Dated 07-05-16

Village of Mukwonago

REGULAR PLAN COMMISSION MEETING

Notice of Meeting and Agenda

Tuesday, July 12, 2016

Time: **6:30 p.m.**
Place: **Mukwonago Municipal Building/Board Room, 440 River Crest Court**

1. Call to Order

2. Roll Call

3. Approval of minutes for the June 14, 2016 regular meeting

4. Public Hearing
   All persons interested in making comments about any of the public hearing items will be heard. Formal petitions and written comments regarding any of the public hearing items may be submitted tonight. During the public hearing(s), if you wish to be heard, the Plan Commission asks that you begin by stating your name and address, speak for no more than three minutes and attempt to avoid duplication. Each person speaking at the public hearing must sign the Public Hearing Appearance sign-in sheet before speaking. The sign-in sheet is available on the table located at the back of the room.

   A. Amendment to the conditional use permit requested by John Theisen, Lighthouse Lubes Real Estate LLC, to remove certain conditions from the permit for the property located at 1160 N. Rochester Street, known as MUKV1962990002

5. Unfinished Business

   A. Historic Preservation Commission Review – Construction of a boat shelter at the property located at 210 Grand Ave., known as MUKV1976085

6. New Business
   Discussion and Possible Action on the Following Items

   A. Recommendation to Village Board concerning conditional use permit requested by John Theisen, Lighthouse Lubes Real Estate LLC, to remove certain conditions from the permit for the property located at 1160 N. Rochester Street, known as MUKV1962990002
   B. Recommendation to Village Board concerning Site Plan and Architectural Plan Review requested by Kevin Sinnett, Instrument Development Corp., for the construction of an addition on the property located at 820 Swan Dr., known as MUKV1970987
   C. Recommendation to Village Board concerning Site Plan and Architectural Plan Review requested by Warren Hansen, WEH Properties/Edgewood Village, LLC, for the construction of apartment buildings on the property located at S92W27800 Edgewood Ave., known as MUKV2091998
   D. Status report on the progress of the Steering Committee of the Comprehensive Plan Update
   E. Change in date and location for the August meeting

7. Adjournment

It is possible that members of, and possibly a quorum of, members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Please note that, upon reasonable notice, efforts will be made to accommodate the needs of individuals with disabilities through appropriate aids and services. For additional information or to request this service, contact the Clerk's Office, 440 River Crest Court, (262) 363-6420, Option 4.

MINUTES OF THE REGULAR PLAN COMMISSION MEETING
Tuesday, June 14, 2016

Call to Order
Chairperson Fred Winchowky called the meeting to order at 6:31 p.m. located in the Board Room of the Mukwonago Municipal Building, 440 River Crest Ct.

Roll Call

Commissioners present:	Joe Hankovich
	Sterling Fairchild
	John Meiners
	Ken Werner
	Fred Winchowky
Commissioner excused:	Mark Penzkover
	Joe Abruzzo
Also present:	Bruce Kaniewski, Village Planner
	Judith Taubert, Deputy Clerk-Treasurer
	Bob Harley, Building Codes Official

Minutes
Motion by Hankovich/Werner to approve the April 12, 2016 regular meeting minutes as presented carried.

Public Hearing
Conditional use permit requested by Pamela L. Turner, Pam's Fine Wines LLC, to allow for the installation of outdoor seating at the property located at 100 Main St., Suite 1, known as MUKV1976109001 opened at 6:33 p.m.

Pamela L. Turner explained the reason for the conditional use to allow for the installation of outdoor seating at the property located at 100 Main St., Suite 1, known as MUKV1976109001 and submitted 6 letters of support from area businesses and residents to be on file in the Clerk's Office.

John Baker, 247 Fox Street, spoke in favor of the outdoor seating.
Michael Schell, S91W33856 Cty Road NN, said he supports what Pam is doing for the Community.
Duane Thornton, W338S8983 Cty Hwy E, spoke in favor of the outdoor seating.
Jim Goetz, 207 Field Street, spoke in favor of what this would do for the downtown area.

Public hearing closed at 6:44 p.m.

New Business

100 Main St., Suite 1
Motion by Werner/Fairchild to recommend the Village Board approve the conditional use permit application by Pamela Turner of the business Pam's Fine Wines to allow an outdoor seating environment consistent with floor plan submitted to the Village subject to the following findings and conditions carried:

Findings:

1. The final construction of such space will not change the character of the neighborhood and may augment and amplify the development in the downtown business district
2. The proposed use is in accordance with the purpose and intent of the B-2, General Business Zoning District.
3. The proposed use is found not to be hazardous, harmful, offensive or adverse to the environment or value of the downtown and the Village of Mukwonago.
4. The proposed use does not change the character of the neighborhood.

Conditions:

1. The outdoor seating area shall be provided and operated in strict conformance with the petitioner's public hearing presentation, and the information submitted on the Request for a Conditional Use Application.
2. The Conditional Use is granted solely to Pamela Lynn Turner, and is not transferrable. Nothing in this conditional use shall prohibit another owner to petition the Village for a new conditional use should a change in ownership occur.
3. Use of the outdoor seating and serving of alcohol via the Conditional Use is conditioned upon applicant maintaining a valid liquor license from the Village of Mukwonago for outdoor service.
4. Use of the outdoor seating and serving of alcohol via the Conditional Use is limited between April 1st and November 15th of each year.
5. Applicant shall install lighting at the front corners of the enclosure subject to the approval of the Mukwonago Police Department and Village of Mukwonago Building Inspection and/or Zoning Administrator staff.
6. The Conditional Use shall be renewed by the Plan Commission and the Village Board within one (1) year of approval, with a second one (1) year renewal, and then subsequent five (5) year renewals. Renewal of the conditional use shall be granted if the use of the property is found to be operation in accordance with terms of approval of this conditional use. Findings of nonconformance shall be grounds for termination of this conditional use.
7. Use of the outdoor seating and serving of alcohol via the Conditional Use shall at all times conform to building codes, fire safety codes and health codes. The use shall be subject to periodic inspections by the Mukwonago Police Department and Village of Mukwonago Building Inspection and/or Zoning Administrator staff.
8. The use of outdoor seating and serving of alcohol shall at all times conform to federal, state and local laws.
9. Within the outdoor seating area, applicant shall provide an adequate amount of trash containers and ashtrays, and the area shall be continually serviced to be kept clean at all times.

CTH ES and Phantom Woods Rd.
Motion by Hankovich/Werner to recommend the Village approve the Site Plan and Architectural Plan Review for the construction of apartment buildings on the property located at CTH ES and Phantom Woods Road known as MUKV2011984 subject to the following conditions carried:

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1. Approval of the plans for the proposed second phase of Premier Woods Multi-Family development at the northwest corner of Main Street (STH 83) and Phantom Woods Road, for two-8 unit multi-family structures, shall be subject to the package of documents and plans submitted by the applicant to the Village of Mukwonago on April 8, 2016 with a portion of the plans revised with a submittal dated May 19, 2016. The plans may be further modified to conform to other conditions of approval; the building and floor plans may be modified with the approval of the Building Inspector to conform to Building and Fire Safety Codes and all plans may be further modified to conform to Village design standards. However, the basic layout of the site as depicted on Sheet 5, Site Plan, shall remain unchanged.
2. All ingress/egress drives and parking areas shown on Sheet 5 shall remain private and shall be maintained in a usable and passable condition at all times.
3. Approval shall be subject to approval of a Storm Water Maintenance Agreement and a Developer's Agreement by the Village Board. The Developer's Agreement shall list these conditions of approval, a list of all final plans for the project, and responsibilities for off-site improvements.
4. With approval, the Plan Commission and Village Board grant allowance of multiple principal buildings on one lot.
5. Prior to issuance of the first building permit, a landscape plan shall be submitted for the approval of the Zoning Administrator and Village Planner.
6. The property shall be maintained in a clean condition, free of debris at all times. No junk, inoperable or abandoned vehicles, or vehicles undergoing repair shall be kept on the property at any time. No vehicles shall be parked in any area not designated for vehicle parking as provided for on Sheet 5.
7. Only signs allowed by the Village Sign Code, and approved by either the Zoning Administrator or Plan Commission, shall be allowed on the property.
8. Prior to the start of any site construction or issuance of a building permit, whichever occurs first, the following shall occur:
   a. The Village Engineer shall approve all site engineering plans and documents, including a complete Storm Water Management Plan.
   b. Village Board approval of a Storm Water Maintenance Agreement and a Developer's Agreement (to include a submitted and Village approved Letter of Credit for any off-site improvements).
   c. Submittal of the signed easements granted to the Village of Mukwonago providing access to maintain on-site sanitary sewer and potable water lines and hydrants.
   d. Completion of all approvals listed in Condition No. 3, and all plans shall be consistent with the plans listed in Condition No. 1 or as modified and identified in the Developer's Agreement.
   e. Approval of the plans by the Fire Chief, which may include, but are not limited to, the internal fire suppression system, external fire department connection location and hydrant locations.
   f. Approval of building plans by the Building Inspector after receipt of approval of building plans by the State of Wisconsin.
   g. Approval of building plans shall include appropriate locations of the external mechanical equipment to be placed hidden from view from neighboring properties.
9. Prior to temporary occupancy issuance for any building, and if needed prior to final occupancy permit, the following shall occur:

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a. Completion of all site grading and storm water management facilities in accordance with approved plans, including landscaping that is a part of the storm water management facilities.
b. Completion of all exterior lighting for the building in accordance with approved plans.
c. Completion of the building in accordance with approved plans and all applicable codes.
d. Completion of a hard drive and parking surfaces from the exterior public right-of-way to the general area surrounding the building, including installation of handicapped parking signs and ramp.
e. Completion of the dumpster enclosure for the building.

10. Prior to final occupancy permit for any building, which shall be issued not later than 120 days after any temporary occupancy permit, the following shall occur:
    a. Completion of all items within Condition No. 9.
    b. Completion of paving and striping of the entire parking area, in accordance with approved plans.
    c. Installation of all site landscaping.
    d. Completion of all required public improvements as specified in the Developer's Agreement.
    e. Completion of any other municipal code requirement in the interest of the health, safety and welfare of the public.

926 Perkins Dr.

Motion by Werner/Meiners to recommend the Village Board approve the application by GS Global to add 14 parking spaces to the north end of their parking lot contingent upon strictly following the Site Plan submitted to the Village on June 3, 2016 which includes replacing the trees removed for the parking, and subject to the following conditions carried:

1. Site plan approval is subject to the drawing submitted by GS Global.
2. During the construction, applicant shall adhere to proper erosion control measures.
3. Applicant shall replace the trees to be removed for the additional parking.

Chapter 64 (Sign Code) amendment

Motion by Hankovich/Werner to recommend the Village Board approve the amendments (marked in red) to Chapter 64 (Sign Code) regarding directional sign standards for industrial properties carried.

Steering Committee of the Comprehensive Plan Update

Village Planner Bruce Kaniewski reported that the Steering Committee of the Comprehensive Plan will be sending out/had sent out letters to property owners showing key areas that will be discussed and the schedule when these areas will be discussed. Tuesday, June 28th, 4:00 p.m. to 6:30 p.m. there will be an Informational open house at the Village Hall to show maps to the public to show areas that will be discussed by the Steering Committee of the Comprehensive Plan. Information only. No action taken.

Historic Preservation Commission

210 Grand Ave.

Motion made by Fairchild/Werner to postpone the consideration of Historic Preservation Commission approval for the Construction of a boat shelter at the property located at 210 Grand Ave., known as MUKV1976085. This will give the applicant 30 days to come back

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and submit plans that comply to the Buffer Zone of the Historic Preservation. A variance may also be required to construct the boat shelter in the side yard. Motion carried.

Adjournment
Meeting adjourned at 7:41 p.m.

Respectfully Submitted,

Judith A. Taubert
Deputy Clerk-Treasurer

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NOTICE OF PUBLIC HEARING BEFORE THE VILLAGE OF MUKWONAGO PLAN COMMISSION TO CONSIDER AN APPLICATION FOR AN AMENDMENT TO THE CONDITIONAL USE PERMIT REQUESTED BY JOHN THEISEN, LIGHTHOUSE LUBES REAL ESTATE LLC, FOR AN OIL CHANGE FACILITY AND DRIVE-UP WINDOW AT THE PROPERTY LOCATED AT 1160 NORTH ROCHESTER STREET

Please take notice that there will be a public hearing before the Plan Commission of the Village of Mukwonago in the Board Room of the Village Hall, 440 River Crest Court, Mukwonago, Waukesha and Walworth Counties, on Tuesday, July 12, 2016, commencing at 6:30 p.m., to consider the following matter(s):

PUBLIC HEARING:	**Conditional Use Permit – Oil change facility, drive-up window**
TAX KEY/ADDRESS:	MUKV1962990002, 1160 N. Rochester Street
LEGAL DESCRIPTION:	LOT 2 CERT SURV 10127 VOL 95/161 REC AS DOC# 3345429 PT NW1/4 SEC 23 T5N R18E :: EX PARCEL 6 TRANSPORTATION PROJECT PLAT 1330-12-20 :: DOC# 4186160
OWNER/APPLICANT:	John Theisen, Lighthouse Lubes Real Estate LLC
MATTER:	Applicant seeks an amendment to Village Board Resolution 2015-31 which granted a Conditional Use Permit for the construction of an oil change facility and drive-up window to Lighthouse Lubes Real Estate, LLC. The amendment would remove the requirement of "full use of all parking spaces and drive aisles across the entire property" shared with Waukesha State Bank while cross access with the bank site will remain; and would remove the requirement of a cross access easement with the property to the south.

At this time all interested persons will be afforded a hearing. Information regarding the above noticed hearing(s) may be obtained in the Clerk's Office.

Steven A. Braatz, Jr.
Village Clerk

Pub: June 22 and 29, 2016

Village of Mukwonago
440 River Crest Court, P.O. Box 206
Mukwonago, WI 53149
Phone: (262) 363-6420
Fax: (262) 363-6425
www.villageofmukwonago.com

VILLAGE OF MUKWONAGO

HISTORIC PRESERVATION REVIEW APPLICATION

Application Fee: $20

Date Submitted: 6/2/16

CONTACTS

Zoning Department
Contact: Joe Hankovich
Phone: (262) 363-6419
Fax: (262) 363-6425
Email: jhankovich@villageofmukwonago.com

Planning Department
Contact: Bruce Kaniewski
Phone: (414) 339-4105
Fax: (262) 363-6425
Email: planner@villageofmukwonago.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Historic Preservation Commission of the Village of Mukwonago. The Plan Commission currently serves the role of the Historic Preservation Commission.

To ensure the proposal will be properly reviewed, the application must be submitted **at least 10 days prior to the meeting** in which the Historic Preservation Commission will consider the matter. The Historic Preservation Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed on page 2 must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100, Article III and other pertinent sections of Village ordinances and State Statutes, and as necessary to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Historic Preservation Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to: Village Zoning Administrator
ATTN: Historic Preservation Review
PO Box 206
Mukwonago, WI 53149

Deliver to: Village Clerk's Office
440 River Crest Court

Email to: jhankovich@villageofmukwonago.com

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: Steven M. Plochocki

Company:

Address: 210 GRAND Ave. City: Mukwonago State: WI Zip: 53149

Daytime Phone: 262-470-7682 Fax:

E-Mail: SPLOCHOCKI1@wi.RR.COM

one

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

ARCHITECT

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

PROFESSIONAL ENGINEER

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

REGISTERED SURVEYOR

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

CONTRACTOR

Name: Tony Fendryk

Company: Fendryk Bros. fencing co.

Address: S64W27656 River Rd. City: Mukwonago State: WI Zip: 53149

Daytime Phone: 414 254 9333 Fax: _____

E-Mail: _____

PROPERTY AND PROJECT INFORMATION

Present Zoning: Residential **Tax Key No(s).:** _____

Address/Location: 210 GRAND Ave. Mukwonago, WI 53149

Year Built: 1954 **Style:** Two story

Present Use: Home **Intended Use:** _____

Project Start Date: _____ **Project Completion Date:** _____

Other Information about the Property: _____

A. I/We represent that I/we have a vested interest in this property in the following manner:
☒ Owner

☐ Leasehold. Length of Lease: _____

☐ Contractual. Nature of contract: _____

☐ Other. Please explain

PROCEDURAL CHECKLIST FOR HISTORIC PRESERVATION REVIEW AND APPROVAL

Application Submittal Packet Requirements for Village and Applicant Use (Check off List). This form is designed to be a guide for submitting a complete application for a historic preservation review.

Application:

- ☐ Completed application form including the procedural checklist and justification of the proposal
- ☐ Application fee: $20
- ☐ Agreement for Reimbursable Services (separate application)

Other information (when applicable):

- ☐ Accurate photographs/pictures of the property showing existing appearance and proposed improvements, including building elevations and signage
- ☐ Materials and colors to be used on the project, including manufacturer names, product numbers, as well as exact sample and color board.
- ☐ Heating and air conditioning unit location and size if outside the structure.
- ☐ Outside storage, lighting fixtures, light isometrics plan.
- ☐ Existing signage along with proposed new sizes, colors and location (on the building, pole or ground mounted).
- ☐ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to planner@villageofmukwonago.com.
- ☐ Any additional information as determined by Village staff.

Please be aware that a permit from the Village Inspection Office may be necessary

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signoture[s] below. If more than one, all of the owners of the property must sign this Application).

Signature - Property Owner

Name & Title (PRINT)

Date

Steven M. Plochocki

Signature - Applicant

STEVEN M. PLOCHOCKI owner

Name & Title (PRINT)

6/2/16

Date

Steven M. Plochocki

Signature - Property Owner

STEVEN M. PLOCHOCKI

Name & Title (PRINT)

6/2/16

Date

Signature – Applicant's Representative

Name & Title (PRINT)

Date

FOR OFFICE USE ONLY		
Date Paid	**Receipt #**	**Meeting Date(s)**
Comments/Conditions of Approval		
Chair Signature		

6/2/18

I WOULD LIKE TO BUILD A SHELTER FOR MY BOAT IN The CORNER OF MY LOT. IT IS A KIT Purchased from MENARDS. I DON'T WANT ANYTHING FANCY, JUST something to Protect my Boat from the elements.

STEVEN M. PLOCHOCK!
Steven M. Plochocki
210 GRAND AVE.
MUKWONAGO, WIS. 53149

ATTENTION: Menards

From: VersaTube Building Systems - Engineering

Date: 7/5/16

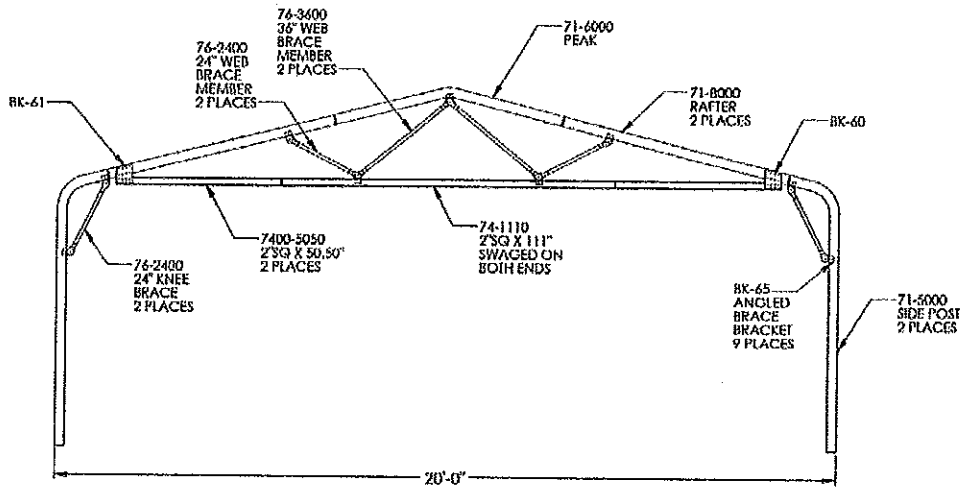
Subject: Truss Bracing on VersaTube Carport

To Whom it may concern,

The 20' x 18' x 7'-6", VersaTube Roof Only Carport Structure will work at a 30 PSF roof snow load / 43 PSF ground snow load and a 90MPH Vasd/115MPH Vult wind load (in accordance with IBC 2012) using 4'-6" on center framing, with our Type 3 truss brace on all 5 frames. The truss and roof wall section was tested with an increased dead load (20psf) to compensate for the customer's want to use alternative roof materials. This truss brace consists of a 2"SQ, 15GA collar tie spanning from rafter to rafter with 1"SQ 16GA members making a 'W' (see picture below).

Sincerely,

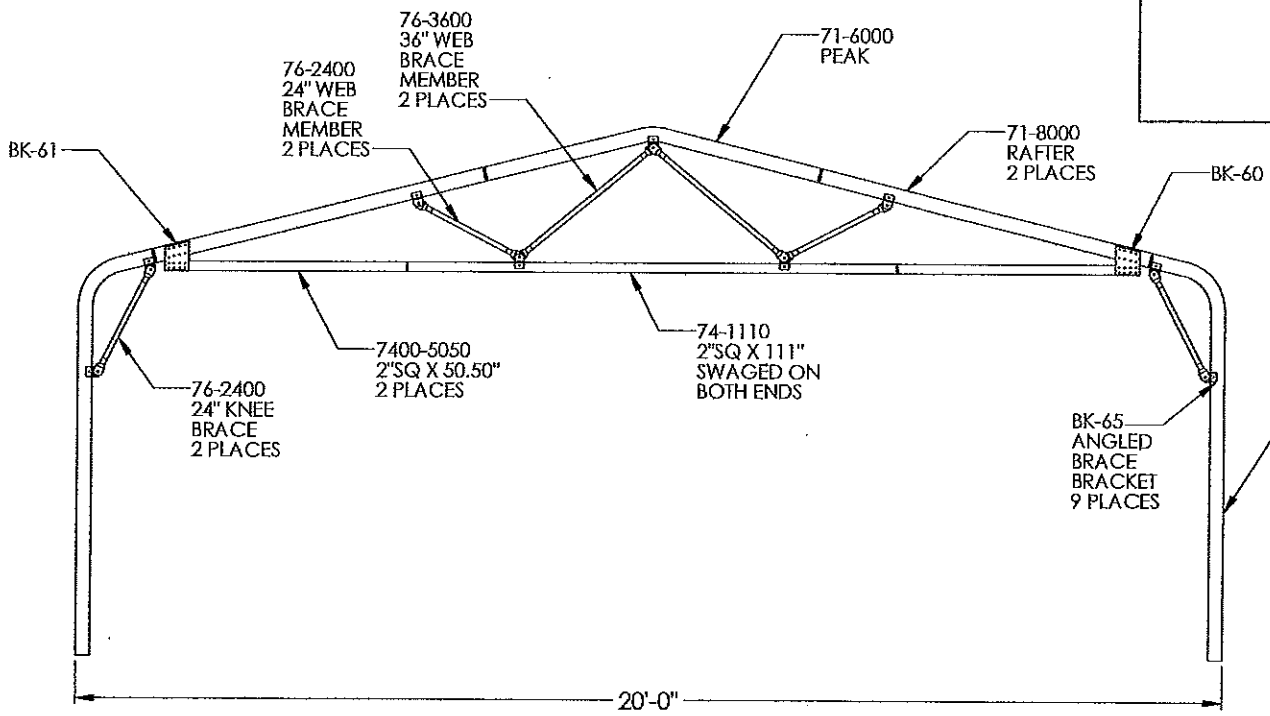
Mario Oliver
Product & Design Engineer
VersaTube Building Systems



50 Eastley St. Collierville, TN (800) 900-7222 Fax: (901) 854-6855

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF VERSATUBE BUILDING SYSTEMS ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF VERSATUBE BUILDING SYSTEMS IS PROHIBITED.

APPROX. 95 SCREWS



NOTE TO BUILDING DEPARTMENT OFFICIAL: THESE DRAWINGS AND/OR CALCULATIONS ARE VALID ONLY FOR STRUCTURES MANUFACTURED BY VERSATUBE BUILDING SYSTEMS. VERIFICATION IS RECOMMENDED PRIOR TO BUILDING APPROVAL.

VersaTube® BUILDING SYSTEMS

PROJECT:	VERSATUBE ROOF WALL SECTION
TITLE:	20' X 7'-6" FRAME, TYPE 3 TRUSS BRACE
DWG NO:	20X7.5 w TBW RWS
DRAWN BY: M. OLIVER	**DATE:** 10/16/13

VersaTube® BUILDING SYSTEM

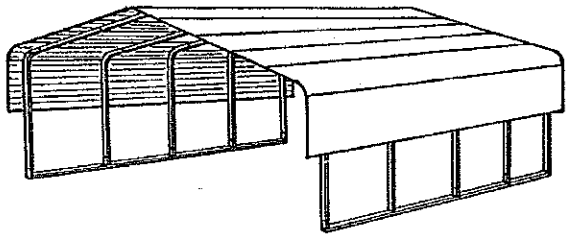
MENARDS®

INSTALLATION INSTRUCTIONS

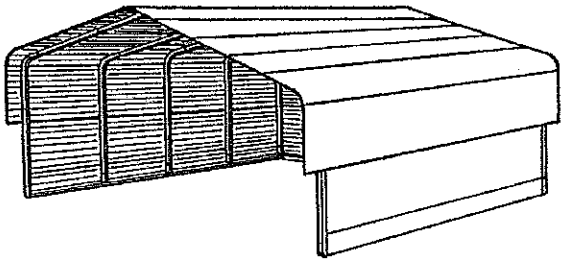
20' WIDE FRAME

ACTUAL FRAME SIZE 20' X 18' X 7'-4 3/4"

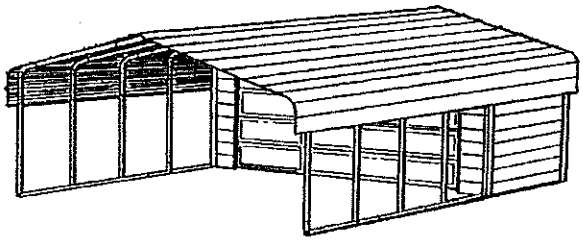
CARPORT/STORAGE SHELTER/STOR-PORT/GARAGE



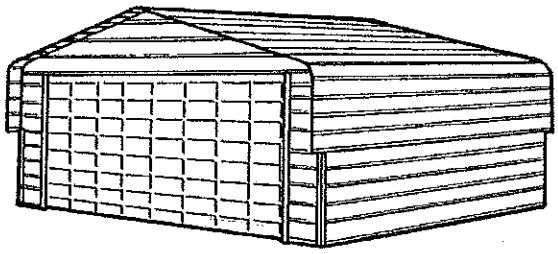
CARPORT



STORAGE SHELTER



STOR-PORT



GARAGE

Our unique assembly process quickly transforms the individual pieces into a finished structure that will give you years of service. Great care has been taken to ensure complete satisfaction with your purchase. In the unlikely event that there are any missing or damaged parts or if you simply need technical assistance, please call our Toll Free Hotline at 1-800-900-7222 and your questions will be addressed promptly. Thank you for choosing the Versatube Building System.

MATERIALS LIST Back Enclosure for 20'W x 7.5'H Shelter

VersaTube® BUILDING SYSTEM

QUANTITY	DESCRIPTION	USAGE
1	SKU# 193-8728 Back Enclosure Frame Kit	Frame
	----- BACK ENCLOSURE SHEET METAL, TRIM & SCREWS -----	
7	144" Pro-Rib Sheet Metal Panel	Back
1	12'-3" Eave Trim	Back Corners
1	12' Corner/Gable Trim	Back Corners
150	#12 x 1" Painted Self-Drilling Screws	Back
80	#12 x ¾" Painted Stitch Screws	Back

----- SIDE ENCLOSURE SHEET METAL & SCREWS -----

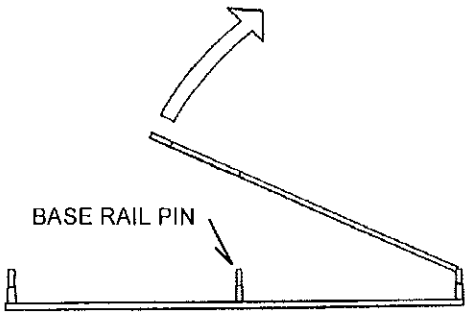
FRAME LENGTH	QUANTITY	DESCRIPTION	USAGE
18' Long	12	120" Pro-Rib Sheet Metal Panel	Sides
	240	#12 x 1" Painted Self-Drilling Screws	
22.5' Long	6	168" Pro-Rib Sheet Metal Panel	Sides
	6	120" Pro-Rib Sheet Metal Panel	
	288	#12 x 1" Painted Self-Drilling Screws	
27' Long	18	120" Pro-Rib Sheet Metal Panel	Sides
	336	#12 x 1" Painted Self-Drilling Screws	
31.5' Long	6	168" Pro-Rib Sheet Metal Panel	Sides
	12	120" Pro-Rib Sheet Metal Panel	
	384	#12 x 1" Painted Self-Drilling Screws	
36' Long	12	168" Pro-Rib Sheet Metal Panel	Sides
	6	120" Pro-Rib Sheet Metal Panel	
	432	#12 x 1" Painted Self-Drilling Screws	
40.5' Long	18	168" Pro-Rib Sheet Metal Panel	Sides
	480	#12 x 1" Painted Self-Drilling Screws	

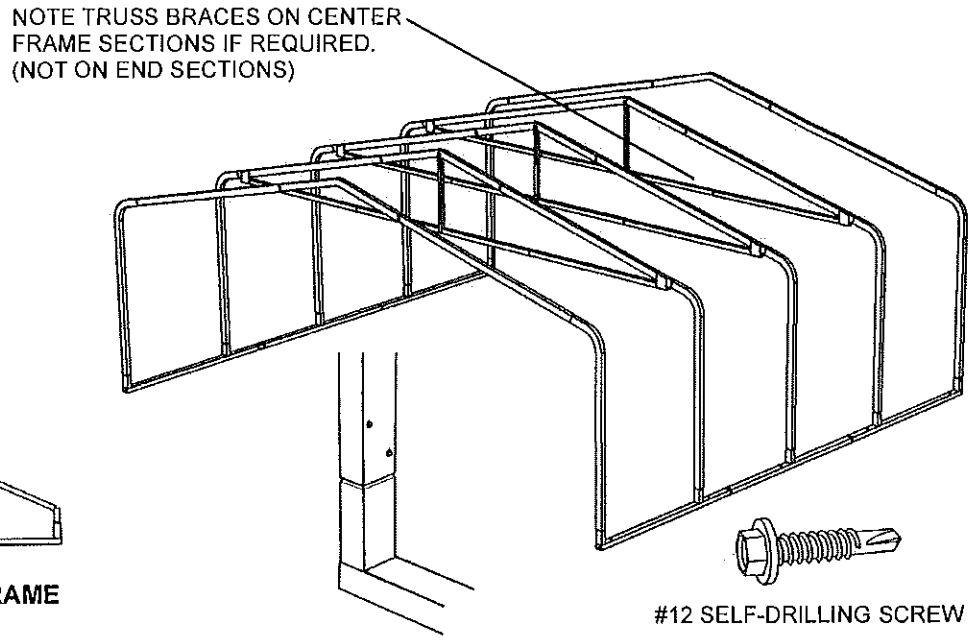
Note: These are the suggested items required to add a back enclosure (with side enclosures) to a 20'W x 7.5'H Storage Shelter.

INSTALLING ROOF/WALL FRAMES SECTIONS TO BASE RAILS

NOTE: This assembly will require at least two people. When raising a taller frame a third person can walk the center of the frame up a ladder placed inside the carport.
Start at one end of the building and place a Roof/Wall frame assembly **(one with no truss brace)** on the first base rail vertical pins. Fasten joints with two screws each. Keep the screw heads away from the outside of the building where sheet metal may be installed. Check the bottom ends of the side posts or height extensions for dimples that might interfere with assembly to base rail pins. Dimples must be removed. (See page 3.)
Repeat this assembly until all Roof/Wall frame assemblies are installed. (Remember, the end frames have no truss brace.) (Your frame may not require truss braces) If truss braces are required on a **stor-port**, there will be no truss brace on the frame that creates the front wall of the storage area at the rear of the stor-port.

Place bottom of side posts on base rail pins at an angle. Raise frame section and drop It onto pins at the same time on both sides of the carport. Tap lightly on the side post with a hammer if parts do not drop into place.

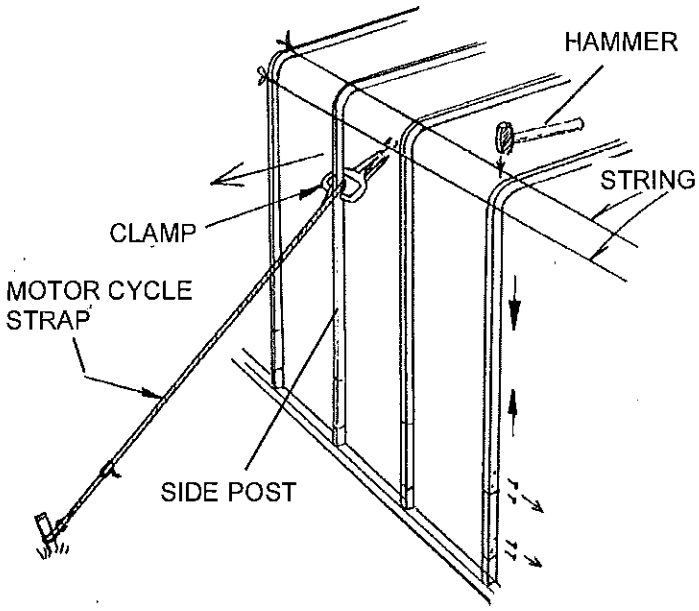




SQUARING UP YOUR FRAME

Before you install sheet metal, you may want to check the Roof/Wall assemblies to make sure that the side post heights are equal.
To do this, first check the front and back Roof/Wall sections to make sure that they are plum side to side. Check the outside of the side post. If adjustments must be made, you can drive a wooden or metal stake into the ground about 8' from the building and use a Motor Cycle strap or Ratchet strap to pull the side post into plumb. Place a clamp on the side post as shown and attach the strap above the clamp.

When the front and back sections are plumb (side to side), tie two strings from the front side post to the back side post at the bottom and top of the bend radius as shown. These strings will let you see which sections are high, low or out of plumb. If the side posts are high or low, remove the joint screws and raise the low posts and hammer down the higher posts as much as possible. Reinstall the screws in a new location. Check the height of the side posts on both sides of the building. The straps should remain in place until several runs of roof metal have been installed.



Note: This is not a critical step, but it may improve the appearance of your building. If side posts are out of plane with the other side posts more than 1/4", it may be visible.

IF YOU ARE NOT INSTALLING A FRONT OR BACK ENCLOSURE, PROCEED TO PAGE 23.

© MSMP INC. 1-4-05

℄ FOX STREET
℄ MILL STREET
℄ GRAND AVENUE
N45°06'23"E
125.38'
68.30'
N87°04'13"E
S14°27'42"W
74.30'
S21°58'31"W
98.51'
N03°53'30"W
182.75'
S86°00'00"W
45.80'
214.80'
S21°58'
126.3'
PLANTER ENCROACHES 0.3'
EXIST. DWL.
EXIST. GARAGE
EXIST. DWELLING
0.270 AC.
0.300 AC.
1.53' ENCROACHMENT
1.45' ENCROACHMENT
N44°41'24"W
18.77'
N66°40'05"W
58.38'
N 56°25'09"W
46.27'
7 FT
17 FT
20 FT
9 FT
33'
218-212 Grand

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Franklin, WI 53132

July 5, 2016

Fred Winchowky, Village President
Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

Re: Theisen Conditional Use Amendment (Lighthouse Lubes)

Dear President Winchowky and Members of the Plan Commission:

On July 21, 2015 the Village Board adopted Resolution 2015-31 approving a Conditional Use for an oil change facility and drive-up window for a coffee shop at 1160 N. Rochester Street, between Waukesha State Bank and Culver's Restaurant. The request is to amend the Conditional Use (specifically Conditions #2 and #4 of the resolution).

Within Condition #2, the amendment would remove the requirement of "full use of all parking spaces and drive aisles across the entire property" shared with Waukesha State Bank while cross access with the bank site will remain. While the entire Waukesha State Bank and Lighthouse Lubes site remains as one lot but separated into individual ownerships via a Condominium Plat, Waukesha State Bank objected to sharing parking between uses.

Condition #4 refers to the approved site plan that showed an internal cross access with the Culver's site. Lighthouse Lubes and Culver's were unable to work out an agreement for cross access. The amendment would eliminate the requirement for cross access.

A footing and foundation permit has been issued to allow construction to proceed. However, a full building permit for above ground building construction will not be issued until this matter has been resolved via amendment.

Recommendation

I recommend approval of the requested Conditional Use amendments with the proposed revisions listed below. Because the Lighthouse Lubes site plan provides the required amount of on-site parking spaces, shared parking with the bank is not necessary. However, Village staff remains absolute that a cross connection between the parking lots and drives is important for good traffic flow in and around the two buildings within the common Condominium Plat, allowing customers of all businesses to travel between them without using the adjacent Marsh View Drive. The planned cross access with the Culver's site is less important because many common customers are not anticipated.

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Recommended Revisions to Resolution 2015-31:

1. In Condition #2, eliminate the last sentence, but in its place insert the following:
   "In addition, the cross access connection between the subject site and the Waukesha State Bank site shall remain as shown on the plans referenced in Condition #3."
2. In Condition #4, eliminate the entire paragraph, but in its place insert the following:
   "The cross access connection between the subject site and the site to the south shall not be required as shown on the plans referenced in Condition #3."

I appreciate the opportunity to assist with this application. Should any questions arise, please feel free to contact me.

Sincerely,

Bruce S. Kaniewski, AICP
Mukwonago Village Planner

Cc: John Weidl, Village Administrator (via email)
Steve Braatz, Village Clerk (via email)
Joe Hankovich, Supervisor of Inspections/Zoning Administrator (via email)
Bob Harley, Code Officer (via email)
Mark Blum, Village Attorney (via email)
Jeff Stien, Fire Chief (via email)
Kevin Schmidt, Police Chief (via email)
John Theisen, Applicant (via email)
Mike Palmisano, Applicant (via email)
Keith Van De Laarschot, Waukesha State Bank (via email)

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Village of Mukwonago
440 River Crest Court, P.O. Box 206
Mukwonago, WI 53149
Phone: (262) 363-6420
Fax: (262) 363-6425
www.villageofmukwonago.com

VILLAGE OF MUKWONAGO
CONDITIONAL USE PERMIT APPLICATION
Application Fee: $450

Date Submitted: ~~04/20/2016~~ 5/18/16 SS

CONTACTS

Zoning Department
Contact: Joe Hankovich
Phone: (262) 363-6419
Fax: (262) 363-6425
Email: jhankovich@villageofmukwonago.com

Planning Department
Contact: Bruce Kaniewski
Phone: (414) 339-4105
Fax: (262) 363-6425
Email: planner@villageofmukwonago.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Plan Commission and Village Board of the Village of Mukwonago.

Conditional use applications require a public hearing. To ensure the public hearing will be properly advertised, the application must be submitted **at least 30 days prior to the meeting** in which the Plan Commission will hold the public hearing. The Plan Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed on page 3 must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100-354 and other pertinent sections of Village ordinances, WI Stats. 62.23, and as necessary to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Plan Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to: Village Planner
ATTN: Conditional Use Permits
PO Box 206
Mukwonago, WI 53149

Deliver to: Village Clerk's Office
440 River Crest Court

Email to: planner@villageofmukwonago.com

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: JOHN THELSON
Company: LIGHTHOUSE LUBE REAL ESTATE, LLC
Address: 716A MAIN City: MUKWONAGO State: WI Zip: 53149
Daytime Phone: 414-216-1038 Fax:
E-Mail: SWRT@ELKNET.NET

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: ____

Daytime Phone: _____ Fax: _____

E-Mail: _____

ARCHITECT

Name: ZENNER ARCHITECTS

Company: _____

Address: 1338 ERIE City: WAUW. State: WI Zip: ____

Daytime Phone: 414.273.6637 Fax: _____

E-Mail: _____

PROFESSIONAL ENGINEER

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: ____

Daytime Phone: _____ Fax: _____

E-Mail: _____

REGISTERED SURVEYOR

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: ____

Daytime Phone: _____ Fax: _____

E-Mail: _____

CONTRACTOR

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: ____

Daytime Phone: _____ Fax: _____

E-Mail: _____

PROPERTY AND PROJECT INFORMATION

Present Zoning: _____ Tax Key No(s).: _____

Address/Location: 1146 N. ROCHESTER, MUKWONAGO, WI

A. I/We request a conditional use permit for:

AMEND ORIGINAL CONDITIONAL USE TO EXCLUDE SHARED PARKING W/ WAUKESHA STATE BANK

B. The property is presently used as:

VACANT LAND

C. Name of Architect, Professional Engineer, or Contractor: RENNER ARCHITECTS

D. Project Timetable: Start Date: 5/2016 Completion Date: 10/2016

E. All of the Proposed Use(s) of the property will be:

Principal Use OIL CHANGE CENTER

Secondary Use RETAIL SPACE

Accessory Use CORPORATE OFFICE

F. I/We represent that I/we have a vested interest in this property in the following manner:

☒ Owner

☐ Leasehold. Length of Lease: _____

☐ Contractual. Nature of contract: _____

☐ Other. Please explain

PROCEDURAL CHECKLIST FOR CONDITIONAL USE REVIEW AND APPROVAL

This form is designed to be a guide for submitting a complete application for a conditional use.

Application Submittal Packet Requirements for Village and Applicant Use (Check off List)

Application:

- ☐ Completed application form including the procedural checklist and justification of the proposed conditional use.
- ☐ Application fee: $450
- ☐ Agreement for Reimbursable Services (separate application)

Required site drawings:

- ☐ Survey of the property
- ☐ Landscape plan
- ☐ Parking plan (including parking computations)
- ☐ Lighting plan (including photo metrics)
- ☐ Proposed location and connection to the sanitary sewer and water mains
- ☐ Drainage plan (if applicable)
- ☐ All building elevations
- ☐ Floor plans

Other Documents:

- ☐ Plan of operation/proposal
- ☐ Overview of the adjoining lots (including list of parcel identification numbers and names and mailing addresses of the current owners for all properties within 300 feet of the subject property)
- ☐ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to planner@villageofmukwonago.com.
- ☐ Any additional information as determined by Village staff

JUSTIFICATION OF THE PROPOSED CONDITIONAL USE

The Plan Commission and Village Board of the Village of Mukwonago will base their decisions on the category standards listed below. It is in the best interest of the applicant to base their presentation on the same applicable set of standards when presenting their petition. **Applicant: Please fill out ALL of the questions. Use additional sheets of paper if needed.**

A. How is the proposed conditional use (the use in general, independent of its location) in harmony with the purposes, goals, objectives, policies and standards of the Village of Mukwonago Comprehensive Plan, the Zoning Ordinance, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the Village?

ORIGINAL CONDITIONAL USE WAS APPROVED
w/ VILLAGE PLANNER & BUILDING INSPECTOR
DETERMINED THAT ADEQUATE PARKING IS
PROVIDED IN LIEU OF SHARED PARKING w/ BKNX

B. How is the proposed conditional use, in its specific location, in harmony with the purposed, goals, objectives, policies and standards of the Village of Mukwonago Comprehensive Plan, the Zoning Ordinance, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the Village?

PROPOSED CONDITIONAL USE WAS PREVIOUSLY
APPROVED

C. Does the proposed conditional use, in its proposed location and as depicted on the required site plan (see Section 100-354 (a), (b), and (c)), result in any substantial or undue adverse impact on nearby property, the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property or rights-of-way, or other matters affecting the public health, safety, or general welfare, either as they now exist or as they may in the future be developed as a result of the implementation of the provisions of the Zoning Ordinance, the Comprehensive Plan, or any other plan, program, map ordinance adopted or under consideration pursuant to official notice by the Village or other governmental agency having jurisdiction to guide development?

NO

D. How does the proposed conditional use maintain the desired consistency of land uses, land use intensities, and land use impacts as related to the environs of the subject property?

ORIGINAL CONDITIONAL USE WAS PREVIOUSLY APPROVED

E. Is the proposed conditional use located in an area that will be adequately served by and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public agencies serving the subject property?

YES

F. Do the potential public benefits of the proposed conditional use outweigh all potential adverse impacts of the proposed conditional use (as identified in Sections 100-354 (e)(1) and (2)), after taking into consideration the Applicant's proposal and any requirements recommended by the Applicant to ameliorate such impacts?

YES

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signature[s] below. If more than one, all of the owners of the property must sign this Application).

Signature - Property Owner	Signature - Applicant
JOHN THEISEN Name & Title (PRINT)	Name & Title (PRINT)
04/20/2014 Date	Date
Signature - Property Owner	Signature – Applicant's Representative
Name & Title (PRINT)	Name & Title (PRINT)
Date	Date

FOR OFFICE USE ONLY			
Date Paid	Receipt #	Date(s) Notice Published	Date Notices Mailed
Public Hearing Date	Plan Commission Date(s)	Village Board Date(s)	Resolution Number
Escrow Required? ☐ Yes ☐ No		Escrow Amount	
Plan Commission Disposition			
Village Board Disposition			

RESOLUTION 2015-31

CONDITIONAL USE PERMIT
FOR THE CONSTRUCTION OF AN OIL CHANGE FACILITY AND DRIVE-UP WINDOW,
JOHN THEISEN, LIGHTHOUSE LUBES REAL ESTATE LLC,
MARSH VIEW DRIVE, MUKV1962990002

WHEREAS, pursuant to Section 100-352 of the Zoning Code, an application for a conditional use permit has been filed for approval of the construction of an oil change facility and drive-up window in the Village of Mukwonago, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, after proper notice pursuant to the Village of Mukwonago Zoning Code, a public hearing was noticed in the official newspaper as a Class II notice, and with notice being mailed at least ten (10) days prior to the date of such public hearing to the owners of record of the properties situated within 300 feet of the boundaries of the properties affected, a public hearing was held on June 14, 2015, and

WHEREAS, these preliminary plans have been reviewed and recommended by the Village Plan Commission, and

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the preliminary plans for the construction of an oil change facility and drive-up window submitted by John Theisen, Lighthouse Lubes Real Estate LLC, based upon the plans submitted to the Village and the public hearing conducted on this matter and for the following reasons:

1. Such use and/or structures are in accordance with the purpose and intent of the zoning district in which it is located.
2. Such use and/or structures are found to be not hazardous, offensive or adverse to the environment or value of the neighborhood and community.

NOW, THEREFORE, BE IT FURTHER RESOLVED this conditional use permit shall be subject to the following conditions:

1. The Conditional Uses for an oil change facility and drive-up window for a coffee shop/restaurant shall be granted to Lighthouse Lubes Real Estate, LLC (Applicant) and Waukesha State Bank as the property owner. Applicant shall be the developer of the project; although after completion of the development in accordance with the provisions of Section 100-354 (e) (4) of the Zoning Ordinance as a “conditional use permit in good standing,” applicant may transfer ownership.
2. Prior to the start of any site construction or issuance of any required building permits, Waukesha State Bank shall provide the Village of Mukwonago Zoning Administrator with a copy of the recorded Condominium Plat, along with any terms and restrictions of the plat. Said Condominium Plat shall prohibit any division of the land by a Plat of Subdivision or a Certified Survey Map, except with an amendment of this Conditional Use approval. In addition, the Condominium Plat shall indicate the full use of all parking spaces and drive aisles across the entire property by any user or customer of the businesses on the entire property.
3. Development of the property shall be consistent with the base plans submitted for the proposal prepared by Renner Architects, dated June 30, 2015; except no site construction or issuance of any required building permits shall occur until all final plans receive written approval of the Supervisor of Inspections/Zoning Administrator, Fire Chief, Village Planner and Village Engineer, subject to the terms and conditions of Site

Plan and Architectural Plan approval. The terms and conditions of Site Plan and Architectural Plan approval shall be incorporated by reference.

4. Prior to the start of any site construction or issuance of any required building permits, applicant shall submit to the Zoning Administrator a recorded copy of the cross access easement with the property owner to the south. Prior to recording, the location of the cross access easement shall be approved by the Village Planner, and the cross access easement document shall be approved by the Village Attorney.
5. The interior of the coffee shop/restaurant with approval of the Conditional Use for drive-thru service shall be constructed with a layout consistent with the floor plan incorporated with the submitted plans dated June 30, 2015. Applicant stated intent is to lease the subject space to a coffee shop that serves a variety of coffees, other non-alcoholic drinks and on-site and off-site prepared breakfast, snack and sandwich type foods in a fast food setting. Should applicant lease to a restaurant that does not have a main coffee theme, the subject space may be occupied by a restaurant if the restaurant maintains the submitted floor plan, maintains the drive-thru window and lane with the minimum of six queuing spaces behind the menu board, and does not exceed a combination of 81 interior and exterior seats. Should a restaurant propose to locate in the subject space that does not meet the criteria just stated, nothing in these terms and conditions shall prevent the applicant or assigns to request a new Conditional Use.
6. Applicant and assigns shall maintain the building at all times consistent with the submitted plans, and shall maintain the entire property clear of trash, rubbish and debris at all times. Applicant shall place aesthetically looking trash containers throughout the site with location and design of the containers subject to the approval of the Zoning Administrator. No outdoor display or sales shall be allowed.
7. A Village maintained water main exists under the site within a 20 foot easement. With approval, applicant and property owner acknowledges if the Village should need to repair or replace a section or the entire length of the water main, the Village shall not be responsible to replace or repair any above ground appurtenance, such as grass, trees and shrubs, drive aisle and parking paving, curb and/or gutter, or sidewalks. Applicant and/or property owner shall replace or repair appurtenance as soon as weather permits.
8. With approval, the Plan Commission and Village Board approve allowance of two principal buildings on one lot.
9. With approval, the Plan Commission confirms the proposal conforms to the standards for approval of a Conditional Use.
10. Approval of the Conditional Uses shall be subject to Village Board approval of rezoning of the entire subject property from B-3, Community Business District, to B-2, General Business District.
11. All hazardous waste shall be disposed of as required by law.

NOW, THEREFORE, BE IT FURTHER RESOLVED the permittee, upon the granting of this Conditional Use Permit, shall agree to accept the same in writing.

Passed and dated this 21st day of July 2015.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Steven A. Braatz, Jr., Village Clerk

ACCEPTANCE

This conditional use permit is accepted, and permittee agrees to abide by the terms thereof.

Village of Mukwonago

By: _____
Owner

Applicant

By: _____
Agent

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Franklin, WI 53132

July 8, 2016

Fred Winchowky, Village President
Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

Re: Site Plan and Architectural Plan Review/Instrument Development Corporation

Dear President Winchowky and Members of the Plan Commission:

Kevin Sinnett on behalf of the Instrument Development Corporation, 820 Swan Drive, has submitted application and plans for site plan and architectural plan approval. Proposed are north and south additions to the existing back shop and office of 10,000 square feet. The north addition is proposed at 9,900 square feet and the south addition is 2,500 square feet. The 6.65 acre site is zoned M-4 Median/Heavy Industrial District and is located at the northeast corner of Holz Parkway and Swan Drive. Please see the good description of the project submitted by the applicant.

During the course of review, Village staff observed that grading commenced for the north addition without proper permits. The site has been "tagged" to stop work and a citation forwarded to the applicant. The site must be stabilized before proceeding with approval and it has been determined a storm water management plan must be submitted. However, Village staff asks for Plan Commission feedback to staff comments that can be addressed with updated plans.

On the next page please see the site shown in the middle of an aerial photo. Overlaid on the photo is a known wetland shown in light green. With the existence of the known wetland, the Wisconsin Department of Natural Resources (DNR) will require wetland delineation before they issue a Notice of Intent permit. In addition, the green cross hatch is a designated Isolated Natural Resource Area. An Isolated Natural Resource Area does not necessarily mean total preservation, but a DNR representative has informed staff it might be a wetland.

In addition to site stabilization, the need for wetland delineation and a storm water management plan, staff has the following comments for Plan Commission direction:

1. **Amount of Parking Spaces.** The new parking standards adopted in December 2015 require 3 spaces per each 1,000 square feet of manufacturing and office space. A total of 47,000 square feet building space with the additions requires 141 spaces, while 93 are shown on the plan. However, the parking standards state the following:

   "For situations of building additions or a new use occupying an existing building, if utilization of building space for production, material storage and warehousing does not necessitate three (3)

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Franklin, WI 53132

spaces per 1,000 square feet, with justification provided by the building occupant the Plan Commission may set the minimum parking requirement for production, material storage and warehousing space at two (2) spaces per 1,000 square feet, while the minimum parking requirement for other building area remains at three (3) spaces per 1,000 square feet."

Therefore, the Plan Commission may determine that 93 spaces on the site are sufficient.

2. **Exterior Design of Additions.** The M-4 design standards include the following:

"Building materials and color.

a. Exterior building materials shall convey an impression of durability. Materials such as decorative masonry, stone, brick block, aggregate panels and glass are permitted. Dryvit, metal and stucco may be used as trim material, not to exceed 25 percent of exterior area. Vinyl and aluminum siding are not permitted.

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Franklin, WI 53132

b. Exterior building colors shall be nonreflective, subtle, neutral, or earth tone. The use of high intensity colors, metallic colors, black, or fluorescent colors shall be prohibited. Building trim and architectural accent elements may feature brighter colors, but such colors shall be muted, not metallic, not fluorescent, and not specific to particular uses or tenants. Standard corporate and trademark colors shall be permitted only on sign face and copy areas."

The north addition with painted masonry block, splitface and smooth face block conforms to the standard, in my opinion. Metal panels on the south addition do not conform.

3. **Parking Lot Dimensions.** A fully dimensioned site plan is needed to show that driveways and new parking spaces conform to required standards. To that end, it appears the driveway to the back portion of the site must be widened to conform to the following new standard within the parking requirements:

   "All driveways internal to the site shall be designed for 2-way traffic at a minimum width of 24 feet, unless Plan Commission approval is received with justification from the applicant for a 20 foot 2-way traffic driveway or a 16 foot 1-way traffic lane (this does not apply to single-family, two-family or multi-family where a driveway directly extends from a public right-of-way to a garage for the individual dwelling unit)."

Staff looks forward to your direction. I any questions arise, please feel free to contact me.

Sincerely,

Bruce S. Kaniewski, AICP

Cc: John Weidl, Village Administrator (via email)
Steve Braatz, Jr., Village Clerk (via email)
Joe Hankovich, Supervisor of Inspections/Zoning Administrator (via email)
Bob Harley, Codes Official (via email)
Kurt Peot, P.E., Village Engineer (via email)
Kevin Schmidt, Police Chief (via email)
Jeff Stien, Fire Chief (via email)
Dave Brown, Utilities Superintendent (via email)
Ron Bittner, Public Works Director (via email)
Mark Blum, Village Attorney (via email)
Kevin Sinnett, Applicant (via email)
Joe Sinnett, Architect (via email)
Matt Gluszcz, COO of IDC (via email)

Village of Mukwonago
440 River Crest Court, P.O. Box 206
Mukwonago, WI 53149
Phone: (262) 363-6420
Fax: (262) 363-6425
www.villageofmukwonago.com

VILLAGE OF MUKWONAGO

SITE PLAN, ARCHITECTURAL, AND PLANNED UNIT DEVELOPMENT (PUD) APPLICATION

Application Fee: Below

RECEIVED
JUN 15 2016
By

Date Submitted: 06.14.2016

FEES

(Please check one)

- ☐ Minor Site Plan (Buildings less than 600 sq. ft.): $135.00 plus $.02 per sq. ft.
- ☒ Site Plan and/or Architectural Review: $250.00 plus $.02 per sq. ft.
- ☐ Conceptual Site Plan and/or Architectural Review: $200.00 plus $.02 per sq. ft.
- ☐ Planned Unit Development (PUD) Review: $185.00 plus $25.00/unit

CONTACTS

Zoning Department
Contact: Joe Hankovich
Phone: (262) 363-6419
Fax: (262) 363-6425
Email: jhankovich@villageofmukwonago.com

Planning Department
Contact: Bruce Kaniewski
Phone: (414) 339-4105
Fax: (262) 363-6425
Email: planner@villageofmukwonago.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Plan Commission and Village Board of the Village of Mukwonago. The application packet must be filed with the Village Clerk **at least 30 days prior to the meeting** of the Planning Commission at which action is desired. The Plan Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed below must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100 Article IX. Section 100-601(f) and other pertinent sections of Village ordinances, and, as necessary, to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Plan Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to:	Village Planner ATTN: Site Plan/Architectural Plan/Planned Unit Development PO Box 206 Mukwonago, WI 53149
Deliver to:	Village Clerk's Office 440 River Crest Court
Email to:	planner@villageofmukwonago.com

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: KEVIN SINNETT
Company: INSTRUMENT DEVELOPMENT CORPORATION
Address: 820 SWAN DR. **City:** MUKWONAGO **State:** WI **Zip:** 53149
Daytime Phone: 262-441-3302 **Fax:**
E-Mail: Kevins@idcwi.com

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name: JOE SINNETT, AIA
Company:
Address: 19100 NORTH HILLS DR City: BROOKFIELD State: WI Zip: 53045
Daytime Phone: 262-470-3653 Fax:
E-Mail: sinnett1423@gmail.com

ARCHITECT

Name: JOE SINNETT, AIA
Company:
Address: 19100 NORTH HILLS DR. City: BROOKFIELD State: WI Zip: 53045
Daytime Phone: 262-470-3653 Fax:
E-Mail: sinnett1423@gmail.com

PROFESSIONAL ENGINEER

Name: CHRIS JACKSON, PE, PLS
Company: C.J ENGINEERING
Address: 9205 W. CENTER ST. SUITE 214 City: MILWAUKE State: WI Zip: 53222
Daytime Phone: 414-443-1312 Fax:
E-Mail: chris@cj-engineering.com

REGISTERED SURVEYOR

Name: MICHAEL BERRY
Company: CAPITOL SURVEY ENTERPRISES
Address: 220 REGENCY CT. SUITE 210 City: BROOKFIELD State: WI Zip: 53045
Daytime Phone: 262-786-6600 Fax:
E-Mail:

CONTRACTOR

Name: BRIAN WERLSERY
Company: W.M. CORPORATION
Address: S29 W33948 Olde Oak Pass City: OCONOMOWOC State: WI Zip: 53066
Daytime Phone: 414-630-3830 Fax:
E-Mail:

PROPERTY INFORMATION

Property Owner (s) *(if different from applicant)*: KEVIN & JANI SINNETT, EXECUTIVE MOTORCOACH LLC.

Address: S40 W30338 HAMILTON DR **City:** WAUKESHA **State:** WI **Zip:** 53189

Daytime Phone: 262-441-3302 **Fax:**

E-Mail: Kevins@idcwi.com

Present Zoning: M-4 **Tax Key No(s).:** MUKV 1970987

Location/Address: 820 SWAN DR.

Present Use: LIGHT INDUSTRIAL **Intended Use:** LIGHT INDUSTRIAL

PROCEDURAL CHECKLIST FOR SITE PLAN/ARCHITECTURAL PLAN/PUD REVIEW AND APPROVAL

Submittals for review must include and be accompanied by the following:

Application:

- ☐ Completed application form including the procedural checklist.
- ☐ Application fee: See page 1.
- ☐ Agreement for Reimbursable Services (separate application).

Other Documents:

- ☐ Five(5) complete sets of Application and materials, in addition to the original, for Village of Mukwonago review.
- ☐ Project Summary: Please attach a statement detailing the reasons and background for this request including: details of proposal, services provided, wares sold, plans and hours of operation, number of employees, frequency of customer visits, frequency of deliveries to site, description of any interior/exterior modifications or additions to be made to property, any outside storage (dumpsters, trucks, materials...), number of parking stalls, screening/buffer type, any other information available. ***PLEASE EXPLAIN IN DETAIL.***
- ☐ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to planner@villageofmukwonago.com.
- ☐ Any additional information as determined by Village staff.

- **Upon receipt of a complete submittal, staff review will be conducted within ten business days.**
- **All Site Plan, Architectural, and Planned Unit Development review requests require Plan Commission review and Village Board approval.**

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signature[s] below. If more than one, all of the owners of the property must sign this Application).

Signature - Property Owner

Kevin Sinnett Owner
Name & Title (PRINT)

06/14/2016
Date

Signature - Applicant

Kevin Sinnett Owner
Name & Title (PRINT)

06/14/2016
Date

Signature - Property Owner

Name & Title (PRINT)

Date

Signature – Applicant's Representative

JOSEPH A SINNETT
Name & Title (PRINT)

06.14.2016
Date

FOR OFFICE USE ONLY	
Date Paid 6-16-16 $498	**Receipt #** 6948
Plan Commission Date(s)	**Village Board Date(s)**
Escrow Required? ☐ Yes ☐ No	**Escrow Amount**
Plan Commission Disposition	
Village Board Disposition	

Memorandum

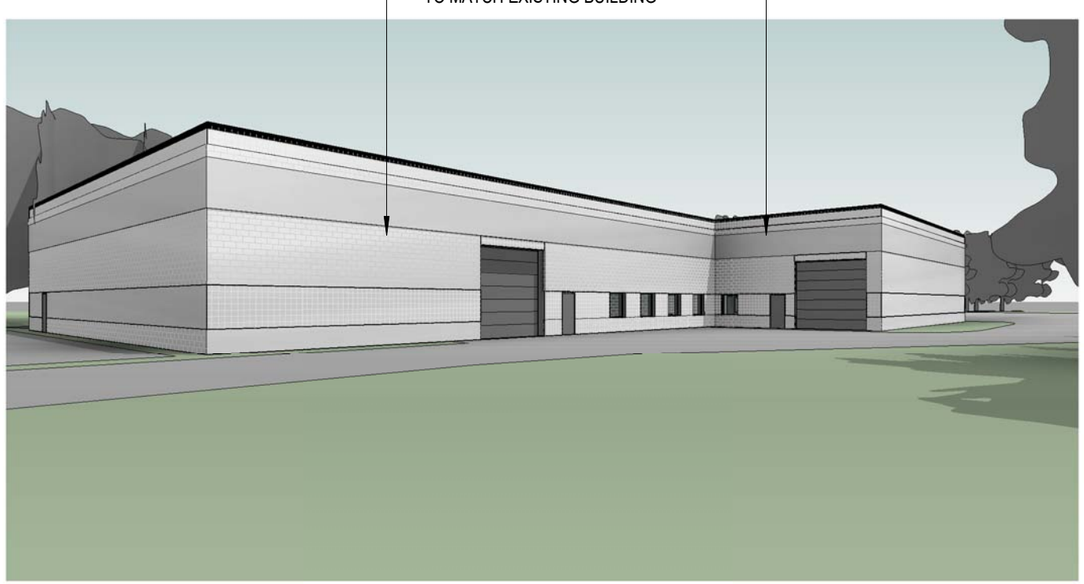
Date	06.14.2016	**Distribution**
To	Plan Commission	
From	Joe Sinnett, AIA	
Project	Instrument Development Corp New Additions	
Project Number	215003.00	
Re	Project Summary	

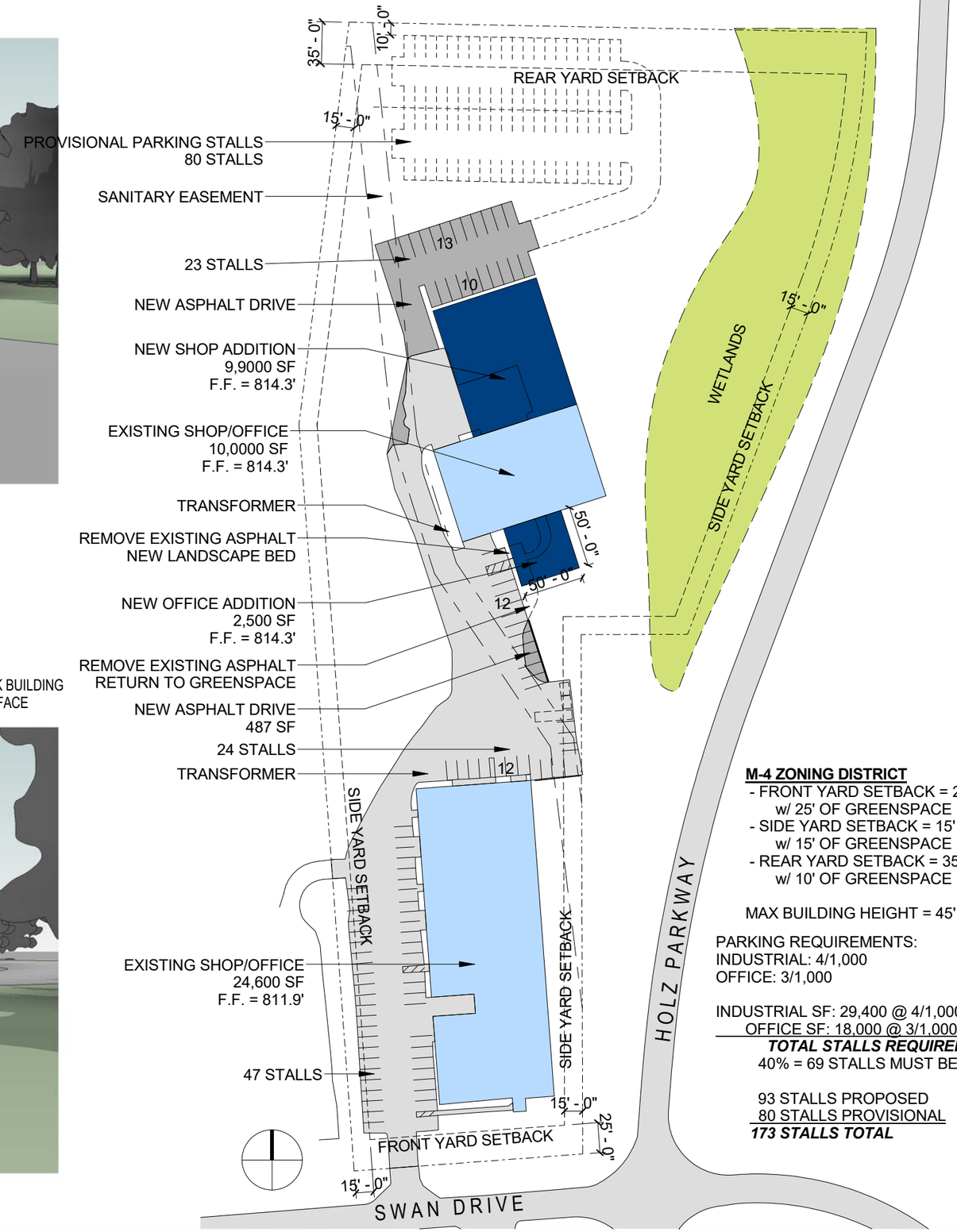
Instrument Development Corporation is proposing two new additions to provide more space in their growing operations in their ultra-precision machining business. Both additions will occur on their back plant. The first addition will be a new 2,500 SF office addition to provide additional office space along with a new corporate conference/training room. This addition will have a steel structure with steel stud framed exterior walls that will be finished with smooth face masonry along the base of the building to match the existing building. Then a corrugated metal accent panel will be used on the office as an accent to the all masonry existing building. At the entry and corner of the building a stack bond brick will be used to anchor the corner of the building. The addition to the north of the existing back plant will be a steel framed structure with steel girts and a metal panel substrate and finished on the exterior with a masonry block veneer to match the existing back plant.

All hours of operation will remain unchanged with the new addition. Also trash/recycle facilities will remain and not increase. These are currently screened from public view by a wood slat fence that is 7'-0" h and other views are screened by a wooded area.

Parking on site will see (23) additional parking stalls added for a total of 93 stalls total on site with 80 provisional stall could be provided. The total provided with provisional stalls equals 173 stalls and exceeds the 172 required.

Joseph A Sinnett, AIA





M-4 ZONING DISTRICT
- FRONT YARD SETBACK = 25'
  w/ 25' OF GREENSPACE
- SIDE YARD SETBACK = 15'
  w/ 15' OF GREENSPACE
- REAR YARD SETBACK = 35'
  w/ 10' OF GREENSPACE

MAX BUILDING HEIGHT = 45'

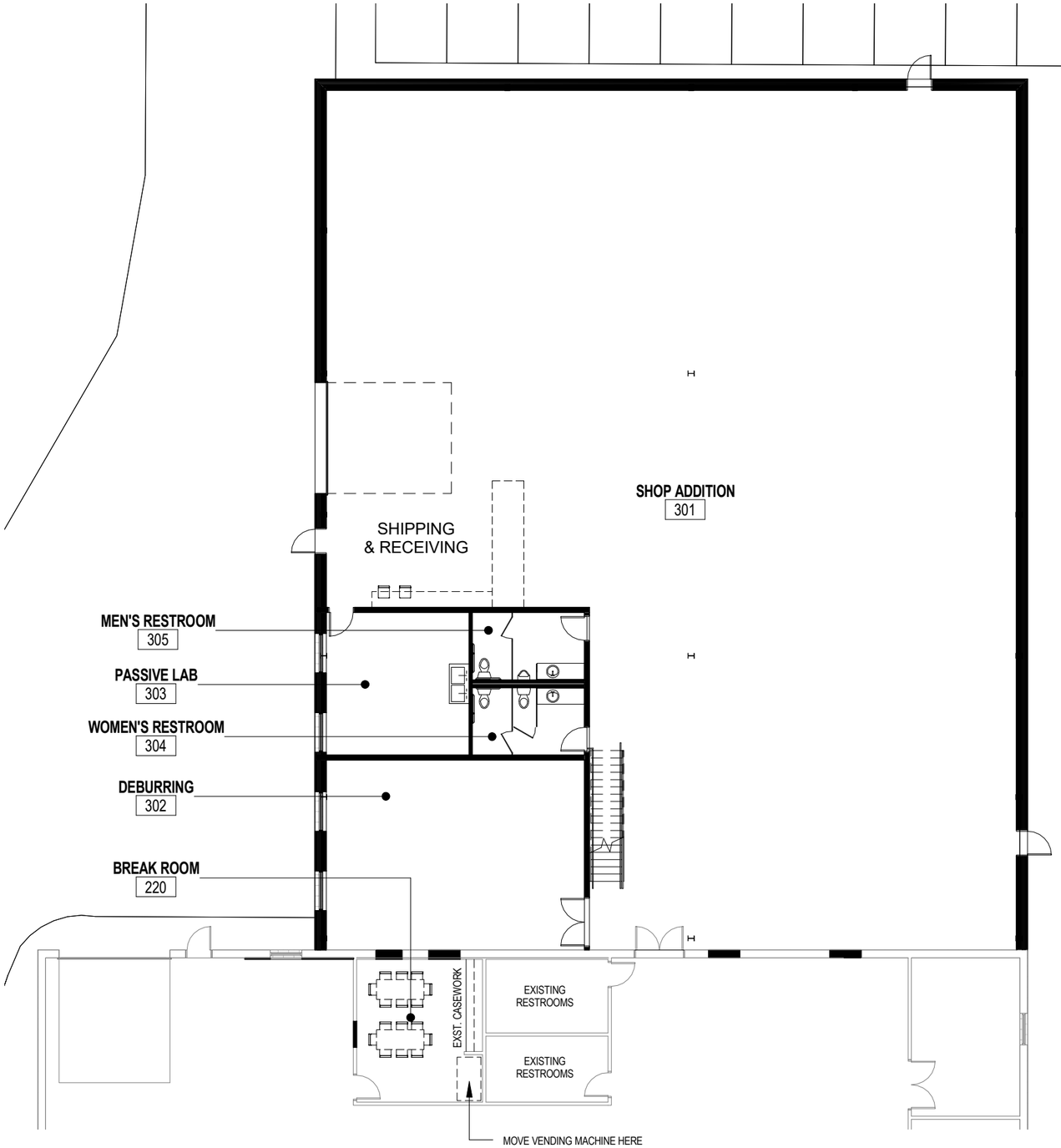
PARKING REQUIREMENTS:
INDUSTRIAL: 4/1,000
OFFICE: 3/1,000

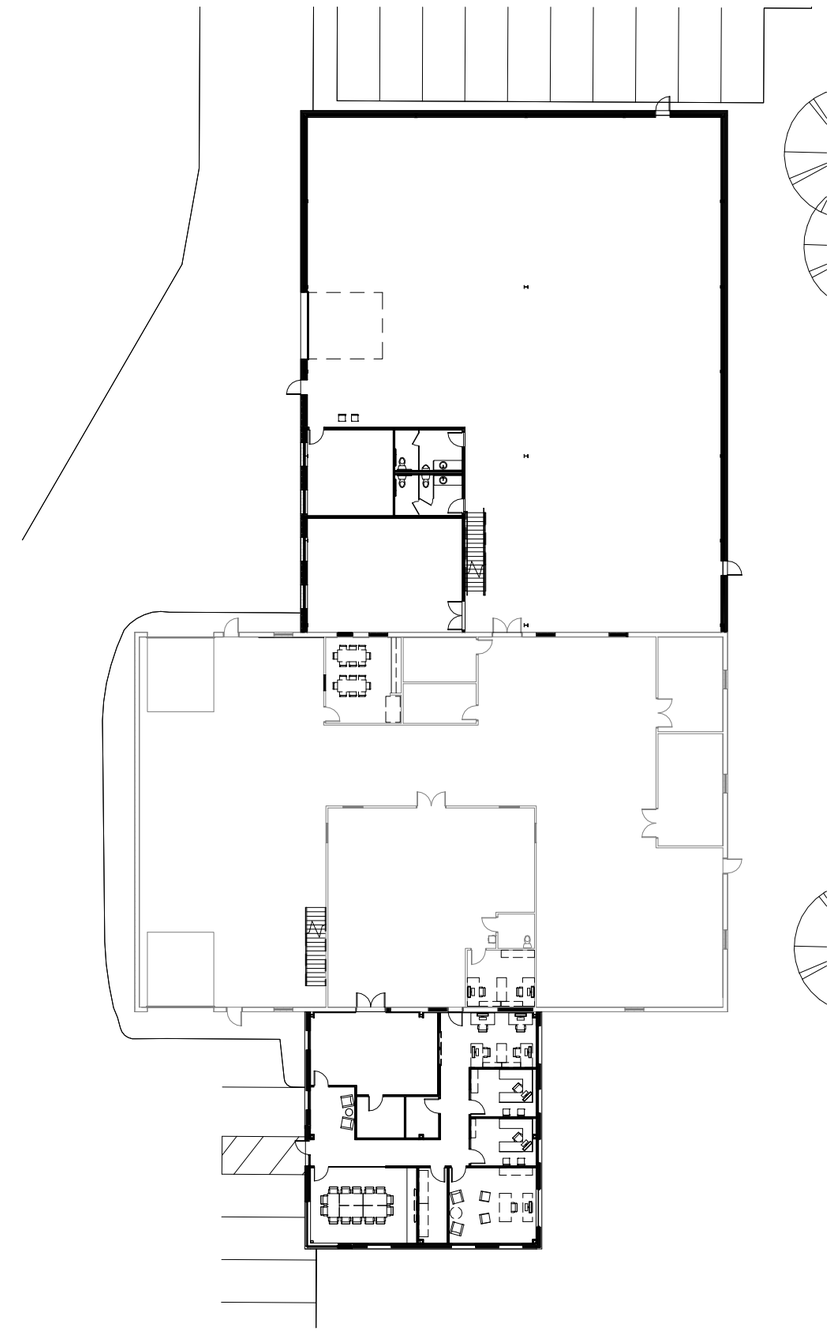
INDUSTRIAL SF: 29,400 @ 4/1,000 = 117.6 STALLS
OFFICE SF: 18,000 @ 3/1,000 = 54 STALLS
TOTAL STALLS REQUIRED = 171.6 STALLS
40% = 69 STALLS MUST BE PROVIDED

93 STALLS PROPOSED
80 STALLS PROVISIONAL
173 STALLS TOTAL

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI





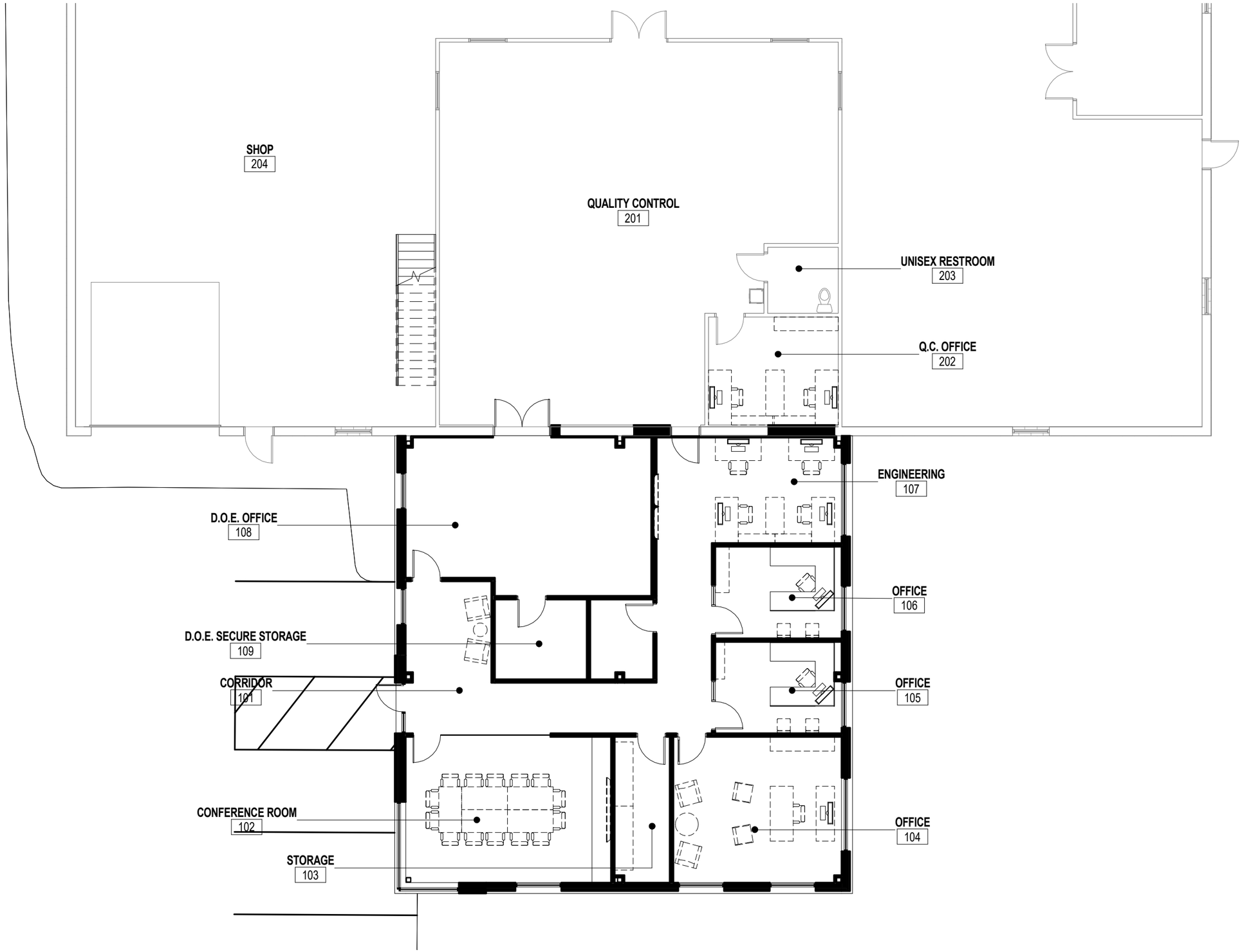
PLANS

JOSEPH A SINNETT, AIA
ARCHITECT

IDC - BACK PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI 53149

003 | 06.14.2016

IDC PRECISION



PLANS

004 | 06.14.2016

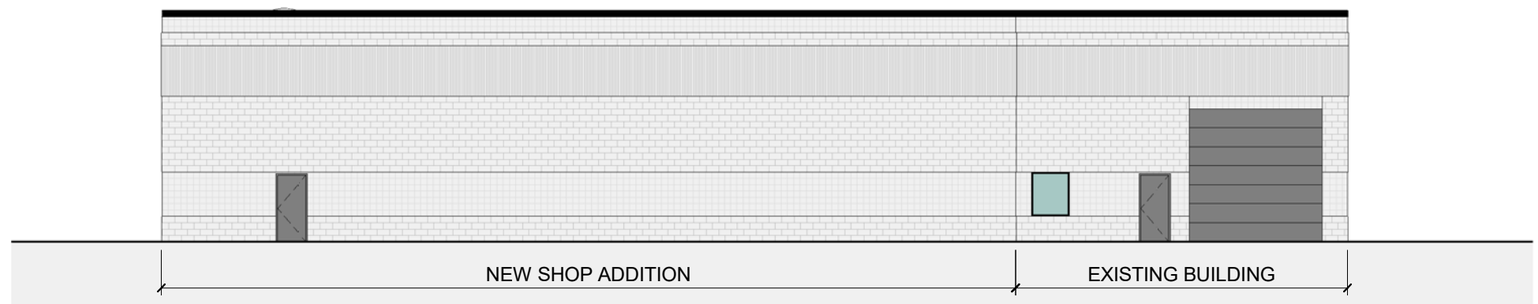
JOSEPH A SINNETT, AIA
ARCHITECT

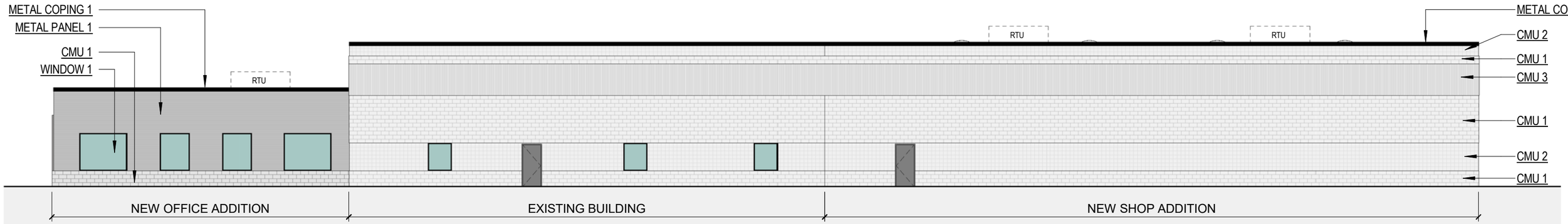
IDC - BACK PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI 53149

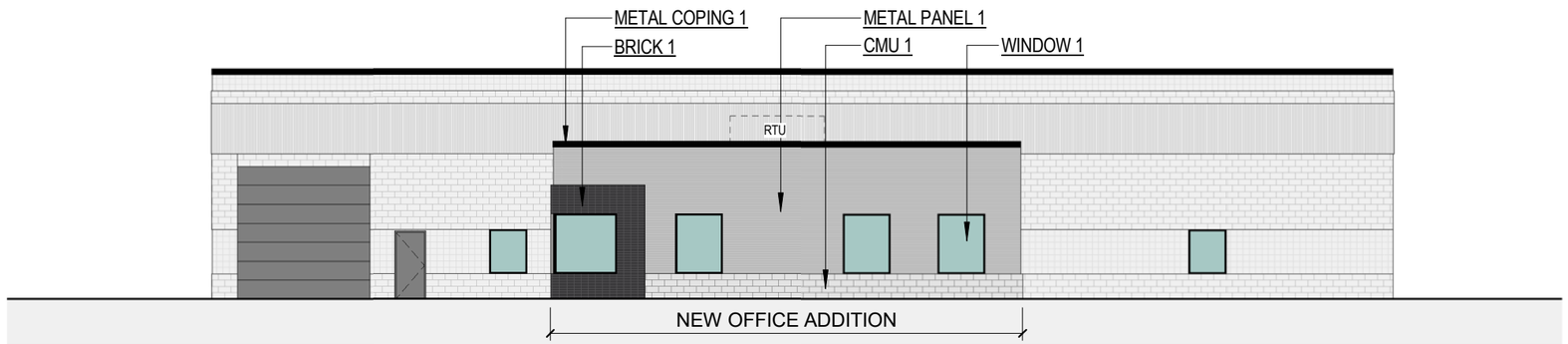
IDC PRECISION

ASSEMBLIES & COMPONENTS

BRICK 1	MODULAR CLAY BRICK MASONRY IN STACK BOND WITH TINTED MORTAR COLOR; BASIS OF DESIGN IS ENDICOTT'S MANGANESE IRONSPOT VELOUR
CMU 1	12" SPLITFACE CMU, PAINTED LIGHT GRAY
CMU 2	12" 1 SCORE SMOOTHFACE CMU, PAINTED GRAY
CMU 3	12" FLUTED SPLITFACE CMU, PAINTED LIGHT GRAY
METAL COPING 1	PREFINISHED SHEET METAL COPING WITH CONTINUOUS CLEATS ON 3/4" PRESSURE TREATED PLYWOOD BLOCKING; COLOR: BLACK
METAL PANEL 1	CONCEALED FASTNER FLUSH METAL PANEL; BASIS OF DESIGN: METAL SPAN DESIGNER SERIES 16" FLUTED PANEL, COLOR: TUNDRA
WINDOW 1	ALUMINUM FRAMED STICK-BUILT THERMALLY BROKEN STOREFRONT WINDOW, COLOR: BLACK







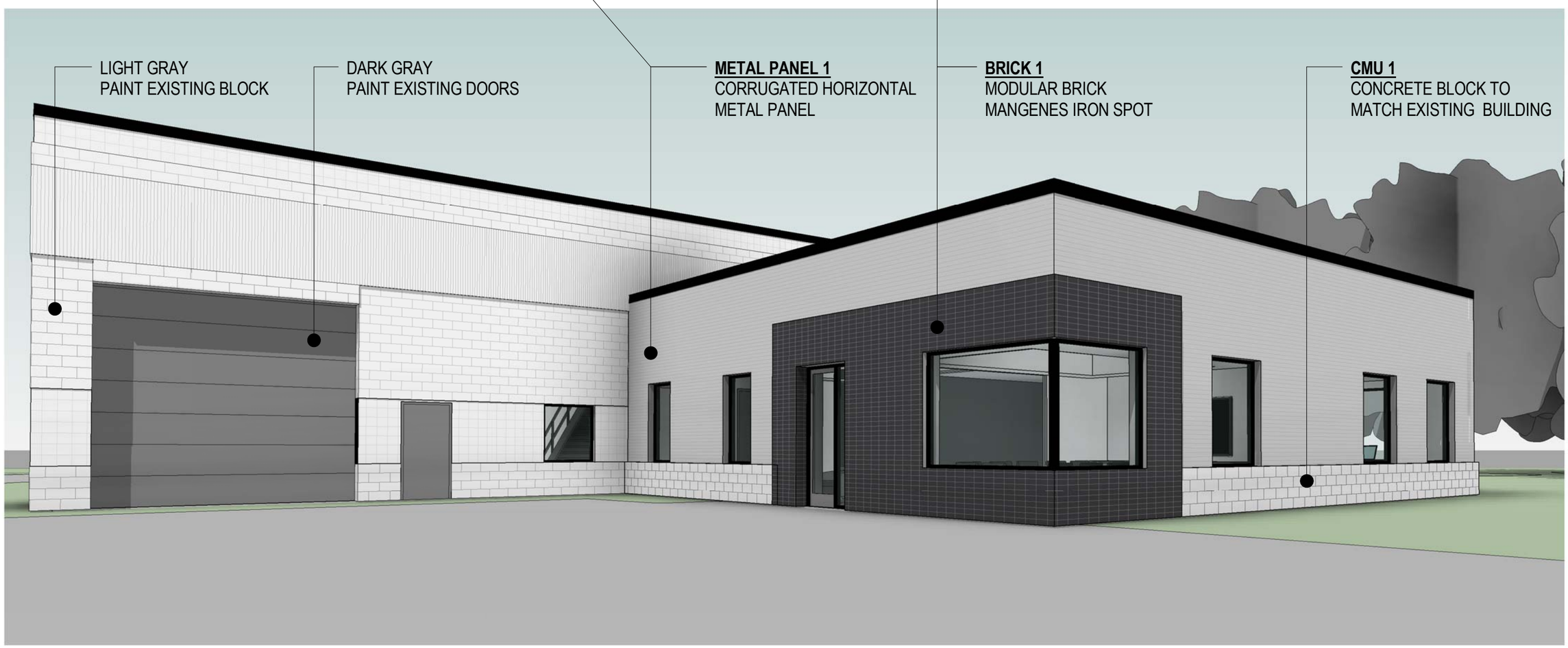
ELEVATIONS

JOSEPH A SINNETT, AIA
ARCHITECT

IDC - BACK PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI 53149

005 | 06.14.2016

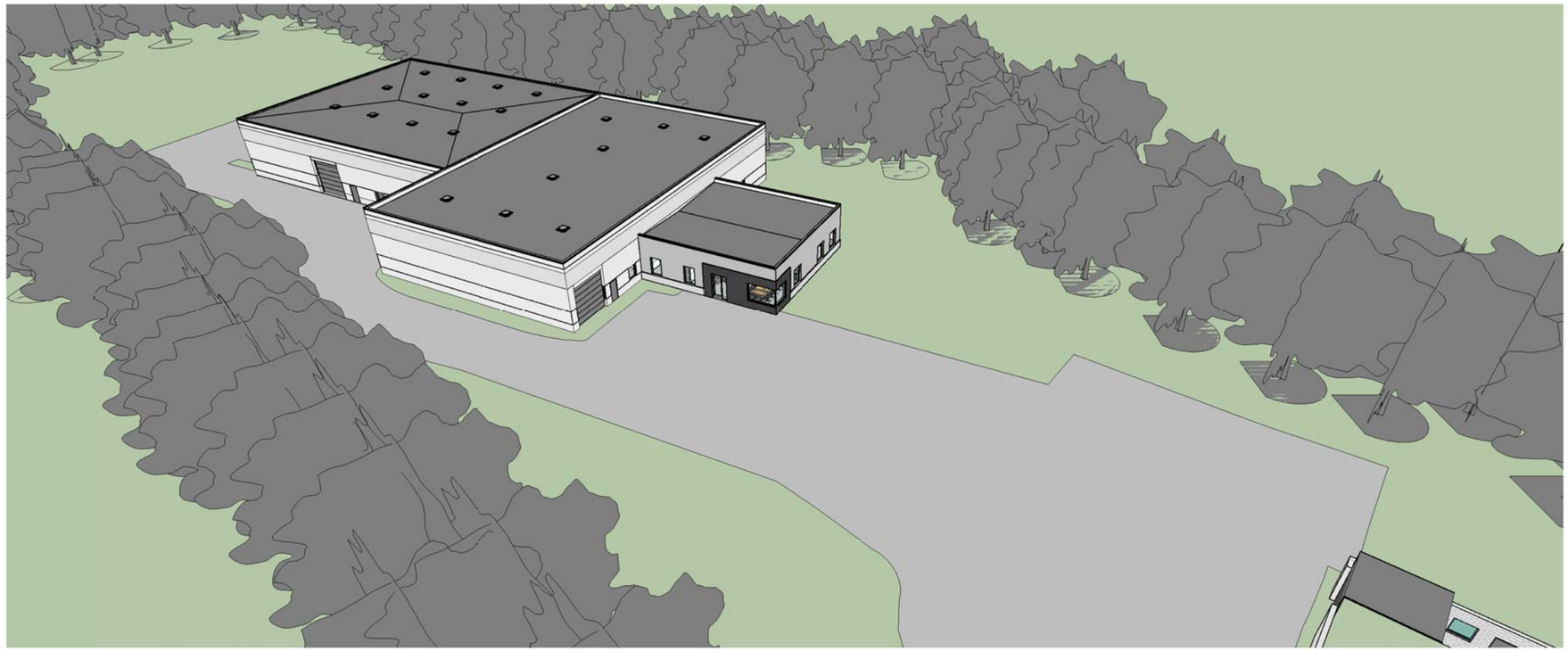
IDC PRECISION

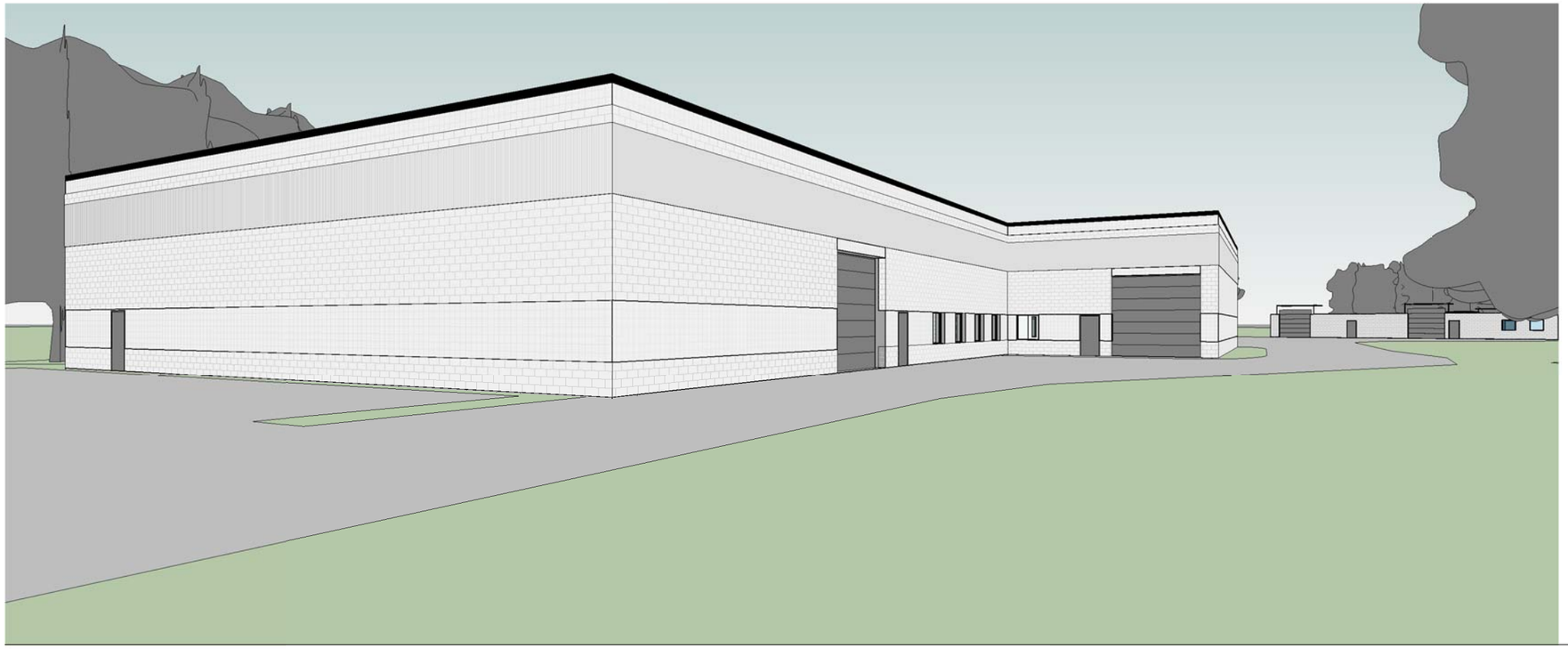


3D EXTERIOR PERSPECTIVES

JOSEPH A SINNETT, AIA
ARCHITECT

IDC - BACK PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI 53149





3D EXTERIOR PERSPECTIVES

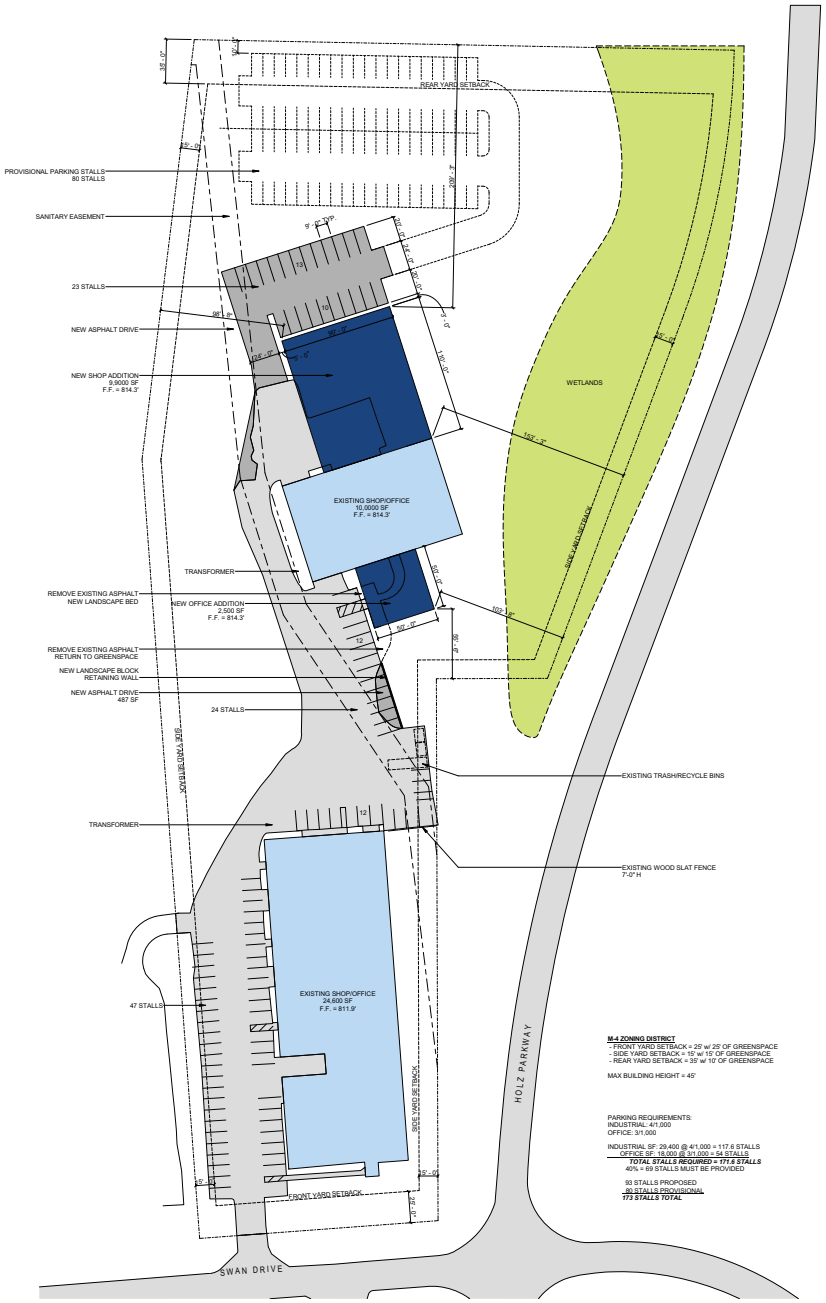
JOSEPH A SINNETT, AIA
ARCHITECT

IDC - BACK PLANT EXPANSION
820 SWAN DRIVE
MUKWONAGO, WI 53149

IDC PRECISION

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PRECISION



M-4 ZONING DISTRICT
- FRONT YARD SETBACK = 25' w/ 25' OF GREENSPACE
- SIDE YARD SETBACK = 15' w/ 15' OF GREENSPACE
- REAR YARD SETBACK = 35' w/ 10' OF GREENSPACE

MAX BUILDING HEIGHT = 45'

PARKING REQUIREMENTS:
INDUSTRIAL: 4/1,000
OFFICE: 3/1,000

INDUSTRIAL SF: 29,400 @ 4/1,000 = 117.6 STALLS
OFFICE SF: 18,000 @ 3/1,000 = 54 STALLS
TOTAL STALLS REQUIRED = 171.6 STALLS
40% = 69 STALLS MUST BE PROVIDED

99 STALLS PROPOSED
80 STALLS PROVISIONAL
173 STALLS TOTAL

1 SITE PLAN
1" = 40'-0"

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.10.2016

IDC PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORPORATION

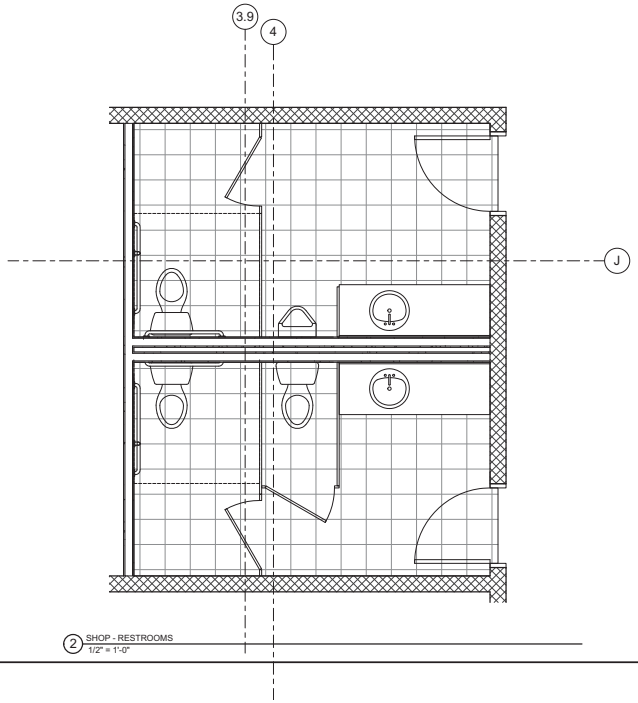
Sheet Title
ARCHITECTURAL SITE PLAN

19100 North Hills Drive
Brookfield WI, 53045

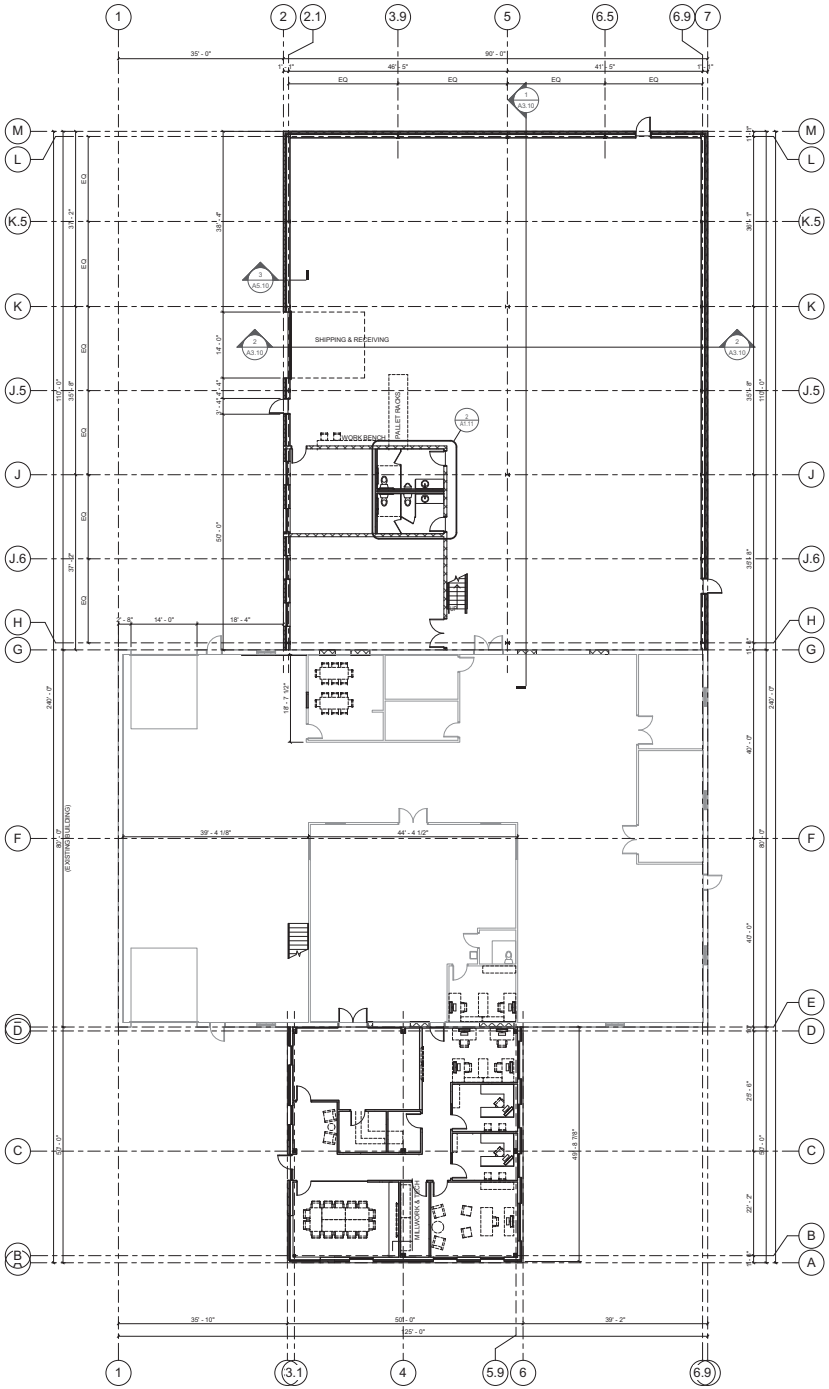
Sheet No.
AS1.10

ASSEMBLIES & COMPONENTS

PLAN KEYED NOTES



2 SHOP - RESTROOMS
1/2" = 1'-0"



1 FIRST FLOOR PLAN
3/32" = 1'-0"

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PRECISION

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORP.

Sheet Title
FLOOR PLAN - FIRST FLOOR

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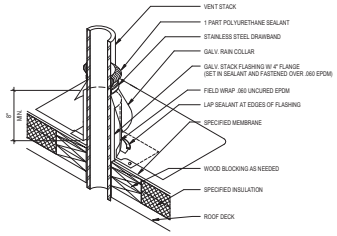
19100 North Hills Drive
Brookfield WI, 53045

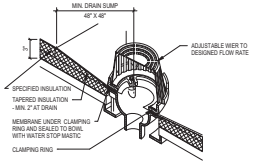
Sheet No.
A1.11

ASSEMBLIES & COMPONENTS

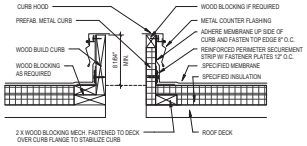
ROOF ASSEMBLY 1	STEEL DECK , PROTECTION BOARD(IF REQUIRED FOR RIGID INSULATION), RIGID INSULATION (MIN R-22), ROOFING 1
ROOFING 1	FULLY ADHERED TPO ROOFING MEMBRANCE, BLACK
SOLATUBE	SOLATUBE 330 DS OPEN CEILING SKYLIGHT



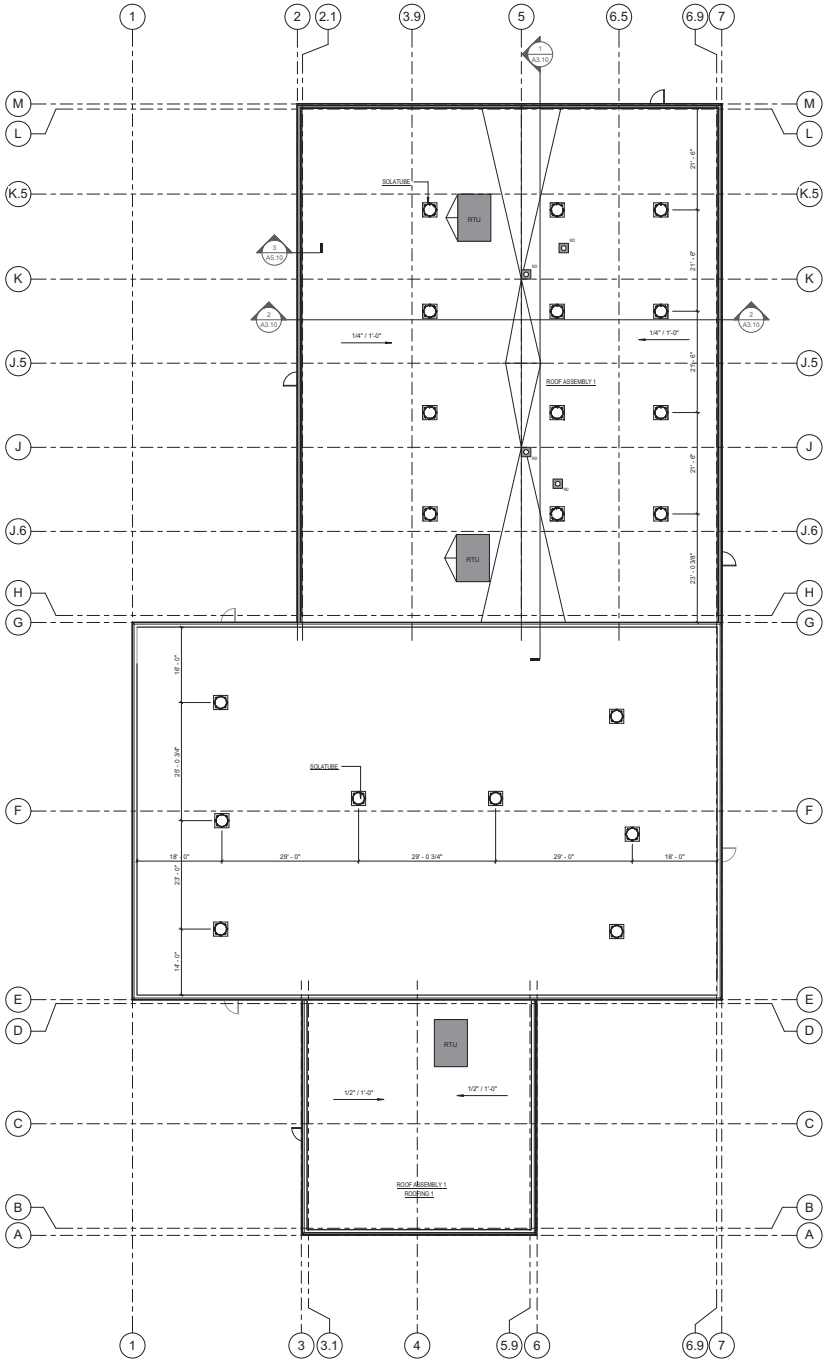
3 TYP - VENT STACK
1 1/2" = 1'-0"



2 TYP - ROOF DRAIN
1 1/2" = 1'-0"



1 ROOF CURBS
1 1/2" = 1'-0"



4 03-ROOF
3/32" = 1'-0"

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PRECISION

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORP.

Sheet Title
ROOF PLAN

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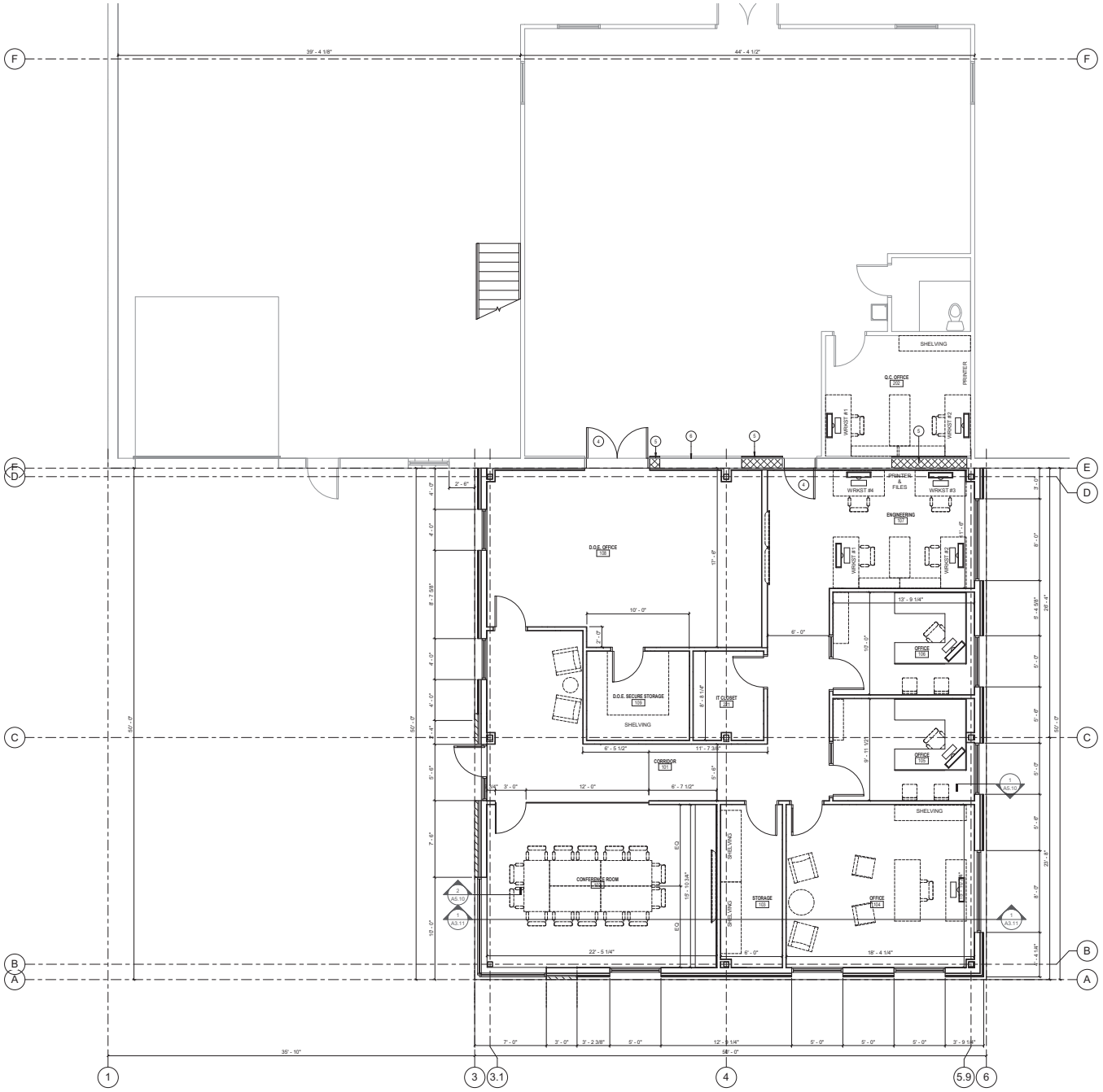
19100 North Hills Drive
Brookfield WI, 53045

Sheet No.
A1.12

ASSEMBLIES & COMPONENTS

PLAN KEYED NOTES

4 NEW FIRE DOOR 2HR RATING
5 NEW CMU TO INFILL EXISTING OPENINGS, 2-HR FIRE RATING REQUIRED
6 EXISTING EXTERIOR CMU WALL TO NOW SERVE AS 2HR FIRE WALL TO SEPARATE FIRE AREAS. FIELD VERIFY EXISTING CMU WALL GROUT SPACING TO DETERMINE EXISTING WALL EQUIVALENT THICKNESS AND INHERENT FIRE RESISTANCE RATING



1 FIRST FLOOR PLAN
1/4" = 1'-0"

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PRECISION

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORP.

Sheet Title
OFFICE ADDITION

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19100 North Hills Drive
Brookfield WI, 53045

Sheet No.
A1.13

ASSEMBLIES & COMPONENTS

BRICK 1	MODULAR CLAY BRICK MASONRY IN STACK BOND WITH TINTED MORTAR COLOR; BASIS OF DESIGN IS ENDICOTT'S MANGANESE IRONSPOT VELOUR
CMU 1	12" SPLITFACE CMU, PAINTED LIGHT GRAY
CMU 2	12" 1 SCORE SMOOTHFACE CMU, PAINTED GRAY
CMU 3	12" FLUTED SPLITFACE CMU, PAINTED LIGHT GRAY
CONCRETE WALL	POURED CONCRETE WALL WITH REINFORCEMENT, SEE STRUCTURAL DRAWINGS
METAL COPING 1	PREFINISHED SHEET METAL COPING WITH CONTINUOUS CLEATS ON 3/4" PRESSURE TREATED PLYWOOD BLOCKING; COLOR: BLACK
METAL PANEL 1	CONCEALED FASTNER FLUSH METAL PANEL; BASIS OF DESIGN: METAL SPAN DESIGNER SERIES 16" FLUTED PANEL, COLOR: TUNDRA

GENERAL ELEVATION NOTES

1. ALL METAL SURFACES EXPOSED TO VIEW (INCLUDING MISCELLANEOUS METALS, PIPING, MECHANICAL EQUIPMENT, LADDERS, STAIRS, RAILING, COLUMNS, PLATFORMS, ETC.) SHALL BE PAINTED, U.N.O.

2. WINDOWS ARE ALUMINUM STOREFRONT U.N.O.

3. MEDICAL OFFICE BUILDING (MOB), WHERE SHOWN, IS FOR INFORMATION ONLY AND IS NOT INCLUDED IN PROJECT SCOPE.

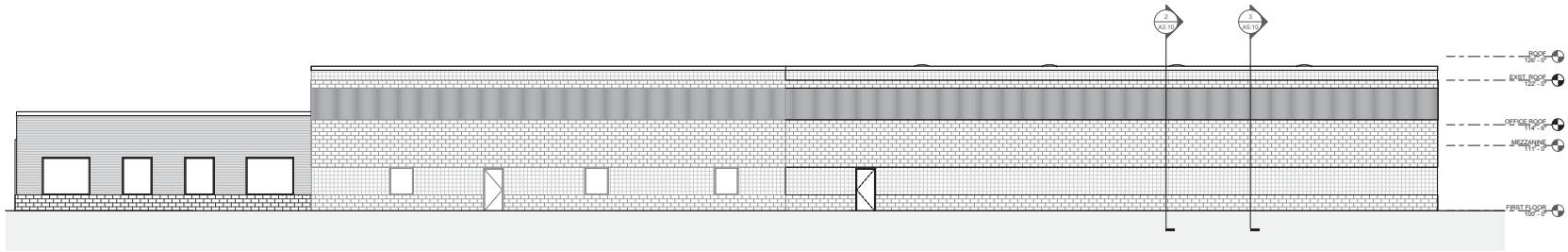
4. FOR TYPICAL CONTROL JOINTS (CJ) SEE DETAIL 25/A5.11.

5. CONTROL JOINTS IN CMU BACKUP TO BE OFFSET FROM CONTROL JOINTS IN MASONRY/STONE VENEER. CONTROL JOINTS AT CMU BACKUP MAXIMUM 25' SPACING.

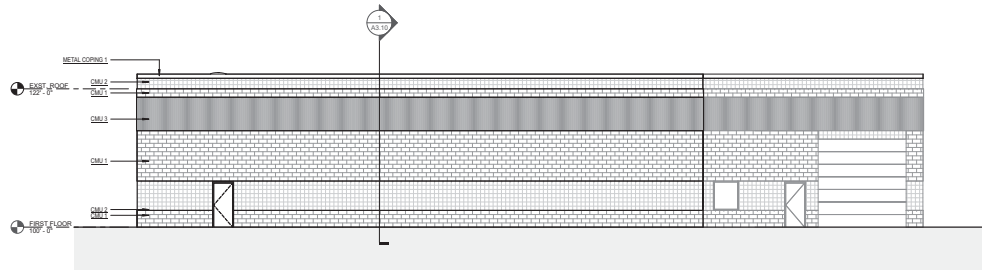
6. PROVIDE CONTROL JOINTS AT INSIDE CORNERS OF BRICK AND STONE.

JOSEPH A SINNETT, AIA
ARCHITECT

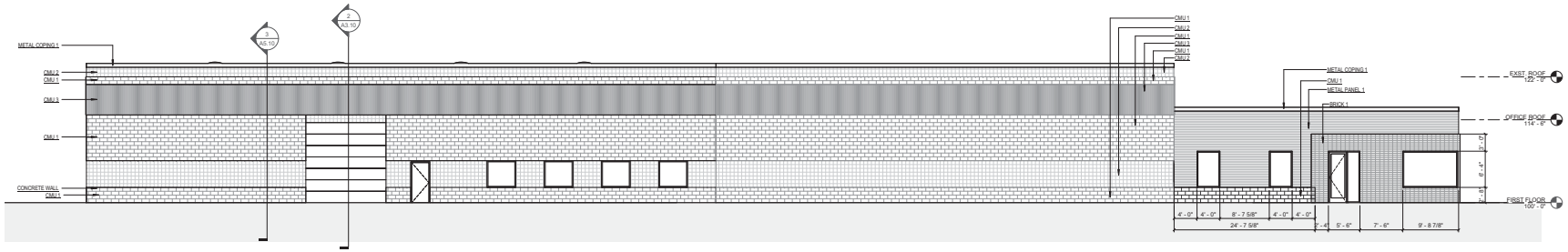
IDC PRECISION



5 East
1/8" = 1'-0"

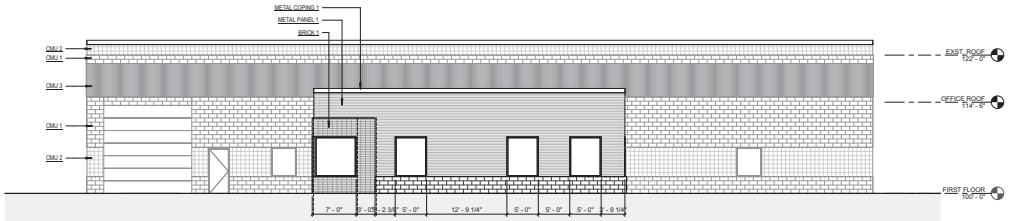


4 North
1/8" = 1'-0"



2 West
1/8" = 1'-0"

3 EXT-OFFICE PERSPECTIVE-01



1 South
1/8" = 1'-0"

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORP.

Sheet Title
EXTERIOR ELEVATIONS

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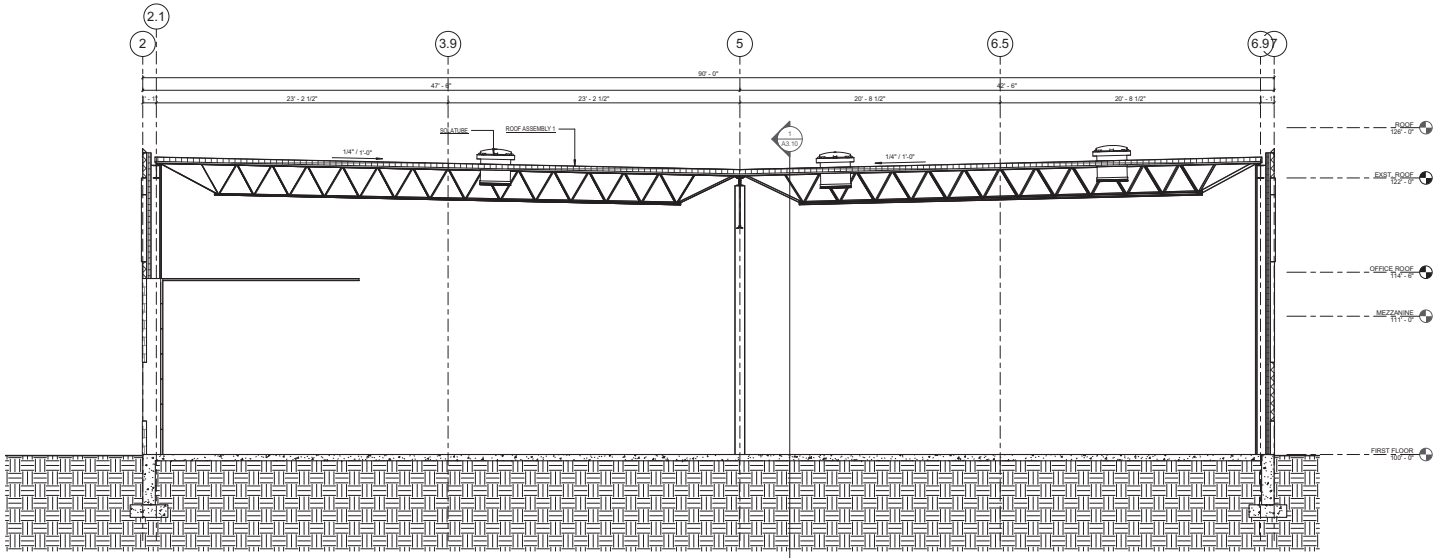
19100 North Hills Drive
Brookfield WI, 53045

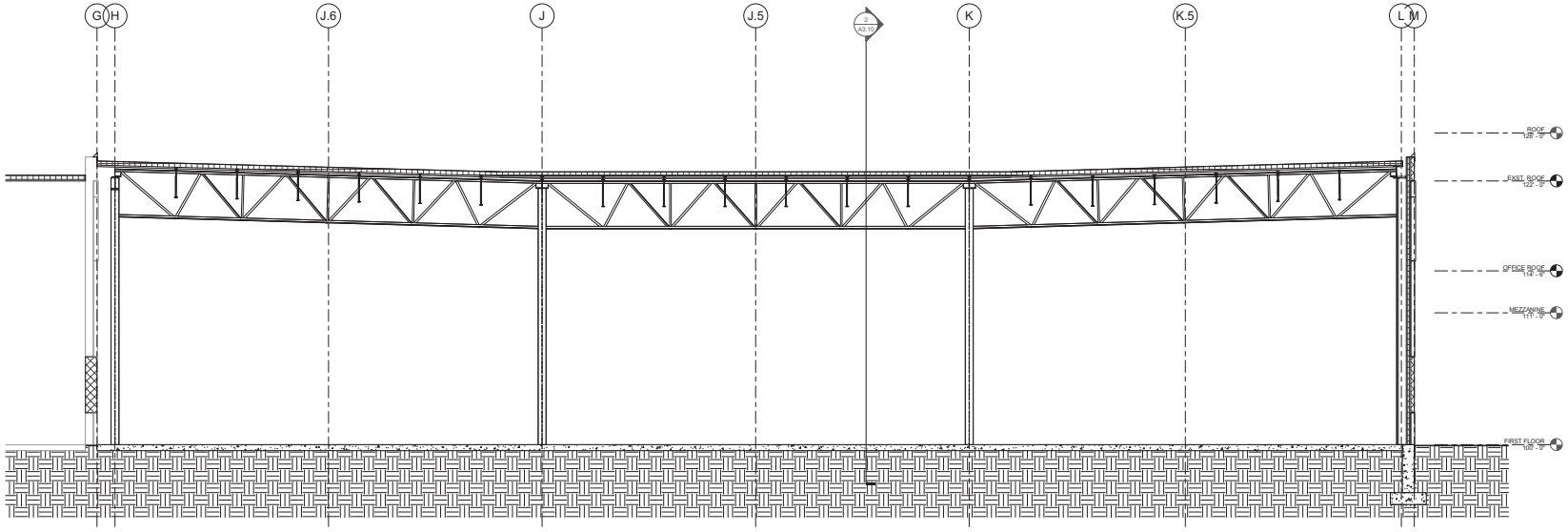
Sheet No.
A2.10

JOSEPH A SINNETT, AIA
ARCHITECT

IDC PRECISION



2 EW - SHOP BUILDING SECTION
1/4" = 1'-0"



1 NS - SHOP BUILDING SECTION
1/4" = 1'-0"

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

Project No.
215003.00

INSTRUMENT DEVELOPMENT CORP.

Sheet Title
BUILDING SECTIONS

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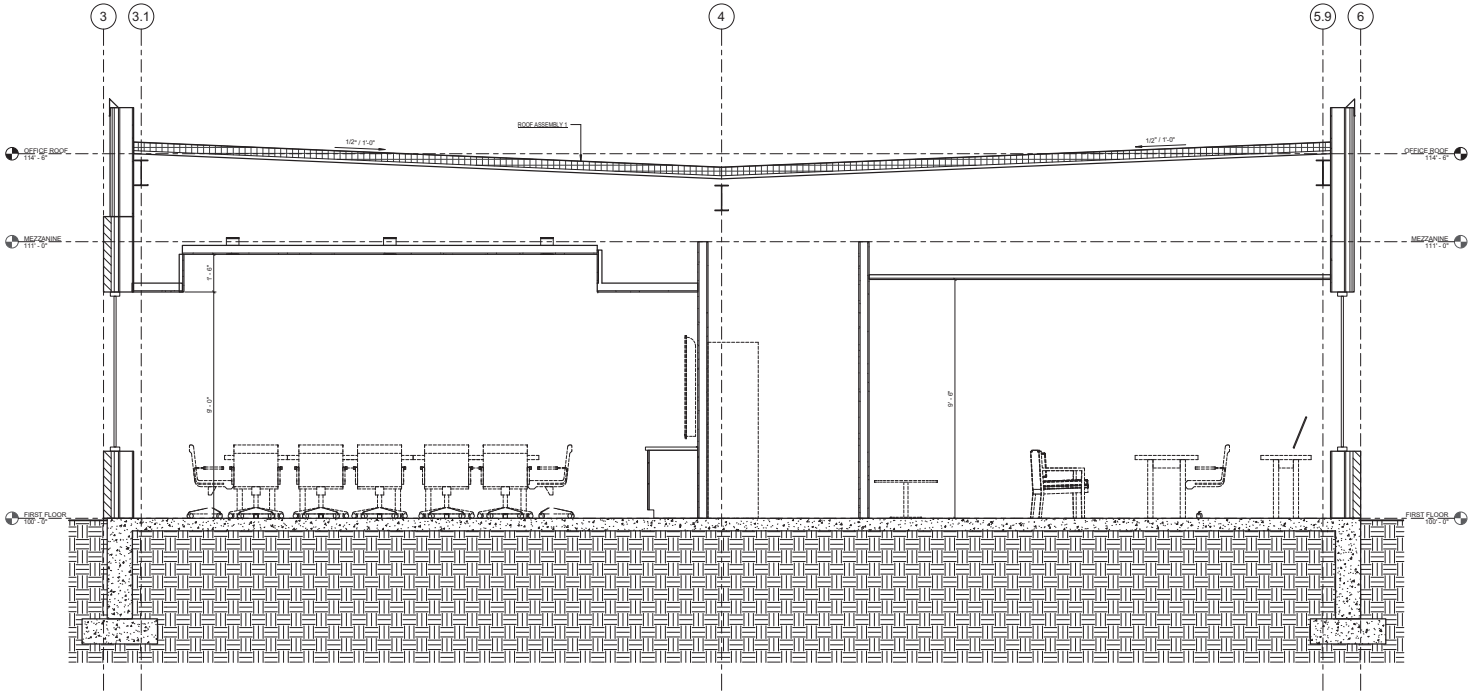
19100 North Hills Drive
Brookfield WI, 53045

Sheet No.
A3.10

JOSEPH A SINNETT, AIA
ARCHITECT



1 WALL SECTION - OFFICE @ BRICK1
1/2" = 1'-0"

Revisions

MUNICIPAL APPROVALS

Drawing Date
06.14.2016

IDC - BACK PLANT EXPANSION

820 SWAN DRIVE
MUKWONAGO, WI 53149

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Sheet Title
BUILDING SECTIONS

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Brookfield WI, 53045

Sheet No.
A3.11

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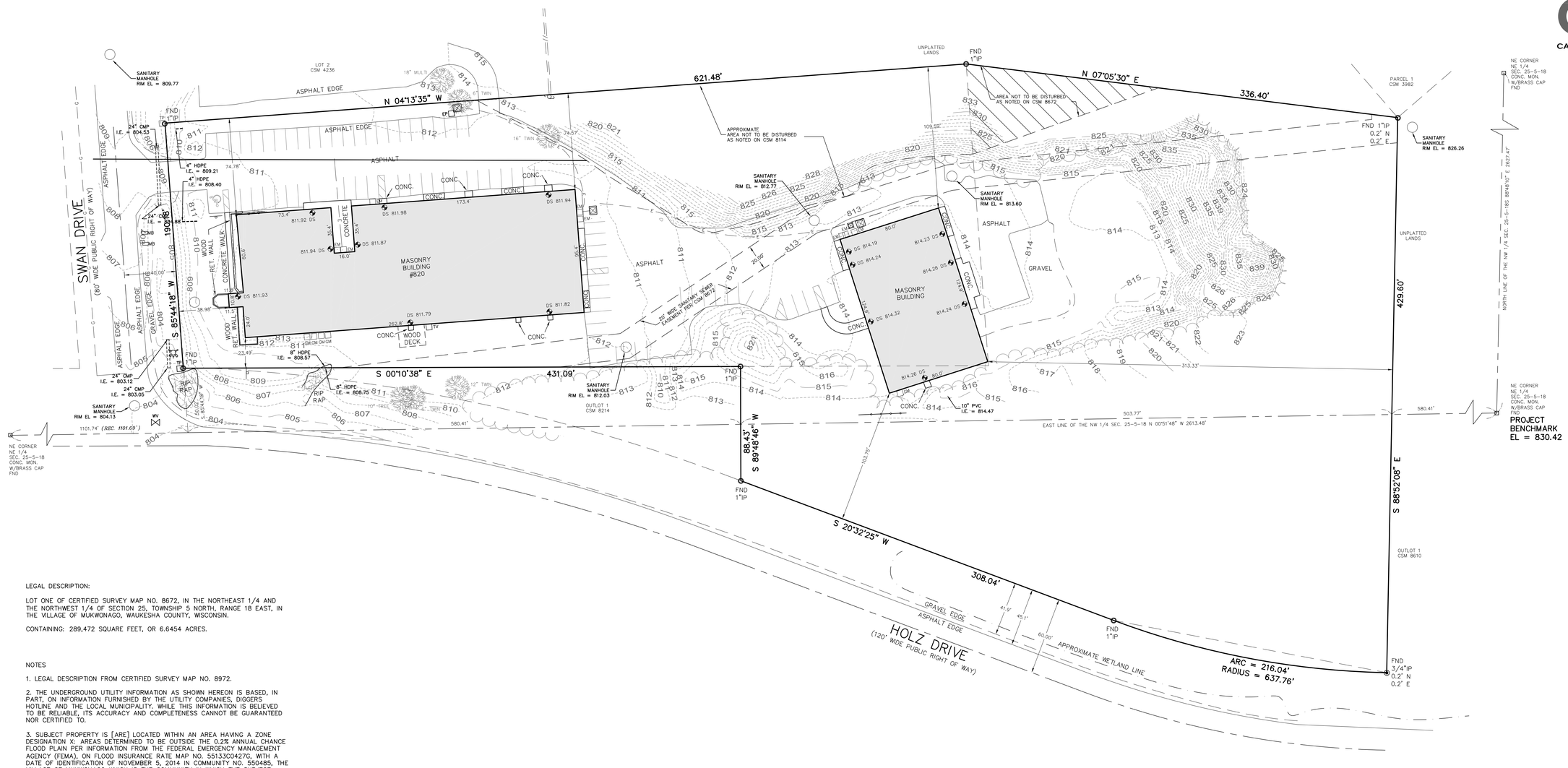
WWW.CAPITOLSURVEY.COM



LEGAL DESCRIPTION:

LOT ONE OF CERTIFIED SURVEY MAP NO. 8672, IN THE NORTHEAST 1/4 AND THE NORTHWEST 1/4 OF SECTION 25, TOWNSHIP 5 NORTH, RANGE 18 EAST, IN THE VILLAGE OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

CONTAINING: 289,472 SQUARE FEET, OR 6.6454 ACRES.

NOTES

1. LEGAL DESCRIPTION FROM CERTIFIED SURVEY MAP NO. 8972.

2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, ON INFORMATION FURNISHED BY THE UTILITY COMPANIES, DIGGERS HOTLINE AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

3. SUBJECT PROPERTY IS [ARE] LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN PER INFORMATION FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 55133C0427G, WITH A DATE OF IDENTIFICATION OF NOVEMBER 5, 2014 IN COMMUNITY NO. 550485, THE VILLAGE OF MUKWONAGO WHICH IS THE COMMUNITY IN WHICH THE SUBJECT PROPERTY IS SITUATED.

4. PROJECT BENCHMARK – CONCRETE MONUMENT WITH BRASS CAP FOUND AT THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SEC. 25-5-18, EL = 830.42.

5. ELEVATIONS BASED ON INFORMATION FROM SEWRPC AND ARE AT NGVD 1929 VERTICAL DATUM.

I CERTIFY THAT I HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY, AND THE ABOVE MAP IS A TRUE REPRESENTATION THEREOF AND SHOWS THE SIZE AND LOCATION OF THE PROPERTY, ITS EXTERIOR BOUNDARIES, THE LOCATION AND DIMENSIONS OF ALL VISIBLE STRUCTURES THEREON, BOUNDARY FENCES, APPARENT EASEMENTS AND ROADWAYS AND VISIBLE ENCROACHMENTS, IF ANY.

THIS SURVEY IS MADE FOR THE EXCLUSIVE USE OF THE PRESENT PROPERTY, AND ALSO THOSE WHO PURCHASE, MORTGAGE, OR GUARANTEE THE TITLE THERETO, WITHIN ONE (1) YEAR FROM DATE THEREOF.

MAY 26, 2016
DATE

MICHAEL J. BERRY, R.L.S.
REGISTERED LAND SURVEYOR S-2545

WISCONSIN MICHAEL J. BERRY S-2545 BROOKFIELD, WI LAND SURVEYOR

www.DiggersHotline.com
DIGGERS HOTLINE
DIAL 811 OR (800) 242-8511

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

LEGEND

SAN	SANITARY SEWER	ELECTRIC TRANSFORMER	HYDRANT
ST	STORM SEWER	ELECTRIC METER	AUTO SPRINKLER
W	WATER MAIN	ELECTRIC PEDESTAL	WATER VALVE
G	BURIED GAS LINE	ELECTRIC BOX AT GRADE	GAS VALVE
TEL	BURIED TELEPHONE LINE	TELEPHONE BOX AT GRADE	MANHOLE
E	BURIED ELECTRIC LINE	TELEPHONE PEDESTAL	CATCH BASIN
FO	BURIED FIBER OPTIC LINE	TV PEDESTAL	METAL LIGHT POLE
//	OVERHEAD UTILITY LINES	GAS METER	CONCRETE LIGHT POLE
CATV	BURIED CABLE TELEVISION LINES	AIR CONDITIONER	WOOD LIGHT POLE
COMB	COMBINATION SEWER	UTILITY POLE	YARD LIGHT
	WOOD FENCE	WOOD SIGN	MAIL BOX
	METAL FENCE	METAL SIGN	FIBER OPTIC MARKER
	EDGE OF TREES AND BRUSH	BOLLARD	
	914.24 DS	FIRE DEPARTMENT CONNECTION	
		DOOR SILL ELEVATION	

PLAT OF SURVEY WITH TOPOGRAPHY

FOR

INSTRUMENT DEVELOPMENT CORPORATION

820 SWAN DRIVE
MUKWONAGO, WI

DRAWN BY:	NJF	DATE:	MAY 26, 2016
CHECKED BY:	MJB	DRAWING NO.	P - 0
CSE JOB NO.:	16 - 049	SHEET 1	OF 1

CJ engineering
civil design and consulting
9205 W. Center Street
Suite 214
Milwaukee, WI 53222
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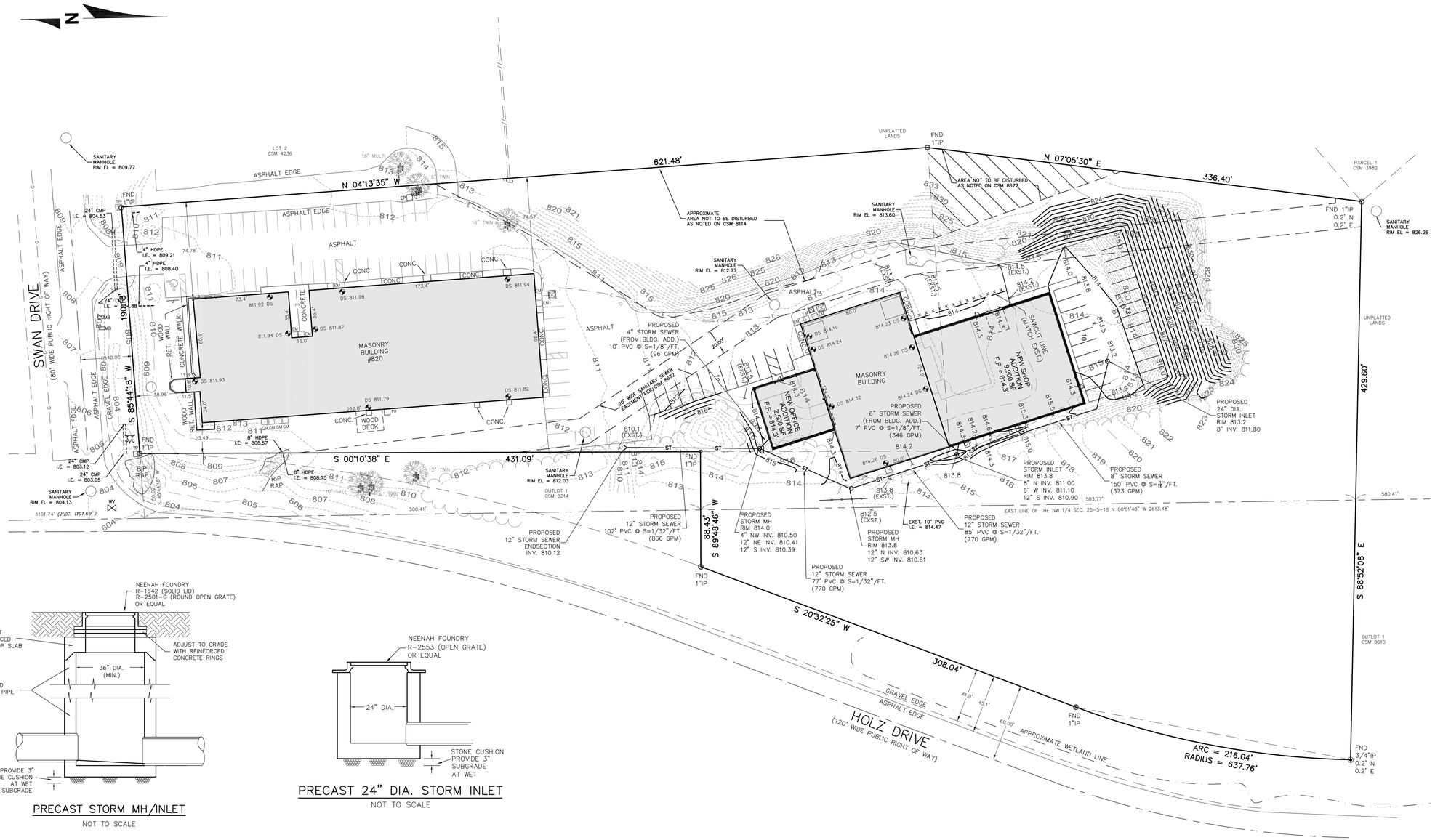
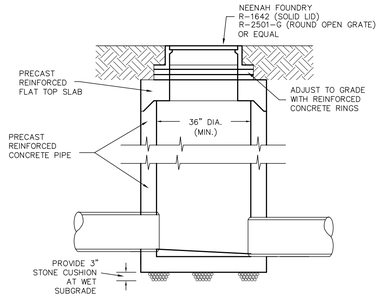
FAX (414) 443-1317
www.cj-engineering.com

INSTRUMENT DEVELOPMENT CORPORATION

820 SWAN DRIVE MUKWONAGO, WI





PRECAST STORM MH/INLET

NOT TO SCALE

PRECAST 24" DIA. STORM INLET

NOT TO SCALE

CJE NO.: 1615RI
JUNE 14, 2016

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS. STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE
MILW. AREA 259-1181

LEGEND

96	EXISTING CONTOUR
96	PROPOSED CONTOUR
x 96.5	PROPOSED ELEVATION
ST	PROPOSED STORM SEWER
X X X X X X X X X	PROPOSED SAW CUT
	PROPOSED SILT FENCE

NOTES:

1. ALL STORM SEWER MATERIALS AND INSTALLATION PER APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (STANDARD SPECIFICATIONS), WISCONSIN ADMINISTRATIVE PLUMBING CODE AND THE VILLAGE OF MUKWONAGO REQUIREMENTS.

2. ALL TRENCHES IN PAVEMENT AREAS SHALL HAVE GRAVEL BACKFILL.

3. SANITARY AND WATER SERVICE TO PROPOSED BUILDING ADDITIONS FROM, THE EXISTING BUILDING. DESIGN BY PLUMBING CONSULTANT/CONTRACTOR.

4. DISTURBED AREA = 39,360 S.F. (0.90 ACRES)

5. IMPERVIOUS SURFACE AREA REMOVED = 7530 S.F.
IMPERVIOUS SURFACE AREA ADDED = 22,920 S.F.
NET INCREASE IN IMPERVIOUS SURFACE = 15,390 S.F (0.35 ACRES)

6. BASED ON THE DISTURBED AREA AND NET INCREASE IN IMPERVIOUS AREA (NOTES 4 & 5 ABOVE) STORM WATER MANAGEMENT IS NOT REQUIRED FOR THIS DEVELOPMENT.

GRAPHIC SCALE

40 0 20 40 80

1 inch = 40 ft

SITE GRADING AND STORM SEWER PLAN

C1.0

SHEET * OF *

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civil design and consulting
9205 W. Center Street
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Milwaukee, WI 53222
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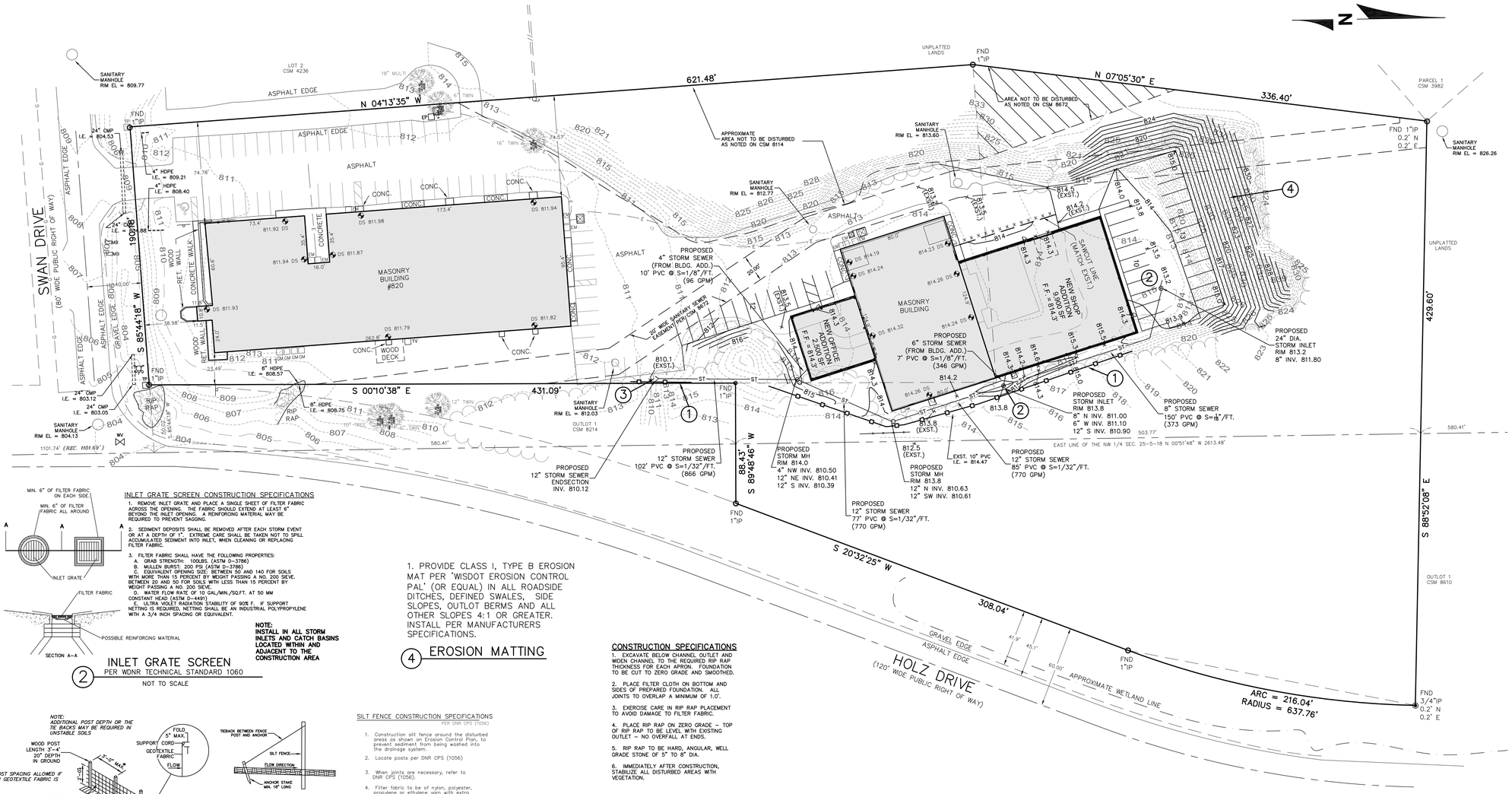
INSTRUMENT DEVELOPMENT CORPORATION

820 SWAN DRIVE

MUKWONAGO, WI



INLET GRATE SCREEN CONSTRUCTION SPECIFICATIONS

1. REMOVE INLET GRATE AND PLACE A SINGLE SHEET OF FILTER FABRIC ACROSS THE OPENING. THE FABRIC SHOULD EXTEND AT LEAST 4' BEYOND THE INLET OPENING. A REINFORCING MATERIAL MAY BE REQUIRED TO PREVENT SAGGING.

2. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR AT A DEPTH OF 1". EXTREME CARE SHALL BE TAKEN NOT TO SPILL ACCUMULATED SEDIMENT INTO INLET, WHEN CLEANING OR REPLACING FILTER FABRIC.

3. FILTER FABRIC SHALL HAVE THE FOLLOWING PROPERTIES:
   A. GRAB STRENGTH: 100LBS. (ASTM D-3786)
   B. MULLEN BURST: 200 PSI (ASTM D-3786)
   C. EQUIVALENT OPENING SIZE: BETWEEN 50 AND 140 FOR SOILS WITH MORE THAN 15 PERCENT BY WEIGHT PASSING A NO. 200 SIEVE. BETWEEN 20 AND 50 FOR SOILS WITH LESS THAN 15 PERCENT BY WEIGHT PASSING A NO. 200 SIEVE.
   D. WATER FLOW RATE OF 10 GAL/MIN./SQ.FT. AT 50 MM CONSTANT HEAD (ASTM D-4491)
   E. ULTRA VIOLET RADIATION STABILITY OF 90% F. IF SUPPORT NETTING IS REQUIRED, NETTING SHALL BE AN INDUSTRIAL POLYPROPYLENE WITH A 3/4 INCH SPACING OR EQUIVALENT.

NOTE:
INSTALL IN ALL STORM INLETS AND CATCH BASINS LOCATED WITHIN AND ADJACENT TO THE CONSTRUCTION AREA

2 INLET GRATE SCREEN
PER WDNR TECHNICAL STANDARD 1060

NOT TO SCALE

1. PROVIDE CLASS I, TYPE B EROSION MAT PER 'WISDOT EROSION CONTROL PAL' (OR EQUAL) IN ALL ROADSIDE DITCHES, DEFINED SWALES, SIDE SLOPES, OUTLOT BERMS AND ALL OTHER SLOPES 4:1 OR GREATER. INSTALL PER MANUFACTURERS SPECIFICATIONS.

4 EROSION MATTING

CONSTRUCTION SPECIFICATIONS

1. EXCAVATE BELOW CHANNEL OUTLET AND WIDEN CHANNEL TO THE REQUIRED RIP RAP THICKNESS FOR EACH APRON. FOUNDATION TO BE CUT TO ZERO GRADE AND SMOOTHED.

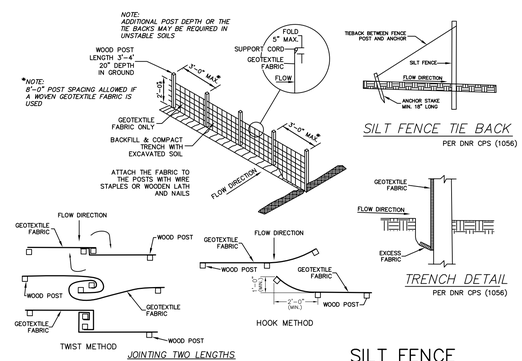
2. PLACE FILTER CLOTH ON BOTTOM AND SIDES OF PREPARED FOUNDATION. ALL JOINTS TO OVERLAP A MINIMUM OF 1.0'.

3. EXERCISE CARE IN RIP RAP PLACEMENT TO AVOID DAMAGE TO FILTER FABRIC.

4. PLACE RIP RAP ON ZERO GRADE – TOP OF RIP RAP TO BE LEVEL WITH EXISTING OUTLET – NO OVERFALL AT ENDS.

5. RIP RAP TO BE HARD, ANGULAR, WELL GRADE STONE OF 5" TO 8" DIA.

6. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.

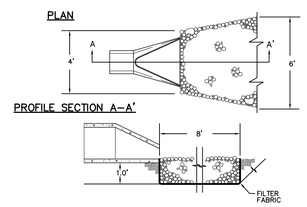


SILT FENCE CONSTRUCTION SPECIFICATIONS
PER DNR CPS (1056)

1. Construction silt fence around the disturbed areas as shown on Erosion Control Plan, to prevent sediment from being washed into the drainage system.
2. Locate posts per DNR CPS (1056)
3. When joints are necessary, refer to DNR CPS (1056).
4. Filter fabric to be of nylon, polyester, propylene or ethylene yarn with extra strength – 50 LB/in. in. (Minimum) – and with a flow rate of at least 0.3 gal./sq. ft./min. Fabric should contain ultraviolet ray inhibitors and stabilizers.
5. The filter fabric shall be anchored by spreading at least 8 inches of fabric in a 4" x 6" trench.
6. The filter fabric shall be stapled and/or nailed to the upslope side of the posts.
7. Post to be 1 1/8"x 1 1/8" hickory or oak, 3 feet long, spaced a maximum of 3 feet apart.
8. Use wire reinforcement in unstabilized minor swales, ditches or diversions.
9. Use WisDOT approved silt fence.

1 SILT FENCE
PER WDNR TECHNICAL STANDARD 1056

NOT TO SCALE



3 OUTLET PROTECTION FOR ENDSECTION

NOT TO SCALE

CONSTRUCTION SCHEDULE

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. FLAG THE WORK LIMIT AND BUFFER AREA FOR PROTECTION.
3. INSTALL SILT FENCE.
4. DEMO EXISTING PAVEMENT TO BE REMOVED. REMOVE MATERIAL FROM SITE.
5. ROUGH GRADE SITE. REMOVE EXCESS SOIL MATERIAL FROM THE PROPERTY.
6. PROVIDE EROSION MATTING, TOPSOIL SEED AND MULCH ON THE NORTH SLOPE.
7. BEGIN BUILDING CONSTRUCTION.
8. INSTALL PROPOSED UTILITIES.
9. INSTALL INLET GRATE SCREENS IN ALL NEW STORM INLETS AND RIP–RAP OUTLET PROTECTION ON ALL STORM END SECTIONS.
10. INSTALL BASE COURSE OF PAVEMENT.
11. FINAL GRADE SLOPES AND TOPSOIL CRITICAL SLOPES; VEGETATE AND MULCH ALL DISTURBED AREAS.
12. ALL EROSION CONTROL PRACTICES WILL BE INSPECTED WEEKLY AND AFTER RAINFALL, NEEDED REPAIRS WILL BE PERFORMED IMMEDIATELY.
13. AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND VEGETATE THE DISTURBED AREAS.
14. ESTIMATED TIME BEFORE FINAL STABILIZATION – 3 MONTHS.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY ½" RUNOFF–PRODUCTION RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.

2. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FT. DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.

3. ALL SEEDED AREAS WILL BE WATERED, FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

4. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING BEFORE THE END OF EACH DAY.

CJE NO.: 1615RI
JUNE 14, 2016

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LEGEND

96	EXISTING CONTOUR
96	PROPOSED CONTOUR
x 96.5	PROPOSED ELEVATION
ST	PROPOSED STORM SEWER
X X X X X X X X X X	PROPOSED SAW CUT
	PROPOSED SILT FENCE

NOTES:

1. DISTURBED AREA = 39,360 S.F. (0.90 ACRES)

2. IMPERVIOUS SURFACE AREA REMOVED = 7530 S.F.
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   NET INCREASE IN IMPERVIOUS SURFACE = 15,390 S.F (0.35 ACRES)

3. BASED ON THE DISTURBED AREA AND NET INCREASE IN IMPERVIOUS AREA (NOTES 1 & 2 ABOVE) STORM WATER MANAGEMENT IS NOT REQUIRED FOR THIS DEVELOPMENT.

EROSION CONTROL PRACTICES SCHEDULE

1. SILT FENCE
2. INLET GRATE SCREEN
3. OUTLET PROTECTION
4. EROSION MATTING

GRAPHIC SCALE
40 0 20 40 80
1 inch = 40 ft

EROSION CONTROL PLAN

C2.0

SHEET 2 OF 2

BK PLANNING STRATEGIES
Sustainable Strategies for Community Development

www.bkplanning.com
Ph: 414.339.4105
7719 W Coventry Dr.
Franklin, WI 53132

July 5, 2016

Fred Winchowky, Village President
Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

Re: Site Plan and Architectural Plan Review/Edgewood Village Apartments

Dear President Winchowky and Members of the Plan Commission:

Warren Hansen, P.E., of WEH Properties/Edgewood Village, LLC submitted plans for 30 apartment units in five (5) buildings for site plan and architectural plan review. The property is owned by Citizen's Bank of Mukwonago.

Because the preliminary storm water management plan has not been certified by the Village Engineer as required by Village Code, the Plan Commission cannot take action. However, applicant and Village staff request Plan Commission comments that can be addressed with updated plans.

The proposed site is 4.44 net acres located on the east side of Edgewood Avenue, with the northern edge of the site about 160 feet south of CTH ES (Fox Street). The site is zoned R-10, Multi-Family Residential. The type of units proposed is a permitted use in R-10. Overall proposed density of 6.76 dwelling units per acre meets the standard of the current R-10 district.

The majority of the site is surrounded by lands within the Town of Vernon, but is contiguous along the southwest corner to the Fox River View Subdivision. To the east and south is vacant property owned by Craig Hein that once was occupied by the Edgewood Golf Course and Driving Range. About half of the south part of the Hein site is within Village corporate limits. Circa 2005 the Hein site was subject to a development proposal for a mixture of multi-family, two-family and single family dwellings. About the same time on the subject site, which was once occupied by a restaurant building of various names over the years, a proposal for multi-family units was submitted when the site was annexed to the Village and rezoned to R-10.

The subject site is now vacant except for remnants of the restaurant parking lot. The site slopes downward about 16 feet from northwest to southeast. On the next page please see a map of the area showing topography with the subject site highlighted in a light red color.

BK PLANNING STRATEGIES
Sustainable Strategies for Community Development

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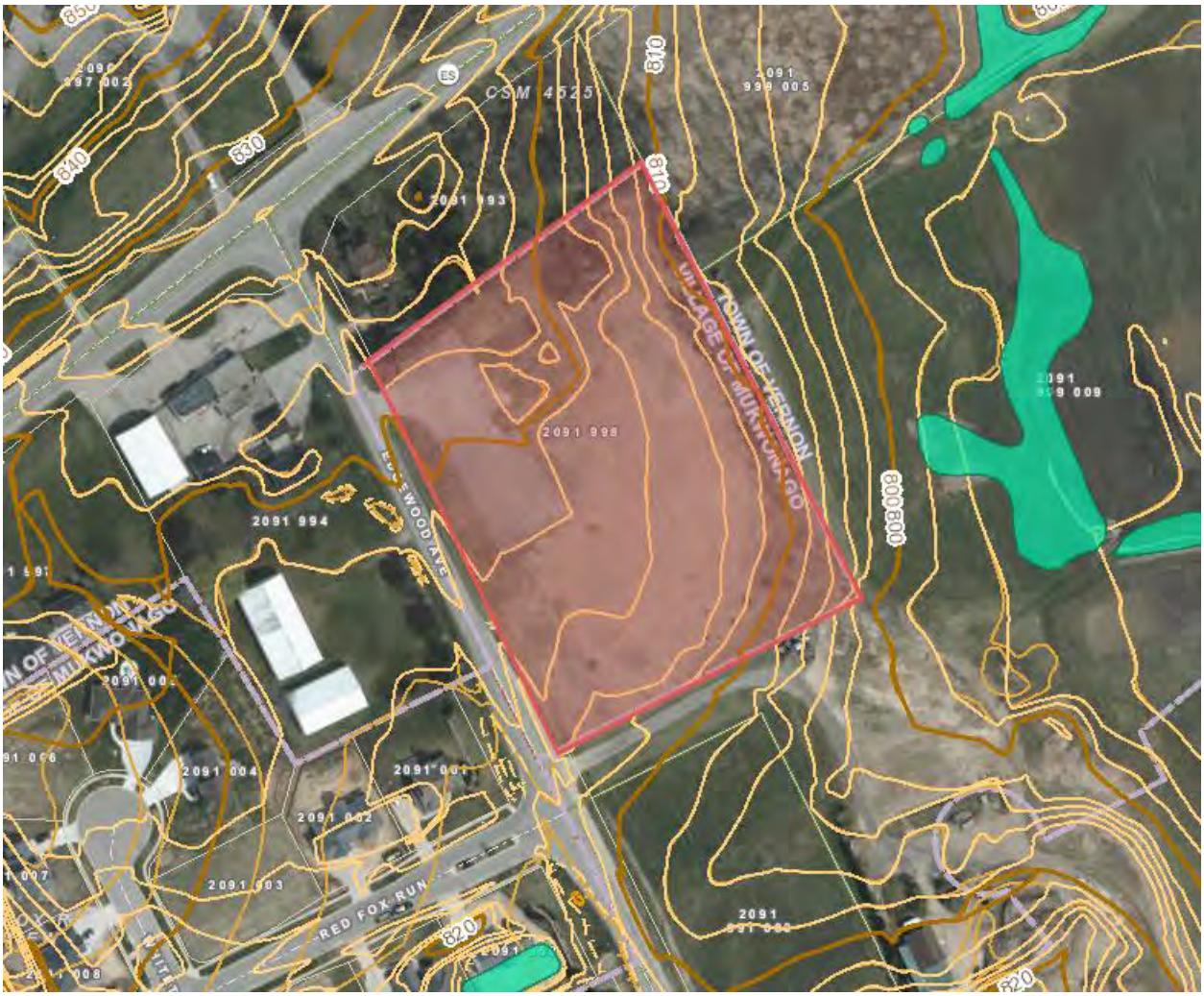

Proposed Building Design

Each 2-story building will house six dwelling units with two lower units and four upper units. Each unit has individual access from the outside and individual access from an attached two-car garage (although two garages in each building are only one car wide but 32 feet deep).

The living area of the two-bedroom, two bath units average 1,287 square feet. The anticipated monthly rent ranges from $1,150 to $1,300.

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Franklin, WI 53132

The exterior elevation will be covered by a combination of cultured stone veneer and vinyl lap siding. I recommend adding 2-story stone veneer elements to the side and rear of the buildings to match the 2-story element proposed for the building front, because four-sided architecture is needed on this site.

Proposed Site Design

The site will be accessed by a boulevard drive with 16+ foot lanes separated by a seven foot wide median. The boulevard private drive will be located in the middle of the Edgewood Avenue frontage. When previous and denser projects were proposed, staff requested access via a public street on the adjacent Hein property that aligned with Red Fox Run on the opposite side of Edgewood Avenue. Now with the less dense proposal, staff agrees with the ingress/egress point as shown. However, if a right-of-way is provided to the south, staff desires approval of this proposal require connection to the right-of-way for improved emergency access flow on the site. Likewise, if the 1.37 acre property to the north is annexed and redeveloped, a likely scenario is additional apartment buildings with access through the subject site.

Beyond the boulevard drive a north-side drive provides access to each building. All attached garages face inward. The Fire Department asks the applicant provide information to check and potentially revise the plan to ensure fire equipment can negotiate the turns on the interior of the boulevard drive.

The new parking standard (adopted December 2015) for multi-family is:

"One (1) garage space per dwelling unit plus 1.2 spaces per dwelling unit that may be garaged or outdoor spaces, although at least 0.2 spaces shall be outdoors to provide for guest parking. The Plan Commission may require additional parking pursuant to the design and type of multi-family dwellings."

The proposed plan exceeds the amount of required garage and outdoor spaces. On the other hand, the proposed plan shows the installation of curb and gutter only within the boulevard drive. The parking standards require the following:

"All vehicle use areas with parking for 20 or more vehicles on a subject property, shall be constructed with full concrete and gutter surrounding the vehicle use areas (both driveways and parking areas); except the Plan Commission may waive the requirement of curb and gutter if an existing parking lot is expanded that does not have curb and gutter. Gaps in the curbing may occur to facilitate property parking lot drainage."

While the plan shows 69 outside parking spaces, 60 of them are spaces in front of garage doors. Therefore, I ask the Plan Commission for direction on this matter. No curb and gutter assists better storm water management, while installation of curb and gutter presents a picture of a quality development. For your information, Premier Woods Phase 2 apartments were recently approved with curb and gutter completely surrounding the drive and guest parking spaces.

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Ph: 414.339.4105
7719 W Coventry Dr.
Franklin, WI 53132

A very minimal landscape plan was submitted. A formal and more extensive landscape plan is needed commensurate with a quality development.

Other Comments

Village Department Heads reviewed the proposal. In addition to comments within previous sections of this report, other comments are as follows:

1. A stop sign exiting the site is needed.
2. Public sewer and water lines must be extended within the Edgewood Avenue right-of-way equal to the site's north property line, according to long standing Village policy.
3. Fire hydrant locations must be reviewed prior to final approval of site engineering.
4. A pre-existing utility easement exists along the north property line, which we understand is an abandoned telephone easement. Staff desires a 30 foot wide utility easement for future extension of sewer and water to the east.
5. The location of the dumpsters should be reconsidered to allow easier access for pick-up and to locate the dumpsters away from the likely place for piling plowed snow.
6. An exterior lighting plan must be submitted.

Summary

The proposal is not yet ready for approval pending a certification of the storm water management plan. In the meantime, staff requests Plan Commission feedback on the following points:

1. Adding 2-story stone veneer elements to the side and rear of the buildings to match the 2-story element proposed for the building front.
2. The adequacy of internal vehicle turning movements.
3. The requirement for full curb and gutter.
4. The relocation of dumpsters.
5. Any other comments Commissioner's may have.

I appreciate the opportunity to assist with the review of this proposal. Should questions arise, please feel free to contact me.

Sincerely,

Bruce S. Kaniewski, AICP

www.bkplanning.com
Ph: 414.339.4105
7719 W Coventry Dr.
Franklin, WI 53132

Cc: John Weidl, Village Administrator (via email)
Steve Braatz, Jr., Village Clerk (via email)
Joe Hankovich, Supervisor of Inspections/Zoning Administrator (via email)
Bob Harley, Codes Official (via email)
Kurt Peot, P.E., Village Engineer (via email)
Kevin Schmidt, Police Chief (via email)
Jeff Stien, Fire Chief (via email)
Dave Brown, Utilities Superintendent (via email)
Ron Bittner, Public Works Director (via email)
Mark Blum, Village Attorney (via email)
Warren Hansen, P.E., Applicant (via email)
Charlie Miller, Citizens Bank of Mukwonago (via email)

Received 6/14/16 - BSK

Village of Mukwonago
440 River Crest Court, P.O. Box 206
Mukwonago, WI 53149
Phone: (262) 363-6420
Fax: (262) 363-6425
www.villageofmukwonago.com

VILLAGE OF MUKWONAGO

SITE PLAN, ARCHITECTURAL, AND PLANNED UNIT DEVELOPMENT (PUD) APPLICATION

Application Fee: Below

Date Submitted: 6/14/2016

FEES

(Please check one)

- ☐ Minor Site Plan (Buildings less than 600 sq. ft.): $135.00 plus $.02 per sq. ft.
- ☒ Site Plan and/or Architectural Review: $250.00 plus $.02 per sq. ft.
- ☐ Conceptual Site Plan and/or Architectural Review: $200.00 plus $.02 per sq. ft.
- ☐ Planned Unit Development (PUD) Review: $185.00 plus $25.00/unit

CONTACTS

Zoning Department
Contact: Joe Hankovich
Phone: (262) 363-6419
Fax: (262) 363-6425
Email: jhankovich@villageofmukwonago.com

Planning Department
Contact: Bruce Kaniewski
Phone: (414) 339-4105
Fax: (262) 363-6425
Email: planner@villageofmukwonago.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Plan Commission and Village Board of the Village of Mukwonago. The application packet must be filed with the Village Clerk **at least 30 days prior to the meeting** of the Planning Commission at which action is desired. The Plan Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed below must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100 Article IX. Section 100-601(f) and other pertinent sections of Village ordinances, and, as necessary, to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Plan Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to:	Village Planner ATTN: Site Plan/Architectural Plan/Planned Unit Development PO Box 206 Mukwonago, WI 53149
Deliver to:	Village Clerk's Office 440 River Crest Court
Email to:	planner@villageofmukwonago.com

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: Warren E. Hansen, P.E.

Company: WEH Properties/Edgewood Village, LLC

Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121

Daytime Phone: 262-723-2098 **Fax:** 262-723-5886

E-Mail: ~~offic~~ office@farrishansen.com warrenhansen@farrishansen.com

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name: Warren E. Hansen, P.E.
Company: Farris, Hansen & Associates, Inc.
Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121
Daytime Phone: 262-723-2098 **Fax:** 262-723-5886
E-Mail: office@farrishansen.com

ARCHITECT

Name: Brian S. Staples
Company: Farris, Hansen & Associates, Inc.
Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121
Daytime Phone: 262-723-2098 **Fax:** 262-723-5886
E-Mail: office@farrishansen.com

PROFESSIONAL ENGINEER

Name: Warren E. Hansen, P.E.
Company: Farris, Hansen & Associates, Inc.
Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121
Daytime Phone: 262-723-2098 **Fax:** 262-723-5886
E-Mail: office@farrishansen.com

REGISTERED SURVEYOR

Name: Peter S. Gordon, PLS
Company: Farris, Hansen & Associates, Inc.
Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121
Daytime Phone: 262-723-2098 **Fax:** 262-723-5886
E-Mail: office@farrishansen.com

CONTRACTOR

Name: To Be Determined
Company:
Address: **City:** **State:** **Zip:**
Daytime Phone: **Fax:**
E-Mail:

PROPERTY INFORMATION

Property Owner (s) *(if different from applicant)*: WEH Properties

Address: PO Box 437 **City:** Elkhorn **State:** WI **Zip:** 53121

Daytime Phone: 262-723-2098 **Fax:** 262-723-5886

E-Mail: office@farrishansen.com or warrenhansen@farrishansen.com

Present Zoning: R-10 **Tax Key No(s).:** MUKV2091998

Location/Address: S92W27800 Edgewood Avenue

Present Use: Vacant **Intended Use:** Mutiple-Family Residential

PROCEDURAL CHECKLIST FOR SITE PLAN/ARCHITECTURAL PLAN/PUD REVIEW AND APPROVAL

Submittals for review must include and be accompanied by the following:

Application:

- ☒ Completed application form including the procedural checklist.
- ☒ Application fee: See page 1.
- ☒ Agreement for Reimbursable Services (separate application).

Other Documents:

- ☒ Five(5) complete sets of Application and materials, in addition to the original, for Village of Mukwonago review.
- ☒ Project Summary: Please attach a statement detailing the reasons and background for this request including: details of proposal, services provided, wares sold, plans and hours of operation, number of employees, frequency of customer visits, frequency of deliveries to site, description of any interior/exterior modifications or additions to be made to property, any outside storage (dumpsters, trucks, materials...), number of parking stalls, screening/buffer type, any other information available. ***PLEASE EXPLAIN IN DETAIL.***
- ☒ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to planner@villageofmukwonago.com.
- ☒ Any additional information as determined by Village staff.

- **Upon receipt of a complete submittal, staff review will be conducted within ten business days.**
- **All Site Plan, Architectural, and Planned Unit Development review requests require Plan Commission review and Village Board approval.**

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signature[s] below. If more than one, all of the owners of the property must sign this Application).

Signature - Property Owner	Same Signature - Applicant
Warren E. Hansen, P.E. Name & Title (PRINT)	Name & Title (PRINT)
6/14/2016 Date	Date
Same Signature - Property Owner	Same Signature – Applicant's Representative
Name & Title (PRINT)	Name & Title (PRINT)
Date	Date

FOR OFFICE USE ONLY	
Date Paid 6-16-16 $861.60	**Receipt #** 69661
Plan Commission Date(s)	**Village Board Date(s)**
Escrow Required? ☐ Yes ☐No	**Escrow Amount**
Plan Commission Disposition	
Village Board Disposition	

Edgewood Village Apartments

A Rental Apartment Development

General: The project will be developed on an existing 4.80 acre parcel (4.44 acre net) that has an existing zoning of R-10 (Multiple-Family Residential) at S92W27800 Edgewood Avenue in the Village of Mukwonago. The property is located between CTH "ES" and Red Fox Run. The proposed entrance drive off Edgewood Avenue will be approximately 430' south of CTH "ES" and 320' north of Red Fox Run. See plans for all setbacks and detail. There are five proposed 6-unit buildings totaling 30 proposed units. All units are two-bedroom and have two-car garages attached with individual entries to each unit from the exterior and from the interior of each garage.

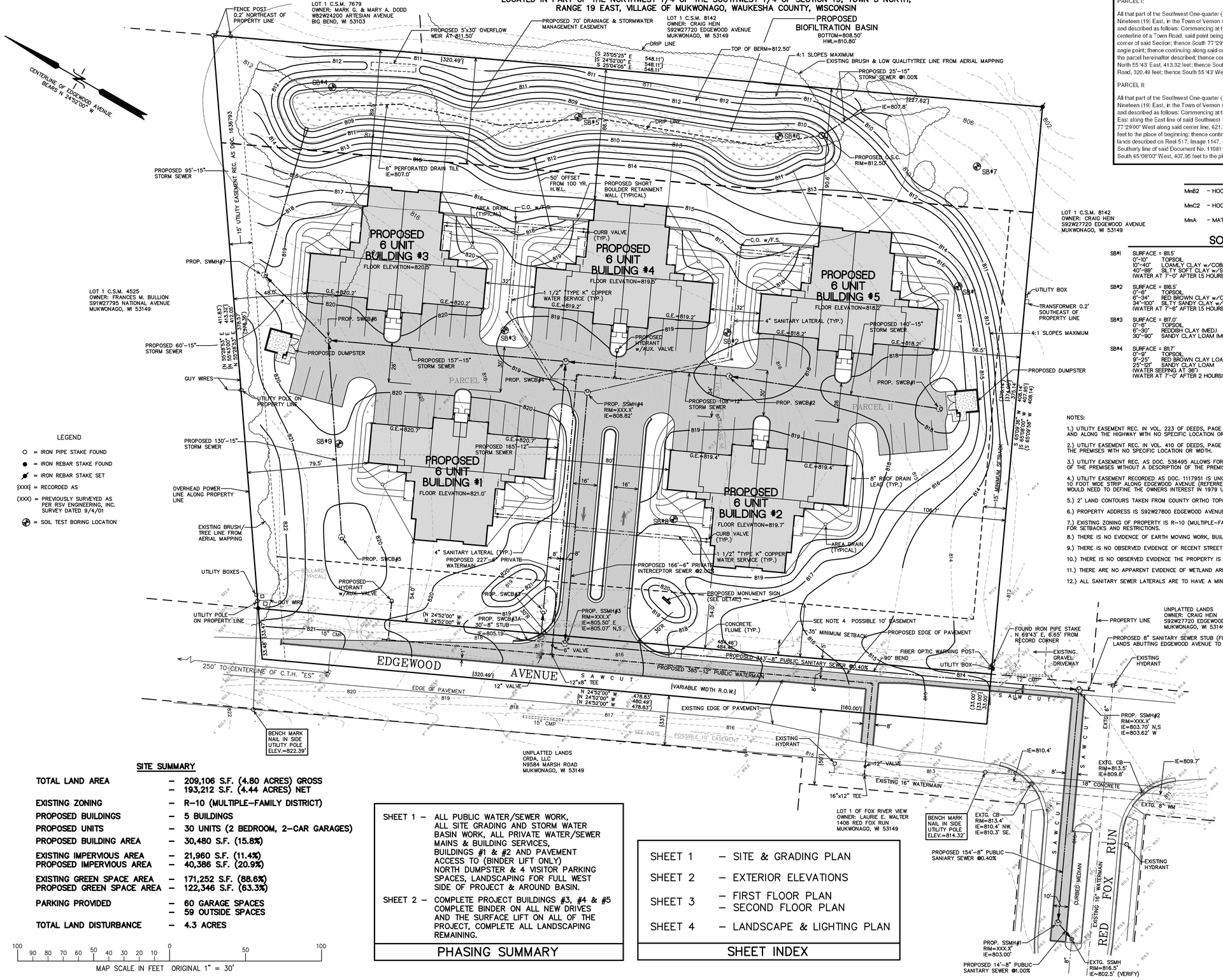
Buildings: The five proposed buildings will be matched in color and materials with four sided architectural features. Basically, there will be three types of units in each building with four units on the second floor and two on the first floor. The large living areas range from 1,260 square feet to 1,310 square feet. It is anticipated that buildings #1 and #2 would be built in Phase I along with all offsite street and utility work and the site mass grading with entrance drive. Buildings #3, #4 and #5 would be built in Phase II. There will be cultured stone, cement board siding and trim or smart board siding. Samples will be presented with color palette demonstrated at the time of the presentation to the Village. These will be upscale units with 9' ceilings first floor and vaulted ceilings on the second floor. Anticipated rent will range from $1,150 to $1,300 per month.

Site Plan: The project will have a split boulevard entry with one way 19' paved drives for each. The parking provided includes 60 garage spaces, and 59 exterior parking spaces, yielding up to almost 4 cars per unit. The site density is only 6.8 units per acre with a resulting 63.3% green space. The building footprints comprise 15.8% of the site and pavement with walks at 20.9%. Dumpsters with screening walls to match the building are planned on both side of the project. Public water and sewer extensions will be made to serve the site from Red Fox Run along Edgewood Avenue. Fire protection will be provided by sprinkler systems in all units and from hydrants on site. Fire access is to meet State and NFPA requirements are provided with tee turnabouts and access to all parts of the building (150' hose distance). All utilities will be underground with the exception of possible satellite services. The large open grass areas will allow room to create a tot lot if found needed in the future. Storm water management for both quality and quantity will be provided using the natural terrain. On the back east side, a large biofiltration basin is planned that will normally be dry with rain garden maintenance, free low plantings. It will fully detain the 100-year storm event with a restricted predevelopment release rate at a minimum (see Preliminary Storm Water Management Plan).

Prepared By:
Farris, Hansen & Associates, Inc.
Engineers, Architects & Surveyors
PO Box 437
Elkhorn, WI 53121
Project No.: 3630.ALF
Dated: June 10, 2016

EDGEWOOD VILLAGE APARTMENTS

LOCATED IN PART OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 19, TOWN 5 NORTH, RANGE 19 EAST, VILLAGE OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN



LEGAL DESCRIPTION TAKEN FROM TITLE COMMITMENT PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY DATED JULY 23, 2015:

PARCEL I:

All that part of the Southwest One-quarter (1/4) of Section Nineteen (19), in Township Five (5) North, Range Nineteen (19) East, in the Town of Vernon (now Village of Mukwonago), Waukesha County, Wisconsin, bounded and described as follows: Commencing at the point of intersection of the South 1/4 line of Section 19 and the centerline of a Town Road, said point being North 00°17'50" East of and 481.61 feet distant from the South 1/4 corner of said Section; thence South 77°29' West along the centerline of said Town Road, 621.74 feet to an angle point; thence continuing along said centerline, North 24°52' West, 1459.38 feet to the place of beginning of the parcel hereinafter described; thence continuing North 24°52' West, along said centerline 320.49 feet; thence North 55°43' East, 413.32 feet; thence South 24°52' East, parallel to the aforementioned centerline of the Town Road, 320.49 feet; thence South 55°43' West, 413.32 feet to the place of beginning.

PARCEL II:

All that part of the Southwest One-quarter (1/4) of Section Nineteen (19), in Township Five (5) North, Range Nineteen (19) East, in the Town of Vernon (now Village of Mukwonago), Waukesha County, Wisconsin, bounded and described as follows: Commencing at the Southeast corner of said Southwest 1/4; thence North 00°17'50" East along the East line of said Southwest 1/4, 481.61 feet to the center line of Edgewood Avenue; thence South 77°29'00" West along said center line, 621.74 feet; thence North 24°52'00" West along said center line, 1299.38 feet to the place of beginning; thence continuing North 24°52'00" West 160.00 feet to the Southerly corner of lands described on Reel 517, Image 1147, as Document No. 1198114; thence North 55°43'00" East along the Southerly line of said Document No. 1198114, 413.32 feet; thence South 24°52'00" East, 227.62 feet; thence South 65°08'00" West, 407.95 feet to the place of beginning.

SITE SOILS

MmB2 – HOCHHEIM LOAM (2–6% SLOPES, ERODED)

MmC2 – HOCHHEIM LOAM (6–12% SLOPES, ERODED)

MmA – MATHERTON SILT LOAM (1–3% SLOPES)

SOIL BORING LOG

SB#1
SURFACE = 811.5'
0"–10" TOPSOIL
10"–40" LOAMLY CLAY w/COBBLES
40"–88" SILTY SOFT CLAY w/SAND SEAMS
(WATER AT 7'–0" AFTER 15 HOURS)

SB#2
SURFACE = 816.5'
0"–6" TOPSOIL
6"–34" RED BROWN CLAY w/COBBLES
34"–100" SILTY SANDY CLAY w/COBBLES (MED.)
(WATER AT 7'–6" AFTER 15 HOURS)

SB#3
SURFACE = 817.0'
0"–6" TOPSOIL
6"–30" REDDISH CLAY (MED)
30"–90" SANDY CLAY LOAM (MOIST, NO WATER)

SB#4
SURFACE = 811.7'
0"–9" TOPSOIL
9"–25" RED BROWN CLAY LOAM
25"–121" SANDY CLAY LOAM
(WATER SEEPING AT 98")
(WATER AT 7'–0" AFTER 2 HOURS)

SB#5
SURFACE = 813.2'
0"–20" TOPSOIL
20"–42" REDDISH BROWN CLAY LOAM
42"–120" CLAY (MOIST) w/COBBLES
(WATER AT 9'–6" AFTER 2 HOURS)

SB#6
SURFACE = 816.6'
0"–10" TOPSOIL
10"–32" REDDISH CLAY LOAM w/COBBLES
32"–120" CLAY w/COBBLES (SOME SEEPS)
(WATER AT 9'–2" AFTER 2 HOURS)

SB#7
SURFACE = 807.3'
0"–1" TOPSOIL
1"–40" CLAY LOAM (DRY)
40"–120" SILTY CLAY w/SEEPS
(WATER AT 7'–6" AFTER 15 HOURS)

SB#8
SURFACE = 817.5'
0"–9" TOPSOIL
9"–32" REDDISH BROWN CLAY (MED)
32"–92" SANDY CLAY LOAM w/SEEPS
(WATER AT 7'–0" AFTER 15 HOURS)

SB#9
SURFACE = 821.5'
0"–6" TOPSOIL
6"–30" BROWN CLAY (MED)
30"–78" SANDY CLAY LOAM (SEEPS)
(NO WATER)

NOTES:

1.) UTILITY EASEMENT REC. IN VOL. 223 OF DEEDS, PAGE 34 ALLOWS FOR POLES, AND APPURTENANCES UPON AND ALONG THE HIGHWAY WITH NO SPECIFIC LOCATION OR WIDTH.

2.) UTILITY EASEMENT REC. IN VOL. 410 OF DEEDS, PAGE 27 ALLOWS FOR POLES, AND APPURTENANCES OVER THE PREMISES WITH NO SPECIFIC LOCATION OR WIDTH.

3.) UTILITY EASEMENT REC. AS DOC. 536495 ALLOWS FOR POLES, AND APPURTENANCES OVER THE NORTH 6 FEET OF THE PREMISES WITHOUT A DESCRIPTION OF THE PREMISES.

4.) UTILITY EASEMENT RECORDED AS DOC. 1117951 IS UNCLEAR AS TO THE EXACT LOCATION AND MAY AFFECT A 10 FOOT WIDE STRIP ALONG EDGEWOOD AVENUE (REFERRED TO AS EDGEWOOD DRIVE IN THE DOCUMENT). TITLE WOULD NEED TO DEFINE THE OWNERS INTEREST IN 1979 UNDER THE GRANTORS NAMES.

5.) 2' LAND CONTOURS TAKEN FROM COUNTY ORTHO TOPOGRAPHIC MAPPING (DATE UNKNOWN).

6.) PROPERTY ADDRESS IS S92W27800 EDGEWOOD AVENUE, MUKWONAGO, WI 53149.

7.) EXISTING ZONING OF PROPERTY IS R–10 (MULTIPLE–FAMILY DISTRICT), SEE VILLAGE CODE OF ORDINANCES FOR SETBACKS AND RESTRICTIONS.

8.) THERE IS NO EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR ADDITIONS ON THE PROPERTY.

9.) THERE IS NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION ON THE PROPERTY.

10.) THERE IS NO OBSERVED EVIDENCE THE PROPERTY IS BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

11.) THERE ARE NO APPARENT EVIDENCE OF WETLAND AREAS ON THE PROPERTY.

12.) ALL SANITARY SEWER LATERALS ARE TO HAVE A MINIMUM OF 2% PITCH.

LEGEND

- ○ = IRON PIPE STAKE FOUND
- ● = IRON REBAR STAKE FOUND
- ⌀ = IRON REBAR STAKE SET
- {XXX} = RECORDED AS
- (XXX) = PREVIOUSLY SURVEYED AS PER RSV ENGINEERING, INC. SURVEY DATED 9/4/01
- ⊕ = SOIL TEST BORING LOCATION

SITE SUMMARY

TOTAL LAND AREA	–	209,106 S.F. (4.80 ACRES) GROSS
	–	193,212 S.F. (4.44 ACRES) NET
EXISTING ZONING	–	R–10 (MULTIPLE–FAMILY DISTRICT)
PROPOSED BUILDINGS	–	5 BUILDINGS
PROPOSED UNITS	–	30 UNITS (2 BEDROOM, 2–CAR GARAGES)
PROPOSED BUILDING AREA	–	30,480 S.F. (15.8%)
EXISTING IMPERVIOUS AREA	–	21,960 S.F. (11.4%)
PROPOSED IMPERVIOUS AREA	–	40,386 S.F. (20.9%)
EXISTING GREEN SPACE AREA	–	171,252 S.F. (88.6%)
PROPOSED GREEN SPACE AREA	–	122,346 S.F. (63.3%)
PARKING PROVIDED	–	60 GARAGE SPACES
	–	59 OUTSIDE SPACES
TOTAL LAND DISTURBANCE	–	4.3 ACRES

100 90 80 70 60 50 40 30 20 10 0 50 100

MAP SCALE IN FEET ORIGINAL 1" = 30'

PHASING SUMMARY

SHEET 1 – ALL PUBLIC WATER/SEWER WORK, ALL SITE GRADING AND STORM WATER BASIN WORK, ALL PRIVATE WATER/SEWER MAINS & BUILDING SERVICES, BUILDINGS #1 & #2 AND PAVEMENT ACCESS TO (BINDER LIFT ONLY) NORTH DUMPSTER & 4 VISITOR PARKING SPACES, LANDSCAPING FOR FULL WEST SIDE OF PROJECT & AROUND BASIN.

SHEET 2 – COMPLETE PROJECT BUILDINGS #3, #4 & #5 COMPLETE BINDER ON ALL NEW DRIVES AND THE SURFACE LIFT ON ALL OF THE PROJECT, COMPLETE ALL LANDSCAPING REMAINING.

SHEET INDEX

SHEET 1 – SITE & GRADING PLAN
SHEET 2 – EXTERIOR ELEVATIONS
SHEET 3 – FIRST FLOOR PLAN
– SECOND FLOOR PLAN
SHEET 4 – LANDSCAPE & LIGHTING PLAN

EDGEWOOD VILLAGE APARTMENTS
VILLAGE of MUKWONAGO, WAUKESHA CO., WI.

SITE & GRADING PLAN

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING – ARCHITECTURE – SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
OFFICE: (262) 723–2098 FAX: (262) 723–5886

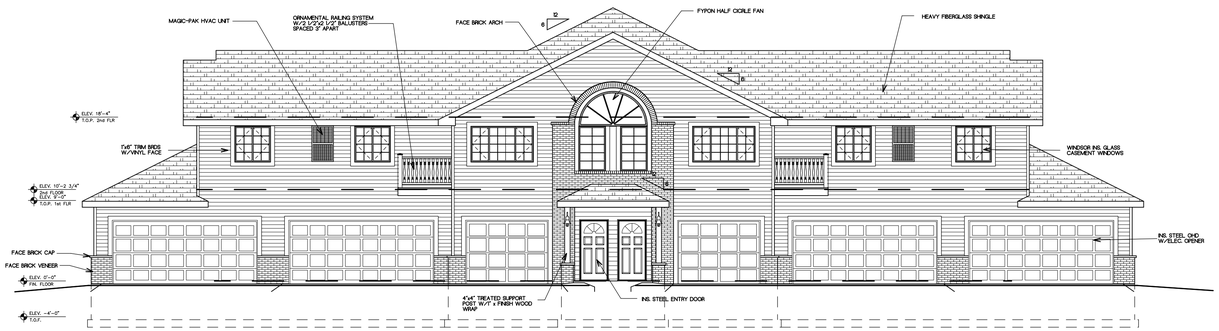
REVISIONS

PROJECT NO. 9344

DATE 6/10/2016

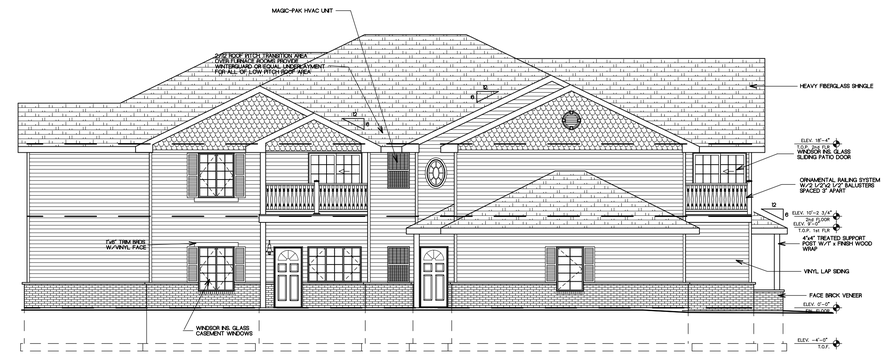
SHEET NO. 1 OF 4

6/14/2016 K:\Projects\9344\Cloud\PRELIM LAND PLAN REV BASIN



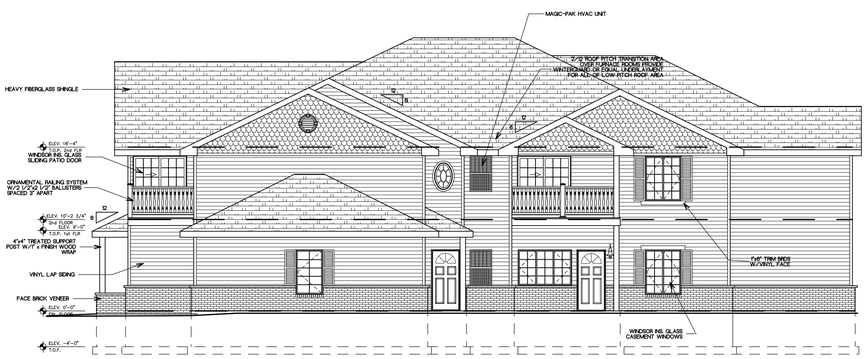
EAST ELEVATION

SCALE:1/8"=1'-0"



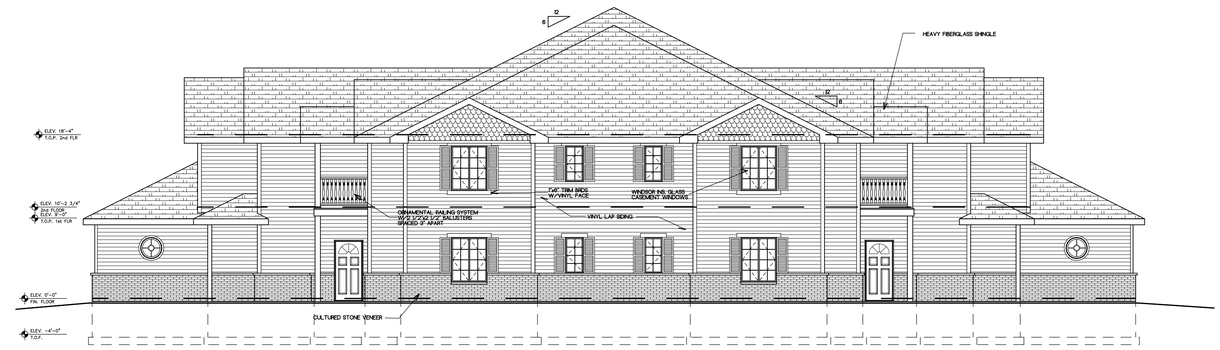
NORTH ELEVATION

SCALE:1/8"=1'-0"



SOUTH ELEVATION

SCALE:1/8"=1'-0"



WEST ELEVATION

SCALE:1/8"=1'-0"

BUILDING #1

BUILDING SUMMARY

BUILDING HEIGHT MAX. = 32'-6"

UNIT AREAS

UNITS #101 & #102 = 1,260 S.F. LIVING AREA - GARAGE = 506 S.F.
UNITS #201 & #202 = 1,310 S.F. LIVING AREA - GARAGE = 585 S.F.
UNITS #203 & #204 = 1,290 S.F. LIVING AREA - GARAGE = 567 S.F.

TOTAL BUILDING FOOTPRINT AREA = 6,290 S.F. INCLUDING ENTRY PORCHES

VILLAGE APARTMENTS

VILLAGE of MUKWONAGO, WAUKESHA CO., WI.

EXTERIOR ELEVATIONS

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING - ARCHITECTURE - SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
OFFICE: (262) 723-2098 FAX: (262) 723-5886

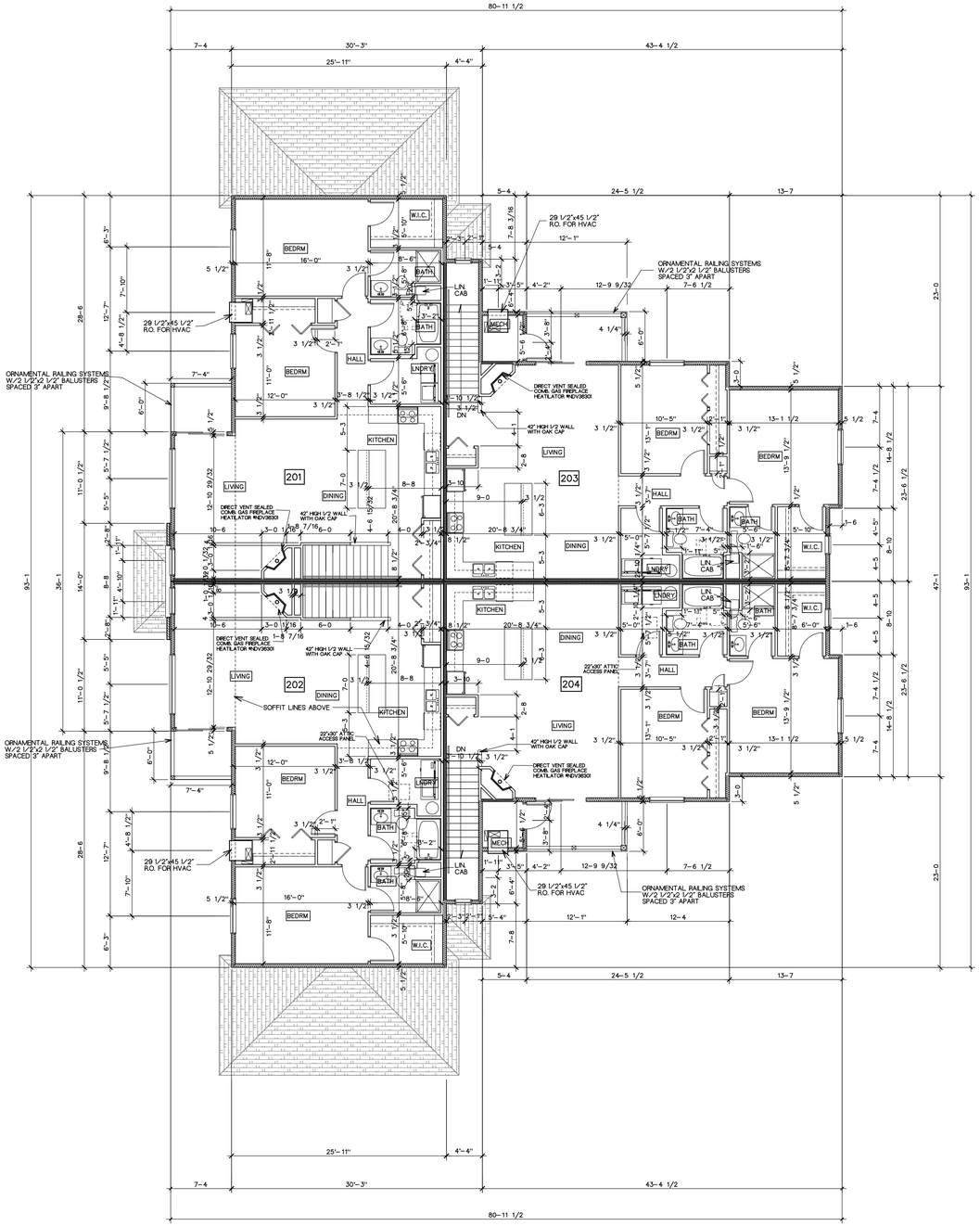
REVISIONS

PROJECT NO. 9344

DATE 6/10/2016

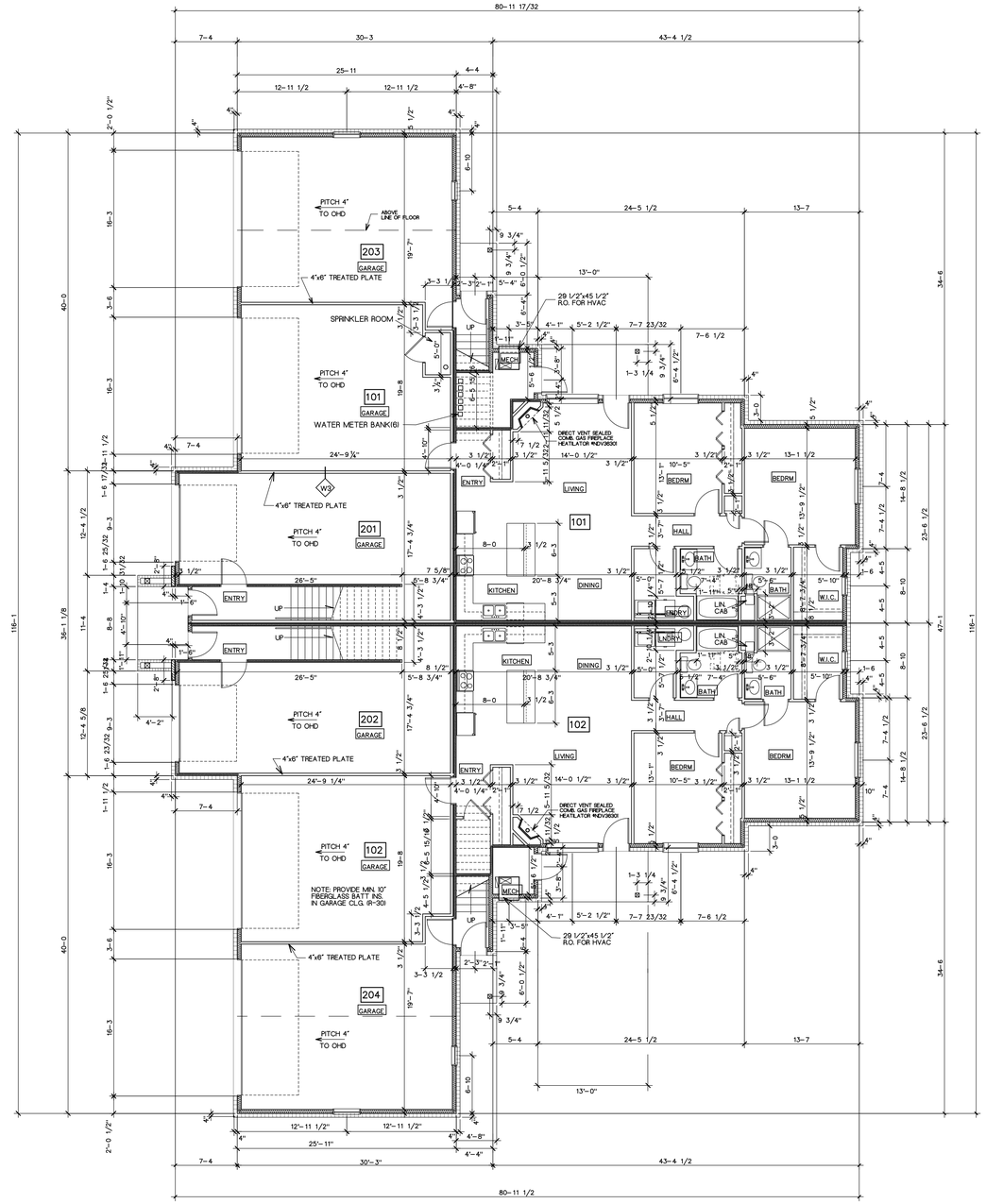
SHEET NO. 2 OF 4

6/14/2016 K:\Projects\9344\Dwg\PRELIM ELEVATION



SECOND FLOOR PLAN

SCALE: 1/8"=1'-0"



FIRST FLOOR PLAN

SCALE: 1/8"=1'-0"

EDGEWOOD VILLAGE APARTMENTS

VILLAGE of MUKWONAGO, WAUKESHA CO., WI.

FIRST FLOOR PLAN
SECOND FLOOR PLAN

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING – ARCHITECTURE – SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
OFFICE: (262) 723-2098 FAX: (262) 723-5886

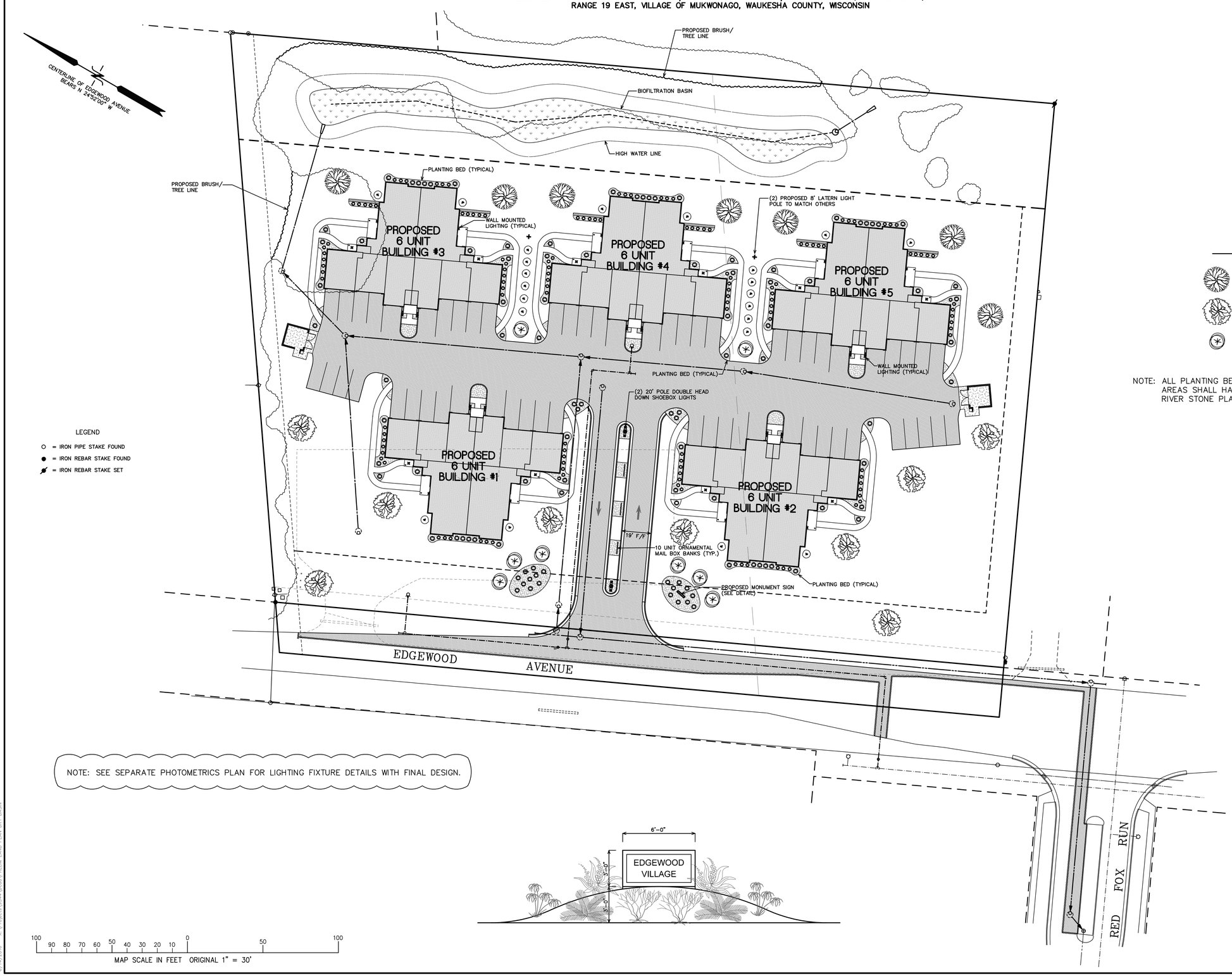
REVISIONS

PROJECT NO.	9344
DATE	6/10/2016
SHEET NO.	3 OF 4

6/14/2016 X:\Projects\9344\Dcad\PREUM FLOOR PLANS

EDGEWOOD VILLAGE APARTMENTS

LOCATED IN PART OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 19, TOWN 5 NORTH, RANGE 19 EAST, VILLAGE OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN



LANDSCAPE KEY

- AUTUMN GOLD GINKGO TREE (7)
- AUTUMN BLAZE MAPLE TREE (9)
- ORNAMENTAL CRAB/PLUM (8)

NOTE: ALL PLANTING BEDS AND FOUNDATION PLANTING AREAS SHALL HAVE WEED BARRIERS AND 1 1/2" RIVER STONE PLACED WITH EDGING AGAINST LAWN EDGES.

NOTE: SEE SEPARATE PHOTOMETRICS PLAN FOR LIGHTING FIXTURE DETAILS WITH FINAL DESIGN.

EDGEWOOD VILLAGE APARTMENTS

VILLAGE of MUKWONAGO, WAUKESHA CO., WI.

LANDSCAPING & LIGHTING PLAN

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING – ARCHITECTURE – SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
OFFICE: (262) 723-2098 FAX: (262) 723-5886

REVISIONS

PROJECT NO. 9344

DATE 6/10/2016

SHEET NO. 4 OF 4

6/14/2016 X:\Projects\9344\Dwgs\PRELIM LAND PLAN (DRY BASIN)

PRELIMINARY STORM WATER MANAGEMENT PLAN

EDGEWOOD VILLAGE APARTMENTS
VILLAGE OF MUKWONAGO,
WAUKESHA COUNTY, WISCONSIN
JUNE 2016

PREPARED FOR:
WEH PROPERTIES
P.O. BOX 437
ELKHORN, WISCONSIN 53121

Prepared By:

Farris, Hansen & Associates, Inc.
Engineers, Architects & Surveyors
7 Ridgway Court, P.O. Box 437
Elkhorn, WI 53121

Project No.: 9344

TABLE OF CONTENTS

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LOCATION AND PURPOSE **1**
EXISTING DRAINAGE CONDITIONS **1**
PROPOSED DRAINAGE CONDITIONS **2**
METHOD OF DRAINAGE ANALYSIS **2**
SUMMARY OF RESULTS **3**

Exhibits

Exhibit 1 **Site Location Map**
Exhibit 2 **Custom Soils Report**
Exhibit 3 **Existing Conditions Drainage Area Map**
Exhibit 4 **Proposed Conditions Drainage Area Map**

Appendix A **Existing 1, 2, 10, and 100-Year TR-20 Hydrologic Model**

Appendix B **Proposed 1, 2, 10, and 100-Year TR-20 Hydrologic Model**

Appendix C **Preliminary Operation and Maintenance Control Plan**

LOCATION AND PURPOSE

The ± 4.4 acre watershed is located within the limits of the Village of Mukwonago, and consists of a partially developed grassed parcel with an asphalt paved surface. The subject property is located approximately 215 feet south of the intersection of Edgewood Avenue and County Trunk Highway "ES" (National Avenue) along the east side of Edgewood Avenue. Refer to Exhibit 1 (Site Location Map). One access point is proposed along Edgewood Avenue east into the proposed development.

The purpose of this report is to evaluate the existing 1, 2, 10, and 100-year watershed discharges and the proposed 1, 2, 10, and 100-year watershed discharges to support little or no increase in proposed downstream discharges. We accomplished this by analyzing the pre and post-development conditions onsite using HydroCAD, which utilizes the SCS TR-20 methodology, and storing part of the runoff in an biofiltration basin on-site and releasing the water at a rate that would not exceed the existing conditions.

In order to evaluate the impact of the proposed site improvements, existing conditions were first considered. The attached Existing and Proposed Drainage Conditions Maps provide a breakdown of the drainage sub-catchment areas for the existing and proposed conditions drainage models. The HydroCAD Drainage Diagrams, display the setup/routing of the existing and proposed condition models. Based on comparison of the pre- vs. post-development exhibits, it is estimated that there will be a net increase in impervious area on-site of approximately 1.06 acres. In order to evaluate this, the overall site has been divided into two (2) main sub-catchments, an easterly sub-catchment and a westerly sub-catchment. The "analysis point" is the furthest downstream points for runoff from any proposed drainage area modifications. This Analysis Points are effectively the easterly property line and the southerly property line. The Analysis Points are shown in the HydroCAD diagram as well as on the attached Existing and Proposed Drainage Conditions Maps and are the same for both proposed and existing conditions.

EXISTING DRAINAGE CONDITIONS

The entire watershed is ±4.4 acres consisting of the previously developed land and the undeveloped portion of the site. The existing developed portions of the site consist of the paved parking area and the undeveloped portions of the site. The immediately surrounding properties are a mix of residential, commercial and undeveloped land. Drainage Area 1S drains to the easterly property line and Drainage Area 2S drains to the southerly property line. In general the site drains from the center to the east and the south eventually draining off-site.

Upon review of the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey (See Exhibit 2), soils located on site are Hochheim loam (HmB2 and HmC2) and Matherton silt loam (MmA). Hochheim soils are characterized by the United States Department of Agriculture (USDA) as well drained, permeability is moderately low to moderately high in the surface layer and subsoil and fall within hydrologic soil group D. Matherton soils are characterized by the USDA as somewhat poorly drained, permeability is moderately high to high in the surface layer and subsoil and falls within hydrologic soil group B/D. There are no soils classified as prime, state-important or unique by USDA.

PROPOSED DRAINAGE CONDITIONS

For the proposed conditions or post-development hydrologic analysis, the storm water model was separated into two (2) sub-catchments to appropriately model the proposed improvements and design. The project improvements to the site consist of an approximately 30,480 s.f. apartments (5 buildings), proposed parking areas, storm sewer piping, a biofiltration basin, and associated site grading. The proposed stormwater management plan includes the biofiltration basin and the minor and major stormwater conveyance systems. The minor conveyance system is a series of swales and pipes routed to the proposed basin. During major events the water will flow through overland flood routes within the development. The overland flow routes convey the stormwater to the biofiltration basin. The overland flow routes will be designed to convey the 100-year storm event for all tributary areas. In order to mitigate the increase in runoff that may be expected from the proposed improvements to the site, the biofiltration detention basin was sized in accordance with WDNR guidelines. See Exhibit 4 (Proposed Conditions Drainage Area Plan) for location of the sub-catchment areas.

METHOD OF DRAINAGE ANALYSIS

The Existing and Proposed Conditions Stormwater runoff has been analyzed using the HydroCAD Stormwater modeling computer program.

Model Sub-catchments have been delineated using Soil Conservation Service methods. Curve Numbers based upon the type of development and soil classifications were used to estimate the runoff volumes. The time of concentration for each of the sub-catchments (A Tc=-10.0 min. was assumed for the area draining to the basin to be conservative), coupled with the runoff characteristics, were used to estimate the peak stormwater runoff for each area. The 1-year, 2-year, 10-year, and 100-year statistical rain events were modeled for both the pre and post-earth removal conditions. The total rainfall per a 24-hour period for the 1, 2, 10 and 100-year statistical rain events are 2.40”, 2.70”, 3.81” and 6.18” respectively. The statistical rainfall for the area is considered a MSE3 distribution. Rainfall Data for Mukwonago (Waukesha County) was taken from was taken from the *NOAA Atlas 14* and input into the program. Refer to Appendices A and B for details.

SUMMARY OF RESULTS

Pre-Development

Area (ID)	Area (Ac)	Tc (Min.)	CN	Q1 (CFS)	Q2 (CFS)	Q10 (CFS)	Q100 (CFS)
1S	3.31	34.6	81	2.29	2.90	5.34	10.98
2S	1.13	23.5	85	1.26	1.54	2.63	5.06
Discharge AP-1				**2.29**	**2.90**	**5.34**	**10.98**
Discharge AP-2				**1.26**	**1.54**	**2.63**	**5.06**

Post-Development

Area (ID)	Area (Ac)	Tc (Min.)	CN	Q1 (CFS)	Q2 (CFS)	Q10 (CFS)	Q100 (CFS)
1S	3.32	10.0	88	6.51	7.78	12.62	23.00
2S	1.12	29.9	81	0.85	1.07	1.97	4.06
1P				1.26	1.32	1.88	8.81
Discharge AP-1				**1.26**	**1.32**	**1.88**	**8.81**
Discharge AP-2				**0.85**	**1.07**	**1.97**	**4.06**

<u>EXHIBITS</u>

SITE LOCATION MAP

CUSTOM SOILS REPORT

EXISTING CONDITIONS DRAINAGE AREA PLAN

PROPOSED CONDITIONS DRAINAGE AREA PLAN

SITE LOCATION MAP

LAND INFORMATION SYSTEMS DIVISION

Waukesha County GIS Map

Legend

PLSS_Corner_Pts
- <all other values>
- Calculated Quarter Section C
- Calculated Section Corner
- Center of Section
- Closing Quarter Section Cor
- Closing Section Corner
- Meander Corner
- Offset Section Corner
- Other or Unknown
- Quarter Section Corner
- Section Corner
- Sixteenth Corner
- Township Corner
- Witness Corner

Corporate Limit Boundary

TaxParcel

Doc. Type
- <all other values>
- Assessor's Plat
- Condominium Plat
- Certified Survey Map (CSM)
- Subdivision Plat

SimultaneousConveyance
- Assessor Plat
- CSM
- Condo Plat
- Subdivision Plat

0 333.33 Feet

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Notes:

Printed: 5/13/2016

CUSTOM SOILS REPORT

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Milwaukee and Waukesha Counties, Wisconsin

April 28, 2016

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,390 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin
Survey Area Data: Version 11, Sep 25, 2015

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Milwaukee and Waukesha Counties, Wisconsin (WI602)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0.2	3.8%
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	4.2	83.2%
MmA	Matherton silt loam, 1 to 3 percent slopes	0.7	13.0%
Totals for Area of Interest		**5.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments

on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Milwaukee and Waukesha Counties, Wisconsin

HmB2—Hochheim loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03w
Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 135 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hochheim, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till over calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
2Bt - 7 to 16 inches: loam
2Cd - 16 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 12 to 24 inches to densic material
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D

Minor Components

Theresa

Percent of map unit: 10 percent
Landform: Till plains

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Linear

Lamartine

Percent of map unit: 5 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear

HmC2—Hochheim loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03r
Elevation: 900 to 1,340 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hochheim, eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
2Bt - 7 to 16 inches: clay loam
2Cd - 16 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 10 to 18 inches to densic material
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D

Minor Components

Theresa

Percent of map unit: 5 percent
Landform: Drumlins, ground moraines
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex

Hochheim

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear

MmA—Matherton silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: g950
Elevation: 670 to 1,100 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Matherton and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matherton

Setting

Landform: Outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Parent material: Loamy glaciofluvial deposits over stratified sandy and gravelly outwash

Typical profile

A,E - 0 to 11 inches: silt loam
EBg,Btg,Bt - 11 to 35 inches: sandy clay loam
2Cg - 35 to 60 inches: Error

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Other vegetative classification: Mod AWC, high water table (G095BY004WI)

Minor Components

Sebewa soils

Percent of map unit:
Landform: Depressions

References

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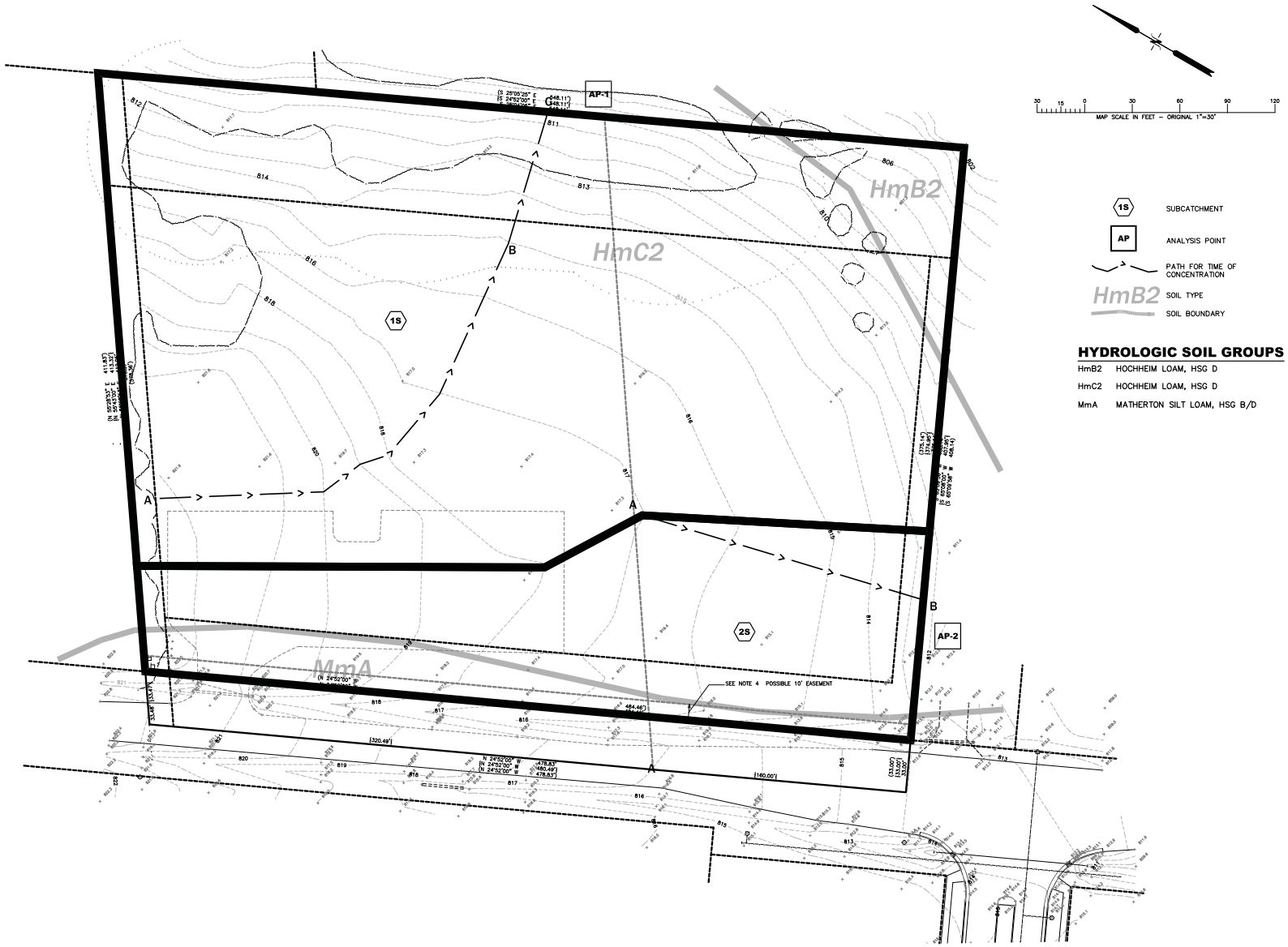

HYDROLOGIC SOIL GROUPS

HmB2	HOCHHEIM LOAM, HSG D
HmC2	HOCHHEIM LOAM, HSG D
MmA	MATHERTON SILT LOAM, HSG B/D

EDGEWOOD VILLAGE APARTMENTS

EDGEWOOD STREET
VILLAGE OF MUKWONAGO, WAUKESHA CO., WISCONSIN

EXISTING CONDITIONS DRAINAGE AREA MAP

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING – ARCHITECTURE – SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
OFFICE: (262) 723-2098 FAX: (262) 723-5886

REVISIONS

PROJECT NO.	9344
DATE	05/12/2016
SHEET NO.	1 OF 1

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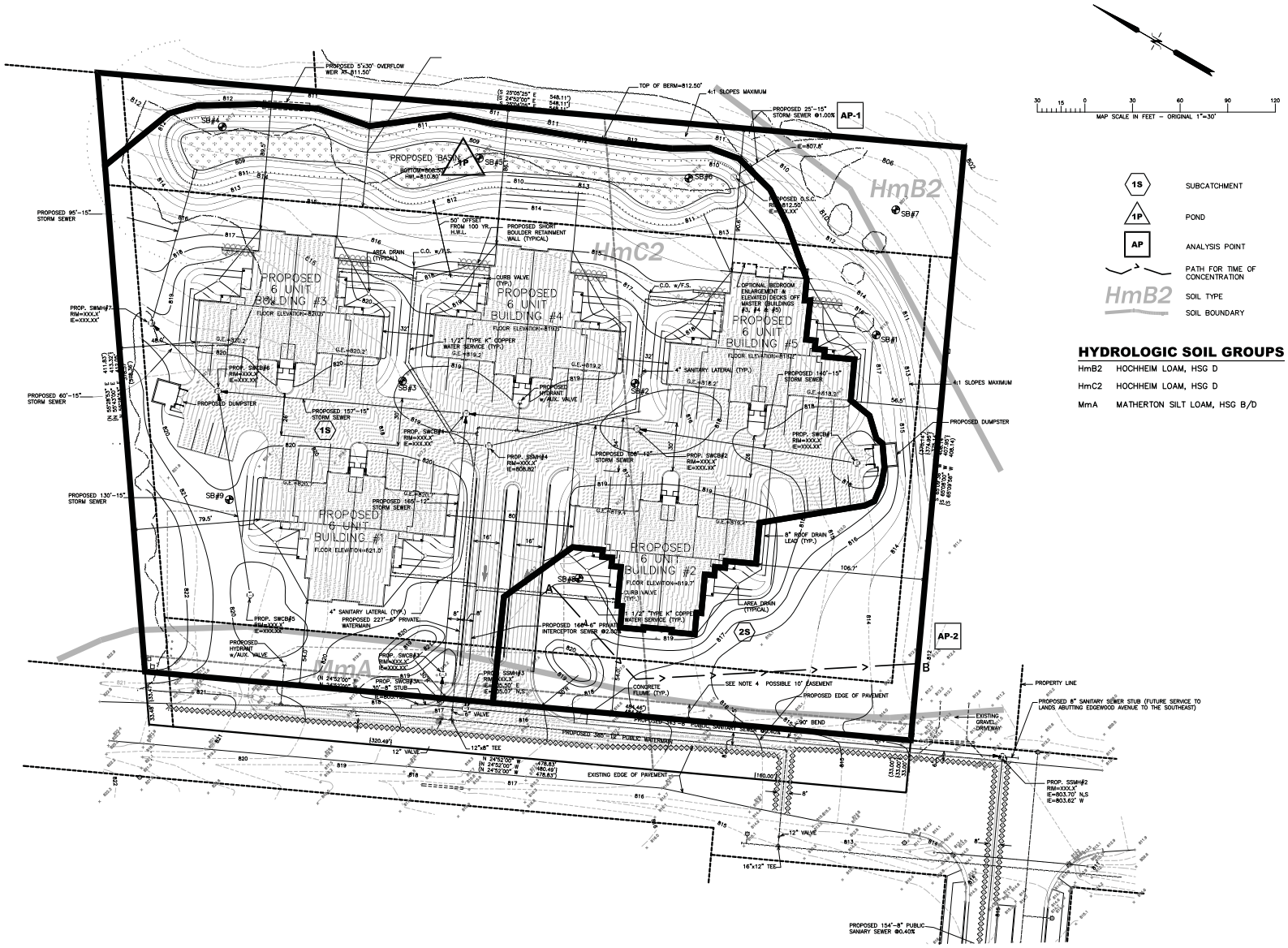

HYDROLOGIC SOIL GROUPS

HmB2	HOCHHEIM LOAM, HSG D
HmC2	HOCHHEIM LOAM, HSG D
MrnA	MATHERTON SILT LOAM, HSG B/D

EDGEWOOD VILLAGE APARTMENTS

EDGEWOOD STREET
VILLAGE OF MUKWONAGO, WAUKESHA CO., WISCONSIN

PROPOSED CONDITIONS DRAINAGE AREA MAP

FARRIS, HANSEN & ASSOCIATES, INC.
ENGINEERING – ARCHITECTURE – SURVEYING
7 RIDGWAY COURT P.O. BOX 437
ELKHORN, WISCONSIN 53121
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REVISIONS

PROJECT NO. 9344

DATE 06/03/2016

SHEET NO. 1 OF 1

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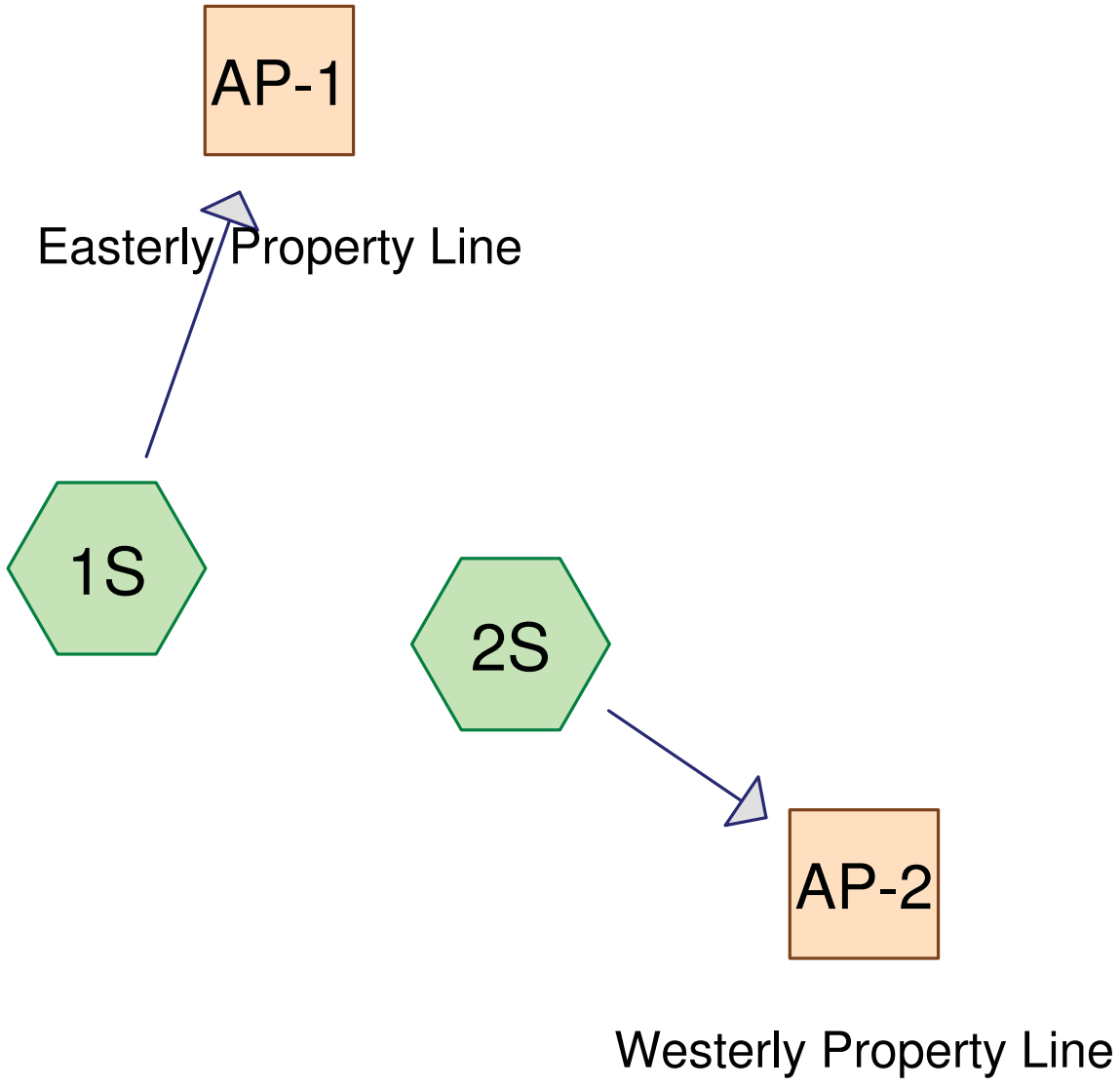
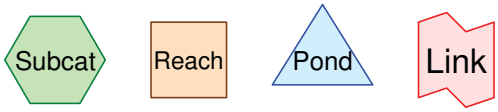
APPENDIX A

EXISTING
1, 2, 10, AND 100-YEAR
HYDROCAD MODEL





Routing Diagram for 9344_EX
Prepared by Farris, Hansen & Associates, Printed 5/12/2016
HydroCAD® 10.00-17 s/n 05638 © 2016 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,229 sf 5.66% Impervious Runoff Depth>0.82"
Flow Length=386' Tc=34.6 min CN=81 Runoff=2.29 cfs 0.226 af

Subcatchment 2S: Runoff Area=48,983 sf 28.14% Impervious Runoff Depth>1.04"
Flow Length=185' Slope=0.0243 '/' Tc=23.5 min CN=85 Runoff=1.26 cfs 0.098 af

Reach AP-1: Easterly Property Line Inflow=2.29 cfs 0.226 af
Outflow=2.29 cfs 0.226 af

Reach AP-2: Westerly Property Line Inflow=1.26 cfs 0.098 af
Outflow=1.26 cfs 0.098 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.324 af Average Runoff Depth = 0.88"
88.64% Pervious = 3.932 ac 11.36% Impervious = 0.504 ac

Summary for Subcatchment 1S:

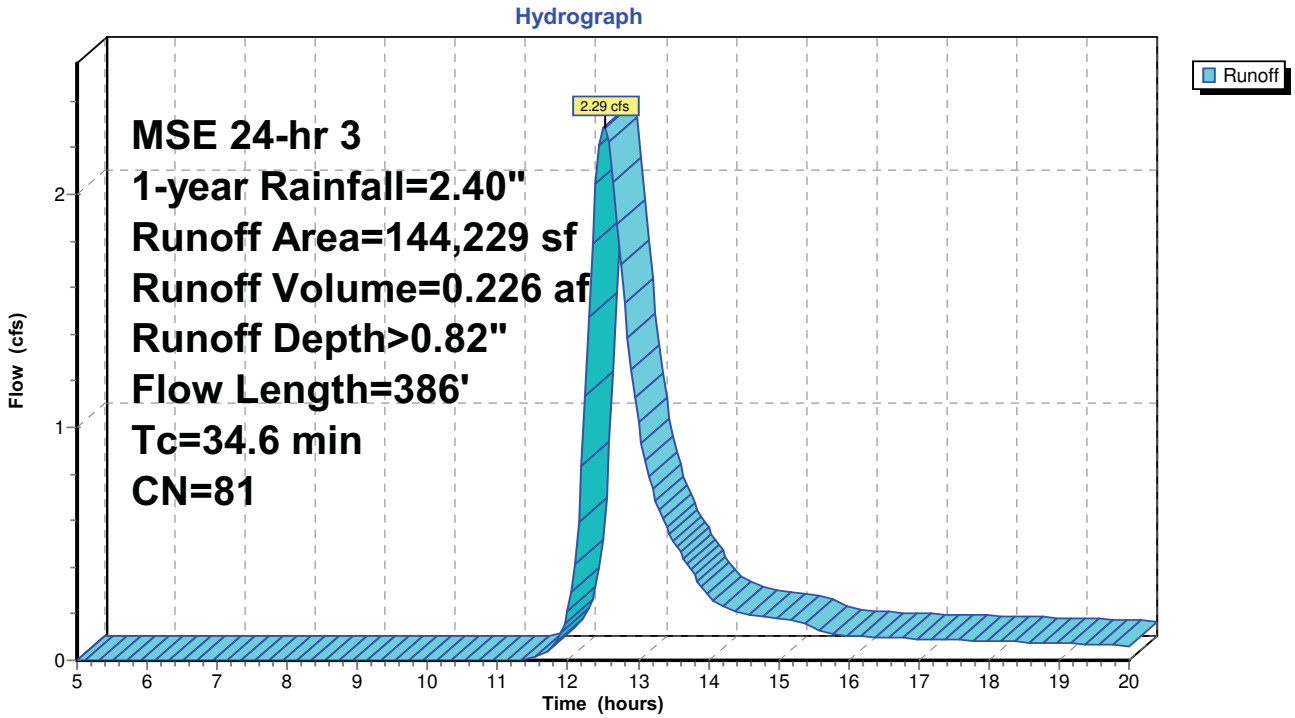
Runoff = 2.29 cfs @ 12.52 hrs, Volume= 0.226 af, Depth> 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.40"

Area (sf)	CN	Description
8,167	98	Paved parking, HSG D
136,062	80	>75% Grass cover, Good, HSG D
144,229	81	Weighted Average
136,062		94.34% Pervious Area
8,167		5.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0250	0.15		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.4	86	0.0581	3.88		**Shallow Concentrated Flow, BC** Unpaved Kv= 16.1 fps
34.6	386	Total			

Subcatchment 1S:



Summary for Subcatchment 2S:

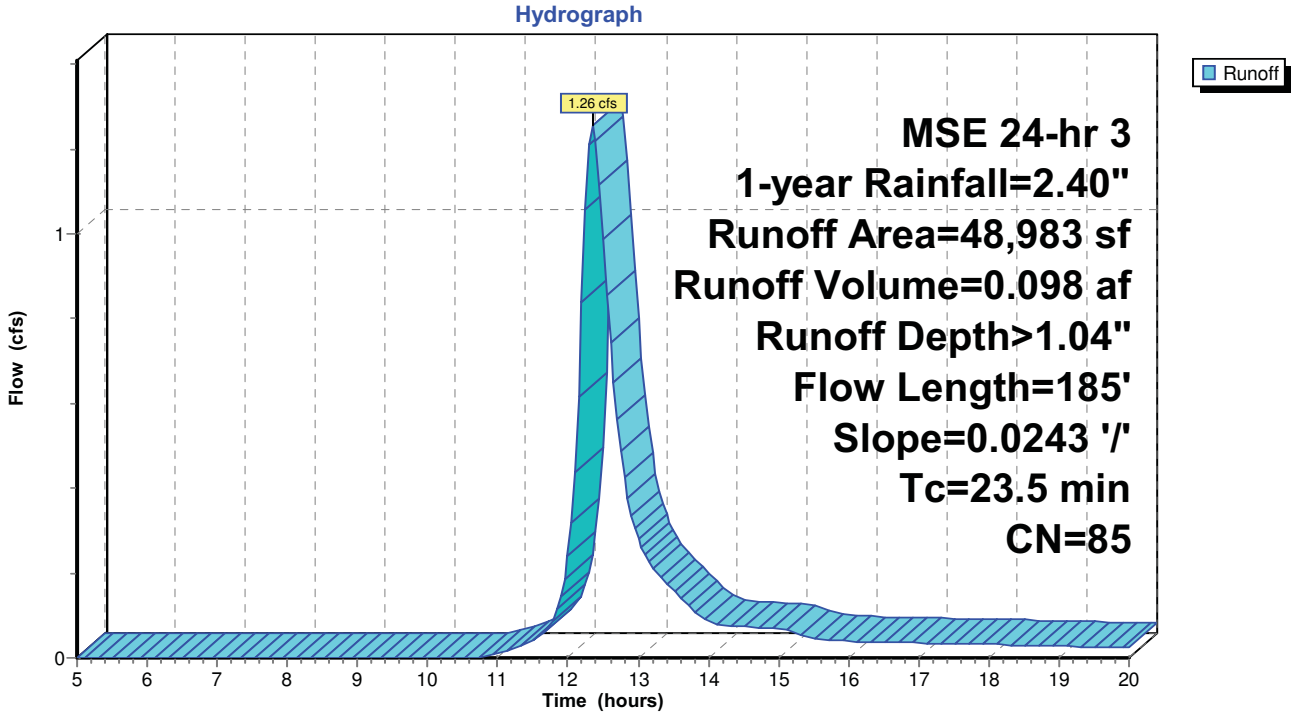
Runoff = 1.26 cfs @ 12.35 hrs, Volume= 0.098 af, Depth> 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.40"

Area (sf)	CN	Description
13,784	98	Paved parking, HSG D
35,199	80	>75% Grass cover, Good, HSG D
48,983	85	Weighted Average
35,199		71.86% Pervious Area
13,784		28.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	185	0.0243	0.13		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

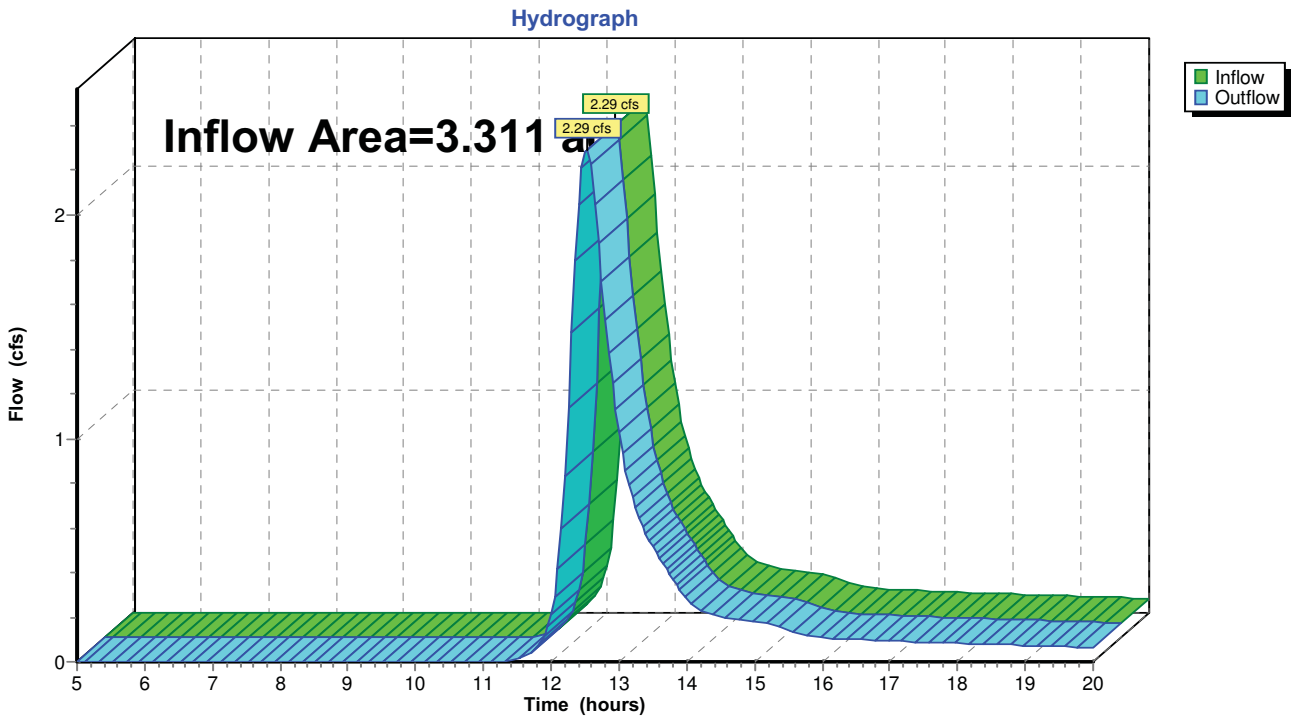


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.311 ac, 5.66% Impervious, Inflow Depth > 0.82" for 1-year event
Inflow = 2.29 cfs @ 12.52 hrs, Volume= 0.226 af
Outflow = 2.29 cfs @ 12.52 hrs, Volume= 0.226 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-1: Easterly Property Line

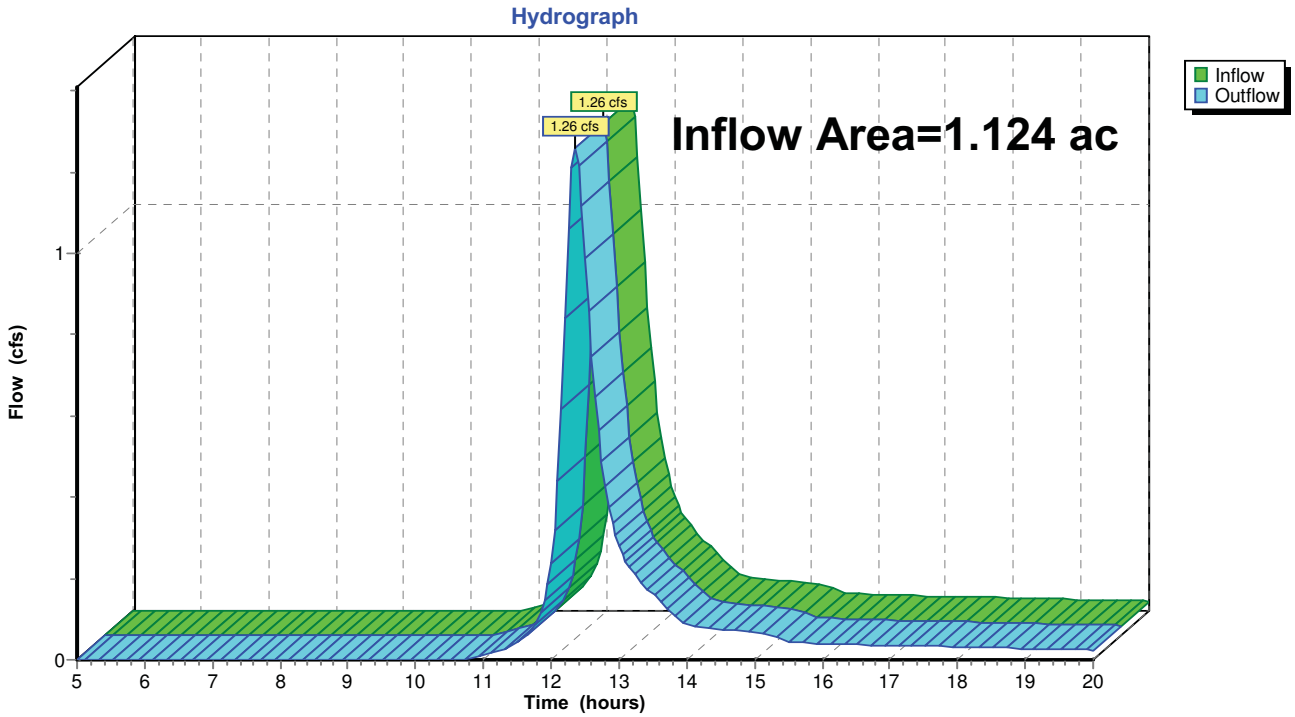


Summary for Reach AP-2: Westerly Property Line

Inflow Area = 1.124 ac, 28.14% Impervious, Inflow Depth > 1.04" for 1-year event
Inflow = 1.26 cfs @ 12.35 hrs, Volume= 0.098 af
Outflow = 1.26 cfs @ 12.35 hrs, Volume= 0.098 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-2: Westerly Property Line



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,229 sf 5.66% Impervious Runoff Depth>1.02"
Flow Length=386' Tc=34.6 min CN=81 Runoff=2.90 cfs 0.283 af

Subcatchment 2S: Runoff Area=48,983 sf 28.14% Impervious Runoff Depth>1.27"
Flow Length=185' Slope=0.0243 '/' Tc=23.5 min CN=85 Runoff=1.54 cfs 0.119 af

Reach AP-1: Easterly Property Line Inflow=2.90 cfs 0.283 af
Outflow=2.90 cfs 0.283 af

Reach AP-2: Westerly Property Line Inflow=1.54 cfs 0.119 af
Outflow=1.54 cfs 0.119 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.402 af Average Runoff Depth = 1.09"
88.64% Pervious = 3.932 ac 11.36% Impervious = 0.504 ac

Summary for Subcatchment 1S:

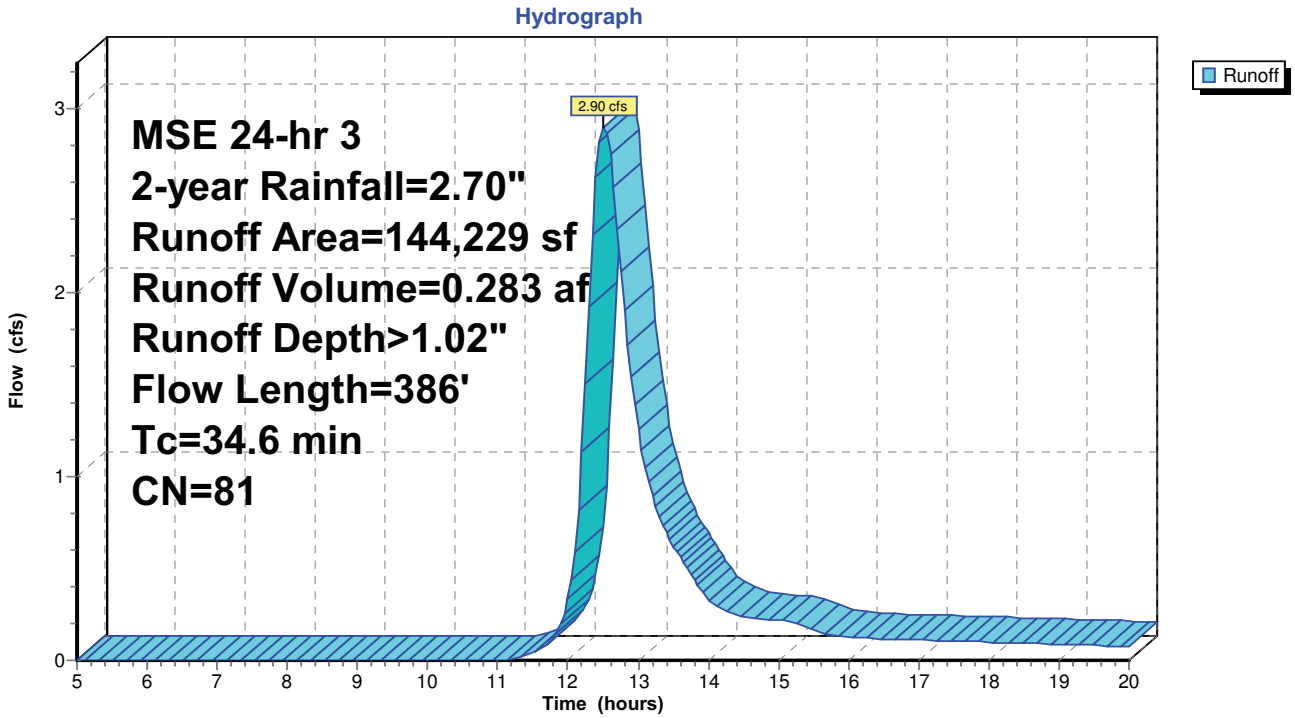
Runoff = 2.90 cfs @ 12.51 hrs, Volume= 0.283 af, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

Area (sf)	CN	Description
8,167	98	Paved parking, HSG D
136,062	80	>75% Grass cover, Good, HSG D
144,229	81	Weighted Average
136,062		94.34% Pervious Area
8,167		5.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0250	0.15		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.4	86	0.0581	3.88		**Shallow Concentrated Flow, BC** Unpaved Kv= 16.1 fps
34.6	386	Total			

Subcatchment 1S:



Summary for Subcatchment 2S:

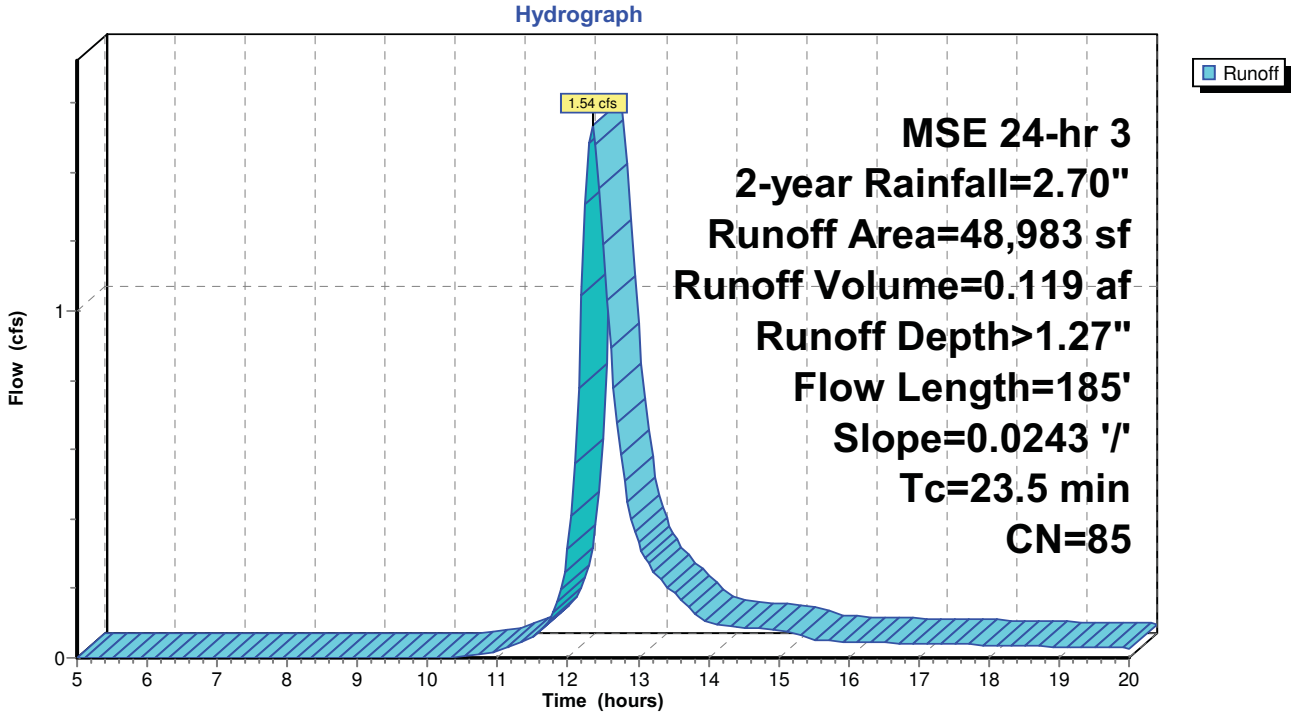
Runoff = 1.54 cfs @ 12.35 hrs, Volume= 0.119 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

Area (sf)	CN	Description
13,784	98	Paved parking, HSG D
35,199	80	>75% Grass cover, Good, HSG D
48,983	85	Weighted Average
35,199		71.86% Pervious Area
13,784		28.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	185	0.0243	0.13		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

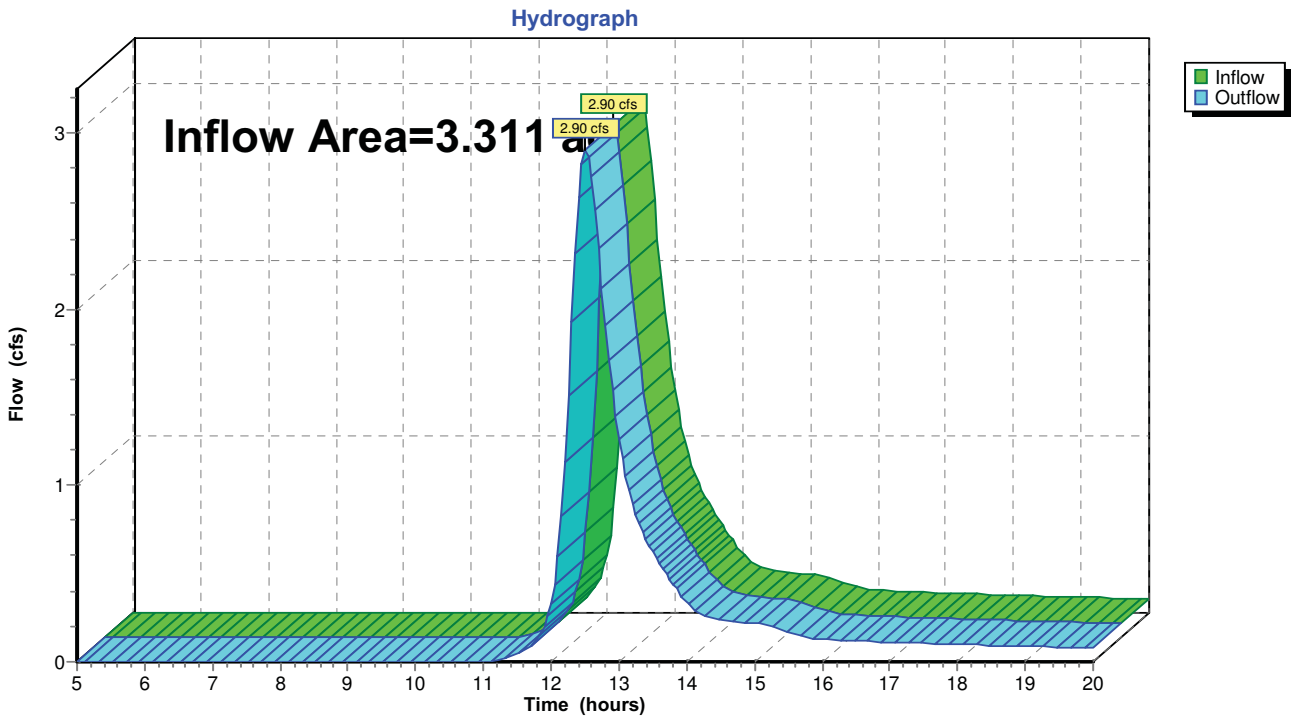


Summary for Reach AP-1: Easterly Property Line

Inflow Area =	3.311 ac,	5.66% Impervious,	Inflow Depth >	1.02"	for 2-year event
Inflow =	2.90 cfs @	12.51 hrs,	Volume=	0.283 af	
Outflow =	2.90 cfs @	12.51 hrs,	Volume=	0.283 af,	Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-1: Easterly Property Line

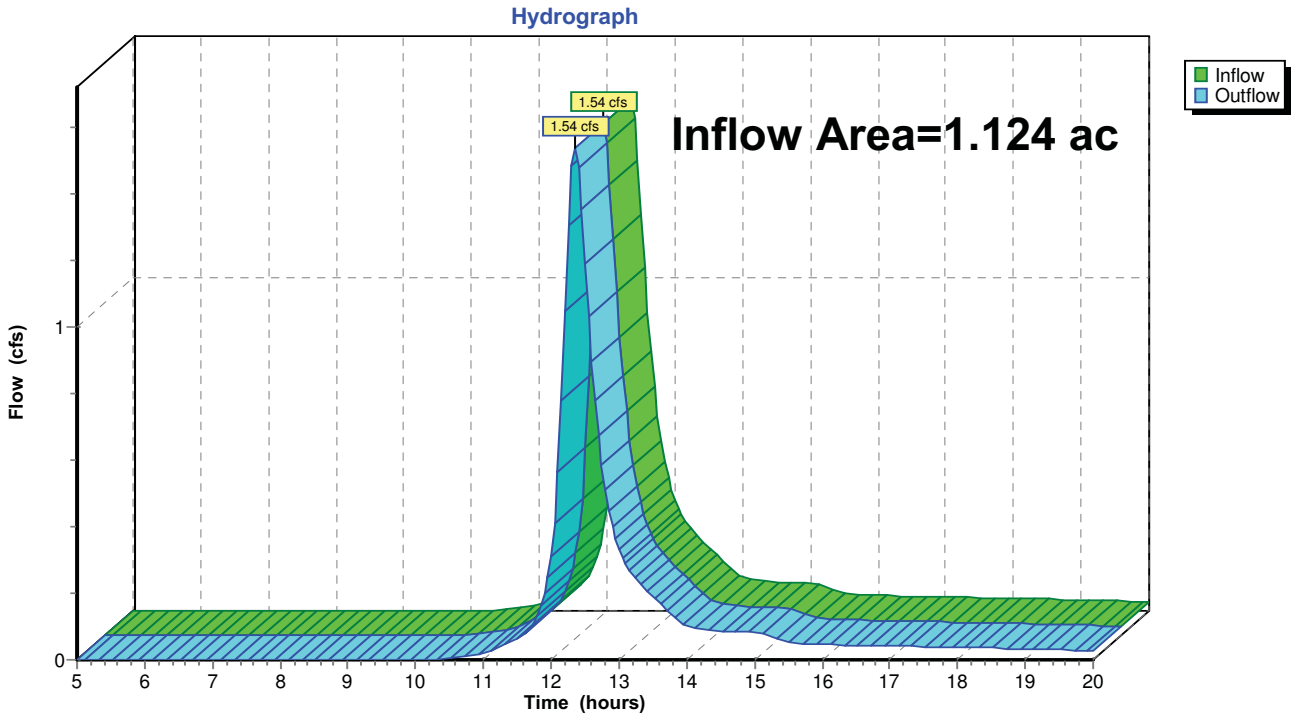


Summary for Reach AP-2: Westerly Property Line

Inflow Area = 1.124 ac, 28.14% Impervious, Inflow Depth > 1.27" for 2-year event
Inflow = 1.54 cfs @ 12.35 hrs, Volume= 0.119 af
Outflow = 1.54 cfs @ 12.35 hrs, Volume= 0.119 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-2: Westerly Property Line



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,229 sf 5.66% Impervious Runoff Depth>1.86"
Flow Length=386' Tc=34.6 min CN=81 Runoff=5.34 cfs 0.514 af

Subcatchment 2S: Runoff Area=48,983 sf 28.14% Impervious Runoff Depth>2.19"
Flow Length=185' Slope=0.0243 '/' Tc=23.5 min CN=85 Runoff=2.63 cfs 0.205 af

Reach AP-1: Easterly Property Line Inflow=5.34 cfs 0.514 af
Outflow=5.34 cfs 0.514 af

Reach AP-2: Westerly Property Line Inflow=2.63 cfs 0.205 af
Outflow=2.63 cfs 0.205 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.719 af Average Runoff Depth = 1.95"
88.64% Pervious = 3.932 ac 11.36% Impervious = 0.504 ac

Summary for Subcatchment 1S:

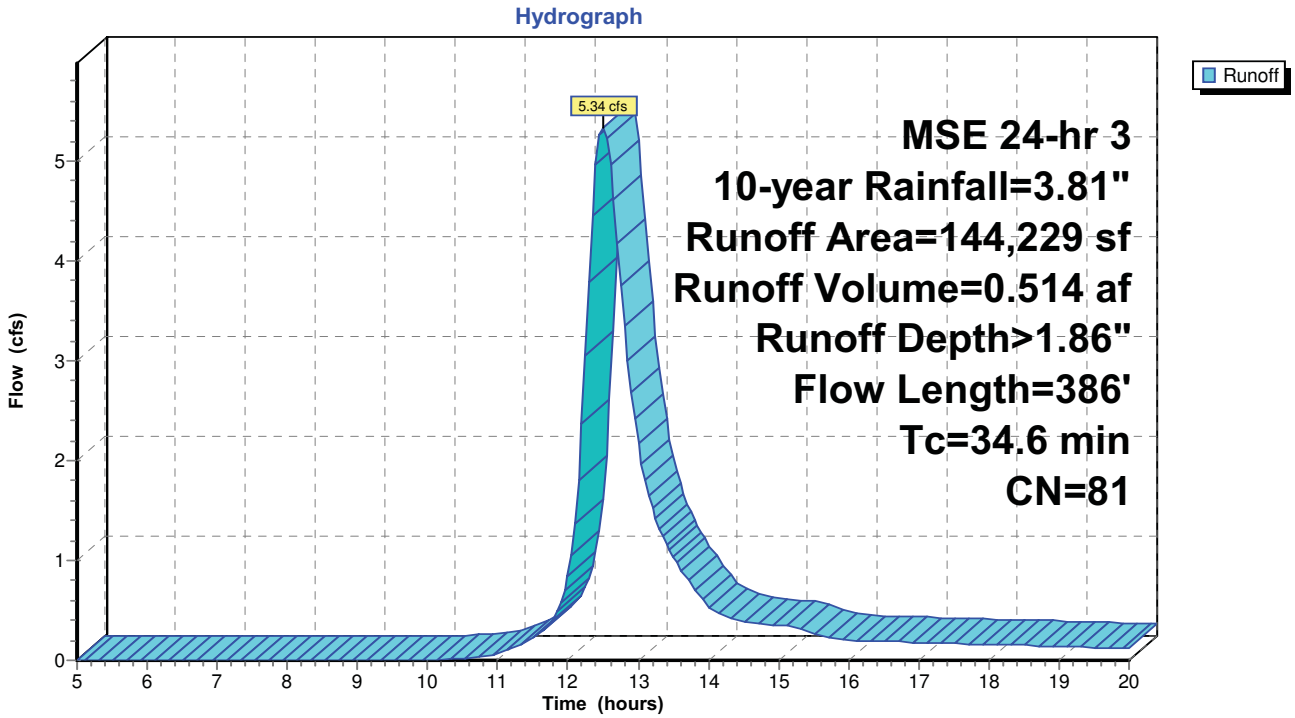
Runoff = 5.34 cfs @ 12.50 hrs, Volume= 0.514 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

Area (sf)	CN	Description
8,167	98	Paved parking, HSG D
136,062	80	>75% Grass cover, Good, HSG D
144,229	81	Weighted Average
136,062		94.34% Pervious Area
8,167		5.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0250	0.15		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.4	86	0.0581	3.88		**Shallow Concentrated Flow, BC** Unpaved Kv= 16.1 fps
34.6	386	Total			

Subcatchment 1S:



Summary for Subcatchment 2S:

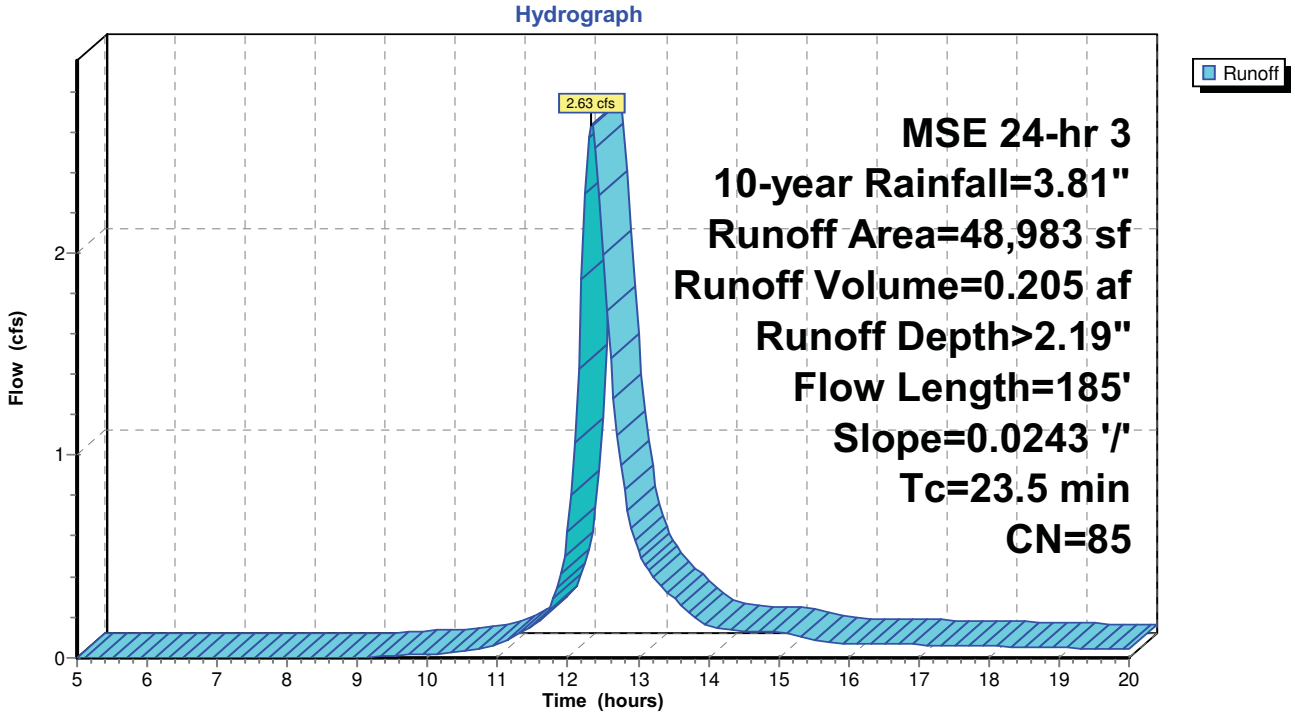
Runoff = 2.63 cfs @ 12.34 hrs, Volume= 0.205 af, Depth> 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

Area (sf)	CN	Description
13,784	98	Paved parking, HSG D
35,199	80	>75% Grass cover, Good, HSG D
48,983	85	Weighted Average
35,199		71.86% Pervious Area
13,784		28.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	185	0.0243	0.13		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

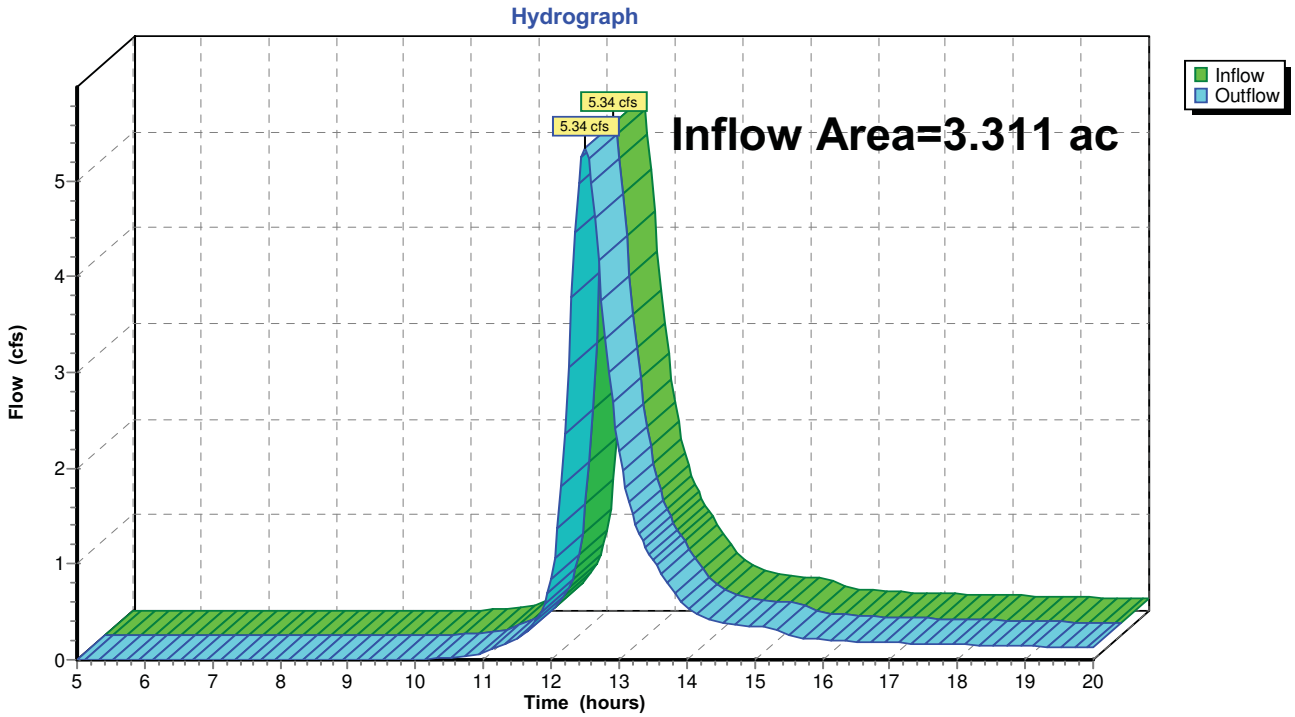


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.311 ac, 5.66% Impervious, Inflow Depth > 1.86" for 10-year event
Inflow = 5.34 cfs @ 12.50 hrs, Volume= 0.514 af
Outflow = 5.34 cfs @ 12.50 hrs, Volume= 0.514 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-1: Easterly Property Line

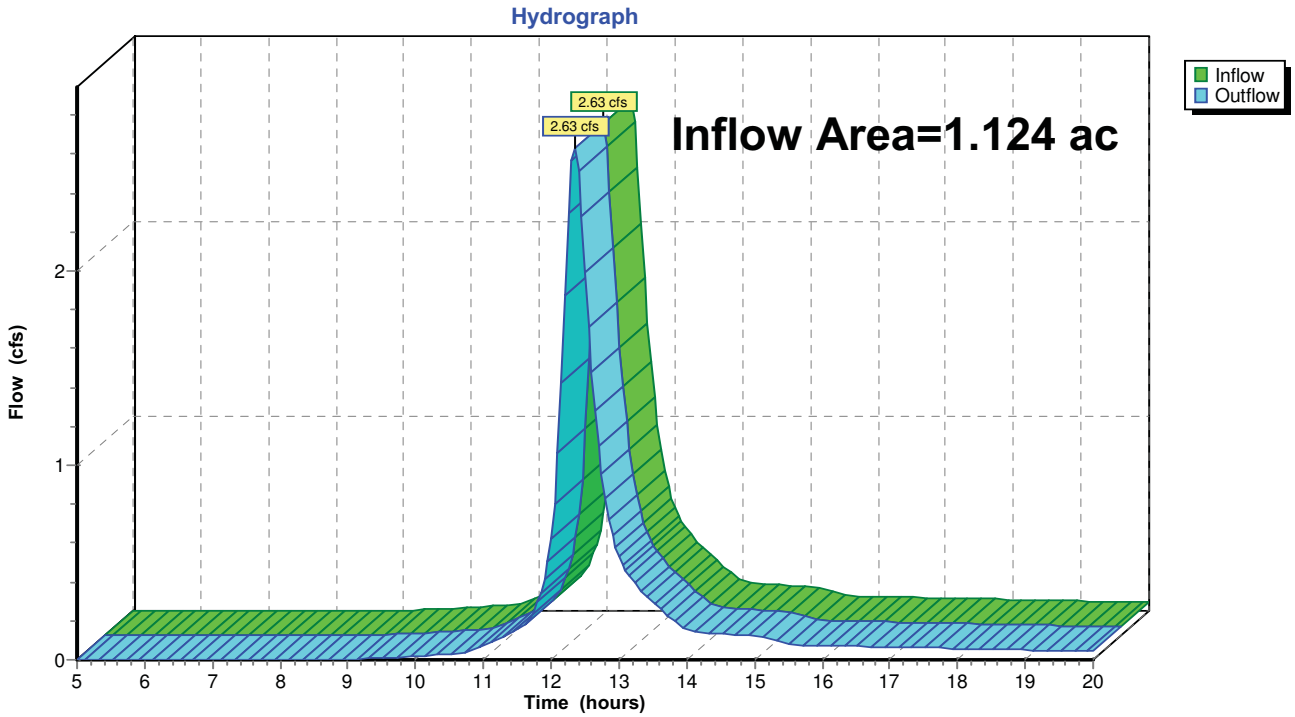


Summary for Reach AP-2: Westerly Property Line

Inflow Area = 1.124 ac, 28.14% Impervious, Inflow Depth > 2.19" for 10-year event
Inflow = 2.63 cfs @ 12.34 hrs, Volume= 0.205 af
Outflow = 2.63 cfs @ 12.34 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-2: Westerly Property Line



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,229 sf 5.66% Impervious Runoff Depth>3.87"
Flow Length=386' Tc=34.6 min CN=81 Runoff=10.98 cfs 1.068 af

Subcatchment 2S: Runoff Area=48,983 sf 28.14% Impervious Runoff Depth>4.30"
Flow Length=185' Slope=0.0243 '/' Tc=23.5 min CN=85 Runoff=5.06 cfs 0.403 af

Reach AP-1: Easterly Property Line Inflow=10.98 cfs 1.068 af
Outflow=10.98 cfs 1.068 af

Reach AP-2: Westerly Property Line Inflow=5.06 cfs 0.403 af
Outflow=5.06 cfs 0.403 af

Total Runoff Area = 4.436 ac Runoff Volume = 1.470 af Average Runoff Depth = 3.98"
88.64% Pervious = 3.932 ac 11.36% Impervious = 0.504 ac

Summary for Subcatchment 1S:

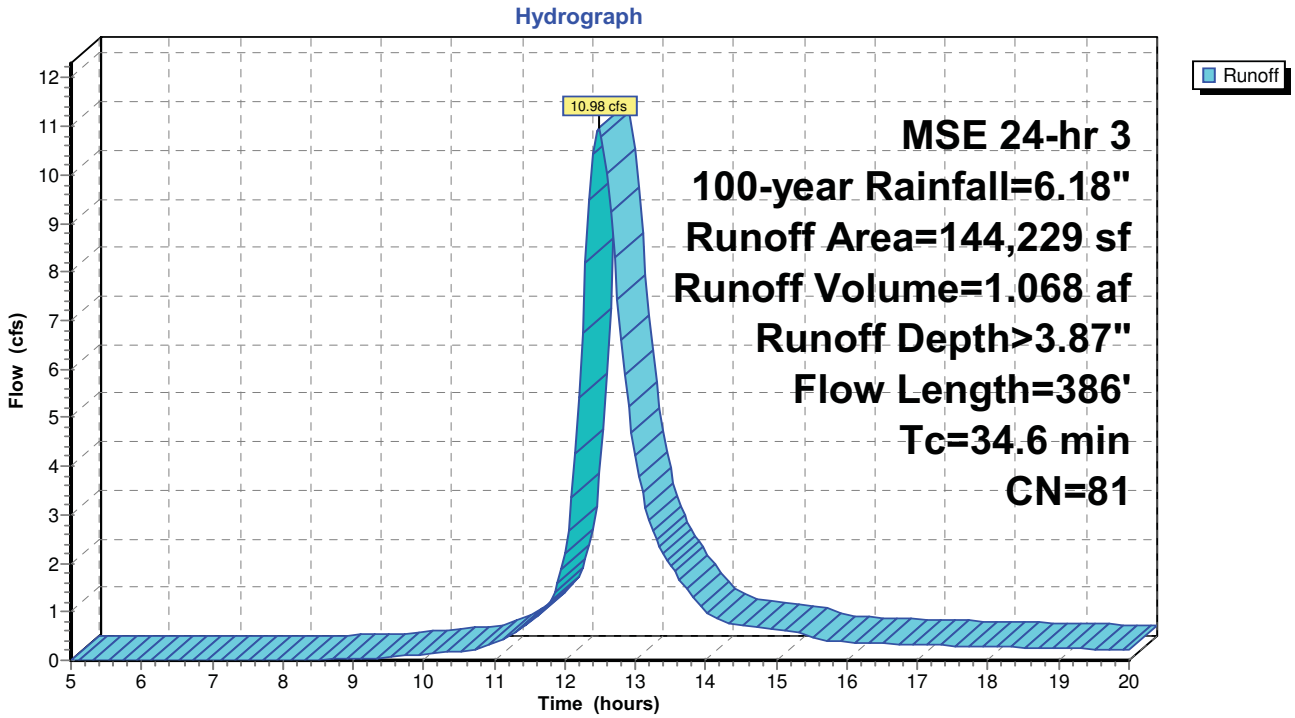
Runoff = 10.98 cfs @ 12.48 hrs, Volume= 1.068 af, Depth> 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

Area (sf)	CN	Description
8,167	98	Paved parking, HSG D
136,062	80	>75% Grass cover, Good, HSG D
144,229	81	Weighted Average
136,062		94.34% Pervious Area
8,167		5.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0250	0.15		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.4	86	0.0581	3.88		**Shallow Concentrated Flow, BC** Unpaved Kv= 16.1 fps
34.6	386	Total			

Subcatchment 1S:



Summary for Subcatchment 2S:

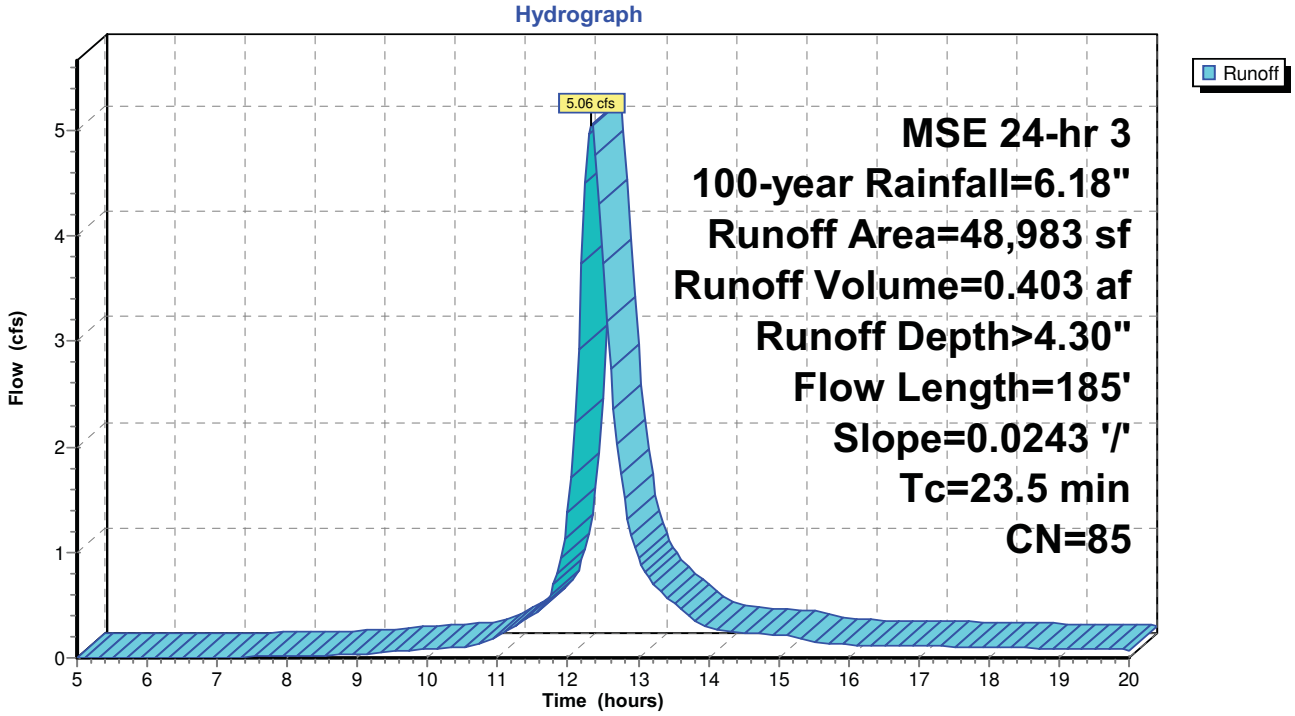
Runoff = 5.06 cfs @ 12.34 hrs, Volume= 0.403 af, Depth> 4.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

Area (sf)	CN	Description
13,784	98	Paved parking, HSG D
35,199	80	>75% Grass cover, Good, HSG D
48,983	85	Weighted Average
35,199		71.86% Pervious Area
13,784		28.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	185	0.0243	0.13		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

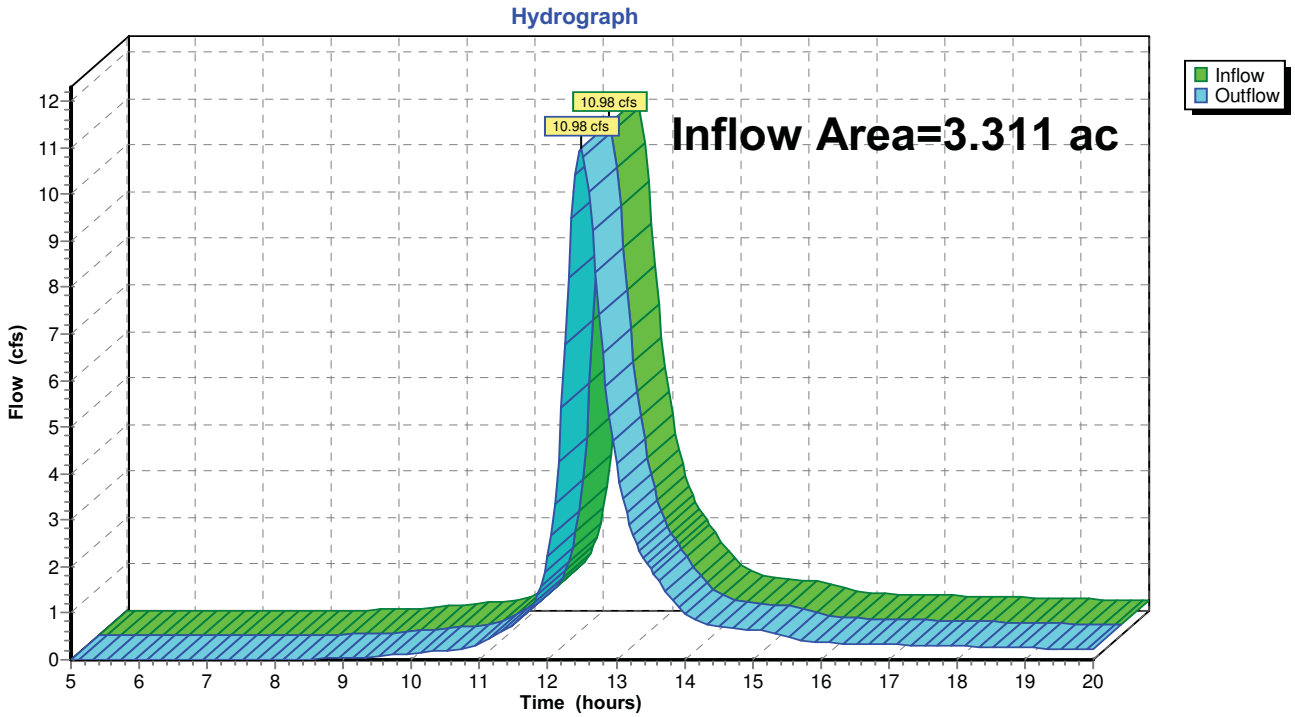


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.311 ac, 5.66% Impervious, Inflow Depth > 3.87" for 100-year event
Inflow = 10.98 cfs @ 12.48 hrs, Volume= 1.068 af
Outflow = 10.98 cfs @ 12.48 hrs, Volume= 1.068 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach AP-1: Easterly Property Line

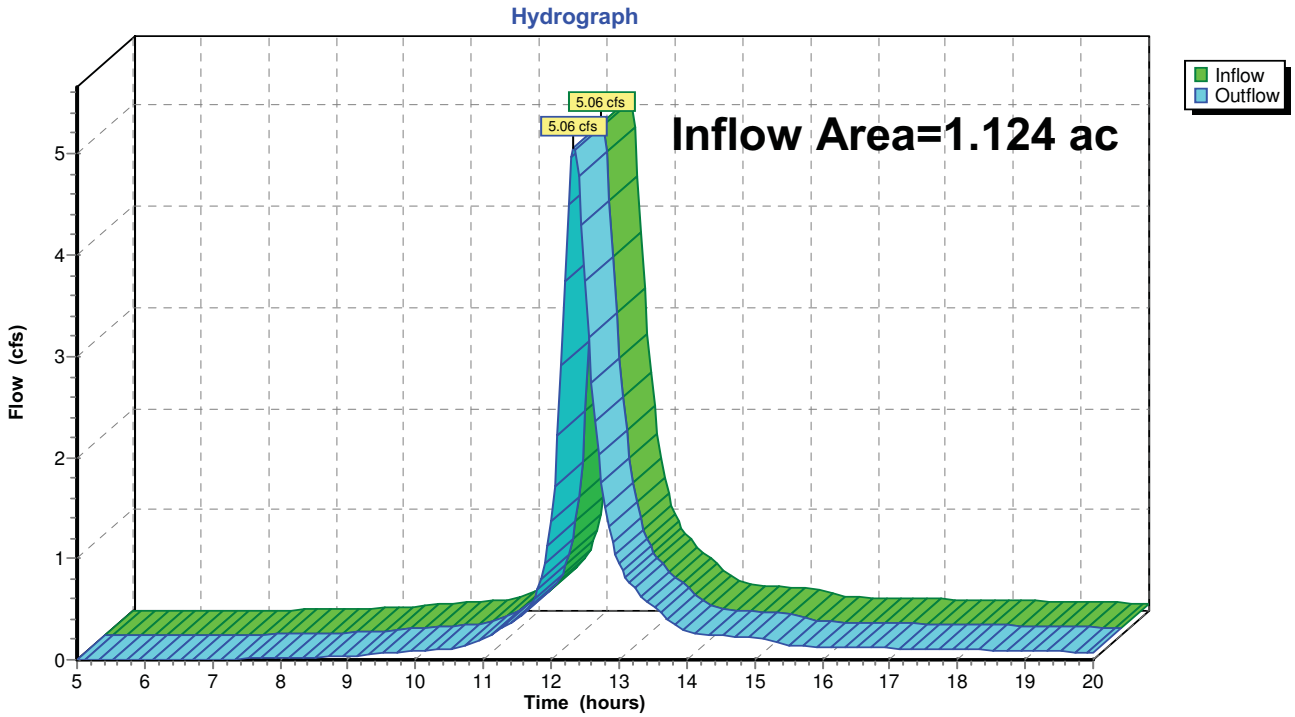


Summary for Reach AP-2: Westerly Property Line

Inflow Area = 1.124 ac, 28.14% Impervious, Inflow Depth > 4.30" for 100-year event
Inflow = 5.06 cfs @ 12.34 hrs, Volume= 0.403 af
Outflow = 5.06 cfs @ 12.34 hrs, Volume= 0.403 af, Atten= 0%, Lag= 0.0 min

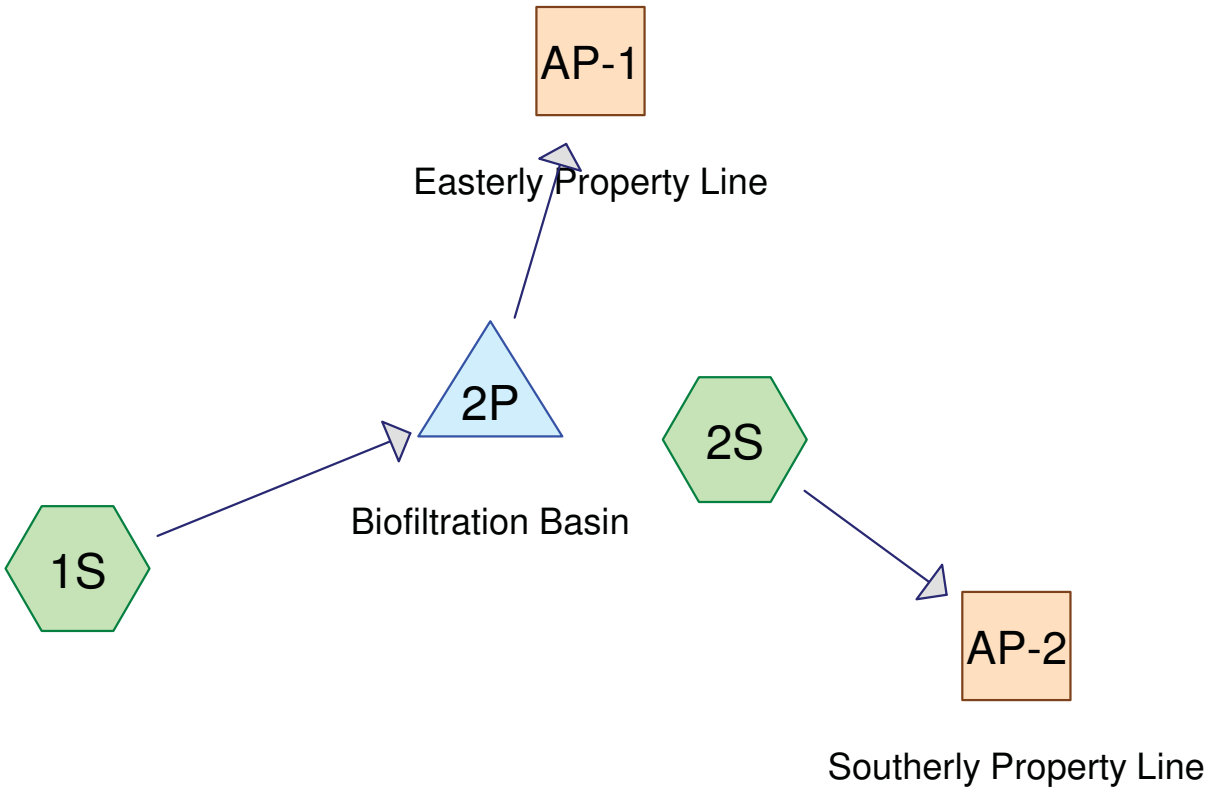
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

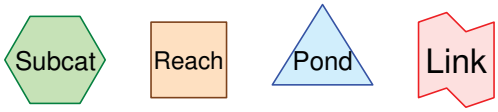
Reach AP-2: Westerly Property Line



APPENDIX B

PROPOSED
1, 2, 10, AND 100-YEAR
HYDROCAD MODEL





Routing Diagram for 9344_PR
Prepared by Farris, Hansen & Associates, Printed 6/3/2016
HydroCAD® 10.00-17 s/n 05638 © 2016 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,334 sf 45.18% Impervious Runoff Depth>1.24"
Tc=10.0 min CN=88 Runoff=6.51 cfs 0.343 af

Subcatchment 2S: Runoff Area=48,878 sf 5.55% Impervious Runoff Depth>0.82"
Flow Length=256' Slope=0.0254 '/' Tc=29.9 min CN=81 Runoff=0.85 cfs 0.077 af

Reach AP-1: Easterly Property Line Inflow=1.26 cfs 0.342 af
Outflow=1.26 cfs 0.342 af

Reach AP-2: Southerly Property Line Inflow=0.85 cfs 0.077 af
Outflow=0.85 cfs 0.077 af

Pond 2P: Biofiltration Basin Peak Elev=809.27' Storage=5,211 cf Inflow=6.51 cfs 0.343 af
Outflow=1.26 cfs 0.342 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.419 af Average Runoff Depth = 1.13"
64.84% Pervious = 2.876 ac 35.16% Impervious = 1.559 ac

Summary for Subcatchment 1S:

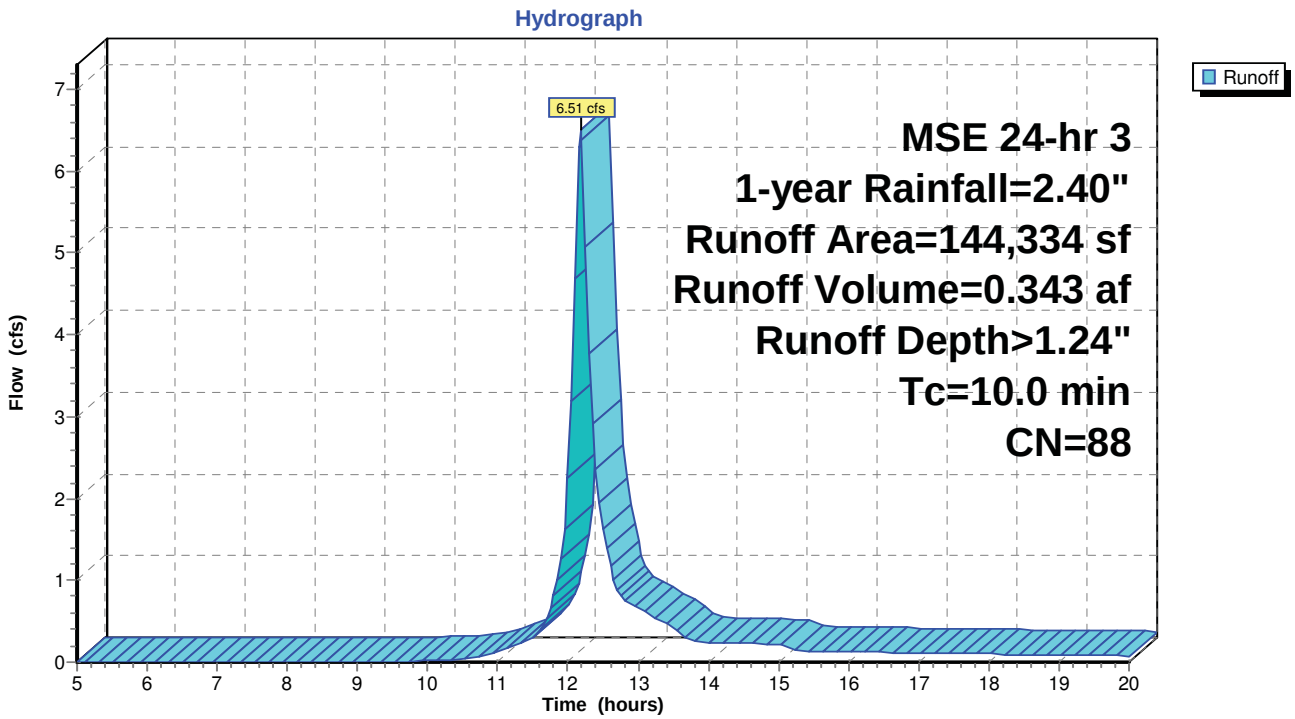
Runoff = 6.51 cfs @ 12.18 hrs, Volume= 0.343 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.40"

	Area (sf)	CN	Description
	29,605	98	Roofs, HSG D
	31,569	98	Paved parking, HSG D
*	4,037	98	Concrete Walks, HSG D
	79,123	80	>75% Grass cover, Good, HSG D
	144,334	88	Weighted Average
	79,123		54.82% Pervious Area
	65,211		45.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S:



Summary for Subcatchment 2S:

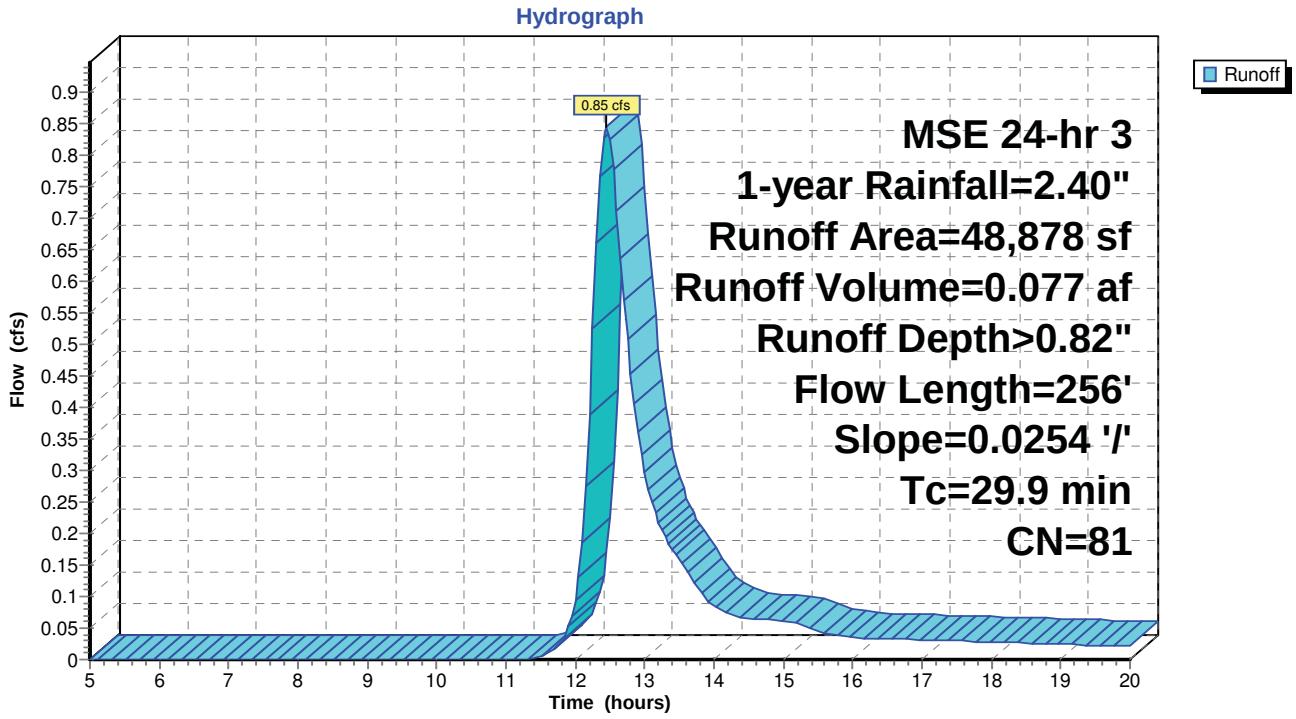
Runoff = 0.85 cfs @ 12.45 hrs, Volume= 0.077 af, Depth> 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.40"

	Area (sf)	CN	Description
	1,541	98	Paved parking, HSG D
*	1,042	98	Concrete Walks, HSG D
	130	98	Roofs, HSG D
	46,165	80	>75% Grass cover, Good, HSG D
	48,878	81	Weighted Average
	46,165		94.45% Pervious Area
	2,713		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	256	0.0254	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

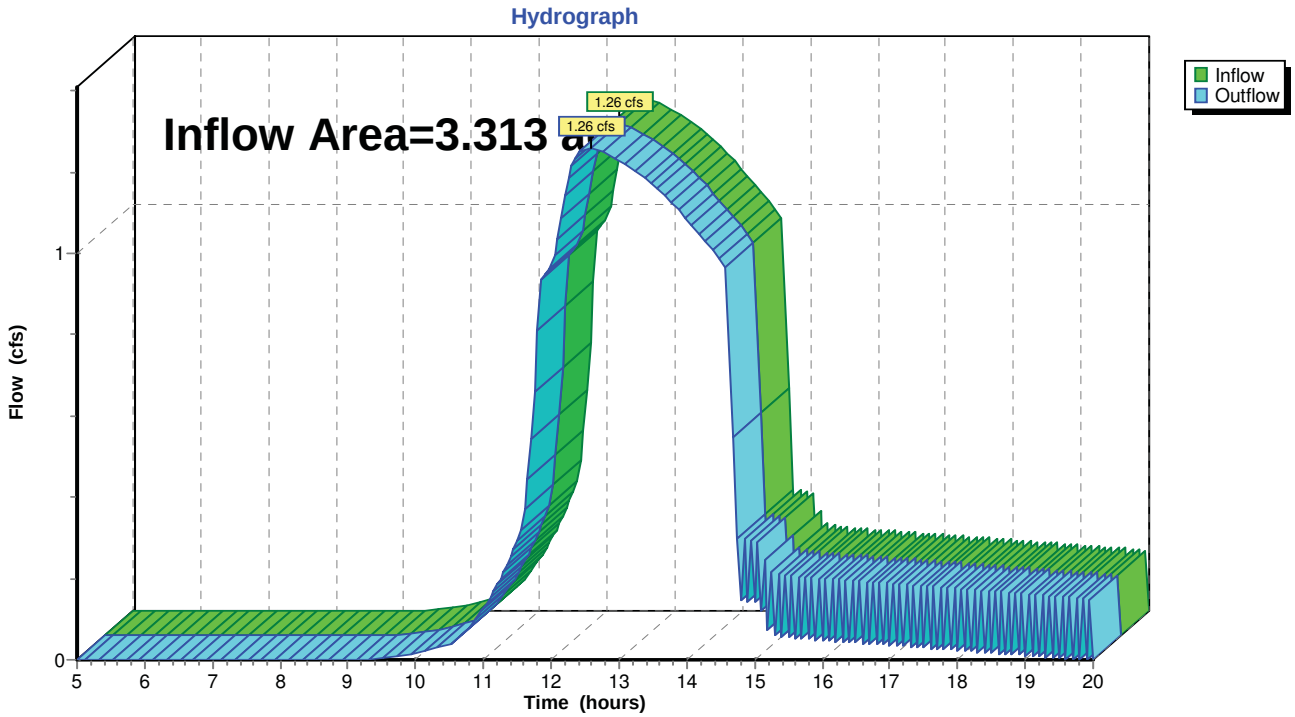


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 1.24" for 1-year event
Inflow = 1.26 cfs @ 12.58 hrs, Volume= 0.342 af
Outflow = 1.26 cfs @ 12.58 hrs, Volume= 0.342 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-1: Easterly Property Line

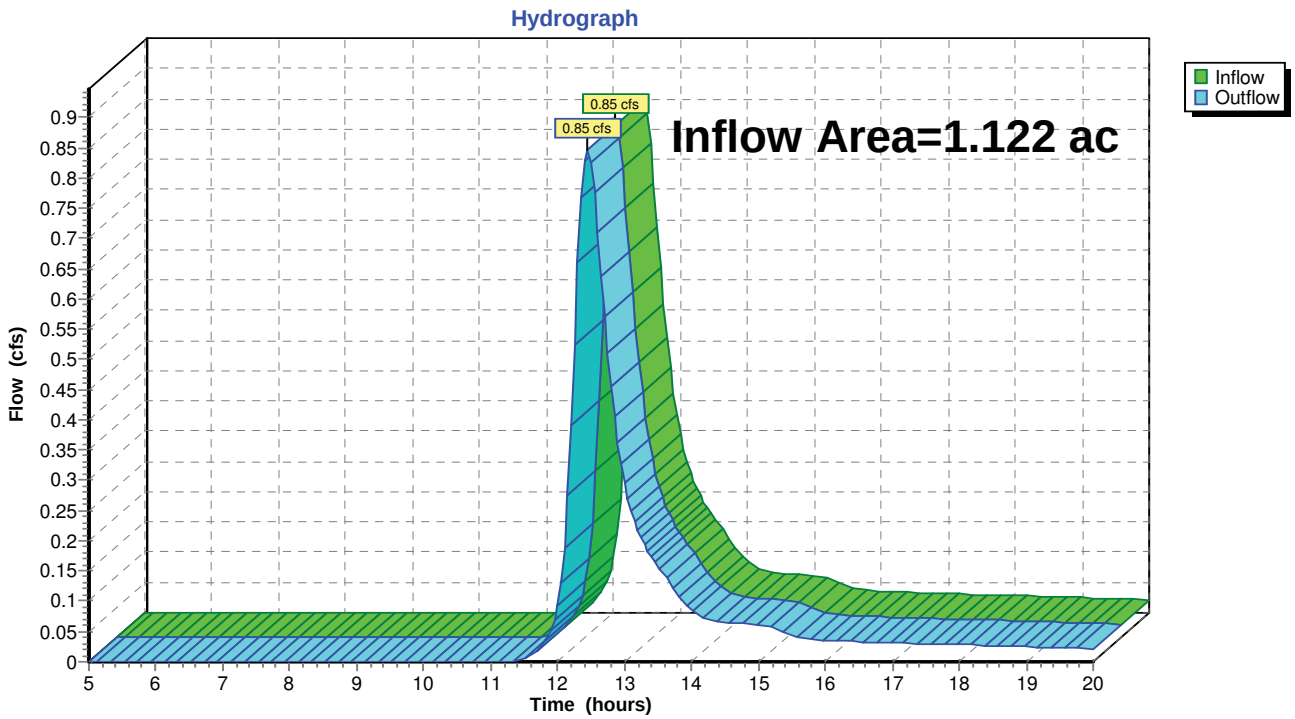


Summary for Reach AP-2: Southerly Property Line

Inflow Area = 1.122 ac, 5.55% Impervious, Inflow Depth > 0.82" for 1-year event
Inflow = 0.85 cfs @ 12.45 hrs, Volume= 0.077 af
Outflow = 0.85 cfs @ 12.45 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-2: Southerly Property Line



Summary for Pond 2P: Biofiltration Basin

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 1.24" for 1-year event
Inflow = 6.51 cfs @ 12.18 hrs, Volume= 0.343 af
Outflow = 1.26 cfs @ 12.58 hrs, Volume= 0.342 af, Atten= 81%, Lag= 24.2 min
Primary = 1.26 cfs @ 12.58 hrs, Volume= 0.342 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 809.27' @ 12.58 hrs Surf.Area= 7,918 sf Storage= 5,211 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 32.3 min (817.3 - 785.1)

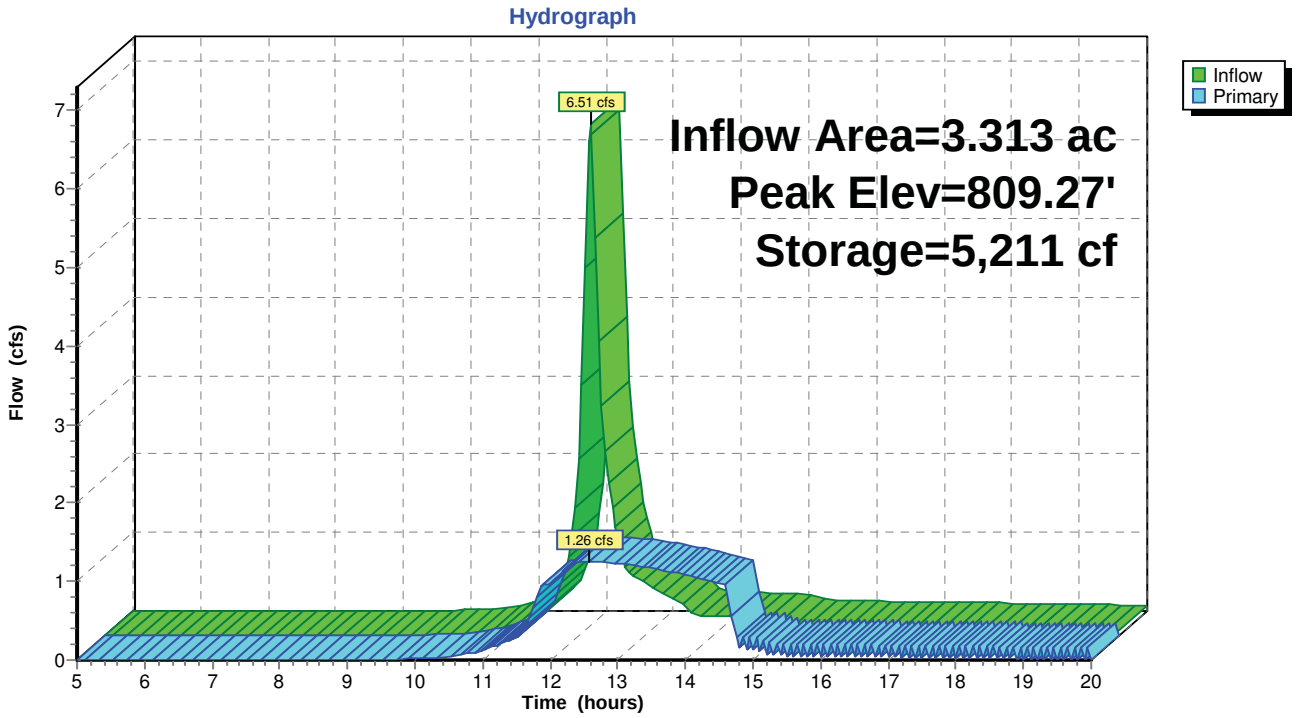
Volume	Invert	Avail.Storage	Storage Description
#1	808.50'	38,410 cf	**Bioretention Area (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
808.50	5,601	0	0
809.00	7,090	3,173	3,173
810.00	10,139	8,615	11,787
811.00	13,287	11,713	23,500
812.00	16,532	14,910	38,410

Device	Routing	Invert	Outlet Devices
#1	Primary	807.25'	**15.0" Round Culvert** L= 40.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 807.25' / 806.85' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	807.25'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	810.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 2.0' Crest Height
#4	Primary	811.50'	**30.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.26 cfs @ 12.58 hrs HW=809.27' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.26 cfs of 6.16 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.26 cfs @ 6.41 fps)
  - **3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Biofiltration Basin



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,334 sf 45.18% Impervious Runoff Depth>1.49"
Tc=10.0 min CN=88 Runoff=7.78 cfs 0.411 af

Subcatchment 2S: Runoff Area=48,878 sf 5.55% Impervious Runoff Depth>1.03"
Flow Length=256' Slope=0.0254 '/' Tc=29.9 min CN=81 Runoff=1.07 cfs 0.096 af

Reach AP-1: Easterly Property Line Inflow=1.32 cfs 0.413 af
Outflow=1.32 cfs 0.413 af

Reach AP-2: Southerly Property Line Inflow=1.07 cfs 0.096 af
Outflow=1.07 cfs 0.096 af

Pond 2P: Biofiltration Basin Peak Elev=809.46' Storage=6,769 cf Inflow=7.78 cfs 0.411 af
Outflow=1.32 cfs 0.413 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.507 af Average Runoff Depth = 1.37"
64.84% Pervious = 2.876 ac 35.16% Impervious = 1.559 ac

Summary for Subcatchment 1S:

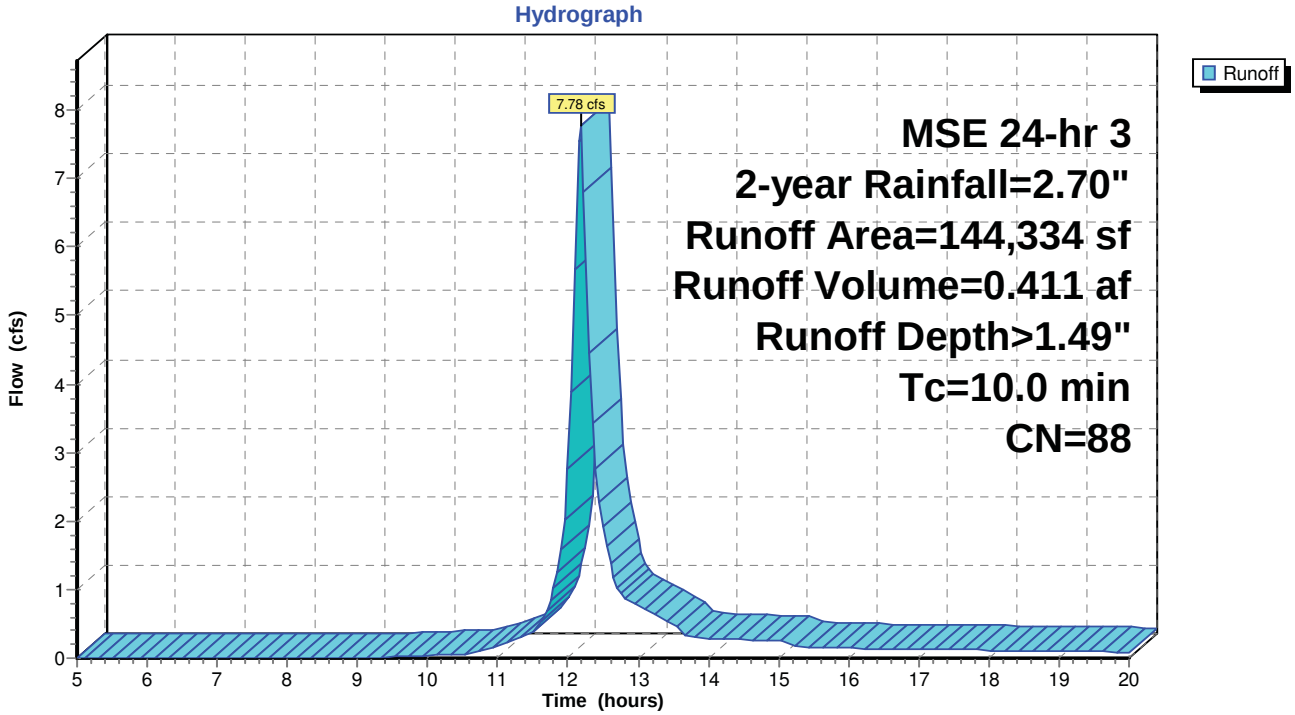
Runoff = 7.78 cfs @ 12.18 hrs, Volume= 0.411 af, Depth> 1.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
	29,605	98	Roofs, HSG D
	31,569	98	Paved parking, HSG D
*	4,037	98	Concrete Walks, HSG D
	79,123	80	>75% Grass cover, Good, HSG D
	144,334	88	Weighted Average
	79,123		54.82% Pervious Area
	65,211		45.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S:



Summary for Subcatchment 2S:

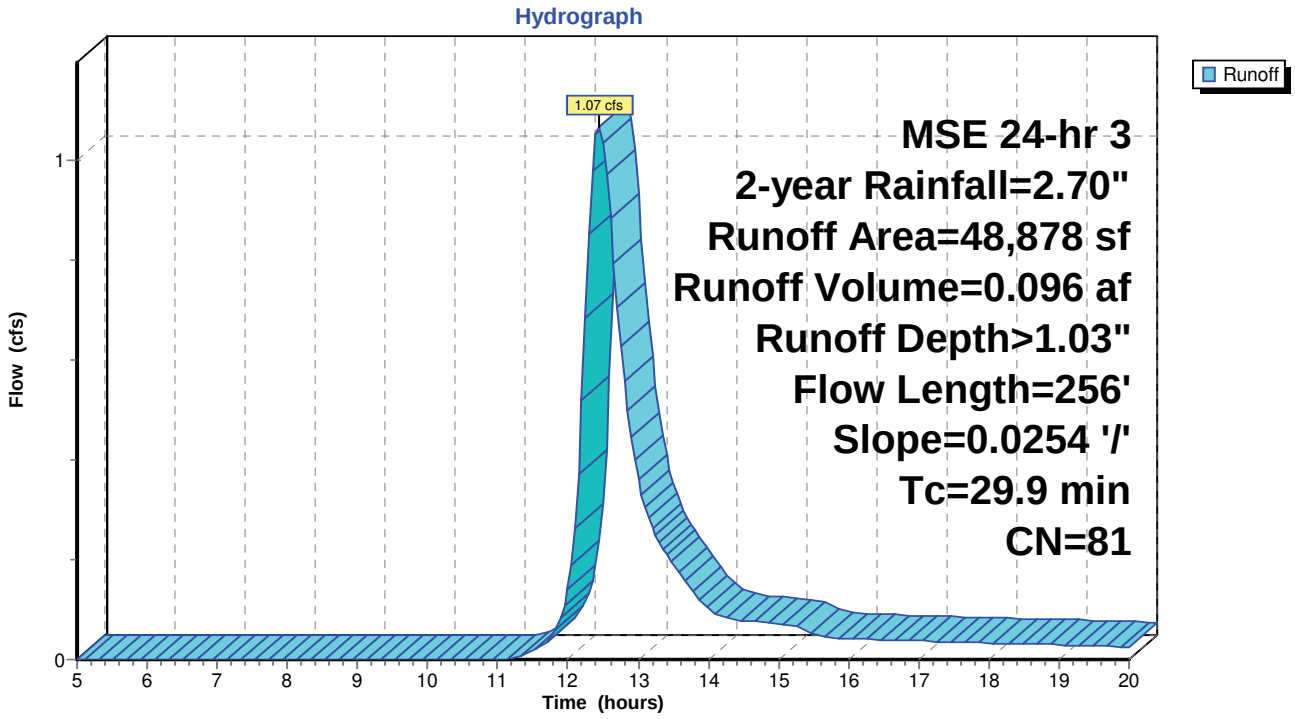
Runoff = 1.07 cfs @ 12.44 hrs, Volume= 0.096 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
	1,541	98	Paved parking, HSG D
*	1,042	98	Concrete Walks, HSG D
	130	98	Roofs, HSG D
	46,165	80	>75% Grass cover, Good, HSG D
	48,878	81	Weighted Average
	46,165		94.45% Pervious Area
	2,713		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	256	0.0254	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

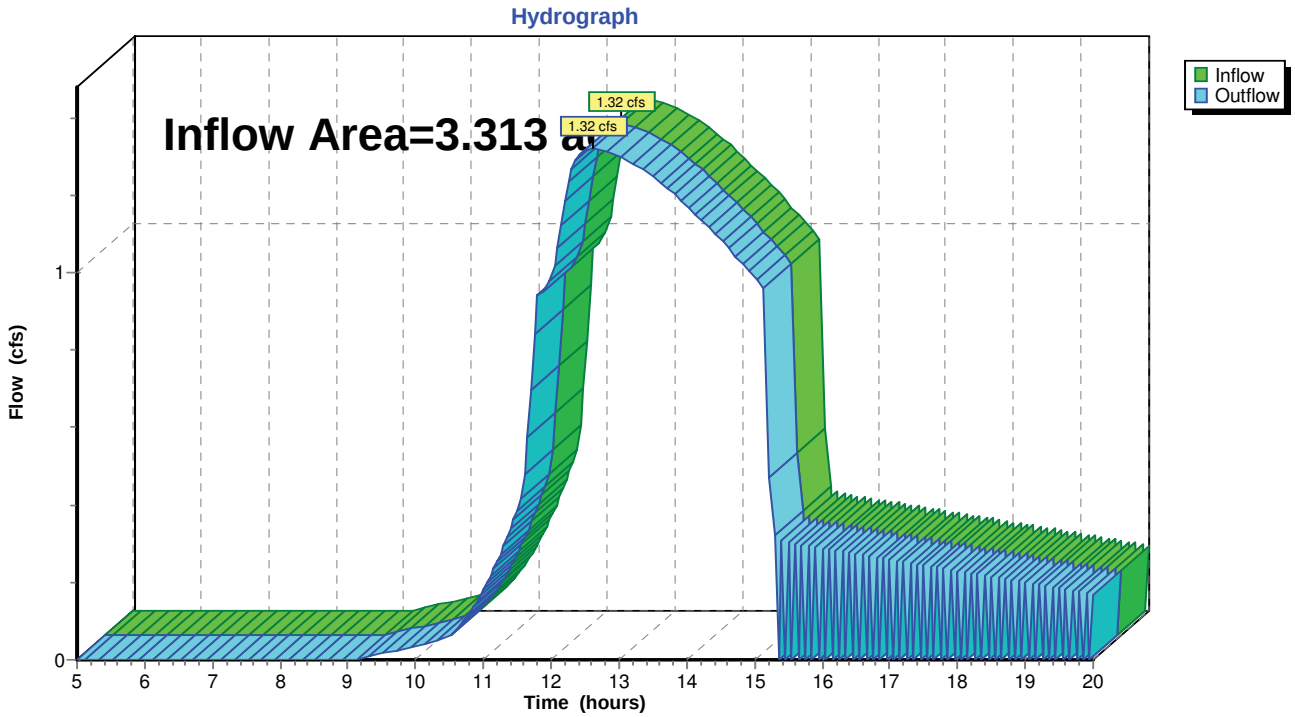


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 1.49" for 2-year event
Inflow = 1.32 cfs @ 12.61 hrs, Volume= 0.413 af
Outflow = 1.32 cfs @ 12.61 hrs, Volume= 0.413 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-1: Easterly Property Line

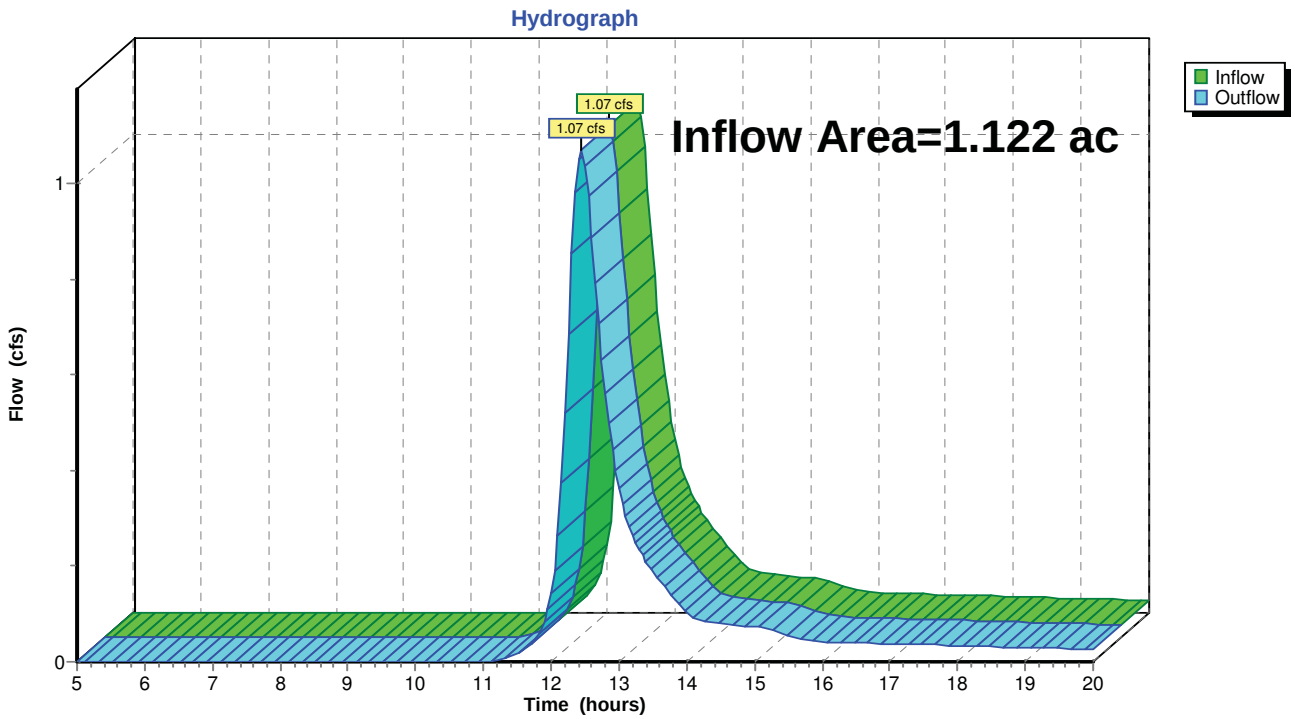


Summary for Reach AP-2: Southerly Property Line

Inflow Area =	1.122 ac,	5.55% Impervious,	Inflow Depth >	1.03"	for 2-year event
Inflow =	1.07 cfs @	12.44 hrs,	Volume=	0.096 af	
Outflow =	1.07 cfs @	12.44 hrs,	Volume=	0.096 af,	Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-2: Southerly Property Line



Summary for Pond 2P: Biofiltration Basin

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 1.49" for 2-year event
Inflow = 7.78 cfs @ 12.18 hrs, Volume= 0.411 af
Outflow = 1.32 cfs @ 12.61 hrs, Volume= 0.413 af, Atten= 83%, Lag= 26.2 min
Primary = 1.32 cfs @ 12.61 hrs, Volume= 0.413 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 809.46' @ 12.61 hrs Surf.Area= 8,497 sf Storage= 6,769 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 42.1 min (824.2 - 782.1)

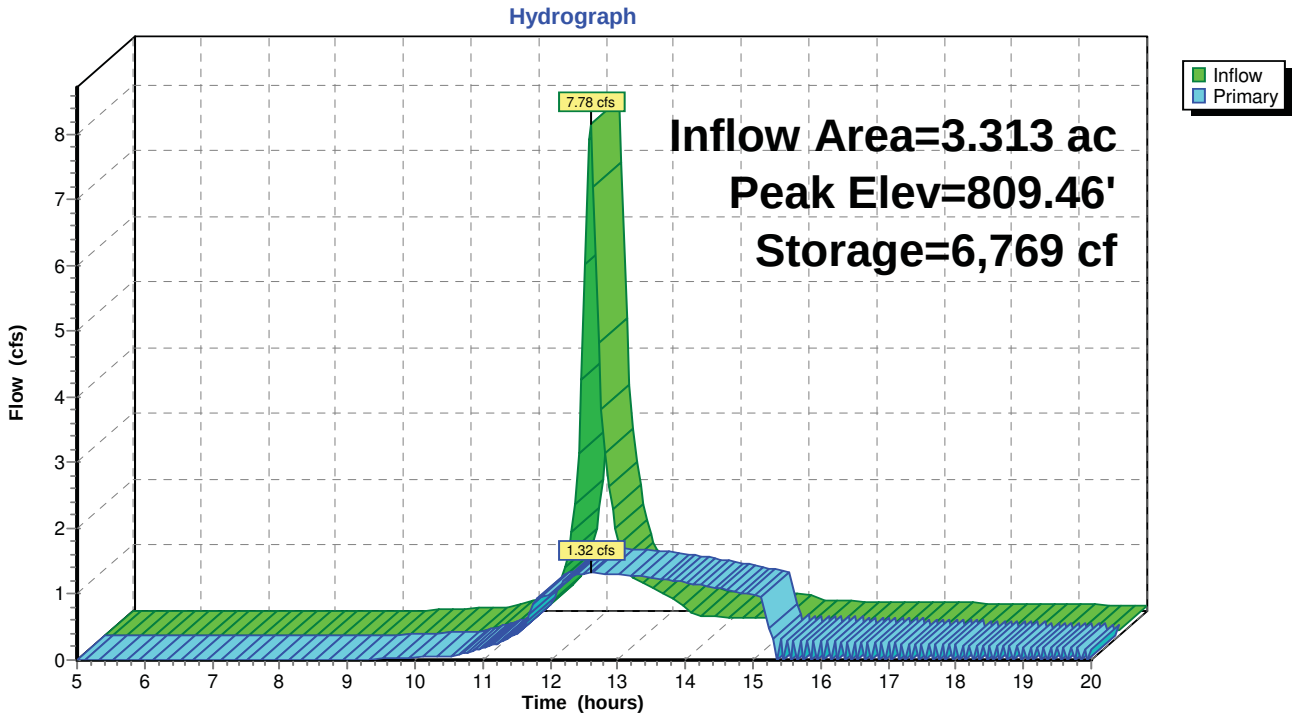
Volume	Invert	Avail.Storage	Storage Description
#1	808.50'	38,410 cf	**Bioretention Area (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
808.50	5,601	0	0
809.00	7,090	3,173	3,173
810.00	10,139	8,615	11,787
811.00	13,287	11,713	23,500
812.00	16,532	14,910	38,410

Device	Routing	Invert	Outlet Devices
#1	Primary	807.25'	**15.0" Round Culvert** L= 40.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 807.25' / 806.85' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	807.25'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	810.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 2.0' Crest Height
#4	Primary	811.50'	**30.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.32 cfs @ 12.61 hrs HW=809.46' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.32 cfs of 6.57 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.32 cfs @ 6.74 fps)
  - **3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Biofiltration Basin



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,334 sf 45.18% Impervious Runoff Depth>2.46"
Tc=10.0 min CN=88 Runoff=12.62 cfs 0.678 af

Subcatchment 2S: Runoff Area=48,878 sf 5.55% Impervious Runoff Depth>1.87"
Flow Length=256' Slope=0.0254 '/' Tc=29.9 min CN=81 Runoff=1.97 cfs 0.174 af

Reach AP-1: Easterly Property Line Inflow=1.88 cfs 0.680 af
Outflow=1.88 cfs 0.680 af

Reach AP-2: Southerly Property Line Inflow=1.97 cfs 0.174 af
Outflow=1.97 cfs 0.174 af

Pond 2P: Biofiltration Basin Peak Elev=810.11' Storage=12,902 cf Inflow=12.62 cfs 0.678 af
Outflow=1.88 cfs 0.680 af

Total Runoff Area = 4.436 ac Runoff Volume = 0.853 af Average Runoff Depth = 2.31"
64.84% Pervious = 2.876 ac 35.16% Impervious = 1.559 ac

Summary for Subcatchment 1S:

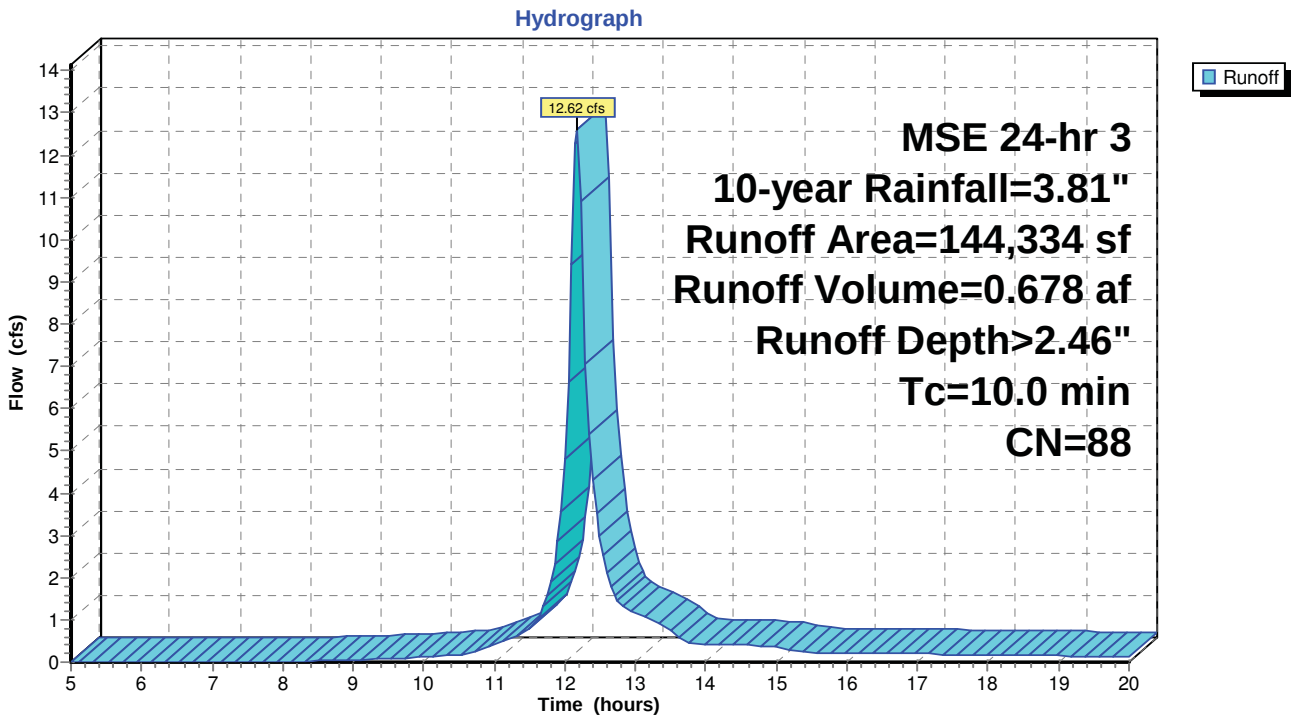
Runoff = 12.62 cfs @ 12.17 hrs, Volume= 0.678 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
	29,605	98	Roofs, HSG D
	31,569	98	Paved parking, HSG D
*	4,037	98	Concrete Walks, HSG D
	79,123	80	>75% Grass cover, Good, HSG D
	144,334	88	Weighted Average
	79,123		54.82% Pervious Area
	65,211		45.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S:



Summary for Subcatchment 2S:

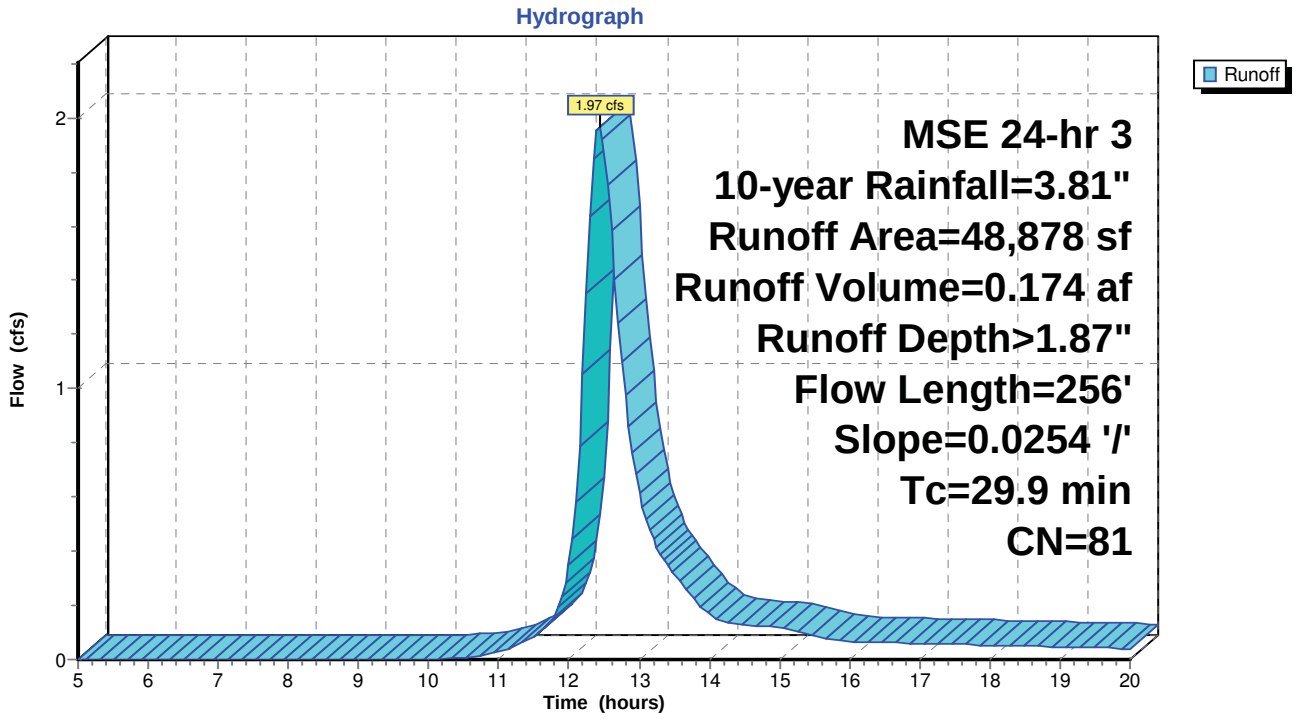
Runoff = 1.97 cfs @ 12.43 hrs, Volume= 0.174 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
	1,541	98	Paved parking, HSG D
*	1,042	98	Concrete Walks, HSG D
	130	98	Roofs, HSG D
	46,165	80	>75% Grass cover, Good, HSG D
	48,878	81	Weighted Average
	46,165		94.45% Pervious Area
	2,713		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	256	0.0254	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

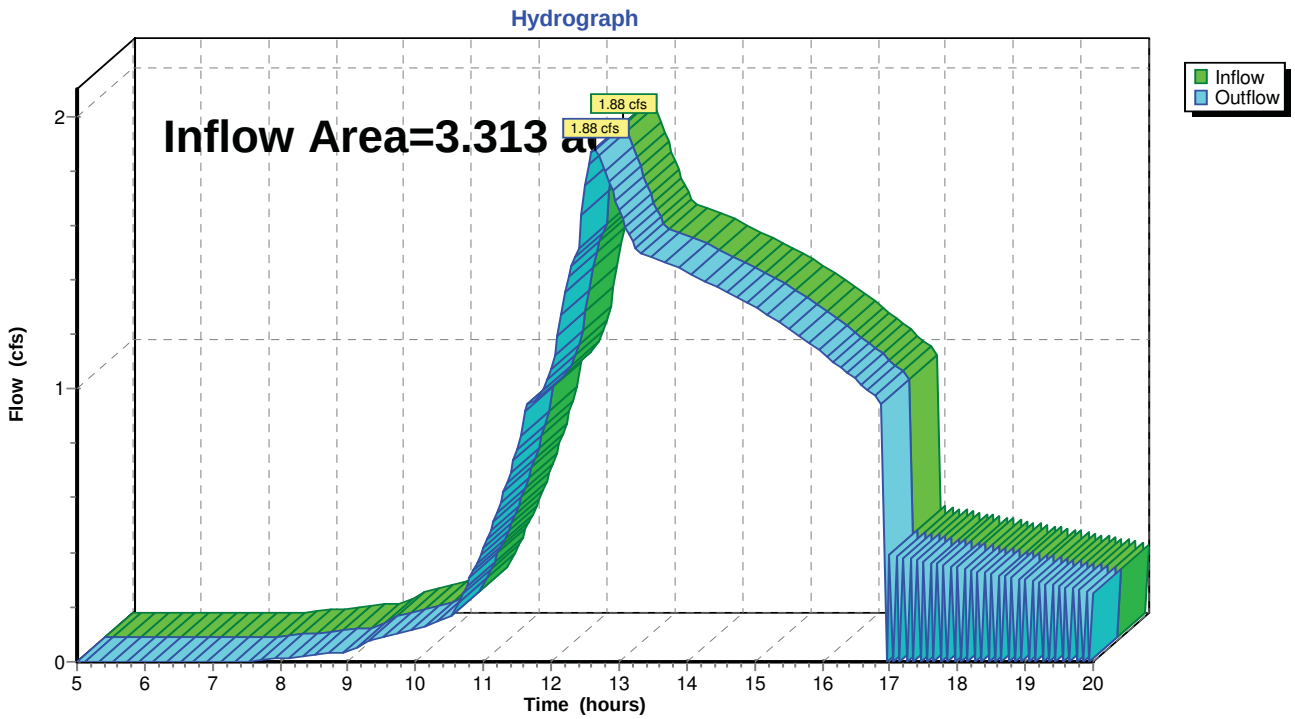


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 2.46" for 10-year event
Inflow = 1.88 cfs @ 12.64 hrs, Volume= 0.680 af
Outflow = 1.88 cfs @ 12.64 hrs, Volume= 0.680 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-1: Easterly Property Line

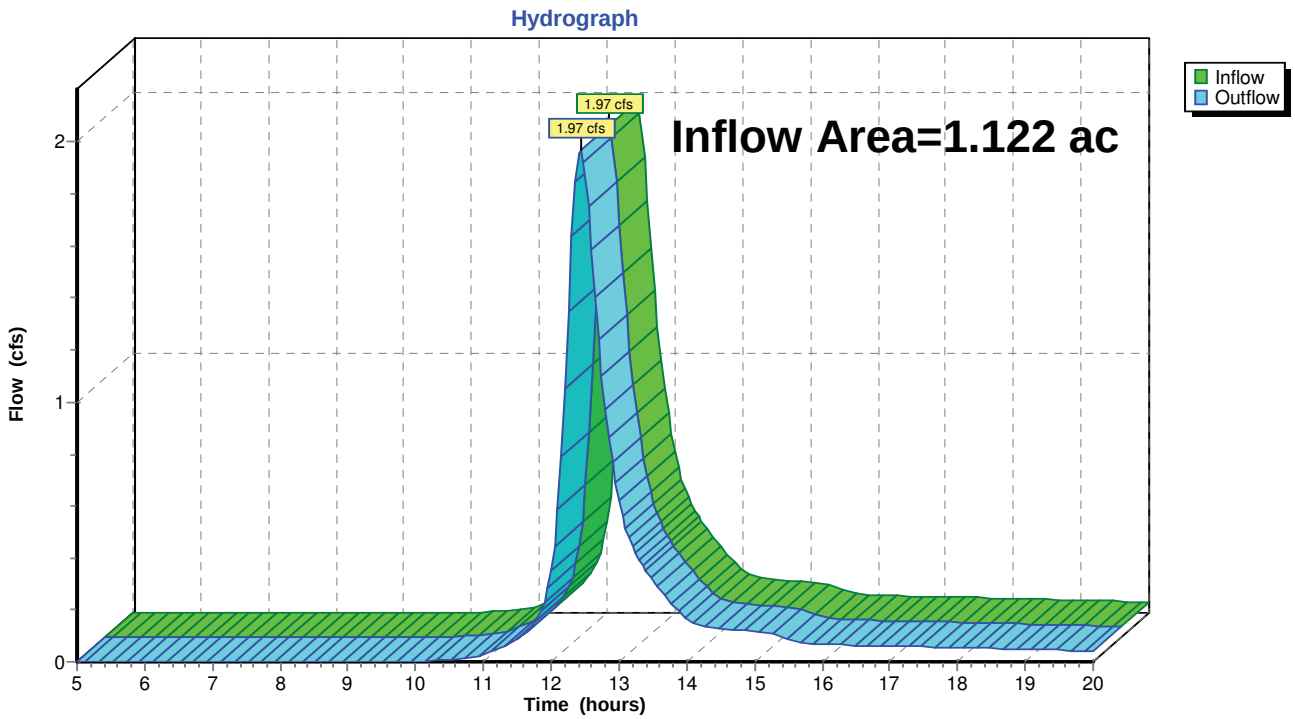


Summary for Reach AP-2: Southerly Property Line

Inflow Area = 1.122 ac, 5.55% Impervious, Inflow Depth > 1.87" for 10-year event
Inflow = 1.97 cfs @ 12.43 hrs, Volume= 0.174 af
Outflow = 1.97 cfs @ 12.43 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-2: Southerly Property Line



Summary for Pond 2P: Biofiltration Basin

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 2.46" for 10-year event
Inflow = 12.62 cfs @ 12.17 hrs, Volume= 0.678 af
Outflow = 1.88 cfs @ 12.64 hrs, Volume= 0.680 af, Atten= 85%, Lag= 28.0 min
Primary = 1.88 cfs @ 12.64 hrs, Volume= 0.680 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 810.11' @ 12.64 hrs Surf.Area= 10,479 sf Storage= 12,902 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 72.4 min (846.1 - 773.7)

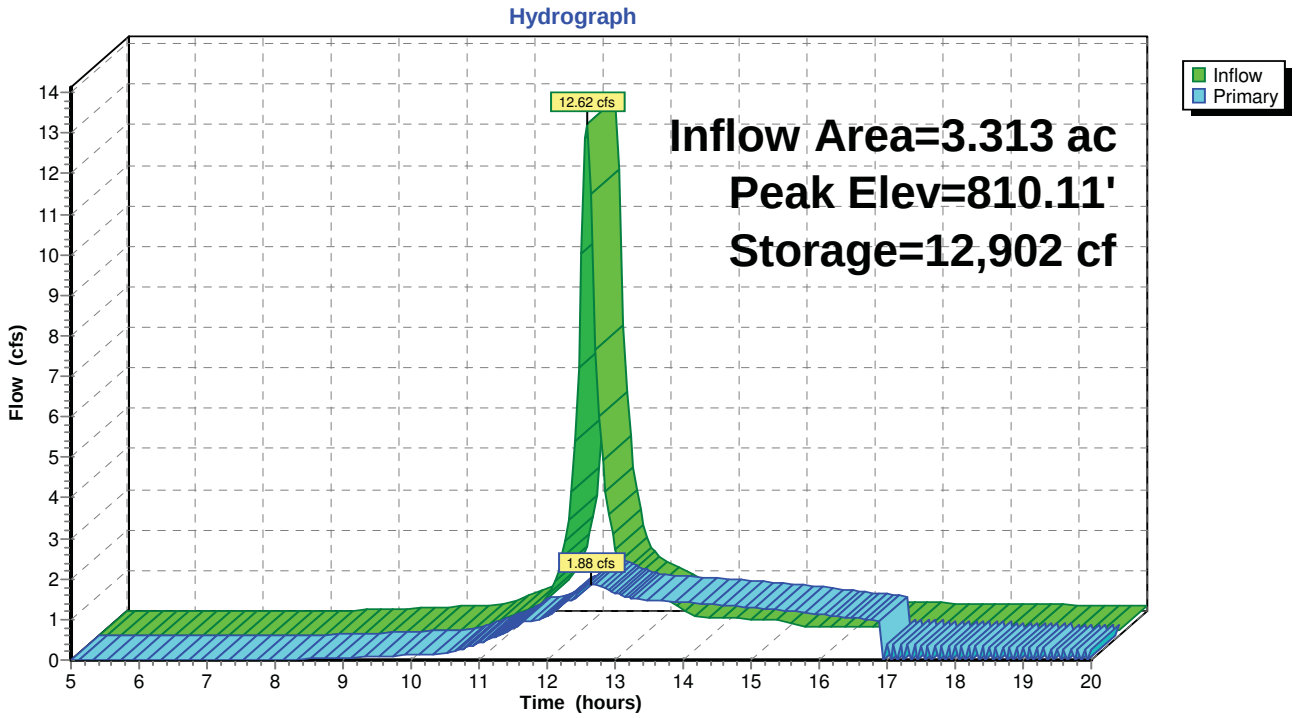
Volume	Invert	Avail.Storage	Storage Description
#1	808.50'	38,410 cf	**Bioretention Area (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
808.50	5,601	0	0
809.00	7,090	3,173	3,173
810.00	10,139	8,615	11,787
811.00	13,287	11,713	23,500
812.00	16,532	14,910	38,410

Device	Routing	Invert	Outlet Devices
#1	Primary	807.25'	**15.0" Round Culvert** L= 40.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 807.25' / 806.85' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	807.25'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	810.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 2.0' Crest Height
#4	Primary	811.50'	**30.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.87 cfs @ 12.64 hrs HW=810.11' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.87 cfs of 7.79 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.53 cfs @ 7.78 fps)
  - **3=Sharp-Crested Rectangular Weir** (Weir Controls 0.35 cfs @ 1.08 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Biofiltration Basin



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Runoff Area=144,334 sf 45.18% Impervious Runoff Depth>4.64"
Tc=10.0 min CN=88 Runoff=23.00 cfs 1.280 af

Subcatchment 2S: Runoff Area=48,878 sf 5.55% Impervious Runoff Depth>3.87"
Flow Length=256' Slope=0.0254 '/' Tc=29.9 min CN=81 Runoff=4.06 cfs 0.362 af

Reach AP-1: Easterly Property Line Inflow=8.81 cfs 1.280 af
Outflow=8.81 cfs 1.280 af

Reach AP-2: Southerly Property Line Inflow=4.06 cfs 0.362 af
Outflow=4.06 cfs 0.362 af

Pond 2P: Biofiltration Basin Peak Elev=810.81' Storage=21,023 cf Inflow=23.00 cfs 1.280 af
Outflow=8.81 cfs 1.280 af

Total Runoff Area = 4.436 ac Runoff Volume = 1.642 af Average Runoff Depth = 4.44"
64.84% Pervious = 2.876 ac 35.16% Impervious = 1.559 ac

Summary for Subcatchment 1S:

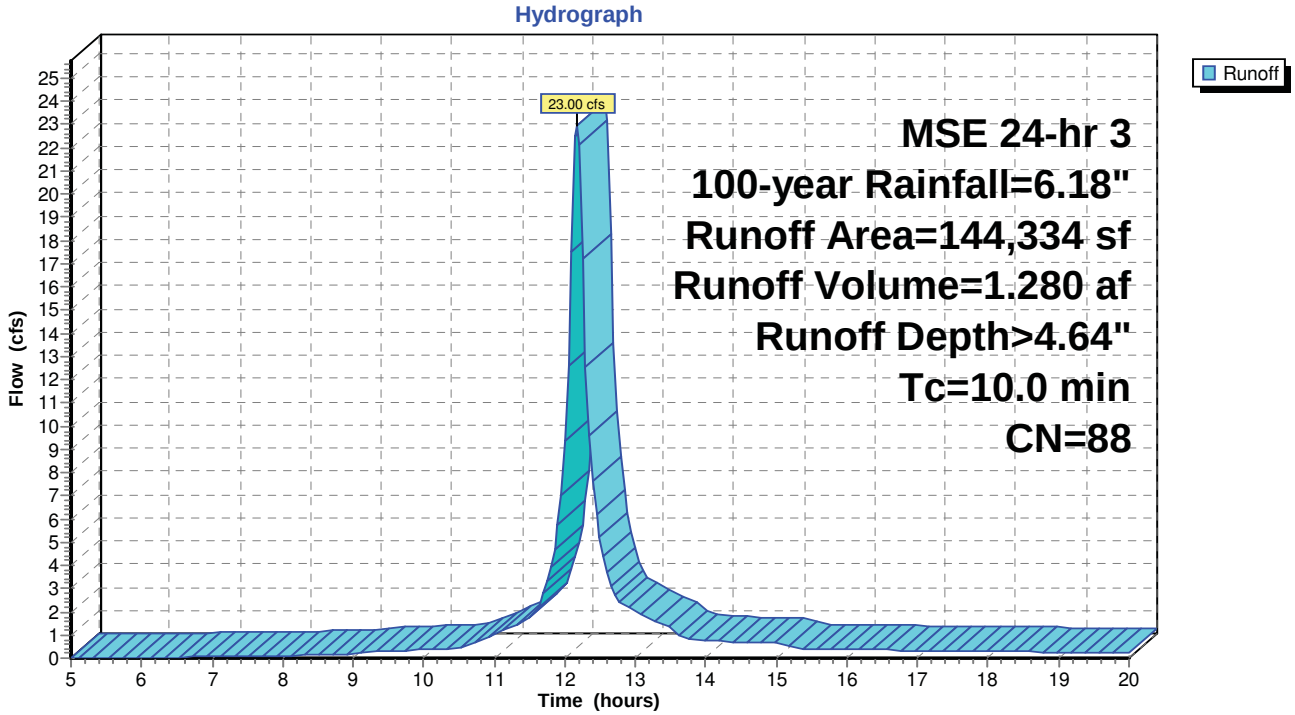
Runoff = 23.00 cfs @ 12.17 hrs, Volume= 1.280 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
	29,605	98	Roofs, HSG D
	31,569	98	Paved parking, HSG D
*	4,037	98	Concrete Walks, HSG D
	79,123	80	>75% Grass cover, Good, HSG D
	144,334	88	Weighted Average
	79,123		54.82% Pervious Area
	65,211		45.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S:



Summary for Subcatchment 2S:

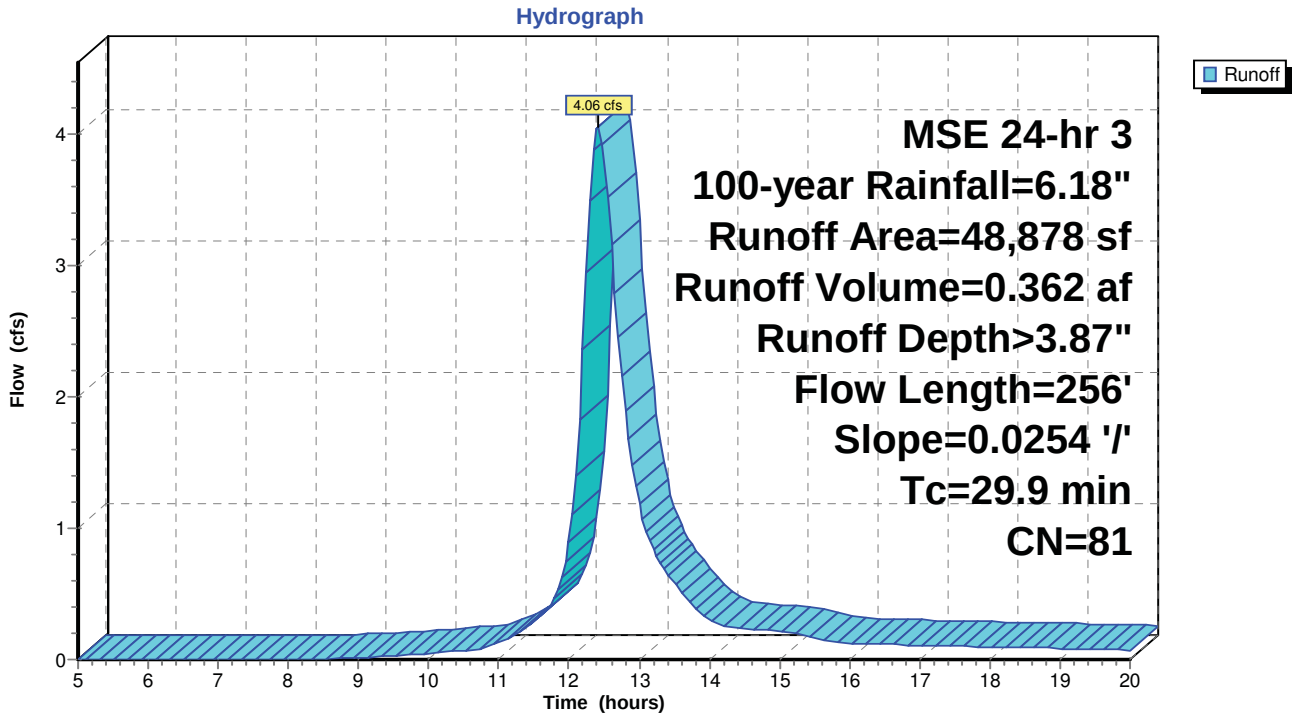
Runoff = 4.06 cfs @ 12.42 hrs, Volume= 0.362 af, Depth> 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
	1,541	98	Paved parking, HSG D
*	1,042	98	Concrete Walks, HSG D
	130	98	Roofs, HSG D
	46,165	80	>75% Grass cover, Good, HSG D
	48,878	81	Weighted Average
	46,165		94.45% Pervious Area
	2,713		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.9	256	0.0254	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2S:

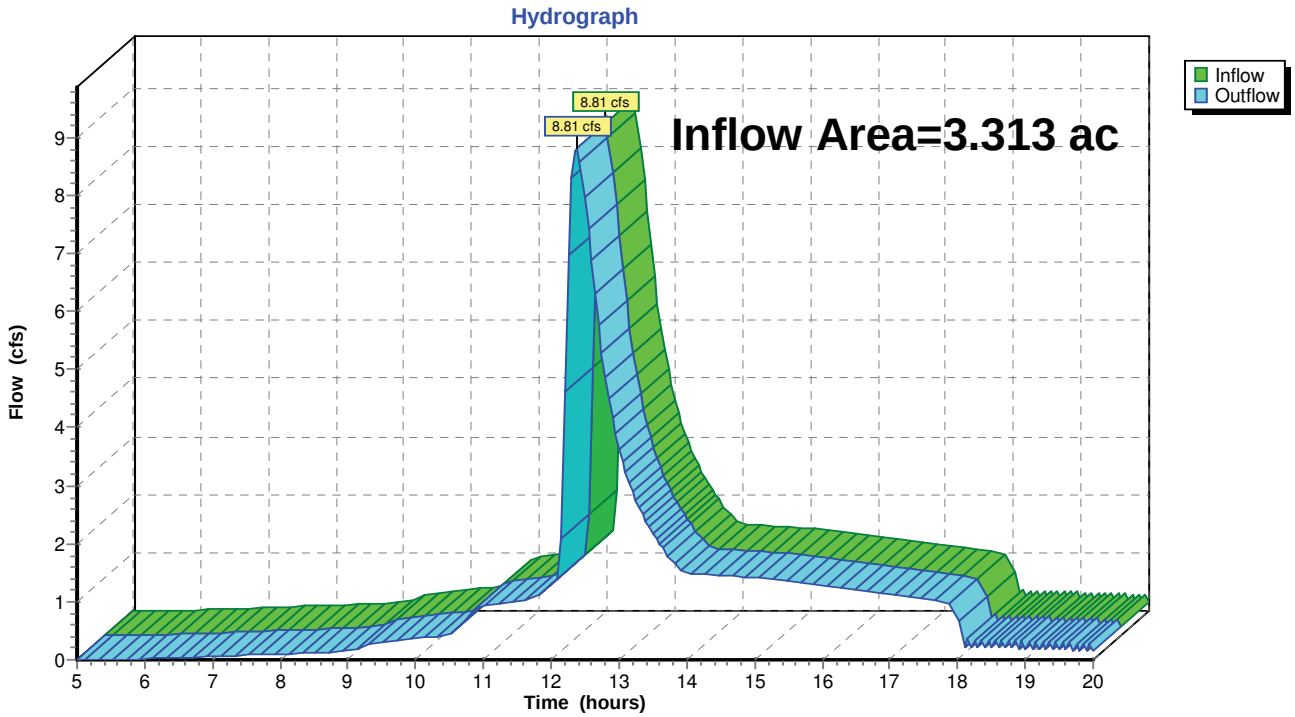


Summary for Reach AP-1: Easterly Property Line

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 4.64" for 100-year event
Inflow = 8.81 cfs @ 12.37 hrs, Volume= 1.280 af
Outflow = 8.81 cfs @ 12.37 hrs, Volume= 1.280 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-1: Easterly Property Line

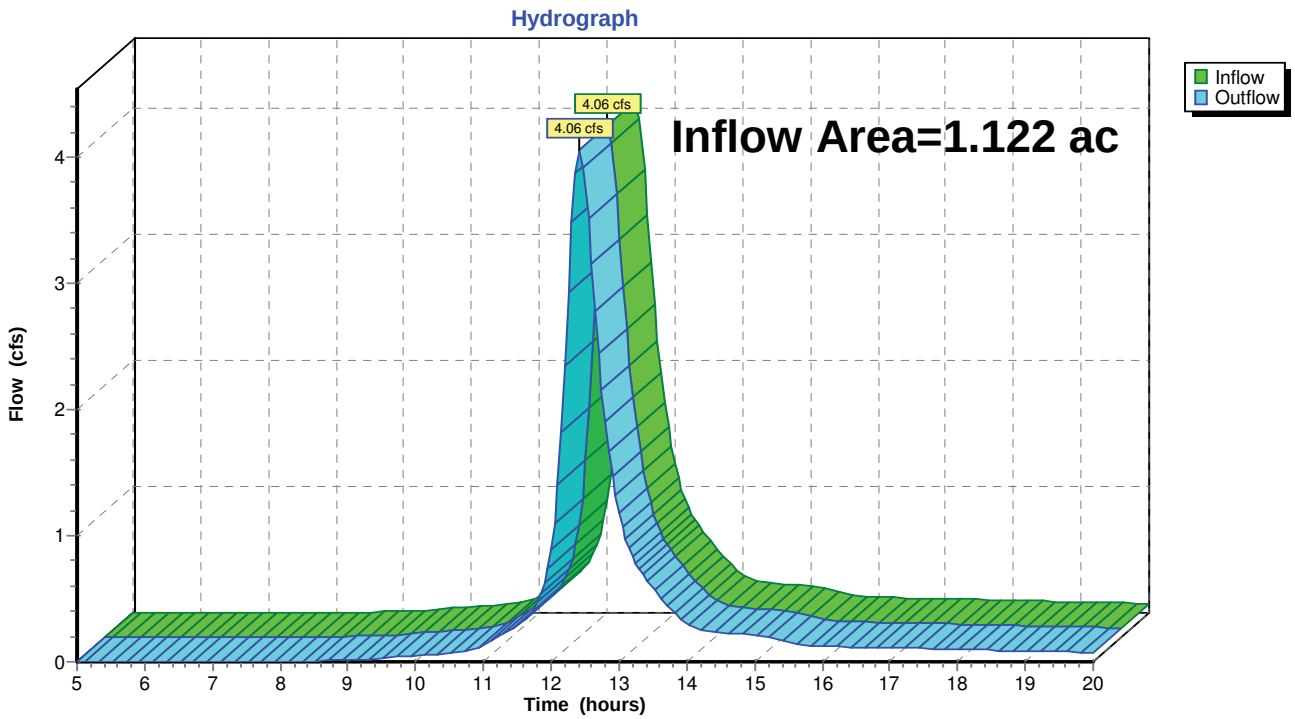


Summary for Reach AP-2: Southerly Property Line

Inflow Area = 1.122 ac, 5.55% Impervious, Inflow Depth > 3.87" for 100-year event
Inflow = 4.06 cfs @ 12.42 hrs, Volume= 0.362 af
Outflow = 4.06 cfs @ 12.42 hrs, Volume= 0.362 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3

Reach AP-2: Southerly Property Line



Summary for Pond 2P: Biofiltration Basin

Inflow Area = 3.313 ac, 45.18% Impervious, Inflow Depth > 4.64" for 100-year event
Inflow = 23.00 cfs @ 12.17 hrs, Volume= 1.280 af
Outflow = 8.81 cfs @ 12.37 hrs, Volume= 1.280 af, Atten= 62%, Lag= 12.0 min
Primary = 8.81 cfs @ 12.37 hrs, Volume= 1.280 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 810.81' @ 12.37 hrs Surf.Area= 12,687 sf Storage= 21,023 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 59.5 min (822.3 - 762.8)

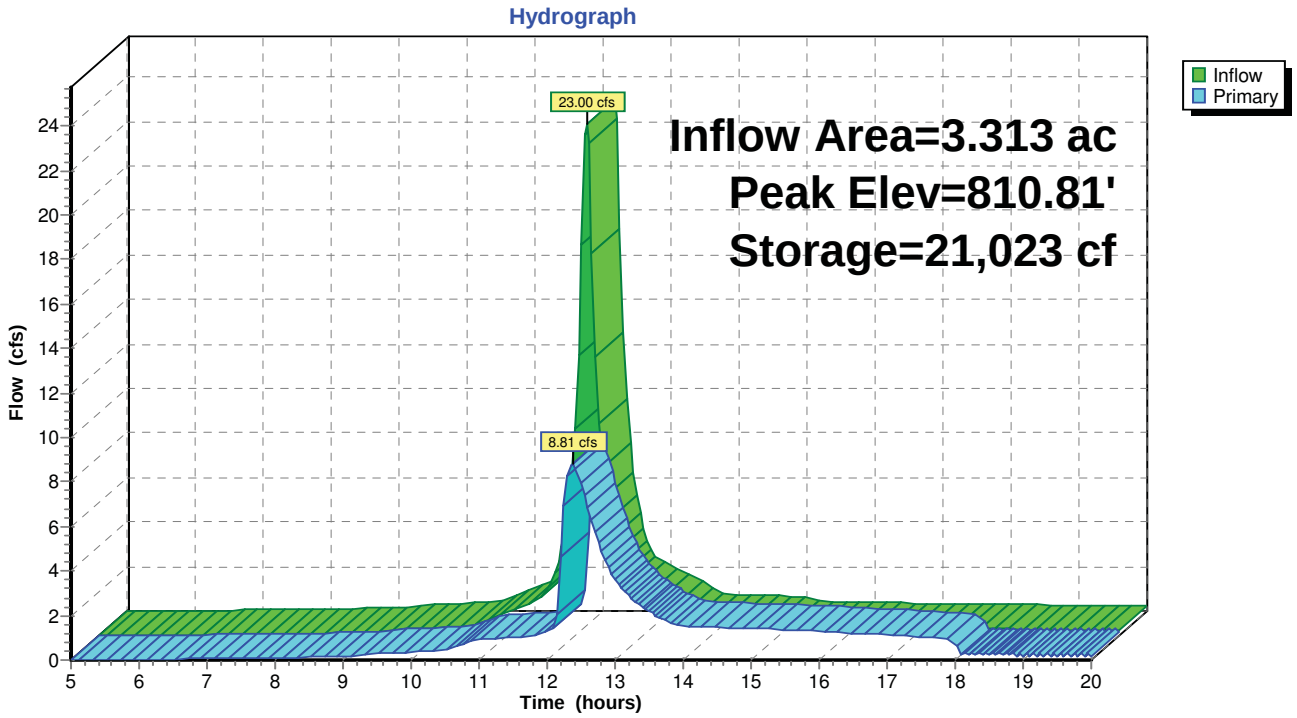
Volume	Invert	Avail.Storage	Storage Description
#1	808.50'	38,410 cf	**Bioretention Area (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
808.50	5,601	0	0
809.00	7,090	3,173	3,173
810.00	10,139	8,615	11,787
811.00	13,287	11,713	23,500
812.00	16,532	14,910	38,410

Device	Routing	Invert	Outlet Devices
#1	Primary	807.25'	**15.0" Round Culvert** L= 40.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 807.25' / 806.85' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	807.25'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	810.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 2.0' Crest Height
#4	Primary	811.50'	**30.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=8.75 cfs @ 12.37 hrs HW=810.80' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 8.75 cfs of 8.92 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.72 cfs @ 8.75 fps)
  - **3=Sharp-Crested Rectangular Weir** (Weir Controls 7.03 cfs @ 3.08 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Biofiltration Basin



APPENDIX C

PRELIMINARY OPERATION AND MAINTENANCE CONTROL PLAN

PRELIMINARY OPERATION & MAINTENANCE PLAN
June 2016

EDGEWOOD VILLAGE APARTMENTS
Edgewood Avenue
Mukwonago, WI

It is anticipated that the Owner, Edgewood Village Apartments, LLC, will become responsible for the operation and maintenance of the stormwater system upon completion of construction. Until such time, the contractor will be responsible for operation and maintenance.

The contractor selected to complete the site work construction will be responsible for the operation and maintenance of the temporary erosion control measures during construction and the stormwater management system during the construction phase of the project. Erosion control measures shall be installed and maintained as shown on site plans for the project in accordance with details shown on the plan. Erosion control shall be maintained as detailed on the site plan.

The following maintenance and inspection recommendations are taken from WDNR's Technical Standards and shall become part of the operation and maintenance plan for the stormwater management system located on the site:

<u>BIOFILTRATION BASIN</u>

LONG TERM MAINTENANCE

ROUTINE

1. Mowing

   B. Side slopes, embankments, and emergency spillways that are not rock lined which have been planted with turf fescue grasses should be high mowed at least twice a year to prevent woody growth and control noxious weeds (if required).

   C. Native fescue grasses should be mowed to a height of 6" during the first year to establish density. After they are densely grown in, no further mowing in subsequent growing seasons will be required.

2. Inspections

   A. Inspections of the basin shall be completed on an annual basis or after significant rainfall events.

   B. The inspections should be completed during wet weather conditions to determine if the basin is functioning properly.

   C. Inspection priorities shall be as follows:

      1. Inspect the embankments for subsidence, erosion, cracking and tree growth.

      2. Inspect the condition of the emergency spillway and overland flow path.

3. Inspect the basin for accumulation of sediment.

4. Inspect the outlet control structure for clogs, debris and material failures.

5. Inspect upstream and downstream channels from an erosion perspective.

6. Inspect any modifications that may have been done to the basin following their initial construction.

7. Inspect the side slopes of the basin for erosion, slumping, cracking or woody plant materials.

D. As-built plans shall accompany the person responsible for the basin inspections.

E. Documentation of the inspections should be completed and filed. Documentation should include as a minimum:

1. Inspectors name, affiliation and professional credentials if applicable.

2. Date, time and weather conditions.

3. Approximate rainfall total over a 24 hour period if applicable.

4. Existing embankment, outlet and inlet conveyance systems and vegetation condition.

5. Sediment depth at the outlet control structure and at a minimum one other location.

6. Identification of potential structural failures and repair needs.

7. Other basin conditions such as vegetation growth, algae growth and emergency spillway conditions.

8. Repair recommendations.

3. Debris and Litter Removal

A. Debris and litter removal from the basin surface shall be completed at least once every three months.

B. Particular attention should be paid to debris accumulating around the outlet structure to prevent potential clogging.

4. Erosion Control

A. The basin side slopes, embankments and emergency spillways may suffer from periodic slumpage and erosion.

B. Corrective measures shall include regrading, filling and revegetation of the eroded or slumping areas.

C. Rip rap at the basin outlet and emergency spillways should be inspected for displacement or undermining. Repairs shall be made upon discovery.

5. Nuisance Control

A. Biological control of algae and mosquitoes is preferred over chemical control. Consultations with WDNR officials is recommended prior to the introduction of any biological control.

B. Mechanical controls should be used when feasible.

NON-ROUTING MAINTENANCE

1. Structural Repairs and Replacement

A. The outlet of the basin has been constructed utilizing concrete pipe. The estimate life of these structures is over 50 years. Annual inspection of the structures will disclose any potential structural problems. If structural problems appear, repair or replace the outlet.

2. Sediment Removal

A. A sediment clean out cycle of 10 to 15 years is recommended. Sediment removal may be necessary prior to 10 years if there is a substantial amount of land disturbance occurring within the contributory watershed. Annual inspections shall be made to insure that the intended design draw-down times are maintained.

B. Sediment removed from the basin shall be hauled to an upland area, spread and stabilized with vegetative material.

C. It is recommended that the sediment be tested to determine if land filling is necessary. Contact the local DNR prior to sediment sampling and testing to insure compliance with State standards and regulations.

C. Surveyed depths of the basin shall be made immediately following the construction of the basin and recorded on the as-built plans. Annual inspections shall include measure downs to determine sediment elevations in relation to the as-built elevations.

RESPONSIBLE PARTY & FINANCIAL FUNDING

1. The responsible party for the operation, inspection and maintenance of the biofiltration basins shall be the Owner.

2. It is recommended that the Owner establish a perpetual maintenance fund to insure that the basins are properly inspected, maintained and repaired.

ADDITIONAL CONSIDERATIONS TO IMPROVE BASIN WATER QUALITY AND REDUCE MAINTENANCE COSTS

1. General

   A. Improper disposal of yard wastes will affect the water quality of the biofiltration basin and may cause clogging of the outlet structure.

   B. Improper fertilizer and pesticide application will affect the water quality of the biofiltration basin and add to algae growth.

   C. Excess lawn watering will affect the water quality of the basin due to increased water runoff that may contain fertilizers and pesticides.

2. Yard Care

   A. It is recommended to consider routine yard care maintenance that is practical and environmentally sound.

   B. It is recommended that leaves and yard trimmings be properly disposed of.

   C. It is recommended to control fertilizer applications on lawn and gardens so as not to be detrimental to the water quality of the basin.

   D. Lawn and garden pesticides may pollute surface and ground water.

   D. Excess lawn watering will wash pollutants into the biofiltration basin.

   F. Proper turf management will lower the amount of the chemicals that may runoff into the biofiltration basin during rain events.

<u>GRASSED SWALES</u>

Inspect drainage swales the first few months after construction to make sure that there is no rilling or gullying, and that vegetation in the swales is adequate. Vegetation damaged by machinery, herbicides, or erosion must be repaired promptly.

Thereafter, inspect grassed swales regularly at least twice a year for slope integrity, soil moisture, vegetative health, soil stability, soil compaction, soil erosion, ponding, and sediment accumulation, especially following heavy rains. Fill, compact, and reseed damaged areas immediately. Remove sediment deposits to maintain capacity of grassed swale. Avoid use of herbicides that would be harmful to the vegetation or pollinating insects in and adjacent to the swale area.

Regular maintenance tasks include mowing, fertilizing, liming, watering, pruning, weeding, and pest control. Mow swales at least once per year. Do not cut the grass shorter than three to four inches. Keep grass height under 6 inches to maintain the design depth necessary to serve as a conveyance. Do not mow excessively, because it may increase the design flow velocity. Remove sediment and debris manually at least once per year and properly dispose of all sediment and hydrocarbons in accordance

with local, state, and federal guidelines and regulations. Re-seed periodically to maintain the dense growth of grass vegetation.

MINUTES OF THE STEERING COMMITTEE OF THE COMPREHENSIVE MASTER PLAN UPDATE
Thursday, July 7, 2016

Call to order
Chairperson Tom Karthausser called the meeting to order at 6:30 p.m. located in the Committee Room of the Mukwonago Municipal Building, 440 River Crest Court

Roll call

Committee Members present:	Roger Walsh
	Mary Patz
	Klaus Heitmann
	Jason Wamser
	Suzie Bauer
	Jean Schultz
	Tom Karthausser
	John Meiners
	Fred Winchowky, Village President
Also present:	Bruce Kaniewski, Planner
	John Weidl, Village Administrator
Excused:	April Reszka
	Joe McAdams
	Linda Burg
	Shelly Yergens

Approval of minutes
Motion made by T. Karthausser to approve the June 16, 2016 meeting minutes; seconded by M. Patz. Motion to approve the minutes carried unanimously.

Public comment
- R. Roberts from Mukwonago Baptist Church expressed several points: 1) The zoning of the parcel north of the church property which is for sale has undergone zoning changes and he prefers it be zoned residential R-3; 2) He would like to purchase said property to serve as a Christian camp; 3) He disagrees with the location of the proposed connector road from Stone School to SH83 which would result in the loss of 2 homes and road construction expense along approximately 2000' of frontage which is church-owned; 4) He suggested an alternative road location further south, closer to Highway L.
- T. Chude asked a question regarding a structure north of the Village on SH 83. He was referring to the pumping station

- J. Roberts indicated he thought the location of the proposed connector road between Stone School to SH83 was too far north and would be better suited closer to Highway L, through land that is currently for sale
- A. Dellemann expressed a general concern about perceived overdevelopment and the desire to have conservation ownership.

Recap and discussion of June 28, 2016 open house

- Twelve written comments were submitted generally split between supportive and critical of the planning suggestions. It was felt the open house conversation essentially mirrored discussions that occurred at the committee level.
- As a result of the open house comments, two issues that will require further committee exploration were identified and will be addressed at the next committee meeting:
    - A recommendation that height restrictions be included in the plan
    - A plan to address blending senior housing options/land use categories between R-5 and R-10
        - J. Wamser has explored this topic and will present his findings/recommendations at the next committee meeting
- In order to spur increased community participation, an improved communication/notification system will be implemented for the next open house

Review, discussion and consideration of planned land use for South/Southeast area of Interstate, generally along STH 83 to CTH L

- B. Kaniewski reviewed the geographic area under discussion and explained the color-key for the map
- Regarding the proposed connector road between State Highway 83 and Honeywell/Stone School Road, B. Kaniewski informed the committee that installation of sewer laterals, the proposed railway spur and geological land formations makes placement of the connector road further to the South much more difficult and costly
- Motion to approve map of the South/Southeast area of Interstate made by T. Karthausser. Seconded by J. Meiners. Motion carried unanimously.

Review, discussion and consideration of planned land use for Southwest area, generally along I-43 between CTH ES and Canadian National Railroad Track

- B. Kaniewski reviewed the geographic area under discussion and explained the color-key for the map. One small parcel along the south side of CTH ES, tucked between the existing church and the Orchards Subdivision has been sold and should be reclassified as medium density single family.
- Comments from representatives of the Mukwonago Baptist Church reiterated their desire to move the proposed connector road further south and to reclassify the land north of the church holdings for a variety of reasons.

- Motion to approve map of Southwest area, reflecting the reclassification of the small parcel along CTH ES was made by J. Schultz. Seconded by J. Meiners. Subsequent discussion led to an amended motion (below).
- J. Wamser made an amendment to the existing motion, indicating that the property immediately north of the Mukwonago Baptist Church be reclassified with the northern-most land changed to low density multi-family and the southern part of that parcel (immediately north of church property) changed to R-1. This motion was seconded by R. Walsh. A vote was taken, with four in favor and five against. This amended motion did not carry and reverted back to the original motion.
- The original motion to approve map of Southwest area, reflecting the reclassification of the small parcel along CTH ES made by J. Schultz and seconded by J. Meiners was put up for vote. This vote carried and the motion passed with five in favor and four against.

Village staff presentation of background information for land use considerations for the North planning area generally along STH 83 North of CTH NN.
Review, discussion and consideration of planned land use for the North planning area generally along STH 83 North of CTH NN.

- B. Kaniewski reviewed the geographic area under discussion and explained the color-key for the map.
- J. Weidl shared information from the representative of the Chapman farm asking that a segment of land on the east side of that parcel be modified to commercial use. This is adjacent to the village-owned property already designated commercial.
- Numerous public comments and questions were fielded including:
    - Homeowner concerns about lands adjacent to the marsh and further reduction of private lands in the event the State demands more connector roads to STH 83
    - Traffic and safety concerns at the intersection of CTH NN and EE
    - Bielinski's desire to develop their 2.5 acre parcel just west of the intersection of CTH NN and EE into multi-family housing
- Village staff will draft a map indicating suggested land use designations for this area for consideration at the next committee meeting

Village staff presentation of background information for land use considerations for the Northeast planning area along CTHNN and CTHES.
Review, discussion and consideration of planned land use for the Northeast planning area along CTHNN and CTHES

- B. Kaniewski reviewed the geographic area under discussion and explained the color-key for the map.
- B. Kaniewski identified the need to expand area available to the public works department, potentially by acquiring approximately ten acres of adjacent land, representing the western edge of property currently held by St. James Catholic Church

  - The St. James land represents approximately 100 acres along the north side of CTH NN and abuts the marsh. The northern edge of this land offers spectacular vistas well suited for larger, executive-style homes.
  - C. Marotta, a representative from St. James church indicated their desire to maintain a segment of the south and east portion of the parcel, permitting expansion of church parking. Additional church representatives are invited to review their needs/plans and attend the next committee meeting.
- There are 3 small parcels of land immediately south of the St. James property for which it is suggested the designation be changed to commercial business.
- The disposition of property south of the fire station is unknown. Staff will reach out to the property owners to understand their desires.
- Staff will prepare two versions of land use maps for this North planning area for consideration at the next committee meeting.

Public comment

- C. Hill representing the Kiwanis Club indicated their desire for the parkland known as Kiwanis Park, located and the intersection of STH 83 and CTH NN be maintained as parkland in perpetuity.

Review of upcoming meeting schedule

- Thursday, July 21st: meeting to be held in downstairs meeting room
- August 4, 2016

Adjourn

Motion to adjourn made by T.Karthausser; seconded by J. Meiners. Motion carried unanimously.
Meeting adjourned at 9:38 p.m.

Respectfully submitted,

Jean Schultz
Secretary