Watershed Development Permits in Lake County

Thursday, November 7th

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

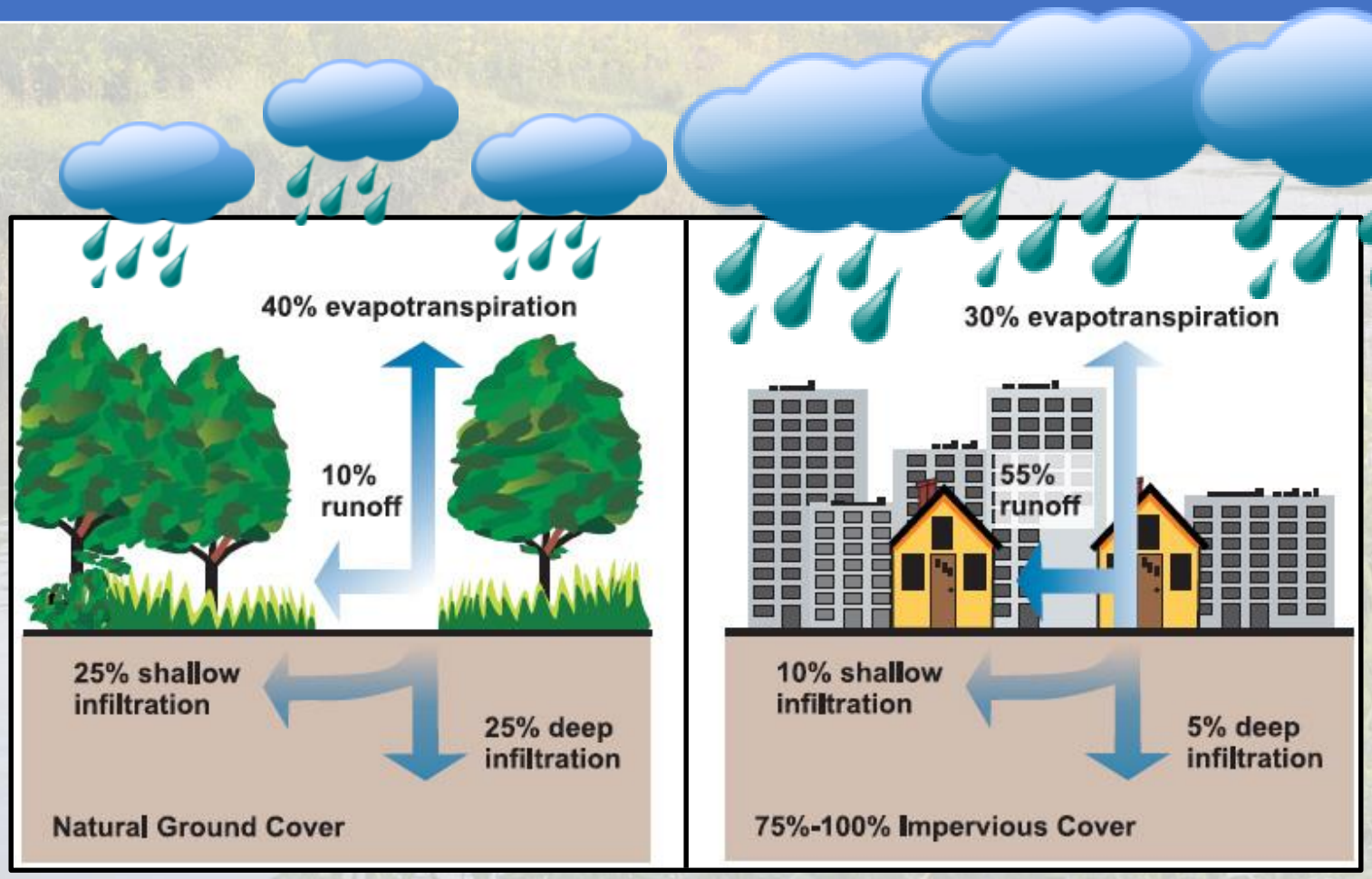
Kurt Woolford, P.E., CFM

Agenda

- Lake County SMC Regulatory Program
- When is a Permit Required? (Types of Development)
- Who Issues the Permit?
- Online Submittal Application and PDF Standards
- How to Get a Permit Faster?

LAKE COUNTY
STORMWATER MANAGEMENT COMMISSION

Why is Stormwater Management Important?

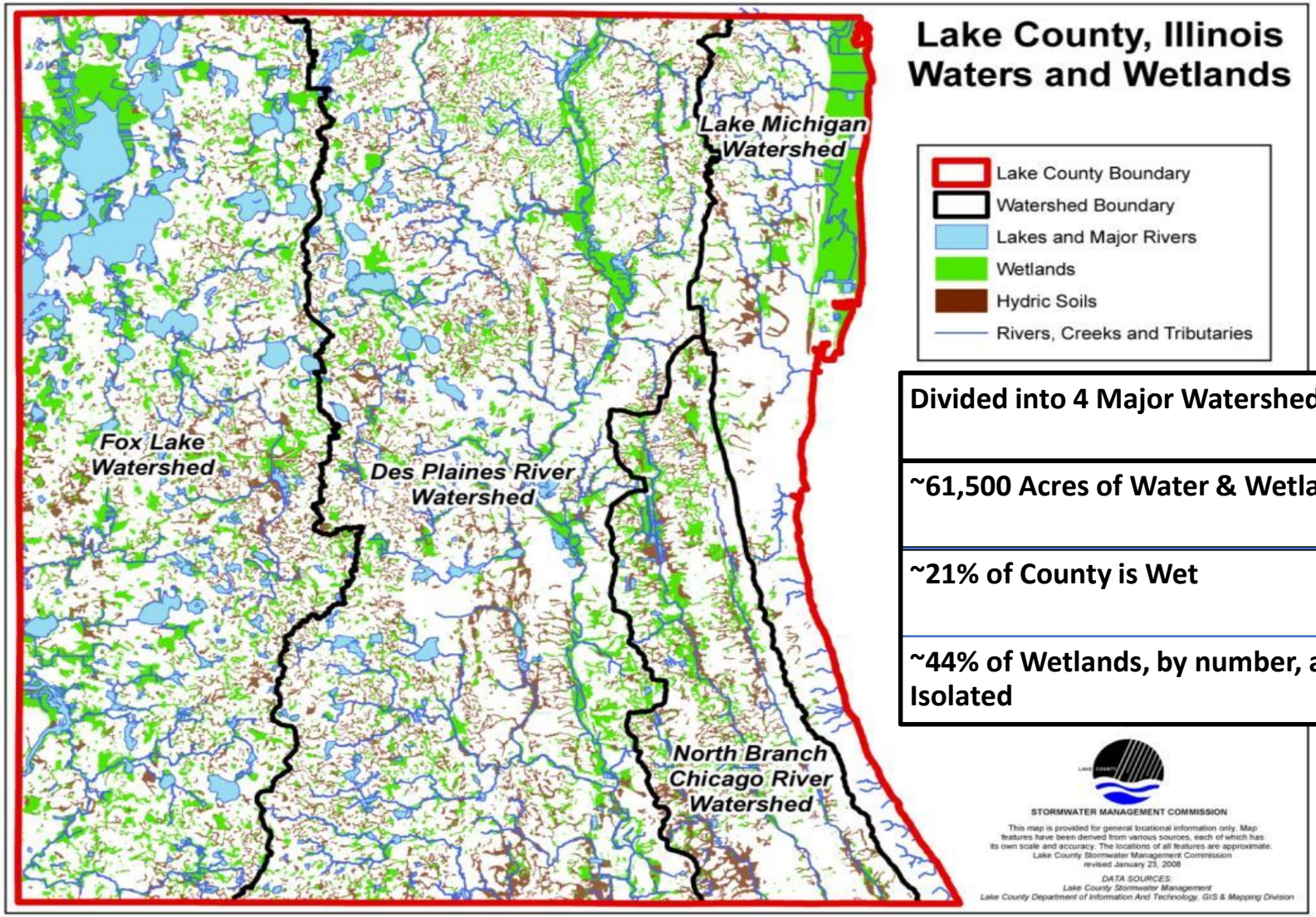


Heavy precipitation events will increase in frequency and amounts (high confidence)

Impervious surfaces increase the volume and rate of stormwater runoff

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Why is it Important…in Lake County?



Divided into 4 Major Watersheds
~61,500 Acres of Water & Wetlands
~21% of County is Wet
~44% of Wetlands, by number, are Isolated

Lake County SMC Overview and Role

Established in 1990 through state legislation to coordinate stormwater management activities from a countywide and interjurisdictional perspective.

Main Components of Our Program:

- **Managing Lake County's floodplains and watersheds** by administering countywide floodplain and stormwater management standards.
- **Flood damage reduction** through flood hazard mitigation projects, and implementing Best Management Practices, watershed management plans and effective floodplain and stormwater management regulations.
- **Natural resource protection and restoration** by utilizing a mix of funding sources and partnerships to restore and enhance the natural drainage system.

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Lake County SMC Regulatory Program

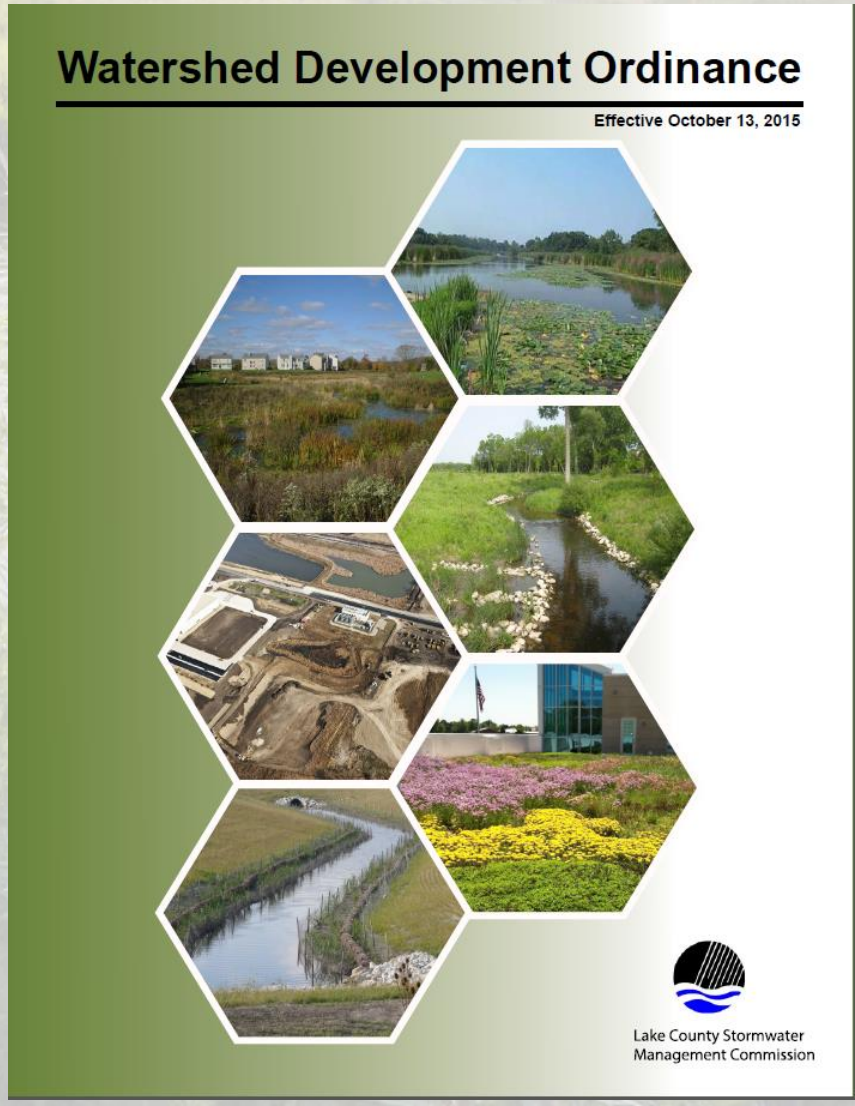
WDO first adopted October 18, 1992

Establish consistent, uniform, minimum county-wide requirements for new development.

Seek balanced input from:

- Governmental agencies
- Municipalities
- Environmental
- Property owners and developers

Done in a public forum.



Revised Watershed Development Ordinance Timeline

START

March 2019

Illinois State Water Survey publishes updated rainfall.

June 6, 2019

SMC opens 30-day Public Comment Period.

Technical Guidance Memo #1 Issued.

July - October 2019

Public Information Meetings

July 16, 2019 in Highland Park

July 23, 2019 in Barrington

August 8, 2019 in Round Lake

September 17, 2019 in Gurnee

October 23, 2019 in Des Plaines

January 2020

January 9, 2020

SMC presentation of WDO amendments; Open 60-day Public Comment period.

January 2020

Public Notice and Hearing.

May 2020

May 12, 2020

County Board adoption (WDO effective date).

May 15, 2020

Mailout to Communities requiring WDO adoption before Sept. 1, 2020.

FINISH

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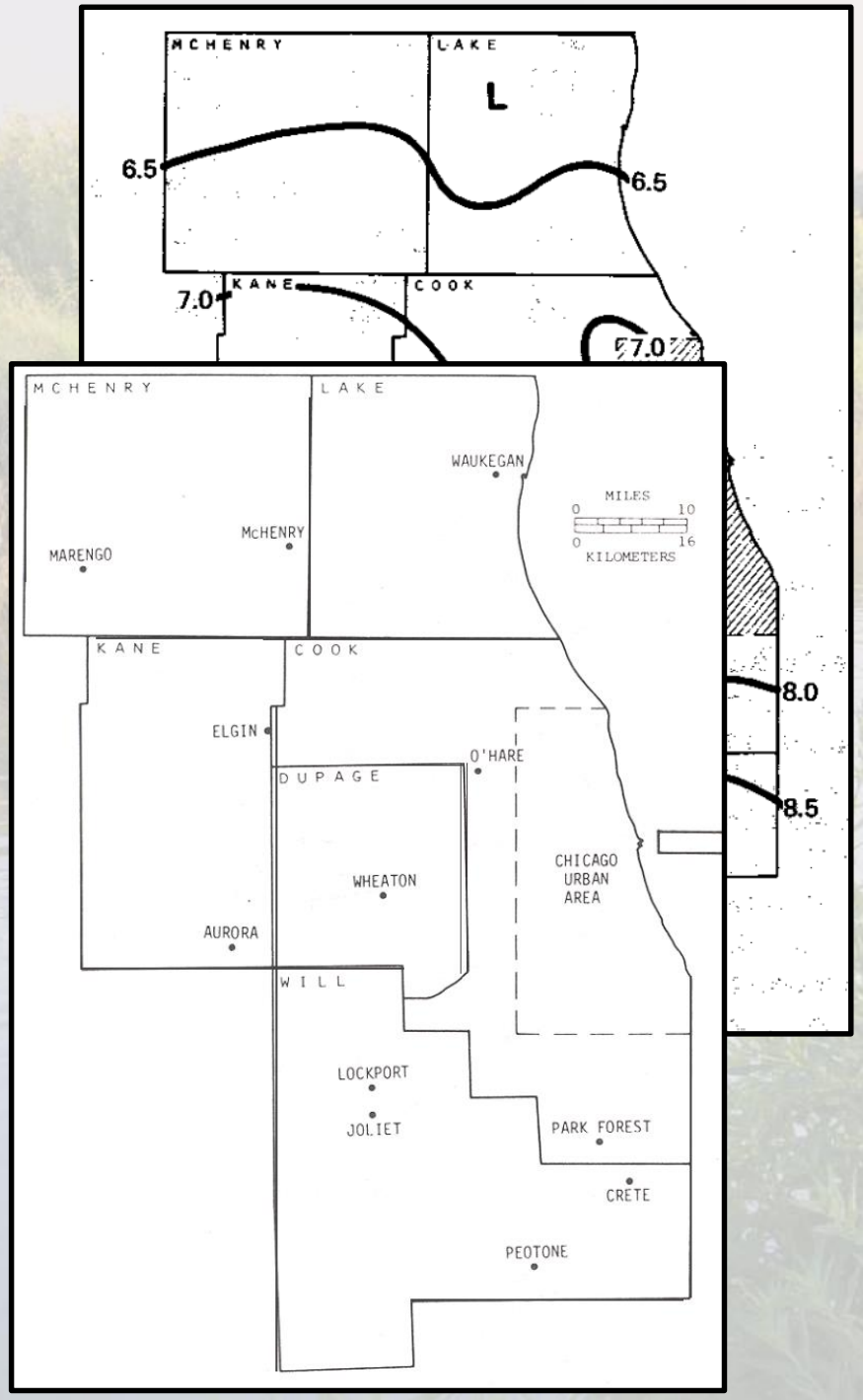
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KILOMETERS
McHENRY
MARENGO
KANE
COOK
ELGIN
O'HARE
DUPAGE
WHEATON
CHICAGO
URBAN
AREA
AURORA
WILL
LOCKPORT
JOLIET
PARK FOREST
CRETE
PEOTONE

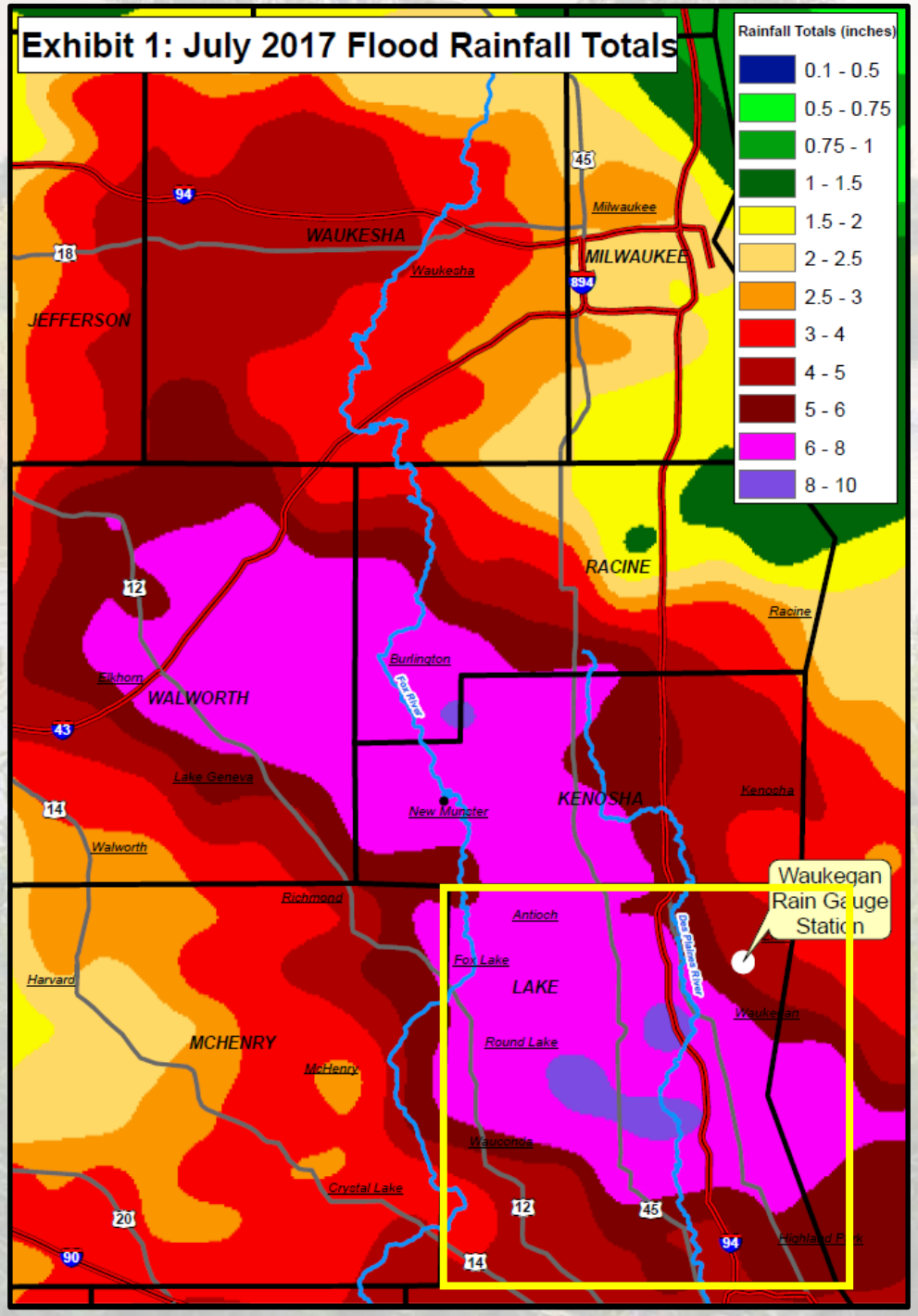
Exhibit 1: July 2017 Flood Rainfall Totals
Rainfall Totals (inches)
0.1 - 0.5
0.5 - 0.75
0.75 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 4
4 - 5
5 - 6
6 - 8
8 - 10
WAUKESHA
Waukesha
Milwaukee
MILWAUKEE
JEFFERSON
RACINE
Racine
Burlington
Elkhorn
WALWORTH
Lake Geneva
New Munster
KENOSHA
Kenosha
Walworth
Richmond
Antioch
Fox Lake
LAKE
Waukegan
Round Lake
Harvard
MCHENRY
McHenry
Wauconda
Crystal Lake
Highland Park
Waukegan
Rain Gauge
Station

Lake County Technical Guidance Memo #1

Table 2: TAC-Approved Updated Rainfall Depth-Duration Frequency Table (Inches)

Duration	2 year	5 year	10 year	25 year	50 year	100 year	500 year
5 min	0.40	0.52	0.62	0.77	0.90	1.03	1.35
10 min	0.70	0.90	1.08	1.35	1.58	1.80	2.36
15 min	0.90	1.16	1.39	1.74	2.03	2.31	3.03
30 min	1.24	1.59	1.91	2.39	2.78	3.17	4.16
1 hour	1.57	2.02	2.42	3.03	3.53	4.03	5.28
2 hour	1.94	2.49	2.99	3.74	4.35	4.97	6.52
3 hour	2.14	2.75	3.30	4.13	4.80	5.49	7.20
6 hour	2.51	3.23	3.86	4.84	5.63	6.43	8.43
12 hour	2.91	3.74	4.48	5.61	6.53	7.46	9.78
18 hour	3.14	4.04	4.84	6.06	7.05	8.06	10.57
24 hour	3.34	4.30	5.15	6.45	7.50	8.57	11.24
48 hour	3.66	4.71	5.62	6.99	8.13	9.28	12.10
72 hour	3.97	5.08	6.05	7.49	8.64	9.85	12.81
120 hour	4.42	5.63	6.68	8.16	9.39	10.66	13.81
240 hour	5.60	7.09	8.25	9.90	11.26	12.65	16.00

Table 2 References: For storm durations of 1 hour or greater, rainfall values were obtained from Table 5 of Updated Bulletin 70, 2019. For storm durations less than 1 hour, values were calculated using ratios listed in Table 18 of Bulletin 70, 1989[4].

LAKE COUNTY

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When is a Watershed Development Permit Required?

Regulated Development

- Hydrologically disturbs 5,000 square feet or more
- Work within special flood hazard area or floodplain
- Drainage modification with 20 acres or more of tributary area
- Creates a wetland impact
- Public Road Development
- Located in a Depressional Storage Area

Some “Development” Activities are not Regulated. Refer to the WDO definition for: “Development”

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Development Classification

Minor Developments	• Regulated activities with no floodplain impacts requiring compensatory storage, no wetland impacts requiring mitigation, and no detention required.
Public Road Developments	• Regulated activities in the right-of-way by the respective roadway jurisdiction. Also includes individual trail systems and linear railroad projects.
Major Developments	• All other regulated development. Streambank Stabilization to Big Box Development to Residential Development
Exempted/Excluded Development	• No development is exempt from the applicable floodplain, floodway, wetland, and sediment control provisions of the WDO. Other provisions may be exempt. Isolated Wetlands may be excluded.

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Who Issues the Watershed Development Permit?

Fully-Certified Community

- A Community certified by the SMC to administer and enforce an Ordinance that is consistent with or at least as stringent as the Lake County Watershed Development Ordinance, **including** Article 10: Wetland Requirements.

Standard Certified Community

- A Community certified by the SMC to administer and enforce an Ordinance that is consistent with or at least as stringent as the Lake County Watershed Development Ordinance, **excluding** Article 10: Wetland Requirements.
- SMC administers Isolated wetland reviews and approvals.

SMC

- Public road development
- Forest preserve development
- Public development in the floodplain
- Development in a Non-Certified Community

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Certified and Non-Certified Communities

https://www.lakecountyil.gov/2343/Certified-Communities

Certified Communities (IWLC = X indicates Fully-Certified)

Community	INS	REG	WS	IWLC
Antioch	TC	KT	GW	X
Bannockburn ★	MB	KT	JEC	X
Barrington	TC	RG	JEC	
Barrington Hills	MB	RG	JEC	
Buffalo Grove	MB	RG	JEC	
Deerfield	TC	KT	JEC	
Deer Park	TC	RG	GW	X
Fox Lake ⦿	TC	KT	GW	
Grayslake ⦿	MB	RG	GW	
Green Oaks	MB	RG	GW	X
Gurnee	MB	RG	GW	
Hainesville	MB	KT	GW	X
Hawthorn Woods	TC	RG	JEC	X
Highland Park	TC	KT	JEC	
Highwood ⦿★	TC	KT	JEC	X
Island Lake	MB	KT	GW	X
Kildeer	MB	RG	GW	X
Lake Barrington	TC	RG	JEC	X
Lake Bluff	MB	KT	JEC	
Lake Forest	MB	KT	GW	
Lake Villa	MB	KT	GW	
Lake Zurich	MB	RG	JEC	
Libertyville	MB	KT	GW	

Community	INS	REG	WS	IWLC
Lindenhurst	TC	KT	GW	X
Long Grove	TC	RG	JEC	X
Mettawa ⦿★	MB	RG	JEC	X
Mundelein	MB	RG	GW	
N. Barrington	TC	RG	JEC	X
North Chicago	TC	RG	JEC	
Old Mill Creek	MB	RG	GW	X
Port Barrington	TC	RG	JEC	
Riverwoods	TC	RG	JEC	X
Round Lake	TC	KT	GW	X
Round Lake Beach	MB	KT	GW	
Round Lake Heights	TC	KT	GW	
Round Lake Park	MB	KT	GW	X
Third Lake	TC	RG	GW	
Unincorporated Lake County (LCPBD)				X
Vernon Hills	MB	RG	JEC	
Volo ⦿	TC	KT	GW	X
Wauconda	MB	RG	JEC	X
Waukegan ⦿	TC	KT	JEC	

Non-Certified Communities

Community	INS	REG	WS
Beach Park ❖	MB	KT	GW
Forest Preserve	TC	RG	GW/JEC
Fox River Grove	MB	RG	GW
Indian Creek	MB	RG	JEC
Lakemoor	TC	KT	GW
Lincolnshire ❖	TC	RG	JEC
Park City	TC	RG	JEC
Public Roads	TC	RG	GW/JEC
Tower Lakes	MB	KT	JEC
Wadsworth ❖	TC	RG	GW
Wheeling	MB	RG	JEC
Winthrop Harbor ❖	TC	KT	JEC
Zion ❖	TC	KT	JEC

ulti-Jurisdictional personnel dependent on location

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Other SMC Regulatory Services

Wetlands

- Preliminary Jurisdictional Determination (PJD)
- Letter of No Impact (IWLC and WOUS)
- In-lieu fee Wetland Restoration Fund (WRF) for IWLC impacts.

Base Flood Elevation Determinations

- Non-riverine (depressional) flood-prone areas with tributary greater than 20 acres.
- Riverine flood-prone areas with tributary greater than 100 acres.

Soil Erosion and Sediment Control

- Provide SE/SC review, approval, and inspection services on behalf of the USACE, for Corps permitted projects.

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“Self Service” Online Permit Application

Lake County, ILLINOIS

Home | Apply | Map | Pay Invoice | Help

Recommend paying by eCheck, instead of credit card.

Welcome to Self Service

https://lakecountyil-energovpub.tylerhost.net/Apps/SelfService#/home

Custom

Search Public Records
This tool can be used to search for existing permits, plans, inspections, code cases, requests and licenses.

Apply
This tool can be used to apply for a permit, plan or license.

Hard copy submittals will require administrative surcharge.

Login or Register
Login to an existing or create a new account. You can also find help if you forgot your login information.

Pay Invoice
Use this tool to pay for individual invoices.

Map
Explore the map to see the activity occurring in your neighborhood.

Architect
Owner
General Contractor
Engineer
Designated Erosion Control Inspector (DECI)
Permit Reviewer
Site Inspector

About Bluebeam

Bluebeam launched in 2002, and adoption of our software by the worldwide AEC community has grown steadily ever since 2003, when DMJHM+H (currently AECOM)—one of the world's largest design and engineering firms—chose Bluebeam Pushbutton PDF as its PDF solution.

Today, over 1.6 million people throughout the world use Revu. In the US, we're a critical partner for the majority of top AEC firms. Globally, we're rapidly expanding our presence, with an office in Sweden and customers in 130 countries. In 2014, we joined Nemetschek, which allows us to connect with even more AEC professionals around the world.

Over 22 Billion

Bluebeam Studio transactions since 2010

Over 1.6 Million

Bluebeam Revu users worldwide

94%

of top US contractors

74%

of top international design firms

86%

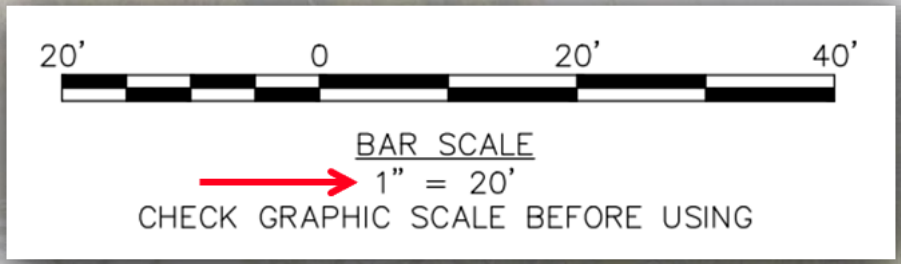
of top US design firms

78%

of top US specialty contractors

Top Ten - Electronic Drawing Standards

1. All documents shall be in PDF format, with a graphic bar scale and <u>rotated so that each page reads upright</u>.



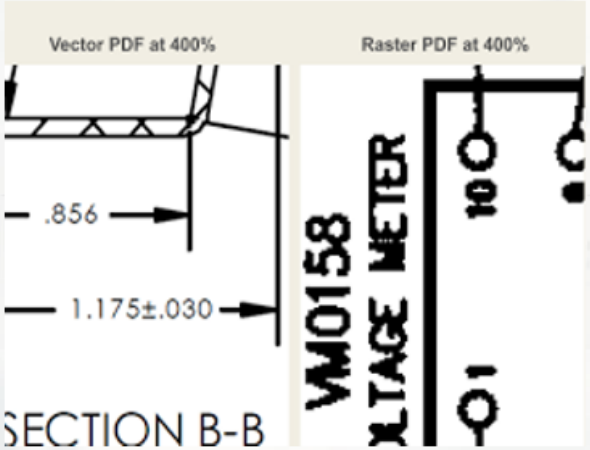
2. Documents must be submitted as a separate PDF for each document type as required in the Self-Service application e.g.,
    a. Watershed Development Permit Application
    b. Engineering Plans
    c. Wetland Delineation Report
    d. Deed-restrictions/Easements
    e. Stormwater Report
    f. Base Flood Elevation Determination

Top Ten - Electronic Drawing Standards

3. Verify you have unlocked and flattened all the drawings and reports. The markups list & layers should be cleared and empty (you can also control this in your print settings).

4. Vector content only. Scanned images are not accepted.

Vector images are mathematical calculations from one point to another that form lines and shapes. If you zoom into a **vector** graphic it will always look the same. A **raster** image has a specific number of pixels. ... **Vector** graphics can be scaled to any size without losing quality.



Top Ten - Electronic Drawing Standards

5. Documents shall be created with TrueType Fonts.

- **PDF Text Elements** (or Real Text) – Is always preferred for PDFs because it results in more responsive content.
  - Crisp on Zoom
  - Text is searchable and can always be selected
- **Vector Characters (SHX)** – Created by line segments that are used to draw the shape of each character. This usually occurs when the PDF has been created from CAD (often AutoCAD®) or a non-TrueType font is used.
- **Raster Characters** – individual pixels are used to define each character

WORK ROOM
WORK ROOM
WORK ROOM

6. Sheet title block sizes shall remain consistent on each page of the plan set including sub disciplines.

Top Ten - Electronic Drawing Standards

7. Drawing Export Tips:
   a. Maintain output Scale – avoid “Fit to Page”.
   b. Keep hatch patterns to a minimum as a best practice as these can quickly increase file sizes and slow the files down.

8. File naming conventions should be as follows:

   DocumentType-ProjectName-Address_Revision#.

   Example: CivilPlans-VillageHall-5400Waukegan_Rev1

   Applications with files not named consistent with these requirements may not be accepted.

Top Ten - Electronic Drawing Standards

9. Name each page with a page label that matches the sheet.

   Example: Page C2 Grading Plan.

   Tutorial link:
   https://www.youtube.com/watch?v=Io0eizVCJXk

10. Each Plan Sheet must be clearly bookmarked to clearly identify the content of the page.

    Example: Page C3 Utility Plan.

SMC

PB&D

DOT

Health

Public Works

No GIS or Addressing comment

SHEET 1 OF 2

MAJOR AMENDMENT TO THE
PD PLAN FOR

RIVER REGION CREDIT UNION - WEST BROADWAY

LOCATED IN SECTION 16, TOWNSHIP 48 NORTH, RANGE 13 WEST
COLUMBIA, BOONE COUNTY, MISSOURI
CITY OF COLUMBIA CASE NO. 37-2019

LEGEND:

PARKING CALCULATIONS:

BANK BUILDING	
OFFICE, 3,240 SQ. FEET BUILDING W/ DRIVE THRU FACILITY (1 SPACE/300 SQ. FEET)	
TOTAL SPACES REQUIRED:	19 SPACES
SPACES PROVIDED	
STANDARD SPACES PROPOSED:	22 SPACES
HANDICAP SPACES PROPOSED:	2 SPACES
TOTAL SPACES PROPOSED:	24 SPACES
BICYCLE SPACES REQUIRED:	4 SPACES
BICYCLE SPACES PROVIDED:	5 SPACES
LOT COVERAGES	
NET LAND AREA:	52,232 SQ.FT. 100%
TOTAL IMPERVIOUS SURFACE AREA:	34,441 SQ.FT. 66%
TOTAL OPEN SPACE	17,792 SQ.FT. 34%

NOTE: PARKING AREA CALCULATIONS ABOVE REFLECT THE SITE PLAN ON THIS SHEET. IMPERVIOUS AREA MAY CHANGE DURING FINAL PLANS. TOTAL IMPERVIOUS AREA SHALL NOT EXCEED 75%.

SIGNAGE:
ALL SITE SIGNAGE (BOTH FREESTANDING AND ON BUILDING) SHALL BE IN CONFORMANCE WITH SECTION 29-4.0 OF THE CITY OF COLUMBIA SIGN REGULATIONS.

For clarification that for M-OP standards.

NOTES:

OWNER/DEVELOPER:
RIVER REGION CREDIT UNION
3204 W. EDGEWOOD DRIVE
JEFFERSON CITY, MO 65109

APPROVED BY THE CITY OF COLUMBIA PLANNING AND ZONING COMMISSION THIS ___ DAY OF _____, 2019

RUDY STRATMANN CHAIRPERSON

Sarah Lee is now chair

2019

ACCEPTED BY ORDINANCE OF THE CITY COUNCIL OF COLUMBIA, MISSOURI, THIS ___ DAY OF _____, 2019

SIGN THREE WAYS

SHEILA MAN, CITY CLERK

STATE OF MISSOURI
TIMOTHY D. CROCKETT
NUMBER
PROFESSIONAL ENGINEER

TIMOTHY D. CROCKETT, 2004000775
12/17/2018
DATE

PREPARED BY:
CROCKETT
ENGINEERING CONSULTANTS
1000 West Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0940
www.crockettengineering.com

140272

12/17/2018 ORIGINAL

Public Works - No comments.

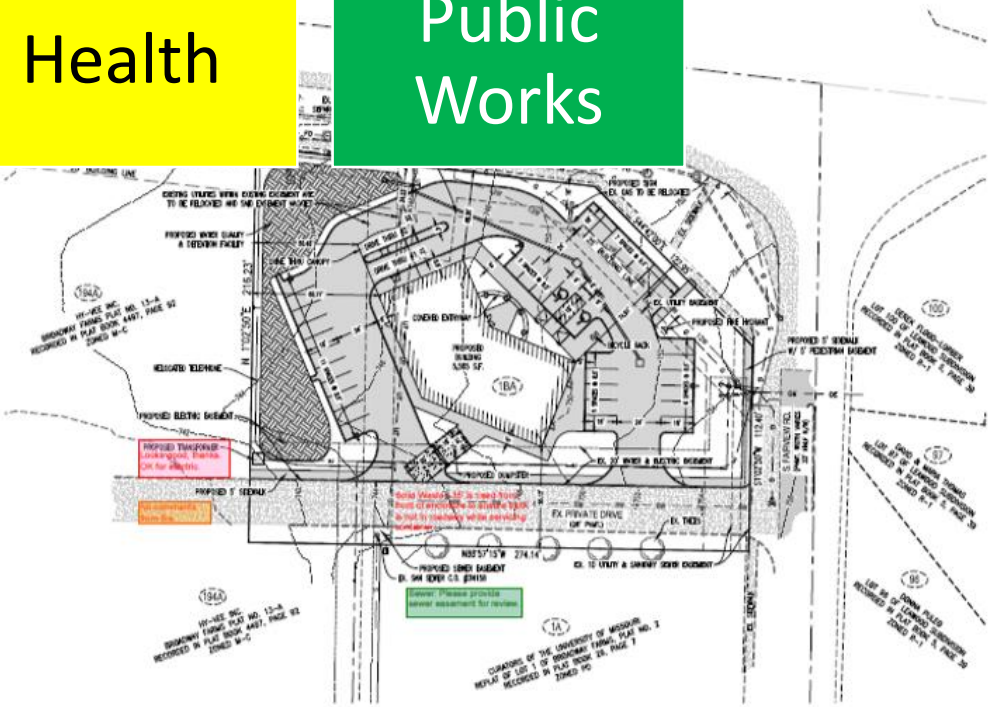
Water Utility: No Comment

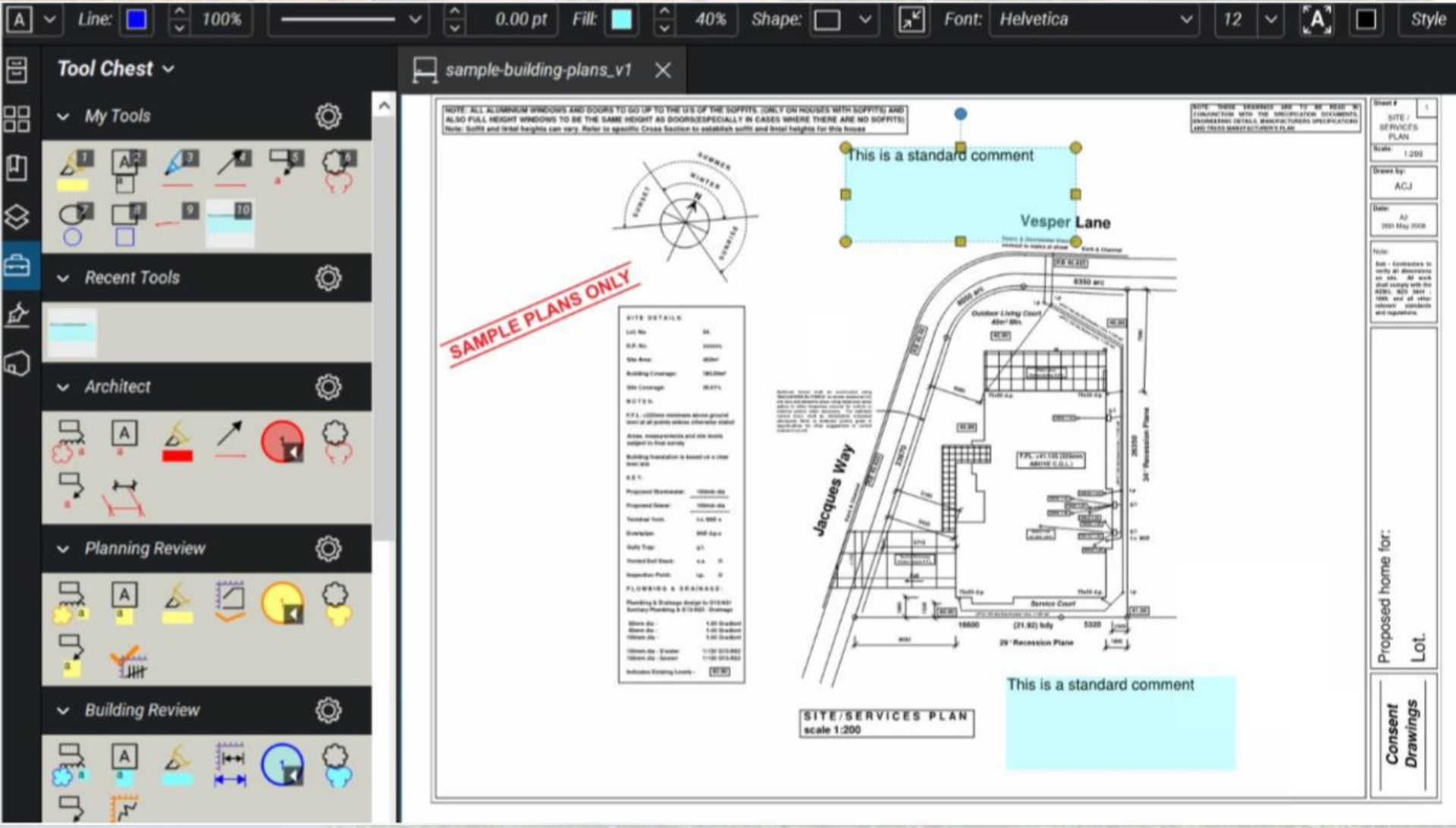
Sewer: Please provide sewer easement for review

Sidewalk: 10' is need from back of encroachment to shelter back & not to interfere with pervious pavement

Electric: Please provide for electric

Comments from Rick Rhodes

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My Tools
Recent Tools
Architect
Planning Review
Building Review
sample-building-plans_v1
This is a standard comment
Vesper Lane
SAMPLE PLANS ONLY
Jacques Way
SITE/SERVICES PLAN
scale 1:200
This is a standard comment
Proposed home for:
Lot.
Consent Drawings

How to get a permit faster

STORMWATER MANAGEMENT COMMISSION

How to get a permit faster

1. Know the WDO! – take the online Enforcement Officer exam - it's free!
2. Avoid or minimize sensitive area impacts if possible: wetlands, floodways
3. Clearly highlight/hatch impacted areas on the plans and label quantities.
4. Show the wetland limits, buffers, floodplain and floodway on ALL drawings.
5. Drawings, reports, exhibits, and calculations should ALL be consistent.
6. Specify <u>appropriate</u> SE/SC measures – routinely we have several SE/SC-related comments. Become an SMC-listed DECI!
7. Ensure the stormwater management system has <u>adequate downstream capacity</u> and a <u>maintainable outlet</u>. Designers and Enforcement Officers.

LAKE COUNTY
STORMWATER MANAGEMENT COMMISSION

How can I get more information?

- Visit lakecountyil.gov/4185
- Subscribe to the SMC newsletter
- Follow us on social media
- Bob's emails
- Call us at 847-377-7700
- Email kwoolford@lakecountyil.gov

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