 | 72.10 | 0.567 | 838.15 | 2.376 |



Subsection: Master Network Summary

**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) | 50 yr 120 hr | 50.00 | 4.012 | 104.30 | 1.192 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 120 hr | 50.00 | 4.012 | 115.40 | 0.537 | 837.88 | 2.187 |
| North Pond (IN) | 50 yr 240 hr | 50.00 | 5.062 | 216.10 | 0.837 | (N/A) | (N/A) |
| North Pond (OUT) | 50 yr 240 hr | 50.00 | 5.062 | 228.00 | 0.489 | 837.49 | 1.916 |
| Ex CB (IN) | 50 yr 15 min | 50.00 | 0.009 | 0.20 | 0.482 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 15 min | 50.00 | 0.009 | 0.25 | 0.458 | 841.96 | 0.000 |
| Ex CB (IN) | 50 yr 30 min | 50.00 | 0.016 | 0.25 | 0.596 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 30 min | 50.00 | 0.016 | 0.30 | 0.566 | 842.01 | 0.001 |
| Ex CB (IN) | 50 yr 1 hr | 50.00 | 0.025 | 0.35 | 0.594 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 1 hr | 50.00 | 0.025 | 0.35 | 0.579 | 842.01 | 0.001 |
| Ex CB (IN) | 50 yr 2 hr | 50.00 | 0.034 | 0.55 | 0.473 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 2 hr | 50.00 | 0.034 | 0.55 | 0.471 | 841.97 | 0.001 |
| Ex CB (IN) | 50 yr 3 hr | 50.00 | 0.039 | 0.70 | 0.378 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 3 hr | 50.00 | 0.039 | 0.75 | 0.377 | 841.92 | 0.000 |
| Ex CB (IN) | 50 yr 6 hr | 50.00 | 0.050 | 1.30 | 0.245 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 6 hr | 50.00 | 0.050 | 1.30 | 0.245 | 841.85 | 0.000 |
| Ex CB (IN) | 50 yr 12 hr | 50.00 | 0.061 | 5.00 | 0.157 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 12 hr | 50.00 | 0.061 | 5.00 | 0.157 | 841.80 | 0.000 |
| Ex CB (IN) | 50 yr 18 hr | 50.00 | 0.067 | 11.90 | 0.121 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 18 hr | 50.00 | 0.067 | 11.90 | 0.121 | 841.77 | 0.000 |
| Ex CB (IN) | 50 yr 24 hr | 50.00 | 0.073 | 15.80 | 0.098 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 24 hr | 50.00 | 0.073 | 15.90 | 0.098 | 841.75 | 0.000 |
| Ex CB (IN) | 50 yr 48 hr | 50.00 | 0.081 | 41.70 | 0.067 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 48 hr | 50.00 | 0.081 | 41.70 | 0.067 | 841.72 | 0.000 |
| Ex CB (IN) | 50 yr 72 hr | 50.00 | 0.088 | 62.60 | 0.048 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 72 hr | 50.00 | 0.088 | 62.60 | 0.048 | 841.70 | 0.000 |
| Ex CB (IN) | 50 yr 120 hr | 50.00 | 0.098 | 104.40 | 0.032 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 120 hr | 50.00 | 0.098 | 104.40 | 0.032 | 841.67 | 0.000 |
| Ex CB (IN) | 50 yr 240 hr | 50.00 | 0.122 | 208.70 | 0.019 | (N/A) | (N/A) |
| Ex CB (OUT) | 50 yr 240 hr | 50.00 | 0.122 | 208.80 | 0.019 | 841.65 | 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 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) |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.33 hours |
| Flow (Peak, Computed) | 0.597 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.35 hours |
| Flow (Peak Interpolated Output) | 0.594 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 1.81 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 4.95 hours |
| Flow (Peak, Computed) | 0.158 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 5.00 hours |
| Flow (Peak Interpolated Output) | 0.157 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 4.48 in |
| Runoff Volume (Pervious) | 0.061 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.061 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 104.38 hours |
| Flow (Peak, Computed) | 0.032 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 104.40 hours |
| Flow (Peak Interpolated Output) | 0.032 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 7.19 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.20 hours |
| Flow (Peak, Computed) | 0.482 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.20 hours |
| Flow (Peak Interpolated Output) | 0.482 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 0.67 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 11.91 hours |
| Flow (Peak, Computed) | 0.121 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 11.90 hours |
| Flow (Peak Interpolated Output) | 0.121 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 4.96 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.53 hours |
| Flow (Peak, Computed) | 0.474 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.55 hours |
| Flow (Peak Interpolated Output) | 0.473 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 2.50 in |
| Runoff Volume (Pervious) | 0.034 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.034 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 15.86 hours |
| Flow (Peak, Computed) | 0.098 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 15.80 hours |
| Flow (Peak Interpolated Output) | 0.098 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 5.39 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 208.78 hours |
| Flow (Peak, Computed) | 0.019 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 208.70 hours |
| Flow (Peak Interpolated Output) | 0.019 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 9.00 in |
| Runoff Volume (Pervious) | 0.122 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.122 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.69 hours |
| Flow (Peak, Computed) | 0.378 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.70 hours |
| Flow (Peak Interpolated Output) | 0.378 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 2.90 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.24 hours |
| Flow (Peak, Computed) | 0.600 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.25 hours |
| Flow (Peak Interpolated Output) | 0.596 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 1.21 in |
| Runoff Volume (Pervious) | 0.016 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.016 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 41.76 hours |
| Flow (Peak, Computed) | 0.067 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 41.70 hours |
| Flow (Peak Interpolated Output) | 0.067 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 5.98 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 1.29 hours |
| Flow (Peak, Computed) | 0.245 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 1.30 hours |
| Flow (Peak Interpolated Output) | 0.245 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 3.65 in |
| Runoff Volume (Pervious) | 0.050 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.050 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 62.64 hours |
| Flow (Peak, Computed) | 0.048 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 62.60 hours |
| Flow (Peak Interpolated Output) | 0.048 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 6.47 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



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

| 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 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North 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 North 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North 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 North 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North 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 North 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



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

| 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 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North 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 North 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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: 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South 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 South 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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: 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted 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 | 0.11 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 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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: Elevation-Area Volume Curve
Label: Ex CB
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 841.58 | 0.0 | 0.000 | 0.000 | 0.000 | 0.000 |
| 842.00 | 0.0 | 205.000 | 205.000 | 0.001 | 0.001 |
| 842.50 | 0.0 | 500.000 | 1,025.156 | 0.004 | 0.005 |



Subsection: Elevation vs. Volume Curve
Label: North Pond
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

**Elevation-Volume**

| Pond Elevation (ft) | Pond Volume (ac-ft) |
|---|---|
| 833.50 | 0.000 |
| 834.40 | 0.000 |
| 835.00 | 0.339 |
| 836.00 | 0.942 |
| 837.00 | 1.585 |
| 838.00 | 2.267 |
| 839.00 | 2.989 |



Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: Ex CB
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 841.65 ft |
| Increment (Headwater) | 0.05 ft |
| Maximum (Headwater) | 842.50 ft |

**Outlet Connectivity**

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Ex CB | Forward | TW | 841.58 | 842.50 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: Ex CB
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Structure ID: Ex CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 |



Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Structure ID: Interconnected Culvert<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.00 in |
| Length | 238.00 ft |
| Length (Computed Barrel) | 238.01 ft |
| Slope (Computed) | 0.007 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) | 1.092 |
| T2 ratio (HW/D) | 1.194 |
| 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 | 839.28 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: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 833.50 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 | 833.50 | 839.00 |
| Orifice-Circular | North 100-Year Restrictor | Forward | TW | 835.90 | 839.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 50 yr 1 hr

Return Event: 50.00 years
Storm Event: 1 hr 50 yr

| Structure ID: North 2-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 833.50 ft |
| Orifice Diameter | 2.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: North 100-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 835.90 ft |
| Orifice Diameter | 3.00 in |
| Orifice Coefficient | 0.610 |

# Proposed 100-yr Critical Duration

| Project Summary | |
|---|---|
| Title | 24-136 Proposed Conditions PondPack Critical Duration |
| Engineer | KML |
| Company | Haeger Engineering LLC |
| Date | 12/2/2025 |

| Notes | Proposed Conditions Model. Critical Duration Analysis |
|---|---|



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| Message Id | 39 |
| 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 |



Subsection: User Notifications

**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 2 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 3 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 %. (5.8 % of Inflow Volume)) |
| 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 %. (8.8 % of Inflow Volume)) |
| Source | Warning |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 %. (8.7 % of Inflow Volume)) |
| Source | Warning |
| 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 %. (7.6 % of Inflow Volume)) |
| Source | Warning |

Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 %. (7.0 % 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 |
| 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 |



Subsection: User Notifications

**User Notifications**

| | |
|---|---|
| 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 %. (6.2 % of Inflow Volume)) |
| Source | Warning |
| 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 %. (5.7 % 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 %. (5.6 % 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 %. (1.8 % of Outflow Volume)) |
| Source | Warning |



Subsection: Master Network Summary

**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 | 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 | 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 |
| 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 |



Subsection: Master Network Summary

**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 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 | 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 |
| Offsite | 100 yr 15 min | 100.00 | 0.012 | 0.20 | 0.628 |
| Offsite | 100 yr 30 min | 100.00 | 0.021 | 0.25 | 0.754 |
| Offsite | 100 yr 1 hr | 100.00 | 0.030 | 0.35 | 0.739 |
| Offsite | 100 yr 2 hr | 100.00 | 0.041 | 0.50 | 0.580 |
| Offsite | 100 yr 3 hr | 100.00 | 0.048 | 0.70 | 0.463 |
| Offsite | 100 yr 6 hr | 100.00 | 0.060 | 1.05 | 0.297 |
| Offsite | 100 yr 12 hr | 100.00 | 0.073 | 4.90 | 0.186 |
| Offsite | 100 yr 18 hr | 100.00 | 0.080 | 11.90 | 0.142 |
| Offsite | 100 yr 24 hr | 100.00 | 0.087 | 15.80 | 0.114 |
| Offsite | 100 yr 48 hr | 100.00 | 0.096 | 41.70 | 0.078 |
| Offsite | 100 yr 72 hr | 100.00 | 0.104 | 62.60 | 0.055 |
| Offsite | 100 yr 120 hr | 100.00 | 0.114 | 104.40 | 0.036 |
| Offsite | 100 yr 240 hr | 100.00 | 0.140 | 208.70 | 0.022 |

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 100 yr 15 min | 100.00 | 0.423 | 0.75 | 0.122 |
| From North Pond | 100 yr 30 min | 100.00 | 0.532 | 0.95 | 0.154 |
| From North Pond | 100 yr 1 hr | 100.00 | 0.734 | 1.35 | 0.341 |
| From North Pond | 100 yr 2 hr | 100.00 | 1.022 | 2.25 | 0.439 |
| From North Pond | 100 yr 3 hr | 100.00 | 1.187 | 3.20 | 0.480 |
| From North Pond | 100 yr 6 hr | 100.00 | 1.492 | 6.15 | 0.538 |
| From North Pond | 100 yr 12 hr | 100.00 | 2.416 | 12.10 | 0.587 |
| From North Pond | 100 yr 18 hr | 100.00 | 2.619 | 18.10 | 0.616 |
| From North Pond | 100 yr 24 hr | 100.00 | 2.797 | 24.10 | 0.628 |

Subsection: Master Network Summary

**Node Summary**

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| From North Pond | 100 yr 48 hr | 100.00 | 3.893 | 48.10 | 0.638 |
| From North Pond | 100 yr 72 hr | 100.00 | 4.194 | 72.10 | 0.624 |
| From North Pond | 100 yr 120 hr | 100.00 | 4.613 | 115.40 | 0.588 |
| From North Pond | 100 yr 240 hr | 100.00 | 5.802 | 228.00 | 0.537 |
| 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 |
| From CB | 100 yr 15 min | 100.00 | 0.012 | 0.25 | 0.591 |
| From CB | 100 yr 30 min | 100.00 | 0.021 | 0.25 | 0.726 |
| From CB | 100 yr 1 hr | 100.00 | 0.030 | 0.35 | 0.727 |
| From CB | 100 yr 2 hr | 100.00 | 0.041 | 0.55 | 0.580 |
| From CB | 100 yr 3 hr | 100.00 | 0.048 | 0.70 | 0.462 |
| From CB | 100 yr 6 hr | 100.00 | 0.060 | 1.10 | 0.297 |
| From CB | 100 yr 12 hr | 100.00 | 0.073 | 5.00 | 0.186 |
| From CB | 100 yr 18 hr | 100.00 | 0.080 | 11.90 | 0.142 |
| From CB | 100 yr 24 hr | 100.00 | 0.087 | 15.90 | 0.114 |
| From CB | 100 yr 48 hr | 100.00 | 0.096 | 41.70 | 0.078 |
| From CB | 100 yr 72 hr | 100.00 | 0.104 | 62.60 | 0.055 |
| From CB | 100 yr 120 hr | 100.00 | 0.114 | 104.40 | 0.036 |
| From CB | 100 yr 240 hr | 100.00 | 0.140 | 208.70 | 0.022 |

**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) | 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 | 7.088 | 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 | 9.027 | 837.36 | 0.073 |



Subsection: Master Network Summary

**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) | 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 | 9.373 | 837.39 | 0.076 |
| South Pond (Reverse) | 100 yr 1 hr | 100.00 | 0.000 | 2.50 | -0.005 | (N/A) | (N/A) |
| 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 | 0.633 | 0.65 | 8.302 | 837.30 | 0.068 |
| 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 | 0.708 | 0.80 | 6.892 | 837.41 | 0.078 |
| South Pond (Reverse) | 100 yr 3 hr | 100.00 | 0.000 | 22.45 | -0.008 | (N/A) | (N/A) |
| South Pond (IN) | 100 yr 6 hr | 100.00 | 0.926 | 1.05 | 4.719 | (N/A) | (N/A) |
| South Pond (OUT) | 100 yr 6 hr | 100.00 | 0.845 | 1.30 | 4.574 | 837.89 | 0.124 |
| South Pond (Reverse) | 100 yr 6 hr | 100.00 | 0.000 | 33.30 | -0.008 | (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 | 1.022 | 5.00 | 2.802 | 838.34 | 0.174 |
| 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 | 1.140 | 10.60 | 1.883 | 838.62 | 0.207 |
| 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 | 1.237 | 13.60 | 1.469 | 838.74 | 0.221 |
| 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 | 1.375 | 41.00 | 0.855 | 838.85 | 0.234 |
| 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 | 1.485 | 61.60 | 0.627 | 838.71 | 0.217 |
| 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 | 1.633 | 104.10 | 0.432 | 838.34 | 0.175 |



Subsection: Master Network Summary

**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) | 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 | 2.153 | 210.70 | 0.406 | 837.88 | 0.123 |
| North Pond (IN) | 100 yr 15 min | 100.00 | 0.540 | 0.20 | 22.702 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 15 min | 100.00 | 0.423 | 0.75 | 0.122 | 835.32 | 0.534 |
| North Pond (IN) | 100 yr 30 min | 100.00 | 0.911 | 0.25 | 27.777 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 30 min | 100.00 | 0.532 | 0.95 | 0.154 | 835.93 | 0.901 |
| North Pond (IN) | 100 yr 1 hr | 100.00 | 1.313 | 0.35 | 28.128 | (N/A) | (N/A) |
| North Pond (Reverse) | 100 yr 1 hr | 100.00 | 0.000 | 2.50 | -0.005 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 1 hr | 100.00 | 0.734 | 1.35 | 0.341 | 836.54 | 1.286 |
| North Pond (IN) | 100 yr 2 hr | 100.00 | 1.748 | 0.55 | 23.448 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 2 hr | 100.00 | 1.022 | 2.25 | 0.439 | 837.12 | 1.668 |
| North Pond (IN) | 100 yr 3 hr | 100.00 | 1.987 | 0.75 | 19.031 | (N/A) | (N/A) |
| North Pond (Reverse) | 100 yr 3 hr | 100.00 | 0.000 | 22.45 | -0.008 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 3 hr | 100.00 | 1.187 | 3.20 | 0.480 | 837.41 | 1.867 |
| North Pond (IN) | 100 yr 6 hr | 100.00 | 2.425 | 1.10 | 12.423 | (N/A) | (N/A) |
| North Pond (Reverse) | 100 yr 6 hr | 100.00 | 0.000 | 33.30 | -0.008 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 6 hr | 100.00 | 1.492 | 6.15 | 0.538 | 837.89 | 2.192 |
| North Pond (IN) | 100 yr 12 hr | 100.00 | 2.938 | 5.00 | 7.676 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 12 hr | 100.00 | 2.416 | 12.10 | 0.587 | 838.34 | 2.511 |
| North Pond (IN) | 100 yr 18 hr | 100.00 | 3.254 | 10.60 | 5.268 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 18 hr | 100.00 | 2.619 | 18.10 | 0.616 | 838.62 | 2.712 |
| North Pond (IN) | 100 yr 24 hr | 100.00 | 3.519 | 14.70 | 4.162 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 24 hr | 100.00 | 2.797 | 24.10 | 0.628 | 838.74 | 2.801 |



Subsection: Master Network Summary

**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) | 100 yr 48 hr | 100.00 | 3.894 | 41.70 | 2.844 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 48 hr | 100.00 | 3.893 | 48.10 | 0.638 | 838.85 | 2.878 |
| North Pond (IN) | 100 yr 72 hr | 100.00 | 4.194 | 62.10 | 2.042 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 72 hr | 100.00 | 4.194 | 72.10 | 0.624 | 838.70 | 2.776 |
| North Pond (IN) | 100 yr 120 hr | 100.00 | 4.613 | 104.10 | 1.359 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 120 hr | 100.00 | 4.613 | 115.40 | 0.588 | 838.34 | 2.515 |
| North Pond (IN) | 100 yr 240 hr | 100.00 | 5.802 | 208.40 | 0.952 | (N/A) | (N/A) |
| North Pond (OUT) | 100 yr 240 hr | 100.00 | 5.802 | 228.00 | 0.537 | 837.88 | 2.186 |
| Ex CB (IN) | 100 yr 15 min | 100.00 | 0.012 | 0.20 | 0.628 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 15 min | 100.00 | 0.012 | 0.25 | 0.591 | 842.02 | 0.001 |
| Ex CB (IN) | 100 yr 30 min | 100.00 | 0.021 | 0.25 | 0.754 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 30 min | 100.00 | 0.021 | 0.25 | 0.726 | 842.07 | 0.001 |
| Ex CB (IN) | 100 yr 1 hr | 100.00 | 0.030 | 0.35 | 0.739 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 1 hr | 100.00 | 0.030 | 0.35 | 0.727 | 842.07 | 0.001 |
| Ex CB (IN) | 100 yr 2 hr | 100.00 | 0.041 | 0.50 | 0.580 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 2 hr | 100.00 | 0.041 | 0.55 | 0.580 | 842.01 | 0.001 |
| Ex CB (IN) | 100 yr 3 hr | 100.00 | 0.048 | 0.70 | 0.463 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 3 hr | 100.00 | 0.048 | 0.70 | 0.462 | 841.96 | 0.000 |
| Ex CB (IN) | 100 yr 6 hr | 100.00 | 0.060 | 1.05 | 0.297 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 6 hr | 100.00 | 0.060 | 1.10 | 0.297 | 841.88 | 0.000 |
| Ex CB (IN) | 100 yr 12 hr | 100.00 | 0.073 | 4.90 | 0.186 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 12 hr | 100.00 | 0.073 | 5.00 | 0.186 | 841.82 | 0.000 |
| Ex CB (IN) | 100 yr 18 hr | 100.00 | 0.080 | 11.90 | 0.142 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 18 hr | 100.00 | 0.080 | 11.90 | 0.142 | 841.79 | 0.000 |
| Ex CB (IN) | 100 yr 24 hr | 100.00 | 0.087 | 15.80 | 0.114 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 24 hr | 100.00 | 0.087 | 15.90 | 0.114 | 841.76 | 0.000 |
| Ex CB (IN) | 100 yr 48 hr | 100.00 | 0.096 | 41.70 | 0.078 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 48 hr | 100.00 | 0.096 | 41.70 | 0.078 | 841.73 | 0.000 |
| Ex CB (IN) | 100 yr 72 hr | 100.00 | 0.104 | 62.60 | 0.055 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 72 hr | 100.00 | 0.104 | 62.60 | 0.055 | 841.71 | 0.000 |
| Ex CB (IN) | 100 yr 120 hr | 100.00 | 0.114 | 104.40 | 0.036 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 120 hr | 100.00 | 0.114 | 104.40 | 0.036 | 841.68 | 0.000 |
| Ex CB (IN) | 100 yr 240 hr | 100.00 | 0.140 | 208.70 | 0.022 | (N/A) | (N/A) |
| Ex CB (OUT) | 100 yr 240 hr | 100.00 | 0.140 | 208.70 | 0.022 | 841.66 | 0.000 |

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 - 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: Unit Hydrograph Summary
Label: Offsite
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) | 0.17 hours |
| Area (User Defined) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.33 hours |
| Flow (Peak, Computed) | 0.746 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.35 hours |
| Flow (Peak Interpolated Output) | 0.739 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 2.23 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) | 0.17 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 4.95 hours |
| Flow (Peak, Computed) | 0.187 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 4.90 hours |
| Flow (Peak Interpolated Output) | 0.186 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 5.35 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) | 0.17 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 104.38 hours |
| Flow (Peak, Computed) | 0.036 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 104.40 hours |
| Flow (Peak Interpolated Output) | 0.036 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 8.41 in |
| Runoff Volume (Pervious) | 0.114 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.114 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.20 hours |
| Flow (Peak, Computed) | 0.628 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.20 hours |
| Flow (Peak Interpolated Output) | 0.628 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 0.87 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 hours |
| Unit receding limb, Tr | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 11.91 hours |
| Flow (Peak, Computed) | 0.142 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 11.90 hours |
| Flow (Peak Interpolated Output) | 0.142 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 5.92 in |
| Runoff Volume (Pervious) | 0.080 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.080 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.53 hours |
| Flow (Peak, Computed) | 0.582 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.50 hours |
| Flow (Peak Interpolated Output) | 0.580 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 3.05 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 15.86 hours |
| Flow (Peak, Computed) | 0.114 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 15.80 hours |
| Flow (Peak Interpolated Output) | 0.114 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 6.40 in |
| Runoff Volume (Pervious) | 0.087 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.087 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 208.78 hours |
| Flow (Peak, Computed) | 0.022 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 208.70 hours |
| Flow (Peak Interpolated Output) | 0.022 ft³/s |

| Drainage Area | |
|---|---|
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |

| Cumulative Runoff | |
|---|---|
| Cumulative Runoff Depth (Pervious) | 10.35 in |
| Runoff Volume (Pervious) | 0.140 ac-ft |

| Hydrograph Volume (Area under Hydrograph curve) | |
|---|---|
| Volume | 0.140 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.69 hours |
| Flow (Peak, Computed) | 0.463 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.70 hours |
| Flow (Peak Interpolated Output) | 0.463 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 3.52 in |
| Runoff Volume (Pervious) | 0.048 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.048 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 0.24 hours |
| Flow (Peak, Computed) | 0.761 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 0.25 hours |
| Flow (Peak Interpolated Output) | 0.754 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 1.51 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) | 0.17 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 41.76 hours |
| Flow (Peak, Computed) | 0.078 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 41.70 hours |
| Flow (Peak Interpolated Output) | 0.078 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 7.08 in |
| Runoff Volume (Pervious) | 0.096 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.096 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
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 | 0.44 hours |
| Total unit time, Tb | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 1.07 hours |
| Flow (Peak, Computed) | 0.297 ft³/s |
| Output Increment | 0.05 hours |
| Time to Flow (Peak Interpolated Output) | 1.05 hours |
| Flow (Peak Interpolated Output) | 0.297 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 4.38 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) | 0.17 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 | 1.108 ft³/s |

Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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) | 7,095.000 ft² |
| Computational Time Increment | 0.02 hours |
| Time to Peak (Computed) | 62.64 hours |
| Flow (Peak, Computed) | 0.055 ft³/s |
| Output Increment | 0.10 hours |
| Time to Flow (Peak Interpolated Output) | 62.60 hours |
| Flow (Peak Interpolated Output) | 0.055 ft³/s |
| **Drainage Area** | |
| SCS CN (Composite) | 82.000 |
| Area (User Defined) | 7,095.000 ft² |
| Maximum Retention (Pervious) | 2.20 in |
| Maximum Retention (Pervious, 20 percent) | 0.44 in |
| **Cumulative Runoff** | |
| Cumulative Runoff Depth (Pervious) | 7.63 in |
| Runoff Volume (Pervious) | 0.104 ac-ft |
| **Hydrograph Volume (Area under Hydrograph curve)** | |
| Volume | 0.104 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 | 1.108 ft³/s |



Subsection: Unit Hydrograph Summary
Label: Offsite
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 | 0.56 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 0.17 hours |
| Area (User Defined) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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) | 179,597.880 ft² |
| 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) | 179,597.880 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to North Pond
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 0.17 hours |
| Area (User Defined) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| SCS Unit Hydrograph Parameters | |
|---|---|
| Unit peak time, Tp | 0.11 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: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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) | 102,801.600 ft² |
| 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) | 102,801.600 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: On-Site Area to South Pond
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted 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) | 0.17 hours |
| Area (User Defined) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted 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 | 0.11 hours |
| Unit receding limb, Tr | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 12 hr

Return Event: 100.00 years
Storm Event: 12 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 120 hr

Return Event: 100.00 years
Storm Event: 120 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 min 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 15 min

Return Event: 100.00 years
Storm Event: 15 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 18 hr

Return Event: 100.00 years
Storm Event: 18 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 2 hr

Return Event: 100.00 years
Storm Event: 2 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
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 | 0.45 hours |
| Total unit time, Tb | 0.57 hours |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 30 min

Return Event: 100.00 years
Storm Event: 30 min 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 48 hr

Return Event: 100.00 years
Storm Event: 48 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 6 hr

Return Event: 100.00 years
Storm Event: 6 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 |



Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 hr 100 yr

| | |
|---|---|
| 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) | 19,602.000 ft² |
| 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) | 19,602.000 ft² |
| 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 |

Subsection: Unit Hydrograph Summary
Label: Unrestricted to West
Scenario: 100 yr 72 hr

Return Event: 100.00 years
Storm Event: 72 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 |



Subsection: Elevation-Area Volume Curve
Label: Ex CB
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Elevation (ft) | Planimeter (ft²) | Area (ft²) | A1+A2+sqr (A1*A2) (ft²) | Volume (ac-ft) | Volume (Total) (ac-ft) |
|---|---|---|---|---|---|
| 841.58 | 0.0 | 0.000 | 0.000 | 0.000 | 0.000 |
| 842.00 | 0.0 | 205.000 | 205.000 | 0.001 | 0.001 |
| 842.50 | 0.0 | 500.000 | 1,025.156 | 0.004 | 0.005 |



Subsection: Elevation vs. Volume Curve
Label: North Pond
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

**Elevation-Volume**

| Pond Elevation (ft) | Pond Volume (ac-ft) |
|---|---|
| 833.50 | 0.000 |
| 834.40 | 0.000 |
| 835.00 | 0.339 |
| 836.00 | 0.942 |
| 837.00 | 1.585 |
| 838.00 | 2.267 |
| 839.00 | 2.989 |



Subsection: Elevation vs. Volume Curve
Label: South Pond
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 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: Ex CB
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 841.65 ft |
| Increment (Headwater) | 0.05 ft |
| Maximum (Headwater) | 842.50 ft |

**Outlet Connectivity**

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Ex CB | Forward | TW | 841.58 | 842.50 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: Ex CB
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Structure ID: Ex CB<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 841.58 ft |
| Orifice Diameter | 12.00 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>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 |



Subsection: Outlet Input Data
Label: Interconnected Pond OCS
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 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: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Structure ID: Interconnected Culvert<br>Structure Type: Culvert-Circular | |
|---|---|
| Number of Barrels | 1 |
| Diameter | 36.00 in |
| Length | 238.00 ft |
| Length (Computed Barrel) | 238.01 ft |
| Slope (Computed) | 0.007 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) | 1.092 |
| T2 ratio (HW/D) | 1.194 |
| 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 | 839.28 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: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 833.50 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 | 833.50 | 839.00 |
| Orifice-Circular | North 100-Year Restrictor | Forward | TW | 835.90 | 839.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |



Subsection: Outlet Input Data
Label: North Pond OCS
Scenario: 100 yr 1 hr

Return Event: 100.00 years
Storm Event: 1 hr 100 yr

| Structure ID: North 2-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 833.50 ft |
| Orifice Diameter | 2.00 in |
| Orifice Coefficient | 0.610 |

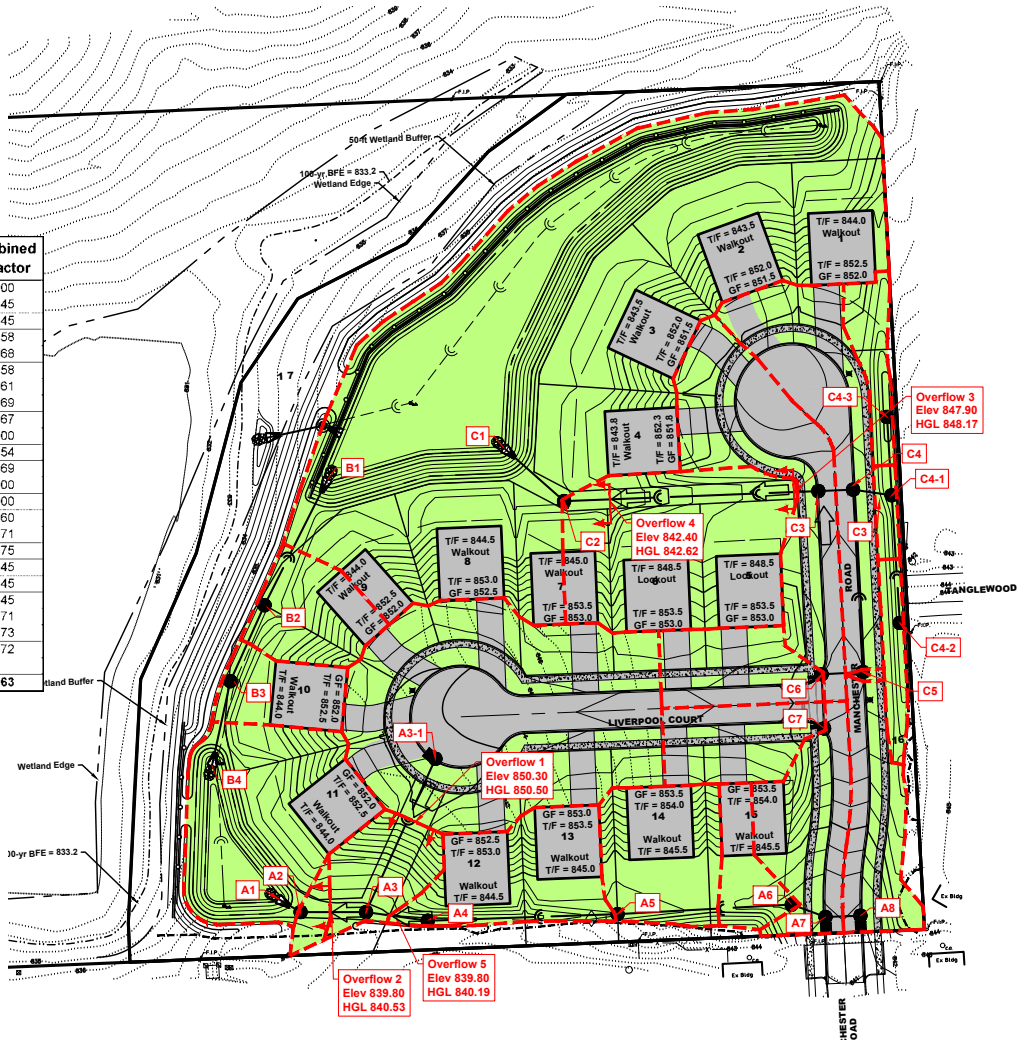
| Structure ID: North 100-Year Restrictor<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 835.90 ft |
| Orifice Diameter | 3.00 in |
| Orifice Coefficient | 0.610 |

# 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: | 08-26-2025 |
| Project No. | 24-136 |
| Sheet | 1 / 1 |

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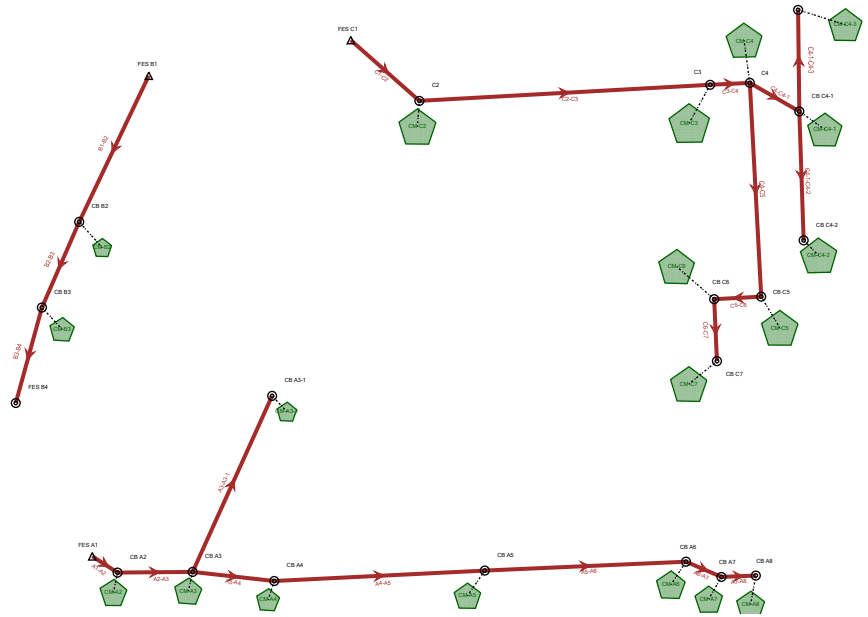
# Meadow Wood East Storm Sewer Calculations

## 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 | 835.20 | 197.8 | 0.013 | 18.0 | 0.013 | 5.12 | 6.54 | 1.01 | 12.05 |
| 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 | 835.20 | FES C1 | 834.40 | 62.2 | 0.013 | 18.0 | 0.013 | 6.79 | 6.96 | 0.81 | 11.91 |
| 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 | 835.39 | CB B2 | 834.80 | 63.5 | 0.009 | 36.0 | 0.013 | 17.31 | 7.72 | 1.40 | 64.31 |
| 78 | B1-B2 | CB B2 | 834.80 | FES B1 | 834.40 | 109.9 | 0.004 | 36.0 | 0.013 | 17.85 | 5.52 | 1.35 | 40.24 |
| 79 | B3-B4 | FES B4 | 836.00 | CB B3 | 835.39 | 67.2 | 0.009 | 36.0 | 0.013 | 16.78 | 7.59 | 1.33 | 63.54 |
| 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 |

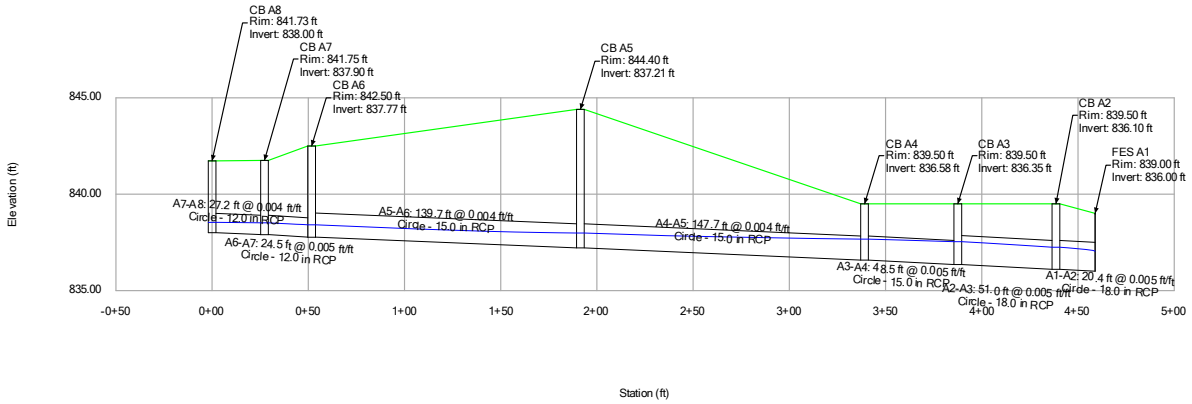
## Meadow Wood East Storm Sewer Calculations

### 10-Year Storm Event

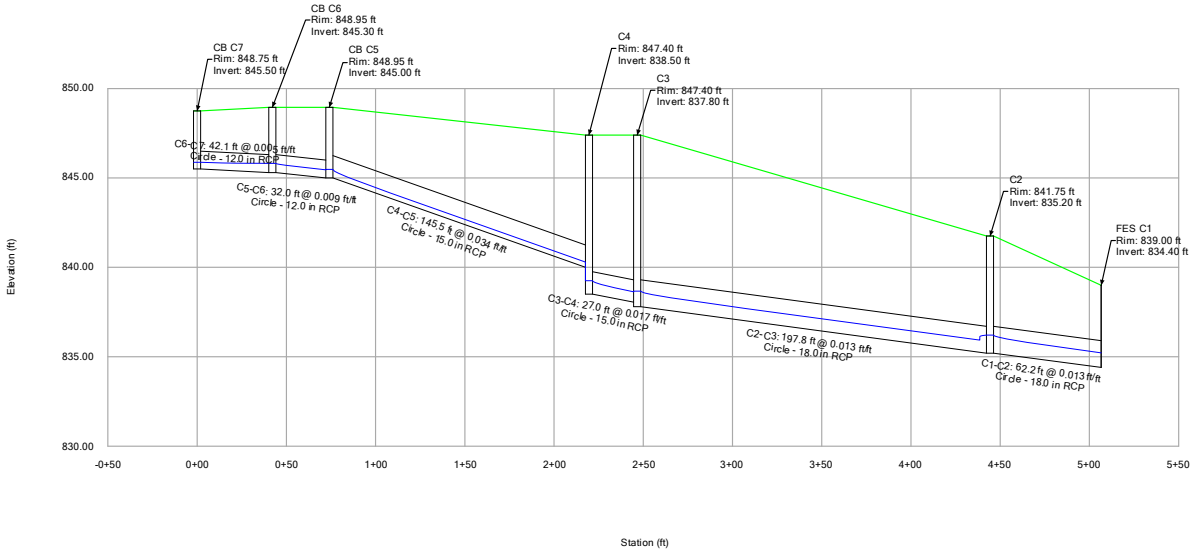
**Combined Pipe/Node Report - Time: 0.00 hours**

| 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 | 12.05 | 6.54 | 837.80 | 835.20 | 838.67 | 836.21 | 0.013 |
| 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 | 6.130 | 0.474 | 6.79 | 1.50 | 11.91 | 6.96 | 835.20 | 834.40 | 836.21 | 835.21 | 0.013 |
| 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 | 64.31 | 7.72 | 835.39 | 834.80 | 836.72 | 836.20 | 0.009 |
| B1-B2 | CB B2 | FES B1 | 109.9 | 0.540 | 6.444 | 0.156 | 17.85 | 3.00 | 40.24 | 5.52 | 834.80 | 834.40 | 836.20 | 835.75 | 0.004 |
| B3-B4 | FES B4 | CB B3 | 67.2 | (N/A) | 7.436 | (N/A) | 16.78 | 3.00 | 63.54 | 7.59 | 836.00 | 835.39 | 837.31 | 836.72 | 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 |

## 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 | 835.20 | 197.8 | 0.013 | 18.0 | 0.013 | 8.58 | 7.40 | 1.29 | 12.05 |
| 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 | 835.20 | FES C1 | 834.40 | 62.2 | 0.013 | 18.0 | 0.013 | 11.40 | 7.67 | 1.18 | 11.91 |
| 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 | 835.39 | CB B2 | 834.80 | 63.5 | 0.009 | 36.0 | 0.013 | 17.66 | 7.76 | 1.43 | 64.31 |
| 78 | B1-B2 | CB B2 | 834.80 | FES B1 | 834.40 | 109.9 | 0.004 | 36.0 | 0.013 | 18.57 | 5.58 | 1.38 | 40.24 |
| 79 | B3-B4 | FES B4 | 836.00 | CB B3 | 835.39 | 67.2 | 0.009 | 36.0 | 0.013 | 16.78 | 7.59 | 1.34 | 63.54 |
| 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 |

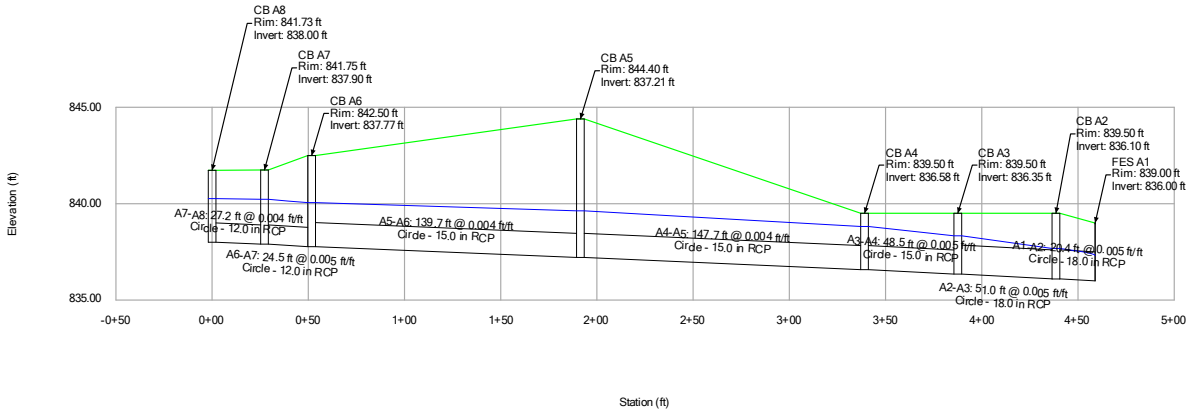
## Meadow Wood East Storm Sewer Calculations

### 100-Year Storm Event

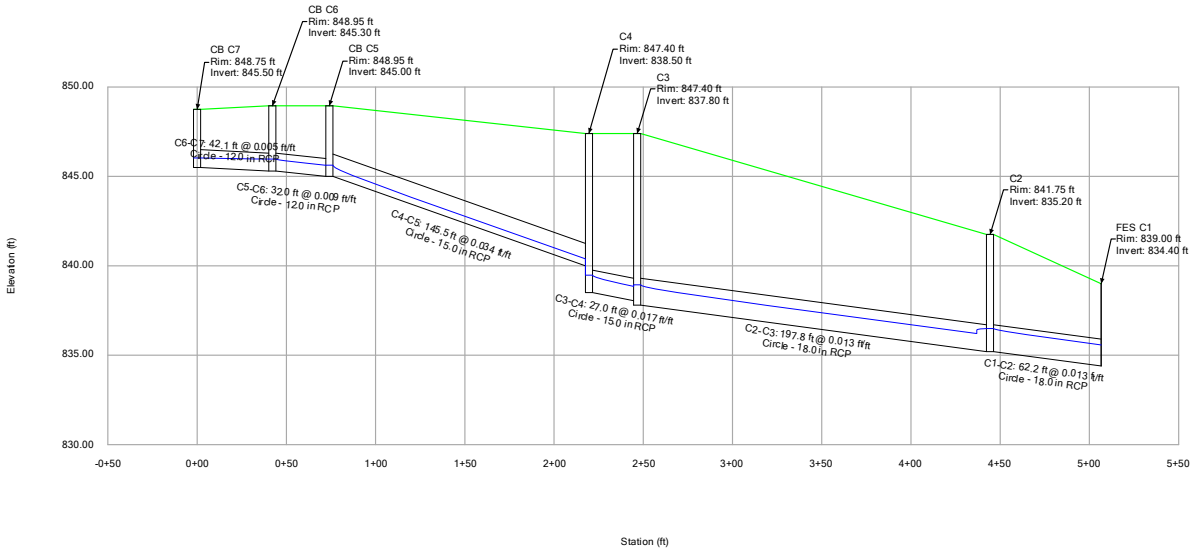
**Combined Pipe/Node Report - Time: 0.00 hours**

| 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 | 12.05 | 7.40 | 837.80 | 835.20 | 838.94 | 836.49 | 0.013 |
| 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 | 10.288 | 0.474 | 11.40 | 1.50 | 11.91 | 7.67 | 835.20 | 834.40 | 836.49 | 835.58 | 0.013 |
| 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 | 64.31 | 7.76 | 835.39 | 834.80 | 836.73 | 836.23 | 0.009 |
| B1-B2 | CB B2 | FES B1 | 109.9 | 0.540 | 10.742 | 0.156 | 18.57 | 3.00 | 40.24 | 5.58 | 834.80 | 834.40 | 836.23 | 835.78 | 0.004 |
| B3-B4 | FES B4 | CB B3 | 67.2 | (N/A) | 12.354 | (N/A) | 16.78 | 3.00 | 63.54 | 7.59 | 836.00 | 835.39 | 837.31 | 836.73 | 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 |

## Meadow Wood East Storm Sewer Calculations
## 100-Year Storm Event



## Meadow Wood East Storm Sewer Calculations
## 100-Year Storm Event




24136-StormCAD.stsw
12/2/2025

Bentley Systems, Inc. Haestad Methods Solution Center
76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666

StormCAD
[10.03.04.53]
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# 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)<br>C = Weir coefficient = 3.3<br>Q = Flow rate (cfs)<br>P = Wetted perimeter of grate (ft)<br>h = Head (ft)<br>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)<br>Q = flow rate (cfs)<br>A = Open area of grate (sf)<br>g = Gravitation constant = 32.174 ft/s^2<br>h = Head (ft)<br>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)<br>C = Weir coefficient = 3.3<br>Q = Flow rate (cfs)<br>L = Unobstructed length of curb opening (ft)<br>h = Head (ft) (max 6")<br>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:**

$Q_g = 0.56 \frac{Z_g}{n} \left(d_g^{8/3} - d_p^{8/3}\right) S^{1/2}$ (IDOT Eq. 8-4)

$Q_p = 0.56 \frac{Z_g}{n} dp^{8/3} S^{1/2}$ (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:** 8/26/2025

### 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 |

**OVERFLOW-5**

**Required Flow Rate from Drainage Areas**

| | | |
|---|---|---|
| Trib. Areas = | A4,A5 | |
| **Total Area =** | **0.475** | **Ac.** |
| Combined c-Factor = | 0.63 | |
| $T_c$ = | 10 | min |
| $i_{100\text{-}yr}$ = | 10.80 | min |
| Q (Q=CiA): | 3.25 | cfs |
| **Total Q:** | **3.25** | **cfs** |

**Cipoletti Weir Capacity**

| | |
|---|---|
| Weir Coef. = | 3.367 |
| Weir Length = | 4 ft. |
| Crest Elevation = | 839.80 |
| Head = | 0.39 |
| Overflow Elevation = | 840.19 |

# APPENDIX G – Preliminary Wetland Assessment

DKES INC.

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<br>Houghton muck ponded<br>0 to 2 percent slopes<br><br>Hydric | LAKE CO SMC*<br>---------- | 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)**

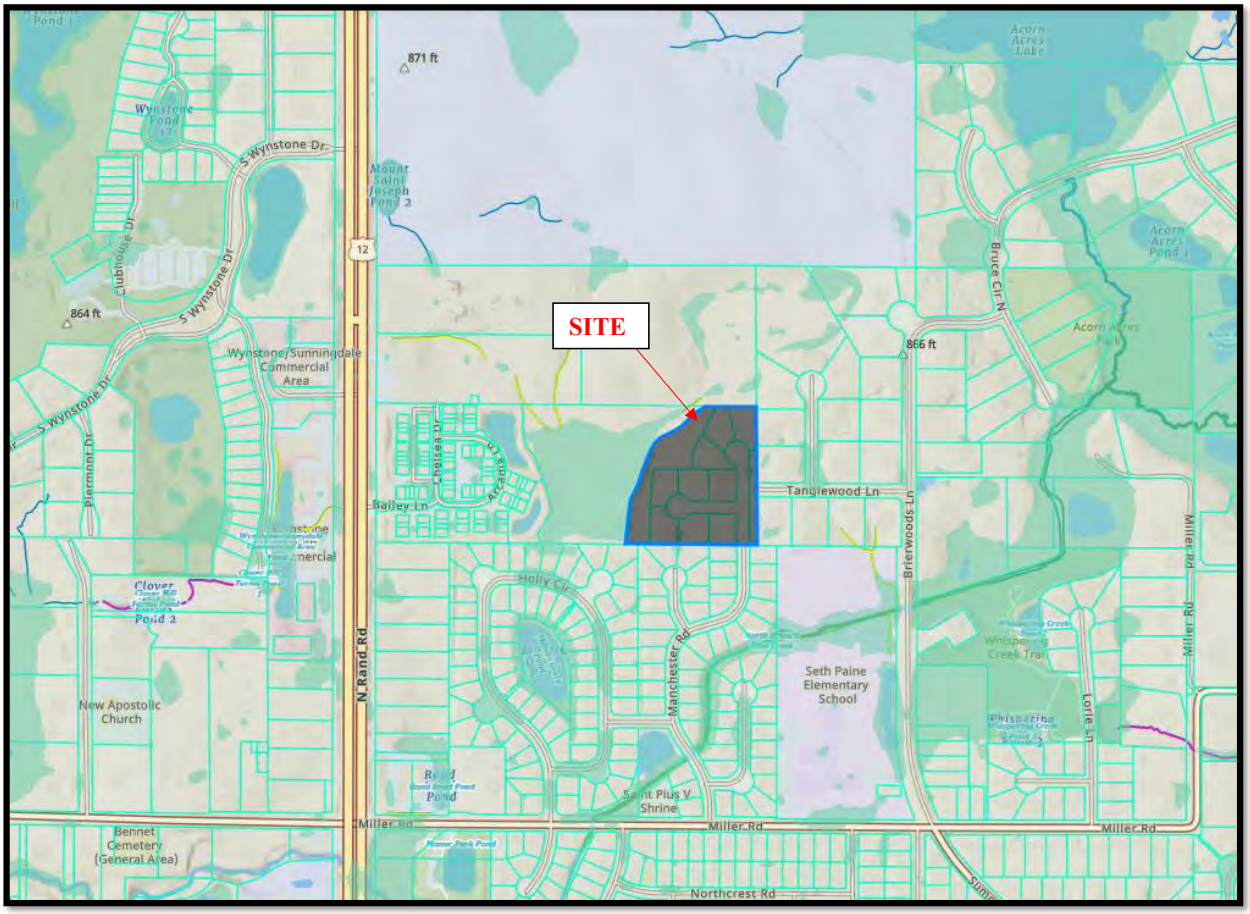
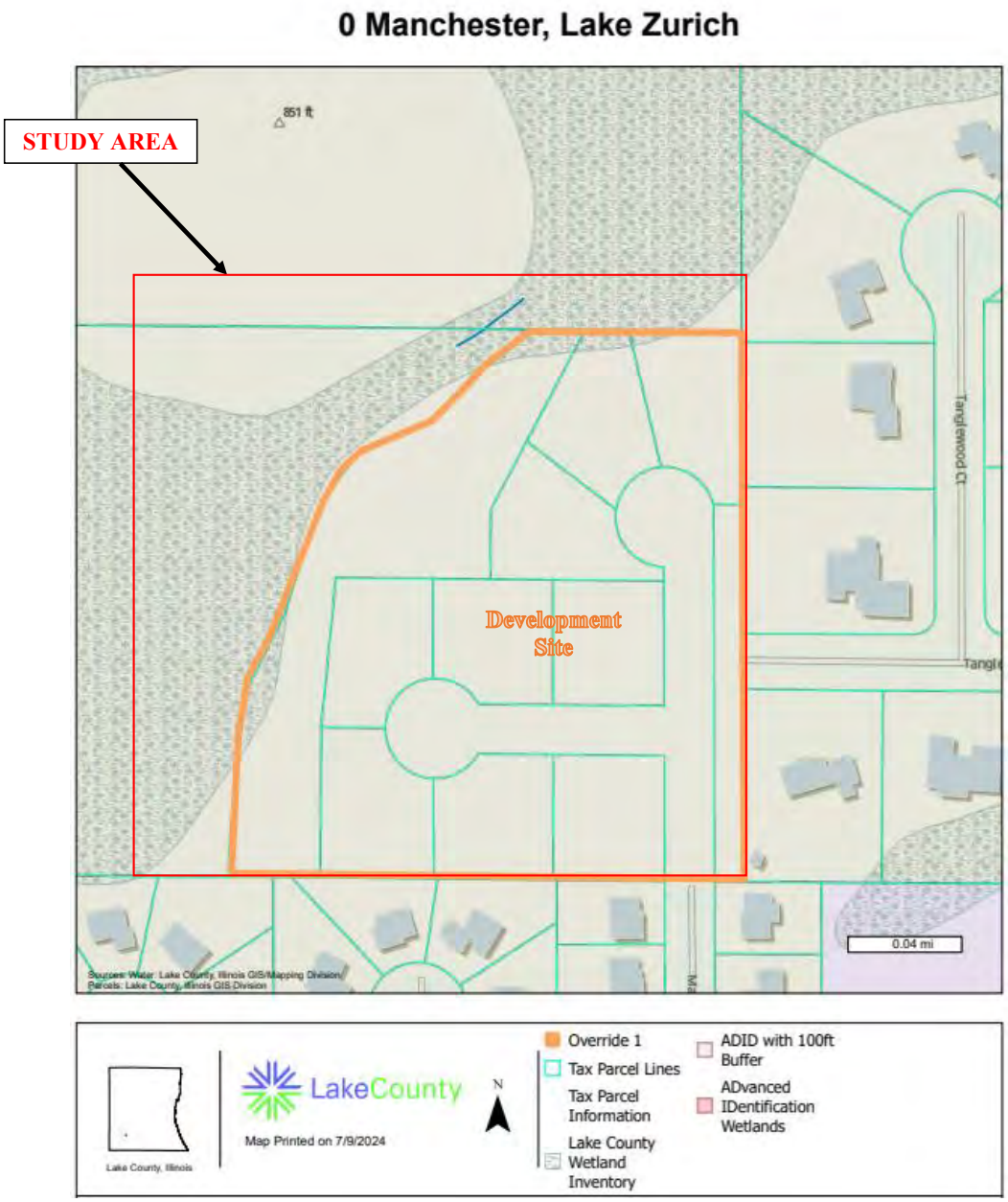
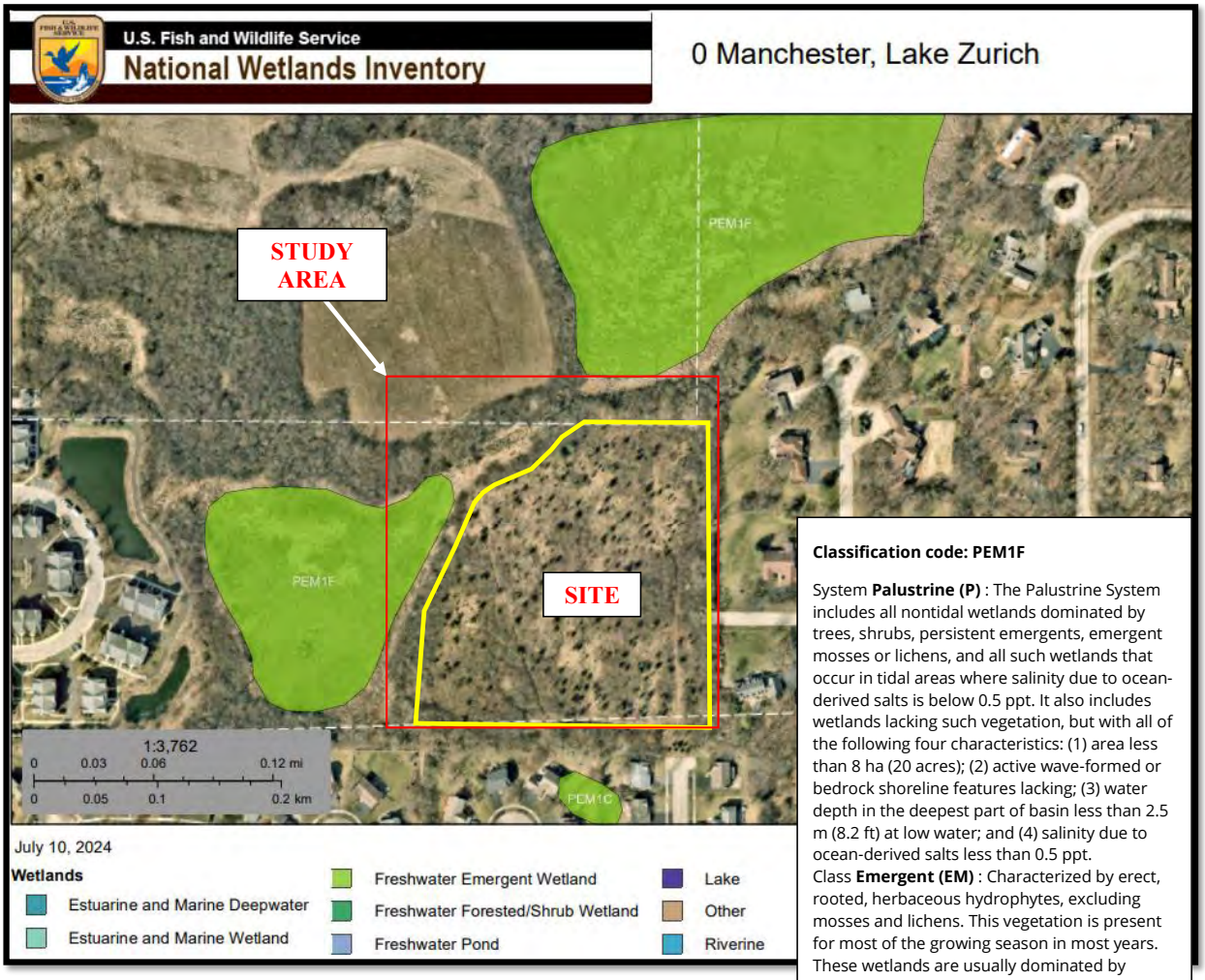


*Exhibit 2: LAKE COUNTY WETLAND INVENTORY*



## ***Exhibit 3: National Wetland Inventory (NWI)***

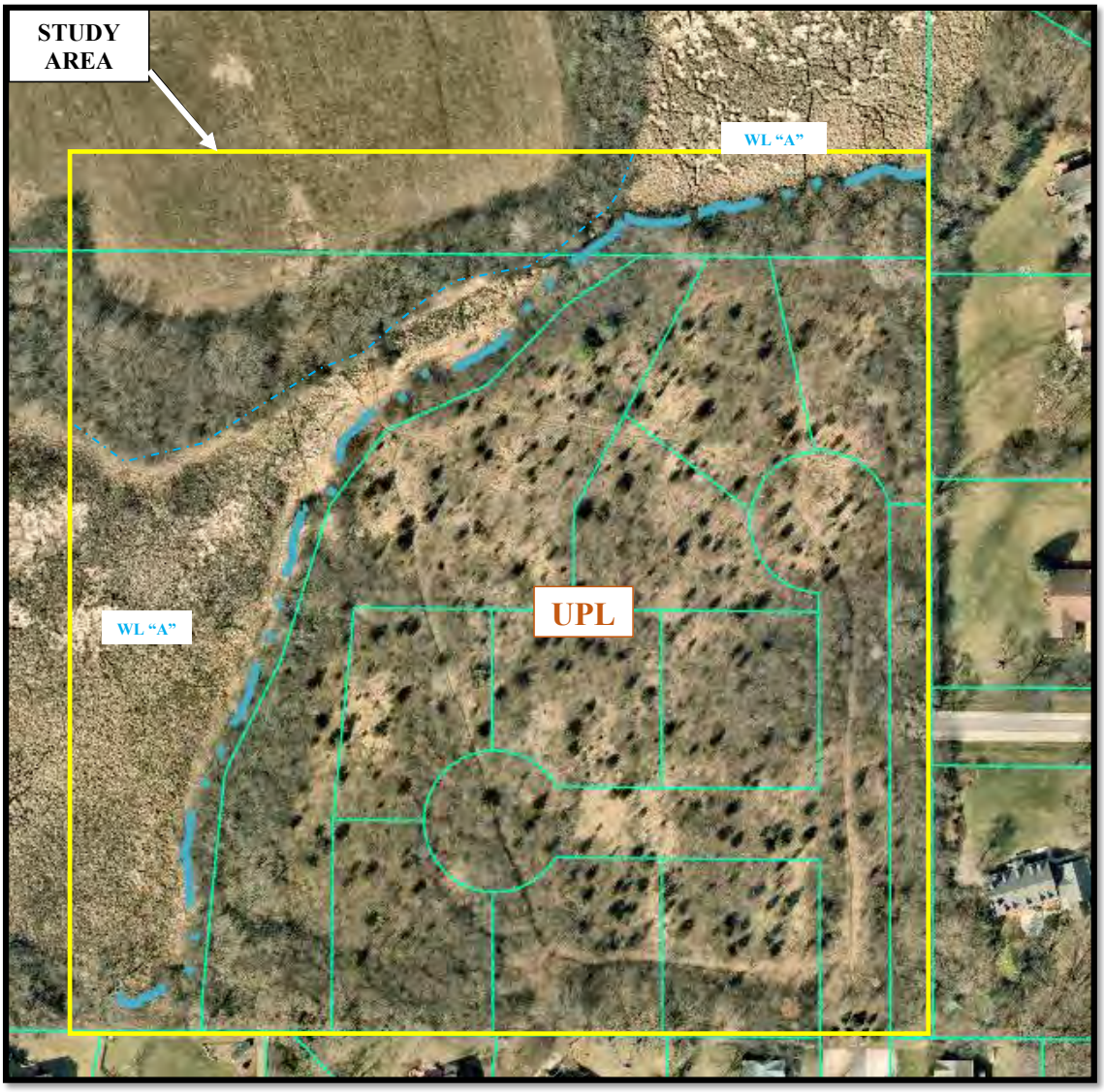



**Classification code: PEM1F**

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.

DKES INC.

***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<br>5-year intervals | Groom<br>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<br>Re-seed<br>Restore Riprap |
| Emergency Outflow Pipes | 5-year intervals | Restore / replace<br>Inflow & Outflow Openings |
| Manholes | As needed basis | Reset cover / lid |

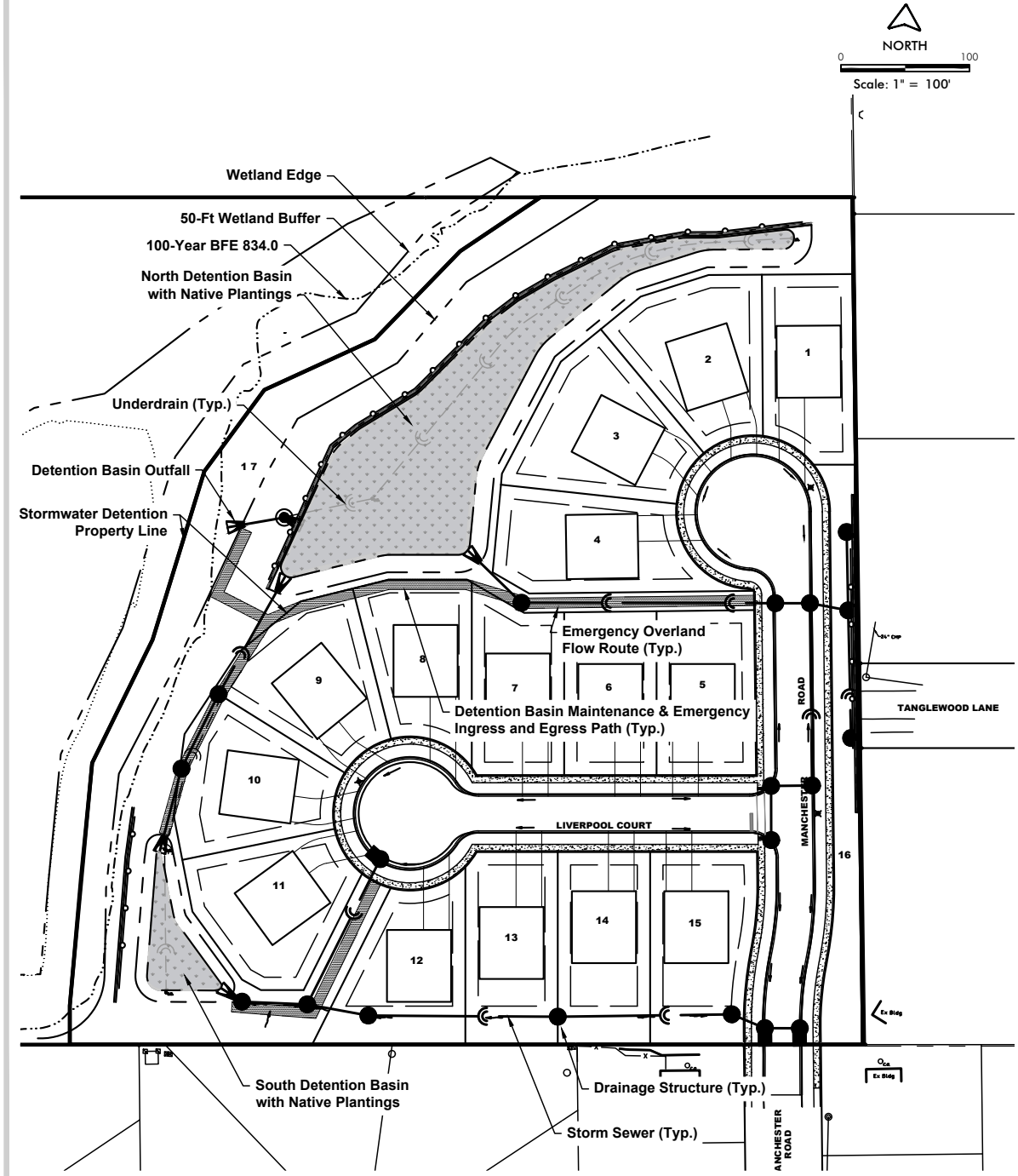



**EXHIBIT A**

**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: | 12-02-2025 |
| Project No. | 24-136 |
| Sheet | 1 / 1 |

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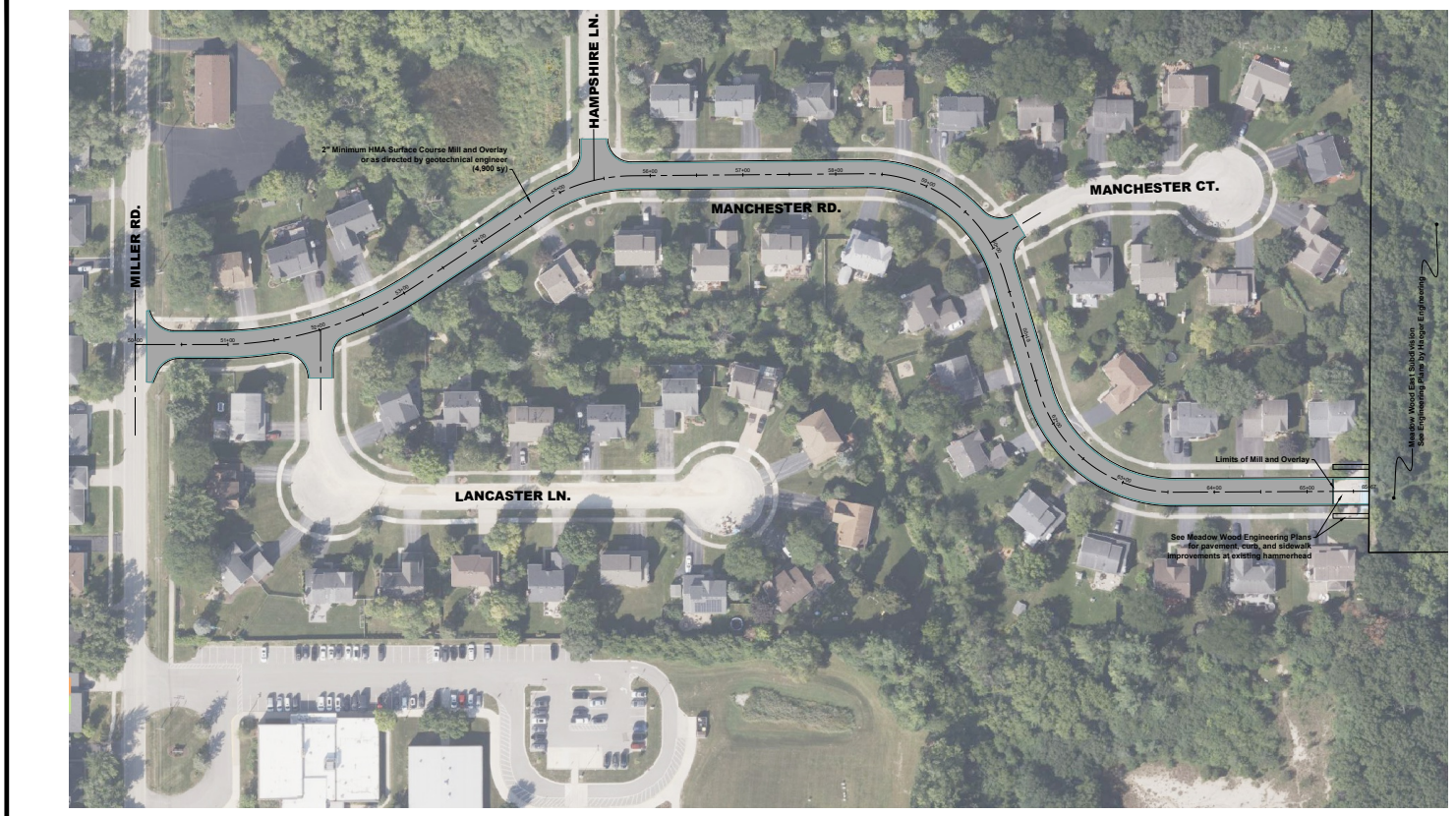


Note:
1. Manchester Road between Miller Road and Meadow Wood East Subdivision shall be evaluated by a third party geotechnical engineer before and after the Meadow Wood East improvements are completed.
2. The geotechnical engineer shall provide a photographic survey of the existing conditions of the road surface, curbs, and sidewalks, with the assumption that a minimum 2" mill and overlay will be required pending evaluation by the geotechnical engineer.
3. The geotechnical engineer shall determine the required resurfacing treatment.
4. Concrete curb and sidewalks shall be removed and replaced where required by the Village.

NORTH
Scale: 1" = 50'

No. | Date | Revision
1 | 10.8.2025 | Village Comments

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Illinois Professional Design Firm 184.007132
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OFF-SITE IMPROVEMENT PLAN
MEADOW WOOD EAST SUBDIVISION
FINAL ENGINEERING

Project Manager: M.L.A.
Engineer: K.M.L.
Date: 08-26-2025
Project No. 24-136
Sheet 1/1

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: 8/26/2025

SUMMARY OF ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

| Section | Description | Total Cost |
|---|---|---|
| A | Demolition & Debris Removal | $ 38,243.00 |
| B | Soil Erosion & Sediment Control | $ 82,550.00 |
| C | Earthwork Improvements | $ 150,000.00 |
| D | Storm Sewer Improvements | $ 240,220.00 |
| E | Water Main Improvements | $ 210,235.00 |
| F | Sanitary Sewer Improvements | $ 118,525.00 |
| G | Pavement Improvements | $ 254,044.00 |
| H | Miscellaneous | $ 117,964.75 |
| | Total | $ 1,211,781.75 |
| | Contingency (10%) | $ 121,178.18 |
| | Total W/ Contingency | $ 1,332,959.93 |

Item No.

| A | Demolition & Debris Removal | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | Curb & Gutter Removal | 89 | LF | $25.00 | $2,225.00 |
| 2 | Tree Removal | 22 | EA | $500.00 | $11,000.00 |
| 3 | Clearing and Brush Removal | 1 | LS | $15,000.00 | $15,000.00 |
| 4 | Fire Hydrant Removal | 2 | EA | $1,000.00 | $2,000.00 |
| 5 | Valve Vault Removal | 3 | EA | $1,250.00 | $3,750.00 |
| 6 | Sawcut Pavement | 52 | LF | $4.00 | $208.00 |
| 7 | Full Depth Pavement Removal | 203 | SY | $20.00 | $4,060.00 |
| | | | | Subtotal | $38,243.00 |

| B | Soil Erosion & Sediment Control | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | Silt Fence | 3,920 | LF | $2.50 | $9,800.00 |
| 2 | Tree Protection Fence | 700 | LF | $4.00 | $2,800.00 |
| 3 | Stabilized Construction Entrance | 1 | EA | $10,000.00 | $10,000.00 |
| 4 | Inlet Protection | 23 | EA | $250.00 | $5,750.00 |
| 5 | Ditch Checks | 5 | EA | $300.00 | $1,500.00 |
| 6 | Concrete Washout | 1 | EA | $5,000.00 | $5,000.00 |
| 7 | Temporary Seeding & Erosion Control Blanket | 4.77 | Ac | $10,000.00 | $47,700.00 |
| | | | | Subtotal | $82,550.00 |

| 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 | 714 | LF | $40.00 | $28,560.00 |
| 2 | Storm Sewer - 12" HDPE | 473 | LF | $40.00 | $18,920.00 |
| 3 | Storm Sewer - 15" HDPE | 562 | LF | $45.00 | $25,290.00 |
| 4 | Storm Sewer - 18" HDPE | 331 | LF | $55.00 | $18,205.00 |
| 5 | Storm Sewer - 36" HDPE | 241 | LF | $125.00 | $30,125.00 |
| 6 | Catch Basin - Type C, 24" Dia. | 2 | EA | $2,000.00 | $4,000.00 |
| 7 | Catch Basin - Type A, 48" Dia. | 15 | EA | $3,500.00 | $52,500.00 |
| 8 | Catch Basin - Type A, 60" Dia. | 2 | EA | $9,000.00 | $18,000.00 |
| 9 | Outlet Control Structure w/Restrictor, 60" Dia. | 1 | EA | $12,500.00 | $12,500.00 |
| 10 | Inlet - Type C, 24" Dia. | 3 | EA | $1,800.00 | $5,400.00 |
| 11 | Underdrain Cleanout | 4 | EA | $500.00 | $2,000.00 |
| 12 | Flared End Section, 15" Dia. | 2 | EA | $2,600.00 | $5,200.00 |

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# Engineer's Opinion of Probable Construction Cost

Project: Meadow Wood
Location: Lake Zurich, Illinois
Project #: 24-136

Prepared: FRM
Reviewed: KML
Date: 8/26/2025

| | | | | | |
|---|---|---|---|---|---|
| 13 | Flared End Section, 18" Dia. | 2 | EA | $2,800.00 | $5,600.00 |
| 14 | Flared End Section, 36" Dia. | 2 | EA | $4,400.00 | $8,800.00 |
| 15 | Trench Backfill | 128 | CY | $40.00 | $5,120.00 |
| | | | | Subtotal | $240,220.00 |

| E | Water Main Improvements | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | PVC C-900 Watermain - 8" | 1,101 | LF | $75.00 | $82,575.00 |
| 2 | 1" Type K Copper Service (B-Box, Fittings, & Trench Backfill) | 15 | EA | $3,000.00 | $45,000.00 |
| 3 | Fire Hydrant Assembly w/ 6" Hydrant Lead | 4 | EA | $8,500.00 | $34,000.00 |
| 4 | Valve Vault, 48" Dia. | 1 | EA | $4,500.00 | $4,500.00 |
| 5 | Pressure Connection in Valve Vault, 48" Dia. | 2 | EA | $18,000.00 | $36,000.00 |
| 6 | Watermain Testing & Chlorination | 1 | EA | $2,000.00 | $2,000.00 |
| 7 | Trench Backfill | 154 | CY | $40.00 | $6,160.00 |
| | | | | Subtotal | $210,235.00 |

| F | Sanitary Sewer Improvements | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | Sanitary Sewer - 8" PVC SDR 26 | 911 | LF | $55.00 | $50,105.00 |
| 2 | Sanitary Service - 6" PVC SDR 26 | 532 | LF | $40.00 | $21,280.00 |
| 3 | Sanitary Manhole - Type A, 48" Dia. | 6 | EA | $5,500.00 | $33,000.00 |
| 4 | Connection to Existing Sanitary Manhole | 1 | EA | $4,500.00 | $4,500.00 |
| 5 | Trench Backfill | 241 | CY | $40.00 | $9,640.00 |
| | | | | Subtotal | $118,525.00 |

| 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, Ty. B, CA-6 | 9,085 | SF | $8.00 | $72,680.00 |
| 6 | Pavement Striping and Signage | 1 | LSUM | $1,500.00 | $1,500.00 |
| 7 | M3.12 Curb & Gutter | 1,748 | LF | $25.00 | $43,700.00 |
| | | | | Subtotal | $254,044.00 |

| H | Miscellaneous | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | Segmental Block Retaining Wall (from Apex Landscaping Inc.) | 1 | LS | $119,000.00 | $119,000.00 |
| 2 | Fence / Railing (42" High) | 825 | LF | $40.00 | $33,000.00 |
| 3 | Landscaping (from Apex Landscaping Inc.) | 1 | LS | $117,964.75 | $117,964.75 |
| | | | | Subtotal | $117,964.75 |

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)

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: 8/26/2025

***Disclaimer:***

*This Engineer's Opinion of Probable Construction Cost is based on the "Meadow Wood - Final Engineering" plans with the latest revision date of August 26, 2025. Quantities and line items are subject to change pending review & approval of the Plans by permitting agencies. 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.*

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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: 8/26/2025

| Manchester Road Resurfacing Improvements | | Quantity | Unit | Unit Price | Total Amount |
|---|---|---|---|---|---|
| 1 | 2" HMA Surface Removal | 4,900 | SY | $4.00 | $19,600.00 |
| 2 | 2" HMA Surface Course, Mix C, IL-9.5, N50 | 4,900 | SY | $16.00 | $78,400.00 |
| 3 | Bituminous Materials (Tack Coat) (0.05 lbs/sf) | 2,205 | LB | $0.50 | $1,102.50 |
| 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 |
| | | | Total | | $ 113,102.50 |
| | | | Contingency (10%) | | $ 11,310.25 |
| | | | Total W/ Contingency | | $ 124,412.75 |

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:*

*This Engineer's Opinion of Probable Construction Cost is based on the "Meadow Wood East Subdivision Offsite Improvement Plan" dated August 26, 2025. 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.*

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<br>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.

*IDNR Project Number: 2505140*

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EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.

Meadow Wood East Project Schedule

SITE

Clearing
Start 7/1/2025
Complete 7/11/2025

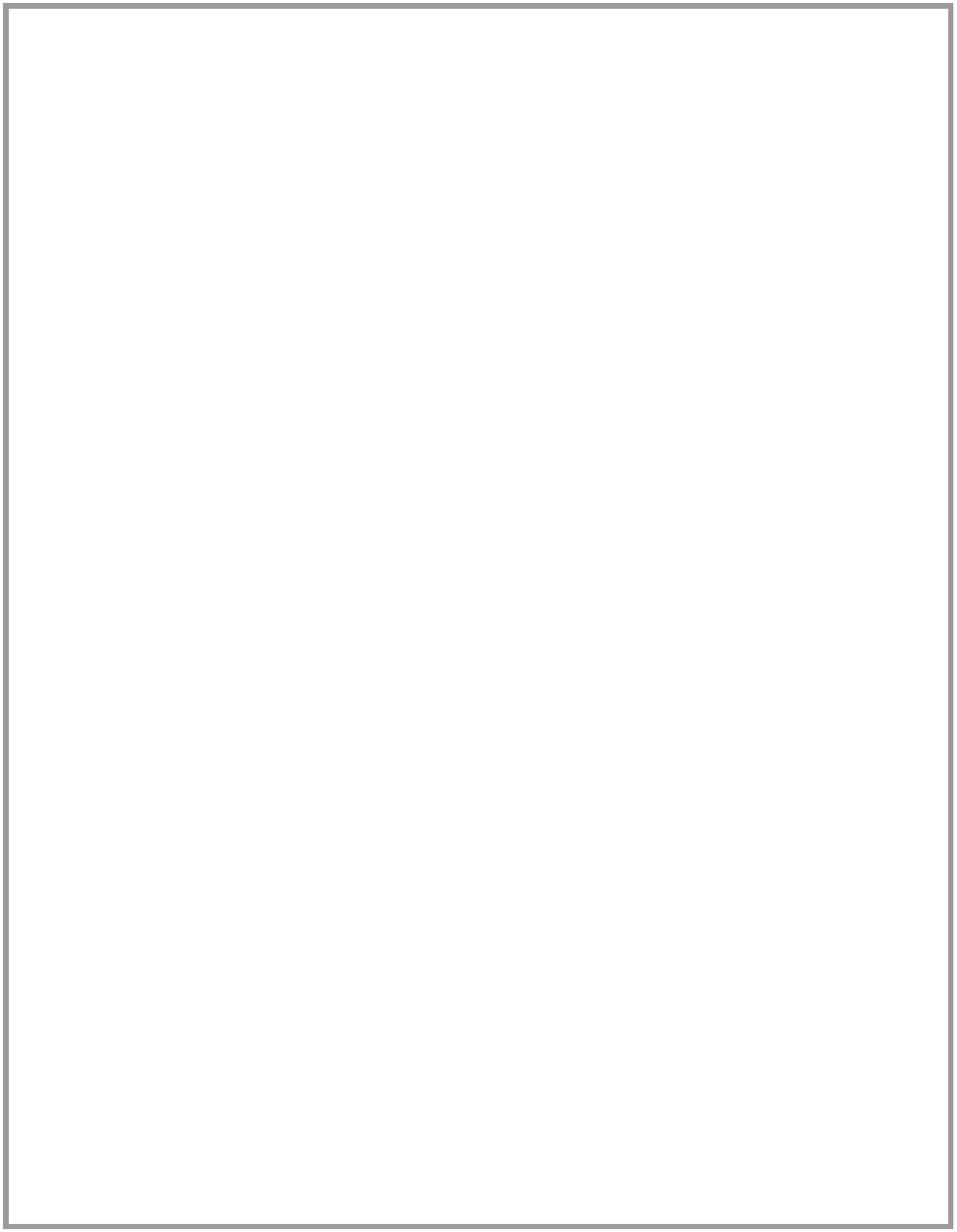
Grading & Site Utilities
Start 7/14/2025
Complete 9/2/2025

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 |



INSERT RECORDING INFO IN EXHIBIT A PRIOR TO RECORDING

*THIS INSTRUMENT PREPARED BY AND SHOULD BE RETURNED TO:*

*Christopher Koziol*

*6444 N Milwaukee Ave.*
*Chicago, Illinois 60631*

*PIN: See Exhibit A*

**ABOVE SPACE FOR RECORDER'S USE ONLY**

# DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS

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**DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS ASSOCIATION**

This Declaration ("Declaration") is made by 0 MANCHESTER LLC, an Illinois corporation ("Declarant").

R E C I T A L S

Declarant is the record title holder of a portion of the property which is legally described in Exhibit A hereto (the "Premises"). The Premises shall be the subject of a development called Meadow Wood East homeowners Association (the "Development"). The Development shall include dwelling units and other areas which will be maintained by the Association.

The Declarant shall subject the Premises to the provisions of this Declaration. From time to time the Declarant may subject additional property to the provisions of this Declaration as Added Premises or remove portions of the Premises, as more fully described in Article Twelve.

Certain portions of the Premises not improved with a Home (including outlots owned by the Association and those portions of each Parcel which are not improved with a Home whether owned by an Owner of the Association), shall be designated as a Common Area hereunder. In order to provide for the orderly and proper administration and maintenance of the Premises, the Declarant has formed (or will form) the Association under the Illinois General Not-for-Profit Corporation Act of 1986.

The Association shall have the responsibility for administering and maintaining the Common Area and certain portions of the Parcels and Home Exteriors and shall set budgets and fix assessments to pay the expenses incurred in connection with such duties. Each Owner of a Parcel shall be a member of the Association and shall be responsible for paying assessments with respect to the Parcel owned by such Owner.

During the construction and marketing of the Development, the Declarant shall retain certain rights set forth in this Declaration, which rights shall include, without limitation, the right, prior to the Turnover Date, to manage the affairs of the Association or to designate the Board of the Association, as more fully described in Article Nine and in the By-Laws, the right to come upon the Premises in connection with Declarant's efforts to sell Homes and other rights reserved in Article Nine.

NOW, THEREFORE, the Declarant hereby declares as follows:

ARTICLE ONE
DEFINITIONS

For the purpose of brevity and clarity, certain words and terms used in this Declaration are defined as follows:

1.01 AGREEMENT DEVELOPMENT: Development agreement between Lake Zurich and 0 Manchester LLC.

1.02 ASSOCIATION: The Meadow Wood East Homeowners Association, an Illinois not for profit corporation, and its successors and assigns.

1.03 BOARD: The board of directors of the Association, as constituted at any time or from time to time.

1.04 BY-LAWS: The by-laws of the Association, a copy of which is attached as Exhibit B hereto and by reference made a part hereof.

1.05 CHARGES: The Common Assessment, any special assessment levied by the Association and/or any other charges or payments which an Owner is required to pay or for which an Owner is liable under this Declaration or the By-Laws.

1.06 COMMON AREA: Those portions of the Premises which are designated as "Common Area" in Exhibit A hereto from time to time and all improvements located thereon.

1.07 COMMON ASSESSMENT: The amounts which the Association shall assess and collect from the Owners to pay the Common Expenses and accumulate reserves for such expenses, as more fully described in Article Six.

1.08 COMMON EXPENSES: The expenses of operating and administering (including management and professional services) of the Association; the expenses of providing all maintenance, repair and replacement required to be furnished by the Association under this Declaration; premiums for insurance policies maintained by the Association hereunder; the cost of general and special real estate taxes, if any, levied or assessed against the Common Area (which is not part of a Parcel); if not separately metered or charged to the Owners, the cost of waste removal, scavenger services, water, sewer, or other necessary utility services to the buildings; and any expenses designated as Common Expenses hereunder.

[New Section] - BACKUP SSA: The Municipality may establish a "Special Service Area" to serve as what is commonly referred to as a "Backup Special Service Area" to give the Municipality the power to levy taxes to pay the cost of maintaining the areas required to be maintained by the Association hereunder if the Association fails to do so and the Municipality chooses to furnish such services. Such language shall also create the right, without obligation, for the Village to enter the premises for necessary or emergency maintenance and/or to maintain, repair and/or replace and preserve such area and impose the costs of such work on the Owners, with lien rights in the event of nonpayment, or by recourse to the imposition of the revenues derived from the backup Special Service Area.

1.09 COUNTY: Lake County, Illinois or any political entity which may from time to time be empowered to perform the functions or exercise the powers vested in the County as of the Recording of this Declaration.

1.10 DECLARANT: 0 Manchester LLC, an Illinois corporation, its successors and assigns. For the purposes of this Declaration, the Declarant shall be the "Developer,"

as that term may be used in this Declaration or applicable statutes.

1.11 DECLARANT'S DEVELOPMENT PLAN: Declarant's current plan for the Development. Declarant's plan shall be maintained by the Declarant at its principal place of business and may be changed at any time or from time to time without notice.

1.12 DECLARATION: This instrument with all Exhibits hereto, as amended or supplemented from time to time.

1.13 DIRECTOR: A duly elected member of the board of directors of the Association.

1.14 FIRST MORTGAGEE: The holder of a bona fide first mortgage, first trust deed or equivalent security interest covering a Parcel.

1.15 HOME: That portion of a Parcel/ Lot which is improved with a dwelling unit.

1.16 HOME EXTERIOR: The roof, gutters, downspouts, foundation or slab, footings, sidewalks, stoops, steps, patios, balconies, decks and outer surface of exterior walls of a Home. The Home Exterior shall not include windows, window frames, window glass, doors (including garage and storm doors) or screening which are part of a Home.

1.17 MUNICIPALITY: The Village of Lake Zurich, an Illinois municipal corporation, or any entity which may from time to time be empowered to perform the functions or exercise the powers vested in the Municipality as of the Recording of this Declaration.

1.18 OWNER: A Record owner, whether one or more persons, of fee simple title to a Parcel, including a contract seller, but excluding those having such interest merely as security for the performance of an obligation. The Declarant shall be deemed to be an Owner with respect to each Parcel/ Lot owned by the Declarant.

1.19 PARCEL or LOT: A Parcel (sometimes referred herein as a Lot) shall mean Lots 1-15, inclusive referenced on the Plat of Subdivision. Each Lot in the Premises shall be improved with a building containing a Home. Each Lot shall be legally described in the deed which conveys the Lot to the first purchaser thereof from the Declarant and the Lot so described, together with all improvements thereon, shall be a "Parcel" or "Lot" hereunder.

1.20 PERSON: A natural individual, corporation, partnership, trustee or other legal entity capable of holding title to real property.

1.21 PLAT: The Plat of Subdivision attached as Exhibit C hereto, and such other plats as may be made a part hereof, which sets forth the measurements, elevations, and/or locations of each Lot.

1.22 PREMISES: The real property legally described in Exhibit A hereto, with all improvements thereon and rights appurtenant thereto.

1.23 RECORD: To record in the office of the Recorder of Deeds for the County.

1.24 RESIDENT: An individual who resides in a Home.

1.25 SUBJECT TO ASSESSMENT: A Parcel shall only be "Subject to Assessment" hereunder from and after such time as a temporary, conditional or permanent certificate of occupancy has been issued for the Home constructed thereon and the Parcel is conveyed by the Declarant to the first purchaser thereof.

1.26 TURNOVER DATE: The date on which the rights of the Declarant to manage the affairs of the Association are terminated under Section 9.05.

1.27 VOTING MEMBER: The individual who shall be entitled to vote in person or by proxy at meetings of the Owners, as more fully set forth in Article Five and the By-Laws.

## ARTICLE TWO
## SCOPE OF DECLARATION/CERTAIN EASEMENTS

2.01 PROPERTY SUBJECT TO DECLARATION: Declarant, as the owner of fee simple title to the Premises, expressly intends to and by Recording this Declaration, does hereby subject the Premises to the provisions of this Declaration. Declarant shall have the right from time to time to subject additional property to the provisions of this Declaration as Added Premises or to remove portions of the property from the terms hereof, as provided in Article Twelve hereof.

2.02 CONVEYANCES SUBJECT TO DECLARATION: All easements, restrictions, conditions, covenants, reservations, liens, charges, rights, benefits, and privileges which are granted, created, reserved or declared by this Declaration shall be deemed to be covenants appurtenant, running with the land and shall at all times inure to the benefit of and be binding on any Person having at any time any interest or estate in the Premises, and their respective heirs, successors, personal representatives or assigns, regardless of whether the deed or other instrument which creates or conveys the interest makes reference to this Declaration.

2.03 DURATION: Except as otherwise specifically provided herein the covenants, conditions, restrictions, easements, reservations, liens, and charges, which are granted, created, reserved or declared by this Declaration shall be appurtenant to and shall run with and bind the land for a period of forty (40) years from the date of Recording of this Declaration and for successive periods of ten (10) years each unless revoked, changed or amended in whole or in part as provided in Section 10.02.

2.04 PARCEL CONVEYANCE: Once a Parcel has been conveyed by the Declarant to a bona fide purchaser for value or any subsequent conveyance or transfer of ownership of the Parcel, such Declarant or Owner shall have no further obligations as an Owner of a Parcel.

2.05 ACCESS EASEMENTS: The Association, each Owner and Resident of a Parcel shall have a non-exclusive perpetual easement for ingress to and egress from his Parcel to public streets and roads over and across the roads, private driveways, pathways and walkways located on the Common Area, which easement shall run with the land, be appurtenant to and pass with title to every Parcel. Any governmental authority which has jurisdiction over the Premises, including without limitation, the Municipality, shall have a non-exclusive easement of access over private roads and driveways located on the Common Area and Parcels for police, fire, ambulance, waste removal, snow removal, or for the purpose of furnishing municipal or emergency services to the Premises. The Association, its employees, agents and contracts, shall have the right of ingress to, egress from, and parking on the Common Area, and the right to store equipment on the Common Area, for the purpose of furnishing any maintenance, repairs or replacements of the Common Area and Home Exteriors, as required or permitted hereunder.

2.06 RIGHT OF ENJOYMENT: Each Owner shall have the non-exclusive right and easement to use and enjoy the Common Area and the exclusive right to use and enjoy the Owner's Parcel and Home. Such rights and easements shall run with the land, be appurtenant to and pass

with title to every Parcel, and shall be subject to and governed by the laws, ordinances and statutes of jurisdiction, the provisions of this Declaration, the By-Laws, and the reasonable rules and regulations from time to time adopted by the Association, including the right of the Association to come upon a Parcel to furnish services hereunder.

2.07 DELEGATION OF USE: Subject to the provisions of this Declaration, the By-Laws, and the reasonable rules and regulations from time to time adopted by the Association, any Owner may delegate his right to use and enjoy the Common Area to Residents of the Owner's Home. An Owner shall delegate such rights to tenants and contract purchasers of the Owner's Parcel who are Residents.

2.08 RULES AND REGULATIONS : The use and enjoyment of the Premises shall at all times be subject to reasonable rules and regulations duly adopted by the Association from time to time.

2.09 UTILITY EASEMENTS:

(a) The Municipality and all public and private utilities (including cable companies) serving the Premises are hereby granted the right to lay, construct, renew, operate, repair and maintain conduits, cables, pipes, wires, transformers, switching apparatus and other equipment, into and through the Common Area and Parcels for the purpose of providing utility or other services to the Premises.

(b) Each Owner of a Parcel shall have a perpetual easement for the continued existence and use of water, sewer, electric, gas or other utility lines, and/or components of other systems which were originally installed by the Declarant or a utility company and which serve the Owner’s Home, which utility lines or wiring may be located in the Common Area or any other portion of the Premises, including, without limitation, under or through another Home.

2.10 EASEMENTS, LEASES, LICENSES AND CONCESSIONS: The Association shall have the right and authority from time to time to lease or grant easements, licenses, or concessions with regard to any portions or all of the Common Area for such uses and purposes as the Board deem to be in the best interests of the Owners and which are not prohibited hereunder, including, without limitation, the right to grant easements for utilities or any other purpose which the Board deem to be in the best interests of the Owners. Any and all proceeds from leases, easements, licenses or concessions with respect to the Common Area shall be used to pay the Common Expenses. Also, the Association shall have the right and power to dedicate any part or all of the roads, parking areas or other vacant areas located on the Common Area (except any portion located on a Parcel) to the Municipality or other governmental authority which has jurisdiction over the Common Area. Each person, by acceptance of a deed, mortgage, trust deed, other evidence of obligation, or other instrument relating to a Parcel, shall be deemed to grant a power coupled with an interest to the Board, as attorney-in-fact, to grant, cancel, alter or otherwise change the easements provided for in this Section. Any instrument executed pursuant to the power granted herein shall be executed by the Manager of the Association prior to the Turnover Date or by a majority of the Board thereafter and duly Recorded.

2.11 ASSOCIATION'S ACCESS: The Association shall have the right and power to come onto any Parcel/ Lot, Home, or Home Exterior for the purpose of furnishing the services required to be furnished hereunder, including, without limitation, the services described in Section 3.02 and Section 3.07, or enforcing its rights and powers hereunder.

2.12 NO DEDICATION TO PUBLIC USE: Except for easements granted or dedications made as permitted in Sections 2.05, 2.09 and 2.10, nothing contained in this Declaration shall be construed or be deemed to constitute a dedication, express or implied, of any part of the Common Area to or for any public use or purpose whatsoever.

2.13 EASEMENT FOR ENCROACHMENT: In the event that by reason of the construction, repair, reconstruction, settlement or shifting of an improvement to a Parcel, any improvement which is intended to service and/or be part of the Parcel shall encroach upon any part of any other Parcel or upon the Common Area or any improvement to the Common Area shall encroach upon any part of a Parcel, then there shall be deemed to be an easement in favor of and appurtenant to such encroaching improvement for the continuance, maintenance, repair and replacement thereof; provided, however, that in no event shall an easement for any encroachment be created in favor of any Owner (other than Declarant), if such encroachment occurred due to the intentional, willful, or negligent conduct of such Owner or his agent. Without limiting the foregoing, the Owner of each Parcel shall have an easement appurtenant to his Parcel for the continuance, maintenance, repair and replacement of the following improvements, if any, which encroach onto another Parcel or the Common Area:

(a) the eaves, gutters, downspouts, fascia, flashings, and like appendages which serve the Home or the Parcel;

(b) the chimney which serves the Home on the Parcel;

(c) the air conditioning equipment which serves the Home on the Parcel; or

(d) balconies, steps, porches, decks, walkways, door entries and patios which serve the Home on the Parcel.

The Person who is responsible for the maintenance of any encroaching improvement for which an easement for continuance, maintenance, repair and replacement thereof is granted under this Section shall continue to be responsible for the maintenance of such encroaching improvement and the Person who is responsible for the maintenance of the real estate upon which such improvement encroaches shall not have the duty to maintain, repair or replace any such encroaching improvement unless otherwise provided in this Declaration.

2.14 OWNERSHIP OF COMMON AREA: Those portions of the Common Area, if any, which are part of a Parcel shall be owned by the Owner of the Parcel subject to the rights of the Association to maintain, repair and replace improvements thereon as provided in Article Three. Those portions of the Common Area which are not part of a Parcel, shall be conveyed to the Association free of mortgages no later than sixty (60) days after the Turnover Date, subject to the rights of Owners from time to time of the Parcels to use and enjoy such portions made subject hereto or the Common Area as provided herein.

2.15 LEASE OF HOME: Subject to the provisions of Section 9.02, an Owner shall have the right to lease all (and not less than all) of his Home subject to the following provisions:

(a) No Home shall be leased for less than twelve (12) months or for hotel or transient purposes;

(b) Any lease shall be in writing and shall provide that such lease shall be subject to the terms of this Declaration and that any failure of the lessee to comply with the terms of this Declaration shall be a default under the lease. A lessee shall be bound by the provisions hereof regardless of whether the lease specifically refers to this Declaration; and

(c) Each Owner who leases his Home shall be required to furnish the Association with a copy of the lease and shall promptly notify the Association of any change in status of the lease. The Association shall maintain a record of such information with respect to all leased Homes.

2.16 REAL ESTATE TAXES FOR COMMON AREA AND PARCELS: If a tax bill is issued with respect to Common Area (which is not part of a Parcel) which is made subject to this Declaration in the middle of a tax year (regardless of when it is conveyed to the Association), then the tax bill shall be prorated so that the Declarant shall be responsible for the payment of that portion of the tax bill from January 1st of the tax year to the date that such Common Area is made subject to this Declaration, and the Association shall be responsible for the balance of the tax bill for such year, and any tax bills for subsequent years. Each Owner of a Parcel shall be responsible for the payment of real estate taxes levied with respect to the Owner's Parcel (including that portion of the Owner's Parcel which is designated as Common Area hereunder).

## ARTICLE THREE
## MAINTENANCE

3.01 IN GENERAL: The restrictions and limitations contained in this Article shall be subject to the rights of the Declarant set forth in Article Nine.

3.02 MAINTENANCE BY THE ASSOCIATION:

(a) The Association shall furnish the following and the cost thereof shall be Common Expenses:

(i) Maintenance, repair and replacement of improvements located on the Common Area, including, but not limited to any entry monument, retaining walls, street lights, mailboxes and perimeter fencing, if any, installed by the Declarant on the Premises;

(ii) Maintenance, repair and replacement of any stormwater facility located on the Common Area;

(iii) Subject to the provisions of Section 3.07, and 3.08 and 8.11, grass cutting and maintenance of grass and all landscaping located on the Common Area;

(iv) To the extent not maintained by a utility company, maintenance, repair and replacement of the electric, gas and other utility lines and components of other systems, if

any, which are located on the Premises, including, without limitation, those located in the Common Area; and

(v) Any other obligations and responsibilities which may be established or required of the Owners or Association pursuant to the Annexation Agreement.

(b) All maintenance, repair and replacement work required pursuant to this Declaration shall be promptly completed in a good and workmanlike manner consistent with any applicable governmental regulations or standards, or, if no such regulations or standards apply, then consistent with good engineering, forestry, or other similar professional standards so as to ensure the safe and effective condition of the portion of the Development subject to maintenance, repair or replacement. The cost of any maintenance, repairs and replacement furnished by the Association pursuant to this Section shall be Common Expenses. The Declarant reserves the right to add additional responsibilities to be furnished by the Association at such time as any Supplemental Declaration or a Special Amendment is Recorded from time to time.

(c) The Association shall not be required to provide maintenance to any Parcel which is not yet Subject to Assessment hereunder.

3.03 MAINTENANCE BY OWNER:

(a) Except as otherwise specifically provided for in this Declaration, each Owner shall be responsible for the maintenance, repair and replacement of the Owner's Home and Parcel, including Home Exteriors and periodic painting of the Home Exteriors and window frames, doors (including garage doors) and door frames.

(b) Each Owner shall be responsible for disconnecting any hose and turning off any exterior spigot which serves the Owner's Home and shall be responsible for any damage which occurs as a result of the Owner's failure to do so.

(c) The maintenance, repairs and replacements of light bulbs, windows, window frames, window glass, doors (including garage and storm doors) and screening on a Home shall be the responsibility of the Owner of the Home.

(d) To the extent not maintained by a utility company, maintenance, repair and replacement of electric, gas and other utility lines, and components of other systems, if any, which serve only the Owner's Home, shall be the responsibility of the Owner of the Home served by any such utility lines or system.

(e) If, in the judgment of the Board, an Owner fails to maintain those portions of the Owner's Home which the Owner is responsible for maintaining hereunder in good condition and repair or the appearance of such portions is not of the quality of that of other Homes in the Development or in compliance with rules and regulations adopted by the Board, then the Board may, in their discretion, take the following action:

(i) advise the Owner of the work which must be done and allow the Owner at least twenty (20) calendar days (or less in the case of an emergency) to cause the work to be done; and

(ii) if the work is not done to the satisfaction of the Board, in their sole judgment, then the Board may seek injunctive relief, levy a fine and/or cause such work to be done and the cost thereof shall be a Charge payable by the Owner to the Association upon demand.

(f) Repairs and replacements which are required due to occurrences which are normally covered by insurance required to be obtained by the Association under Article Four shall be made as provided in Article Four.

3.04 CERTAIN UTILITY COSTS: Certain utility costs incurred in connection with the use, operation and maintenance of the Common Area and Home Exteriors may not be separately metered and billed to the Association. Except as otherwise provided in Section 3.05 below, if the cost for such water or other utilities is metered and charged to individual Homes rather than being separately metered and charged to the Association, then the following shall apply:

(a) If, in the opinion of the Board, each Owner is sharing in a fair and equitable manner the cost for such service, then no adjustment shall be made and each Owner shall pay his own bill; or

(b) If in the opinion of the Board, the Owner of a Home is being charged disproportionately for costs allocable to the Common Area and Home Exteriors, then the Association shall pay, or reimburse such Owner, an amount equal to the portion of the costs which in the reasonable determination of the Board is properly allocable to the Common Area and Home Exteriors and the amount thereof shall be Common Expenses hereunder.

Any determinations or allocations made hereunder by the Board shall be final and binding on all parties.

3.05 DAMAGE BY RESIDENT: If, due to the act or omission of a Resident of a Home, or of a household pet or guest or other authorized occupant or invitee of the Owner of a Parcel, damage shall be caused to the Common Area or Home Exterior, and maintenance, repairs or replacements shall be required thereby, which would otherwise be a Common Expense, then the Owner of the Parcel shall pay for such damage and such maintenance, repairs and replacements, as may be determined by the Board, to the extent not covered by insurance carried by the Association or an Owner.

3.06 ALTERATIONS, ADDITIONS OR IMPROVEMENTS TO THE COMMON AREA:

(a) No alterations, additions or improvements shall be made to the Common Area without the prior approval of the Board.

(b) The Association may cause alterations, additions or improvements to be made to the Common Area, and the cost thereof shall be paid from a special assessment, as more fully described in Section 6.05.

(c) If the Association shall alter, in any way, landscaping which was installed by the Declarant on the Common Area in accordance with plans approved by the Municipality, and if the Municipality requires that the altered area be returned to its original state, then the Association shall be responsible for restoring the altered area in accordance with the plans approved by the Municipality and the cost thereof shall be a Common Expense.

3.07 ALTERATIONS, ADDITIONS OR IMPROVEMENTS TO THE PARCELS: No additions, alterations or improvements shall be made to any Parcel (including any part of the Home which is visible from outside the Home) by an Owner without the prior written consent of the Board and, until the Declarant no longer holds title to any portion of the Premises, the Declarant, and shall be done in compliance with applicable ordinances of the Municipality. The Board may (but shall not be required to) condition its or their consent to the making of an addition, alteration or improvement to a Parcel which requires the consent of the Board upon the Owner's agreement either (i) to be solely responsible for the maintenance of such addition, alteration or improvement, subject to such standards as the Board may from time to time set, or (ii) if the addition, alteration or improvement is required to be maintained hereunder by the Association as part of the Common Expenses, to pay to the Association from time to time the additional cost of maintenance as a result of the addition, alteration or improvement. If an addition, alteration or improvement which requires consent of the Board and/or Declarant hereunder is made to a Parcel by an Owner without the prior written consent of the Board or Declarant, or both, as applicable, then (i) the Board may, in its or their discretion, take any of the following actions; and (ii) until such time as the Declarant no longer owns or controls title to any portion of the Premises, the Declarant may, in its discretion take any of the following actions:

(a) Require the Owner to remove the addition, alteration or improvement and restore the Parcel to its original condition, all at the Owner's expense; or

(b) If the Owner refuses or fails to properly perform the work required under (a), the Board may cause such work to be done and may charge the Owner for the cost thereof as determined by the Board or the Declarant, as applicable; or

(c) Ratify the action taken by the Owner, and the Board may (but shall not be required to) condition such ratification upon the same conditions which it may impose upon the giving of its or their prior consent under this Section.

3.08 SPECIAL SERVICES: The Board may furnish to an Owner or Owners special services relating to the use and occupancy of a Parcel or Parcels and may charge the cost of providing such services to the Owner or Owners who benefit from the service. Without limiting the foregoing, the Association may contract with a provider of a special service, such as satellite TV service, cable TV service, internet access or other similar service, either make such service available to all Parcels or offer such service to each of the Owners on a voluntary basis. The Board may charge the Owner of each Parcel which receives any such service for the reasonable cost of providing such service, which may be allocated in equal shares for each of the Parcels which is served or on such other reasonable basis as the Board may deem appropriate. Any amount charged to an Owner for services furnished pursuant to this Section shall be due and payable at such time or times as designated by the Board, and failure to pay any such amount shall give rise to a lien provided for in Section 6.01.

ARTICLE FOUR
INSURANCE/CONDEMNATION

4.01 ASSOCIATION INSURANCE:

(a) The Association shall be responsible for procuring and maintaining comprehensive general liability insurance, including liability for injuries to, and death of, persons and property damage in combined single limit amount not less than One Million and no/100 Dollars ($1,000,000.00) per occurrence, including non-owned and hired automobile liability; umbrella liability insurance coverage in an amount not less than Two Million and no/100 Dollars ($2,000,000.00); and other liability insurance as it may deem desirable, insuring the Association from liability in connection with its duties hereunder. The liability policy shall also name as insureds the Association's agents, officers, employees and each Owner.

(b) The Association shall also obtain and maintain Directors and Officers Liability Insurance. In addition, the Association may obtain such other kinds of insurance as the Association shall from time to time deem prudent in such amounts as the Association shall deem desirable including, without limitation, the following: Earthquake risk and Workman's Compensation and Employer Liability.

4.02 LOT OWNER INSURANCE Each Owner shall procure and maintain in full force at all times insurance covering its Home consisting of, or providing all the protections afforded by, the insurance now generally described in a "Special Form" policy to one hundred percent (100%) of the full insurable value thereof, with loss payable on the basis of the cost of replacement without deduction for depreciation, less a deductible amount of no more than Twenty-Five Thousand and no/100 Dollars ($25,000.00) and naming the Association as an additional insured on each policy. All insurance required under this Section 4.02 shall be written by companies reasonably acceptable to the Association. A certificate of insurance evidencing such coverage shall be furnished to the Association and new certificates evidencing the renewal of each expiring policy of insurance shall be furnished to the Association in each case at least ten (10) days prior to the expiration date of the expiring insurance. In the event a Home or any portion thereof shall be damaged or destroyed by fire or other casualty and the Owner thereof shall cause it to be repaired, restored or reconstructed, as the case may be, the repairs, restoration or reconstruction shall be in the same architectural style and resign as was originally constructed and shall conform in all respects to all applicable laws or ordinances in force at the time of such repair, restoration or reconstruction. In the event of the total or substantial destruction of all the Homes, the architectural design of the Homes to be rebuilt and the materials to be used in constructing the same shall be substantially similar in architectural design as the original Homes and shall be constructed of comparable materials and quality of construction.FAILURE TO MAINTAIN INSURANCE: Upon the failure of any Owner to procure and maintain the insurance required in Section 4.02 hereof or, in the event the Board, in its sole discretion, determines that the Home is underinsured, the Board shall have the authority to procure such insurance and/or additional insurance, as the case may be, and the costs thereof shall become a lien upon said Parcel in the same manner as provided in Article Seven hereof for nonpayment of maintenance assessments.

4.04 REPAIR, RESTORATION AND REBUILDING: All repair, restoration or rebuilding pursuant to the provisions of this Article Four shall be carried out under such

supervision and direction as the Board shall deem appropriate in order to assure the expeditious and correct completion of the work concerned. The Owner or Owners of each Home which shall have been damaged or destroyed shall fully cooperate with, and abide by all instructions and directions of, the Association in connection with all repair, restoration and rebuilding undertaken pursuant to this Article FourRESTORATION: In the event of such damage or destruction of a Home, the holder of the mortgage encumbering said Home shall cause the proceeds of any insurance required pursuant to Section 4.02 hereof to be utilized in restoring the Home pursuant to the terms of this Article.

4.06 FAILURE TO RESTORE: In any case in which the Owner or Owners concerned shall fail to perform or cause to be performed the repair, restoration or rebuilding required by the provisions of this Article Four, the Association shall cause such repairs or rebuilding to be furnished, provided and installed in the manner as set forth in Section 4.04 hereof; provided, however, that to the extent the insurance proceeds referred to in Section 4.02 are insufficient as to any Home, the particular Owner shall be responsible to the Association for such deficiency, and the Association shall have, and is hereby granted, a continuing lien on the Parcel for which any such repairs or rebuilding are furnished by the Association in the aggregate amount of (a) the amount that the cost thereof exceeds insurance proceeds, (b) interest at the Prime Rate (as defined below) plus two percent (2%) from the date of the Associations' payment of such costs, and (c) reasonable attorneys' fees and any court or other costs incurred by the Association in connection therewith, which lien shall bind such Parcel. (For purposes of this Declaration, the term "Prime Rate" shall mean a rate equal to the "corporate base rate" or similar rate of interest announced from time to time by the downtown Chicago brand of JPMorgan Chase Bank, N.A. or its successors-in-interest.) In the event such Owner does not forthwith fully repay the Association therefor, as aforesaid, such lien shall be foreclosed against such Parcel by the Association in the same manner as hereinafter provided in connection with unpaid assessments. The Association's lien provided for in this Section 4.06 shall be subordinate to the lien of any first mortgage now or hereafter placed upon the Parcel.

4.07 WAIVER OF SUBROGATION: The Association and each Owner hereby waive and release any and all claims which it or he may have against any other Owner, the Association and its Board, the Declarant and the managing agent if any, and their respective employees and agents, for damage to the Home or any personal property located in a Home or to the Common Area, caused by fire or other casualty, to the extent that such damage is covered by fire or other form of casualty insurance, and to the extent this release is allowed by policies for such fire or other casualty insurance.

4.08 CONDEMNATION: In the case of a taking or condemnation by competent authority of any part of the Common Area (which is not part of a Parcel), the proceeds awarded in such condemnation shall be paid to the Association and such proceeds, together with any Common Area Capital Reserve being held for such part of the Common Area, shall, in the discretion of the Board, either (i) be applied to pay the Common Expenses, (ii) be distributed to the Owners and their respective First Mortgagees, as their interests may appear, in equal shares, or (iii) be used to acquire additional real estate to be used and maintained for the mutual benefit of all Owners, as Common Area under this Declaration. Any acquisition by the Association pursuant to this Section of real estate which shall become Common Area hereunder shall not become effective unless and until a supplement to this Declaration, which refers to this Section

and legally describes the real estate affected, is executed by a majority of the Managers of the Association and Recorded.

ARTICLE FIVE
THE ASSOCIATION

5.01 THE ASSOCIATION IN GENERAL: Declarant has caused or shall cause the Association to be organized as a not for profit corporation under the laws of the State of Illinois. The Association shall be the governing body for all of the Owners for the administration and operation of the Common Area and for the maintenance repair and replacement of the Common Area as provided herein.MEMBERSHIP: Each Owner shall be a member of the Association. There shall be one membership per Parcel (including the case of a Parcel owned by the Declarant unimproved with a Home as described on the Declarant's Development Plan ("Unimproved Parcel")). There shall be two (2) classes of membership. Each Owner of a Parcel (other than Declarant) shall be a "Class A Member"; and the Declarant shall be a "Class B Member" with respect to its ownership of (a) a Parcel or (b) an Unimproved Parcel. Membership shall be appurtenant to and may not be separated from ownership of a Parcel or an Unimproved Parcel. Ownership of a Parcel or an Unimproved Parcel shall be the sole qualification for membership. The Association shall be given written notice of the change of ownership of a Parcel within ten (10) days after such change.

5.03 VOTING MEMBERS: Subject to the provisions of Section 9.05, voting rights of the members of the Association shall be vested exclusively in the Voting Members. One individual shall be designated as the "Voting Member" for each Parcel or Unimproved Parcel (as defined in Section 5.02 above). The Voting Member or his proxy shall be the individual who shall be entitled to vote at meetings of the Owners. If the Record ownership of a Parcel shall be in more than one person, or if an Owner is a trustee, corporation, partnership or other legal entity, then the Voting Member for the Parcel shall be designated by such Owner or Owners in writing to the Board and, if in the case of multiple individual Owners, no designation is given, then the Board at their election may recognize an individual Owner of the Parcel as the Voting Member for such Parcel.

5.04 DIRECTORS: Prior to the Turnover Date, the Directors shall be the Declarant, or one or more entities or persons designated by the Declarant from time to time, who need not be Owners or Voting Members. Initially the Declarant shall be the Board of the Association. After the Turnover Date, the Board shall consist of that number of individuals provided for in the By-Laws, each of whom shall be an Owner or Voting Member.

5.05 VOTING RIGHTS: Prior to the Turnover Date, all of the voting rights at each meeting of the Association shall be vested exclusively in the Class B member and the Owners (other than Declarant) shall have no voting rights. From and after the Turnover Date, all of the voting rights at any meeting of the Association shall be vested in the Voting Members, and each Voting Member who represents a Class A Membership shall have one (1) vote for each Parcel which the Voting Member represents, and the Declarant, as the Class B Member, shall have ten (10) votes for each Parcel or Unimproved Parcel (as defined in Section 5.02 above) which it owns. From and after the Turnover Date any action may be taken by the Voting Members at any meeting at which a quorum is present (as provided in the By-Laws) upon an affirmative vote of a majority

of the votes represented by Voting Members and the Declarant, except as otherwise provided herein or in the By-Laws.

5.06 BOARD LIABILITY: The Board, committee members or officers of the Association shall not be personally liable to the Association or the Owners for any mistake of judgment or for any other acts or omissions of any nature whatsoever as such Board, committee members or officers except for any acts or omissions found by a court to constitute criminal conduct, gross negligence or actual fraud. The Association shall indemnify and hold harmless the Declarant and each member of the Board, committee members and officers and their heirs, executors or administrators, against all contractual and other liabilities to the Association, the Owners or others arising out of contracts made by or other acts of the Board, committee members or officers on behalf of the Owners or the Association or arising out of their status as Board, committee members or officers unless any such contract or act shall have been made criminally, fraudulently or with gross negligence. It is intended that the foregoing indemnification shall include indemnification against all costs and expenses (including, but not limited to, counsel fees, amounts of judgments paid and amounts paid in settlement) actually and reasonably incurred in connection with the defense of any claim, action, suit or proceeding, whether civil, criminal, administrative, or other in which any such Board member, committee member or officer may be involved by virtue of such person being or having been such Board member, committee member or officer; provided, however, that such indemnity shall not be operative with respect to (i) any matter as to which such person shall have been finally adjudged in such action, suit or proceeding to be liable for criminal conduct, gross negligence or actual fraud in the performance of his duties as such Board member, committee member or officer, or (ii) any matter settled or compromised, unless, in the opinion of independent counsel selected by or in a manner determined by the Board there is not reasonable ground for such person being adjudged liable for criminal conduct, gross negligence or actual fraud in the performance of his duties as such Manager, committee member or officer.

5.07 MANAGING AGENT: The Declarant (or an entity affiliated with the Declarant) may be engaged by the Association to act as the managing agent for the Association and as managing agent shall be paid a reasonable fee for its services as fixed by a written agreement between the Association and the Declarant (or an entity controlled by the Declarant). Any management agreement entered into by the Association prior to the Turnover Date shall have a term of not more than two years and shall be terminable by the Association without payment of a termination fee with ninety (90) days written notice.

5.08 REPRESENTATION: The Association shall have the power and right to represent the interests of all of the Owners in connection with claims and disputes affecting the Common Area. Without limiting the foregoing, the Association shall have the power after the Turnover Date to settle warranty disputes or other disputes between the Association, the Owners, and the Declarant affecting the construction, use or enjoyment of the Common Area and any such settlement shall be final and shall bind all of the Owners.

5.09 LITIGATION: No judicial or administrative proceedings shall be commenced or prosecuted by the Association without first holding a special meeting of the members and obtaining the affirmative vote of Voting Members representing at least seventy-five percent (75%) of the total votes represented by all Voting Members to the commencement and

prosecution of the proposed action. This Section shall not apply to (a) actions brought by the Association to enforce the provisions of this Declaration, the By-Laws or rules and regulations adopted by the Board (including, without limitation, an action to recover unpaid assessments or other charges or to foreclose a lien for unpaid assessments or other charges) or (b) counterclaims brought by the Association in proceedings instituted against it.

5.10 MERGER: Prior to the Turnover Date, the Declarant, or after the Turnover Date, the Managers shall have the right, power and authority to convert the Association from an Illinois Limited Liability Company to an Illinois Not for Profit Corporation ("NFP Conversion"), as permitted under applicable laws of the State of Illinois, as amended from time to time ("IL Law"). In furtherance of the foregoing, a power coupled with an interest is hereby reserved and granted to the Declarant and/or the Managers, as applicable, to make, consent to, and execute such documents as may be required under IL Law on behalf of each Owner and the Association. Each deed, mortgage, trust deed, other evidence of obligation, or other instrument affecting a Dwelling Unit and the acceptance thereof shall be deemed to be a grant and acknowledgment of, and a consent to the reservation of, the power of the Declarant and/or the Managers to make, consent to, and execute the NFP Conversion and take such other actions as the Declarant and/or the Managers deem necessary or appropriate to carry out the intent of the NFP Conversion, including, without limitation, adopting By-Laws for the Association to replace the Operating Agreement.

5.11 DISSOLUTION: To the extent permissible under applicable law, in the event of the dissolution of the Association, any Common Area owned by the Association shall be conveyed to the Owners as tenants in common.

## ARTICLE SIX
## ASSESSMENTS

6.01 PURPOSE OF ASSESSMENTS: The assessments levied by the Association shall be exclusively to administer the affairs of the Association, to pay the Common Expenses, and to accumulate reserves for any such expenses.

6.02 COMMON ASSESSMENT: Each year on or before December 1, the Board shall adopt and furnish each Owner with a budget for the ensuing calendar year, which shall show the following with reasonable explanations and itemizations:

(a) The estimated Common Expenses;

(b) The estimated amount, if any, to maintain adequate reserves for Common Expenses including, without limitation, amounts to maintain the Capital Reserve;

(c) The estimated net available cash receipts from the operation and use of the Common Area, plus the estimated excess funds, if any, from the current year's assessments;

(d) The amount of the "Common Assessment" payable by the Owners, which is hereby defined as the amount determined in (a) above, plus the amount determined in (b) above, minus the amount determined in (c) above;

(e) That portion of the Common Assessment which shall be payable by the Owner of each Parcel which is subject to assessment hereunder each month until the next Common Assessment or revised Common Assessment becomes effective, which monthly amount shall be equal to the Common Assessment, divided by the number of Parcels, divided by twelve (12), so that each Owner shall pay equal Common Assessments for each Parcel owned. The Common Assessment shall be paid in periodic installments as determined by the Board from time to time, but no less than once each calendar year.

Anything herein to the contrary notwithstanding the provisions of this paragraph shall apply with respect to the period prior to the Turnover Date. Any budget ("Stabilized Budget") prepared by the Board prior to the Turnover Date shall be based on the assumptions that (i) the Development has been fully constructed as shown on Declarant's Development Plan and (ii) all proposed Homes have been sold, are occupied and are Subject to Assessment. Prior to the Turnover Date, each owner of a Parcel (other than Declarant) which is Subject to Assessment shall pay a Common Assessment equal to the total cash needs, as shown on the Stabilized Budget, divided by the total number of proposed Homes, as shown on the Declarant's Development Plan, divided by 12, so that each Owner (other than Declarant) will pay, with respect to each Parcel which is Subject to Assessment and owned by the Owner, a monthly Common Assessment equal to what such Owner would be paying with respect to the Owner's Parcel if the Development were fully constructed pursuant to the Declarant's Development Plan and all proposed Homes have been built, are occupied and are Subject to Assessment. The Declarant shall not be obligated to pay any Common Assessments to the Association prior to the Turnover Date. However, if with respect to the period commencing on the date of the Recording of this Declaration and ending on the Turnover Date, the amount of Common Assessments and working capital contributions under Section 6.07 payable by Owners (other than Declarant) less the portions thereof which are to be added to Capital Reserves is less than the Common Expenses actually incurred with respect to such period, then the Declarant shall pay the difference to the Association. From time to time prior to the Turnover Date, the Declarant may (but shall not be obligated to) advance to the Association funds to be used by the Association to pay its expenses ("Advanced Funds"). A final accounting and settlement of the amount, if any, owed by Declarant to the Association shall be made as soon as practicable after the Turnover Date. If, and to the extent that, the final accounting determines that the Advanced Funds, if any, are less than the amount owed by the Declarant to the Association pursuant to this Section, the Declarant shall pay the difference to the Association. If, and to the extent that, the final accounting determines that the Advanced Funds, if any, exceed the amount owed by the Declarant to the Association pursuant to this Section, then the Association shall pay such excess to the Declarant.

6.03 PAYMENT OF COMMON ASSESSMENT: On or before the 1st day of January of the ensuing calendar year, and on the first day of each month thereafter until the effective date of the next annual or revised Common Assessment, each Owner of a Parcel which is Subject to Assessment shall pay to the Association, or as the Board may direct, that portion of the Common Assessment which is payable by each Owner of a Parcel under Section 6.02(e) or Section 6.08, as applicable, at such times as the Board shall determine from time to time. For purposes hereof, a Parcel shall only be subject to assessment hereunder from and after such time as a temporary, conditional or permanent occupancy certificate has been issued with respect to the Home constructed thereon and the transfer and sale of the Home and Parcel to a third party purchaser.

6.04 REVISED ASSESSMENT: If the Common Assessment proves inadequate for any reason (including nonpayment of any Owner's assessment) or proves to exceed funds reasonably needed, then the Board may increase or decrease the assessment payable under Section 6.02(e) by giving written notice thereof (together with a revised budget and explanation for the adjustment) to each Owner not less than ten (10) days prior to the effective date of the revised assessment.

6.05 SPECIAL ASSESSMENT: After the Turnover Date, the Board may levy a special assessment as provided in this Section (i) to pay (or build up reserves to pay) expenses other than Common Expenses incurred (or to be incurred) by the Association from time to time for a specific purpose including, without limitation, to make alterations, additions or improvements to the Common Area, or any other property owned or maintained by the Association; or (ii) to cover an unanticipated deficit under the prior year's budget. Any special assessment shall be levied against all of Parcels which are Subject to Assessment in equal shares for each such Parcel. No special assessment shall be adopted without the affirmative vote of Voting Members representing at least two-thirds (2/3) of the votes cast on the question and only those Owners of Parcels against which the proposed special assessment shall be levied may vote on the question. The Board shall serve notice of a special assessment on all Owners by a statement in writing giving the specific purpose and reasons therefor in reasonable detail, and the special assessment shall be payable in such manner and on such terms as shall be fixed by the Board. Any assessments collected pursuant to this Section (other than those to cover an unanticipated deficit under the prior year's budget) shall be segregated in a special account and used only for the specific purpose set forth in the notice of assessment.

6.06 CAPITAL RESERVE: The Association shall segregate and maintain a special reserve account to be used solely for making capital expenditures in connection with the Common Area (the "Capital Reserve"). The Board shall determine the appropriate level of the Capital Reserve based on a periodic review of the useful life of improvements to the Common Area and other property owned by the Association and periodic projections of the cost of anticipated major repairs or replacements to the Common Area and the purchase of other property to be used by the Association in connection with its duties hereunder. The Capital Reserve may be built up by separate or special assessments or out of the Common Assessment as provided in the budget. Special accounts set up for portions of the Capital Reserve to be used to make capital expenditures with respect to the Common Area and other property owned by the Association, shall be held by the Association as agent and trustee for the Owners of Homes with respect to which the Capital Reserve is held and such accounts shall be deemed to have been funded by capital contributions to the Association by the Owners. The budgets which will be adopted from time to time by the Board prior to the Turnover Date shall include such reserve buildups which the Board deem to be appropriate based on information available to the Board. The Board elected by the Owners after the Turnover Date may use different approaches from those used by the Board appointed by the Declarant prior to the Turnover Date for the buildup of reserves or may choose not to provide for the buildup of reserves for certain capital expenditures or deferred maintenance for repairs or replacements of the Common Area and other property owned by the Association. If the Board chooses not to provide for the buildup of reserves for a particular anticipated expenditure or if the buildup of reserves that the Board does provide for in the budget does not result in sufficient funds to pay for the expenditure when the expenditure must be made, then (i) neither the Board nor any of the past or present members shall be liable to the Association or the Owners for failing to

provide for sufficient reserves and (ii) the Board shall have the right and power to either levy a separate or special assessment to raise the funds to pay the expenditure or to borrow funds to pay the expenditure and repay the borrowed funds out of future Common Assessments, separate assessments or special assessments. The final accounting and settlement calculation between the Declarant and the Association (provided for in Section 6.02 above) shall not include any amounts allocated to, or deposited in, the Capital Reserve.

6.07 INITIAL CAPITAL CONTRIBUTION: Upon the closing of the sale of each Home by the Declarant to a purchaser for value, the purchasing Owner shall make a capital contribution to the Association in an amount equal to two (2) monthly installments of the then current Common Assessment for that Home, which amounts shall be held and used by the Association for its working capital needs (and not as an advance payment of the Common Assessment). In addition, the purchasing Owner shall pay to the Association an amount equal to one (1) monthly installment of the then current Common Assessment for that Home which amount shall be added to the Capital Reserve. [SUBJECT TO CONFIRMATION BY TM]

6.08 PAYMENT OF ASSESSMENTS: Assessments levied by the Association shall be collected from each Owner by the Association and shall be a lien on the Owner's Parcel and also shall be a personal obligation of the Owner in favor of the Association, all as more fully set forth in Article Seven.

## ARTICLE SEVEN
## COLLECTION OF CHARGES AND REMEDIES FOR BREACH OR VIOLATION

7.01 CREATION OF LIEN AND PERSONAL OBLIGATION: The Declarant hereby covenants, and each Owner of a Parcel by acceptance of a deed therefor (whether or not it shall be so expressed in any such deed or other conveyance) shall be and is deemed to covenant and hereby agrees to pay to the Association all Charges made with respect to the Owner or the Owner's Parcel. Each Charge, together with interest thereon and reasonable costs of collection, if any, as hereinafter provided, shall be a continuing lien upon the Parcel against which such Charge is made and also shall be the personal obligation of the Owner of the Parcel at the time when the Charge becomes due. The lien or personal obligation created under this Section shall be in favor of and shall be enforceable by the Association.

7.02 COLLECTION OF CHARGES: The Association shall collect from each Owner all Charges payable by such Owner under this Declaration.

7.03 NON-PAYMENT OF CHARGES: Any Charge which is not paid to the Association when due shall be deemed delinquent. Any Charge which is delinquent for thirty (30) days or more shall bear interest at the rate of eighteen percent (18%) per annum or the maximum rate permitted by law, whichever is less, from the due date to the date when paid. The Association may (i) bring an action against the Owner personally obligated to pay the Charge to recover the Charge (together with interest, costs and reasonable attorney's fees for any such action, which shall be added to the amount of the Charge and included in any judgment rendered in such action), and (ii) enforce and foreclose any lien which it has or which may exist for its benefit. In addition, the Board may add a reasonable late fee to any installment of an assessment which is not paid within thirty (30) days of its due date. No Owner may waive or otherwise escape personal

liability for the Charges hereunder by nonuse of the Common Area or by abandonment or transfer of his Parcel.

7.04 LIEN FOR CHARGES SUBORDINATED TO MORTGAGES: The lien for Charges, provided for in Article Seven, shall be subordinate to the First Mortgagee's mortgage on the Parcel which was recorded prior to the date that any such Charge became due. Except as hereinafter provided, the lien for Charges, provided for in Article Seven, shall not be affected by any sale or transfer of a Parcel. Where title to a Parcel is transferred pursuant to a decree of foreclosure of the First Mortgagee's mortgage or by deed or assignment in lieu of foreclosure of the First Mortgagee's mortgage, such transfer of title shall extinguish the lien for unpaid Charges which became due prior to the date of the transfer of title. However, the transferee of the Parcel shall be personally liable for his share of the Charges with respect to which a lien against his Parcel has been extinguished pursuant to the preceding sentence where such Charges are reallocated among all the Owners pursuant to a subsequently adopted annual or revised Common Assessment or special assessment, and non-payment thereof shall result in a lien against the transferee's Parcel, as provided in this Article.

7.05 SELF-HELP BY THE BOARD: In the event of a violation or breach by an Owner of the provisions, covenants or restrictions of the Declaration, the By-Laws, or rules or regulations of the Board where such violation or breach may be cured or abated by affirmative action, then the Board upon not less than ten (10) days' prior written notice to the Owner, shall have the right to enter upon that part of the Premises where the violation or breach exists to remove or rectify the violation or breach; provided, that, if the violation or breach exists within a Home, judicial proceedings must be instituted before any items of construction can be altered or demolished.

7.06 OTHER REMEDIES OF THE BOARD: In addition to or in conjunction with the remedies set forth above, to enforce any of the provisions contained in this Declaration or any rules and regulations adopted hereunder the Board may levy a fine or the Board may bring an action at law or in equity in the name of the Association against any person or persons violating or attempting to violate any such provision, either to restrain such violation, require performance thereof, to recover sums due or payable (including fines) or to recover damages, and against the Parcel to enforce any lien created hereunder; and failure by the Association to enforce any provision shall in no event be deemed a waiver of the right to do so thereafter.

7.07 COSTS AND EXPENSES: All costs and expenses incurred by the Board in connection with any action, proceedings or self-help in connection with the exercise of its rights and remedies under this Article, including, without limitation, court costs, attorneys' fees and all other fees and expenses, and all damages, liquidated or otherwise, together with interest thereon at the rate of eighteen percent (18%) per annum or the maximum rate permitted by law, whichever is less, until paid, shall be charged to and assessed against the defaulting Owner, and the Association shall have a lien for all the same, upon his Parcel as provided in Article Seven.

7.08 ENFORCEMENT BY OWNERS: Enforcement of the provisions contained in this Declaration and the rules and regulations adopted hereunder may be by any proceeding at law or in equity by any aggrieved Owner against any person or persons violating or attempting to violate any such provisions, either to restrain such violation or to recover damages, and against a Parcel to enforce any lien created hereunder.

ARTICLE EIGHT
USE RESTRICTIONS

8.01 RESIDENTIAL USE: Each Parcel shall be used only for residential purposes, as a private residence, and no professional, business or commercial use shall be made of a Parcel or any portion thereof, nor shall any Resident's use of a Parcel endanger the health or disturb the reasonable enjoyment of any other Owner or Resident, except that professional and quasi-professional persons may use their residence as an ancillary or secondary facility to an office elsewhere. The foregoing restrictions shall not, however, be construed to prohibit a Resident from: (a) maintaining his personal professional library; (b) keeping his personal business or professional records or accounts; (c) handling his personal business or professional telephone calls or correspondence therefrom, or (d) conducting an in-home business not prohibited by applicable laws, ordinances or regulations.

8.02 OBSTRUCTIONS AND REFUSE: Except as permitted under Article Nine, there shall be no obstruction of the Common Area. No Owner shall store any items or materials in the Common Area without the prior written consent of the Board. The Common Area shall be kept free and clear of all rubbish, debris and other unsightly materials and no waste shall be committed thereon. All rubbish shall be deposited in such areas and such receptacles as shall be designated by the Board. All rubbish, trash, or garbage shall be kept so as not to be seen from neighboring Homes and streets. Garbage may not be burned on the Premises. Unless otherwise provided in rules and regulations adopted by the Board or as organized by Municipal Ordinance, all garbage shall be placed curbside no earlier than 7:00 p.m. on the day before collection and the empty receptacles shall be removed from curbside and returned to the Homes no later than 7:00 p.m. on the day of collection.

8.03 PETS: No animal of any kind shall be raised, bred, or kept on the Common Area. The Board may from time to time adopt rules and regulations governing (a) the keeping of pets in the Home, which may include prohibiting certain species of pets from being kept in the Home and (b) the use of the Common Area by pets. Any pet causing or creating a nuisance or unreasonable disturbance to an Owner shall be permanently removed from the Premises upon three (3) days written notice from the Board to the Owner of the Home containing such pet and the decision of the Board shall be final. No pet shall be permitted on the Common Area unless it is leashed. The owner of a pet shall be responsible for the immediate removal of pet waste from the Common Area.

8.04 PROSCRIBED ACTIVITIES / NUISANCE: No nuisance, noxious or offensive activity shall be carried on in the Premises nor shall anything be done therein, either willfully or negligently, which may be or become an annoyance or nuisance to the Owners or occupants of any Home.

8.05 PROHIBITED USES AND STRUCTURES: Unless permitted by the Board, no clothes, sheets, blankets, laundry of any kind or other articles shall be hung out on any portion of the Premises. Except as permitted under Article Nine, there shall be no obstruction of the Common Area and nothing shall be stored in the Common Area without the prior written consent of the Board.

8.06 PARKING / VEHICLES: Parking areas and driveways shall be used for parking operable automobiles only and no part of any Parcel shall be used for storage use, or parking of mobile homes, trailers, commercial vehicles, snowmobiles or boats except within the confines of a garage. No repair or body work of any motorized vehicle shall be permitted except within the confines of the garage. Passenger motor vehicles in non-operative condition shall not be parked, except in garages. No golf carts shall be operated on the Premises, except as operated by the Declarant.

Without limiting the foregoing paragraph, Residents shall not be permitted to store or park any vehicle (which has "D" or equivalent plates, more than two (2) axles, more than four (4) tires and/or a gross weight when fully loaded in excess of 8,000 pounds), recreational vehicle, boat, trailer or other similar vehicle on any portion of the Premises, other than within a garage which is part of a Home. In no event can any portion of a vehicle which is permitted to be parked on the Premises hereunder (including any ladder or other equipment attached thereto) block or overhang any portion of a sidewalk located on the Premises.

Any violation of this provision shall be deemed a nuisance under Section 8.04.

8.07 PLANTS: No plants, seeds, or other things or conditions harboring or breeding infectious plant diseases or noxious insects shall be introduced or maintained upon any part of the Premises.

8.08 ANTENNA/SATELLITE DISHES: Subject to the provisions of Section 3.07 and to applicable federal, state or local laws, ordinances or regulations, towers, antennas, or other apparatus for the transmission or reception of television, radio, satellite or other signals shall not be installed or mounted on the outside of any Home. The foregoing, however, does not prohibit direct broadcast satellite receiving discs or dishes no larger than eighteen inches (18") in diameter provided that such over-the air reception devices are installed or mounted in compliance with rules and regulation adopted by the Board from time to time pertaining to the location, screening and manner of installation of such devices and provided that such rules and regulations do not cause unreasonable cost or delay and do not preclude reception of an acceptable quality signal. The purpose, herein, is to be courteous to the surrounding Owners. Under no circumstances shall free standing transmission or receiving towers which support satellite discs or dishes larger than one (1) meter in diameter or non-standard television antennae shall be permitted within the Premises.

8.09 GARAGE DOORS: Garage doors shall be kept closed at all times, except when Residents or vehicles are entering or exiting the garage or when the garage is being cleaned.

8.10 STRUCTURAL IMPAIRMENT: Nothing shall be done in, on or to any part of the Premises which would impair the structural integrity of any Home located thereon.

8.11 WATERING: The Board may adopt rules and regulations governing the watering of grass, shrubs, trees and other foliage on the Common Area and Parcels. Without limiting the foregoing, the Board may require the Owner of a particular Parcel to be responsible for watering specific portions of the Common Area and/or Parcels as designated from time to time by the Board.

8.12 BALCONIES / GRILLS: The use and placement of gas and electric grills and other seasonal items on balconies shall be subject to applicable ordinances of the Municipality and rules and regulations adopted by the Board from time to time.

8.13 USE AFFECTING INSURANCE: Nothing shall be done or kept in any Home or on the Parcels or Common Area which will increase the rate of insurance on the Premises, without prior written consent of the Board. No Owner shall permit anything to be done or kept in his Home on the Parcels or Common Area which will result in the cancellation of insurance on the Premises or which would be in violation of any law.

8.14 RULES AND REGULATIONS:

(a) The use and enjoyment of the Common Area shall be subject to reasonable rules and regulations duly adopted by the Board from time to time.

(b) Without limiting the foregoing, the Board may levy a reasonable fine upon an Owner for a violation of a rule or regulation, in accordance with the procedures set forth in Section 7.06.

8.15 FENCES: Only fencing installed by the Declarant, and later the Association, shall be permitted on the Premises. Owners are prohibited from installing fencing on their Parcel.

8.16 FLAGS AND FLAGPOLES: Subject to the provisions of Section 3.07 and to applicable federal, state or local laws, ordinances or regulations, flags and flagpoles shall not be installed or mounted on the outside of any Home or on a Parcel. The foregoing, however, does not prohibit the display of the American flag or a military flag, or both, or a flag pole to display same, on a Parcel; provided (a) that displays are installed in compliance with rules and regulation adopted by the Board from time to time pertaining to the placement and manner of display of the American Flag or a military flag, or both, and (b) that installation of flag poles for such displays are installed in compliance with rules and regulation adopted by the Board from time to time pertaining to the location and size of flag poles. The purpose, herein, is to be courteous to the surrounding Owners.

8.17 SOLAR ENERGY SYSTEM: Any and all devices employed to convert sunlight to electricity must be either totally screened from view or completely integrated into the residence design. Solar shingles or other reflective devices producing a glare that is visible from the street or from adjacent lots will not be permitted.

8.18 SIGNS: Except as provided in Article Nine, no “For Sale”, “For Rent” or any other sign of any kind or other form of solicitation or advertising or window display shall be erected, maintained or permitted on the Premises unless permitted pursuant to reasonable rules or regulations adopted by the Board from time to time. Without limiting the foregoing, no more than one (1) sign (not to exceed 2 feet by 2 feet in size) may be placed in a window, subject to the reasonable rules and regulations of the Board. Also, during the two (2) week period prior to and during the one (1) week period subsequent to a primary or general election, one (1) political sign (not to exceed 2 feet by 2 feet in size) may be placed in the window.

8.19 TRASH PICK-UP. Trash pick-up will be conducted in the courtyard accessed via the private driveways. Owners shall place their trash bins, and recycling bins if applicable, in front of their garages adjacent to the private driveway for trash pick-up.

## ARTICLE NINE
## DECLARANT'S RESERVED RIGHTS

9.01 IN GENERAL: In addition to any rights or powers reserved to the Declarant under the provisions of this Declaration or the By-Laws, the Declarant shall have the rights and powers set forth in this Article. Anything in this Declaration or the By-Laws to the contrary notwithstanding, the provisions set forth in this Article shall govern. If not sooner terminated as provided in this Article, the provisions of this Article shall terminate and be of no further force and effect five (5) years after the Declarant is no longer vested with or controls title to any portion of the Premises.

9.02 PROMOTION OF PROJECT: The Declarant shall have the right and power, within its sole discretion, to (i) construct such temporary or permanent improvements, or to do such acts or other things in, on, or to the Premises as the Declarant may, from time to time, determine to be necessary or advisable, (ii) construct and maintain model homes, sales or leasing offices, parking areas, advertising signs, lighting and banners, or other promotional facilities at such locations and in such forms as the Declarant may deem advisable and to use such model homes (including model homes which are sold and leased back to the Declarant), sales or leasing offices or other facilities for the purpose of selling or leasing Homes on the Premises or at other properties in the general location of the Premises which are being offered for sale by the Declarant or any of its affiliates, without the payment of any fee or charge whatsoever to the Association. Declarant, its agents, prospective purchasers and tenants, shall have the right of ingress, egress and parking in and through, and the right to use and enjoy the Common Area, at any and all reasonable times without fee or charge. The Declarant shall have the right and power to lease any Home owned by it to any person or entity which it deems appropriate in its sole discretion and it need not comply with the provisions of Section 2.15.

9.03 CONSTRUCTION ON PREMISES: In connection with the construction of improvements to any part of the Premises, the Declarant, its agents and contractors, shall have the right, at the Declarant's own expense (but shall not be obligated) to make such alterations, additions or improvements to any part of the Premises including, without limitation, the construction, reconstruction and/or alteration of any temporary or permanent improvements which the Declarant deems, in its sole discretion, to be necessary or advisable, and the landscaping, sodding or planting and replanting of any unimproved portions of the Premises. In connection with the rights provided in the preceding sentence, the Declarant, its agents and contractors, shall have the right of ingress, egress and parking on the Premises and the right to store dirt, construction equipment and materials on the Premises without the payment of any fee or charge whatsoever.

9.04 GRANT OF EASEMENTS AND DEDICATIONS: Declarant shall have the right to dedicate portions of the Common Area and Parcels to the County, Municipality or other governmental authority which has jurisdiction over such portions. Declarant shall also have the right to reserve or grant easements over the Common Area to any governmental authority, public

utility or private utility for the installation and maintenance of electrical and telephone conduit and lines, gas, sewer, water lines and cable television, or any other utility services serving any Parcel.

9.05 DECLARANT CONTROL OF ASSOCIATION: Prior to the Turnover Date, the Board shall be the Declarant, or one or more entities or persons designated by the Declarant. Initially the Declarant shall be the sole member of the Board. The rights and powers of the Declarant to manage the affairs of the Association, or designate the Board, which persons may, but need not, be members under Section 5.02, of the Association shall terminate on the first to occur of (i) Sixty (60) days after Declarant has conveyed seventy-five percent (75%) of the number of Parcels made subject to this Declaration; (ii) the expiration of ten (10) years from the date of the Recording of this Declaration; (iii) the date designated in written notice from the Declarant to all of the Owners as being the Turnover Date or (iv) the date required under applicable statute. The date on which the Declarant's rights under this Section shall terminate shall be referred to as the "Turnover Date". From and after the Turnover Date, the Directors shall be constituted and elected as provided in the By-Laws. Prior to the Turnover Date, all of the voting rights at each meeting of the Owners shall be vested exclusively in the Declarant and the Owners (other than the Declarant) shall have no voting rights.

9.06 OTHER RIGHTS: The Declarant shall have the right and power to execute all documents and do all other acts and things affecting the Premises which, in Declarant's opinion, are necessary or desirable in connection with the rights of Declarant under this Declaration.

9.07 ASSIGNMENT BY DECLARANT: All rights which are specified in this Declaration to be rights of the Declarant are mortgageable, pledgeable, assignable or transferable, in whole or in part. Any successor to, or assignee of, the rights of the Declarant hereunder (whether as the result of voluntary assignment, foreclosure, assignment in lieu of foreclosure, or otherwise) shall hold or be entitled to exercise the rights of Declarant hereunder as fully as if named as such party herein. No such successor assignee of the rights of Declarant hereunder shall have or incur any liability for the acts of any other party which previously exercised or subsequently shall exercise such rights.

9.08 MATTERS AFFECTING COMMON AREA: The Association shall not cause or permit a lien or encumbrance to be placed or imposed on any portion of the real estate legally described in Section II of Exhibit A hereto (each a "Common Area Parcel") without the prior written consent of the Declarant. Any such lien or encumbrance placed or imposed on a Common Area Parcel without Declarant's consent shall be null and void.

9.09 ARCHITECTURAL CONTROLS: Prior to such time as the Declarant no longer holds or controls title to any portion of the Premises, no additions, alterations or improvements (including, without limitation, changes in the exterior color of a Home or the installation of an antennae, satellite dish or similar changes) shall be made to the exterior of any Home or any part of the Home which is visible from outside the Home by an Owner without the prior written consent of the Declarant. If an addition, alteration or improvement which requires Declarant approval hereunder is made to a Home without the prior written consent of the Declarant, then the Declarant may seek injunctive relief to cause the Owner to cease construction of and/or remove the addition, alteration or improvement. Declarant's decision to approve or disapprove

an alteration, addition or improvement in one instance shall not in any way create or establish a precedent for how the Declarant must respond to a request for an alteration, addition or improvement subsequently made, it being understood that circumstances, situations and standards may change and the Declarant reserves the right and power to grant or deny requests as Declarant believes are appropriate in Declarant's sole and absolute discretion.

## ARTICLE TEN
## AMENDMENTS

10.01 SPECIAL AMENDMENTS: Anything herein to the contrary notwithstanding, Declarant reserves the right and power to Record a special amendment ("Special Amendment") to this Declaration at any time and from time to time which amends this Declaration (i) to comply with requirements of the Federal National Mortgage Association ("Fannie Mae"), the Government National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Veteran's Administration, or any other governmental agency or any other public, quasi-public or private entity which performs (or may in the future perform) functions similar to those currently performed by such entities, (ii) to induce any of such agencies or entities to make, purchase, sell, insure, guarantee or otherwise deal with first mortgages covering Parcels, (iii) to correct omissions, errors, ambiguities or inconsistencies in the Declaration or any Exhibit, (iv) to bring the Declaration into compliance with applicable laws, ordinances or governmental regulations, (v) to amend Exhibit A remove real estate from the Premises and the terms of this Declaration, and (vi) to reflect a change in the Declarant's Development Plan. In furtherance of the foregoing, a power coupled with an interest is hereby reserved and granted to the Declarant to make or consent to a Special Amendment on behalf of each Owner. Each deed, mortgage, trust deed, other evidence of obligation, or other instrument affecting a Parcel and the acceptance thereof shall be deemed to be a grant and acknowledgment of, and a consent to the reservation of, the power to the Declarant to make, execute and Record Special Amendments. The right and power of the Declarant to record a Special Amendment hereunder shall terminate five (5) years after such time as Declarant no longer holds or controls title to a portion of the Premises.

10.02 AMENDMENT: Subject to Section 10.01 and Article Eleven, the provisions of this Declaration may be amended, abolished, modified, enlarged, or otherwise changed in whole or in part by the affirmative vote of Voting Members representing at least Seventy-Five percent of the total votes or by an instrument consented to, in writing, executed by Owners of at least Seventy-Five Percent (75%) of the Parcels; except, that (i) the provisions of this Section 10.02 may be amended only by an instrument executed by all of the Owners and all First Mortgagees, and (ii) until such time as the rights and powers of the Declarant under this Declaration terminate, this Declaration may only be amended with the written consent of the Declarant. No amendment which removes Premises from the provisions of this Declaration shall be effective if as a result of such removal, an Owner of a Parcel shall no longer have the legal access to a public way from his Parcel. No amendment shall become effective until properly Recorded.

10.03 SUPPLEMENTAL DECLARATION TO REMOVE REAL ESTATE: Upon the Recording of a Supplemental Declaration by Declarant which removes Removed Real Estate from the terms of this Declaration, as provided in this Article, then:

(a) Except as specifically provided in the Supplemental Declaration, none of the easements, restrictions, conditions, covenants, reservations, liens, charges, rights, benefits and privileges set forth and described herein shall apply to or affect any portion of the Removed Real Estate;

(b) The owner or owners from time to time of any portion of the Removed Real Estate shall not be members of the Association;

(c) The Supplemental Declaration may grant or reserve easements or covenants with respect to a portion of all of the Removed Real Estate or may impose upon a portion or all of the Removed Real Estate, the obligation to share in certain costs incurred by the Association which benefit such portion or all of the Removed Real Estate, as determined by the Declarant in its sole and absolute judgment; and

(d) The provisions of Article Twelve shall apply to any Common Area Parcel or portion thereof which is part of the Removed Real Estate.

## ARTICLE ELEVEN
## FIRST MORTGAGEES' RIGHTS

11.01 NOTICE TO FIRST MORTGAGEES: Upon the specific, written request of First Mortgagee or the insurer or guarantor of a First Mortgagee's mortgage, such party shall receive some or all of the following and these notices can be delivered by any means the Directors determines which is not contrary to the provisions of the Act:

(a) Copies of budgets, notices of assessment, or any other notices or statements provided under this Declaration by the Association to the Owner of the Parcel covered by the First Mortgagee's mortgage;

(b) Any audited or unaudited financial statements of the Association which are prepared for the Association and distributed to the Owners; provided, that, if an audited statement is not available, then upon the written request of the holder, insurer or guarantor of a Mortgage, the Association shall permit such party to have an audited statement for the preceding fiscal year of the Association prepared at such party's expense;

(c) Copies of notices of meetings of the Owners;

(d) Notice of any proposed action that requires the consent of a specified percentage of Eligible First Mortgagees;

(e) Notice of any substantial damage to any part of the Common Area or the Parcel subject to the First Mortgagee's mortgage;

(f) Notice of the commencement of any condemnation or eminent domain proceedings with respect to any part of the Common Area or the Parcel subject to the First Mortgagee's mortgage;

(g) Notice of any default by the Owner of the Parcel which is subject to the First Mortgagee's mortgage under this Declaration, the By-Laws or the rules and regulations of the Association which is not cured within 30 days of the date of the default;

(h) The right to examine the books and records of the Association at any reasonable times;

(i) In the case of a First Mortgagee, the right to be listed on the records of the Association as an "Eligible First Mortgagee" for purpose of Section 11.02 below; and

(j) A lapse, cancellation or material modification of any insurance policy or fidelity bond maintained by the Association.

The request of any such party shall specify which of the above it desires to receive and shall indicate the address to which any notices or documents shall be sent by the Association.

11.02 CONSENT OF FIRST MORTGAGEES:

(a) In addition to any requirements or prerequisites provided for elsewhere in this Declaration, the consent of First Mortgagees holding, in the aggregate, the first mortgages on at least two-thirds (2/3) of the Parcels (by number) which are subject to first mortgages held by First Mortgagees which specifically request to be treated as "Eligible First Mortgagees" under Section 11.01(i) above will be required for the Association to do or permit to be done any of the following:

(i) Adoption of an amendment to this Declaration which (i) changes Article Six or otherwise changes the method of determining the Common Assessments or other Charges which may be levied against an Owner; (ii) changes Section 7.04 or Article Ten, (iii) changes this Article Eleven, or any other provision of this Declaration or by By-Laws which specifically grants rights to First Mortgagees, (iv) materially changes insurance and fidelity bond requirements, (v) changes voting rights, or (vi) imposes a right of first refusal or similar restriction on the right of an Owner to sell, transfer or otherwise convey his Parcel;

(ii) The withdrawal of the Premises from the provisions of this Declaration; provided, that, such consent of Eligible First Mortgagees will not be required with respect to any action under (1) above which occurs as a result of any action taken pursuant to Article Twelve.

(b) Whenever required, the consent of an Eligible First Mortgagee shall be deemed granted unless the party seeking the consent is advised to the contrary, in writing, by the Eligible First Mortgagee within sixty (60) days after making the request for consent.

11.03 INSURANCE PROCEEDS/CONDEMNATION AWARDS: In the event of (i) any distribution of any insurance proceeds hereunder as a result of damage to, or destruction of, any part of the Premises or (ii) any distribution of the proceeds of any award or settlement as a result of condemnation or eminent domain proceedings with respect to any part of the Common Area, any such distribution shall be made to the Owners and their respective First Mortgagees, as their interests may appear, and no Owner or other party shall be entitled to priority over the First

Mortgagee of a Parcel with respect to any such distribution to or with respect to such Parcel; provided, that, nothing in this Section shall be construed to deny to the Association the right (i) to apply insurance proceeds to repair or replace damaged improvements or (ii) to apply proceeds of any award or settlement as a result of eminent domain proceedings as provided in Article Four.

## ARTICLE TWELVE
## ANNEXING AND REMOVAL OF ADDITIONAL PROPERTY

12.01 IN GENERAL: Declarant reserves the right at any time and from time to time prior to ten (10) years from the date of Recording of this Declaration to (i) annex, add and subject additional property to the provisions of this Declaration as additional Premises or (ii) remove certain portions of property from the Premises by recording a supplement to this Declaration (a "Supplemental Declaration"), as hereinafter provided. Any property which is made subject to this Declaration by a Supplemental Declaration shall be referred to as "Added Premises"; any portion of any Added Premises which is made part of the Common Area shall be referred to as "Added Common Area"; and any Parcels contained in the Added Premises shall be referred to as "Added Parcels". Any property which is removed from the terms of this Declaration by a Supplemental Declaration shall be referred to herein as "Removed Real Estate". The Removed Real Estate may only include (i) a Parcel planned to be improved with Home (as shown on the Declarant's Development Plan), provided that no portion of such Parcel is Subject to Assessment hereunder, and (ii) portions of the Common Area, if any, which, in Declarant's sole and absolute determination, serve the Parcels being removed. After the expiration of said ten (10) year period, Declarant may exercise the rights described herein to annex, add and subject additional property to the provisions of this Declaration or remove property from the Premises, provided that the consent the Owners (by number) of two-thirds (2/3) of all Parcels then subject to this Declaration is first obtained. If any portion of the Added Premises or Removed Real Estate, as the case may be, is owned by an owner other than the Declarant, then such owner shall join in the Supplemental Declaration for the purpose of making the Added Premises owned by it subject to this Declaration or removing the portion of the Removed Real Estate owned by it from the terms of this Declaration, as applicable.

12.02 POWER TO AMEND: Declarant hereby retains the right and power to Record a Supplemental Declaration, at any time and from time to time as provided in Section 0, which may amend or supplement Exhibit A. Exhibit A may only be amended or supplemented pursuant to this Article to (i) either add property to Exhibit A or (ii) remove from the Premises property which is described in Exhibit A immediately prior to the Recording of such Supplemental Declaration. A Supplemental Declaration may contain such additional provisions affecting the use of the Added Premises or the rights and obligations of owners of any part or parts of the Added Premises or the Removed Real Estate as the Declarant deems necessary or appropriate.

12.03 SUPPLEMENTAL DECLARATION TO ADD PREMISES: Upon the Recording of a Supplemental Declaration by Declarant which annexes and subjects Added Premises, Added Common Area, or Added Parcels to this Declaration, as provided in this Article, then:

(a) The easements, restrictions, conditions, covenants, reservations, liens, charges, rights, benefits and privileges set forth and described herein shall run with and bind the Added Premises and inure to the benefit of and be binding on any Person having at any time any interest

or estate in the Added Premises in the same manner, to the same extent and with the same force and effect that this Declaration applies to the Premises, and Persons having an interest or estate in the Premises, subjected to this Declaration prior to the date of the Recording of the Supplemental Declaration;

(b) Each Added Parcel shall be a Parcel hereunder and each Owner of an Added Parcel shall be a member of the Association on the same terms and subject to the same qualifications and limitations as those members who are Owners of Parcels immediately prior to the Recording of such Supplemental Declaration;

(c) The provisions of Article Three shall be revised to add any new obligations or responsibilities of the Association or Parcel Owners with regards to the maintenance, repair or replacement of the Added Common Area, if any;

(d) In all other respects, all of the provisions of this Declaration shall include and apply to the Added Premises (including the Added Common Area or the Added Parcels, if any) made subject to this Declaration by any such Supplemental Declaration and the Owners, First Mortgagees, and lessees thereof, with equal meaning and of like force and effect and the same as if such Added Premises were subjected to this Declaration at the time of the Recording hereof;

(e) The Recording of each Supplemental Declaration shall not alter the amount of the lien for any Charges made to a Parcel or its Owner prior to such Recording;

(f) The Declarant shall have and enjoy with respect to the Added Premises all rights, powers and easements reserved by the Declarant in this Declaration, plus any additional rights, powers and easements set forth in the Supplemental Declaration; and

(g) Each Owner of an Added Parcel which is subject to assessment hereunder shall be responsible for the payment of the Common Assessment pursuant to Section 6.02(e) or Section 6.08, but shall not be responsible for the payment of any special assessment which was levied prior to the time that the Added Parcel became Subject to Assessment hereunder.

12.03 SUPPLEMENTAL DECLARATION TO REMOVE REAL ESTATE: Upon the Recording of a Supplemental Declaration by Declarant which removes Removed Real Estate from the terms of this Declaration, as provided in this Article, then:

(a) Except as specifically provided in the Supplemental Declaration, none of the easements, restrictions, conditions, covenants, reservations, liens, charges, rights, benefits and privileges set forth and described herein shall apply to or affect any portion of the Removed Real Estate;

(b) The owner or owners from time to time of any portion of the Removed Real Estate shall not be members of the Association;

(c) The Supplemental Declaration may grant or reserve easements or covenants with respect to a portion of all of the Removed Real Estate or may impose upon a portion or all of the Removed Real Estate, the obligation to share in certain costs incurred by the Association which

benefit such portion or all of the Removed Real Estate, as determined by the Declarant in its sole and absolute judgment; and

(d) The provisions of Section 9.08 shall apply to any Common Area Parcel or portion thereof which is part of the Removed Real Estate.

## ARTICLE THIRTEEN
## BACK-UP SSA

In the event that the Association fails to maintain the Common Area, the Village of Lake Zurich is hereby granted the right, without obligation, for the Village to enter upon any of the Common Area(s) for necessary or emergency maintenance, restoration or repairs and/or to perform such maintenance, restoration or repairs and preserve the areas and impose the costs of such work on the Homeowners Association, with lien rights in the event of nonpayment, or by recourse to the imposition of the revenues derived from the Back-Up SSA. The Village shall have the right to create and draw on a permanent Back-Up SSA, the creation of which is as set forth in Section 7 of the Annexation Agreement, to pay for the performance of any of the duties and obligations of the Association with respect to such Common Area. Notwithstanding any other provision of this Declaration, this provision shall not be amended or modified without the express written consent of the Village.

## ARTICLE FOURTEEN
## MISCELLANEOUS

14.01 NOTICES: Any notice required to be sent to any Owner under the provisions of this Declaration or the By-Laws shall be deemed to have been properly sent if (i) mailed, postage prepaid, to his or its last known address as it appears on the records of the Association at the time of such mailing, (ii) transmitted by facsimile or e-mail to his or its facsimile number or e-mail address as either appears on the records of the Association at the time of such transmittal, or (iii) when personally delivered to his or its Home. The date of mailing, or the date of transmission if the notice is sent by facsimile or e-mail, shall be deemed the date of service.

14.02 CAPTIONS: The Article and Section headings are intended for convenience only and shall not be construed with any substantive effect in this Declaration. In the event of any conflict between statements made in recitals to this Declaration and the provisions contained in the body of this Declaration, the provisions in the body of this Declaration shall govern.

14.03 SEVERABILITY: Invalidation of all or any portion of any of the easements, restrictions, covenants, conditions, or reservations, by legislation, judgment or court order shall in no way affect any other provisions of this Declaration which shall, and all other provisions, remain in full force and effect.

14.04 PERPETUITIES AND OTHER INVALIDITY: If any of the options, privileges, covenants or rights created by this Declaration would otherwise be unlawful or void for violation of (a) the rule against perpetuities or some analogous statutory provision, (b) the rule restricting restraints on alienation, or (c) any other statutory or common law rules imposing time limits, then such provisions shall continue only until twenty-one (21) years after the death of the survivor of

the now living lawful descendants of the President of the United States at the time this Declaration is Recorded.

14.05 TITLE HOLDING LAND TRUST: In the event title to any Parcel is held by a title holding trust, under the terms of which all powers of management, operation and control of the Parcel remain vested in the trust beneficiary or beneficiaries, then the beneficiaries thereunder from time to time shall be responsible for payment of all Charges and for the performance of all agreements, covenants and undertakings chargeable or created under this Declaration against such Parcel. No claim shall be made against any such title holding trustee personally for payment of any lien or obligation hereunder created and the trustee shall not be obligated to sequester funds or trust property to apply in whole or in part against such lien or obligation. The amount of such lien or obligation shall continue to be a charge or lien upon the Parcel and the beneficiaries of such trust notwithstanding any transfers of the beneficial interest of any such trust or any transfers of title to such Parcel.

14.06 WAIVER OF IMPLIED WARRANTY OF HABITABILITY AND OTHER WARRANTIES: Illinois courts have held that every contract for the construction of a new home in Illinois carries with it a warranty that when completed, the home will be free of defects and will be fit for its intended use as a home. The courts have also held that this "Implied Warranty of Habitability" does not have to be in writing to be a part of the contract and that it covers not only structural and mechanical defects such as may be found in the foundation, roof, masonry, heating, electrical and plumbing, but it also covers any defect in workmanship which may not easily be seen by the buyer. However, the courts have also held that a seller-builder and buyer may agree in writing that the Implied Warranty of Habitability is not included as a part of their particular contract. Each buyer of a Home from Declarant agreed in the purchase contract that the Declarant has excluded and disclaimed the Implied Warranty of Habitability and all other implied warranties, whether created judicially, statutorily or by common law, including the implied warranty of fitness for a particular purpose. Such exclusion and disclaimer shall apply to and bind any subsequent Owner of a Home and, accordingly, no Owner of a Home shall be able to assert a claim against Declarant for a breach of the Implied Warranty of Habitability or any other implied warranty.

14.07 JURISDICTION. This Agreement and its validity, enforcement and interpretation shall be governed by the law of the State of Illinois (without regard to any conflict of laws, principles) and applicable United States federal law.

14.08 CONFLICTS. Where the requirements of law, Village Code or Ordinances or the provisions of the Annexation Agreement impose restrictive or higher standards or requirements than this Declaration, such requirements of law or the Annexation Agreement shall govern and control.

[Signature Page Follows]

Dated: _____, 2025

**DECLARANT**:

0 MANCHESTER LLC, an Illinois corporation

By: _____
Name: _____
Title: _____

SIGNATURE PAGE TO
DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS ASSOCIATION

STATE OF ILLINOIS )
) SS.
COUNTY OF _____ )

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 _____ of 0 Manchester LLC, an Illinois corporation, and personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such _____ of 0 Manchester LLC, he signed and delivered the said instrument, pursuant to authority of said corporation, as his free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this _____ day of _____ 2019

_____
Notary Public

My commission expires: _____

NOTARY PAGE TO
DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS
ASSOCIATION

**EXHIBIT A TO**

**DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS**

**ASSOCIATION** [LEGAL DESCRIPTON TO BE ADDED]

The Premises

I. Parcels: The following described lots shall constitute the Parcels as described in Section 1.19 of the Declaration to which this Exhibit is attached:
Lots 1 through 15 in Meadow Wood East Subdivision

II. Common Area: The following described Outlots shall constitute the Common Area as described in Section 1.06 of the Declaration to which this Exhibit is attached:
Outlots A and B in Meadow Wood East Subdivision

PIN:

ADDRESSES:

Various addresses on Manchester Rd and Liverpool Rd., Lake Zurich, Illinois

**EXHIBIT B TO**
**DECLARATION FOR MEADOW WOOD EAST HOMEOWNERS ASSOCIATION**

**(BY-LAWS OF MEADOW WOOD EAST HOMEOWNERS ASSOCIATION)**

## ARTICLE I
## NAME OF ASSOCIATION

The name of the Association is the Meadow Wood East Homeowners Association, an Illinois not for profit corporation, and its successor and assigns.

## ARTICLE II
## PURPOSE AND POWERS

2.01 PURPOSES: The purposes of the Association are to act on behalf of its members collectively, as their governing body, with respect to the preservation, care, maintenance, replacement, improvement, enhancement, operation and administration of both real and personal property, for the promotion of the health, safety and welfare and the common use and enjoyment thereof by members of the Association. These By-Laws are part of the Declaration for the Meadow Wood East Homeowners Association ("Declaration") recorded with the Office of the Recorder of Deeds for Lake County, Illinois, as amended or supplemented from time to time. All terms used herein (if not otherwise defined herein) shall have the meanings set forth in the Declaration.

2.02 POWERS: The Association shall have and exercise all powers as are now or may hereafter be granted by the General Not-for-Profit Corporation Act of the State of Illinois, the Common Interest Community Association Act if the Association elects to be subject to the Common Interest Community Association Act, the Declaration and these By-Laws.

2.03 TAX STATUS. It is intended that the Association shall be treated as a homeowners association taxable as a not-for-profit corporation and, to the extent determined from time to time by the Board (as hereafter defined), shall elect to be treated as a "homeowners association" under the Internal Revenue Code.

## ARTICLE III
## OFFICES

3.01 REGISTERED OFFICE: The Association shall have and continuously maintain in the State of Illinois a registered office and a registered agent whose office is identical with such registered office, and may have other offices within or without the State of Illinois as the Board may from time to time determine.

3.02 PRINCIPAL OFFICE: The Association's principal office shall be maintained on the Premises or at the office of the managing agent employed by the Association, if any.

ARTICLE IV
MEETINGS AND ACTIONS OF OWNERS

4.01 MEMBERSHIP. The Owner from time to time of each Parcel/ Lot (including the case of a Parcel owned by the Declarant unimproved with a Home as described on the Declarant's Development Plan ("Unimproved Parcel")) shall automatically be a "Owner" of the Association. There shall be one membership per Parcel or Unimproved Parcel. There shall be two (2) classes of membership. The Declarant shall be the "Class B Member" with respect to Parcels or Unimproved Parcels which it owns from time to time. Each owner other than the Declarant shall be a "Class A Member" with respect to each the Owner owns. Membership shall be appurtenant to and may not be separated from ownership of a Parcel or Unimproved Parcel. Ownership of a Parcel or an Unimproved Parcel shall be the sole qualification for membership. The Association shall be given written notice of the change of ownership of a Parcel within ten (10) days after such change.

4.02 VOTING RIGHTS: Any or all Owners may be present at any meeting of the Owners, but the voting rights shall be vested exclusively in the representative designated by the Owner of each Parcel or Unimproved Parcel (as defined in Section 4.01 above), in writing or by electronic notice to the Association, and such representative shall be deemed a "Voting Member", as defined in the Declaration; provided, that, prior to the First Meeting (as defined in Section 4.04 below), the voting rights shall be vested exclusively in the Class B Member (the Declarant) and Owners other than Declarant shall have no voting rights. From and after the First meeting, all of the voting rights at any meeting of the Association shall be vested in the Voting Members and each Voting Member who represents a Parcel or Unimproved Parcel owned by a Class A Member shall have one vote for each Parcel or Unimproved Parcel which the Voting Member represents, and the Declarant, as the Class B Member, shall have ten (10) votes for each Parcel or Unimproved Parcel which it owns. The Voting Members may vote in person or by proxy. All proxies shall be in writing, revocable, valid only for eleven (11) months from the date of execution and filed with the Secretary.

4.03 PLACE OF MEETING; QUORUM: Meetings of the Owners shall be held at the Premises or at such other place in Lake County, Illinois, as may be designated in any notice of a meeting. Voting Members representing at least twenty percent (20%) of the total vote shall constitute a quorum; provided, however, that in the event quorum is not met for a particular meeting, the number of Voting Members required for quorum shall be reduced by fifty percent (50%) and shall continue to be reduced by fifty percent (50%) until such time as quorum is met and a meeting can be held. Unless otherwise expressly provided herein or in the Declaration, any action may be taken at any meeting of the Owners at which a quorum is present upon the affirmative vote of a majority of the Voting Members present at such meeting, including any matter which would otherwise require the unanimous consent of the Owners.

4.04 ANNUAL MEETINGS: The first meeting of the Owners ("First Meeting") shall be held upon not less than twenty-one (21) days' written notice given by the Declarant to the Owners. If not called earlier by the Declarant, the First Meeting shall be held no later than thirty (30) days after the Turnover Date. Thereafter, there shall be an annual meeting of the Owners ("Annual Meeting") on the anniversary of the First Meeting, or at such other reasonable time or

date (not more than thirty (30) days before or after such date) upon not less than twenty-one (21) days written notice given by the Board to the Owners.

4.05 SPECIAL MEETINGS: A special meeting of the Owners may be called at any time for the purpose of considering matters which, by the terms of the Declaration, require the approval of all or some of the Voting Members or for any other reasonable purpose. A special meeting shall be called by written notice to the Owners by Declarant (prior to the First Meeting), a majority of the Board (after the First Meeting), or by twenty percent (20%) of the Voting Members (after the First Meeting), and delivered not less than twenty-one (21) days prior to the date fixed for said meeting. The notices shall specify the date, time, and place of the meeting and the matters to be considered.

4.06 NOTICE OF MEMBERSHIP MEETINGS: Notices of Owner meetings required to be given herein may be delivered either personally, by U.S. Mail or by E-mail to the Owners, addressed to such Owner at the address given by such Owner to the Board for the purpose of service of such notice or to the Parcel of the Owner, if no address has been given to the Board. A notice of meeting may include an agenda of business and matters to be acted upon or considered at the meeting.

4.07 NO DUTY OWED BY OWNERS: Except as otherwise provided herein or in the Declaration, an Owner owes no duty to the Association or to the other Owners solely by reason of being an Owner.

4.08 NO SERVICES DUE FROM OWNERS: No Owner shall be required to perform any services for the Association solely by reason of being an Owner. No Owner shall be entitled to any compensation for any services performed by such Owner for the Association unless otherwise determined by the Board.

## ARTICLE V
## BOARD OF DIRECTORS

5.01 IN GENERAL: After the First Meeting, the affairs of the Association shall be vested in the board of Board (the "Board"), which shall consist of three (3) persons or such other number of persons as shall be fixed from time to time by the affirmative vote of not less than fifty percent (50%) of the Voting Members.

5.02 DECLARANT AS DESIGNATED BOARD(S): Anything herein to the contrary notwithstanding, until the first meeting of the Owners after the Turnover Date, the Board shall consist of three (3) individuals from time to time designated by the Declarant. Such individuals may, but need not be, Owners and shall serve at the discretion of the Declarant.

5.03 DELIVERY OF DOCUMENTS: Within sixty (60) days of the First Meeting, the Declarant shall deliver to the Board:

(a) Original copies of the Declaration, the By-Laws and the Association's Articles of Incorporation and any other documents filed with the Secretary of State of the State of Illinois.

(b) An accounting of all receipts and expenditures made or received on behalf of the Association by the Declarant and copies of all insurance policies and a list of any loans or advances to the Association which are outstanding.

(c) All Association funds and bank accounts.

(d) A schedule of all personal property, equipment and fixtures belonging to the Association, including documents transferring the property to the Association.

(e) A list of all litigation, administrative action and arbitrations involving the Association and any notices of governmental bodies involving actions taken or which may be taken by the Association.

5.04 ELECTION: At the First Meeting, the Voting Members shall elect a full Board. The two (2) candidates receiving the greatest number of votes shall each serve a two-year term and the candidate receiving the next greatest number of votes shall serve a one-year term. Thereafter, each Director shall serve a two-year term. Each Director shall hold office until his/her term expires or until his successor has been elected and qualified. Director may succeed themselves in office. In all elections for Director, each Class A Member shall be entitled to the number of votes equal to the number of Director to be elected, and the Class B Member shall be entitled to the number of votes equal to the number of Director to be elected times ten (10). Cumulative voting shall not be permitted; provided that the Class B Member shall be entitled to cast up to 10 votes for each candidate that the Class B Member votes for.

5.05 BOARD MEETINGS: After the First Meeting, regular meetings of the Board shall be held at such time and place as shall be determined by a majority of the Board, provided that (i) the Board shall hold a meeting within thirty (30) days of the Annual Meeting, and (ii) not less than four (4) Board meetings (in addition to the Annual Meeting) shall be held during each fiscal year. Notice of regular meetings of the Board shall be given to each Director, personally, by email, or by mail, at least 48 hours' notice prior to the day named for any such meeting and such notice shall state the time and place of such regular meeting and such notice shall be mailed or delivered to Owners with at least 48 hours' notice and posted conspicuously on the Premises so as to inform the Owners of such meeting(s).

5.06 SPECIAL MEETINGS: After the First Meeting, a special meeting of the Board may be called by the President or at least one-third (l/3) of the Director then serving.

5.07 WAIVER OF NOTICE: Before or at any meeting of the Board, any Director may, in writing, waive notice of such meeting and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a Director at any meeting of the Board shall be a waiver of notice by him of the time and place thereof. If all the Directors are present at any meeting of the Board, no notice shall be required and any business may be transacted at such meeting.

5.08 QUORUM: A majority of the Directors serving from time to time shall constitute a quorum for the election of officers and for the transaction of business at any meeting of the Board, provided, that if less than a majority of the Directors are present at said meeting, a majority of the Director present may adjourn the meeting from time to time without further notice. Except as otherwise expressly provided herein or in the Declaration, any action may be taken upon the affirmative vote of a majority of the Directors present at a meeting at which a quorum is present ("Board Action").

5.09 POWERS AND DUTIES OF THE BOARD: The Board shall have all of the powers and duties granted to it or imposed upon it by the Declaration, the By-Laws, and any applicable statutes, including, without limitation, the following powers and duties:

(a) To engage the services of a managing agent upon such terms and with such authority as the Board may approve;

(b) To provide for the designation, hiring and removal of such employees and such other personnel, including attorneys and accountants, as the Board may, in its discretion, deem necessary or proper;

(c) To provide for any maintenance, repair, alteration, addition, improvement or replacement of the Common Area for which the Association is responsible under the Declaration and the By-Laws;

(d) To procure insurance as provided for under the Declaration;

(e) To estimate and provide each Owner with an annual budget showing the Common Expenses;

(f) To set, give notice of, and collect from the Owners, Common Assessments and other assessments, as provided in the Declaration;

(g) To pay the Common Expenses;

(h) Subject to the provisions of the Declaration, to own, convey, encumber or otherwise deal with any real property conveyed to or purchased by the Association;

(i) To adopt and, from time to time, to amend such reasonable rules and regulations as the Board may deem advisable for the use, enjoyment, administration, management, maintenance, conservation and beautification of the Common Area, and for the health, comfort, safety and general welfare of the Owners and Residents. Written notice of any such rules and regulations or amendments thereto shall be given to all Residents affected thereby;

(j) To delegate the exercise of its power to committees appointed pursuant to Article Seven of these By-Laws;

(k) To borrow money and pledge the assets of the Association, including the right to receive future assessments, as collateral for repayment thereof;

(l) To convey all or substantially all of the Association's assets to, merge with, or convert to, another entity, including a not-for-profit corporation, to the extent permitted by law;

(m) To keep detailed, accurate records of the receipts and expenditures affecting the use and operation of the Association;

(n) To pay real property taxes, special assessments, and any other special taxes or charges of the State of Illinois or of any political subdivision thereof, or other lawful taxing or assessing body, which are authorized by law to be assessed and levied upon the real property of the Association;

(o) To impose charges for late payments of an Owner's proportionate share of the Common Expenses, or any other expenses lawfully agreed upon, and after notice and an opportunity to be heard, levy reasonable fines for violations of the Declaration, By-Laws and Rules and Regulations of the Association;

(p) To assign the Association's right to future income, including the right to receive Common Expenses;

(q) To record a dedication of a portion of the Common Area to a public body for its use as, or in connection with, a street or utility or authorized by the Owners under the applicable provisions of any statutes;

(r) To record the granting of an easement for the laying of television cable or internet cable;

(s) To provide for the repair, maintenance, removal and replacement of entryway stairways, roof, roof drains, chimneys, entryway features, private roadways and walkways and the premises, as well as fencing and landscaping adjoining the Homes; and

(t) To provide for the snow removal in the private roadways located on the Premises.

5.10 COMPENSATION/REIMBURSEMENT FOR EXPENSES: Directors shall receive no compensation, except as expressly provided in a resolution duly adopted by not less than 75% of the Voting Members. Upon the presentation of receipts or other appropriate documentation, a Director shall be reimbursed by the Association for reasonable out-of-pocket expenses incurred in the course of the performance of his or her duties as a Director.

5.11 REMOVAL OR RESIGNATION OF A DIRECTOR: Prior to the First Meeting, the Declarant may not be removed as Directors without the Declarant's written consent. After the First Meeting, any Director may be removed from office, with or without cause, by the affirmative vote of at least two-thirds (2/3) of the Owners then serving at any Annual Meeting or at a special meeting called for such purpose. Any Director may resign at any time by submitting his written resignation to the Board. If after the First Meeting, a Director ceases to be a Owner or Voting Member, he or she shall be deemed to have resigned as of the date of such cessation. A successor to fill the unexpired term of a Director who resigns may be appointed by a majority of the

remaining Directors at any regular meeting or a special meeting called for such purpose and any successor so appointed shall serve the balance of his or her predecessor's term.

5.13 LIMITATION OF LIABILITY: The Directors shall perform the duties of the Director in good faith, in a manner which the Directors believe to be in the best interests of the Association, and with such care as an ordinarily prudent individual in a like position would use under similar circumstances.

5.14 INDEMNIFICATION: The Association shall indemnify each Director for all acts performed by the Director in respect of the Association, to the full extent permitted by applicable statutes, but in no event for fraud, deceit, theft, misappropriation, embezzlement, willful misconduct or gross negligence relating to the Association.

## ARTICLE VI
## OFFICERS

6.01 OFFICERS: The officers of the Association shall be a President, a Secretary, Treasurer, and such assistants to such officers as the Board may deem appropriate and shall hold office at the discretion of the Board. After the First Meeting, officers shall be Directors and shall be elected annually at the first Board meeting following the Annual Meeting.

6.02 VACANCY OF OFFICE: Any officer may be removed at any meeting of the Board by the affirmative vote of the majority of the Directors in office, either with or without cause. Any officer may resign at any time by submitting his or her written resignation to the Board. If after the First Meeting, an officer ceases to be an Owner or Voting Member, he or she shall be deemed to have resigned as of the date of such cessation. A successor to fill the unexpired term of an officer who resigns or is removed may be appointed by the Board at any regular meeting or a special meeting called for such purpose and any successor so appointed shall serve the balance of his or her predecessor's term.

6.03 POWERS OF OFFICERS: The respective officers of the Association shall have such powers and duties as are from time to time prescribed by the Board and as are usually vested in such officers, including but not limited to, the following:

(a) The President shall preside at all meetings of the Owners and at all meetings of the Board and shall execute amendments to the Declaration By-Laws as provided in the Declaration and By-Laws.

(b) The Secretary shall keep minutes of all meetings of the Owners and of the Board and shall have charge of such other books, papers and documents as the Board may prescribe;

(c) The Treasurer shall be responsible for Association funds and securities and for keeping full and accurate accounts of all receipts and disbursements in the Association books of accounts kept for such purpose.

6.04 OFFICERS' COMPENSATION: The officers shall receive no compensation for their services, except as expressly provided by a resolution duly adopted by not less than 75% of the Voting Members.

ARTICLE VII
COMMITTEES DESIGNATED BY BOARD

7.01 BOARD COMMITTEES: The Board may, by Board Action, designate one or more committees, each of which shall consist of two or more Directors, which committees, to the extent consistent with law and as provided in said resolution, shall have and exercise the authority of the Board in the management of the Association; but the designation of such committees and delegation thereto of authority shall not operate to relieve the Board, or any individual Director, of any responsibility imposed by law upon the Board or any individual Director.

7.02 SPECIAL AND STANDING COMMITTEES: Other committees not having and exercising the authority of the Board in the management of the Association may be designated by a resolution adopted by Board Action. Except as otherwise provided in such resolution, members of each such special committee shall be Owners or Voting Members and the President shall appoint the members of such special committee, as well as a Director to act as the liaison between the special committee and the Board. Any member of such special committee may be removed by the President whenever in his or her judgment the best interests of the Association shall be served by such removal. The powers and the duties of any standing committee shall be as set from time to time by resolution of the Board. The President shall designate a Director (who shall act as the liaison between the standing committee and the Board) to serve as the chairman of each standing committee, and the other members of the standing committee (who need not be Directors) shall be appointed and removed from time to time by such chairman.

7.03 TERM: Each member of a committee shall continue as such until the next Annual Meeting of the Board and until his or her successor is appointed, unless the committee shall be sooner terminated, or unless such member shall be removed from such committee, or unless such member shall cease to qualify as a member thereof.

7.04 CHAIRPERSON: Except as otherwise provided in Section 7.02, one member of each committee shall be appointed chairperson.

7.05 VACANCIES: Vacancies in the membership of any committee may be filled by appointments made in the same manner as provided in the case of the original appointments to such committee.

7.06 QUORUM: Unless otherwise provided in the resolution of the Board designating a committee, a majority of the whole committee shall constitute a quorum and the act of a majority of the members present at a meeting at which a quorum is present shall be the act of the committee.

7.07 RULES: Each committee may adopt rules for its own governance not inconsistent with the Declaration, the By-Laws or with rules adopted by the Board.

ARTICLE VIII
CONTRACTS, CHECKS, DEPOSITS AND FUNDS

8.01 CONTRACTS: The Board may authorize any officer of officers, agent or agents of the Association, in addition to the officers so authorized by the By-Laws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Association and such authority may be general or confined to specific instances. In the absence of any such authorization by the Board, any such contract or instrument shall be executed by the President or a Vice President and attested to by the Secretary or an Assistant Secretary of the Association.

8.02 PAYMENTS: All checks, drafts, vouchers or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Association shall be signed by such officer or officers, agent or agents of the Association, and in such manner as shall from time to time be determined by resolution of the Board. In the absence of such determination by the Board, such instruments shall be signed by the Treasurer or an Assistant Treasurer and countersigned by the President of the Association.

8.03 BANK ACCOUNTS: All funds of the Association not otherwise employed shall be deposited from time to time to the credit of the Association in such banks, trust companies or other depositories as the Board shall elect.

8.04 SPECIAL RECEIPTS: The Board may accept on behalf of the Association any contribution, gift, bequest, or devise for the general purposes or for any special purpose of the Association.

ARTICLE IX
FISCAL MANAGEMENT

9.01 FISCAL YEAR: The fiscal year of the Association shall be established by the Association and may be changed from time to time by a resolution adopted by two-thirds (2/3) of the Board.

9.02 ANNUAL STATEMENT: Within a reasonable time after the close of each fiscal year, the Board shall furnish each Owner with a statement of the income and disbursements of the Association for such fiscal year.

9.03 SPECIAL STATEMENT: Within ten (10) days after receipt of a written request from an Owner, the Board shall provide the Owner with a statement containing the following information:

(a) The status of the Owner's account and the amount of any unpaid Common Assessments and/or other charges due and owing from the Owner; and

(b) The status and amount of any and all Capital Reserves.

9.04 ASSESSMENT PROCEDURE: Common Assessments and special assessments shall be made and collected as provided in the Declaration.

ARTICLE X
TRANSFER OF MEMBERSHIP

10.01 MEMBERSHIP: The Owner of each Parcel or Unimproved Parcel shall automatically be an Owner of the Association. There shall be one membership per Parcel or Unimproved Parcel. Membership shall be appurtenant to and may not be separated from ownership of a Parcel or Unimproved Parcel. Ownership of a Parcel or Unimproved Parcel shall be the sole qualification for membership. The Association shall be given written notice of a proposed change of ownership of a Parcel or Unimproved Parcel within ten (10) days prior to such change. Any attempt to transfer membership in the Association separate from ownership of a Parcel or Unimproved Parcel shall be invalid, null and void, and of no force and effect.

10.02 NO VOLUNTARY DISSOCIATION: An Owner shall not be permitted to voluntarily dissociate from the Association.

ARTICLE XI
BOOKS AND RECORDS

The Association shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its Owners, the Board, and committees having any of the authority of the Board, and shall keep at the registered or principal office of the Association a record including the following: (i) the names and last known address of the Owners, setting forth the date on which each became an Owner; (ii) a copy of the Articles of Incorporation of the Association, as amended or restated, together with executed copies of any powers of attorney pursuant to which any articles, applications, or certificates have been executed; (iii) copies of the Association's financial statements and federal, state, and local income tax returns and reports for the three (3) most recent years, where applicable; and (4) copies of the By-Laws and any amendments thereto. All books and records of the Association may be inspected and copied by any Owner, or his or her mortgagee, agent or attorney, at any reasonable time on ten (10) days written notice. The Owner shall reimburse the Association for all costs and expenses incurred by the Association in connection with that Owner's inspection and copying of such records.

ARTICLE XII
AMENDMENTS

These By-Laws may be amended or modified at any time, or from time to time, by the affirmative vote of two-thirds (2/3) of the Owners in the aggregate, that (a) no provision of these By-Laws may be amended or modified so as to conflict with the provisions of the Declaration or applicable statutes and (b) no provision of these By-Laws which affects the rights of the Class B Member may be amended or modified without the written consent of the Class B Member.

**EXHIBIT C TO**
**MEADOW WOOD EAST HOMEOWNERS**
**ASSOCIATION (PLAT OF SUBDIVISION)**

**VILLAGE OF LAKE ZURICH**

**ORDINANCE NO. 2026-02-649**

**AN ORDINANCE APPROVING AND AUTHORIZING THE EXECUTION AND ATTESTATION OF A DEVELOPMENT AGREEMENT BY AND BETWEEN THE VILLAGE OF LAKE ZURICH AND 0 MANCHESTER ROAD, LLC RELATING TO THE DEVELOPMENT OF MEADOW WOOD EAST**
***(0 Manchester Road)***

**WHEREAS**, 0 Manchester Road, LLC represented by Mr. Michael Naumowicz, is the Applicant, Developer and Owner (the "Applicant," "Developer" and "Owner") of certain property for a Planned Unit Development (the "PUD") for the property commonly referred to as Meadow Wood East at 0 Manchester Road ("Subject Property"), said Property legally described in Exhibit A hereto; and

**WHEREAS**, Applicant proposes to develop approximately eight (8) acres of land area, currently platted for nine (9) parcels with a residential subdivision consisting of 15 single-family detached homes, stormwater management facilities and open areas (the "Development"); and

**WHEREAS**, Applicant requests an amendment to the Official Zoning Map of the Village of Lake Zurich from R-4 Single-Family Residential district to R-5 Single-Family Residential district to allow the establishment of the 15 new single-family lots; and

**WHEREAS**, Applicant has been granted Development Concept Plan (Preliminary Plan) approval by the Village Board 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,"* passed on January 6, 2025; and

**WHEREAS**, Applicant has been granted Final Plan approval by the Village Board through Ordinance No. 2026-02-648 entitled "An Ordinance Granting Final Plan Approval for a Planned Unit Development – *Meadow Wood East – Manchester Road,*" passed on February 2, 2026; and

**WHEREAS**, the Village and Applicant desire to enter into a Development Agreement for the purpose of providing for the terms and conditions of the development and use of the Property in compliance with Ordinances No. 2025-01-600 and 2026-02-

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

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

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

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

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

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

***Signature page to follow***

PASSED THIS _____ day of February, 2026.

Ayes:

Nays:

Absent:

Abstain:

EFFECTIVE on this _____ day of February, 2026.

_____
Thomas Poynton, Village President

ATTEST:

_____
Kathleen Johnson, Village Clerk

EXHIBIT A

Legal Description

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

AN AGREEMENT BY AND BETWEEN
THE VILLAGE OF LAKE ZURICH AND 0 MANCHESTER ROAD LLC
RELATING TO THE DEVELOPMENT OF
MEADOW WOOD EAST *(0 Manchester Road)*

AN AGREEMENT BY AND BETWEEN
THE VILLAGE OF LAKE ZURICH AND MICHAEL NAUMOWICZ
REPRESENTING 0 MANCHESTER ROAD, LLC
RELATING TO THE DEVELOPMENT OF MEADOW WOOD EAST
*(0 Manchester Road)*

THIS AGREEMENT is made and entered into this _____ day of _____, 2026, by and between the Village of Lake Zurich, a municipal corporation (hereinafter referred to as "Village"); and Michael Naumowicz representing 0 Manchester Road, LLC (hereinafter referred to as "Applicant," "Owner" or "Developer").

W I T N E S S E T H:

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

WHEREAS, the owner of the Subject Property is Ms. Mary Christine Misik, and has provided her written consent to allow Applicant to develop the Subject Property; and

WHEREAS, the Subject Property is approximately 8 acres in size and is currently subdivided into nine (9) single-family residential lots classified within the R-4 single-family residential district; and

WHEREAS, Applicant is the contract purchaser and Developer of the Subject Property and wishes to undertake the development of the Subject Property with a subdivision consisting of 15 single-family detached homes, roadways and stormwater management facilities (the "Development"); and

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

WHEREAS, the Village approved a Development Concept Plan for a Planned Unit Development on February 3, 2025, through Lake Zurich 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*"; and

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

Concept and Final Plan and Final Plat of Subdivision" or alternately referred to as the “Residential Subdivision”); and

WHEREAS, the effectiveness of said Ordinance No. 2026-02-649 is conditioned in part upon the execution and recording of a development agreement for the Residential Subdivision in the form of this Agreement and to the satisfaction of the Village, including among other matters the installation of the required public and private improvements (the “Agreement”); and

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

WHEREAS, Applicant intends to convey title of Lots 1 and 2 of the Subject Property to the owner of the adjacent property at 3 Tanglewood Court, for the purpose of maintaining such lots as unimproved open space, and the construction upon/across and maintenance of such Lots 1 and 2 shall be subject to the terms and conditions outlined under Section 2 herein.

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

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

Section 2. Lots 1 and 2 of the Residential Subdivision: Upon execution of this Agreement by Owner, Village agrees to the following conditions with respect to Lots 1 and 2:

a. Owner shall convey fee simple title of Lots 1 and 2 to and only to the owner of the adjacent residential property located at 3 Tanglewood Court, Hawthorn Woods, IL 60047. Such conveyance shall take place within six (6) months of the approval of this Ordinance with proof of title conveyance presented to the Village within such time. No building permits for development on any lots within the Subject Property will be issued unless and until the completion of this conveyance of Lots 1 and 2.

b. Developer shall be required to connect Lots 1 and 2 into the public water and sanitary sewer lines to be constructed as part of Developer's development of the Subject Property and contingent upon the payment of all necessary connection fees by Developer. To the extent, if any, that any such approval is necessary, Village hereby agrees that Developer may tap into any other utility lines to be constructed by Developer (and/or Commonwealth Edison, Northern Illinois Gas or other utility supplier) as part of Developer's development of the Subject Property.

c. Developer shall be required to construct sidewalk across Lots 1 and 2, all stormwater management features such as stormwater pipes and other related drainage structures as well as all related street improvements in compliance with the Codes of the Village including this approved Final Plan for the PUD. Such improvements shall be completed concurrently with all subdivision improvements or within 6 months of commencement of construction, whichever comes first.

d. Notwithstanding the improvements required under the preceding paragraphs b. and c. of this section, Lots 1 and 2 shall be maintained as vacant open space for the duration of 20 years and shall be subject to all property maintenance codes and ordinances of the Village of Lake Zurich.

e. Lots 1 and 2 of the Subject Property shall remain classified within the R-5 single-family residential district and subject to all terms and conditions of the zoning bulk and other requirements the R-5 district as approved and modified by the PUD Ordinance Number 2025-01-600.

f. Failure to demonstrate proof of conveyance of Lots 1 and 2 within 6 months of approval of this Ordinance shall require such lots to be developed in conformance with all terms and conditions of this Development Agreement required hereunder, including in particular that construction of buildings on Lots 1 and 2 shall be completed within the required 2-year subdivision improvement period required by Village Code.

g. Following completion of the 2-year subdivision improvement construction period of the Village Code and with the understanding that remaining lots 3 through 15 have been completed and occupied, the development of Lots 1 and 2 with single-family residences shall only be permitted upon amendment to this PUD and Final Plan and the Development Agreement for the Subject Property, and conform to all remaining terms and conditions of this agreement.

Such conditions shall be made a permanent covenant that runs with Lots 1 and 2, unless released with the prior written approval of the Village Board of Trustees. Such covenant and any other accompanying restrictions shall be recorded and be of record with the Lake County Recorder of Deeds prior to conveyance of such lots to the receiving owner of 3 Tanglewood Court, Hawthorn Woods, IL 60047.

Section 3. Back-up Open Space, Stormwater Management, Special Service Area. Promptly after the approval of the Final Plat of Subdivision by the Village, the Village shall give all notices required by, and shall hold public hearings as required and pursuant to the Illinois Special Service Area Tax Law, 35 ILCS 200/27-5 et seq., for the purpose of establishing a back-up special service area exclusively for the Residential Subdivision (the "Back-up SSA"), for the purpose of generating revenues sufficient to allow the Village to assume the obligations of maintaining repairing and/or replacing within the Residential Subdivision the following: Any common areas/outlots, open space, including landscape materials, and stormwater management and stormwater retention/detention areas and facilities, should the Developer and its successors or the HOA default on their obligations to ensure that these areas and features are timely and properly cared for, maintained and replaced. Developer agrees to cooperate with the creation of the Back-up SSA and shall not, and hereby agrees to waive any objection to the creation of the Back-up SSA. Developer shall include provisions in the Declaration of Covenants, Conditions and Restrictions (the "Declaration") for the Homeowners Association (defined below) memorializing and permitting the creation of the Back-up SSA.

Developer agrees to provide such agreement to cooperate with the creation of the Back-up SSA by appropriate written documentation, if requested by the Village. The Developer shall pay to the Village, immediately upon presentation of a written invoice therefor, all reasonable legal, engineering, and other consulting or administrative fees, costs, and expenses incurred or accrued for that time spent on work in connection with the review and processing of plans for, and the creation of, the Back-up SSA, including without limitation all reasonable costs incurred by the Village for publications and recordings required in connection with the foregoing. The Developer and its successors acknowledge their responsibility to timely pay for the maintenance, repair and/or replacement costs set forth herein, of all property owned by the Developer and its successors, and for all tax levies pursuant to this Back-up SSA in the event of the ultimate institution of such Back-up SSA.

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

Section 4. Homeowners Association (HOA). The Developer shall establish a Home Owners Association(s) (HOA), by a declaration of covenants, restrictions and easements, prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, to assume the ongoing maintenance, repair and/or replacement responsibilities of common areas within the Residential Subdivision, as provided herein. The provisions for such declaration shall

be subject to the review and approval of the Village. Developer shall be responsible for the preparation (and submittal to the Village for review and approval) and ultimate recording of an appropriate declaration of covenants, restrictions and easements creating an HOA for the Residential Subdivision.

Section 5. Certified Contractors for Public Street and Sidewalk Improvements. Village and Developer acknowledge and agree that Developer shall be responsible for the construction of all public streets and utilities within and outside the boundaries of the Development of the Residential Subdivision as described within this Agreement. To demonstrate financial and technical capability to complete projects safely and efficiently, 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. 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.

Section 6. Sidewalk Improvements. Village and Developer acknowledge and agree that sidewalks and parkway trees are required within and along the right of way as set forth on the Final Plan attached hereto and made a part hereof as Exhibit B (the "Final Plan"). Developer agrees to install sidewalks within the Residential Subdivision. Such sidewalks shall be installed in compliance with the applicable standards of Village of Lake Zurich. No final occupancy for a home on any block shall be granted prior to the completion of a sidewalk along the frontage of such home along the street. No home on any block that is granted a temporary occupancy permit shall be occupied for longer than nine (9) months without a sidewalk along that property being completed. Upon the completion of construction and issuance of the earlier of either a temporary or final certificate of occupancy of the tenth of fifteen ($10^{th}$ of 15) homes within the Residential Subdivision, Developer shall implement the construction of all sidewalks within the Residential Subdivision.

Section 7. Street Improvements: Village and Developer acknowledge and agree that street improvements are required for the Development. All streets within the boundaries of the Development shall be designated as "public streets" and shall be owned and maintained by the Developer or its successor until such time they are dedicated to and accepted by the Village. Such streets shall be constructed by the Developer at its cost and in compliance with the approved Final Plan. Public improvements by the Village along with maintenance responsibility shall only be accepted by the Village upon completion of inspections by Village Staff and formally accepted by Resolution of the Lake Zurich Village Board.

Manchester Road for its extent from Miller Road to the southerly boundary of the Development is a public right-of-way and owned and maintained by the Village. Such roadway shall be the sole means of access to the Development. It is understood that such roadway will also be used to provide access for construction vehicles, materials and equipment necessary to complete the Development. Upon completion of the development in substantial form, the roadway shall be resurfaced in conformance with the Village standards for roadway re-construction, including but

not limited to installation of village utilities, curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village. Such work as described herein shall be completed at the Developer's sole expense. Resurfacing/reconstruction shall be completed in compliance with the following requirements:

a. Village-Approved Third-Party Geotechnical Evaluation: Prior to any construction activity for the Meadow Wood East subdivision, and again following substantial completion of site improvements, the Developer shall retain a third-party geotechnical engineer subject to explicit approval by the Village. The engineer must be independent from the project engineer and demonstrate qualifications acceptable to the Village. The geotechnical evaluation shall encompass the full length of Manchester Road between Miller Road and Meadow Wood East, and all associated infrastructure. All associated costs related to evaluations, studies documents and construction shall be paid for by the Developer.

b. Pre-Construction Photographic and Condition Survey: The Village-approved geotechnical engineer shall prepare a comprehensive photographic and written survey documenting the pre-existing condition of the roadway surface, pavement structure, curb and gutter, sidewalks, and all appurtenant features. This survey shall serve as the baseline for post-construction comparison. The geotechnical engineer shall also take core-samples of the roadway to determine the cross section and its condition. The Village anticipates that a minimum 2.25-inch mill and overlay will be required; however, the geotechnical engineer may determine that a more extensive rehabilitation scope is warranted. The Developer shall perform all improvements determined necessary by the geotechnical engineer and approved by the Village.

c. Post-Construction Assessment & Required Resurfacing Treatment: After all subdivision construction is complete, the Village-approved geotechnical engineer shall conduct a post-construction evaluation to identify any deterioration, settlement, or damage caused by construction traffic or changes in loading conditions. The geotechnical engineer shall recommend the required resurfacing or reconstruction treatment based on comparative analysis of the pre- and post-construction conditions. The Village reserves the right and full authority to approve or modify the recommended pavement treatment, and the Developer shall complete all required improvements at its expense prior to final acceptance or occupancy approvals as determined by the Village.

d. Milling Evaluation, Proof Roll, and Required Undercutting/Patching: After milling the existing pavement to the depth determined by the Village-approved geotechnical engineer, the exposed pavement and base course shall undergo a visual inspection and a proof roll performed under Village observation. Any areas that exhibit deflection, rutting, pumping, excessive cracking, or other forms of pavement distress during the proof roll shall be fully removed and replaced.

   The Developer shall anticipate that approximately 20% of the roadway within the project limits may require undercutting, base repair, or full-depth pavement patching

based on expected subgrade conditions and the findings and determinations of the geotechnical evaluation as approved by the Village.

e. Curb and Sidewalk Removal & Replacement Requirements: As part of the final restoration work, the Developer shall be prepared to remove and replace no less than 25% of all curb and gutter along the project limits, regardless of visible condition. Such replacement shall include all ramps at intersections to be replaced.

   This required 25% replacement is a minimum baseline and shall not include any curb or sidewalk damage attributable to the Developer's construction activity. Such construction-related damage shall be repaired in addition to the 25% minimum. Sidewalk replacement shall only occur wherever directed by the Village based on observed deficiencies, drainage needs, impacts from construction, or noncompliance with ADA slopes. The Village will mark the locations and provide the replacement quantities. The curb and sidewalk must have pre- and post- pour inspections for each section.

f. Restoration Costs and Standards:
   i. All pavement, concrete, and infrastructure restoration shall conform fully to current Village standards and specifications.
   ii. The Developer shall be responsible for all costs associated with engineering, testing, traffic control, construction, restoration, and corrective measures required by the Village.
   iii. The pavement and curb restoration construction shall be completed by November 1 of the year in which the work is started to avoid disruption to the existing neighborhood and shall be completed within the time period authorized by the ordinance approving the development.
   iv. Contractors performing all work related to the roadway resurfacing shall be prequalified per requirements outlined in Section 5 of this Agreement.
   v. The contractor and subcontractors selected to perform the work shall provide a list of similar past projects completed and accepted by a public entity in the last five years.

g. Schedule and Deliverables:
   i. The pre-construction photographic and condition survey must be provided by the Owner at the preconstruction meeting prior to mass grading of the Subject Property.
   ii. The Owner shall provide the third-party geotechnical evaluation following the substantial completion of Residential Subdivision improvements. The third-party Village approved Geotechnical engineer must be present at the preconstruction meeting for the Development.
   iii. A detailed schedule for the offsite improvements of the residential Subdivision must be provided by the Developer and approved by the Village. Failure of the Developer to meet the required timelines as approved by the Village will subject the developer to penalties, and/or forfeiture of the posted sureties for the roadway construction. The Village will have the right and authority to draw on the posted

surety for the purpose of developing engineering specifications and completing the restoration/or any outstanding work items at the Developer's sole expense should the Developer fail to complete the project according to the Village's standards and requirements.

Section 8. Street Lights. Street lights as required by the Final Plan shall be installed by and at the expense of Developer along the streets in conformance with standards and requirements of Commonwealth Edison (ComEd). Street lights shall be energized prior to the first occupancy permit issued. ComEd has the exclusive right to affect the installation of required streetlights, and ComEd controls the time of commencement of street light installation and completion thereof. Accordingly, if the Developer has paid ComEd in a timely manner and in full for installation of all required street lights, and ComEd delays installation thereof for any reason not attributable to or caused by any act or omission of the Developer, and if, further, such delay by ComEd causes a failure to meet the specified completion date for street light installation, then the Developer shall not be responsible for such failure and the Village shall not penalize the Developer therefor by withholding certificates of occupancy or any other certificates or permits. The Developer and its successors shall be solely responsible for all streetlight installation, energy charges from ComEd or any other source of operation of all street lights within the Residential Subdivision at all times.

Section 9. Water and Sanitary Sewer Service: The Development on the Subject Property shall be connected to public water and sanitary sewer mains/systems. Developer shall be required to construct and install any required extension to the existing water main from the current location of such main(s), bringing the line to the Subject Property from the appropriate location(s) designated by Village. Such water and sewer connections shall be made for any homes to be built on the Subject Property prior to and as a condition of the issuance of an occupancy permit. All connections to said water and sanitary sewer systems shall be made by Developer in accordance with the Final Plan approved by Village, and Developer shall pay all applicable water connection fees to the Village as required by Village Codes. Developer shall additionally pay all applicable Lake County sewer connection fees at rates that are established at the time of requesting such permits.

Developer agrees to connect to Village water and sanitary sewerage systems as required by the codes and ordinances of Village and as set forth on the Final Plan. Village represents and warrants that it owns, operates and maintains (i) a potable water supply and distribution system, and (ii) a sanitary sewer system, each of which systems and mains have, and at all times will have, sufficient capacity to accommodate the anticipated potable water, fire protection and sanitary sewer needs of the Subject Property and the residents of the Subject Property to the extent that the Subject Property is developed in accordance with the Final Plan. Such Final Plan will be reviewed by the Corporate Authorities of Village, and approved for the development of the Subject Property in accordance with all applicable codes and ordinances. Village agrees that said Final Plan shall include the Final Plat of Subdivision for the Property as required by the terms of Village's Land Development Code. Said Final Plan approval shall be effective for the term as outlined within the provisions contained within the Land Development Code. Developer agrees that no work related to water and sanitary improvements shall commence prior to obtaining approval of the pertinent local, county or state agencies and posting of any required improvement guaranties. No such approval by the pertinent local, county or state agencies and/or posting of the required

improvement guaranties by Developer shall delay the permitting or construction described in Section 20 below.

Section 10. Stormwater Improvements: The development on the Subject Property shall be constructed by Developer in compliance with all applicable Village and County stormwater restrictions and requirements in accordance with final engineering plans to be approved by Village.

Section 11. Impact Fees/Building Permit Fees/Village Fees: Developer shall pay all Development Impact Fees and Contributions, Water and Sanitary Connection Fees, and Building Permit Fees and deposits as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, library impact fees, water and sanitary connection fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each residential building. The fee amount per unit shall be paid as outline in Exhibit C.

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

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

Section 12. Easements: Developer and Owner, with respect to the portion of the Subject Property then owned by such party, shall provide all on-site easements which may be required to enable the Subject Property to receive water and sanitary sewer service and other public utilities, including cable television. Such required easements and easement provisions shall be depicted on the Final Plat. The location for all public improvements, including public utilities, streets, fire protection and emergency services shall be as shown on final engineering plans approved by Village, with all utilities to be placed underground.

Section 13. Final Plan: The Final Plan shall include but not be limited to all final plats of subdivision, final planned unit development plans, final landscape plans, final engineering plans, and final building elevations which are in substantial conformance with the Preliminary Plan and subject to compliance with the Zoning and Land Development Codes and all other documents and reports related to the development. Such documents and exhibits are as approved by the Ordinance approving the Final Plan for the Planned Unit Development and Final Plat of Subdivision on _____, through Lake Zurich Ordinance No. _____. Developer may submit one or more final plats of subdivision for the Subject Property and Village shall approve such final plats of subdivision so submitted provided they are in substantial

conformance with the terms and conditions of this Agreement, the Preliminary Plan, and otherwise meet all requirements of the Village Zoning and Land Development Codes, as modified by this Agreement. All final plats of subdivision shall comply with Village Land Development Code in all respects unless specifically stated otherwise in this Agreement, and as indicated on the Preliminary Plan. The final plat(s) of subdivision approved by Village for the Subject Property is/are herein referred to individually and collectively, as the case may be, as the "Final Plat".

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

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

Section 14. Plan Changes: Subject to staff review and approval, and without the requirement to amend this Agreement, Developer may construct additional floor plans, models and elevations so long as they are in substantial conformance with the floor plans, models and elevations approved in the Development Concept Plan (Preliminary Plan); and consistent with Village Municipal Code Requirements. Any change or modification to the engineering plans and specifications or any change or modification to the building plans or changes in the Preliminary Plan which are determined by the Village Manager (as defined in the Lake Zurich Municipal Code) as: (i) in substantial compliance with the Preliminary Plan or other plans or plats as approved by the Village Board; (ii) in compliance with the Lake Zurich Municipal Code, as amended, except as specifically varied herein; and (iii) in compliance with good engineering practice, are herein referred to as an "Incidental Change." Any change in the product mix set forth in the Preliminary Plan that does not affect the configuration or increase the overall density shall be an Incidental Change hereunder. Incidental Changes may be approved or rejected by the Village Manager without Planning and Zoning Commission or Village Board review or public hearing.

Section 15. Code Compliance: Except state or county mandates which are outside of the control of Village, for a period of two years from the Effective Date of this Agreement, any changes to Village's Building, Plumbing, Electrical, Fire Prevention codes ("Village Codes") shall not be applicable to the development of the Subject Property. In the event that any modifications or amendments to the above referenced codes affecting the Subject Property benefit Developer during the term of this agreement, said modification shall be effective as to the Subject Property.

Section 16. Marketing Signage and Marketing Trailer, Construction and Storage Trailers: Developer may place and utilize up to one (1) marketing trailer and one (1) construction supply storage trailer upon such parts of the Subject Property as required for development and/or construction purposes. Developer shall have the right to install and maintain marketing signage per the attached Exhibit D.

Section 17. Subdivision Improvement Guarantee: Developer shall post one or more performance guarantees for the required subdivision improvements and off-site improvements in the form of an irrevocable Letter of Credit (the "Letter of Credit") as determined by the Village generally in the format attached to this Agreement as Exhibit E and to be approved by Village. The required public and private improvements shall hereinafter be referred to as "Improvements." The amount of the Letter of Credit shall be based on the Village Engineer opinion of the probable cost of the Improvements (the "EOPC") to ensure that the work is being guaranteed to cover the cost of construction of the Development. The Village reserves the right to require Developer to post separate guarantees for private and public improvements. If a draw on the Letter of Credit is required to complete any Improvements, any and all of the funds available in the Letter of Credit may be used to complete any of the Improvements.

Periodic reductions in the guarantee, as the case may be, will be approved by Village based upon the Village Engineer's certification of completion of work on the affected Improvements based upon documentation supplied from time to time by Developer and the inspection of such Improvements by the Village Engineer and based on a determination that sufficient funds remain at all times to ensure the completion of any remaining Improvements. The Village Engineer shall notify Developer without unreasonable delay of (1) its certification of the completion of the work on Improvements on account of which Developer requests a reduction in the Letter of Credit, and any corresponding reduction in the Letter of Credit, or (2) any deficiencies in the work on the affected Improvements or incomplete work on such Improvements, each to be identified with specificity, and detail of all corrections to defective work and/or work to be completed in order to obtain the Village Engineer's certification of completion of the work on the affected Improvements. Any necessary re-inspection shall be completed within fifteen (15) days following notice from Developer to the Village Engineer that it has corrected such deficiencies and/or completed such work, as the case may be. The Village will have the ability to draw on LOC funds at any time after an inspection is completed on any phase or portion of the work and at any time that the Village engineer concludes that any portion of the work has been improperly completed and needs repair, correction or replacement.

The Letter of Credit shall be automatically renewed on an annual basis and extended for an additional year until the completion and approval or acceptance of the Improvements, in order to guarantee ongoing work on the Development. Extensions of time to complete the Improvements shall require that the Letter of Credit be renewed automatically for such extended period of time. Every six months, until the completion of the Development and Residential Subdivision, if it is determined by the Village Engineer that costs of the remaining Improvements have increased, the amount of the Letter of Credit shall be increased, upon Village request to Developer, based on an updated EOPC by the Village engineer of the then current cost of construction of the remaining Improvements in the Development. Notwithstanding the foregoing condition of automatic

renewal, any required increase in the LOC shall supersede an automatic renewal of the original LOC.

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

As it relates to the reconstruction of Manchester Road, Developer shall post a separate discrete performance guarantee in the form of a Letter of Credit (LOC) for the resurfacing of Manchester Road as designated and required by the Village. the LOC for Manchester Road shall be similar in form to that posted for the subdivision improvements by Developer.

Section 18. Demolition, Soil Erosion Control & Grading Plan Approval (Initial Plans): If separately requested by Developer, and upon review and approval of the Initial Plans and required permits from other local, state and federal agencies, Village shall permit Developer to proceed with site demolition, site clearing (including tree removal) and earthwork prior to the approval of any Final Plans (i.e. Final Subdivision Improvement Plans and Final Plats) provided Developer posts with Village guarantees in the form of a Surety (the "Surety") in the form of a Letter of Credit (LOC) in the format attached to this Agreement as Exhibit E and approved by Village for such site demolition, site clearing and earthwork in the amount sufficient to restore the affected area, including, without limitation, the costs of erosion control, re-spreading topsoil and seeding the disturbed area. Such Demolition, Soil Erosion Control & Grading Plan Approval (the "Initial Plans") shall only pertain to "mass grading" and not to excavation for the construction and installation of utilities.

Section 19. IEPA Permits. Developer shall prepare and Village will execute (review and provide signature) and return to Developer both IEPA Sanitary Sewer Main Extension and IEPA Water Main Extension Permits ("IEPA Permits") within one (1) week of submittal thereof by Developer, and only upon approval of the Final Plan.

Section 20. Sanitary Sewer and Water Main Improvements: Upon Village review and approval of the Utility Plan as contained within the Final Engineering Improvements Plan made a part of the approved Final Plan, the submittal of the required Letter of Credit described in this agreement and updated as necessary, in the amount of such work contemplated with such improvements, and approval of all necessary permits by the Illinois Environmental Protection Agency (IEPA), Village will allow Developer to install the sanitary sewer main and water main for this Subdivision.

Section 21. Building and Occupancy Permits: The construction of new buildings and structures shall only commence upon issuance of a building permit for such building or structure. Village shall allow the permitting and construction of one or more model homes and/or speculative homes. The model homes may be utilized for the purpose of sales offices. Developer shall have the right to occupy and use said models, as well as their garages, for sales, sales promotions and

offices for sales personnel, all as may be desirable or in any way connected with the sales of homes on the Subject Property. Each model and speculative home shall only be allowed for construction after an access roadway constructed to binder course is installed and prior to potable water and sanitary service being available. Permits for such model and speculative home shall only be issued after Village staff and fire prevention bureau are satisfied that access to these structures is safe and adequate.

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

Section 22. Temporary Certificate of Occupancy. Temporary Certificates of Occupancy for individual residences may be granted only between the months of December and April when the construction of a single-family residence has been completed but, for good cause, minor building and site improvements that are affected by weather conditions, such as seeding or sod, final grading, asphalt or concrete work, or the like, have not been completed. Such temporary certificate of occupancy shall be issued by the Village's Building Official, but only after a request therefor, payment of the required fee, and posting of the required bond. No temporary certificate of occupancy shall be issued except after a finding by the building official that such permit will not adversely affect the health, welfare, or safety of the occupants or the general public. Prior to issuance of a temporary or final certificate of occupancy, permission will not be authorized for any residential structure to be used for human occupancy, or for storage of any furniture, or household belongings within a structure or on the property.

Section 23. Construction Sequencing. Developer shall coordinate the various construction activities, including site clearing, demolition, earthwork, infrastructure installation, and house construction, to minimize disruption on the adjoining roadways and adjacent properties, control erosion and sediment runoff into any adjoining offsite stormwater facilities and waterways, and ensure the safe and efficient completion of the Improvements. Developer shall prepare and provide to the Village a detailed construction sequence schedule in the form of a Gantt chart or similar format that outlines the timeline for all activities beginning with earth-disturbing activities through to completion of the Improvements. Such schedule shall incorporate phasing of site clearing and construction where necessary to limit areas of active earth disturbance around sensitive areas of the site. At all times, the Developer and its contractors shall maintain open communication with the Village and all stakeholders throughout the completion of the Improvements.

Section 24. Pre-construction meeting(s) required. The Village shall require Developer, its general contractor, sub-contractors and trades, to attend one or more pre-construction meetings with and relevant local and municipal representatives to review construction requirements prior to the commencement of any work. Such meeting shall ensure that all permits, agreements and guarantees (Sureties such as Letters of Credit) and applicable fees are in place, including those related to off-site improvements. At all times during the project, Developer shall follow the details and requirements as outlined in the pre-construction meeting.

Section 25. Designated Erosion Control Inspector (DECI) required. In conformance with the Designated Erosion Control Inspector (DECI) program of the Lake County Stormwater Management Commission, the Developer shall employ and assign an independent DECI during the course of completion of the Improvements. The DECI shall serve as the liaison between the Developer and Village's Enforcement Officers (EO) to inspect and report on the status of installed Erosion Control and Sediment Control devices. The DECI shall produce reports on such matters as needed, and in the format required by the Village.

Section 26. Inspections of Site and Subdivision Improvements required. During construction of the site or subdivision improvements, the Village Engineer or inspectors designated by the Village shall conduct inspections of the site or subdivision improvements at such times as may be determined appropriate by the Village. At any time that the Village Engineer or inspectors determines that construction is not in compliance with the standards and procedures established herein, the Village shall have the authority to order all work to be stopped at the recommendation of the Village Engineer or inspectors until such time that the work is brought into compliance with the approved Final Plan.

Section 27. Construction Observation. The Village of Lake Zurich shall employ, at Developer's expense, the services of a civil engineer to observe, monitor and inspect certain aspects of the development to ensure that they are being constructed according to the design plans, specifications, and codes. Construction observation will be required for water and sanitary utility construction, construction within the public roadway, stormwater management facility construction, and construction within wetlands or waterways that traverse the Property being developed.

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

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

Section 28. Site and Surrounding Area Maintenance during Construction. Developer shall at all times during the construction of the project take measures to ensure safety, protect the

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

Section 29. Impact Requirements: Developer and Owner agree that any and all recaptures, contributions, dedications, donations and easements provided for in this Agreement substantially advance legitimate governmental interests of Village including, but not limited to, providing its residents, and in particular the residents of the Subject Property, with access to and use of public utilities, streets, fire protection and emergency services. Developer and Owner further agree that the recaptures, contributions, dedications, donations and easements required by this Agreement are uniquely attributable to, reasonably related to and made necessary by the development of the Subject Property. Developer and Owner agree to waive any possible objections to any of these recaptures, contributions, dedications, donations or easements.

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

Section 30. Disconnection: The Subject Property is annexed to the Village. Owner and each of their respective successors, heirs, executors and assigns all agree that during the term of this Agreement they will not seek to disconnect any portion or all of the Subject Property or any of the respective parcels from Village, and that they will oppose any disconnection proceeding that may be filed.

Section 31. Warranties and Representations: Developer and Owner, with respect to the portion of the Subject Property then owned by such party, represent and warrant to Village as follows:

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

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

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

Section 32. General Provisions:

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

(1) If to Village or Corporate Authorities:

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

With a copy to:

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

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

(2) If to Owner:

Michael Naumowicz
8717 West Park Lane
Niles, IL 60714

With a copy to:

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

And to:

[Any additional party Subject to this agreement]

(3) If to Developer:

Michael Naumowicz
8717 West Park Lane
Niles, IL 60714

With a copy to:

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

B. Continuity of Obligations:

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

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

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

C. Court Contest: In the event that the development of the Subject Property or other terms of this Agreement are challenged in any court proceeding, the period of time during which

such litigation is pending, including (without limitation) the appeal time therefor, shall not be included, if allowed by law, in calculating the twenty (20) year period provided in subparagraph O below.

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

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

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

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

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

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

J. Amendment: This Agreement sets forth all the promises, inducements, agreements, conditions and understandings between the parties relative to the subject matter thereof, and there are no promises, agreements, conditions or understandings, either oral or written, express or implied, between them, other than are herein set forth. Except as herein otherwise provided, no subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the parties hereto unless authorized in accordance with law and reduced in writing and signed by them.

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

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

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

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

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

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

Q. Cooperation. Village, Developer and Owner shall do all things necessary or appropriate to carry out the terms and provisions of this Agreement and to aid and assist each other in carrying out the terms and objectives of this Agreement and the intentions of the parties as reflected by said terms, including the terms of the any ordinance passed concurrently herewith. Village, Developer and Owner shall act in good faith, reasonably and promptly with respect to all consents, approvals and actions required or requested of it or taken by it hereunder or in connection with the development of the Subject Property. During the term of this Agreement, Developer and Owner, with respect to that portion of the Subject Property then owned by it, may continue the

current uses on the Subject Property including farming and general agricultural uses as to those portions of the Subject Property not then developed. Owner shall have no liability, obligation or expense payments related to such mutual assurances and cooperation.

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

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

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

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

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

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

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

Such costs and expenses incurred by Village in the administration of this Agreement shall be evidenced to Developer upon its request, by a sworn statement of Village; and such costs and

expenses may be further confirmed by Developer at its option from additional documents designated from time to time by Developer relevant to determining such costs and expenses.

In any event that any third party or parties institute any legal proceedings against Owner, Developer and/or Village, which relate to the terms of this Agreement, then, in that event, Developer, on notice from Village shall assume, fully and vigorously, the entire defense of such lawsuit and all expenses of whatever nature relating thereto; provided, however:

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

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

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

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

(Signature pages follow)

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

VILLAGE OF LAKE ZURICH,
an Illinois municipal corporation

By: _____
Village Mayor

ATTEST:

By: _____
Village Clerk

Owner:

[Owner Name and address

By: _____

Name: _____

Title: _____

Developer:

[Developer Name and Address]
an Illinois corporation/partnership

By: _____

Name: _____

Title: _____

VILLAGE ACKNOWLEDGMENT

STATE OF ILLINOIS )
)
COUNTY OF _____ )

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

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

_____
Notary Public

OWNER ACKNOWLEDGMENT

STATE OF ILLINOIS )
)
COUNTY OF _____ )

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

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

_____
Notary Public

DEVELOPER ACKNOWLEDGMENT

STATE OF ILLINOIS )
)
COUNTY OF _____ )

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

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

_____
Notary Public

EXHIBIT LIST

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

EXHIBIT A
LEGAL DESCRIPTION

(SINGLE-FAMILY PARCEL)

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. Final Plan Documents

1. .
2. .
3. .
4.

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

A. School district Impact fees:
For detached single-family homes

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

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

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

C. Lake Zurich Park Impact fees
For detached single-family residences

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

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

D. Lake Michigan Capital Reservation Fee. $3,500 per unit.

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

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

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

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

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

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

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

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

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

f. Real estate activity signs may not be illuminated.

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

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

Exhibit E. Letter of Credit Format

**SAMPLE LETTER OF CREDIT**

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

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

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

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

(The "Project")

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

AND

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

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

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

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

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

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

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

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

THE BANK HEREBY UNDERTAKES AND ENGAGES THAT ALL DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT WILL BE DULY HONORED IF PRESENTED TO [Bank Name] BY 4:00 PM CENTRAL TIME ON OR BEFORE THE THEN CURRENT EXPIRY DATE. IF, WITHIN TEN (10) DAYS OF THE DATE ANY DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT IS PRESENTED, WE FAIL TO HONOR THE DRAWING, WE AGREE TO PAY ALL REASONABLE ATTORNEY FEES, COURT COSTS AND OTHER EXPENSES INCURRED BY THE VILLAGE OF LAKE ZURICH, IN ENFORCING THE TERMS OF THIS LETTER OF CREDIT.

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

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

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.

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

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

Planning & Zoning Commission Chairman

OFFICE OF THE VILLAGE MANAGER
Human Resources Division

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

*At the Heart of Community*

**MEMORANDUM**

Date: February 2, 2026

To: Ray Keller, Village Manager RK

From: Doug Gibson, Director of Human Resources

Subject: Alternate Delegate to the Intergovernmental Risk Management Agency (IRMA)

**Issue.** As the Village of Lake Zurich is a member of the Intergovernmental Risk Management Agency (IRMA), the contract and bylaws of IRMA requires members to appoint an Alternate Delegate in addition to their Delegate to represent the Village of Lake Zurich on the Board of Directors of IRMA.

**Background.** Annette (Anna) Weldon recently began her position as the part-time Risk Management Coordinator for the Village of Lake Zurich, and will be handling many of the worker's compensation and general liability claims which are filed with IRMA.

**Analysis**. The village has determined, in accordance with the bylaws of the Intergovernmental Risk Management Agency, that we need to appoint an alternate in addition to a delegate. As an alternate delegate, Ms. Weldon will be able to serve if Mr. Gibson is unable to carry out his duties as the representative of the Village of Lake Zurich to IRMA.

**Recommendation.** Approve the motion to appointment Ms. Weldon as the Alternate Delegate to the Intergovernmental Risk Management Agency.

**Attachments:**

- Resolution Appointing a Delegate and Alternate Delegate to the Intergovernmental Risk Management Agency (IRMA).

**VILLAGE OF LAKE ZURICH**

**RESOLUTION NO. 2026-02-110**

**RESOLUTION APPOINTING A DELEGATE AND ALTERNATIVE DELEGATE TO THE INTERGOVERNMENTAL RISK MANAGEEMNT AGENCY (IRMA)**

**WHEREAS**, the Village of Lake Zurich is a member of the Intergovernmental Risk Management Agency (IRMA); and

**WHEREAS**, the Contract and Bylaws of IRMA provides that member units of local government shall by majority vote of its corporate authorities select an Alternate Delegate to represent the Village of Lake Zurich on the Board of Directors of said Intergovernmental Agency.

**NOW, THEREFORE, BE IT RESOLVED** by the President and Board of Trustees of the Village of Lake Zurich:

**SECTION 1:** Annette (Anna) Weldon, Risk Management Coordinator, of the Village of Lake Zurich, is hereby appointed as the alternate delegate to serve if Doug Gibson is unable to carry out his delegate duties as the representative of the Village of Lake Zurich to said Intergovernmental Agency.

PASSED this _____ day of February, 2026.

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of February, 2026.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

PUBLIC WORKS DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

*At the Heart of Community*

7a

**MEMORANDUM**

**Date:** January 26, 2026

**To:** Ray Keller, Village Manager

**From:** Michael J. Brown, Director of Public Works

**Subject:** **Bid Award: 2026 Sanitary Sewer Lining Project**

**Issue:** The FY 2026 budget includes $3,000,000 for Sanitary Sewer – Lining for I&I Reduction / Asset Preservation in the Water and Sewer Fund for lining portions of the Village's sanitary sewer distribution system.

**Background:** This project is a continuation of the Public Works Department's ongoing effort to reduce the risk of costly emergency open-cut repairs by implementing proactive, trenchless rehabilitation through cured-in-place pipe (CIPP) lining. CIPP lining is a proven method that can significantly extend the service life of existing sanitary sewer infrastructure, with an anticipated lifespan of 50 years or more under normal operating conditions. This work is particularly critical due to the project's location adjacent to Buffalo Creek and within environmentally sensitive wetland areas, where emergency open-cut replacement would pose substantial environmental, regulatory, and logistical impacts.

**Analysis:** Staff solicited bids for the 2026 Sanitary Sewer Lining project beginning on November 20th, 2025. The bid opening occurred on December 19th, 2025. The Village received five (5) bids; bid results are summarized on Page 2. The lowest responsible bid was received from Insituform Technologies USA, LLC of Chesterfield, Missouri. Insituform Technologies USA has had experience installing over 200,000 feet of similar-diameter CIPP liner for municipalities, including Lake Zurich, other municipalities in Lake County, and northern Cook County.

| Name of Bidder | Bid Amount |
|---|---|
| Insituform Technologies USA, LLC | $2,339,002.50 |
| Hoerr Construction, Inc. | $2,510,371.00 |
| Inliner | $2,803,036.00 |
| Visu-Sewer | $2,951,368.00 |
| National Power Rodding | $4,023,998.00 |

A summary of the proposed budget is provided below:

| 2026 Sanitary Sewer Lining | |
|---|---|
| Construction (Base Project) | $2,339,002.50 |
| Contingency (10%) | $233,900.25 |
| Construction Engineering | $93,560.10 |
| Total Estimated Cost | $2,666,462.85 |

**Recommendation:** Award a contract for the 2026 Sanitary Sewer Lining project to Insituform Technologies USA, LLC of Chesterfield, MO, $2,339,002.50, with a total project budget not to exceed $2,666,462.85.

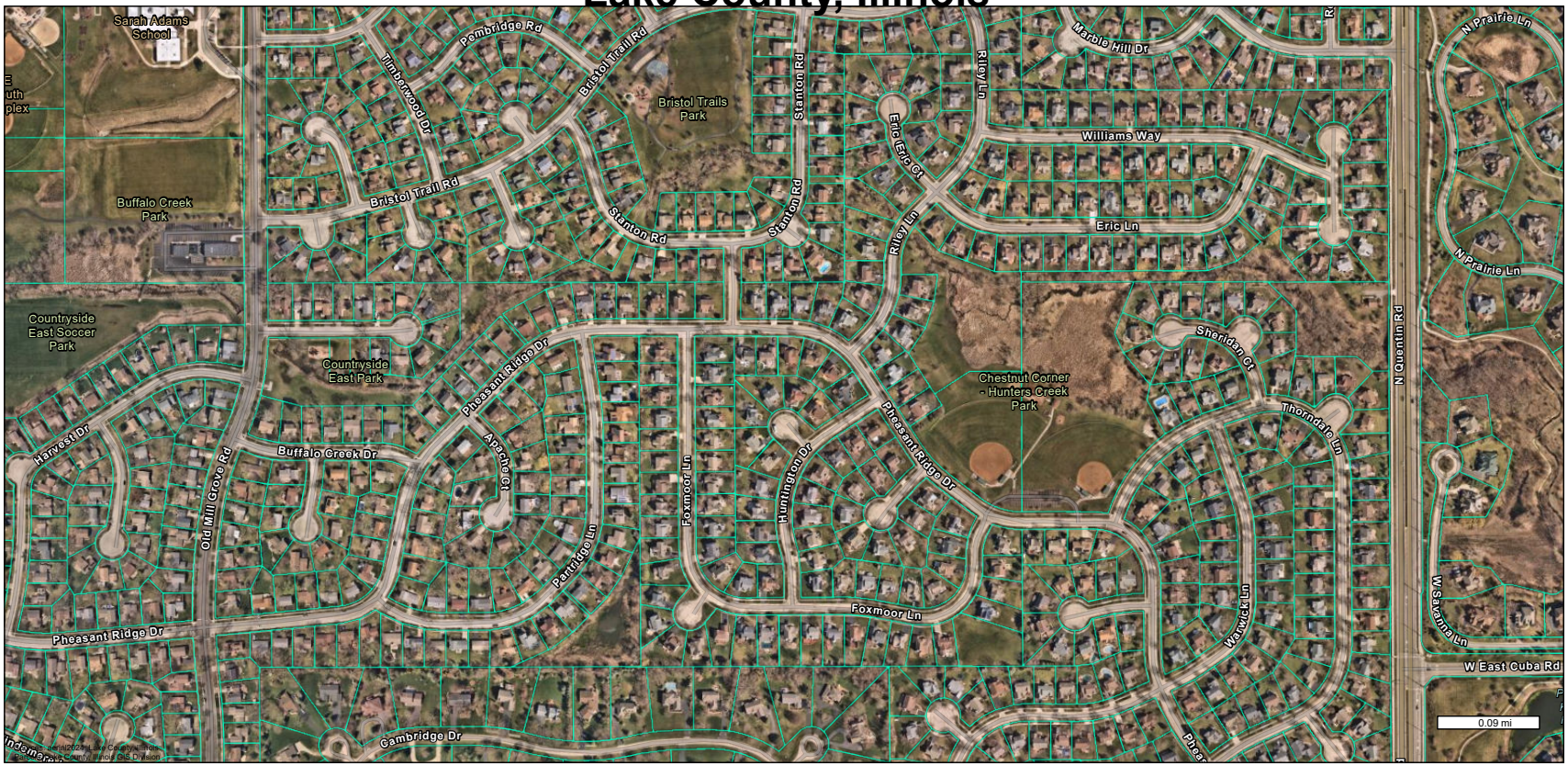
**w/Attachments:**

1. Project Location Map
2. Bid Tabulation

2026 Sanitary Sewer Lining Project, Lake Zurich. Bid Opening 10:00 AM Friday 12/19/2025

| | | | | Engineers Estimate | | Insituform - Apparent Low Bid | | Hoerr | | Inliner | | Visu-Sewer | | National Power Rodding | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pay Item** | **Description** | **Unit** | **Quantity** | **Unit Price** | **Total** | **Unit Price** | **Total** | **Unit Price** | **Total** | **Unit Price** | **Total** | **Unit Price** | **Total** | **Unit Price** | **Total** |
| 1 | Mobilization and De-Mobilization | LS | 1 | $250,000.00 | $250,000.00 | $ 220,000.00 | $ 220,000.00 | $198,600.00 | $198,600.00 | $573,000.00 | $573,000.00 | $400,000.00 | $400,000.00 | $100,000.00 | $100,000.00 |
| 2 | Traffic Control and Protection | LS | 1 | $25,000.00 | $25,000.00 | $ 500.00 | $ 500.00 | $24,250.00 | $24,250.00 | $5,000.00 | $5,000.00 | $150,000.00 | $150,000.00 | $50,000.00 | $50,000.00 |
| 3 | Temporary Flow Control | LS | 1 | $500,000.00 | $500,000.00 | $ 400,000.00 | $ 400,000.00 | $361,258.00 | $361,258.00 | $553,349.00 | $553,349.00 | $738,000.00 | $738,000.00 | $800,000.00 | $800,000.00 |
| 4 | Pre-Inspection CCTV-30 - 36 Inches | LF | 3,459 | $4.00 | $13,836.00 | $ 6.00 | $ 20,754.00 | $5.00 | $17,295.00 | $1.00 | $3,459.00 | $2.50 | $8,647.50 | $7.00 | $24,213.00 |
| 5 | Post-Inspection CCTV-30 - 36 Inches | LF | 3,459 | $4.00 | $13,836.00 | $ 1.00 | $ 3,459.00 | $4.00 | $13,836.00 | $1.00 | $3,459.00 | $2.50 | $8,647.50 | $5.00 | $17,295.00 |
| 6 | Cleaning, 36-Inch Pipe | LF | 2,129 | $22.00 | $46,838.00 | $ 11.00 | $ 23,419.00 | $20.00 | $42,580.00 | $59.00 | $125,611.00 | $20.00 | $42,580.00 | $35.00 | $74,515.00 |
| 7 | Cleaning, 30-Inch Pipe | LF | 1,330 | $20.00 | $26,600.00 | $ 11.00 | $ 14,630.00 | $20.00 | $26,600.00 | $45.00 | $59,850.00 | $20.00 | $26,600.00 | $30.00 | $39,900.00 |
| 8 | Heavy Cleaning and Debris Removal | HOUR | 80 | $1,000.00 | $80,000.00 | $ 775.00 | $ 62,000.00 | $670.00 | $53,600.00 | $1.00 | $80.00 | $700.00 | $56,000.00 | $600.00 | $48,000.00 |
| 9 | Manhole (4' Dia. Typ.) Rehabilitation | VER FT | 228 | $600.00 | $136,800.00 | $ 720.00 | $ 164,160.00 | $2,245.00 | $511,860.00 | $960.00 | $218,880.00 | $1,065.00 | $242,820.00 | $1,100.00 | $250,800.00 |
| 10 | Manhole Patching/Cementitious Liner | SQ FT | 100 | $120.00 | $12,000.00 | $ 400.00 | $ 40,000.00 | $100.00 | $10,000.00 | $19.00 | $1,900.00 | $25.00 | $2,500.00 | $75.00 | $7,500.00 |
| 11 | Manhole Stop Active Leaks | EACH | 30 | $1,000.00 | $30,000.00 | $ 990.00 | $ 29,700.00 | $500.00 | $15,000.00 | $434.00 | $13,020.00 | $850.00 | $25,500.00 | $2,000.00 | $60,000.00 |
| 12 | External Chimney Seals | EA | 17 | $1,000.00 | $17,000.00 | $ 1,200.00 | $ 20,400.00 | $770.00 | $13,090.00 | $1.00 | $17.00 | $600.00 | $10,200.00 | $15,000.00 | $255,000.00 |
| 13 | Sanitary Frame with Locking Lid | EA | 17 | $1,000.00 | $17,000.00 | $ 6,000.00 | $ 102,000.00 | $4,000.00 | $68,000.00 | $2,258.00 | $38,386.00 | $3,850.00 | $65,450.00 | $10,000.00 | $170,000.00 |
| 14 | Cured In Place Pipe Liner, 36-Inch | LF | 2,129 | $280.00 | $596,120.00 | $ 304.50 | $ 648,280.50 | $293.00 | $623,797.00 | $295.00 | $628,055.00 | $287.00 | $611,023.00 | $475.00 | $1,011,275.00 |
| 15 | Cured In Place Pipe Liner, 30-Inch | LF | 1,330 | $250.00 | $332,500.00 | $ 315.00 | $ 418,950.00 | $235.00 | $312,550.00 | $269.00 | $357,770.00 | $280.00 | $372,400.00 | $350.00 | $465,500.00 |
| 16 | Restoration | LS | 1 | $50,000.00 | $50,000.00 | $ 50,000.00 | $ 50,000.00 | $90,000.00 | $90,000.00 | $135,200.00 | $135,200.00 | $116,000.00 | $116,000.00 | $400,000.00 | $400,000.00 |
| 17 | Drop Pipe Lining 24" | EACH | 2 | $24,000.00 | $48,000.00 | $ 40,250.00 | $ 80,500.00 | $41,785.00 | $83,570.00 | $27,000.00 | $54,000.00 | $25,000.00 | $50,000.00 | $75,000.00 | $150,000.00 |
| 18 | Drop Pipe Lining 30" | EACH | 1 | $30,000.00 | $30,000.00 | $ 40,250.00 | $ 40,250.00 | $44,485.00 | $44,485.00 | $32,000.00 | $32,000.00 | $25,000.00 | $25,000.00 | $100,000.00 | $100,000.00 |
| | | | | As Calculated | $2,225,530.00 | | $ 2,339,002.50 | | $2,510,371.00 | | $2,803,036.00 | | $2,951,368.00 | | $4,023,998.00 |
| | | | | As Read | | | $ 2,339,002.50 | | $ 2,490,371.00 | | $ 2,803,036.00 | | $2,951,368.00 | | $4,023,998.00 |
| | | | | Addendum | | | x | | x | | x | | x | | x |
| | | | | Bid Bond | | | x | | x | | x | | x | | x |

# Lake County, Illinois



LakeCounty

Map Printed on 1/26/2026

N

Tax Parcel Lines
World Imagery
Low Resolution 15m Imagery
High Resolution 60cm Imagery
High Resolution 30cm Imagery
Citations
1.2m Resolution Metadata

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.