United City of Yorkville
800 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-4350
www.yorkville.il.us

AGENDA
CITY COUNCIL MEETING
Tuesday, April 25, 2017
7:00 p.m.
City Hall Council Chambers
800 Game Farm Road, Yorkville, IL

Call to Order:

Pledge of Allegiance:

Roll Call by Clerk:

WARD I	WARD II	WARD III	WARD IV
Carlo Colosimo	Jackie Milschewski	Chris Funkhouser	Diane Teeling
Ken Koch	Arden Joe Plocher	Joel Frieders	Seaver Tarulis

Establishment of Quorum:

Amendments to Agenda:

Presentations:

Public Hearings:

Citizen Comments on Agenda Items:

Consent Agenda:

1. PS 2017-07 Ordinance Amending the Noise Regulations in the Public Health and Safety Code and the Zoning Ordinance – *authorize the Mayor and City Clerk to execute*
2. PS 2017-08 Request to Purchase New Vehicles in FY 18 – *authorize purchase of three vehicles as presented in an amount not to exceed $165,000*
3. PS 2017-09 Ordinance Amending the Liquor Regulations to Clarify Possession and Consumption of Alcoholic Beverages on City Property – *authorize the Mayor and City Clerk to execute*
4. PW 2017-24 Water Department Reports for January, February and March 2017
5. PW 2017-25 Route 47 ITEP (Streetlights) – Authorization No. 5 – *authorize City Administrator to execute*
6. PW 2017-26 Wrigley EDP Project – Change Order Nos. 2, 3 and 4 – *authorize Mayor to execute*
7. PW 2017-27 Center / Countryside Resurfacing – Contract Award – *accept bid and award contract to D Construction, Co. in an amount not to exceed $239,317.66*
8. PW 2017-28 Center / Countryside Resurfacing Professional Services Agreement – Construction Engineering – *authorize Mayor and City Clerk to execute*
9. PW 2017-29 Kennedy Road Resurfacing – Contract Award – *accept bid and award contract to Geneva Construction, Co. in an amount not to exceed $388,437.24*

Consent Agenda (cont'd):

10. PW 2017-30 Ordinance Authorizing the Subordination of Surface Rights for Public Road Purposes (U.S. Route 34 from Eldamain Road to Center Parkway) – *authorize Mayor and City Clerk to execute*
11. PW 2017-31 Ordinance Approving a Revised Stormwater Management Program Plan – *authorize Mayor and City Clerk to execute*
12. PW 2017-33 Ordinance Amending the Code of Ordinances Regulating Truck and Commercial Vehicles; Loads and Weights – *authorize the Mayor and City Clerk to execute*
13. PW 2017-34 Fox Hill and Sunflower Estates SSA Management RFP – *authorize staff to issue a request for proposals for management services of Fox Hill and Sunflower Estates SSAs*
14. PW 2017-35 Water Study – *motion to accept water study*
15. ADM 2017-35 Monthly Treasurer's Report
16. ADM 2017-40 Ordinance Repealing Licensing Requirements for Taxicab Companies, Taxicabs and Taxicab Drivers – *authorize Mayor and City Clerk to execute*

Minutes for Approval:

1. Minutes of the Regular City Council – March 28, 2017

Bills for Payment (Informational): $710,343.73

Mayor's Report:

1. CC 2017-21 Proclamation for Rain Barrel Month
2. CC 2017-22 Appointments to Library Board
3. CC 2017-23 Ordinance Authorizing the First Amendment to the Annual Budget for the Fiscal Year Commencing on May 1, 2017 and Ending on April 30, 2018
4. CC 2017-24 Resolution Approving an Assignment of Contract to Anthony Place Yorkville, L.P. (GC Housing Development)
5. CC 2017-25 Ordinance Approving a Lease Agreement Between the City and 215 Hillcrest LLC (Special Census Office Space)

Public Works Committee Report:

Economic Development Committee Report:

Public Safety Committee Report:

1. PS 2017-10 Local Prosecution
   a. Ordinance Amending the Yorkville City Code to Create the Anticrime Task Force Commission
   b. Ordinance Amending the Yorkville City Code to Provide Minimum and Maximum Fines for Certain Violations of the Illinois Vehicle Code as Adopted by the United City of Yorkville

Administration Committee Report:

1. ADM 2017-39 Ordinance Repealing the Code of Ordinances Providing for Regulation of Farmer's Markets

Park Board:

Planning and Zoning Commission:

City Council Report:

City Clerk's Report:

Community and Liaison Report:

Staff Report:

Additional Business:

Executive Session:

1. For the discussion of minutes of meetings lawfully closed under the Open Meetings Act, whether for purposes of approval by the body of the minutes or semi-annual review of the minutes.

Citizen Comments:

Adjournment:

COMMITTEES, MEMBERS AND RESPONSIBILITIES

ADMINISTRATION: May 17, 2017 – 6:00 p.m. – City Hall Conference Room

Committee		Departments	Liaisons
Chairman:	Alderman Milschewski	Finance	Library
Vice-Chairman:	Alderman Frieders	Administration	
Committee:	Alderman Teeling		
Committee:	Alderman Tarulis		

ECONOMIC DEVELOPMENT: May 2, 2017 – 6:00 p.m. – City Hall Conference Room

Committee		Departments	Liaisons
Chairman:	Alderman Koch	Community Development	Plan Commission
Vice-Chairman:	Alderman Teeling	Building Safety and Zoning	Yorkville Econ. Dev. Corp.
Committee:	Alderman Colosimo		Kendall Co. Plan Commission
Committee:	Alderman Funkhouser		

PUBLIC SAFETY: July 6, 2017 – 6:30 p.m. – City Hall Conference Room

Committee		Departments	Liaisons
Chairman:	Alderman Frieders	Police	School District
Vice-Chairman:	Alderman Plocher		
Committee:	Alderman Colosimo		
Committee:	Alderman Tarulis		

PUBLIC WORKS: May 16, 2017 – 6:00 p.m. – City Hall Conference Room

Committee		Departments	Liaisons
Chairman:	Alderman Funkhouser	Public Works	Park Board
Vice-Chairman:	Alderman Milschewski	Engineering	YBSD
Committee:	Alderman Koch	Parks and Recreation	
Committee:	Alderman Plocher		

UNITED CITY OF YORKVILLE
WORKSHEET
CITY COUNCIL
Tuesday, April 25, 2017
7:00 PM
CITY COUNCIL CHAMBERS

AMENDMENTS TO AGENDA:

CITIZEN COMMENTS ON AGENDA ITEMS:

CONSENT AGENDA:

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1. PS 2017-07 Ordinance Amending the Noise Regulations in the Public Health and Safety Code and the Zoning Ordinance

   ☐ Approved: **Y** _____ **N** _____ □ Subject to _____

   ☐ Removed _____

   ☐ Notes _____

   _____

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2. PS 2017-08 Request to Purchase New Vehicles in FY 18

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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3. PS 2017-09 Ordinance Amending the Liquor Regulations to Clarify Possession and Consumption of Alcoholic Beverages on City Property

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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4. PW 2017-24 Water Department Reports for January, February and March 2017

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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5. PW 2017-25 Route 47 ITEP (Streetlights) – Authorization No. 5

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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6. PW 2017-26 Wrigley EDP Project – Change Order Nos. 2, 3 and 4

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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7. PW 2017-27 Center / Countryside Resurfacing – Contract Award

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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8. PW 2017-28 Center / Countryside Resurfacing Professional Services Agreement
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

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9. PW 2017-29 Kennedy Road Resurfacing – Contract Award
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

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10. PW 2017-30 Ordinance Authorizing the Subordination of Surface Rights for Public Road Purposes (U.S. Route 34 from Eldamain Road to Center Parkway)
    - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
    - ☐ Removed _____
    - ☐ Notes _____

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11. PW 2017-31 Ordinance Approving a Revised Stormwater Management Program Plan

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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12. PW 2017-33 Ordinance Amending the Code of Ordinances Regulating Truck and Commercial Vehicles; Loads and Weights

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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13. PW 2017-34 Fox Hill and Sunflower Estates SSA Management RFP

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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14. PW 2017-35 Water Study

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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15. ADM 2017-35 Monthly Treasurer's Report

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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16. ADM 2017-40 Ordinance Repealing Licensing Requirements for Taxicab Companies, Taxicabs and Taxicab Drivers

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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MINUTES FOR APPROVAL:

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1. Minutes of the City Council – March 28, 2017
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

BILLS FOR PAYMENT:

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1. Bills for Payment (Informational)
   - ☐ Notes _____

MAYOR'S REPORT:

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1. CC 2017-21 Proclamation for Rain Barrel Month
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

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2. CC 2017-22 Appointments to Library Board

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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3. CC 2017-23 Ordinance Authorizing the First Amendment to the Annual Budget for the Fiscal Year Commencing on May 1, 2017 and Ending on April 30, 2018

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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4. CC 2017-24 Resolution Approving an Assignment of Contract to Anthony Place Yorkville, L.P. (GC Housing Development)

☐ Approved: **Y** _____ **N** _____ □ Subject to _____

☐ Removed _____

☐ Notes _____

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5. CC 2017-25 Ordinance Approving a Lease Agreement Between the City and 215 Hillcrest LLC (Special Census Office Space)
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

PUBLIC SAFETY COMMITTEE REPORT:

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1. PS 2017-10 Local Prosecution
   a. Ordinance Amending the Code to Create the Anticrime Task Force Commission
   b. Ordinance Amending the Code to Provide Minimum and Maximum Fines for Certain Violations of the Illinois Vehicle Code as Adopted by the City
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

ADMINISTRATION COMMITTEE REPORT:

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1. ADM 2017-39 Ordinance Repealing the Code Providing for Regulation of Farmer's Markets
   - ☐ Approved: **Y** _____ **N** _____ □ Subject to _____
   - ☐ Removed _____
   - ☐ Notes _____

ADDITIONAL BUSINESS:

CITIZEN COMMENTS:

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	■
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #1

Tracking Number

PS 2017-07

Agenda Item Summary Memo

Title: Noise Ordinance Text Amendment

Meeting and Date: City Council – April 25, 2017

Synopsis: Memo explains Noise Ordinance Revisions as well as previous rounds of review.

Council Action Previously Taken:

Date of Action: PS – 04/06/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PS 2017-07

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Jason Engberg (Name) Community Development (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Public Safety Committee
From: Jason Engberg, Senior Planner
CC: Bart Olson, City Administrator
Krysti J. Barksdale-Noble, Community Development Director
Date: March 29, 2017
Subject: Noise Ordinance Text Amendment

Summary

This memo shall provide information regarding the recent history of the City's Noise Ordinance, existing requirements, Soundscape Engineering consultant recommendations, and levels of review already conducted.

Background

The City's Noise Ordinance was last amended in December of 2014. At that time, the code was comprehensively rewritten based on staff's research of surrounding municipalities. The main reason for the rewrite was due to a proposed downtown amphitheater.

In 2015, the City responded to multiple instances of noise complaints for the area surrounding Pinheadz Bar at 1211 N Bridge Street. The City responded, during work hours and non-work hours, to the complaints of noise originating inside and outside the building. Residents voiced their concern at a City Council meeting and asked the City to restudy the Noise Ordinance in light of the complaints at Pinheadz.

Staff toured the property with the owner and was told that the owner had fixed some structural and mechanical issues which may have been producing the excessive noise. The owner had measured sound levels outside the building within the limits of the existing Noise Ordinance. However, the property owners directly behind Pinheadz stated that the noise issue was not improved.

Due to the continued nuisance, the City retained an experienced acoustical consultant, Soundscape Engineering, in 2016 to provide services to assist the City in evaluating its Noise Ordinance Standards. Soundscape Engineering reviewed the existing regulations, conducted a site visit to Pinheadz to determine sound levels at night, and reviewed the City's sound measuring equipment.

Soundscape Engineering Recommendations

Soundscape Engineering has rewritten the entire Noise Ordinance to better clarify how to measure noise, how loud noises should be in certain areas, and provide simpler regulations to enforce. They also provided the City with a list of sound measuring devices which would be useful for measuring and enforcing the new ordinance. The existing Noise Ordinance and a revised version illustrating the changes made to it (redline copy) have been attached to this memo for review. Soundscape Engineering believes these revisions and the proper equipment to enforce them, that the sound nuisance at Pinheadz will be resolved.

Proposed Regulations Summary

The proposed Noise Ordinance revisions have been updated to reflect the new equipment that will be used by the Yorkville Police Department to measure sound and vibration. A section has been added to clarify the correct settings for the meter. Additionally, allowable location for sound measurement has been thoroughly updated. The table providing example decibel levels, as well as

the table containing maximum decibel levels for various locations and uses, have been eliminated. These tables have been replaced with two tables containing allowable decibel level by time and land use, as well as allowable adjustments for certain scenarios or sound characteristics. Construction activity was also added as an allowable exception to these sound limitations.

Levels of Review

The alterations proposed by Soundscape Engineering have been reviewed by staff, the Economic Development Committee, and the Planning and Zoning Commission. Staff believes the changes to the Noise Ordinance will improve the enforcement of the ongoing nuisance at Pinheadz Bar as well as provide the needed clarity in the regulation of varying types of sounds (vibration, frequency, etc...).

The Economic Development Committee reviewed the proposed changes to the Noise Ordinance during their meeting held on January 3, 2017. Staff received positive feedback from the Economic Development Committee regarding the proposed alterations.

The Planning and Zoning Commission (PZC) reviewed the proposed changes to the Noise Ordinance during their meeting held on January 18, 2017. Regulations regarding noise are located within the Public Health and Safety Ordinance of the City Code, which is not under the purview of the Planning and Zoning Commission. However, the pending changes to the City's current Noise Ordinance affects certain standards within the Zoning Ordinance performance standards. Staff recommended text amendments to the performance standards within the Zoning Ordinance which reference the regulations provided by Soundscape Engineering (which will be located in the Public Health and Safety Ordinance). A public hearing was held at the PZC meeting to hear opinions from residents (no testimony was given). The PZC recommended approval to the City Council on the proposed text amendments to the Zoning Ordinance. The case has not yet been brought to City Council until the results of this Public Safety Committee are complete.

Staff Recommendations

As stated previously, staff believes these new regulations will help prevent future issues at Pinheadz Bar with regards to disturbing residential neighbors. The new updated regulations will also allow for a more thorough measuring of noise complaints in the future. The Economic Development Committee and Planning and Zoning Commission have reviewed the regulations and support their recommendation to City Council. Staff is now seeking a recommendation from the Public Safety Committee to the City Council for the changes to the Noise Ordinance.

Attachments

1. Existing Regulations (4-4 Noise Ordinance)
2. Proposed Revisions to 4-4 Noise Ordinance (Redline)
3. January 3 EDC Memo (with Soundscape Engineering Report)

Ordinance No. 2017-____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, AMENDING THE NOISE REGULATIONS IN THE PUBLIC HEALTH AND SAFETY CODE AND THE ZONING ORDINANCE

WHEREAS, the United City of Yorkville (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the City's sound engineer consultant and staff have recommended revised sound regulations to regulate sound measurement, limitations and exceptions; and,

WHEREAS, pursuant to Section 10-4-10 of the Yorkville Zoning Ordinance the City may initiate amendments to the Yorkville Zoning Ordinance; and,

WHEREAS, the City filed seeking amendments to the Yorkville Zoning Ordinance to amend noise performance standards to include those adopted in Title 4, the Public Health and Safety Code of the Yorkville City Code; and,

WHEREAS, the Planning and Zoning Commission convened and held a public hearing on January 18, 2017, to consider the request and made recommendations to the City Council to approve the requested text amendments.

WHEREAS, the City pursuant to Section 11-60-2 of the Illinois Municipal Code (65 ILCS 5/11-60-2) may define, prevent and abate nuisances, pursuant to Section 11-5-2 of the Illinois Municipal Code (65 ILCS 5/11-5-2) may prevent and suppress noises and disturbances, pursuant to Section 11-5-10 of the Illinois Municipal Code (65 ILCS 511-5-10) may regulate sound devices, and the City's authority to protect the public health, welfare and safety hereby adopts this ordinance.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1: The above recitals are incorporated and made a part of this Ordinance.

Section 2: That Chapter 4 of Title 4 of the Yorkville City Code, as amended, be and is hereby amended to read as follows:

"CHAPTER 4
NOISE ORDINANCE

4-4-1: Definitions:
All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body.

4-4-2: WEIGHTED SOUND LEVEL:

Sound level meter meeting Class 1 or Class 2 requirements as defined by IEC 61672 or ANSI S1.4 and which is specified by the meter manufacturer to have a Measurement Level Range that encompasses the noise level to be measured. When the sound level measurement is to be made indoors, a Class 1 meter may be required to check for conformance with the sound level limits because most Class 2 meters to not have a Measurement Level Range that extends low enough.

4-4-3: SOUND LEVEL METER SETTINGS

A. Sound level meter shall be set to A-weighting (frequency weighting).

B. Sound level meter shall be set to Slow meter response (1-second exponential time averaging).

C. Measured sound level shall be the maximum (L_{max}) sound level, attributable to the source under investigation, which is measured during the measurement period.

4-4-4: MEASUREMENT LOCATION:

A. Measurement may be made anywhere within the receiving property, but must be made at least 3 feet from any building façade or other surface.

B. Measurement may be made at any height above grade, at or near locations that are regularly occupied by people. For example, a measurement may be made at a position 3 feet to the exterior of a 2nd floor window since people can be expected to occupy the 2nd floor room.

C. Measurement may be made inside a structure on the receiving property, in any space that is classified as inhabitable and constructed with necessary City construction permits.

D. If measurement is to be made within a building on the receiving property, then measurement shall be made with windows, doors, and other openings to the exterior closed and measurement shall be made at least 3 feet from floor, ceiling, and all other partitions or surfaces.

E. If the sound source is in a Public Park or Other Public Open Space and sound level measurement is to be in the Public Park or Other Public Open Space then the measurement location shall be no closer than 50 feet from the source.

4-4-5: HOURS AND LEVELS:

A. No person shall operate or cause to be operated any source of sound in such a manner as to create a sound level which exceeds the sound level limits in Table 1, as adjusted according to Table 2.

Table 1: Sound Level Limits

Time of Day	Receiving Property Land Use		
	Residential	**Commercial**	**Public Parks and other Public Open Spaces**
Daytime (7:00 AM – 10:00 PM)	60 dBA	67 dBA	67 dBA
Nighttime (10:00 PM – 7:00 AM)	50 dBA	67 dBA	67 dBA

Table 2: Adjustments to Sound Level Limits

	Adjustment to Sound Level Limit
1. DURATION of noise in any one-hour period (use one adjustment only):	
a. 12 minutes and longer	Add 0 dBA
b. Under 12 minutes but over 3 minutes	Add 5 dBA
c. Under 3 minutes but over ½ minute	Add 10 dBA
d. Under ½ minute	Add 15 dBA
2. Noise is IMPULSIVE in character (e.g. hammering, firearms discharge, explosions)	Subtract 5 dBA
3. Content of noise includes electronically amplified, reinforced, or reproduced voice or music	Subtract 5 dBA
4. Noise is TONAL in character (e.g. hum, screech)	Subtract 10 dBA
5. If measured within a building on the receiving property per Paragraph 4-4-4.C and 4-4-4.D	Subtract 20 dBA

B. All Table 2 adjustments which are relevant to the noise shall be applied. For example, if the noise source is tonal and has a duration of less than 12 minutes in any one hour period then the Sound Level Limit shall be increased by 5 dBA for the Duration adjustment and decreased by 10 dBA for the Tonal adjustment.

4-4-6: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations.

E. Noise generated by construction or maintenance activities, performed for the improvement or maintenance of real property, from 7:00 AM to 7:00 PM."

Section 3: That Section 10-13C-2 of the United City of Yorkville Zoning Ordinance of the Yorkville City Code is hereby amended to read as follows:

"10-13C-2: NOISE AND VIBRATION:

A. Noise: Noise Measurement Equipment shall conform to the requirements and settings outlined in Sections 4-4-2 and 4-4-3 of the Yorkville City Code, Noise Ordinance. Measurement Location shall follow the guidelines set forth in Section 4-4-4 of the Yorkville City Code, Noise Ordinance. Sound level limits shall be as set forth in Section 4-4-5 of the Yorkville City Code, Noise Ordinance. The only exemptions to the aforementioned may be found in Section 4-4-6 of the Yorkville City Code, Noise Ordinance.

B. Vibration: Vibration shall be measured at the same measurement location parameters for sound found in Section 4-4-4 of the Yorkville City Code, Noise Ordinance. At the specified points of measurements, the vibration shall not exceed the limits listed in Table 1 of this section. The instrument used for these measurements shall be a three (3) component recording system.

C. Table:

TABLE 1
MAXIMUM PERMISSIBLE PARTICLE
VELOCITY OF THE GROUND VIBRATION

	Particle Velocity	
Applicable Limit	Steady State Inches/Second	Impact Inches/Sound
A	0.10	0.20
B	0.02	0.24

Particle velocity as specified in Table 1 may be measured directly, or if computed on the basis of

displacement and frequency, measurements shall be computed from the formula 6.28 FD, where F is the frequency of the vibration in cycles per second and D is the single amplitude displacement of the vibration in inches.

The maximum particle velocity shall be the vector sum of three (3) simultaneous mutually perpendicular components recorded.

For the purpose of this title, steady state vibrations are vibrations which are continuous, or vibrations in discrete impulses more frequent than one hundred (100) per minute. Discrete impulses which do not exceed one hundred (100) per minute shall be considered impact vibrations."

Section 4: This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____ day of _____, 2017.

_____
MAYOR

NOISE ORDINANCE

4-4-1: DEFINITIONS:

All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body. (Ord. 2001-10, 3-22-2001)

4-4-2: WEIGHTED SOUND LEVEL:

Sound pressure decibel levels shall be measured on a sound level meter using the "A" weighing network and designated as dB(A) or dBA. The following table provides examples of sound pressure decibel levels:

Sound Environment	Typical Sound Pressure Decibel Levels Generated
Threshold of hearing	0 dBA
Broadcast studio	20 dBA
Library	30 dBA
Quiet office	40 dBA
Light auto traffic (100 feet)	50 dBA
Air conditioning unit (20 feet)	60 dBA
Freeway traffic	70 dBA
Vacuum cleaner (5 feet)	80 dBA
Passing car at 10 feet	90 dBA
Passing bus or truck at 10 feet	100 dBA
Passing subway train at 10 feet	110 dBA
Nightclub with band playing	120 dBA
Jet takeoff (200 feet)	130 dBA
Air raid siren	140 dBA

(Ord. 2014-80, 12-9-2014)

4-4-3: HOURS AND LEVELS:

A. Day Hours: No person shall cause or allow the emission of sound decibel levels during daytime hours from seven o'clock (7:00) A.M. to ten o'clock (10:00) P.M. from any noise source which exceeds the following levels:

Land Use	Outdoor Space Within The Property Boundaries Of Property Where The Sound Originates From - Max. Decibel Level (dB)	Outdoor Space Not Closer Than The Property Line Of The Receiving Residential Property - Max. Decibel Level (dB)	Indoor Space In A Structure - Max. Decibel Level (dB)
Residential - single-family and multi-family, detached and attached	70	65	65
Office buildings, businesses, commercial and professional	70	70	70
Sports arena, outdoor spectator sports	110	100	100
Theaters, auditoriums, concert halls, outdoor music venues, amphitheaters	110	90	100
Parks, neighborhood playgrounds, ball fields	70	70	-
Golf courses, water recreations, gun/ shooting ranges	75	70	70
Industrial, manufacturing, utilities, agriculture	80	75	80

B. Night Hours: No person shall cause or allow the emission of sound decibel levels during nighttime hours (10:01 P.M. to 6:59 A.M.) from any noise source to any receiving residential land which exceeds fifty five (55) dBA when measured at any point within such receiving residential land provided that the point of measurement shall not be closer than on the property line of the complainant. (Ord. 2014-80, 12-9-2014)

4-4-4: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

4-4-1: DEFINITIONS:

All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body. (Ord. 2001-10, 3-22-2001)

4-4-2: WEIGHTED SOUND LEVEL:

Sound level meter meeting Class 1 or Class 2 requirements as defined by IEC 61672 or ANSI S1.4 and which is specified by the meter manufacturer to have a Measurement Level Range that encompasses the noise level to be measured. When the sound level measurement is to be made indoors, a Class 1 meter may be required to check for conformance with the sound level limits because most Class 2 meters to not have a Measurement Level Range that extends low enough.

~~Sound pressure decibel levels shall be measured on a sound level meter using the "A" weighing network and designated as dB(A) or dBA. The following table provides examples of sound pressure decibel levels:~~

~~Sound Environment~~	~~Typical Sound Pressure Decibel Levels Generated~~
~~Threshold of hearing~~	~~0 dBA~~
~~Broadcast studio~~	~~20 dBA~~
~~Library~~	~~30 dBA~~
~~Quiet office~~	~~40 dBA~~
~~Light auto traffic (100 feet)~~	~~50 dBA~~
~~Air conditioning unit (20 feet)~~	~~60 dBA~~
~~Freeway traffic~~	~~70 dBA~~
~~Vacuum cleaner (5 feet)~~	~~80 dBA~~
~~Passing car at 10 feet~~	~~90 dBA~~

~~Passing bus or truck at 10 feet~~	~~100 dBA~~
~~Passing subway train at 10 feet~~	~~110 dBA~~
~~Nightclub with band playing~~	~~120 dBA~~
~~Jet takeoff (200 feet)~~	~~130 dBA~~
~~Air raid siren~~	~~140 dBA~~

(Ord. 2014-80, 12-9-2014)

4-4-3: SOUND LEVEL METER SETTINGS

A. Sound level meter shall be set to A-weighting (frequency weighting).

B. Sound level meter shall be set to Slow meter response (1-second exponential time averaging).

C. Measured sound level shall be the maximum (L_{max}) sound level, attributable to the source under investigation, which is measured during the measurement period.

4-4-4: MEASUREMENT LOCATION:

A. Measurement may be made anywhere within receiving property, but must be made at least 3 feet from any building façade or other surface.

B. Measurement may be made at any height above grade, at or near locations that are regularly occupied by people. For example, a measurement may be made at a position 3 feet to the exterior of a 2nd floor window since people can be expected to occupy the 2nd floor room.

C. Measurement may be made inside a structure on the receiving property, in any space that is classified as inhabitable and constructed with necessary City construction permits.

D. If measurement is to be made within a building on the receiving property, then measurement shall be made with windows, doors, and other openings to the exterior

closed and measurement shall be made at least 3 feet from floor, ceiling, and all other partitions or surfaces.

E. If sound source is in Public Park or Other Public Open Space and sound level measurement is to be in Public Park or Other Public Open Space then measurement location shall be no closer than 50 feet from the source.

4-4-5:HOURS AND LEVELS:

A. A. Day Hours: No person shall operate or cause to be operated any source of sound in such a manner as to create a sound level which exceeds the sound level limits in Table 1, as adjusted according to Table 2.

Table 1: Sound Level Limits

Time of Day	Receiving Property Land Use		
	Residential	Commercial	Public Parks and other Public Open Spaces
Daytime (7:00 AM – 10:00 PM)	60 dBA	67 dBA	67 dBA
Nighttime (10:00 PM – 7:00 AM)	50 dBA	67 dBA	67 dBA

Table 2: Adjustments to Sound Level Limits

	Adjustment to Sound Level Limit
1. DURATION of noise in any one-hour period (use one adjustment only):	
a. 12 minutes and longer	Add 0 dBA
b. Under 12 minutes but over 3 minutes	Add 5 dBA
c. Under 3 minutes but over ½ minute	Add 10 dBA
d. Under ½ minute	Add 15 dBA
2. Noise is IMPULSIVE in character (e.g. hammering, firearms discharge, explosions)	Subtract 5 dBA
3. Content of noise includes electronically amplified, reinforced, or reproduced voice or music	Subtract 5 dBA
4. Noise is TONAL in character (e.g. hum, screech)	Subtract 10 dBA
5. If measured within a building on the receiving property per Paragraph 4-4-4.C and 4-4-4.D	Subtract 20 dBA

cause or allow the emission of sound decibel levels during daytime hours from seven o'clock (7:00) A.M. to ten o'clock (10:00) P.M. from any noise source which exceeds the following levels:

Land Use	Outdoor Space Within The Property Boundaries Of Property Where The Sound Originates From - Max. Decibel Level (dB)	Outdoor Space Not Closer Than The Property Line Of The Receiving Residential Property - Max. Decibel Level (dB)	Indoor Space In A Structure - Max. Decibel Level (dB)
Residential - single-family and multi-family, detached and attached	70	65	65
Office buildings, businesses, commercial and professional	70	70	70
Sports arena, outdoor spectator sports	110	100	100
Theaters, auditoriums, concert halls, outdoor music venues, amphitheaters	110	90	100
Parks, neighborhood playgrounds, ball fields	70	70	--
Golf courses, water recreations, gun/ shooting ranges	75	70	70
Industrial, manufacturing, utilities, agriculture	80	75	80

~~B. Night Hours: No person shall cause or allow the emission of sound decibel levels during nighttime hours (10:01 P.M. to 6:59 A.M.) from any noise source to any receiving residential land which exceeds fifty five (55) dBA when measured at any point within such receiving residential land provided that the point of measurement shall not be closer than on the property line of the complainant. (Ord. 2014-80, 12-9-2014)~~

B. All Table 2 adjustments which are relevant to the noise shall be applied. For example, if the noise source is tonal and has a duration of less than 12 minutes in any one hour period then the Sound Level Limit shall be increased by 5 dBA for the Duration adjustment and decreased by 10 dBA for the Tonal adjustment.

4-4-~~4~~6: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

E. Noise generated by construction or maintenance activities, performed for the improvement or maintenance of real property, from 7:00 AM to 7:00 PM.

Memorandum

To: Economic Development Committee
From: Jason Engberg, Senior Planner
CC: Bart Olson, City Administrator
Krysti J. Barksdale-Noble, Community Development Director
Date: December 28, 2016
Subject: **Noise Ordinance Revision**

Summary

This memo shall provide information regarding the recent history of the City's noise ordinance, existing requirements, Soundscape Engineering consultant recommendations, and zoning ordinance performance standard discrepancies.

Background

The City's Noise Ordinance was last amended in December of 2014. At that time, the code was comprehensively rewritten based on staff's research of surrounding municipalities. The main reason for the rewrite was due to a proposed downtown amphitheater.

In 2015, the City responded to multiple instances of noise complaints for the area surrounding Pinheadz Bar at 1211 N Bridge Street. The City responded, during work hours and non-work hours, to the complaints of noise originating inside and outside the building. Residents voiced their concern at a City Council meeting and asked the City to restudy the noise ordinance in light of the complaints at Pinheadz.

Staff toured the property with the owner and was told that the owner had fixed some structural and mechanical issues which may have been producing the excessive noise. The owner had measured sound levels outside the building within the limits of the existing Noise Ordinance. However, the property owners directly behind Pinheadz stated that the noise issue was not improved.

Due to the continued nuisance, the City retained an experienced acoustical consultant, Soundscape Engineering, in 2016 to provide services to assist the City in evaluating its Noise Ordinance Standards. Soundscape Engineering reviewed the existing regulations, conducted a site visit to Pinheadz to determine sound levels at night, and reviewed the City's sound measuring equipment.

Soundscape Engineering Recommendations

Soundscape Engineering has rewritten the entire Noise Ordinance to better clarify how to measure noise, how loud noises should be in certain areas, and provide simpler regulations to enforce. They also provided the City with a list of sound measuring devices which would be useful for measuring and enforcing the new ordinance. The existing Noise Ordinance and a revised version illustrating the changes made to it (redline copy) have been attached to this memo for review. Soundscape Engineering believes these revisions and the proper equipment to enforce them, that the sound nuisance at Pinheadz will be resolved.

Propsed Regulations Summary

The proposed Noise Ordinance revisions have been updated to reflect the new equipment that will be used by the Yorkville Police Department to measure sound and vibration. A section has been

added to clarify the correct settings for the meter. Additionally, allowable location for sound measurement has been thoroughly updated. The table providing example decibel levels, as well as the table containing maximum decibel levels for various locations and uses, have been eliminated. These tables have been replaced with two tables containing allowable decibel level by time and land use, as well as allowable adjustments for certain scenarios or sound characteristics. Construction activity was also added as an allowable exception to these sound limitations.

Zoning Ordinance

The proposed Noise Ordinance revisions were written to amend the text in "Title 4 Chapter 4 Noise Ordinance" of the Yorkville City Code. There are additional regulations regarding noise in "Title 10 Chapter 13 Article C Performance Standards" which will also need to be amended to coexist with the proposed changes. The existing Performance Standards as well as a revised version illustrating the changes made to it (redline copy) have been attached to this memo for review.

The noise performance standards reference outdated measuring equipment and are not consistent with the proposed Noise Ordinance in the Public Health and Safety Code. This section of the Zoning Ordinance has been updated to reference the new Noise Ordinance for all matters regarding sound measurement and limitations and exceptions. Vibration, while mentioned in the Zoning Ordinance (10-13C-2), is not explicitly mentioned in the updated Noise Ordinance; therefore the sections regarding vibration have remained unchanged.

Staff Recommendations

Staff is seeking feedback regarding the proposed changes to the Noise Ordinance within both the Public Health and Safety Code and the Zoning Ordinance.

Attachments

1. Existing Regulations (4-4 Noise Ordinance)
2. Proposed Revisions to 4-4 Noise Ordinance (Redline)
3. Zoning Ordinance Performance Standards (10-13-C)
4. Proposed Revisions to Zoning Ordinance Performance Standards (Redline)
5. Soundscape Engineering Report
6. Sound Level Meters

NOISE ORDINANCE

4-4-1: DEFINITIONS:

All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body. (Ord. 2001-10, 3-22-2001)

4-4-2: WEIGHTED SOUND LEVEL:

Sound pressure decibel levels shall be measured on a sound level meter using the "A" weighing network and designated as dB(A) or dBA. The following table provides examples of sound pressure decibel levels:

Sound Environment	Typical Sound Pressure Decibel Levels Generated
Threshold of hearing	0 dBA
Broadcast studio	20 dBA
Library	30 dBA
Quiet office	40 dBA
Light auto traffic (100 feet)	50 dBA
Air conditioning unit (20 feet)	60 dBA
Freeway traffic	70 dBA
Vacuum cleaner (5 feet)	80 dBA
Passing car at 10 feet	90 dBA
Passing bus or truck at 10 feet	100 dBA
Passing subway train at 10 feet	110 dBA
Nightclub with band playing	120 dBA
Jet takeoff (200 feet)	130 dBA
Air raid siren	140 dBA

(Ord. 2014-80, 12-9-2014)

4-4-3: HOURS AND LEVELS:

A. Day Hours: No person shall cause or allow the emission of sound decibel levels during daytime hours from seven o'clock (7:00) A.M. to ten o'clock (10:00) P.M. from any noise source which exceeds the following levels:

Land Use	Outdoor Space Within The Property Boundaries Of Property Where The Sound Originates From - Max. Decibel Level (dB)	Outdoor Space Not Closer Than The Property Line Of The Receiving Residential Property - Max. Decibel Level (dB)	Indoor Space In A Structure - Max. Decibel Level (dB)
Residential - single-family and multi-family, detached and attached	70	65	65
Office buildings, businesses, commercial and professional	70	70	70
Sports arena, outdoor spectator sports	110	100	100
Theaters, auditoriums, concert halls, outdoor music venues, amphitheaters	110	90	100
Parks, neighborhood playgrounds, ball fields	70	70	-
Golf courses, water recreations, gun/ shooting ranges	75	70	70
Industrial, manufacturing, utilities, agriculture	80	75	80

B. Night Hours: No person shall cause or allow the emission of sound decibel levels during nighttime hours (10:01 P.M. to 6:59 A.M.) from any noise source to any receiving residential land which exceeds fifty five (55) dBA when measured at any point within such receiving residential land provided that the point of measurement shall not be closer than on the property line of the complainant. (Ord. 2014-80, 12-9-2014)

4-4-4: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

4-4-1: DEFINITIONS:

All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body. (Ord. 2001-10, 3-22-2001)

4-4-2: WEIGHTED SOUND LEVEL:

Sound level meter meeting Class 1 or Class 2 requirements as defined by IEC 61672 or ANSI S1.4 and which is specified by the meter manufacturer to have a Measurement Level Range that encompasses the noise level to be measured. When the sound level measurement is to be made indoors, a Class 1 meter may be required to check for conformance with the sound level limits because most Class 2 meters to not have a Measurement Level Range that extends low enough.

~~Sound pressure decibel levels shall be measured on a sound level meter using the "A" weighing network and designated as dB(A) or dBA. The following table provides examples of sound pressure decibel levels:~~

~~Sound Environment~~	~~Typical Sound Pressure Decibel Levels Generated~~
~~Threshold of hearing~~	~~0 dBA~~
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~~Quiet office~~	~~40 dBA~~
~~Light auto traffic (100 feet)~~	~~50 dBA~~
~~Air conditioning unit (20 feet)~~	~~60 dBA~~
~~Freeway traffic~~	~~70 dBA~~
~~Vacuum cleaner (5 feet)~~	~~80 dBA~~
~~Passing car at 10 feet~~	~~90 dBA~~

~~Passing bus or truck at 10 feet~~	~~100 dBA~~
~~Passing subway train at 10 feet~~	~~110 dBA~~
~~Nightclub with band playing~~	~~120 dBA~~
~~Jet takeoff (200 feet)~~	~~130 dBA~~
~~Air raid siren~~	~~140 dBA~~

(Ord. 2014-80, 12-9-2014)

4-4-3: SOUND LEVEL METER SETTINGS

A. Sound level meter shall be set to A-weighting (frequency weighting).

B. Sound level meter shall be set to Slow meter response (1-second exponential time averaging).

C. Measured sound level shall be the maximum (L_{max}) sound level, attributable to the source under investigation, which is measured during the measurement period.

4-4-4: MEASUREMENT LOCATION:

A. Measurement may be made anywhere within receiving property, but must be made at least 3 feet from any building façade or other surface.

B. Measurement may be made at any height above grade, at or near locations that are regularly occupied by people. For example, a measurement may be made at a position 3 feet to the exterior of a 2nd floor window since people can be expected to occupy the 2nd floor room.

C. Measurement may be made inside a structure on the receiving property, in any space that is classified as inhabitable and constructed with necessary City construction permits.

D. If measurement is to be made within a building on the receiving property, then measurement shall be made with windows, doors, and other openings to the exterior

closed and measurement shall be made at least 3 feet from floor, ceiling, and all other partitions or surfaces.

E. If sound source is in Public Park or Other Public Open Space and sound level measurement is to be in Public Park or Other Public Open Space then measurement location shall be no closer than 50 feet from the source.

4-4-5:HOURS AND LEVELS:

A. A. Day Hours: No person shall operate or cause to be operated any source of sound in such a manner as to create a sound level which exceeds the sound level limits in Table 1, as adjusted according to Table 2.

Table 1: Sound Level Limits

Time of Day	Receiving Property Land Use		
	Residential	Commercial	Public Parks and other Public Open Spaces
Daytime (7:00 AM – 10:00 PM)	60 dBA	67 dBA	67 dBA
Nighttime (10:00 PM – 7:00 AM)	50 dBA	67 dBA	67 dBA

Table 2: Adjustments to Sound Level Limits

	Adjustment to Sound Level Limit
1. DURATION of noise in any one-hour period (use one adjustment only):	
a. 12 minutes and longer	Add 0 dBA
b. Under 12 minutes but over 3 minutes	Add 5 dBA
c. Under 3 minutes but over ½ minute	Add 10 dBA
d. Under ½ minute	Add 15 dBA
2. Noise is IMPULSIVE in character (e.g. hammering, firearms discharge, explosions)	Subtract 5 dBA
3. Content of noise includes electronically amplified, reinforced, or reproduced voice or music	Subtract 5 dBA
4. Noise is TONAL in character (e.g. hum, screech)	Subtract 10 dBA
5. If measured within a building on the receiving property per Paragraph 4-4-4.C and 4-4-4.D	Subtract 20 dBA

cause or allow the emission of sound decibel levels during daytime hours from seven o'clock (7:00) A.M. to ten o'clock (10:00) P.M. from any noise source which exceeds the following levels:

Land Use	Outdoor Space Within The Property Boundaries Of Property Where The Sound Originates From - Max. Decibel Level (dB)	Outdoor Space Not Closer Than The Property Line Of The Receiving Residential Property - Max. Decibel Level (dB)	Indoor Space In A Structure - Max. Decibel Level (dB)
Residential - single-family and multi-family, detached and attached	70	65	65
Office buildings, businesses, commercial and professional	70	70	70
Sports arena, outdoor spectator sports	110	100	100
Theaters, auditoriums, concert halls, outdoor music venues, amphitheaters	110	90	100
Parks, neighborhood playgrounds, ball fields	70	70	--
Golf courses, water recreations, gun/ shooting ranges	75	70	70
Industrial, manufacturing, utilities, agriculture	80	75	80

~~B. Night Hours: No person shall cause or allow the emission of sound decibel levels during nighttime hours (10:01 P.M. to 6:59 A.M.) from any noise source to any receiving residential land which exceeds fifty five (55) dBA when measured at any point within such receiving residential land provided that the point of measurement shall not be closer than on the property line of the complainant. (Ord. 2014-80, 12-9-2014)~~

B. All Table 2 adjustments which are relevant to the noise shall be applied. For example, if the noise source is tonal and has a duration of less than 12 minutes in any one hour period then the Sound Level Limit shall be increased by 5 dBA for the Duration adjustment and decreased by 10 dBA for the Tonal adjustment.

4-4-~~4~~6: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

E. Noise generated by construction or maintenance activities, performed for the improvement or maintenance of real property, from 7:00 AM to 7:00 PM.

ARTICLE C. PERFORMANCE STANDARDS

10-13C-1: COMPLIANCE WITH PERFORMANCE STANDARDS:

Any use established in a manufacturing district after the effective date hereof shall be so operated as to comply with the performance standards set forth hereinafter for the district in which such use shall be located. No use lawfully established on the effective date hereof shall be so altered or modified as to conflict with, or further conflict with, the performance standards established for the district in which such use is located. (Ord. 2014-73, 11-25-2014)

10-13C-2: NOISE AND VIBRATION:

A. Noise: Noise shall be measured at any adjacent lot line and/or district boundary, as indicated in table 1 of this section. At the specified points of measurement, the sound pressure level of any activity or operation (except those not under the direct control of the industrial use, such as transportation facilities) shall not exceed the values tabulated in tables 1, 2, 3 and 4 of this section between the hours of seven o'clock (7:00) A.M. and seven o'clock (7:00) P.M. The instruments used for these measurements shall conform to all current American National Standards Institute specifications. Impact noises are those whose peak values are more than three (3) dB higher on the fast response than the r.m.s. values indicated on the sound level meter.

B. Vibration: Vibration shall be measured at any adjacent lot line and/or district boundary as indicated in table 4 of this section. At the specified points of measurements, the vibration shall not exceed the limits listed in table 5 of this section. The instrument used for these measurements shall be a three (3) component recording system.

C. Tables:

TABLE 1
REFERENCE

Manufacturing District	Adjacent Lot Line	Commercial District Boundary	Residential District Boundary
M-1	A	-	B
M-2	-	A	C

Between the hours of seven o'clock (7:00) P.M. and seven o'clock (7:00) A.M., the permissible sound levels across residential district boundaries shall be reduced by five (5) dB in each octave band, or in the overall band for impact noises.

TABLE 2
MAXIMUM PERMITTED SOUND
LEVELS, PREFERRED FREQUENCY OCTAVE BANDS

Preferred Center Frequency Cycles/Second	A	B	C
31 .5	88	83	86
63	79	71	75
125	69	59	64
250	62	52	57
500	58	47	53
1,000	54	44	49
2,000	51	40	46
4,000	49	37	44
8,000	47	35	41

Measurement of the sound levels may also be made using an A-weighted scale sound level meter. The levels in table 2 of this section shall be considered to have been met if the A-weighted levels are not greater than the following:

TABLE 3
MAXIMUM PERMITTED SOUND
LEVELS, dB(A), FOR SCREENING PURPOSES

Required Level	Sound Level, dB(A)
A	60
B	50
C	55

TABLE 4
REFERENCE

Manufacturing District	Adjacent Lot Lines	Commercial District Boundary	Residential District Boundary

M-1	A	-	B
M-2	-	A	B

Particle velocity as specified in table 5 of this section may be measured directly, or if computed on the basis of displacement and frequency, measurements shall be computed from the formula 6.28 FD, where F is the frequency of the vibration in cycles per second and D is the single amplitude displacement of the vibration in inches.

TABLE 5
MAXIMUM PERMISSIBLE PARTICLE
VELOCITY OF THE GROUND VIBRATION

Applicable Limit	Particle Velocity	
	Steady State Inches/Second	Impact Inches/Sound
A	0.10	0.20
B	0.02	0.24

The maximum particle velocity shall be the vector sum of three (3) simultaneous mutually perpendicular components recorded.

For the purpose of this title, steady state vibrations are vibrations which are continuous, or vibrations in discrete impulses more frequent than one hundred (100) per minute. Discrete impulses which do not exceed one hundred (100) per minute shall be considered impact vibrations. (Ord. 2014-73, 11-25-2014)

10-13C-1: COMPLIANCE WITH PERFORMANCE STANDARDS:

Any use established in a manufacturing district after the effective date hereof shall be so operated as to comply with the performance standards set forth hereinafter for the district in which such use shall be located. No use lawfully established on the effective date hereof shall be so altered or modified as to conflict with, or further conflict with, the performance standards established for the district in which such use is located. (Ord. 2014-73, 11-25-2014)

10-13C-2: NOISE AND VIBRATION:

A. Noise: ~~Noise shall be measured at any adjacent lot line and/or district boundary, as indicated in table 1 of this section. At the specified points of measurement, the sound pressure level of any activity or operation (except those not under the direct control of the industrial use, such as transportation facilities) shall not exceed the values tabulated in tables 1, 2, 3 and 4 of this section between the hours of seven o'clock (7:00) A.M. and seven o'clock (7:00) P.M. The instruments used for these measurements shall conform to all current American National Standards Institute specifications. Impact noises are those whose peak values are more than three (3) dB higher on the fast response than the r.m.s. values indicated on the sound level meter.~~ Noise Measurement Equipment shall conform to the requirements and settings outlined in Sections 4-4-2 and 4-4-3 of the Public Health and Safety Code Noise Ordinance. Measurement Location must follow the guidelines set forth in Section 4-4-4 of the Noise Ordinance. Sound level limits are as stated in Section 4-4-5 of the Noise Ordinance. The only exemptions to the aforementioned may be found in Section 4-4-6 of the Noise Ordinance.

B. Vibration: Vibration shall be measured at ~~the~~ the same measurement location parameters for sound, which can be found in Section 4-4-4 of the Public Health and Safety Code Noise Ordinance.~~any adjacent lot line and/or district boundary as indicated in table 4 of this section~~. At the specified points of measurements, the vibration shall not exceed the limits listed in T~~t~~able 1~~5~~ of this section. The instrument used for these measurements shall be a three (3) component recording system.

C. Tables:

~~TABLE 1~~
~~REFERENCE~~

~~Manufacturing District~~	~~Adjacent Lot Line~~	~~Commercial District Boundary~~	~~Residential District Boundary~~
~~M-1~~	~~A~~	~~—~~	~~B~~

M-2	—	A	C

Between the hours of seven o'clock (7:00) P.M. and seven o'clock (7:00) A.M., the permissible sound levels across residential district boundaries shall be reduced by five (5) dB in each octave band, or in the overall band for impact noises.

TABLE 2
MAXIMUM PERMITTED SOUND
LEVELS, PREFERRED FREQUENCY OCTAVE BANDS

Preferred Center Frequency Cycles/Second	A	B	C
31 .5	88	83	86
63	79	71	75
125	69	59	64
250	62	52	57
500	58	47	53
1,000	54	44	49
2,000	51	40	46
4,000	49	37	44
8,000	47	35	41

Measurement of the sound levels may also be made using an A-weighted scale sound level meter. The levels in table 2 of this section shall be considered to have been met if the A-weighted levels are not greater than the following:

TABLE 3

~~MAXIMUM PERMITTED SOUND LEVELS, dB(A), FOR SCREENING PURPOSES~~

~~Required Level~~	~~Sound Level, dB(A)~~
~~A~~	~~60~~
~~B~~	~~50~~
~~C~~	~~55~~

~~TABLE 4~~
~~REFERENCE~~

~~Manufacturing District~~	~~Adjacent Lot Lines~~	~~Commercial District Boundary~~	~~Residential District Boundary~~
~~M-1~~	~~A~~	~~—~~	~~B~~
~~M-2~~	~~—~~	~~A~~	~~B~~

Particle velocity as specified in table 5 of this section may be measured directly, or if computed on the basis of displacement and frequency, measurements shall be computed from the formula 6.28 FD, where F is the frequency of the vibration in cycles per second and D is the single amplitude displacement of the vibration in inches.

TABLE 1~~5~~
MAXIMUM PERMISSIBLE PARTICLE
VELOCITY OF THE GROUND VIBRATION

Applicable Limit	Particle Velocity	
	Steady State Inches/Second	Impact Inches/Sound
A	0.10	0.20
B	0.02	0.24

The maximum particle velocity shall be the vector sum of three (3) simultaneous mutually perpendicular components recorded.

For the purpose of this title, steady state vibrations are vibrations which are continuous, or vibrations in discrete impulses more frequent than one hundred (100) per minute. Discrete impulses which do not exceed one hundred (100) per minute shall be considered impact vibrations. (Ord. 2014-73, 11-25-2014)

Soundscape Engineering

Practical Solutions from Professional Engineers

April 21, 2016

Krysti J. Barksdale-Noble AICP
Community Development Director
(630) 553-8573
knoble@yorkville.il.us

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

Subject: Recommended revisions to noise ordinance

Dear Ms. Barksdale-Noble:

I have completed my review of the existing City noise ordinance (Title 4, Chapter 4). As we discussed previously, my professional opinion is that the existing ordinance is poorly written. I have, therefore rewritten the ordinance rather than try to markup the existing text. Prior to rewriting the ordinance, I obtained and reviewed the ordinance for the nearby Cities of Joliet, Aurora, and Naperville. I also reviewed the ordinance for the City of Grand Rapids, Michigan, and considered the City of Chicago ordinance. Much of the general approach in the rewritten ordinance emulates the ordinances for the Village of Lakemoor and City of McHenry.

My goals in rewriting the ordinance were to (1) create an ordinance that is as simple or more simple than the existing Yorkville noise ordinance, (2) accounts for the character of the noise, (3) is very specific in describing how the noise is to be measured, and (4) places the limits on the amount of noise transmitted to receiving properties rather than on the amount of noise produced on the source property.

Maintaining the brevity of the ordinance, means that there is much not included that is included in some other noise ordinances. One such item is a noise limit(s) specifically for vehicles. There are also no limits on the noise level or duration produced specifically by animals (such as a limit on how long dogs are allowed to bark).

I added only one exemption to the exemptions in the existing noise ordinance. This additional exemption is for construction activities. There are many exemptions included in other communities' ordinances which you may wish to consider. Accompanying this cover letter and the rewritten ordinance, are all of the noise ordinances mentioned above. Also included is the "Model Community Noise Control Ordinance" from the U.S. Environmental Protection Agency. You may wish to review this model ordinance to determine if it contains anything that you believe would be beneficial to include in the Yorkville ordinance.

Finally, I must point out that I am acoustical engineer, not an attorney. What I have included in the ordinance is what I believe to be appropriate from that perspective. I leave it to the City attorney or other counsel to address any legal issues associated with the ordinance.

Sincerely,

Soundscape Engineering LLC
Per:



Nathan Sevener, Principal Consultant
PE, LEED AP, INCE Bd. Cert.

nsevener@SoundscapeEngineering.com
(312) 436-0032 x100

Chapter 4
NOISE ORDINANCE

4-4-1: DEFINITIONS:

A. All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body.

4-4-2: MEASUREMENT EQUIPMENT:

A. Sound level meter meeting Class 1 or Class 2 requirements as defined by IEC 61672 or ANSI S1.4 and which is specified by the meter manufacturer to have a Measurement Level Range that encompasses the noise level to be measured. When the sound level measurement is to be made indoors, a Class 1 meter may be required to check for conformance with the sound level limits because most Class 2 meters to not have a Measurement Level Range that extends low enough.

4-4-3: SOUND LEVEL METER SETTINGS:

A. Sound level meter shall be set to A-weighting (frequency weighting).

B. Sound level meter shall be set to Slow meter response (1-second exponential time averaging).

C. Measured sound level shall be the maximum (L_{max}) sound level, attributable to the source under investigation, which is measured during the measurement period.

4-4-4: MEASUREMENT LOCATION:

A. Measurement may be made anywhere within receiving property, but must be made at least 3 feet from any building façade or other surface.

B. Measurement may be made at any height above grade, at or near locations that are regularly occupied by people. For example, a measurement may be made at a position 3 feet to the exterior of a 2nd floor window since people can be expected to occupy the 2nd floor room.

C. Measurement may be made inside a structure on the receiving property, in any space that is classified as inhabitable and constructed with necessary City construction permits.

D. If measurement is to be made within a building on the receiving property, then measurement shall be made with windows, doors, and other openings to the exterior

closed and measurement shall be made at least 3 feet from floor, ceiling, and all other partitions or surfaces.

E. If sound source is in Public Park or Other Public Open Space and sound level measurement is to be in Public Park or Other Public Open Space then measurement location shall be no closer than 50 feet from the source.

4-4-5: SOUND LEVELS:

A. No person shall operate or cause to be operated any source of sound in such a manner as to create a sound level which exceeds the sound level limits in Table 1, as adjusted according to Table 2.

Table 1: Sound Level Limits

Time of Day	Receiving Property Land Use		
	Residential	**Commercial**	**Public Parks and other Public Open Spaces**
Daytime (7:00 AM – 10:00 PM)	60 dBA	67 dBA	67 dBA
Nighttime (10:00 PM – 7:00 AM)	50 dBA	67 dBA	67 dBA

Table 2: Adjustments to Sound Level Limits

	Adjustment to Sound Level Limit
1. DURATION of noise in any one-hour period (use one adjustment only):	
a. 12 minutes and longer	Add 0 dBA
b. Under 12 minutes but over 3 minutes	Add 5 dBA
c. Under 3 minutes but over ½ minute	Add 10 dBA
d. Under ½ minute	Add 15 dBA
2. Noise is IMPULSIVE in character (e.g. hammering, firearms discharge, explosions)	Subtract 5 dBA
3. Content of noise includes electronically amplified, reinforced, or reproduced voice or music	Subtract 5 dBA
4. Noise is TONAL in character (e.g. hum, screech)	Subtract 10 dBA
5. If measured within a building on the receiving property per Paragraph 4-4-4.C and 4-4-4.D	Subtract 20 dBA

B. All Table 2 adjustments which are relevant to the noise shall be applied. For example, if the noise source is tonal and has a duration of less than 12 minutes in any one hour period then the Sound Level Limit shall be increased by 5 dBA for the Duration adjustment and decreased by 10 dBA for the Tonal adjustment.

4-4-6: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

E. Noise generated by construction or maintenance activities, performed for the improvement or maintenance of real property, from 7:00 AM to 7:00 PM.

4-4-7: ENFORCEMENT:

A.

Chapter 4
NOISE ORDINANCE

[4-4-1: DEFINITIONS:](#)
[4-4-2: WEIGHTED SOUND LEVEL:](#)
[4-4-3: HOURS AND LEVELS:](#)
[4-4-4: EXEMPTIONS:](#)

4-4-1: DEFINITIONS:

All terminology used in this chapter shall be in conformance with applicable publications of the American National Standard Institute (ANSI) or its successor body. (Ord. 2001-10, 3-22-2001)

4-4-2: WEIGHTED SOUND LEVEL:

Sound pressure decibel levels shall be measured on a sound level meter using the "A" weighing network and designated as dB(A) or dBA. The following table provides examples of sound pressure decibel levels:

Sound Environment	Typical Sound Pressure Decibel Levels Generated
Threshold of hearing	0 dBA
Broadcast studio	20 dBA
Library	30 dBA
Quiet office	40 dBA
Light auto traffic (100 feet)	50 dBA
Air conditioning unit (20 feet)	60 dBA
Freeway traffic	70 dBA
Vacuum cleaner (5 feet)	80 dBA
Passing car at 10 feet	90 dBA
Passing bus or truck at 10 feet	100 dBA
Passing subway train at 10 feet	110 dBA
Nightclub with band playing	120 dBA
Jet takeoff (200 feet)	130 dBA

Air raid siren	140 dBA

(Ord. 2014-80, 12-9-2014)

4-4-3: HOURS AND LEVELS:

A. Day Hours: No person shall cause or allow the emission of sound decibel levels during daytime hours from seven o'clock (7:00) A.M. to ten o'clock (10:00) P.M. from any noise source which exceeds the following levels:

Land Use	Outdoor Space Within The Property Boundaries Of Property Where The Sound Originates From - Max. Decibel Level (dB)	Outdoor Space Not Closer Than The Property Line Of The Receiving Residential Property - Max. Decibel Level (dB)	Indoor Space In A Structure - Max. Decibel Level (dB)
Residential - single-family and multi-family, detached and attached	70	65	65
Office buildings, businesses, commercial and professional	70	70	70
Sports arena, outdoor spectator sports	110	100	100
Theaters, auditoriums, concert halls, outdoor music venues, amphitheaters	110	90	100
Parks, neighborhood	70	70	-

playgrounds, ball fields			
Golf courses, water recreations, gun/ shooting ranges	75	70	70
Industrial, manufacturing, utilities, agriculture	80	75	80

B. Night Hours: No person shall cause or allow the emission of sound decibel levels during nighttime hours (10:01 P.M. to 6:59 A.M.) from any noise source to any receiving residential land which exceeds fifty five (55) dBA when measured at any point within such receiving residential land provided that the point of measurement shall not be closer than on the property line of the complainant. (Ord. 2014-80, 12-9-2014)

4-4-4: EXEMPTIONS:

A. Emergency Operations: Emergency short term operations which are necessary to protect the health and welfare of the citizens, such as, emergency utility and street repair, fallen tree removal or emergency fuel oil delivery shall be exempt, provided that reasonable steps shall be taken by those in charge of such operations to minimize noise emanating from the same.

B. Noises Required By Law: The provisions of this section shall not apply to any noise required specifically by law for the protection or safety of people or property.

C. Powered Equipment: Powered equipment, such as lawn mowers, small lawn and garden tools, riding tractors, and snow removal equipment which is necessary for the maintenance of property is exempted between the hours of seven o'clock (7:00) A.M. and ten o'clock (10:00) P.M.

D. Community Events: The term "community events" shall include such things as parades, festivals, drum corps shows, sports events, Fourth Of July celebrations, sanctioned or sponsored in whole or in part by local governments, schools or charitable or service organizations. (Ord. 2001-10, 3-22-2001)

SECTION #12: PERFORMANCE STANDARDS

A. Purpose

The requirements herein are intended to provide a basis for determining the compatibility of land uses that may produce measurable adverse environmental effects on their surroundings.

B. Applicability

The Performance Standards herein shall apply as follows:

Performance Standard For:	Applies To:
1. Heavy Industrial Uses	Conditional Uses in I-1
2. Other Uses	Conditional Uses in All Districts Except I-1 Permitted Uses in All Districts
3. (Unspecified)	Permitted Uses in All Districts Conditional Uses in All Districts

C. Noise

1. Maximum Sound Levels
   No operation or activity shall cause or create noise above the sound pressure levels in Tables 22 and 23 at the locations specified therein.

2. Measurement
   A sound-level meter and associated octave band analyzer shall be employed to measure the intensity and frequency of sound. The flat network slow meter response of the sound level meter shall be used.

3. Exemptions
   The following shall be exempt from noise performance standards:

   a. Noises of construction or maintenance activities from 7AM to 7PM.
   b. Noises of safety signals, warning devices, and emergency relief valves.
   c. Transient noises of moving sources such as transportation vehicles.
   d. Noises associated with snow plowing, street sweeping, and mosquito abatement.
   e. Church bells, chimes, and carillons.
   f. Other noises not under the direct control of the property user.

Table 22: Permitted Sound Levels

Preferred Center Frequency in Hertz	Maximum Permitted Sound Pressure Level in Decibels at Boundaries of Nearest Residentially Zoned Lot
31.5	75
63	74
125	69
250	64
500	58
1,000	52
2,000	47
4,000	43
8,000	40

Above figures for octave band analyzers calibrated with Preferred Frequencies (American Standards Association S1.6-1960, Preferred Frequencies for Acoustical Measurement)
Sound Levels above shall be modified where applicable by the adjustments in Table 23.

Table 23: Adjustments to Permitted Sound Levels

	Adjustment in Decibels
1. DURATION of noise in any one-hour period (use one adjustment only): a. Under 12 minutes b. Under 3 minutes c. Under ½ minute	 Add 5 dB Add 10dB Add 15dB
2. At boundaries of nearest Office or COMMERCIAL zoned lot	Add 5dB
3. Noise is IMPULSIVE in character (e.g. hammering)	Subtract 5dB
4. Noise is PERIODIC in character (e.g. hum, screech)	Subtract 5dB
5. Noise may be heard between hours of 7:00PM and 7:00AM	Subtract 5dB

D. Vibration

1. Maximum Vibration

Ground-transmitted vibration shall not exceed the maximum permitted Particle Velocities in Table 24 at the locations specified therein.

2. Measurement

A seismograph or other three-component measuring system capable of simultaneous measurement of vibration in three mutually perpendicular directions shall be used to measure vibration.

Particle Velocity may be measured directly or computed by the following formula:

$$PV = 6.28 \times F \times D$$

PV: Particle Velocity in inches per second
F: Vibration frequency in cycles per second
D: Single amplitude displacement of the vibration in inches

The maximum Particle Velocity shall be the maximum vector sum of the three mutually perpendicular components recorded simultaneously.

Table 24: Maximum Ground Transmitted Vibration

Use	Maximum Permitted Particle Velocity*	
	At Adjacent Lot Line	At Nearest Residentially Zoned Lot Boundary **
Heavy Industrial	0.2	0.02
Other	0.1	0.02

*Where vibration is produced as discrete impulses (impact vibrations) not exceeding 100 per minute, maximum permitted velocities may be doubled.

**Between 7:00 AM and 7:00PM, maximum permitted velocity at residentially zoned lot boundaries shall be reduced 50 percent.

E. Smoke

1. Maximum Emissions
Emissions of smoke shall not exceed the maximum permitted smoke units as defined herein and Ringelmann Number ratings in Table 25.

Table 25: Maximum Smoke Emissions

	During 1 Hour Per 24-Hour Day*		All Other Times	
	Heavy Industrial	Other	Heavy Industrial	Other
Maximum Permitted Smoke Units *** Per Hour Per Stack	32	16	16	8
Highest Ringelmann Number Permitted	3**	2**	2	1

*When blowing soot or cleaning fires
**For a maximum duration of 3 minutes
***The number of Smoke Units is the product of the Ringelmann Number and the number of minutes the smoke is visible.

XII. PERFORMANCE STANDARDS

A. PURPOSE

The requirements herein are intended to provide a basis for determining the compatibility of land uses that may produce measurable adverse environmental effects on their surroundings.

B. APPLICABILITY

The Performance Standards herein shall apply as follows:

Performance Standard For	Applies To
1. Heavy Industrial Uses	Conditional Uses in I-1
2. Other Uses	Conditional Uses in All Districts Except I-1 Permitted Uses in All Districts
3. (Unspecified)	Permitted Uses in All Districts Conditional Uses in All Districts

C. NOISE

1. MAXIMUM SOUND LEVELS

No operation or activity shall cause or create noise above the sound pressure levels in Tables 22 and 23 at the locations specified therein.

2. MEASUREMENT

A sound-level meter and associated octave band analyzer shall be employed to measure the intensity and frequency of sound. The flat network slow meter response of the sound level meter shall be used.

3. EXEMPTIONS

The following shall be exempt from noise performance standards:

a. Noises of construction or maintenance activities from 7 AM to 7 PM.
b. Noises of safety signals, warning devices, and emergency pressure relief valves.
c. Transient noises of moving sources such as transportation vehicles.
d. Noises associated with snow plowing, street sweeping, and mosquito abatement.
e. Church bells, chimes, and carillons.
f. Other noises not under the direct control of the property user.
g. Use of generators during periods of power loss and/or outage on residentially-zoned property only. (MC-12-1044)*****

*****Cross reference – Municipal Code Chapter 14 Offenses – Miscellaneous Article I In General, Section Noise, Sec. 14-8.

Table 22: Permitted Sound Levels

Preferred Center Frequency in Hertz	Maximum Permitted Sound Pressure Level in Decibels at Boundaries of Nearest Residentially Zoned Lot
31.5	75
63	74
125	69
250	64
500	58
1,000	52
2,000	47
4,000	43
8,000	40

Above figures for octave band analyzers calibrated with Preferred Frequencies (American Standards Association S1.6-1960, Preferred Frequencies for Acoustical Measurement)

Sound levels above shall be modified where applicable by the adjustments in Table 23.

Table 23: Adjustments to Permitted Sound Levels

	Adjustment in Decibels
1. DURATION of noise in any one-hour period (use one adjustment only):	
a. under 12 minutes	Add 5 dB
b. under 3 minutes	Add 10 dB
c. under 1/2 minute	Add 15 dB
2. At boundaries of nearest Office or COMMERCIAL zoned lot	Add 5 dB
3. Noise is IMPULSIVE in character (e.g., hammering)	Subtract 5 dB
4. Noise is PERIODIC in character (e.g., hum, screech)	Subtract 5 dB
5. Noise may be heard between hours of 7:00 PM and 7:00 AM	Subtract 5 dB

D. VIBRATION

1. MAXIMUM VIBRATION

Ground-transmitted vibration shall not exceed the maximum permitted Particle Velocities in Table 24 at the locations specified therein.

2. MEASUREMENT

A seismograph or other three-component measuring system capable of simultaneous measurement of vibration in three mutually perpendicular directions shall be used to measure vibration.

Particle Velocity may be measured directly or computed by the following formula:

$$PV = 6.28 \times F \times D$$

PV: Particle Velocity in inches per second
F: Vibration frequency in cycles per second
D: Single amplitude displacement of the vibration in inches

The maximum Particle Velocity shall be the maximum vector sum of the three mutually perpendicular components recorded simultaneously.

Table 24: Maximum Ground Transmitted Vibration

	Maximum Permitted Particle Velocity *	
Use	At Adjacent Lot Line	At Nearest Residentially Zoned Lot Boundary **
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* Where vibration is produced as discrete impulses (impact vibrations) not exceeding 100 per minute, maximum permitted velocities may be doubled.

** Between 7:00 AM and 7:00 PM, maximum permitted velocity at residentially zoned lot boundaries shall be reduced 50 percent.

The Environmental Protection Agency's Model Community Noise Control Ordinance

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ARTICLE I Short Title

This ordinance may be cited as the "Noise Control Ordinance of the (City/County) of _____"

ARTICLE II Declarations of Findings and Policy & Scope

2.1 Declaration of Findings and Policy

WHEREAS excessive sound and vibration are a serious hazard to the public health and welfare, safety, and the quality of life: and WHEREAS a substantial body of science and technology exists by which excessive sound and vibration may be substantially abated: and, WHEREAS the people have a right to and should be ensured an environment free from excessive sound and vibration that may jeopardize their health or welfare or safely or degrade the quality of life: and NOW, THEREFORE, it is the policy of the (City/County) of _____ to prevent excessive sound and vibration which may jeopardize the health and welfare or safety of its citizens or degrade the quality of life.

2.2 Scope

This ordinance shall apply to the control of all sound and vibration originating within the limits of the (City/County) of _____

ARTICLE III Definitions

3.1 Terminology

All terminology used in this ordinance not defined below, shall be in conformance with applicable publications of the American National Standards institute (ANSI) or its successor body.

3.2.1 "A-Weighted Sound Level" Means

The sound pressure level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dB(A) or dBA.

3.2.2 "Commercial Area" Means

[(As defined in the community (comprehensive plan)/ (zoning ordinance)].

3.2.3 "Construction" Means

Any site preparation, assembly, erection, substantial repair, alteration, or similar action, but excluding demolition, for or of public or private rights-of-way, structures, utilities or similar property.

3.2.4 "Day-Night Average Sound Level (L_{dn})" Means

The 24-hour energy average of the A-weighted sound pressure level, with the levels during the period 10:00 p.m. to 7:00 a.m. the following day increased by 10 dBA before averaging.

3.2.5 "Decibel (dB)" Means

A unit for measuring the volume of a sound, equal to 20 times (the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

3.2.6 "Demolition" Means

Any dismantling, intentional destruction or removal of structures, utilities, public or private right-of-way surfaces, or similar property.

3.2.7 "Emergency" Means

Any occurrence or set or circumstances involving actual or imminent physical trauma or property damage which demands immediate action.

3.2.8 "Emergency Work" Means

Any work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency.

3.2.9 " Noise Control Officer" Means

The municipal agency or department having lead responsibility for this ordinance. (If no such agency is designated, the term shall mean the municipal official having lead responsibility for this ordinance.)

3.2.10 "Equivalent A-Weighted Sound Level (L_{eq})" Means

The constant sound level that in a given situation and time period, conveys the same sound energy as the actual time-varying A-weighted sound. [For the purposes of this ordinance, a time period of 24

hours shall be used, unless otherwise specified.]

3.2.11 "Gross Vehicle Weight Rating (GVWR) Means
The value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors arc separable, the gross combination weight rating (GCWH), which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle shall be used.

3.2.12 "Impulsive Sound" Means
Sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and the discharge of firearms.

3.2.13 "Industrial Area" Means
[(As defined in the community (comprehensive plan)/ (zoning ordinance)].

3.2.14 "Motor Carrier Vehicle Engaged in Interstate Commerce" Means
Any **** for which regulations **** pursuant to Section 18 of the Federal Noise Control Act of 1972(P.L. 72-***), as amended, pertaining to motor carriers engaged in interstate commerce.

3.2.15 "Motor Vehicle" Means
As defined in the motor vehicle code of this state. [Any vehicle which is propelled or drawn on land by a motor, such is, but not limited to, passenger cars, trucks, truck-trailers, semi-trailers, campers, go-carts, amphibious craft on land, **** ****, or racing vehicles, but **** **** motorcycles.]

3.2.16 "Motorboat" Means
Any vessel which operates on water and **** is propelled by a motor, including but not limited to, boats, barges, amphibious craft, water ski **** devices and hover craft.

3.2.17 "Motorcycle" Means
As defined in the motor vehicle code of this state. [An unenclosed motor vehicle having a saddle for the use of the operator and two or three wheels in contact with the ground, including but not limited to, motor scooters and mini-bikes.]

3.2.18 "Muffler or Sound Dissipative Device" Means
A device for abating sound of escaping gases of an internal combustion engine.

3.2.19 "Noise" Means
Any sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans.

3.2.20 "Noise Disturbance" Means
Any sound which (a) endangers or **** the safety or health of humans or animals; or (b) annoys or disturbs a reasonable person of normal sensitivities; or (c) endangers or injures personal or real property.

3.2.21 "Noise Sensitive Zone" Means
Any area designated pursuant to Section **** of this ordinance for the purpose of ensuring exceptional quiet.

3.2.22 "Person" Means
Any individual, association, partnership, or corporation, and includes any officer, employee, department, agency or instrumentality of a State or any political subdivision of a State.

3.2.23 "Powered Model Vehicle" Means
Any self-propelled airborne, waterborne, or land borne plane, vessel, or vehicle, which is not designed to carry persons, including, but not limited to any model airplane, boat, car, or rocket.

3.2.24 "Public Right-of-Way" Means
Any street, avenue, boulevard, highway, sidewalk or alley or similar place which is owned or controlled by a governmental entity.

3.2.25 "Public Space" Means
Any real property or structures thereon which are owned or controlled by a governmental entity.

3.2.26 "Pure Tone" Means
Any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this ordinance, a pure tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above and by 8 dB for center frequencies between 160 and 400 Hz and by 15 dB for center frequencies less than or equal to 125 Hz.

3.2.27 "Real Property Boundary" Means
An imaginary line along the ground surface, and its vertical extension, which separates the real property owned by one person from that owned by another person, but not including intra-building real property divisions.

3.2.28 "Residential Area" Means
[(As defined in the community (comprehensive plan)/ (zoning ordinance)].

3.2.29 "RMS Sound Pressure" Means
The square root of the time averaged square of the sound pressure, denoted P_{rms}

3.2.30 "Sound" Means
An oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.

3.2.31 "Sound Level" Means
The weighted sound pressure level obtained by the use of a sound level meter and frequency-weighting

network, such as A or C, as specified in the American National Standards Institute specifications for sound level meters (ANSI S1.4-1971), or the latest approved revision thereof. If the frequency weighting employed is not indicated, the A-weighting shall apply.

3.2.32 "Sound Level Meter" Means
An instrument which includes a microphone, amplifier, RMS detector, integrator or time averaging device, output meter, and weighting networks used to measure sound pressure levels.

3.2.33 "Sound Pressure" Means
The instantaneous difference between the actual pressure and the average or barometric pressure of a given point in space, as produced by sound energy.

3.2.34 "Sound Pressure Level" Means
20 times the logarithm to the base 10 of the ratio of the RMS sound pressure to the reference pressure of 20 micropascals (20x10μN/m). The sound pressure level is denoted L_p, or SPL and is expressed in decibels.

3.2.35 "Vibration" Means
An oscillatory motion of solid bodies of deterministic or random nature described by displacement, velocity, or acceleration with respect to a given reference point.

3.2.36 "Weekday" Means
Any day Monday through Friday which is not a legal holiday.

ARTICLE IV Powers and Duties of the Noise Control Officer (NCO)

4.1 Lead (Agency/Official)
The noise control program established by this ordinance shall be administered by (title of municipal agency or lead official).

4.2 Powers of the Noise Control Officer (NCO)
In order to implement and enforce this ordinance and for the general purpose of sound and vibration abatement and control, the NCO shall have, in addition to any other authority vested in it, the power to:

4.2.1 Studies
Conduct, or cause to be conducted, research, monitoring, and other studies related to sound and vibration.

4.2.2 Education
(a) Conduct programs of public education regarding:
(1) the causes, effects and general methods of abatement and control of noise and vibration; and,
(2) the actions prohibited by this ordinance and the procedures for reporting violations; and
(b) encourage the participation of public interest groups in related public information efforts.

4.2.3 Coordination and Cooperation
(a) Coordinate the noise and vibration control activities of all municipal departments;
(b) Cooperate to the extent practicable with all appropriate State and Federal agencies;
(c) Cooperate or combine to the extent practicable with appropriate county and municipal agencies; and,
(d) Enter into contracts [with the approval of the (appropriate authority)] for the provision of technical and enforcement services.

4.2.4 Review of Actions of Other Departments
Request any other department or agency responsible for any proposed or final standard, regulation or similar action to consult on the advisability of revising the action, if there is reason to believe that the action is not consistent with this ordinance.

4.2.5 Review of Public and Private Protects
Review public and private projects, subject to mandatory review or approval by other departments, for compliance with this ordinance, if such projects are likely to cause sound or vibration in violation of this ordinance.

4.2.6 Inspections
(a) Upon presentation of proper credentials, enter and inspect any private property or place, and inspect any report or records at any reasonable time when granted permission by the owner, or by some other person with apparent authority to act for the owner. When permission is refused or cannot be obtained, a search warrant may be obtained from a court of competent jurisdiction upon showing of probable cause to believe that a violation of this ordinance may exist. Such inspection may include administration of any necessary tests.
([**(b)** Stop any motor vehicle, motorcycle, or motorboat operated on a public right-of-way, public space, or public waterway reasonably suspected of violating any provision of this ordinance, and issue a notice of violation or abatement order which may require the motor vehicle, motorcycle or motorboat to be inspected or tested as the Noise Control Officer may reasonably require.]

4.2.7 Records
Require the owner or operator of any commercial or industrial activity to establish and maintain records and make such reports as the NCO may reasonably prescribe.

4.2.8 Measurements by the Owner or Operator
Require the owner or operator of any commercial or industrial activity to measure the sound level of or the vibration from any source in accordance with the [published] methods and procedures and at such locations and times as the NCO may reasonably prescribe and to furnish reports of the results of such measurements to the NCO. The NCO may require the measurements to be conducted in the presence of its enforcement officials.

4.2.9 Product Performance Standard Recommendations

(a) Develop and recommend for promulgation (to the appropriate authority) provisions regulating the use and operation of any product, including the specification of maximum allowable sound emission levels of such product.

([**(b)** Develop and recommend for promulgation (to the appropriate authority) provisions prohibiting the sale of products which do not meet specified sound emission levels, where the sound level of the product is not regulated by the United States Environmental Protection Agency under Section 6 of the Noise Control Act of 1972.]

4.2.10 Noise Sensitive Zone Recommendations

Prepare recommendations, to be approved by (the appropriate authority), for the designation of noise sensitive zones which contain noise sensitive activities. Existing quiet zones shall be considered noise sensitive zones until otherwise designated. Noise sensitive activities include, but are not limited to, operations of schools, libraries open to the public, churches, hospitals, and nursing homes.

4.3 Duties of Noise Control Officer (NCO)

In order to implement and enforce this ordinance effectively, the NCO shall within a reasonable time after the effective date of the ordinance:

4.3.1 Standards, Testing Methods, and Procedures

Develop, [recommend to the appropriate authority.] and promulgate standards, testing methods and procedures.

4.3.2 Investigate and Pursue Violations

In consonance with Section 4.2.6, Article XI, and other provisions of this ordinance, investigate and pursue possible violations of this ordinance.

4.3.3 Delegation of Authority

Delegate functions, where appropriate under this ordinance, to personnel within the NCO and to other agencies or departments, (subject to approval of .....).

4.3.4 Truck Routes and Transportation Planning

(a) Study the existing transportation systems, such as truck routes within the community; determine areas with sensitivity to sound and vibration caused by transportation; recommend changes or modifications to transportation systems to minimize the sound and vibration impact on residential areas and noise sensitive zones

(b) Assist in or review the total transportation planning of the community, including planning for new roads and highways, bus routes, airports, and other systems for public transportation, to ensure that the impact of sound and vibration receives adequate consideration.

4.3.5 Capital Improvement Guidelines

Establish noise assessment guidelines for the evaluation of proposed improvements for the capital improvements budget and program pursuant to Section 5.5. These guidelines shall assist in the determination of the relative priority of each improvement in terms of noise impact.

4.3.6 State and Federal Laws and Regulations

(a) Prepare and publish [with the approval of .....] a list of those products manufactured to meet specified noise emission limits under Federal, State, or community law for which "tampering" enforcement will be conducted; and.

(b) Make recommendations for modifications or amendments to this ordinance to ensure consistency with all Stale and Federal law; and regulations.

4.3.7 Planning to Achieve Long Term Noise Goals

[Develop a generalized sound level map of the (city/county), a long term plan for achieving quiet in the (city/county), and [with the approval of .....] integrate this plan into the planning process of the (city/county).]

4.3.8 Administer Grants. Funds and Gifts

Administer noise program grams and other funds and gifts from public and private sources, including the State and Federal governments.

4.3.9 Periodic Report

[Evaluate and report, every ..... year(s) following the effective date of this ordinance, on the effectiveness of the (city/county) noise control program and make recommendations for any legislative or budgetary changes necessary to improve the program. This report shall be made to the (Noise Control Advisory Board)/ (appropriate authority) which may amend it after consultation with the NCO, and then submit it to the (appropriate authority), for approval.]

ARTICLE V Duties and Responsibilities of Other Departments

5.1 Departmental Actions

All departments and agencies shall, to the fullest extent consistent with other law, carry out their programs in such a manner as to further the policy of this ordinance.

5.2 Departmental Cooperation

All departments and agencies shall cooperate with the NCO to the fullest extent in enforcing this ordinance.

5.3 Departmental Compliance with Other Laws

All departments and agencies shall comply with Federal and Stale laws and regulations and the provisions and intent of this ordinance respecting the control and abatement of noise to the same extent that any person is subject to such laws and regulations.

5.4 Project Approval

All departments whose duty it is to review and approve new projects or changes to existing projects that result, or may result, in the production of sound or vibration shall consult with the NCO prior to any such approval.

5.5 Contracts

Any written contract, agreement, purchase order, or other instrument whereby the (city/county) a committed to the expenditure of ..... dollars or more in return for goods or services shall contain provisions requiring compliance with this ordinance.

5.6 Low Noise Emission Products

Any product which has been certified by the Administrator of the United States Environmental Protection Agency pursuant to Section 15 of the Noise Control Act as a low noise emission product and which he determines is suitable for use as a substitute, shall be procured by the city/county and used in preference to any other product, provided that such certified product is reasonably available and has a procurement cost which is not more than (125) percent of the least expensive type of product for which it is certified as a substitute.

5.7 Capital Improvement Program

All departments responsible for a capital improvements budget and program shall prepare an analysis of the noise impact of any proposed improvements in accordance with noise assessment guidelines established by the NCO pursuant to Section 4.3.5. Proposed capital improvements include land acquisition, building construction, highway improvements, and utilities and fixed equipment installation.

ARTICLE VI Prohibited Acts

6.1 Noise Disturbances Prohibited

No person shall unreasonably make, continue, or cause to be made, or continued, any noise disturbance. Non-commercial public speaking and public assembly activities conducted on any public space or public right-of-way shall be exempt from the operation of this Section.

6.2 Specific Prohibitions

The following acts, and the causing thereof, are declared to be in violation of this ordinance:

6.2.1 Radios, Television Sets, Musical Instruments and, Similar Devices

Operating, playing or permitting the operation or playing of any radio, television, phonograph, drum, musical instrument, sound amplifier, or similar device which produces, reproduces, or amplifies sound:

(a) Between the hours of .....p.m. and ..... a.m. the following day in such a manner as to create a noise disturbance across a real property boundary or within a noise sensitive zone. [Except for activities open to the public and for which a permit has been issued by (appropriate authority) according to criteria set forth in .....];

(b) In such a manner as to create a noise disturbance at 50 feet (15 meters) from such device, when operated in or on a motor vehicle on a public right-of-way or public space, or in a boat on public waters, or;

(c) In such a manner as to create a noise disturbance to any person other than the operator of the device, when operated by any passenger on a common carrier;

(d) This section shall not apply to non-commercial spoken language covered under Section 6.2.2.

6.2.2 Loudspeakers/Public Address Systems

(a) Using or operating for any non-commercial purpose any loudspeaker public address system, or similar device between the hours of 10:00 p.m. and 8:00 a.m. the following day, such that the sound there from creates a noise disturbance across a residential real property boundary or within a noise sensitive zone.

(b) Using or operating for any commercial purpose any loudspeaker, public address system, or similar device **** such that the sound there from creates a noise disturbance across a real property boundary or within a noise sensitive zone: or (2) between the hours of ……. p.m. and ..... a.m. the following day on a public right-of-way or public space.

6.2.3 Street Sales

Offering for sale or selling anything by shouting or outcry within any residential or commercial area of the **** county (except by permit issued by (appropriate authority) according to criteria set forth in ..... and/or except between the hours of ... .a.m. and ….. p-m.].

6.2.4 Animals and Birds

Owning possessing or harboring any animal or bird which frequently or for continued duration, howls, barks, **** squawks, or makes other sounds which create a noise disturbance across a residential real property boundary or within a noise sensitive zone. [This provision shall not apply to public zoos.]

6.2.5 Loading and Unloading

Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ..... p.m. and ..... a.m. the following day in such a manner as to cause a noise disturbance across a residential real property boundary or within a noise sensitive zone.

6.2.6 Construction

Operating or permitting the operation of any tools or equipment used in construction, drilling, or demolition work:

(a) Between the hours of ..... p.m. and ..... a.m. the following day on weekdays or at any time on (Sundays/weekends) or holidays, such that the sound there from creates a noise disturbance across a residential real property boundary or within a noise sensitive zone, except for emergency work of public service utilities or by special variance issued pursuant to Section 7.2;

(b) At any other time such that the sound level at or across a real property boundary exceeds an L_{eq}, of ..... dBA for the daily period of operation.

(c) This section shall not apply to the use of domestic power tools subject to Section 6.2.17.

6.2.7 Vehicle or Motorboat Repairs and Testing
Repairing, rebuilding, modifying, or testing any motor vehicle, motorcycle, or motorboat in such a manner as to cause a noise disturbance across a residential real property boundary or within a noise sensitive zone.

6.2.8 Airport and Aircraft Operations
(a) The NCO shall consult with the airport proprietor to recommend changes in airport operations to minimize any noise disturbance which the airport owner may have authority to control in its capacity as proprietor.
(b) Nothing in this section shall be construed to prohibit, restrict, penalize, enjoin or in any manner regulate the movement of aircraft which are in all respects, conducted in accordance with, or pursuant to applicable Federal Laws or regulations.

6.2.9 Places of Public Entertainment
Operating, playing or permitting the operation or playing of any radio, television, phonograph, drum, musical instrument, sound amplifier, or similar device which produces, reproduces, or amplifies sound in any place of public entertainment at a sound level greater than ..... dBA as read by the slow response on a sound level meter at any point that is normally occupied by a customer, unless a conspicuous and legible sign is located outside such place, near each public entrance, slating "WARNING: SOUND LEVELS WITHIN MAY CAUSE PERMANENT HEARING IMPAIRMENT."

6.2.10 Explosives, Firearms, and Similar Devices
The use or firing of explosives, firearms, or similar devices which create impulsive sound so as to cause a noise disturbance across a real property boundary or on a public space or right-of-way, without first obtaining a special variance issued pursuant to Section 7.2. [Such permit need not be obtained for licensed game-hunting activities on property where such activities are authorized.]

6.2.11 Powered Model Vehicles
Operating or permitting the operation of powered model vehicles so as to create a noise disturbance across a residential real property boundary, in a public space or within a noise sensitive zone between the hours of ..... p.m. and ..... a.m. the following day. Maximum sound levels in a public space during the permitted period of operation shall conform to those set forth for residential land use in Table 1 of Section 8.1 and shall be measured at a distance of ..... feet (meters) from any point on the path of the vehicle. Maximum sound levels for residential property and noise sensitive zones, during the permitted period of operation, shall be governed by Section 8.1 and Section 6.2.16, respectively.

6.2.12 Vibration
Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property of the source if on private property or at ..... feet (meters) from the source if on a public space or public right-of-way. For the purposes of this section, "vibration perception threshold" means the minimum ground or structure-borne vibratory motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to sensation by touch or usual observation of moving objects.

6.2.13 Stationary Non-Emergency Signaling Devices
(a) Sounding or permitting the sounding of any [electronically-amplified] signal from any stationary bell, chime, siren, whistle, or similar device, intended primarily for non-emergency purposes, from any place, (for more than ..... minutes in any hourly period.]
[**(b)** Devices used in conjunction with places of religious worship shall be exempt from the operation of this provision.]
[**(c)** Sound sources covered by this provision and not exempted under subsection (b) shall be exempted by (appropriate authority) using criteria set forth in Section 7.2.]

6.2.14 Emergency Signaling Devices
(a) The intentional sounding or permitting the sounding outdoors of any fire, burglar, or civil defense alarm, siren, whistle or similar stationary emergency signaling device, except for emergency purposes or for testing, as provided in Subsection **(b)**.
(b)(i) Testing of a stationary emergency signaling device shall occur at the same time of day each time such a test is performed, but not before ..... a.m. or after ..... p.m. Any such testing shall use only the minimum cycle test time. In no case shall such test time exceed ..... seconds.
(b)(ii) Testing of the complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device, shall not occur more than once in each calendar month. Such testing shall not occur before ..... a.m. or after ..... p.m. The time limit specified in subsection (i) shall not apply to such complete system testing.
[**(c)** Sounding or permitting the sounding of any exterior burglar [or fire] alarm or any motor vehicle burglar alarm unless such alarm is automatically terminated within .... minutes of activation. [This action shall not be interpreted to apply to ..... alarms.]]

6.2.15 Motorboats
Operating or permitting the operation of any motorboat in any lake, river, stream, or other waterway in such manner as to exceed a sound level of ..... dBA at 50 feet (15 meters) or the nearest shoreline, whichever distance is less.

6.2.16 Noise Sensitive Zones
(a) Creating or causing the creation of any sound within any noise sensitive zone designated pursuant to Section 4.2.10, so as to disrupt the activities normally conducted within the zone, provided that conspicuous signs are displayed indicating the

presence of the zone; or
(b) Creating or causing the creation of any sound within any noise sensitive zone, designated pursuant to Section 4.2.10, containing a hospital, nursing home. or similar activity, so as to interfere with the functions of such activity or disturb or annoy the patients in the activity, provided that conspicuous signs are displayed indicating the presence of the zone.

6.2.17 Domestic Power Tools
Operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, snow blower, or similar device used outdoors in residential areas between the hours or ..... p.m. and ..... a.m. the following day so as to cause a noise disturbance across a residential real property boundary.

6.2.18 Tampering
The following acts or the causing thereof are prohibited:
(a) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any noise control device or element of design or noise label of any product identified under Section 4.3.6. The NCO may, by regulation, list those acts which constitute violation of this provision.
[**(b)** The (intentional) moving or rendering inaccurate or inoperative of any sound monitoring instrument or device positioned by or for the NCO, provided such device or the immediate area is clearly labeled, in accordance with NCO regulations, to warn of the potential illegality.]
(c) The use of a product, identified under Section 4.3.6, which has had a noise control device or element of design or noise label removed or rendered inoperative, with knowledge that such action has occurred.

ARTICLE VII Exceptions and Variances

7.1 Emergency Exception
The provisions of this ordinance shall not apply to;
(a) the emission of sound for the purpose of alerting persons to the existence of an emergency, or
(b) the emission of sound in the performance of emergency work

7.2 Special Variances
(a) The (NCO)/(Hearing Board) shall have the authority, consistent with this section, to grant special variances which may be requested pursuant to Sections 6.2.6 (Construction) and 6.2.10 (Explosives, Firearms, and Similar Devices).
(b) Any person seeking a special variance pursuant to this section shall file an application with the (NCO)/(Hearing Board). The application shall contain information which demonstrates that bringing the source of sound or activity for which the special variance is sought into compliance with this ordinance would constitute an unreasonable hardship on the applicant, on the community, or on other persons. [Notice of an application for a special variance shall be published according to (Jurisdictional procedure).] Any individual who claims to be adversely affected by allowance of the special variance may file a statement with the (NCO)/(Hearing Board) containing any information to support his claim. If the (NCO)/(Hearing Board) finds that a sufficient controversy exists regarding an application, a public hearing may be held.
(c) In determining whether to grant or deny the application, the (NCO)/(Hearing Board) shall balance the hardship to the applicant, the community, and other persons of not granting the special variance against the adverse impact on the health, safety, and welfare of persons affected, the adverse impact on property affected, and any other adverse impacts of granting the special variance. Applicants for special variances and persons contesting special variances may be required to submit any information the (NCO)/(Hearing board) may reasonably require. In granting or denying an application, the (NCO)/(Hearing Board) shall place on public file a copy of the decision and the reasons for denying or granting the special variance.
(d) Special variances shall be granted by notice to the applicant containing all necessary conditions, including a time limit on the permitted activity. The special variance shall not become effective until all conditions are agreed to by the applicant. Noncompliance with any condition of the special variance shall terminate it and subject the person holding it to those provisions of this ordinance regulating the source of sound or activity for which the special variance was granted, including enforcement actions.
(e) Application for extension of time limit specified in special variances or for modification of other substantial conditions shall be treated like applications for initial special variances under subsection (b).
(f) The (NCO)/(Hearing Board) may issue guidelines [approved by .....] defining the procedures to be followed in applying for a special variance and the criteria to be considered in deciding whether to grant a special variance.

7.3 Variances for Time to Comply
(a) Within ..... days following the effective date of this ordinance, the owner of any commercial or industrial source of sound may apply to the (NCO)/(Hearing Board) for a variance in time to comply with Section 6.2.12 (Vibration) or Article VIII. The (NCO)/(Hearing Board) shall have the authority, consistent with this section, to grant a variance, not to exceed ..... days from the effective date of this ordinance.
(b) Any person seeking a variance in time to comply shall file an application with the (NCO)/(Hearing Board). The application shall contain information which demonstrates that bringing the source of sound or activity for which the variance is sought into compliance with this ordinance prior to the date requested in the application would constitute an unreasonable hardship on the applicant, on the community, or on other persons. [Notice of an application for a variance in time to comply shall be published

according to (jurisdictional procedure).] Any individual who claims to be adversely affected by allowance of the variance in time to comply may file a statement with the (NCO)/(Hearing Board) containing any information to support their claim. If the (NCO)/(Hearing Board) finds that a sufficient controversy exists regarding an application, a public hearing may be held.

(c) In determining whether to grant or deny the application, the (NCO)/(Hearing Board) shall balance the hardship to the applicant, the community, and other persons of not granting the variance in time to comply, against the adverse impact on health, safety, and welfare of persons affected, the adverse impact on property affected, and any other adverse impacts of granting the variance. Applicants for variances in time to comply and persons contesting variances may be required to submit any information the (NCO)/(Hearing Board) may reasonably require. In granting or denying an application, the (NCO)/(Hearing Board) shall place on public file a copy of the decision and the reasons for denying or granting the variance in time to comply.

(d) Variances in time to comply shall be granted to the applicant containing all necessary conditions, including a schedule for achieving compliance. The variance in time to comply shall not become effective until all conditions are agreed to by the applicant. Noncompliance with any condition of the variance shall terminate the variance and subject the person holding it to those provisions of this ordinance for which the variance was granted.

(e) Application for extension of time limits specified in variances in time to comply or for modification of other substantial conditions shall be treated like applications for initial variances under subsection (b), except that the (NCO)/(Hearing Board) must find that the need for the extension or modification clearly outweighs any adverse impacts of granting the extension or modification.

(f) The (NCO)/(Hearing Board) may issue guidelines [approved by .....] defining the procedures to be followed in applying for a variance in time to comply and the criteria to be considered in deciding whether to grant a variance.

7.4 Appeals

Appeals of an adverse decision of the (NCO)/(Hearing Board) shall be made to the (appropriate court of law). Review of the court shall be (de novo)/ (limited to whether the decision is supported by substantial evidence)/(as specified by the .....).

ARTICLE VIII Sound Levels by Receiving Land Use

8.1 Maximum Permissible Sound Levels

No person shall operate or cause to be operated on private property any source of sound in such a manner as to create a sound level which exceeds the limits set forth for the receiving land use category in Table 1 when measured at or within the property boundary of the receiving land use.

TABLE 1
SOUND LEVELS BY RECEIVING LAND USE

Receiving Land Use Category	Time	Sound Level Limit (dBA)
R-l, R-2, etc.	(A) a.m. to (B) p.m.	L_{eq}
(Residential, Public Space, Open Space, Agricultural or Institutional)	(A) a.m. to (B) p.m.	L_{eq}
C-l, C-2, etc. B-l, B-2, etc. (Commercial or Business)	At All Times	L_{eq}
M-1, M-2,etc. (Industrial)	At All Times	L_{eq}

8.2 Correction for Character of Sound

For any source of sound which emits a pure tone or impulsive sound, the maximum sound level limits set forth in Section 8.1 shall be reduced by ..... dBA.

8.3 Exemptions

The provisions of this article shall not apply to:

(a) Activities covered by the following Sections: 6.2.6 (Construction), 6.2.8 (Aircraft and Airport Operations), 6.2.10 (Explosives. Firearms, and Similar Devices), 6.2.13 (Stationary Non-emergency Signaling Devices), 6.2.14 (Emergency Signaling Devices), 6.2.15 (Motorboats), 6.2.17 (Domestic Power Tools), 9.1.3 (Refuse Collection Vehicles), 9.2 (Recreational Motorized Vehicles Operating Off Public Rights-of-way);

(b) the un-amplified human voice;

(c) interstate railway locomotives and cars; and

[**(d)** (non-stationary farming equipment)/(all agricultural activities)]

ARTICLE IX Motor Vehicle Maximum Sound Levels

9.1 Motor Vehicles and Motorcycles on Public Rights-of-way

No person shall operate or cause to be operated a public or private motor vehicle or motorcycle on a public right-of-way at any time in such a manner that the sound level emitted by the motor vehicle or motorcycle exceeds the level set forth in Table 2.

TABLE 2
MOTOR VEHICLE AND
MOTORCYCLE SOUND LIMITS
(MEASURED AT 50 FEET OR 15 METERS)

	Sound Level Limit in dBA Speed Limit		
Vehicle Class	35 mph or Less	Over 35 mph	Stationary Run-up
Motor Carrier Vehicle engaged in interstate commerce of GVWR or GCWR of 10,000 lbs or more	86	90	88
All other motor vehicles of GVWR or GCWR of 10,000 lbs or more	A	B	-
Any Motorcycle	C	D	-
Any other motor vehicle or any combination of vehicles towed by any motor vehicle	E	F	-

9.1.1 Adequate Mufflers or Sound Dissipative Devices
(a) No person shall operate or cause to be operated any motor vehicle or motorcycle not equipped with a muffler or other sound dissipative device in good working order and in constant operation:
(b) No person shall remove or render inoperative, or cause to be removed or rendered inoperative, other than for purposes of maintenance, repair, or replacement, any muffler or sound dissipative device on a motor vehicle or motorcycle;
(c) The NCO may, by (guidelines) (regulations subject to approval by .....), list those acts which constitute violation of this section.

9.1.2 Motor Vehicle Horns and Signaling Devices
The following acts and the causing thereof are declared to be in violation of this ordinance:
(a) The sounding of any horn or other auditory signaling device on or in any motor vehicle on any public right-of-way or public space, except (as a warning of danger)/(as provided in the vehicle code).
[**(b)** The sounding of any horn or other auditory signaling device which produces a sound level in excess of ..... dBA at ..... feet (meters).]

9.1.3 Refuse Collection Vehicles
No person shall;
(a) On or after (2 years) following the effective date of this ordinance, operate or permit the operation of the compacting mechanism of any motor vehicle which compacts refuse and which creates, during the compacting cycle, a sound level in excess of ….. dBA when measured at ..... feet (meters) from any point on the vehicle: or
(b) Operate or permit the operation of the compacting mechanism of any motor vehicle which compacts refuse, between the hours of ..... p.m. and ..... a.m. the following day in a residential area or noise sensitive zone: or
(c) Collect refuse with a refuse collection vehicle between the hours of ..... p.m. and ..... a.m. the following day in a residential area or noise sensitive zone.

9.1.4 Standing Motor Vehicles
No person shall operate or permit the operation of any motor vehicle with a gross vehicle weight rating (GVWR) in excess of ten thousand (10,000) pounds, or any auxiliary equipment attached to such a vehicle, for a period longer than ..... minutes in any hour while the vehicle is stationary, for reasons other than traffic congestion, on a public right-of-way or public space within 150 feet (46 meters) of a residential area or designated noise sensitive zone. between the hours of ..... p.m. and ..... a.m. the following day.

9.2 Recreation Motorized Vehicles Operating Off Public Rights-of-way
(a) [Except as permitted in subsection (b) or (c),] no person shall operate or cause to be operated any recreational motorized vehicle off a public right-of-way in such a manner that the sound level emitted there from exceeds the limits set forth in Table 3 at a distance of 50 feel (15 meters) or more from the path of the vehicle when operated on a public space or at or across the boundary of private property when operated on private property This section shall apply to all recreational motorized vehicles, whether or not duly licensed and registered, including, but not limited to, commercial or non-commercial racing vehicles, motorcycles, go-carts, snowmobiles, amphibious craft, campers and dune buggies, but not including motorboats.
[**(b)** Permits for new vehicle racing events may be obtained from the (appropriate authority) according to procedures and criteria set forth in .....]
[**(c)** Special variances for ..... may be obtained from. (appropriate authority) according to procedure and criteria set forth in .....]

TABLE 3
RECREATIONAL MOTORIZED
VEHICLE SOUND LIMITS
(MEASURED AT 50 FEET OR I5 METERS)

Vehicle Type	Sound Level, dBA
Snowmobile	A
Motorcycle	B
Any Other Vehicle	C

ARTICLE X Land Use

10.1 General Provisions
(a) No owner of any land shall commence or cause to be commenced the construction of any structure covered by Sections 10.2. 10.3. 10.5 or 10.6 unless approved by the NCO as provided in this Article.
(b) Any application for approval required by this Article shall be submitted in writing to the NCO,

with a copy to the (Building Department)/ (Appropriate Department), by the owner of the land on which the Structure is proposed to be constructed and shall contain the following information:
(1) identification of the land on which the construction is proposed:
(2) the section of this Article under which approval is requested;
(3) information and data supporting the claim that the appropriate requirements will be met; and,
(4) any other information which the NCO may reasonably require.

10.2 Construction Restrictions for Habitable and Institutional Structures

(a) Except as provided in subsection (c), no new single family residential structure shall be approved for construction (excluding substantial repair or alteration) if the exterior day-night average sound level (L_{dn}) anywhere on the site of the proposed structure is projected to be in excess of …... dBA within ..... years following the estimated completion date of the structure.
(b) Except as provided in subsection (c), no new multiple-family residence, dormitory, mobile home park, transient lodging, school, hospital, nursing home or similar structure, or substantial modification of such existing structure, shall be approved for construction if the exterior day-night average sound level (L_{dn}) anywhere on the site of the proposed structure is projected to be in excess of ..... dBA within ..... years following the estimated completion date of the structure or modification.
(c) Construction otherwise prohibited pursuant to subsections (a) or (b) shall be allowed if the exterior day-night average sound level (L_{dn}) on the site of the proposed structure is projected not to be in excess of ..... dBA for ..... years following construction, provided that there is incorporated into the design and construction of the structure such sound attenuation measures as are necessary to reduce the maximum interior day-night average sound level (L_{dn}) to ..... dBA. Subsections (a) and (b) shall not apply to any site development plan or its equivalent on which four or fewer dwelling units are to be constructed.
(d) Prior to issuance of any occupancy permit for any structure regulated pursuant to subsection (c), the owner of the structure shall submit for NCO review the report of an independent testing agency [approved by the NCO] certifying that sound attenuation measures have been property incorporated into the design and construction of the structure and that the interior L_{dn} meets the criterion specified in subsection (c). Such report shall contain the results of simultaneous measurements of the exterior and interior day-night average sound levels for a representative sample of locations.
(e) The NCO may conduct such inspections and measurements as are necessary to ensure the accuracy of any report submitted pursuant to subsection (d) and to ascertain compliance with this section. These may include on-site inspections by a certified independent testing agency during specified periods of construction.

10.3 Recreational Area Restrictions

(a) Except as provided in subsections (b), (c), and (d) no land shall be designated or approved for construction or use as a public or private exterior recreational area, including, but not limited to, child playgrounds, outdoor theaters and amphitheaters, picnic grounds, tennis courts and swimming pools, if the exterior day-night average sound level (L_{dn}) anywhere on the site of the proposed recreational area is projected to be in the excess of ..... dBA within ..... years following the construction or designation of the site.
(b) This section shall not apply to the designation or approval of any green belt or open space in any area in which the L_{dn} exceeds the level specified in subsection (a) regardless of whether such green belt or open space is open to public use, provided that no recreational improvement or facility is constructed thereon.
(c) Designation or approval of exterior recreational areas otherwise prohibited under subsection (a) shall be allowed if the L_{dn} specified in that subsection can be achieved by appropriate means of sound attenuation, such as berms, barriers, or buildings, at the perimeter of or elsewhere on the site.
(d) No new interior recreational facility, including, but not limited to, gymnasiums, ice or roller skating rinks, indoor swimming pools, and tennis courts, shall be approved for construction if the exterior day-night average sound level anywhere on the site is projected to be in excess of ..... dBA within ..... years following the estimated date of completion of the structure unless there is incorporated into the design and construction of the structure such sound attenuation measures as are necessary to reduce the maximum interior day-night average sound level (L_{dn}) to ..... dBA.

10.4 Site Study Requirement

(a) If the NCO has reason to believe that a full report is necessary to determine whether a proposed project is prohibited under Section 10.l such report shall be made by the applicant prior to approval of any subdivision, zoning, or building permit application. (If a full report has not been made and the applicant believes the project was wrongfully prohibited under Section 10.1, he may file a full report within …… days of the NCO decision and request reconsideration by the NCO. A full report shall contain the following information and any other information which the NCO may reasonably require:
(1) the existing day-night average sound levels L_{dn}, including identification of the major sources of sound, for a representative sample of locations measured in accordance with guidelines published by the NCO;
(2) any projected or proposed new or expanded sources of sound which may affect exposure of the site during ..... years following completion of the project and the projected future L_{dn}, at the site resulting from these new or expanded sources; and.
(3) where applicable, plans for sound attenuation measures on the site and/or of the structure proposed to be built and the amount of sound

attenuation anticipated as a result of these measures.
(b) In determining whether an applicant should be required to submit a full report pursuant to subsection (a), the EPO/NCO shall consider Circular 1390.2 (None Abatement and Control) and other publications of the U.S. Department of Housing and Urban Development.

10.5 Commercial and Industrial Construction
No new or substantially modified structure on land used or zoned as commercial or industrial shall be approved for construction unless the owner or developer of such land has demonstrated, in accordance with guidelines published by the NCO, that the completed structure and the activities associated with and on the same property as the structure, will comply with the provisions of Article VIII at the time for initial full-scale operation of such activities.

10.6 Sound From New Transportation Systems in Residential Areas or Noise Sensitive Zones
No plans for construction of new transportation systems or expansion of the capacity of existing transportation systems will be approved for location in or near residential areas or noise sensitive zones, regardless of the source of project funds, unless such plan includes all control measures necessary to ensure that the projected day-night average sound level (L_{dn}) due to the operation of the transportation system does not exceed ..... dBA at any point on residential property within ..... years after the expected completion of the project.

10.7 Equivalent Measurement Systems
For the purposes of this Article, all measurements and designations of sound levels shall be expressed in day-night average sound levels (L_{dn}) or in any other equivalent measurement system the NCO may reasonably approve.

10.8 Zoning Ordinance or Comprehensive Plan
(a) No proposed zoning ordinance or comprehensive plan shall be approved unless such plan includes a sound analysis which;
(1) identifies existing and projected noise sources and associated sound levels for ..... years in and around the area under consideration, and
(2) ensures usage of adequate measures to avoid violation of any provision of this ordinance.
(b) No zoning change application shall be approved unless the site feasibility study submitted as required by the (Zoning Board of Appeals)/ (Planning Commission), contains an analysis which shows:
(1) the impact of existing and projected noise sources for ..... years on the intended use, and
(2) the projected noise impact of the intended use, when completed, on surrounding areas. Such sites study shall ensure the use of adequate measures to avoid violation of any provision of this ordinance.

10.9 Truth in Selling or Renting
No person shall sell or rent, or cause to be sold or rented, any structure or property to be used for human habitation, where the structure or property is exposed to sound levels regularly in excess of (an L_{eq} in any hour of ..... dBA)/(an L_{dn} of ..... dBA), without making full written disclosure to all potential buyers or renters of the existence of such sound levels and of the nature of the sources. The NCO shall develop a standard format for written disclosures, which shall include information on the effects of noise on human health and welfare.

10.10 Appeal
Any applicant may appeal an adverse decision by the NCO under the Article, in the (appropriate court of law), on the grounds that the NCO disapproval was arbitrary, capricious, or unreasonable.

Article XI Enforcement

11.1 Penalties
(a) Any person who violates any provision of this ordinance shall be fined for each offense not more than ..... dollars.
(b) Any person who willfully or knowingly violates any provision of this ordinance shall be fined for each offense a sum of not less than ..... dollars and not more than ..... dollars.
(c) Each day of violation of any provision of this ordinance shall constitute a separate offense.

11.2 Abatement Orders
[(a) Except as provided in subsection (b) in lieu of issuing a notice of violation as provided for in Section 11.3, the NCO or other (agency/official) responsible for enforcement of any provision of this ordinance may issue an order requiring abatement of any source of sound or vibration alleged to be in violation of this ordinance within a reasonable time period and according to guidelines [to be approved by appropriate authority] which the NCO may prescribe.
(b) An abatement order shall not be issued:
(1) for any violation covered by Section 11.1 (b);
(2) for any violation of ....., or
(3) when the NCO or other enforcement (agency) / (official) has reason to believe that there will not be compliance with the abatement order.]

11.3 Notice of Violation
[Except where a person is acting in good faith to comply with an abatement order issued pursuant to Section 11.2 (a)], violation of any provision of this ordinance shall be cause for a (notice of violation)/ (summons)/(complaint)/(information or indictment) to be issued by the NCO or other responsible enforcement (agency official) according to procedures (which the NCO may prescribe)/ (set forth in .....).

11.4 Immediate Threats to Health and Welfare
(a) The NCO shall order an immediate halt to any sound which exposes any person, except those excluded pursuant to subsection (b), to continuous sound levels in excess of those shown in Table 4 or to impulsive sound levels in excess of those shown in Table 5. Within ……. days following issuance of such an order, the NCO shall apply to the

appropriate court for an injunction to replace the order

(b) No order pursuant to subsection (a) shall be issued if the only persons exposed to sound levels in excess of those listed in Tables IV and V are exposed as a result of;

(1) trespass;

(2) invitation upon private property by the person causing or permitting the sound, or

(3) employment by the person or a contractor of the person causing or permitting the sound.

(c) Any person subject to an order issued pursuant to subsection (a) shall comply with such order until;

(1) the sound is brought into compliance with the order, as determined by the NCO, or

(2) a Judicial order has superseded the NCO order.

(d) Any person who violates an order issued pursuant to this section shall, for each day of violation, be fined not less than ..... dollars nor more than ..... dollars.

TABLE 4
CONTINUOUS SOUND LEVELS WHICH POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE
(Measured at 50 Feet or 15 Meters)[1]

Sound Level Limit (dBA)	Duration
90	24 hours
93	12 hours
96	6 hours
99	3 hours
102	1.5 hours
103	45 minutes
108	22 minutes

[1] Use equal energy time-intensity trade-off if level varies; find energy equivalent over 24 hours.

TABLE 5
IMPULSIVE SOUND LEVELS WHICH POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE
(Measured at 50 Feet or 15 Meters)

Sound Level Limit (dBA)	Number of Repetitions per 24 Hour Period
145	1
135	10
125	100

11.5 Citizen Suits

(a) Any person, other than persons responsible for enforcement of this ordinance, may commence a civil action on his own behalf against:

(1) any person who is alleged to be in violation of any provision of this ordinance set forth in Table 6 below or

(2) the NCO where there is alleged a failure of the NCO to perform any act under this ordinance which is not discretionary. The ..... court shall have Jurisdiction, without regard to the amount in controversy, to grant such relief as it deems necessary.

(b) No action may be commenced:

(1) under Subsection (a)(l)

(A) prior to ..... days after the plaintiff has given notice of the alleged violation to the NCO [and to the alleged violator] of such violation, or

(B) if the NCO has commenced and is diligently prosecuting an action against the alleged violator with respect to such violation, [but in such action any affected person may intervene as a matter of right], or

(2) under Subsection (a)(2), prior to ..... days after the plaintiff has given notice to the NCO that he will commence such action. Notice under this subsection shall be given in a manner prescribed by the NCO.

(c) In any action under this section, the NCO, if not a party, may intervene as a matter of right.

(d) The court, in issuing any final order in any action brought pursuant to subsection (a), may at its discretion award the costs of litigation to any party.

TABLE 6
Provisions Under Which Civil Actions May Be Commenced

6.2.1(a)	(Radios, Television Sets, Musical Instruments and Similar Devices)
6.2.2	(Loudspeakers/Public Address Systems)
6.2.3	(Street Sales)
6.2.5	(Loading and Unloading)
6.2.6	(Construction)
6.2.7	(Vehicle or Motorboat Repairs and Testing)
6.2.9	(Places of Public Entertainment)
6.2.10	(Explosives, Firearms, and Similar Devices)
6.2.11	(Powered Model Vehicles)
6.2.12	(Vibration)
[6.2.13	(Stationary, Non-Emergency Signaling Devices)
6.2.14	(Emergency Signaling Devices)
6.2.15	(Motorboats)
6.2.17	(Domestic Power Tools)
6.2.18	(Tampering)
8.1	(Maximum Permissible Sound Levels by Receiving Land Use)
9.1.3	(Refuse Collection Vehicles)
9.1.4	(Standing Motor Vehicles)
9.2(b)	(Motor Vehicle Racing Events)
9.2.1(b)	(Motor Vehicle Horns and Signaling Devices)
10.9	(Truth-in Selling or Renting)

11.6 Other Remedies

No provision of this ordinance shall be construed to impair any common law or statutory cause of action, or legal remedy there from, of any person for injury or damage arising from any violation of this ordinance or from other law.

11.7 Severability

If any provision of this ordinance is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, the remaining provisions of the ordinance shall not be invalidated.

11.8 Effective Date

This law/ordinance shall take the effect on .....

ARTICLE VIII. - NOISE ABATEMENT

Sec. 29-200. - Purpose.

This article is enacted to protect, preserve, and promote the health, safety, welfare, peace, and quiet of the citizens of the city through the reduction, control, and prevention of unreasonably loud and raucous sounds, or any noise that unreasonably disturbs, injures, or endangers the comfort, repose, health, peace, or safety of reasonable persons of ordinary sensitivity. Nothing in this article shall be construed as preventing the lawful exercise of right of free speech protected by the Constitutions of the United States or the State of Illinois.

(Ord. No. O04-57, § 1, 5-25-04)

Sec. 29-201. - Savings.

A prosecution which is pending on the effective date of this article and which arose from a violation of an ordinance repealed by this article, or a prosecution which is started within six (6) months after the effective date of this article, arising from a violation of an ordinance repealed by this article, shall be tried and determined exactly as if the ordinance had not been repealed.

(Ord. No. O04-57, § 1, 5-25-04)

Sec. 29-202. - Scope.

This article applies to the control of all sound originating within the jurisdictional limits of the city.

(Ord. No. O04-57, § 1, 5-25-04)

Sec. 29-203. - Definitions.

When used in this article:

Emergency means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage demanding immediate attention.

Emergency work means any work performed for the purpose of preventing or alleviating physical trauma or property damage, whether actually caused or threatened by an emergency, or work by private or public utilities when restoring utility service.

Noise sensitive area includes, but is not limited to, the land on which a school, hospital, nursing home, church, court, public library, or similar institution is located and the area within two hundred fifty (250) feet of a school, hospital, nursing home, church, court, public library, or similar institution.

Person means any individual, firm, association, partnership, joint venture, or corporation.

Public right-of-way means any street, avenue, boulevard, highway, sidewalk, alley, or similar place normally accessible to the public that is owned or controlled by a government entity.

Public space means any real property or structures on real property, owned by a government entity and normally accessible to the public, including but not limited to parks and other recreational areas.

Residential area means any real property which contains a structure or building in which one or more persons reside, provided that the structure or building is properly zoned, or is legally nonconforming, for residential use in accordance with the terms and maps of the city's zoning ordinance.

(Ord. No. O04-57, § 1, 5-25-04)

Sec. 29-204. - General prohibition.

(a) No person or property owner, shall make, allow, permit, continue, or cause to be made or continued, the following:
   (1) Any unreasonably loud or raucous noise; or
   (2) Any noise which unreasonably disturbs, injures, or endangers the comfort, repose, health, peace, or safety of reasonable persons of ordinary sensitivity, within the jurisdictional limits of the City of Aurora; or
   (3) Any noise which is so harsh, prolonged, unnatural, or unusual in time or place as to occasion unreasonable discomfort to any persons within the neighborhood from which said noises emanate, or as to unreasonably interfere with the peace and comfort of neighbors or their guests, or operators or customers in places of business, or as to detrimentally or adversely affect such residences or places of business.

(b) Factors for determining whether a sound is unreasonably loud and raucous include, but are not limited to, the following:
   (1) The proximity of the sound to sleeping facilities, whether residential or commercial;
   (2) The land use, nature, and zoning of the area from which the sound emanates and the area where it is received or perceived;
   (3) The time of day or night the sound occurs;
   (4) The duration of the sound; and
   (5) Whether the sound is recurrent, intermittent, or constant.

(Ord. No. O04-57, § 1, 5-25-04; Ord. No. O09-88, § 1, 11-10-09)

Sec. 29-205. - Noises prohibited.

The following acts are declared to be per se violations of this article. This list does not constitute an exclusive list.

   (1) *Unreasonable noises:* The unreasonable making of, or knowingly and unreasonably permitting to be made, any unreasonably loud, boisterous or unusual noise, disturbance, commotion or vibration in any boarding facility, dwelling, place of business or other structure, or upon any public street, park, or other place or building. The ordinary and usual sounds, noises, commotion or vibration incidental to the operation of these places when conducted in accordance with the usual standards of practice and in a manner which will not unreasonably disturb the peace and comfort of residences or which will not detrimentally affect the operators of other places of business are exempted from this provision.
   (2) *Non-emergency signaling devices:* Sounding or permitting sounding any amplified signal from any bell, chime, siren, whistle or similar device, intended primarily for non-emergency purposes, from any place for more than ten (10) consecutive seconds in any hourly period.

The reasonable sounding of such devices by houses of religious worship, seasonal contribution solicitors, or by the city for traffic control purposes are exempt from the operation of this provision.

(3) *Emergency signaling devices:* The intentional sounding or permitting the sounding outdoors of any emergency signaling device including fire, burglar, civil defense alarm, siren, whistle, or similar emergency signaling device, except in an emergency or except as provided in subsection a. below. Local, state, and federal governments are exempt from this prohibition.

a. Testing of an emergency signaling device shall occur between 7:00 a.m. and 7:00 p.m. Any testing shall use only the minimum cycle test time. In no case shall such test time exceed five (5) minutes. Testing of the emergency signaling system shall not occur more than once in each calendar month.

(4) *Radios, televisions, boom boxes, phonographs, stereos, musical instruments and similar devices:* The use or operation of a radio, television, boom box, stereo, musical instrument, or similar device that produces or reproduces sound in a manner that is plainly audible to any person other than the player(s) or operator(s) of the device, and those who are voluntarily listening to the sound, and which unreasonably disturbs the peace, quiet, and comfort of neighbors and passers-by, or is plainly audible at a distance of seventy-five (75) feet from any person in a commercial, industrial area, or public space. The use or operation of a radio, television, boom box, stereo, musical instrument, or similar device that produces or reproduces sound in a manner that is plainly audible to any person other than the player(s) or operator(s) of the device, and those who are voluntarily listening to the sound, and unreasonably disturbs the peace, quiet, and comfort of neighbors in residential or noise sensitive areas, including multi-family or single-family dwellings. This subsection shall not apply to violations of 5/12-611 of the Illinois Vehicle Code.

(5) *Loudspeakers, amplifiers, public address systems, and similar devices:* The unreasonably loud and raucous use or operation of a loudspeaker, amplifier, public address system, or other device for producing or reproducing sound, except as may be permitted by section 29-22 of the City of Aurora Code of Ordinances, between the hours of 10:00 p.m. and 7:00 a.m. of the following day on weekdays, and 10:00 p.m. and 10:00 a.m. of the following day on weekends and holidays (holidays shall consist of Christmas Day, Thanksgiving Day, New Year's Eve, New Year's Day, Memorial Day, and Independence Day) in the following areas:

a. Within or adjacent to residential or noise-sensitive areas;

b. Within public space if the sound is plainly audible across the real property line of the public space from which the sound emanates, and is unreasonably loud and raucous. This shall not apply to any public performance, gathering, or parade or which a permit has been obtained from the local government.

(6) *Yelling, shouting, and similar activities:* Yelling, shouting, hooting, whistling, or singing in residential or noise sensitive areas or in public places, between the hours of 10:00 p.m. and 7:00 a.m. of the following day, or at any time or place so as to unreasonably disturb the quiet, comfort, or repose of reasonable persons of ordinary sensitivities.

(7) *Animals and birds:* Unreasonably loud and raucous noise emitted by an animal or bird for which a person is responsible. A person is responsible for an animal if the person owns, controls, or otherwise cares for the animal or bird. Sounds made by animals or birds in animal shelters, veterinary hospitals, pet shops, or pet kennels [licensed under, and in compliance

with, licensing and permitting provisions set forth in this Code and which use reasonable measures to minimize such sounds emanating from their property] are exempt from this subsection.

(8) *Loading or unloading merchandise, materials, equipment:* The creation of unreasonably loud, raucous, and excessive noise in connection with the loading or unloading of any vehicle at a place of business or residence between the hours of 10:00 p.m. and 6:00 a.m. of the following day.

(9) *Construction or repair of buildings, excavation of streets and highways:* The construction, demolition, alteration or repair of any building or the excavation of streets and highways other than between the hours of 6:00 a.m. and 9:00 p.m., on weekdays and 8:00 a.m. and 6:00 p.m. on weekends. Local, state, and federal governments are exempt from this prohibition. In cases of emergency, construction or repair noises are exempt from this provision. In non-emergency situations, the following shall apply:

a. The director of property standards may, at his discretion, issue written permission, upon application, if he determines that the public health and safety, as affected by loud and raucous noise caused by construction or repair of buildings between the hours of 6:00 p.m. and 9:00 a.m. of the following day, will not be impaired, and if he further determines that loss or inconvenience would not result to a party in interest. The written permission shall grant permission in non-emergency cases for a period of not more than three (3) days. The permit may be renewed once for a period of three (3) days or less.

b. The director of public works may, at his discretion, issue written permission, upon application, if he determines that the public health and safety, as affected by loud and raucous noise caused by construction or excavation of roadways and sidewalks between the hours of 6:00 p.m. and 9:00 a.m. of the following day, will not be impaired, and if he further determines that loss or inconvenience would not result to a party in interest. The written permission shall grant permission in non-emergency cases for a period of not more than three (3) days. The permit may be renewed once for a period of three (3) days or less.

(10) *Noise sensitive areas—schools, courts, churches, hospitals, and similar institutions:* The creation of any unreasonably loud and raucous noise adjacent to any noise sensitive area while it is in use, which unreasonably interferes with the workings of the institution or which unreasonably disturbs the persons in these institutions.

(11) *Blowers, and similar devices:* In residential or noise sensitive areas, between the hours of 9:00 p.m. and 6:00 a.m. of the following day, the operation of any noise-creating blower, power fan, or any internal combustion engine, the operation of which causes noise due to the explosion of operating gases, fuels, or fluids, provided that the noise is unreasonably loud and raucous and can be heard across the property line of the property from which it emanates. This subsection shall not apply to snow blowers and other snow removal machinery nor to landscaping operations conducted on golf courses.

(12) *Commercial establishments.* Unreasonably loud and raucous noise from the premises of any commercial establishment, including any outdoor area which is part of or under the control of the establishment, between the hours of 10:00 p.m. and 6:00 a.m. of the following day which is plainly audible at a distance of fifty (50) feet from any residential property.

(Ord. No. O04-57, § 1, 5-25-04; Ord. No. O04-68, § 1, 6-29-04)

Sec. 29-206. - Exemptions.

Sounds caused by the following are exempt from the prohibitions set out in section 29-204 and are in addition to the exemptions specifically set forth in section 29-205:

(1) Repairs of utility structures, which are damaged, in disrepair, or out of service and such condition, pose a clear and immediate danger to life, health, or significant loss of property.

(2) Sirens, whistles, or bells lawfully used by emergency vehicles, or other alarm systems used in case of fire, collision, civil defense, police activity, or imminent danger, provided that the prohibition(s) in subsection 29-205(d) continues to apply.

(3) Repairs or excavations of bridges, streets, or highways by or on behalf of the City of Aurora, the State of Illinois, or the federal government, between the hours of 10:00 p.m. and 6:00 a.m. of the following day, when public welfare and convenience renders it impractical to perform the work between 6:00 a.m. and 10:00 p.m.

(4) Outdoor school and playground activities. Reasonable activities conducted on public playgrounds and public or private school/university grounds, which are conducted in accordance with the manner in which such spaces are generally used, including but not limited to, school/university athletic and school/university entertainment events.

(5) Other outdoor events. Outdoor gatherings, public dances, shows, parades, festivals, and other similar outdoor events, provided that a permit has been obtained from the appropriate permitting authority.

(6) Any event that is sponsored by and directly controlled by the city or its designee.

(7) Outdoor church activities that cannot be heard from a distance of more than one hundred (100) feet beyond the church property boundaries between 10:00 p.m. and 6:00 a.m. of the following day, except that a church may sound chapel bells periodically so long as each said ringing does not continue for an unreasonable amount of time.

(Ord. No. O04-57, § 1, 5-25-04)

Sec. 29-207. - Enforcement and violation notice.

(a) The chief of police, or his designees, will have primary responsibility for the enforcement of the noise regulations herein. Nothing in this article shall prevent the police chief, or his designees, from obtaining voluntary compliance by way of warning, notice, or education.

(b) If a person's conduct would otherwise violate this article and consists of any of the following: 1) speech or communication protected by the Constitution of the United States or the State of Illinois; 2) of a gathering with others to hear or observe speech or communication protected by the Constitution of the United States or the State of Illinois; 3) or of a gathering with others to lawfully picket or otherwise express, in a non-violent manner, a position on a social, economic, political, or religious questions, then the person must be ordered to, and have the opportunity to, move, disperse, or otherwise remedy the violation prior to arrest or a citation being issued.

(c) Every ticket or citation issued pursuant to this article shall contain, but not necessarily be limited to, the following information:

(1) The date and time of the violation.

(2) The address where the violation took place.

(3) The particular regulation violated.

(4) The penalty which may be assessed for the violation.

(5) A section entitled "Request for Hearing" which shall clearly set forth that the person or property owner may request and appear at an administrative hearing to contest the violation on its merits, by:

a. Checking or placing a mark in a space provided and clearly identified, "Request for Hearing."

b. Placing his/her name and current address in the place provided.

c. Signing his/her name in the appropriate indicated place.

d. Filing the violation notice, with the "Request for Hearing" section fully completed, with the law department in person not later than seven (7) business days after the citation or ticket including the date the ticket or citation was issued. Such filing shall be deemed completed upon receipt by the law department.

(6) That payment of the indicated fine shall operate as a final disposition of the violation without necessity of attendance at any hearing.

(d) Service of the ticket or citation shall be made by the person issuing same by:

(1) Handing it to the person or property owner, if present, or

(2) Affixing the original or a facsimile of the ticket or citation to an entryway door of the property where the violation took place if the person or property owner is not present.

(e) The correctness of facts contained in the ticket or citation shall be certified by the person issuing said notice by:

(1) Signing his/her name to the ticket or citation at the time of service, or

(2) In the case of a notice produced by a computer device, by signing a single certificate, to be kept by the police department, attesting to the correctness of all notices produced by the device while under the signatory's control.

(f) The original or a facsimile of the ticket or citation shall be retained by the police department and kept as a record in the ordinary course of business.

(g) Any ticket or citation issued, signed and served in accordance herewith, or a copy of the ticket or citation, shall be prima facie evidence of the correctness of the facts shown on the notice.

(h) The ticket or citation or a copy shall be admissible in any subsequent administrative or judicial proceeding to the extent permitted by law.

(Ord. No. O04-57, § 1, 5-25-04; Ord. No. O09-88, § 2, 11-10-09)

Sec. 29-208. - Penalties.

(a) Any violation of the provisions of this article is punishable by a ticket or citation carrying a fine of not less than two hundred fifty dollars ($250.00). However, this subsection shall not be construed as requiring the Aurora Police Department to cite a person or property owner for violation of this article if, in its discretion, the department determines that it is in the best interest of the community to utilize other lawful means to gain compliance.

(b) A second violation of this article by the same person or at the same property, which occurs within one year (365 days) of receiving a previous ticket, is punishable by a ticket carrying a fine of not less than five hundred dollars ($500.00). A third or subsequent violation of this article by the same person or at the same property at any time thereafter is punishable by a ticket carrying a fine of not less than one thousand dollars ($1,000.00). Any ticket issued and remaining unpaid shall be a lien upon, and run with the land, of the property where the violation was cited.

(c) Each occurrence of a violation of this article or, in the case of continuous violations, each day a violation occurs or continues, constitutes a separate offense and may be punished separately.

(Ord. No. O04-57, § 1, 5-25-04; Ord. No. O04-68, § 2, 6-29-04; Ord. No. O09-88, § 3, 11-10-09)

Sec. 29-209. - Procedure.

Any person issued a ticket or citation under this section shall have the right to seek a hearing in front of the administrative hearing officer subject to the following provisions:

(1) For purposes of this section, the administrative hearing officer shall be the individual who holds administrative hearings involving violations of the city's property maintenance code under chapter 12 of this Code of Ordinances and violations of the city's criminal nuisance ordinance under this chapter.

(2) Any person seeking a hearing by the administrative hearing officer shall file a written request within fourteen (14) calendar days after receipt of the ticket or citation. The written request must be received by the city's law department prior to the expiration of the fourteen-day period, or on the first date the law department is open for business after such period if the law department is closed on the fourteenth day. Mailing the request on such date is insufficient. If the petition is not received during this time period, then the ticket/citation shall become final and not subject to further review, and the city may proceed with collection of the fine or other such penalties as enumerated above.

(3) The written request shall state the reason(s) why the ticket is invalid and state the relief sought from the hearing officer. Upon receipt of the written request, the law department shall promptly set a time and date for a hearing on the petition and shall notify the petitioner of the same not less than seven (7) days prior to the date set for hearing. A hearing date may be continued by the administrative hearing officer for good cause.

(4) At such hearing, the administrative hearing officer shall give the petitioner an opportunity to be personally heard and to present witnesses and information relevant to the issue. The hearing officer shall also hear from the city and its witnesses and information. Upon conclusion of such hearing, and after consideration of any information presented by the petitioner and the city, a decision shall be made by the hearing officer either canceling or affirming the ticket/citation.

(5) The decision of the administrative hearing officer, reached at the conclusion of such hearing, shall be final. If applicable, the city may enforce such decision in any manner available by law or ordinance.

(Ord. No. O04-68, § 3, 6-29-04)

Sec. 29-210. - Severability.

A determination of the invalidity or unconstitutionality of any clause, sentence, paragraph, section, or part of this article, by a court of competent jurisdiction, shall not affect the validity of the remaining parts of this article.

(Ord. No. O04-57, § 1, 5-25-04; Ord. No. O04-68, § 4, 6-29-04)

Secs. 29-211—29-299. - Reserved.

ARTICLE IX. - NOISE POLLUTION CONTROL[9]

Footnotes:

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Editor's note—*Ord. No. 7278, §§ 1—8, enacted Apr. 1, 1980, did not specifically amend the Code, but is codified herein as superseding §§ 21-131—21-134 and 21-136 which were derived from a nonamendatory Ord. No. 7144, §§ 1—6, adopted July 17, 1979, and set out herein as Art. IX, §§ 21-131—21-136.*

Cross reference— *Loud or unnecessary noises prohibited generally, § 21-7; sound-amplifying devices used in advertising, § 3-13 et seq.; muffler requirements for motor vehicles, § 19-214; building, generally, Ch. 8.*

Sec. 21-131. - Title.

This article shall be known as the Noise Pollution Control Ordinance.

(Ord. No. 7144, § 1, 7-17-79; Ord. No. 7278, § 1, 4-1-80)

Sec. 21-132. - Definitions.

Antique vehicle. A motor vehicle that is more than twenty-five (25) years of age or a bona fide replica thereof and which is driven on the highways only going to and returning from an antique auto show or an exhibition, or for servicing or demonstration, or a fire-fighting vehicle more than twenty (20) years old which is not used as fire-fighting equipment but is used only for the purpose of exhibition or demonstration.

Common carrier by motor vehicle. Any person who holds himself out to the general public to engage in the transportation by motor vehicle in interstate of foreign commerce of passengers or property or any class or classes thereof for compensation, whether over regular or irregular routes.

Contract carrier by motor vehicle. Any person who engages in transportation by motor vehicle of passengers or property in interstate or foreign commerce for compensation (other than transportation referred to in the definition of "common carrier by motor vehicle") under continuing contracts with one person or a limited number of persons either:

(a) For the furnishing of transportation services through the assignment of motor vehicles for a continuing period of time to the exclusive use of each person served; or

(b) For the furnishing of transportation services designed to meet the distinct need of each individual customer.

dB(A). Sound level in decibels determined by the A-weighting of a sound level meter.

Dealer. Every person engaged in the business of selling vehicles to persons who purchase such vehicles for purposes other than resale, and who has an established place of business for such activity in this state.

Decibel (dB). A unit of measure, on a logarithmic scale to the base 10, of the ratio of the magnitude of a particular sound pressure to a standard reference pressure, which, for purposes of this chapter, shall be twenty (20) micronewtons per square meter (uN/m^2).

Exhaust system. The system comprised of a combination of components which provides for the enclosed flow of exhaust gas from engine parts to the atmosphere.

Farm tractor. Every motor vehicle designed and used primarily as a farm implement for drawing wagons, plows, moving machines and other implements of husbandry, and every implement of husbandry which is self-propelled (sic).

Fast meter response. As specified by American National Standards Institute in document S1.4-1971, or subsequent revisions.

Gross vehicle weight (gvw). The maximum loaded weight for which a motor vehicle is registered or, for vehicles not so registered, the value specified by the manufacturer as the loaded weight of the vehicle.

Highway. The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

Interstate commerce. The commerce between any place in a state and any place in another state or between places in the same state through another state, whether such commerce moves wholly by motor vehicle or partly by motor vehicle and partly by rail, express, water or air. This definition of "interstate commerce" is in Section 203(a) of the Interstate Commerce Act (49 U.S.C. Section 303(a)).

Motorcycle. Every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three (3) wheels in contact with the ground, but excluding a tractor.

Motor carrier. A common carrier by motor vehicle, a contract carrier by motor vehicle, or a private carrier of property by motor vehicle, as those terms are defined by paragraphs (14), (15), and (17) of Section 203(a) of the Interstate Commerce Act (49 U.S.C. 303(a)). The term "motor carrier" includes those entities which own and operate the subject motor vehicles, but not the drivers thereof, unless said drivers are independent truckers who both own and drive their own vehicles.

Motor-driven cycle. Every motorcycle, motor scooter, or bicycle with motor attached, with less than one hundred fifty (150) cubic centimeter piston displacement.

Motor vehicle. Every vehicle which is self-propelled and any combination of vehicles which are propelled or drawn by a vehicle which is self-propelled.

Muffler. A device for abating the sounds of escaping gases of an internal combustion engine.

New motor vehicle. A motor vehicle the equitable or legal title to which has never passed to a person who purchases it for purposes other than resale.

Open site. An area that is essentially free of large sound-reflecting objects, such as barriers, walls, board fences, signboards, parked vehicles, bridges or buildings.

Passenger car. A motor vehicle designed for the carrying of not more than ten (10) persons, including a multipurpose passenger vehicle, except any motor vehicle of the second division as defined in I.R.S. Ch. 95½, Section 1-146, and except any motorcycle or motor-driven cycle.

Person. Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof or any legal successor, representative, agent or agency of the foregoing.

Private carrier of property by motor vehicle. Any person, not included in terms "common carrier by motor vehicle" or "contract carrier by motor vehicle," who transports in interstate or foreign commerce by motor vehicle property of which such person is the owner, lessee, or bailee, when such transportation is for sale, lease, rent or bailment, or in furtherance of any commercial enterprise.

Registered. A vehicle is registered when a current registration certificate or certificates and registration plates have been issued for it under the laws of any state pertaining to the registration of vehicles.

Snowmobile. A self-propelled device designed for travel on snow or ice or natural terrain steered by skis or runners, and supported in part by skis, belts, or cleats.

Sound. An oscillation in pressure in air.

Sound level. In decibels, a weighted sound pressure level, determined by the use of metering characteristics and frequency weightings specified in ANSI S1.4-1971 "Specification for Sound Level Meters."

Sound pressure level. In decibels, twenty (20) times the logarithm to the base 10 of the ratio of the magnitude of a particular sound pressure to the standard reference pressure. The standard reference pressure is twenty (20) micronewtons per square meter.

Special mobile equipment. Every vehicle not designed or used primarily for the transportation of persons or property and only incidentally operated or moved over a highway, including but not limited to ditch digging apparatus, well boaring (sic) apparatus and road construction and maintenance machinery such as asphalt spreaders, bituminous mixers, bucket loaders, tractors, other than truck tractors, levelling graders, finishing machines, motor graders, road rollers, scarifiers, earth-moving carryalls and scrapers, power shovels, and drag lines, and self-propelled cranes and other earthmoving equipment.

Tactical military vehicle. Every vehicle operated by any federal or state military organization and designed for use in field operations, but not including vehicles such as staff cars and personnel carriers designed primarily for normal highway use.

Used motor vehicle. A motor vehicle that is not a new motor vehicle.

Vehicle. Every device in, upon, or by which any person or property is or may be transported or drawn upon a highway.

(Ord. No. 7144, § 4, 7-17-79; Ord. No. 7278, § 2, 4-1-80)

Sec. 21-132.1. - Measurement procedures.

The measurement procedures to be used by the City of Joliet to determine whether the emissions of sound from motor vehicles comply with section 19½-4 shall be in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.

(Ord. No. 7278, § 3, 4-1-80)

Sec. 21-133. - Construction noise.

It shall be unlawful for any person to use any piledriver, shovel, hammer derrick, hoist tractor, roller or other mechanical apparatus operated by fuel or electric power in building or construction operations between the hours of 9:30 p.m. and 7:00 a.m. except for work on public improvements and work of public service utilities, within six hundred (600) feet of any building used for residential or hospital purposes.

(Ord. No. 7144, § 2, 7-17-79; Ord. No. 7278, § 5, 4-1-80; Ord. No. 10361, § 1, 1-19-94)

Sec. 21-134. - Sound emission standards and limitations for motor vehicles.

(a) *Equipment standards applicable to motor vehicles:*

(1) *Exhaust system.* Except for motor carriers engaged in interstate commerce regulated under federal standards contained in 40 Code of Federal Regulations Part 202 (40 CFR Part 202), no person shall operate or cause or allow the operation of a motor vehicle on a public right-of-way unless it is at all times equipped with an adequate muffler or other sound dissipative device which is:

a. In constant operation and properly maintained to prevent any excessive or unusual noise;

b. Free from defects which affect sound reduction; and

c. Not modified in a manner which will amplify or increase the noise of such muffler or other sound dissipative device above that emitted by the muffler originally installed on the vehicle so as to produce excessive or unusual noise.

(2) *Exhaust system of motor carrier engaged in interstate commerce.* No motor carrier engaged in interstate commerce regulated under 40 CFR Part 202, as amended from time to time, shall operate or cause or allow the operation of a subject motor vehicle unless the exhaust system of such motor vehicle is:

a. Equipped with a muffler or other noise dissipative device;

b. Free from defects which affect sound reduction, and

c. Not equipped with any cutout, bypass or similar device.

(3) *Visual tire inspection.* No person shall operate any motor vehicle on a tire or tires having a tread pattern which as originally manufactured, or as newly retreaded, is composed primarily of cavities in the tread (excluding sipes and local chunking) which are not vented by grooves to the tire shoulder or circumferentially to each other around the tire. This subparagraph (3) shall not apply to any motor vehicle which is demonstrated to be in compliance with the noise emission standards specified in section 21-134(b) for operation on highways with speed limits of more than thirty-five (35) mph if the demonstration is conducted at the highway speed limit in effect at the inspection location or, if speed is unlimited, the demonstration is conducted at a speed of sixty-five (65) mph.

(b) *Operational standards:*

(1) Standards applicable to all passenger cars and to other motor vehicles with gvw of eight thousand (8,000) pounds or less:

a. *Applicability.* Subsection (b)(1) shall apply to all passenger cars regardless of weight and to other motor vehicles with a gross vehicle weight of eight thousand (8,000) pounds or less, except motorcycles and motor driven cycles.

b.

Standards for highway operation. No person shall operate or cause or allow the operation of a motor vehicle subject to subsection (b)(1) at any time under any conditions of highway grade, load, acceleration or deceleration in such a manner as to exceed the following limits:

1. On highways with speed limits of thirty-five (35) miles per hour or less, seventy-four (74) dB(A), or seventy-six (76) dB(A) when operating on a grade exceeding three (3) per cent, measured with fast meter response at fifty (50) feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.
2. On highways with speed limits of more than thirty-five (35) miles per hour, eighty-two (82) dB(A), or eighty-five (85) dB(A) if the vehicle is equipped with two (2) or more snow or mud/snow tires, measured with fast meter response at fifty (50) feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.

(2) Standards applicable to motor vehicles with gvw in excess of eight thousand (8,000) pounds, including motor vehicles operated by motor carriers engaged in interstate commerce as regulated under federal standards contained in 40 CFR Part 202, as amended from time to time:

a. *Applicability.* Subsection (b)(2) shall apply to the total sound produced by motor vehicles with gvw in excess of eight thousand (8,000) pounds, including motor vehicles operated by motor carriers engaged in interstate commerce as regulated by 40 CFR Part 2 when operated under the hereinbelow specified conditions, including the sound produced by auxiliary equipment mounted on such motor vehicle; but, shall not apply to auxiliary equipment (e.g. cranes, asphalt spreaders, ditch diggers, liquid slurry pumps, air compressors, welders, refuse compactors, etc.,) which is normally operated only when the motor vehicle is stationary or is moving at a speed of five (5) miles per hour or less.

b. *Standards for highway operation.* No person shall operate any motor vehicle of a type with respect to which subsection (b)(2) is applicable and which at any time or under any condition of highway grade, load, acceleration or deceleration generates a sound level in excess of eighty-six (86) dB(A) measured on an open site with fast meter response at fifty (50) feet from the centerline of lane of travel on highways with speed limits of thirty-five (35) mph or less; or ninety (90) dB(A) measured on an open site with fast meter response at fifty (50) feet from the center line of lane of travel on highways with speed limits of more than thirty-five (35) mph.

c. *Standard for operation under stationary test.* No person shall operate any motor vehicle of a type with respect to which subsection (b)(2) is applicable, and which is equipped with an engine speed governor, which generates a sound level in excess of eighty-eight (88) dB(A) measured on an open site with fast meter response at fifty (50) feet from the longitudinal centerline of the vehicle, when its engine is accelerated from idle with wide open throttle to governed speed with the vehicle stationary, transmission in neutral, and clutch engaged.

(3) Standards applicable to motorcycles and motor driven cycles:

a. *Applicability.* Subsection (b)(3) shall apply to all motorcycles and motor driven cycles.

b. *Standards for highway operation.* No person shall operate or cause or allow the operation of a motor vehicle subject to subsection (b)(3) at any time or under any conditions of highway grade, load, acceleration or deceleration in such a manner as to exceed the following limits:

1. On highways with speed limits of thirty-five (35) miles per hour or less, eighty (80) dB (A), or eighty-two (82) dB(A) when operating on a grade exceeding three (3) per cent, measured with fast meter response at fifty (50) feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.

2. On highways with speed limits of more than thirty-five (35) miles per hour, eighty-six (86) dB(A) measured with fast meter response at fifty (50) feet from the centerline of travel, or an equivalent sound level limit measured in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.

c. No person shall at any time operate or cause or allow the operation of a motor vehicle subject to subsection (b)(3) which is not subject to registration for road use, on any property zoned for business or residential use, under any condition of load, acceleration or deceleration in such a manner as to exceed 82dB(A) measured with fast meter response at fifty (50) feet from the centerline of travel, or an equivalent sound level limit measured in accordance with procedures adopted by the Illinois Environmental Protection Agency on file with the Illinois Secretary of State, Index Division, as amended from time to time.

(c) *Horns and other warning devices.* No person shall sound a horn when upon a highway, except when reasonably necessary to insure safe operation. No person shall sound any horn on any motor vehicle for an unreasonable period of time or in a manner so as to circumvent enforcement of the operational standards contained herein.

No person shall sound any siren, whistle or bell of any motor vehicle except as provided in I.R.S. Ch. 95½, Section 12-601(b). (Ord. No. 7278, § 6, 4-1-80)

(d) *Tire noise.* No person shall operate a motor vehicle in such a manner as to cause or allow to be emitted squealing, screeching or other such noise from the tires in contact with the ground because of rapid acceleration or excessive speed around corners or other such reason, except that noise resulting from emergency operation to avoid imminent danger shall be exempt from this provision.

Exceptions:

(1) The standards and limitations of this subsection shall not apply to:

a. Any vehicle moved by human or animal power;

b. Any vehicle moved by electric power;

c. Any vehicle used exclusively upon stationary rails or tracks;

d. Any farm tractor;

e. Any antique vehicle, if licensed under Section 3-804 of the Illinois Vehicle Code;
f. Any snowmobile;
g. Any special mobile equipment;
h. Any vehicle while being used lawfully for racing competition or timed racing events; and
i. Any lawn care maintenance equipment.

(2) Section 21-134(a)(3) shall not apply to any person who can show that a tread pattern as described in that section was the result of wear and that the tire was not originally manufactured or newly retreaded with such a tread pattern.

(3) The operational standards contained in section 21-134(b) shall not apply to warning devices, such as horns and sirens; or to emergency equipment and vehicles such as fire engines, ambulances, police vans, and rescue vans, when responding to emergency calls; to snow plows when in operation; or to tactical military vehicles.

(Ord. No. 7144, § 3, 7-17-79; Ord. No. 7278, §§ 4, 6, 7, 4-1-80)

Sec. 21-135. - Testing procedures.

Test procedures to determine whether maximum noise emitted by motor vehicles in use meets the noise limits stated in this article shall be in substantial conformity with standards and recommended practice established by the Society of Automotive Engineers, Inc., including SAE Standard J986; SAE Standard J331; Recommended Practice J366; Recommended Practice J184; and such other and further standards as may be propounded by the enforcing department of the City of Joliet as designated by the Joliet City Council.

(Ord. No. 7144, § 5, 7-17-79)

Sec. 21-136. - Construction of article; penalty.

(a) *Article not to impair action or remedy.* Nothing in this article shall be construed to impair any cause of action, or legal remedy therefore, of any person or the public for injury or damage arising from the emission or release into the atmosphere from any source whatever of noise in such place or manner, or at such level so as to constitute a common-law nuisance.

(b) *Penalty.* Any person found guilty of violating, disobeying, omitting, neglecting or refusing to comply with, or resisting or opposing the enforcement of any of the provisions of this article, except when otherwise specifically provided, upon conviction thereof shall be punished in accordance with section 1-8 of the Code of Ordinances of the City of Joliet.

(Ord. No. 7144, § 6, 7-17-79; Ord. No. 7278, § 8, 4-1-80)

CHAPTER 14 - PERFORMANCE STANDARDS
SECTION:

6-14-1: - INTENT:
It is the intent of this Chapter to provide that businesses, utilities, light industry, research, offices, residential uses, and related activities shall be constructed, maintained, and operated with a proper appearance from streets and adjoining properties and to provide that each such permitted use shall be a good neighbor to adjoining properties by controlling the emission of noise, odor, exterior lighting, vibration, smoke, particulate matter, gases, and wastes.

It is further the intent of this Chapter to state the conditions of construction and operation with which uses will be expected to comply. In many cases, the relation of a prospective use to all performance standards cannot be judged properly at the time of building permit issuance. In such cases, the recipient of the building permit should note that these standards, like all other provisions of this Title, are continuing obligations and that all uses shall be expected to operate in compliance with these standards. The building plans shall bear the signature of a qualified professional stating that all performance standards will be complied with based upon the submitted building plans. the City retains the right to conduct its own investigation to determine compliance with the performance standards at any time.

(Ord. 01-68, 4-4-2001)

6-14-2: - COMPLIANCE:
The performance standards set forth in Section 6-14-4 of this Chapter shall be complied with and any use which fails to comply with these standards shall be in violation of this Chapter and shall be subject to penalties provided for such violation.

(Ord. 01-68, 4-4-2001)

6-14-3: - MEASUREMENT:
Each measurable standard shall be measured at the appropriate indicated location in accordance with the provisions of Section 6-14-4 of this Chapter.

(Ord. 01-68, 4-4-2001)

6-14-4: - STANDARDS:
The following performance standards shall be applicable to all uses in all zoning districts:

1. Noise: The decibels generated from a use shall not exceed the exterior noise limitations set forth in table 1 of this Section as measured at the property line of the parcel from which the noise is generated. The decibels typically generated by particular uses are given in table 2 of this Section.
   1.1. Measurement Of Noise: Noise shall be measured at the property line of the parcel from which the noise is generated. Noise shall be muffled so as not to become violative of applicable standards due to intermittence, beat frequency, shrillness, or intensity. The sound pressure level shall be measured with a sound level meter and an octave band analyzer that

conforms to ANSI S1.4-1983 (American national standards institute) specifications, or any successor standard promulgated by ANSI. Preferred frequencies for acoustical measurements shall be used.

TABLE 1

Land Use	7:00 a.m. To 7:00 p.m.	7:00 p.m. To 7:00 a.m.
Residential	55 dBA	50 dBA
Commercial	62 dBA	55 dBA
Light industrial	70 dBA	70 dBA
Industrial	80 dBA	80 dBA

TABLE 2

Sound Environment	Typical Sound Pressure Levels Generated (dBA)
Threshold of hearing	0 dBA
Broadcast studio	20 dBA
Library	30 dBA
Quiet office	40 dBA
Light auto traffic (100 feet)	50 dBA
Air-conditioning unit (20 feet)	60 dBA
Freeway traffic	70 dBA
Vacuum cleaner (5 feet)	80 dBA
Passing car at 10 feet	90 dBA
Passing bus or truck at 10 feet	100 dBA
Passing subway train at 10 feet	110 dBA

Nightclub with band playing	120 dBA
Jet takeoff (200 feet)	130 dBA
Air-raid siren	140 dBA

1.2. Exceptions:

1.2.1. Nighttime Building Or Construction Operations: It shall be unlawful to allow or permit any building or construction operations (including construction related noises, such as the delivery of equipment or material or the operation of tools, machinery, or apparatus) on private property between the hours of seven o'clock (7:00) p.m. and seven o'clock (7:00) a.m. within one thousand (1,000) feet of any residence and between ten o'clock (10:00) p.m. and seven o'clock (7:00) a.m. in all other districts. Work occurring in the public right-of-way, on public property, or within public utility easement areas shall be exempt from these restrictions.

1.2.2. Daytime Building Or Construction Operations: Between the hours of seven o'clock (7:00) a.m. and seven o'clock (7:00) p.m., noises customarily resulting from construction work and from the maintenance of grounds shall be exempt from the limitations listed in table 1 of this Section.

(Ord. 01-68, 4-4-2001)

1.2.3. Amplifiers: Noise generated by an amplifier or other device for which a permit has been obtained in accordance with Title 3, Chapter 9, "Amplifiers", of this Code shall be exempt from limitations listed in table 1 of this Section.

(Ord. 01-68, 4-4-2001; amd. Ord. 08-086, 5-6-2008)

1.2.4. Other Exemptions:

1.2.4.1. Valves, warning devices, aircraft and railroads, emergency generators, snowplowing, mosquito abatement, and emergency equipment/vehicles used only during times of emergency.

1.2.4.2. Church bells, chimes, and carillons.

1.2.4.3. The authorized use of recreational facilities within the property of schools, colleges, and public parks between the hours of seven o'clock (7:00) a.m. and ten o'clock (10:00) p.m.

1.2.4.4. Substations for public utilities.

(Ord. 01-68, 4-4-2001)

1.2.5. The City Manager shall have the authority to approve requests for construction activities not in compliance with the regulations provided in this Section provided that said requests do not have a significant adverse impact on the public health, safety and general welfare.

(Ord. No. 14-193, § 2, 12-16-2014)

Editor's note— Ord. No. 14-193, § 2, adopted December 16, 2014, enacted provisions intended for use as Subsection 1.2.3. Inasmuch as there are already provisions so designated, and at the discretion of the editor, said provisions have been redesignated as Subsection 1.2.5.

1.3. External Speaker Systems: External speaker systems shall not generate noise that is heard beyond the property line.

1.3.1. External speakers and audible external paging systems are prohibited for businesses conducting motor vehicle sales. Existing nonconforming speakers at automotive dealerships shall be brought into compliance within six (6) months from the date of adoption of this Subsection 6-14-4.1.3.1.

(Ord. 04-122, 7-20-2004)

2. Odors: At a point along or outside any property line, the emission of odorous matter in such quantity as to be offensive or in excess of the odor threshold shall not be permitted.

2.1. The measurement of odor threshold shall be in accordance with the American society for testing and materials method DI391-57 "Standard Method For Measurement Of Odor In Atmosphere (Dilution Method)" (Philadelphia: American Society Of Testing And Materials, 1957).

2.2. Detailed plans for the prevention of odors crossing property lines may be required before the issuance of a building permit.

(Ord. 01-68, 4-4-2001)

3. Exterior Lighting: All public and private outdoor lighting installed in the City of Naperville shall be in conformance with the requirements set forth in this Section.

3.1. Definitions:

EXTERIOR LIGHTING:	The illumination of an outside area or object by any manmade device that produces light by any means.
FIXTURE:	The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.
FLAT LENSES:	A glass or plastic element used in luminaires that is flush or inside the bottom edge of the luminaire.
FOOT-CANDLE (fc):	A unit of illumination produced on a surface, all points of which are one foot from a uniform point source of one standard candle.

FOOT-CANDLE HORIZONTAL MEASUREMENT (hfc):	The measurement of foot-candles utilizing a direct reading, portable light meter mounted on a horizontal position.
GLARE:	The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance and visibility.
HEIGHT OF LUMINAIRE, CAR DEALERSHIPS:	The maximum height of a luminaire at car dealerships shall be twenty-five (25) feet and shall be measured as provided herein. The maximum height of twenty-five (25) feet shall be measured from the ground directly below the centerline of the luminaire to the top of the pole or luminaire, whichever is higher.
LIGHT LOSS FACTOR (LLF):	A factor applied to lamps which estimates the lumen output of a lamp sometime after installation. (For example, a lamp with an initial lumen rating of 10,000 which has a light loss factor of 0.8 is estimated to put out 8,000 lumens. A lamp with an initial lumen rating of 10,000, which has a light loss factor of 1.0, is estimated to put out 10,000 lumens.)
LUMINAIRE:	A complete lighting unit consisting of a light source and all necessary mechanical, electrical, and decorative parts.
SAG LENSES:	A glass or plastic element used in luminaires that extends below the bottom edge of the luminaires.
UNIFORMITY RATIO:	Describes the average level of illumination in relation to the lowest level of illumination for a given area.

(Ord. 01-68, 4-4-2001; amd. Ord. 05-060, 4-6-2005)

3.2. Luminaire Design Factors:

3.2.1. The style of the light and light standard shall be consistent with the architectural style of the principal building.

3.2.2. Pathways, sidewalks, and trails shall be lighted with low level fixtures not to exceed eight (8) feet in pole height.

3.2.3.

All building lighting for security or aesthetics shall include glare controls and shall be shielded. Floodlighting is discouraged, and if used, shall be shielded to prevent disability glare for drivers or pedestrians, light trespass beyond the property line, and light above a 90-degree horizontal plane. Wallpack type fixtures shall not be permitted.

3.2.4. All parking area lighting shall include glare controls and shall be shielded.

3.2.5. Poles supporting lights shall be no taller than twenty-three (23) feet in a residential district, twenty-five (25) feet in a commercial district, a commercial part of a residential planned unit development, or in office/business park districts, and thirty-two (32) feet in any industrial district.

(Ord. 01-68, 4-4-2001)

3.3. Standards And Requirements:

3.3.1. Height Of Luminaire At Automotive Dealerships: The maximum height of a luminaire at automotive dealerships shall be twenty-five (25) feet and shall be measured as provided in the definition of "height of luminaire, car dealerships". All existing dealerships that have luminaires on their sites in excess of the 25-foot maximum at the time of adoption hereof will be grandfathered and considered legal nonconforming luminaires for the sole purpose of its height and only until such time as the pole or base are removed or replaced.

3.3.2. Standards; Exception: Lighting shall be provided in accordance with the standards of the Illuminating Engineering Society of North America (IESNA) as follows for all uses, with the exception of automotive dealerships as specified in Subsection 6-14-4.3.3.2.1 of this Section:

IESNA Parking Lot Levels Of Activity	IESNA Maintained Horizontal Illuminance Standards (Foot-Candles)					
	General Parking And Pedestrian Area			Vehicle Use Area (Only)		
	Ave.	Min.	Uniformity Ratio	Ave.	Min.	Uniformity Ratio
High	3.6	0.9	4:1	2.0	0.67	3:1
Major athletic events						
Major cultural events						
Regional shopping centers (retail space above 300,000 square feet)						

Fast food facilities (;gt;40 seats)						
Entertainment theaters						
Medium	2.4	0.6	4:1	1.0	0.33	3:1
Community shopping centers (retail space to 299,999 square feet)						
Office parks						
Hospital parking						
Multi-family residential complex						
Low	0.8	0.2	4:1	0.5	0.13	4.1
Neighborhood shopping centers (retail space of less than 5,000 square feet)						
Industrial employee parking						
Educational facilities						
Church parking						

3.3.2.1. Lighting shall be provided in accordance with the standards of the Illuminating Engineering Society of North America (IESNA) as follows for automotive dealerships:

Areas Of Activity	Description	Standards (Foot-Candles) - Target Maintained Levels

Feature display area	The first row of vehicles adjacent to a major/minor arterial, including the area in front of the vehicle up to the property line and behind the vehicle up to the merchandise area and/or the circulation area including drive aisles. Car dealerships shall comply with this provision no later than April 5, 2007. However, compliance with the provision related to security lighting, below, is required from 10:00 P.M. until sunrise.	75 foot-candles - maximum
Merchandise area	All other rows of vehicles on a lot used for general auto sales, including all areas surrounding the vehicle up to the defined circulation area including related drive aisles. Car dealerships shall comply with this provision no later than April 5, 2007. However, compliance with the provision related to security lighting, below, is required from 10:00 P.M. until sunrise.	50 foot-candles - maximum

Circulation area	Includes all portions of the lot dedicated to customer parking, employee parking, site entrance areas and inventory areas including related drive aisles. Car dealerships shall comply with this provision no later than April 5, 2007. However, compliance with the provision related to security lighting, below, is required from 10:00 P.M. until sunrise.	10 foot-candles - average
Security lighting, Monday—Sunday	The average amount of light found on site within each of the areas of activity, including the feature display area, merchandise area, and circulation area from 10:00 p.m. until sunrise. Car dealerships shall comply with this provision no later than October 5, 2005.	10 foot-candles - average

3.3.2.2. In determining the maximum foot-candle standard provided above, all foot-candle measurements shall be taken from the ground at any point within the areas of activity or at the property line.

3.3.2.3. In determining the average foot-candle standard, all foot-candle measurements shall be taken from the ground at ten-foot increments throughout the areas of activity.

3.3.2.4. Sag lenses are prohibited from use on all car dealership luminaries. All existing dealerships using sag lenses at the time of adoption date hereof, will be grandfathered and considered legal nonconforming for the sole purpose of its lens type until the dealership replaces greater than ten percent (10%) of their existing fixtures on site during any 12-month period at which time full compliance shall be required. All new fixtures shall have flat lenses.

3.3.2.5. Light shields used by car dealerships to control light and reduce glare shall be made of nonreflective material. Car dealerships must comply with this provision no later than October 5, 2005.

(Ord. 05-060, 4-6-2005)

3.3.3. Exterior lighting shall be designed at or below the following average maintained foot-candles at the property line:

Location	Maximum Foot-Candles At Property Line - Horizontal Measurement
Residential to residential	Horizontal fc: 0.10
Nonresidential to nonresidential	Horizontal fc: 2.0
Nonresidential to residential	Horizontal fc: 0.10
Intensity at adjoining right-of-way, except as noted below for automotive dealerships	Horizontal fc: 0.50
Intensity at adjoining major/minor arterial rights-of-way for automotive dealerships	Horizontal fc: 10.0

(Ord. 04-122, 7-20-2004; amd. Ord. 05-060, 4-6-2005)

3.3.4. The light loss factor (LLF) shall be a minimum of 0.75 to a maximum of 0.8 for all uses.
(Ord. 05-060, 4-6-2005)

3.4. Measuring Light Levels:

3.4.1. Metering Equipment: Light levels of both direct and indirect light shall be measured in foot-candles with a direct reading, portable light meter. Readings shall be taken only after the cell has been exposed long enough to provide a constant reading.

3.4.2. Method Of Measurement: Foot-candle horizontal measurements shall be taken at a height of three and one-half (3.5) feet aboveground.

3.5. Exceptions And Variances:

3.5.1. Because of their unique requirement for nighttime visibility and their limited hours of operation, ball diamonds, playing fields, tennis courts, and other outdoor recreational facilities shall be exempted from the general standards of this Section. Lighting for outdoor recreational facilities shall be shielded to minimize light and glare from spilling onto adjacent residential properties. The maximum permitted illumination at adjoining residential property lines shall be one foot-candle. The maximum permitted illumination at adjoining nonresidential property lines shall be two (2) foot-candles.

3.5.2. Luminaires used for public roadway illumination by a public transportation agency shall be exempt from the requirements of this Section but may be subject to the regulations of federal or State agencies or by intergovernmental agreements.

3.5.3. Decorative seasonal lighting shall be limited to a power rating of less than or equal to seventy-five (75) watts.

3.5.4. Temporary emergency lighting used by police, firefighters, and other emergency services, as well as all vehicular luminaires shall be exempt.

3.5.5. Hazard warning lights that are required by local or federal regulatory agencies shall be exempt.

3.5.6. Transportation facilities shall be exempt.

3.5.7. Public walkways shall be exempt.

3.5.8. When site characteristics are unique and the requirements of this Section cannot be met, the Zoning Administrator has the authority to approve nonconforming lighting designs if the illumination levels and/or uniformity ratios are within twenty percent (20%) of the values set forth in this Section. All other nonconforming designs shall be subject to approval of the City Council through the variance procedure or by annexation agreement or development agreement.

(Ord. 01-68, 4-4-2001)

3.6. Nonconforming Luminaires: Exterior lighting luminaires in existence on the effective date of this Section shall be exempt from the standards of this Section and shall be considered legally nonconforming. Such fixtures may be repaired and maintained. However, if any legal nonconforming luminaire is moved or damaged by any means to an extent that its total replacement is necessary, the luminaire, or replacement, shall comply with this Section. For development activity involving improved property, luminaires shall be required to comply with this Section when the floor area of any building or structure, or parking areas, or any combination thereof, is increased by ten percent (10%) or greater. This Section shall not apply to car dealerships which are governed by Subsection 6-14-4.3.3 of this Section.

(Ord. 05-060, 4-6-2005)

3.7. Exterior Lighting Plan Required:

3.7.1. A lighting plan shall be required any time exterior lighting is proposed, or modified, that is associated with a residential use of greater density than a one- or two-family dwelling or with any commercial, office, industrial or other use. The lighting plan shall be submitted with the site plan information as required in this Title.

3.7.2. The lighting plan shall include a site plan indicating location of light fixtures and intensity of foot-candles at various points on the site, catalog cuts of the proposed fixtures, and a summary table containing average foot-candles, minimum foot-candles, maximum foot-candles, uniformity ratio (average/minimum), foot-candles at the property line, pole height, and light loss factor (LLF). The plan shall also contain a certification by the property owner or agent and the preparer of the plan that the exterior lighting depicted on the plan complies with the requirements of this Chapter. Once the plan is approved, the exterior lighting of the property shall conform to the plan.

4.

Vibration: Vibration shall not be discernible at any property line to the human sense of feeling for three (3) minutes or more duration in any one hour. Vibration at any time shall not produce at any time an acceleration of more than 0.1 gravities or shall result in any combination of amplitudes and frequencies beyond the "safe" range of table 7 United States Bureau of Mines bulletin no. 442 "Seismic Effects Of Quarry Blasting", on any structure. The methods and equations of bulletin no. 442 shall be used to compute all values for the enforcement of this provision.

5. Smoke And Particulate Matter: Measurement of smoke and particulate matter shall be taken from the point of emission.
   5.1. The emission of particulate matter containing more than five percent (5%) by weight, of particles having a particle diameter larger than forty-four (44) microns, is prohibited.
   5.2. The rate of emission of particulate matter from all sources within the boundaries of any lot shall not exceed a net figure of one-half (½) pound per acre of lot size during any one hour.
   5.3. Smoke not darker or more opaque than no. 0 on the Ringelmann smoke chart (as published by the United States Bureau of Mines) may be emitted except that smoke not darker or more opaque than no. 1 on said chart may be emitted for periods not longer than four (4) minutes in any thirty (30) minutes. These provisions, applicable to visible gray smoke, shall also apply to visible smoke of a different color but with an equivalent apparent opacity.
   5.4. Dust or other types of air pollution borne by the wind from such sources as storage areas, trash enclosures, and yards within the boundaries of any lot shall be kept to a minimum by appropriate landscaping, screening, paving, oiling, wetting, or other acceptable means.
6. Gases: Fumes or gases shall not be emitted at any point in concentrations or amounts that are noxious, toxic, or corrosive. The values given in table 1 (industrial hygiene standards — maximum allowable concentration for 8 hour day, 5 days per week), table III (odor thresholds), table IV (concentrations of substances causing pain in the eyes), and table V (exposures to substances causing injury to vegetation) in the latest revision of Chapter 5, "Physiological Effect", that contains such tables, in the "Air Pollution Abatement Manual", by the Manufacturing Chemists' Association, Inc., Washington, D.C., are hereby established as guides for the determination of permissible concentration or amounts. Detailed plans for the elimination of fumes or gases may be required before the issuance of a building permit.
7. Hazard: Any operation of an industrial nature shall be carried on with reasonable precautions against fire and explosion hazards.
8. Waste: All sewage and industrial wastes shall be treated and disposed of in such manner as to comply with the water quality standards applicable to the classification assigned to the receiving waters by the City, the State of Illinois, and the USEPA. Approval of the Illinois Environmental Protection Agency of all plans for waste disposal facilities shall be required before issuance of any building permit.

(Ord. 01-68, 4-4-2001)

ARTICLE 5. - NOISE CONTROL[6]

Footnotes:
*--- (**6**) ---*
***Cross reference—** Noise control in Monroe Center Mall, § 3.111.*

Sec. 9.61. - Title and Purpose.

(1) Article 5 of Chapter 151 shall be known as the "Noise Control Ordinance" of the City of Grand Rapids.

(2) The purposes of this Article are to abate certain loud, unnecessary, unnatural an unusual noises and to establish maximum noise limits from motor vehicle and transportation noise, construction power equipment noise, and other general environmental noise.

(Ord. No. 73-8, 2-6-73)

Sec. 9.62. - Definitions.

For the purpose of this Article, certain terms are defined as follows:

(1) *ANSI* shall mean American National Standards Institute or its successor bodies. All acoustical terminology shall be that contained in ANSI S1.1 "Acoustical Terminology."

(2) *ARI* shall mean Air Conditioning and Refrigeration Institute or its successor bodies.

(3) *ASHRAE* shall mean American Society of Heating, Refrigerating and Air Conditioning Engineers or its successor bodies.

(4) *ASTM* shall mean American Society for Testing Materials or its successors bodies.

(5) *Director* shall mean the Environmental Protection Director or his or her duly authorized representative.

(6) *Decibel* shall mean a logarithmic unit of measurement which indicates the ratio between two (2) quantities (commonly electrical or sound energy levels, or pressure levels). (See Sound pressure level)

(7) *Discrete Tone* shall mean a sound wave whose instantaneous sound pressure varies essentially as a sinusoidal function of time.

(8) *Essential Services* shall mean the erection, construction, alteration or maintenance by public utilities, municipal Departments or Commissions, or any governmental agencies of street or right-of-way facilities, underground or overhead gas, electrical, steam, water, or other transmission or distribution system, collection, communication, supply or disposal system, including poles, conduits, cables, fire alarm boxes, police call boxes, traffic signals, hydrants, towers, electric substations, telephone exchange buildings, gas regulator stations, and other similar equipment and accessories in connection therewith, reasonably necessary for the furnishing of utility service by such public utilities, municipal Departments, Commission or any governmental agencies, or for the public health, safety or welfare. Essential Services in this Chapter shall also mean Michigan Department of Transportation work including: capital preventive maintenance, light duty rehabilitation, rotomilling and resurfacing, pavement restriping, asset management related repairs, alterations or improvements, emergency repairs that are essential to the operational functionality, safety and maintenance of the transportation network and such other activities approved in writing by the City Engineer.

(9) *Fluctuating Noise* shall mean a noise whose sound pressure level varies significantly but does not equal the ambient environmental level more than once during the period of observation.

(10) *IEC* shall mean International Electrotechnical Commission or its successor bodies.

(11) *Impulse Noise* is characterized by brief excursions of sound pressure which significantly exceed the ambient environmental sound pressure. The duration of a single impulse is usually less than one (1) second.

(12) *Intermittent Noise* shall mean a noise whose sound pressure level equals the ambient environmental level two (2) or more times during the period of observation. The period of time during which the level of the noise remains at an essentially constant value different from that of the ambient noise level is on the order of one (1) second or more.

(13) *ISO* shall mean International Organization for Standardization or its successor bodies.

(14) *Motor Vehicle* shall mean any passenger vehicle, truck, truck-trailer, trailer, or semi-trailer propelled or drawn by mechanical power.

(15) *Octave Band* shall mean a frequency band with lower and upper cut-off frequencies having a ratio of 2. The cut-off frequencies of 707 Hertz and 1414 Hertz define an octave band in common use.

(16) *Period of Observation* shall mean the time interval during which acoustical data are obtained. The period of observation is determined by the characteristics of the noise being measured and should also be at least ten (10) times as long as the response time of the instrumentation. The greater the variance in indicated sound level, the longer must be the observation time for a given expected accuracy of the measurement.

(17) *Person* shall mean every natural person, partnership, association or corporation which may own, operate or control those devices or facilities herein described.

(18) *Repetitive Impulse Noise* shall mean more than five (5) impulses per hour.

(19) *SAE* shall mean Society of Automotive Engineers or its successor bodies.

(20) *Sound Level* or *Noise Level* shall mean, for airborne sound, a weighted sound pressure level, obtained by the use of metering characteristics and A-weighting as specified in the referenced standards. When the A-weighing is employed it must be indicated.

(21) *Sound Pressure Level* of a sound, in decibels, is twenty (20) times the logarithm to the base 10 of the ratio of the pressure of this sound to the reference sound pressure having the value of 2×10^{-4} dynes per square centimeter.

(22) *Steady Noise* shall mean a noise whose level remains essentially constant.

(23) *Zoning District* shall mean districts established by the Zoning Ordinance of the City of Grand Rapids and found in Chapter 61 of Title V of this Code.

(24) *Helicopter* shall mean an aircraft which has its support in the air derived chiefly from the aerodynamic forces acting on one or more rotors turning about a substantially vertical axis.

(25) *Emergency Landings and Takeoffs* shall mean rescue and ambulance missions and other landings and takeoffs necessary to deal with unforeseeable occurrences or sudden and urgent occasions requiring specific evacuation measures in which a helicopter would be needed.

(Ord. No. 73-8, 2-6-73; Ord. No. 83-56, 9-27-83; Ord. No. 99-65, § 1, 11-23-99; Ord. No. 2013-74, § 1, 11-19-13)

Sec. 9.63. - Prohibited Noise.

(1) No person shall make, or cause, permit or allow to be made, upon a public way, or in such close proximity to a public way as to be distinctly and loudly audible upon such public way, any noise of any kind by crying, calling or shouting, or by means of any whistle, rattle, bell, gong, clapper, hammer, drum, horn, hand organ, mechanically operated piano, other musical instrument, wind instrument, mechanical device, radio, phonograph, sound amplifying or other similar electronic device; provided that a licensed peddler is not hereby restricted or prohibited so long as he or she shall have met the requirements and conditions hereinafter specified in subsection (5) nor does this prohibition apply to all bands and orchestras or similar musical bodies utilized as part of a parade or similar authorized musical production.

(2) No person shall use or perform any hand organ or other musical instrument or device, in any public way or public place of the City before 7:00 a.m. or after 10:00 p.m. of any day.

(3) No person shall use any premises or suffer any premises under his or her care or control to be used which shall destroy the peace and tranquility of the surrounding neighborhood.

(4) No person shall use any pile driver, shovel, hammer, derrick, hoist, tractor, roller or any other mechanical apparatus in building or construction operations between the hours of 10:00 p.m. and 7:00 a.m. except for work on essential services, within six hundred (600) feet of a residence or hospital.

(5) No person shall activate or cause or suffer to be activated any horn or audible signal device on any motor vehicle of any kind except as a warning of danger or peril as provided in the Traffic Ordinance.

(6) No person shall operate or allow to be operated any motor of a motor vehicle which weighs in excess of five (5) tons (ten thousand (10,000) pounds) for a consecutive period of longer than two (2) minutes while such vehicle is in a stationary location on private property located within one hundred fifty (150) feet of property devoted to residential uses.

Except that, the provisions of this subsection shall not apply:

(a) When the vehicle or motor is being used in the course of normal productive work,

(b) When the vehicle or motor is being used by a public utility, municipal department, Commission or other governmental agency to provide essential services as hereinbefore defined.

(c) To buses operated for the transportation of passengers while standing in established bus turnarounds, terminals or storage yards,

(d) To any vehicle standing within a completely enclosed structure.

(7) No person shall sell, or offer for sale, a new motor vehicle that produces a maximum noise exceeding the following noise limit at a distance of fifty (50) feet from the center line of travel, under test procedures, standards and recommended practices as itemized below and with reference to Sections 9.64 and 9.65 of this Article. Such stock as is certified to the Director on the effective date of this Article shall be exempt from the prohibition contained in this subsection. Test procedures shall be in substantial conformity with standards and recommended practices established by the Society of Automotive Engineers, Inc., including SAE Recommended Practice J 184, and ANSI Standards S1.1 1960 and S1.4, 1961.

1. *Type of Vehicle*	Date of Manufacture	Noise Limit dB(A)
Motorcycle	Before 1 July 1973	88
Same	After 1 July 1973	86
Same	After January 1975	84
Same	After 1 January 1980	80
Test procedures according to SAE Proposed Standard J-331.		

2. *Type of Vehicle*	*Date of Manufacture*	*Noise Limit dB(A)*
Any motor vehicle with a gross vehicle weight of 10,000 pounds or more	Before 1 July 1973	88
Same	After 1 July 1973	86
Same	After 1 January 1975	84
Test procedures according to SAE Standard J-366a.		

3. *Type of Vehicle*	Date of Manufacture	Noise Limit dB(A)
Passenger car, motor driven cycle and any other motor vehicle	Before 1 January 1973	86
Same	After 1 January 1973	84
Same	After 1 January 1975	80
Test procedures according to SAE Standard J-986a.		

(8) (a) No person shall operate within the speed limits specified in this Section either a motor vehicle or combination of vehicles of a type subject to registration at any time or under any condition as to exceed the following noise limit for the category of motor vehicle, measured at a distance of not less than fifty (50) feet from the centerline of travel, under ANSI Standards S1.1, 1960, and S1.4, 1961, and SAE Standard J-184 with meter set for fast response and the A-weighted scale.

Type of Vehicle	Noise Limit in Relation to Posted Speed Limit	
1. Any motor vehicle with a manufacturer's GVW rating of 10,000 lbs. or more, and any combination of vehicles towed by such motor vehicle	35 mph or less	Over 35 mph

Before 1 July 1973	88 dB(A)	90 dB(A)
After 1 July 1973	86 dB(A)	90 dB(A)
2. Any motorcycle		
Before 1 July 1978	82 dB(A)	86 dB(A)
After 1 July 1978	78 dB(A)	82 dB(A)
3. Any other motor vehicle and any combination of motor vehicles towed by such vehicle		
Before 1 July 1978	78 dB(A)	82 dB(A)
After 1 July 1978	73 dB(A)	79 dB(A)

This Section applies to the total noise from a vehicle or combination of vehicles and shall not be construed as limiting or precluding the enforcement of any other provisions of this Code relating to motor vehicle mufflers for noise control.

(8) (b) No person shall operate a motor vehicle or combination of vehicles, of a type subject to registration, at any time or under any condition when the noise limit herein established is exceeded under stationary test procedures as outlined for this Section by the regulations as promulgated under Section 9.68.

Type of Vehicle	*Stationary Engine Speed*	*Microphone Distance From Vehicle*	*Noise Limit dB (A)*
1. Any motor vehicle with a manufacturer's GVW rating of 10,000 lbs. or more, and any combination of vehicles towed by such motor vehicle	Maximum Governor speed (not applicable to vehicles without Governors). Ungoverned vehicles of this class shall be tested as provided for in Section 9.63(8)(a).	35 ft. from center line of vehicle	93
2. Any motorcycle	75 percent of motor speed at maximum developed horsepower	75 inches from near side of vehicle	
Before 1 July 1978			99
After 1 July 1978			95
3. Any other motor vehicle and any combination of motor vehicles towed by such vehicle	3000 Revolutions Per Minute (RPM)	20 inches from end of tailpipe	
Before 1 July 1978			94
After 1 July 1978			90

(9) No person shall sell, lease or agree to sell or lease any of the types of equipment herein enumerated which shall exceed the noise level herein established at a distance of fifty (50) feet, under test procedures and Standards SAE J-184, SAE J-952b, ANSI S1.1, 1960, ANSI SI.4, 1961, and with reference to Sections 9.64 and 9.65 of this Article.

Type of Equipment	*Noise Limit dB(A)*

1. Construction and industrial machinery, such as crawlers-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchrs, trenchers, compactors, scrapers, wagons, pavement breakers, compressors, and pneumatic powered equipment, etc., but not including pile drivers:	
Manufactured after 1 July 1973	88
Manufactured after 1 January 1975	86
Manufactured after 1 January 1980	80
2. Agricultural tractors and equipment:	
Manufactured after 1 July 1973	88
Manufactured after 1 January 1975	86
Manufactured after 1 January 1980	80
3. Powered commercial equipment of 20 hp or less intended for infrequent use in a residential area, such as chainsaws, pavement breakers, log chippers, powered hand tools, etc.:	
Manufactured after 1 July 1973	84
Manufactured after 1 January 1980	80
4. Powered equipment intended for repetitive use in residential area (such equipment includes lawn mowers, small lawn and garden tools, riding tractors, snow removal equipment):	
Manufactured after 1 July 1973	74
Manufactured after 1 January 1975	70
Manufactured after 1 January 1978	65

(10) No person shall alter, modify or change any exhaust muffler, intake muffler or other equipment designed to abate noise on any motor equipment unless such alteration, modification or change shall reduce the noise emitted by such equipment. Nothing in this Section shall be interpreted to prohibit the replacement of worn noise abatement equipment certified as meeting or exceeding specifications of the manufacturer's original equipment.

(11) In I-1 Light Industrial Zoning Districts and PID, Planned Industrial Districts, at no point on the boundary of a Residence, Business, or Commercial district shall the sound pressure level of any individual operation or plant, or the combined operations of any person, firm or corporation, exceed the decibel levels in the designated octave bands shown below for the zoning districts indicated as measured using test equipment per ANSI Standards S1.1—1960, S1.4—1961, S1.11—1966, and S1-12—1967, and SAE J-184, and with reference to Sections 9.64 and 9.65 of this Article.

Octave Band Center Frequency (Hz)	Maximum Sound Pressure Levels (dB) Along District Boundaries (Daytime, Steady Noise)	
	Residence	*Business and Commercial*
31.5	72	79
63	71	78
125	65	72
250	57	64
500	51	58
1000	45	52
2000	39	46
4000	34	41
8000	32	39
	Maximum repetitive impulse noise sound pressure levels to be 10 (dB) lower than the values shown for steady noise.	

For monitoring purposes, the A scale levels (slow response) of 55 dB(A) and 62 dB(A), respectively, for Residence and Business-Commercial districts may be used. Any noise level in excess of these values constitute a violation of this subsection of the Article.

Where noise levels below the abovementioned 55 dB(A) and 62 dB(A) are measured, the octave band test is to be applied in order to determine compliance with this subsection.

Maximum nighttime sound pressure levels (10:00 p.m. to 7:00 a.m.) are to be 7 (db) lower than the values shown for daytime steady noise for each octave band center frequency.

(12) In I-2 Heavy Industrial Zoning Districts, at no point either on the boundary of a Residence, Business or Commercial district, or at one hundred twenty-five (125) feet from the nearest property line of a plant or operation, whichever distance is greater, shall the sound pressure level of any individual operation or plant, or the combined operations of any person, firm or corporation, exceed the decibel levels in the designated octave bands shown below for the zoning districts included, as measured using test equipment per ANSI Standards S1.1—1960, S1.4—1961, S1.11—1966, and S1.12—1867, and SAE J-184, and with reference to Sections 9.64 and 9.65 of this Article.

Octave Band Center Frequency (Hz)	Maximum Sound Pressure Levels (dB) Along District Boundaries (Daytime, Steady Noise)	
	Residence	*Business and Commercial*
31.5	75	80
63	74	79
125	69	74
250	64	69
500	58	63
1000	52	57
2000	47	52
4000	43	48
8000	40	45
	Maximum repetitive impulse noise sound pressure levels to be 10 (db) lower than the values shown for steady noise.	

For monitoring purposes the A scale levels (slow response) of 61 dB(A) and 66 dB(A), respectively, for Residence and Business-Commercial districts may be used. Any noise levels in excess of these values constitute a violation of this subsection of the Article. Where noise levels below the abovementioned 61 dB(A) and 66 dB(A) values are measured, the octave band test is to be applied in order to determine compliance with this subsection.

Maximum nighttime sound pressure levels (10:00 p.m. to 7:00 a.m.) are to be 7 (db) lower than the values shown for daytime steady noise for each octave band center frequency.

(13) In Business and Commercial zoning districts, all activities involving the production, processing, cleaning, servicing, testing, repair of materials, goods or products, or any property use shall conform with the performance standards stated in subsection (11), above, provided that performance standards shall in every case be applied at the boundaries of the lot on which any such activities take place.

(14) In Residential zoning districts, any property use shall conform with the performance standards stated in subsection (11) above, for Residence district boundaries, provided that performance standards shall in every case be applied at the boundaries of the lot on which such use is established.

(15) The maximum sound pressure levels established in subsections (11), (12), (13) and (14) to be applied to the boundaries of a lot shall not apply to construction sites. Construction site noise level shall be regulated by subsection (4) above.

(16) In all instances in which an I-2 Heavy Industrial District does not adjoin a Residence, Business or Commercial district, the performance standards governing noise for the I-1 Light Industrial Districts shall apply at the nearest Residence or Commercial district boundary line, as these districts are defined and designated under the provisions of the Grand Rapids Zoning Ordinance.

(17) Any property uses established in an Industrial, Business or Commercial district shall be so operated as to comply with the performance standards governing vibrations set forth:

(a) In an I-2 Heavy Industrial Zoning District any property use creating intense or shaking vibrations such as are created by drop forges or heavy hydraulic surges shall be set back at least three hundred (300) feet from the zoning district line of any Residence or Commercial zoning district and at least one hundred fifty (150) feet from the zoning district line in any I-1 or PID Industrial zoning district unless such operation is controlled in such manner as to prevent such transmission beyond the zoning district line of earth shaking vibrations perceptible without the aid of instruments.

(b) In an I-1, PID Industrial Zoning District, Business or Commercial zoning district, any property use creating earth-shaking vibrations such as are created by drop forges or hydraulic surges shall be controlled in such manner as to prevent transmission beyond the lot lines of earth-shaking vibrations perceptible without the aid of instruments.

(18) No person shall sell or offer for sale any engine powered pleasure vessel, engine powered craft or motorboat which may exceed the following noise limit as measured at the distance of fifty (50) feet under test procedures per SAE J-952b and with reference to SAE J-184 and ANSI Standards S1.1, 1960, S1.4, 1961, and Sections 9.64 and 9.65 of this Article.

	Noise Limit
Manufactured before 1 January 1975	85 dB(A)
Manufactured after 1 January 1975	76 dB(A)

(19) No person shall sell or offer for sale a new power driven recreational or off-highway vehicle including dune buggies and snowmobiles, go-karts, and minibikes that produce noise measured at the distance of fifty (50) feet exceeding the following, under test procedures per SAE J-952b and with reference to SAE J-184 and ANSI Standards S1.1, 1960, S1.4, 1961, and Sections 9.64 and 9.65 of this Article.

Type of Vehicle	Date of Manufacture	Noise Limit dB(A)
Snowmobile	After 1 July 1973	82
Same	After 1 July 1974	73
Any other vehicle including dune buggy,		
all-terrain vehicle,	After 1 July 1973	82
go-kart, mini bike	After 1 July 1975	73

This subsection shall not be interpreted to include motor homes, off-highway trucks, construction equipment and other equipment included under subsections (7) and (9), above.

(20) No person shall operate a motor driven vehicle of a type not subject to registration for road use, at any time or under any condition of acceleration or deceleration as to exceed the following noise limits as measured from the distance of fifty (50) feet under ANSI Standards S1.1, 1960, and S1.4, 1961, and SAE Standard J-184 with meter set for fast response and the A-weighted scale.

Date of Manufacture	Noise Limit
Before 1 July 1973	86 dB(A)
After 1 July 1973	82 dB(A)

This subsection shall not be interpreted to include the operation of off-highway trucks and construction equipment, regulated under subsection 9.63(9) of this Article.

(21) Landing and Takeoff Limitations.

(a) No person shall cause or permit a helicopter to land or take off in a CBD Zoned District between the hours of 11:00 p.m. and 7:00 a.m., nor shall any person cause or permit more than fifteen (15) landings and fifteen (15) takeoffs a month from any one (1) site, nor more than two (2) landings and two (2) takeoffs per day from any one (1) site.

(b) The City Manager may grant written permission for additional landings and takeoffs in conjunction with special events of community importance.

(22) Helicopter Landing and Takeoff Noise Limitations. No person shall operate a helicopter or permit a helicopter to be operated so as to exceed the following noise limit:

(a) *Microphone Distance from Helicopter*	*Maximum dB(A) Slow Meter Response*	*Maximum Duration*
Meter used at perimeter of structure or property containing landing site at the public right-of-way level	110 dB(A)	30 seconds

(b) A helicopter shall not remain in operation at a landing site for a duration of more than three (3) minutes.

(23) Exemption. The provisions of this Article shall not apply to emergency landings and takeoffs.

(Ord. No. 73-8, 2-6-73; Ord. No. 75-36, 4-29-75; Ord. No. 76-2, 1-6-76; Ord. No. 78-27, 4-18-78; Ord. No. 83-56, 9-27-83)

Sec. 9.64. - Test Procedures.

Test procedures as to noise levels emitted by motor vehicles and by engine powered equipment when offered for sale shall conform to SAE Standards and Recommended Practices:

SAE J-184	Qualifying a Sound Data Acquisition System, SAE Recommended Practice
SAE J-331	SAE Standard for Sound Levels for Motorcycles, as it is proposed on the effective date of this Article
SAE J-366a	Exterior Sound Level for Heavy Trucks and Buses, SAE Recommended Practice
SAE J-952b	Sound Levels for Engine Powered Equipment, SAE Standard

SAE J-986a	Sound Levels for Passenger Cars and Light Trucks, SAE Standard

and such other and further standards as may be propounded in the Code of Recommended Practices of the Director.

(Ord. No. 73-8, 2-6-73)

Sec. 9.65. - Test Equipment Standards.

Test equipment standards applicable to tests and measurements described and required herein are:

ANSI S1.1, 1960	Acoustic Terminology (ISO R131) (IEC 50-08)
ANSI S1.4, 1961	General Purpose Sound Level Meters (IEC-123-1961)
ANSI S1.11, 1966	Octave, Half Octave and Third Octave Band Filter Sets (IEC 225-1966)
ANSI S1.12, 1967	Laboratory Standard Microphones
IEC 179, 1965	Precision Sound Level Meters

and such other and further standards as may be propounded in the Code of Recommended Practices of the Director.

(Ord. No. 73-8, 2-6-73)

Sec. 9.66. - Certification of Compliance.

The Director may require, upon reasonable notice, that the manufacturer, distributor, importer, or designated agent shall certify in writing to the City that his or her vehicles or equipment sold or offered for sale within the City comply with the applicable provisions of the appropriate subsections of this Article.

(Ord. No. 73-8, 2-6-73)

Sec. 9.67. - Adjustment of Standards.

It is the intent of the City of Grand Rapids to periodically reevaluate the future noise level limits and other standards contained in this noise control ordinance, and, if it is determined to be appropriate, to adjust such standards either upward or downward in light of future possible advances in technology or the state of the art.

(Ord. No. 73-8, 2-6-73)

Sec. 9.68. - Regulations.

(1) The City Manager may establish regulations for the implementation or enforcement of Article 5, Chapter 151, of Title IX of the Code of the City of Grand Rapids. Any regulation promulgated under this Section shall pertain only to the means, manner or method of implementation or enforcement of the Article and shall not change, alter or amend the requirements of the Article. The regulations promulgated hereunder, or amendments or changes thereof, shall become effective upon review and approval by the City Commission.

(2) Violation of the regulations promulgated under this provision shall be punished as provided for in Section 1.13 of this Code.

(3) Copies of the Regulations promulgated under this Section shall be kept on file at the Office of the City Clerk and at the Office of the Director. These regulations shall be available for public inspection and copying during normal business hours.

(Ord. No. 75-36, 4-29-75)

Sec. 9.69. - Variances.

(1) The provisions of this Article shall not apply to those events, activities or locations which have been granted a variance, as hereinafter set out, by the City Commission.

(2) The City Commission shall have the authority to grant variances subject to the conditions and under the circumstances set out in this Section. These variances, to be known and entitled as Noise Variances, shall exclude the event, activity or location for which the permit is issued from the operation and requirements of this Article, subject to the provisions of this Section.

(3) Any person seeking a variance pursuant to this Section shall file an application with the City Clerk on a form prescribed by the City Manager. The application shall contain, in addition to such information as shall be required by the City Manager, information demonstrating that bringing the source of sound for which the variance is sought or the activity involved into compliance with this Article, would cause an unreasonable hardship for the applicant, the community or for other persons. Upon receiving such an application, the Clerk shall submit it to the City Manager. Upon receipt of an application, the City Manager shall cause such investigation as he or she deems necessary to be made concerning the application. This investigation may include, but need not be limited to, consulting with such City Departments as he or she may deem necessary or desirable. The City Manager, subject to the provisions of subsection (4) of this Section may, in his or her discretion, cause a public hearing to be held on any application for a Noise Variance. If no public hearing is held, the City Manager, subject to the provisions of subsection (4) of this Section, shall allow interested parties to submit written comments concerning an application for a Noise Variance. The applicant shall, prior to the investigation of the application by the City Manager, cause a public notice of said application for a Noise Variance to be published at least twice in a daily newspaper of general circulation published in the City of Grand Rapids, in a form prescribed by the City Manager.

(4) The City Manager, in addition to such other investigation as he or she may deem necessary:

(a) Shall require applicant to show that the notice requirements herein provided for have been met;

(b) Shall permit applicant to offer such evidence as it desires to establish applicant's position that a variance should be granted;

(c) Shall permit those opposing applicant's request for a variance to offer evidence in opposition to the granting of a variance;

(d) May, in his or her discretion, refuse to receive or hear evidence that is merely cumulative, and may reasonably limit the time allowed to present evidence by those supporting and those opposing the application.

(5) The City Manager shall consider all evidence received pursuant to this Section and based upon this evidence and the results of his or her investigation, shall make a recommendation to the City Commission as to whether a Noise Variance should be granted. The City Manager shall make his or her recommendation based upon the factors set out in subsection (6), and shall state the reasons for his or her recommendation in writing. The application and the recommendation of the City Manager shall be placed on the agenda of the City Commission and shall be considered in due course according to the Rules of the City Commission. In deciding whether to grant the Noise Variance, the City Commission shall consider the factors set out in subsection (6) of this Section. The City Commission shall, by resolution, grant or deny the Variance. If a resolution approving a Noise Variance is passed, the City Clerk shall issue a Noise Variance subject to the terms of this Section.

(6) The following factors shall be considered in determining whether to grant the variance;

(a) The balance of the hardship to the applicant, the community and other persons in not granting the variance against the adverse impact on the health, safety and welfare of persons adversely affected and any other effects of the granting of the variance.

(b) The number, if any, of previous variances granted to the applicant, or for the same location or activity.

(c) The nearness of any residence or residences, or any other use which would be adversely affected by noise in excess of the limits prescribed by this Article.

(d) The sound level of the sound to be generated by the event or activity.

(e) Whether the type of noise to be produced by the event is usual or unusual for the location or area for which the variance is requested.

(f) The density of population of the area in which the event or activity is to take place.

(g) The time of day or night which the activity or event will take place.

(h) The nature of the sound to be produced, including but not limited to whether the sound will be steady, intermittent or of a repetitive impulse nature.

(7) Neither the City Manager nor the City Commission shall consider the communicative content of the activity or event in determining whether to grant or deny a variance. The rights of all interested persons to due process of law and equal protection of law shall not be denied.

(8) Variances shall only be granted subject to the following conditions:

(a) That the event or activity for which the permit is sought shall be held in a public place.

(b) That the event or activity for which the permit is sought shall be open to the public. There shall be no discrimination on the basis of race, color, creed, national origin or sex.

(c) Variances issued shall be subject to such reasonable conditions as the City Commission shall

require, including, but not limited to, conditions:

(i) Limiting the days of the week for which the variance is valid.

(ii) Limiting the number of days for which the variance is valid.

(iii) Limiting the hours of the day, or days, for which the variance is valid.

Such conditions shall be noted on the variance issued to the applicant and noncompliance with any condition of the variance shall terminate the variance and subject the applicant, event or activity to the provisions of this Article. The variance shall not be valid unless all conditions thereof are agreed to by the applicant, or its duly authorized officer or agent, in writing.

(9) Any variance issued pursuant to this Section shall be kept at the site of the event or activity for which the variance was obtained. The variance shall be displayed, on request, to any law enforcement officer, Environmental Protection Department employee or park patrol officer. The requirements of this subsection are hereby made express conditions of the granting of the variance and failure to comply with these conditions shall cause the variance to terminate as provided for in subsection (8).

(10) The City Commission, in granting or denying a variance pursuant to this Section, shall be an administrative body acting in a quasi-judicial capacity, subject to review as provided in Article 6, Section 28, of the Michigan Constitution of 1963.

(Ord. No. 76-20, 3-23-76)

Sec. 9.70. - Sound Systems in Vehicles.

No person operating or in control of a stopped or moving motor vehicle shall operate or permit the operation of a sound system in the vehicle so as to produce sound that is clearly audible at a distance of fifty (50) feet from the vehicle between the hours of 7:00 a.m. and 7:00 p.m., or clearly audible at a distance of twenty-five (25) feet from the vehicle between the hours of 7:00 p.m. and 7:00 a.m.; provided, however, this section shall not apply to the sound system of a police, fire or other public service vehicle while the public service vehicle is being used in the performance of public service work. Notwithstanding any other provision of this Code, a person convicted of violation of this Section shall be punished by a fine of not less than fifty dollars ($50.00) and not more than one hundred dollars ($100.00) in addition to other penalties provided for by law and by this Code.

(Ord. No. 95-67, § 1, 11-14-95)

From: Nathan Sevener
To: Krysti Barksdale-Noble
Cc: Mandy Kachur
Subject: Sound Level Meters
Date: Tuesday, April 26, 2016 10:18:47 AM

Hello Krysti,

Here are a list of sound level meters that your police department may want to consider for purchase. I have listed them in order of what I think will work the best for you. My goals in making this list were minimum necessary functionality (i.e., the meter doesn't do too much more than what you need it to do) and a simple user interface, ability to measure low noise levels in case it is necessary to make indoor measurements, long battery life, and minimizing the cost.

Bruel & Kjaer model 2240 (Class 1)
http://www.bksv.com/Products/handheld-instruments/sound-level-meters/sound-level-meters/type-2240
Cost $2,446

Bruel & Kjaer, commonly referred to as B&K, is generally considered the premium brand in our industry. My company owns 9 sound level meters and none of them are B&K because B&K meters tend to be more expensive than other brands. However, I think that the B&K model 2240 is better suited to your needs than any other meter that I came across. I highly recommend that you consider it in spite of the price tag. Also, you should consider that B&K sound level meters are usually very durable and should work for many years. And, they provide good customer service. The Chicago area technical representative for B&K should be willing to arrange a demonstration.

Tim Nosal (B&K Technical Representative for Chicago area)
(847) 841-9237
Tim.nosal@bksv.com

This Ono Sokki meter and the Rion meter that follow are both Class 2 meters (not as accurate as a Class 1 meter). They have relatively simple user interfaces. They are less expensive than the B&K meter, but neither, in my opinion is nearly as good. Both companies will probably try to sell you one of their more expensive models as an equivalent to the B&K meter, but I don't think that either company has a more expensive model that will have only the minimum necessary functionality and be as simple to use. Never the less, I am providing them as options in case you cannot afford the B&K meter.

Ono Sokki model 1410 (Class 2)
https://www.onosokki.net/catalog/viewProduct.cfm?ProductID=253&a=1&CategoryIDTrail=3,12
Cost: $1,500

Ono Sokki USA

(630) 627-9700

Rion model NL-27 Sound Level Meter (Class 2)
http://scantekinc.com/brands/rion/sound-level-meters/nl-27-sound-level-meter
Cost $1,300

Scantek Inc. (U.S. Sales Representative)
(410) 290-7726

Let me know if I can be of any more help in selecting sound level meters.

Best Regards,
Nate

Nate Sevener, Principal Consultant
PE, LEED AP, INCE Board Certified

Soundscape Engineering
Practical Solutions from Professional Engineers

Soundscape Engineering LLC | Acoustics • Vibrations • Noise
Illinois | Indiana | Michigan
(312) 436-0032 • (317) 489-4151 • (734) 418-8663
www.SoundscapeEngineering.com

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	■
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #2

Tracking Number

PS 2017-08

Agenda Item Summary Memo

Title: Request to purchase three (3) police vehicles

Meeting and Date: City Council – April 25, 2017

Synopsis: The Yorkville Police Department is seeking to purchase three (3) police vehicles not to exceed $165,000. See attached memo.

Council Action Previously Taken:

Date of Action: PS – 04/06/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PS 2017-08

Type of Vote Required:

Council Action Requested:

Submitted by: Chief of Police Rich Hart (Name) Police Department (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Yorkville Police Department Memorandum
804 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-4340
Fax: 630-553-1141

Date: 03-29-17
To: Chief Hart #101
From: Deputy Chief Larry Hilt #103
Reference: Request to Purchase Vehicles

Chief Hart,

The following is a request to purchase three (3) new squad car vehicles. These vehicles will be replacing 3 squad cars that will be disposed of in accordance with City policy.

The first vehicle we are requesting is a 2016 Chevy Impala to be purchased from Miles Chevrolet, who holds the state bid for Chevy Impala police vehicles. See attached purchase worksheet.

Cost of Vehicle - $21,997.00
New equipment including installation - $10,304.88
New Fujitsu in car computer w/console - $3862.18
Watch Guard video camera - $8,055.33
3-Mobile radios - $2185.00
Streamlight flashlight - $152.99
Striping - $950.00
Miscellaneous unexpected expenses - $2000.00

Total Cost - $49,507.38
*See attached quotes.

The second vehicle we are requesting is a 2016 Chevy Impala to be purchased from Miles Chevrolet, who holds the state bid for Chevy Impala police vehicles. See attached purchase worksheet.

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New equipment including installation – $10,304.88
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Streamlight flashlight - $152.99
Striping - $950.00

Yorkville Police Department Memorandum
804 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-4340
Fax: 630-553-1141

Miscellaneous unexpected expenses - $2000.00
Total Cost - $49,507.38
*See attached quotes.

The third vehicle we are requesting is a 2016 Chevy Impala to be purchased from Miles Chevrolet who holds the state bid for Chevy Impala police vehicles. See attached purchase worksheet.

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New equipment including installation – $10,304.88
New Fujitsu in car computer w/console - $3862.18
Watch Guard video camera - $8055.33
3-Mobile radios – $2185.00
Streamlight flashlight - $152.99
Striping - $950.00
Miscellaneous unexpected expenses - $2000.00

Total Cost - $49,507.38
*See attached quotes.

*Total cost for all three vehicles - $148,522.14

Overall, the funds for the three squad cars will be expended from the 2017/2018 police capital under Vehicles.

*Two other Chevy dealerships in the area were contacted and could not match the state bid. See attached copies.

Respectfully Submitted,

D.C. L. Hilt #103

D. C. L. Hilt #103

* Order Placement Form *

MILES CHEVROLET, INC

Fax to (217) 872-2069 Phone (217) 872-2070 Email: twene@vtaig.com

New 2016 Chevrolet Impala Police Package (9C1) Interceptor

Includes all equipment listed below for only **$21,779.00**

Front Wheel Drive	6 Speed Automatic Transmission	4 Wheel Anti Lock Brakes	P235/55R17 Tires
HD Pursuit Suspension	3.6 V-6 Flex Fuel – E85 Rated	Tire Pressure Monitors	Identical Key
Stainless Steel Exhaust	Solar Ray Light Tinted Windows	6 Way Pwr Driver & Pass Seat	Cruise Control
Front Cloth Bucket Seats	Ignition Control Trunk Release	Heavy Duty Cooling	Tilt Wheel
Rear Vinyl Bench Seat	Center Dome Light w/ Map Lights	Rear Window Defroster	Compact Spare
PS & Transmission Coolers	Power Points (2) w/ Stud	Intermittent Wipers	Air Conditioning
Wig Wag Flasher HL & TL	Power Windows & Door Locks	HD Radio Suppression	AM/Fm w/CD Stereo
Night Saver Dome Light	Automatic Pass Seat Air Bag Switch	Dome Lamp In-Operable	Keyless Entry
Ignition Override Switch	Day Night Rear View Mirror	170 Amp Alternator	Oil Life Monitor
Rubber Floor Covering	Daytime Running Lights Off Switch	Power Heated Mirrors	750 CCA Battery
LH Spotlight - 6" Black	Grille Lamps & Speaker Wiring (6J3)	Horn & Siren Wiring (6J4)	In State Delivery

Other Available Options

X	Rear Door Functions In-Operable	$	120.00
2	Extra Keys (each)	$	49.00
	Extra Key Fob	$	65.00
	HD Rubber Floor Mats	$	89.00
	Full Size Spare Tire	$	175.00
	Delete Spotlight	$	-89.00
	Delete Ignition Override	$	-75.00

X Please Check Options Desired

	Push Bumper (Setina)	$	594.00
	Splash Guards (Pair)	$	89.75
	Trim Rings	$	120.00
	Trunk Cargo & Equipment Shelf	$	294.00
	Administrative Package**	$	950.00
	Illinois Title & Municipal Police Plates	$	105.00

****Administrative Package:**
2017 Impala (New Body Style)

Deletes Police Equipment: Spotlight, Override, Wig Wag, Extra Dome, 6J3 & 6J4 wiring.
Adds: Carpet, Mats, Center Console, Cloth Rear Seat, Wheel Covers.
Available Options: Extra Key, Splash Guards, Remote Start.

COLOR:

* All Interiors are Ebony

X Black ___ White ___ Silver

BILL / SHIP TO

City, County or Village of: YORKVILLE, KENDALL CO. Tax Exemption # E 9995-8945-07

Address 804 GAME FARM RD City YORKVILLE State IL. Zip 60560

Contact Person A.C. LARRY HELT Phone (630) 553-4340 Fax (630) 553-1141

Per Vehicle Price w/ Options: $ 21,997.00 Quantity: 3 Total Order Amount: $ 65,991.00

Tom Wene
Fleet Operations

Miles Chevrolet 150 W Pershing Road Decatur, IL 62526
**** Celebrating Over 25 Years in Pursuit Sales**

MINER ELECTRONICS CORPORATION

500 45th Ave.
Munster, Indiana 46321
219-924-1765 / 708-474-7720

COMMUNICATIONS EQUIPMENT PROPOSAL FOR:

Yorkville PD
Attn: DC Hilt

Confidentiality Notice: **This information is for the exclusive use of the individual or entity to which it is addressed and is confidential. Miner Electronics would appreciate your cooperation in not disclosing this information to anyone other than the intended recipient.**

DATE: 28-Mar-2017

Miner Electronics is pleased to submit the following Communications Equipment Proposal:

MATERIALS

QTY.	DESCRIPTION	PRICE	TOTAL
	Police Equipment for 2017 Impala Squad *(per car)*		$ -
1	**Code 3 21TR Plus LED lightbar** *(red,blue,amber arrow,TD & alleys, PE)*	$ 1,625.00	$ 1,625.00
1	**Code 3 RLS Remote Siren** *(w/ArrowStik control)*	$ 945.00	$ 945.00
4	**Whelen Vertex Super-LED** *(clear in headlights & backups)*	$ 120.00	$ 480.00
2	**Whelen ION Wide-Angle Super-LED** *(1 red, 1 blue in grill & brkts)*	$ 156.00	$ 312.00
2	**Whelen ION Wide-Angle Super-LED** *(1 red, 1 blue in rear deck & brkts)*	$ 156.00	$ 312.00
2	**Whelen ION Wide-Angle Super-LED** *(red/blues on sides of cage & brkts)*	$ 156.00	$ 312.00
1	**100-watt Siren Speaker & Impala Bracket**	$ 279.00	$ 279.00
1	**Pro-Guard trunk tray**	$ 240.00	$ 240.00
1	**Pro-Gard Sedan Partition** *(w/space saver, ext's & center sliding poly window)*	$ 728.00	$ 728.00
1	**Pro-Gard Window Bars**	$ 201.00	$ 201.00
1	**Pro-Gard ABS Prisoner Seat**	$ 420.00	$ 420.00
1	**Santa Cruz Dual Gun Rack** *(Shotgun & SC-5 Rifle Partition Mt & HC key)*	$ 415.00	$ 415.00
1	**Stalker Patrol Radar**	$ 1,665.00	$ 1,665.00
1	**Dual Band Wireless Antenna Kit** *(cellular, PCS)*	$ 27.00	$ 27.00
2	**Unity Gain Antenna Kit** *(1 each; UHF & VHF)*	$ 27.00	$ 54.00
1	**Unity Gain Antenna Kit** *(low band)*	$ 80.00	$ 80.00
1	**Tri-Block**	$ 25.00	$ 25.00
1	**Power Distribution Center**	$ 295.00	$ 295.00
1	**Install Supplies** *(hardware, fuseholders, etc.)*	$ 129.00	$ 129.00
	Labor includes installation of the equipment described above, plus: computer,		$ -
	dock & modem, 3 radios, video system, flashlight & charger, console,dock		$ -
	mounts, provided by Yorkville PD		$ -
	Any additional equipment, not specifically described above will	***Mat. Total***	$ 8,544.00

be priced and explained to customer prior to being added to invoice.

SERVICES			CHARGES	
		FREIGHT		$ 260.88
1		INSTALLATION	$ 1,500.00	$ 1,500.00
	This proposal is valid for 60 days from date of delivery unless otherwise stated.		**Total Est.**	$ 10,304.88

MOTOROLA SOLUTIONS CASSIDIAN WHELEN HAVIS Productivity in motion BOSCH TRUCK VAULT

PREPARED BY: MINER ELECTRONICS

Rick Gonsiorowski

7647 Main Street Fishers Victor NY 14564
Telephone: (585) 758-0200
FAX: (585) 758-0222
Toll Free: (800)-333-0498
salesinfo@britecomputers.com
Thank you for choosing Brite!

Quote

Date of Quote
3/28/2017

Quote #
Q70906

Bill To
Deputy Chief Larry Hilt
Yorkville Police Department
804 Game Farm Road
Yorkville IL 60560

Ship To
Deputy Chief Larry Hilt
Yorkville Police Department
804 Game Farm Road
Yorkville IL 60560

Quote Expirati...	Terms	PO #	Sales Rep	Shipping Via	FOB
4/28/2017			Nancy Ann Martin		Brite Whse

Part Number	Description	Qty	Unit Price	Extended
	Computers			
FUJ-BQJAD30000PAABDK	Q736 CORE i5-6300U vPRO | 8GB | 13.3FHD AG | TOUCH&PEN | 128GB SSD | WWAN | INTEL (ABGN) WLAN | BT | NO NFC | CAM | TPM(2.0) | STSHELL | FP | WIN7PRO(64BIT) | 3YR | WIN10PRO(64-BIT)REC	3	1,784.62	5,353.86
FUJ-FUJ38-1633-01	Covers accidental damage for a period of three years from the date of unit purchase. Covers up to one qualified incident per year whether major or minor part. If unit needs to be sent out for repair, Fujitsu pays for the return shipment to the customer. If unit is beyond repair, Fujitsu offers one replacement within the warranty period. Once a unit is replaced, the remaining ADP warranty contract will be exhausted. The Standard International Limited Warranty is also included in this program.	3	0.00	0.00
FUJ-FPCC0184AP	Fujitsu Protective TPU Cover w/ Handstrap (Q736 or Q775)	3	109.00	327.00
ELE-509559-1	Elegant X-Handle for Q736 TPU Case	3	27.00	81.00
Subtotal	Item Subtotal			5,761.86
	Electronics			
IKE-SB-87-TB	iKey Skinny Mobile Silicone Rubber Keyboard w Touchpad-Led Backlit-IP65 3yr	3	429.87	1,289.61
LIN-FJ1950-4522	Lind DC Adapter for Fujitsu Stylistic Q-Series Dock, 6' R/A OP, Bare-Wire input	3	0.00	0.00
LUN-CG-X	ChargeGuard Microprocessor controlled Equipment Timeout Timer	3	0.00	0.00
CAB-USB-901	3FT USB 2.0 A (90ø) TO B W/ FERRITE CORE	3	0.00	0.00
Subtotal	Item Subtotal			1,289.61

7647 Main Street Fishers Victor NY 14564
Telephone: (585) 758-0200
FAX: (585) 758-0222
Toll Free: (800)-333-0498
salesinfo@britecomputers.com

Quote

Date of Quote

3/28/2017

Quote #

Q70906

Part Number	Description	Qty	Unit Price	Extended
	Choice Two - Havis Dash Mount See attached photo			
LUN-LI-FUJ-Q736DCM-3	Fujitsu Q775/Q736 Active Dock for VESA Mount: 3 Yr Warranty	3	1,511.69	4,535.07
HAV-C-DMM-113	Swing Out Dash Monitor Mount Base For 2006-2016 Chevrolet Impala Police Package	3	0.00	0.00
HAV-C-MM-201	Monitor Adapter Plate Assembly, VESA, Video Electronic Standard Assoc	3	0.00	0.00
LUN-SWA-HD6-TS1	2.5" x 6" H/D .250 CRS Swing Arm w/Bearing & TS-1 for Computers & Keyboards	3	0.00	0.00
LUN-IKEY-THN	Keyboard Tray for I-Key Thin SB-87-TP with glide point - needs TS-60 or TS-1	3	0.00	0.00
LUN-CP-IMP	2006+ Impala Console Package Includes: VH-6005-9 Console, IMP06-BASE Console Base Mount, CHB-2EN Dual Cup holder, PS2-3 Power Strip, MK-2CL Microphone Holder, HD-ARM-5 Armrest, PB-250 Pen Box with required fill & face plates ***Console Brackets*** Brackets - 2 Motorola XPR5500E, 1 Kenwood TK-6110K2, Code 3 RLS remote siren (3997CCR)	3	0.00	0.00
Subtotal	Item Subtotal			4,535.07

Total $11,586.54

"Building Relationships,
Strengthening Partnerships,
Providing Solutions"

For Technical Support call (800) 333-0498 (option 1)

Q70906

Larry Hilt

From: Dan Freveletti <DFreveletti@WatchGuardVideo.com>
Sent: Monday, March 27, 2017 3:36 PM
To: Larry Hilt
Subject: 4RE Quote
Attachments: 3 4RE.pdf

Deputy Chief Hilt:

Thank you for the contact today. I have attached a quote for you to review. The quote includes...

HARDWARE

- 4RE In Car video system with 200 GB HD DVR, 16GB USB, front and rear camera solution, Crash Sensor, display and HIFI microphone.
- Upgraded Panoramic Camera allowing for pillar to pillar view
- Wireless transfer kit for wireless upload of video

SOFTWARE

- Evidence Library Web allowing for web based evidence management, case management, cloud based sharing of video
- Licensing for 4RE devices
- Software maintenance for year one

SERVER

- Tower based server, 3 year warranty, 12 TB of storage
- Access point, industrial materials and construction

TECHNICAL SERVICES

- 3 days, Technical Services Engineer on site for setup of wireless communication, vehicle configuration, and training of department personnel on in car and Evidence Library use.

Please feel free to contact me with any questions and thank you for the opportunity.

Regards,

Dan Freveletti
Regional Sales Manager
(469) 207-9465 Mobile
(972) 423-9778 Fax



http://www.WatchGuardVideo.com
415 Century Parkway, Allen, TX 75013

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify your system administrator and the sender.

4RE/VISTA Price Quote

CUSTOMER: Yorkville Police Department

ISSUED: 3/27/2017 3:09 PM

EXPIRATION: 4/28/2017 5:00 AM

TOTAL PROJECT ESTIMATED AT: $24,166.00

ATTENTION: Larry Hilt

SALES CONTACT: Dan Freveletti

PHONE: 630-553-4340

DIRECT:

E-MAIL:

E-MAIL: DFreveletti@WatchGuardVideo.com

4RE and VISTA Proposal

Evidence Library 4 Web Software and Licensing

Part Number	Detail	Qty	Direct	Discount	Total Price
KEY-EL4-SRV-001	Evidence Library 4 Web Server Site License Key	1.00	$1,000.00	$0.00	$1,000.00
KEY-EL4-DEV-001	Evidence Library 4 Web 4RE In-Car Device License Key	3.00	$150.00	$0.00	$450.00

4RE In-Car System and Options

Part Number	Detail	Qty	Direct	Discount	Total Price
4RE-STD-GPS-RV2	4RE Standard DVR Camera System with integrated 200GB automotive grade hard drive, 16GB USB removable thumb drive, rear facing cabin camera, GPS, hardware, cabling and your choice of mounting bracket.	3.00	$4,795.00	$18.00	$14,331.00
CAM-4RE-PAN-NHD	Front Camera, 4RE, HD Panoramic, (reduced EMI)	3.00	$200.00	$0.00	$600.00

Wireless Video Transfer and Networking Options

Part Number	Detail	Qty	Direct	Discount	Total Price
4RE-WRL-KIT-101	4RE In-Car 802.11n Wireless Kit, 5GHz (2.4 GHz is available by request)	3.00	$200.00	$0.00	$600.00
WAP-MIK-CON-802	WiFi Access Point, Configured, MikroTik, 802.11n, 5GHz, Sector	1.00	$250.00	$0.00	$250.00

4RE Hardware Warranties

Part Number	Detail	Qty	Direct	Discount	Total Price
WAR-4RE-CAR-1ST	Warranty, 4RE, In-Car, 1st Year (Months 1-12)	3.00	$0.00	$0.00	$0.00

Software Maintenance and CLOUD-Share

WATCH GUARD

4RE/VISTA Price Quote

Part Number	Detail	Qty	Direct	Discount	Total Price
SFW-MNT-EL4-001	Software Maintenance, Evidence Library, 1st Year (Months 1-12)	3.00	$0.00	$0.00	$0.00
SFW-EL4-CLD-BAS	Evidence Library 4 Web CLOUD-SHARE - Basic	3.00	$0.00	$0.00	$0.00

Server Hardware and Software

Part Number	Detail	Qty	Direct	Discount	Total Price
HDW-4RE-SRV-003	Server, Tower, Intel i7 3.40 GHz, 8GB RAM, 3x6TB SATA 7,200 RPM drives, 12TB usable video storage, Windows 10 Pro 64-bit, SQL Server 2008 R2 (1CAL), 3-Year full service (on-site or reimbursed) warranty.	1.00	$4,285.00	$0.00	$4,285.00

WatchGuard Video Technical Services

Part Number	Detail	Qty	Direct	Discount	Total Price
SVC-4RE-ONS-400	4RE System Setup, Configuration, Testing and Training (WG-TS)	1.00	$2,500.00	$0.00	$2,500.00

Shipping and Handling

Part Number	Detail	Qty	Direct	Discount	Total Price
Freight	Shipping and Handling Charges	1.00	$150.00	$0.00	$150.00
					$24,166.00

Total Estimated Tax, may vary from State to State $0.00

Configuration Discounts	**$54.00**
Additional Quote Discount	**$0.00**
Total Amount	**$24,166.00**

NOTE: This is only an estimate for 4RE & VISTA related hardware, software and WG Technical Services. Actual costs related to a turn-key operation requires more detailed discussion and analysis, which will define actual back-office costs and any costs associated with configuration, support and installation. Please contact your sales representative for more details.

To accept this quotation, sign, date and return with Purchase Order: _____ DATE: _____

415 Century Parkway • Allen, TX • 75013
Toll Free (800) 605-6734 • Main (972) 423-9777 • Fax (972) 423-9778
www.WatchGuardVideo.com

Miner Electronics
500 45th Ave

Munster, IN 46321
219 924-1765 Fax: 219 924-1768
Shop: SALE Miner Sales Shop

CUSTOMER QUOTE

Quote Order No. 13727-00
Sales Reps. 75
Quote Date 3/29/17

Terms: NET 30
Quote Expiration: 3/29/18

Prepared
For: 12378
Yorkville Police Department
804 Game Farm Road

Yorkville IL 60560
630 553-8513

Seq#	Cd	Quantity	Item Description	Unit Price	U/M	Extension
1		3.00	AAM28JQN9WA1AN XPR5500E MOBILE, VHF 136-174	650.0000	EA	1,950.00
3		6.00	RKN4136 IGNITION CABLE MOTOTRBO NO CON	35.0000	EA	210.00
4		3.00	AAM28QPN9WA1AN XPR5500E MOBILE, UHF 403-470	700.0000	EA	2,100.00
5		3.00	TK-6110K2 LOW B 32 CHANNEL MOBILE (35-50	750.0000	EA	2,250.00
6		3.00	KCT-18 IGNITION SENSE CABLE	15.0000	EA	45.00

COMMENTS:

Program to archives.

Service to install.

Created from Copy Order - Sales Order 013348-00

Customer: 12378 Yorkville Police Department

Item summary	6,555.00
Subtotal . . .	6,555.00
Rush Charge . .	.00
Inbound Shipping	.00
Outbound Shipping	.00
Sales Tax . . .	.00
Total Amount	6,555.00

Larry Hilt

From: Larry Yaggie <strypesplusmore@aol.com>
Sent: Monday, March 27, 2017 5:11 PM
To: Larry Hilt
Subject: Re: Quote on striping 3 new Impala's

DC Hilt, the price will remain the same as last year -- NO INCREASES -- $950.00 each.

Larry
Strypes Plus More, Inc.
630-816-9069

-----Original Message-----
From: Larry Hilt <lhilt@yorkville.il.us>
To: strypesplusmore <strypesplusmore@aol.com>
Sent: Mon, Mar 27, 2017 4:10 pm
Subject: Quote on striping 3 new Impala's

Larry,

I'm working on purchasing 3 new 2016 Chevy Impala's. Could I get a quote for striping all 3? They would be marked the same as last year. Thanks.

Deputy Chief Larry Hilt #103
Yorkville Police Department
804 Game Farm Rd.
Yorkville, Il. 60560
Direct: 630-553-8513
Main: 630-553-4340
Fax: 630-553-1141
E-Mail: lhilt@yorkville.il.us



600/9df78e[illegible]d08d6e5fb8d27136e95/7/7/77553.jpg)

‹ (protac-2aa-led-light) › (flashlight-dual-sw-nimh-ac-dc)

Streamlight Ultrastinger LED With AC/DC Charger

SKU:77553

Be the first to review this product
(https://www.oherron.com/review/product/list/id/309/category/312/#review-form)

$152.99

Email to a Friend (https://www.oherron.com/sendfriend/product/send/id/309/cat_id/312/)

secured by

* NO 2016's AVAILABLE

SALES SERVICE DIRECTIONS MENU

AVAILABLE INVENTORY

FILTER Clear All

6 VEHICLES FOUND

Compare Sort By

CATEGORY

- ✓ New
- ✓ Used
- ✓ Certified

TYPE

- ✓ Car (171)
- SUV (213)
- Truck (93)
- Van (43)

MAKE

- Buick (53)
- ✓ Chevrolet (104)
- Cadillac (1)
- Chrysler (1)

NEW 2017 CHEVROLET IMPALA

LT

PRICE ** $28,997

MSRP * $32,580



Save Compare

WWW.ILOVEGJOVIK.COM (630) 925-7541

SPECIFICATIONS

Stock Number	C70323
Engine	3.6L V6
Exterior	Silver Ice Metallic
Transmission	Automatic

CURRENT OFFERS

MSRP *	$32,580
Price **	$28,997

CERTIFIED 2016 CHEVROLET IMPALA
LS RON WESTPHAL CHEVY

INTERNET VALUE $19,895
SALES(630) 599-1029 SERVICE(630) 701-8319



PRICE WATCH REQUEST A QUOTE SHOP. CLICK. DRIVE. Save

VEHICLE AT A GLANCE VEHICLE DESCRIPTION GALLERY IMPORTANT INFORMATION PAYMENT CALCULATOR SPECIFICATIONS
SIMILAR VEHICLES VEHICLE DISCLAIMER
RON WESTPHAL CHEVY - YOUR LOCAL CHEVROLET DEALERSHIP IN AURORA, NEAR PLAINFIELD, NAPERVILLE, AND OSWEGO

VEHICLE AT A GLANCE

FUEL ECONOMY	TRANSMISSION	EXTERIOR COLOR	INTERIOR COLOR	ENGINE DATA
22 CITY / 31 HWY	AUTOMATIC 6-SPEED	SILVER ICE METALLIC	DARK TITANIUM/JET BLACK W/PREMIUM CLOTH SEAT TRIM	2.5L 4 CYLS

VEHICLE DESCRIPTION

THIS SPACIOUS ONE-OWNER IS GM CERTIFIED! SOPHISTICATED LS DECOR, 10-WAY POWER DRIVER'S SEAT, REMOTE KEYLESS ENTRY WITH PANIC ALARM, POWER WINDOWS, LOCKS, MIRRORS, TILT, CRUISE, ICE-COLD AIR CONDITIONING, MP3/USB, STEERING WHEEL AUDIO CONTROLS, READING LAMPS, INSIDE TRUNK RELEASE, FLOOR MATS AND A WHOLE LOT MORE! STARTS RIGHT UP AND DRIVES BEAUTIFULLY AS YOU WOULD EXPECT FROM A FULL SIZE LUXURY SEDAN! GM E-X-T-E-N-D-E-D WARRANTY INCLUDED @ NO EXTRA COST TO YOU! FRESH OIL CHANGE & EXTENSIVE 172 POINT VEHICLE INSPECTION DONE HERE - THIS BABY'S READY FOR A NEW HOME! ALSO INCLUDED: TWO ADDITIONAL OIL CHANGES PLUS TIRE ROTATIONS, MULTI-POINT VEHICLE INSPECTIONS, ROADSIDE ASSISTANCE & COURTESY TRANSPORTATION!THANKS FOR LOOKING! VISIT RON WESTPHAL CHEVROLET IN AURORA, IL FOR YOUR IN-PERSON EVALUATION AND DEMO DRIVE! CALL OUR CUSTOMER CARE TEAM @ 630-898-9630 NOW TO RECEIVE PRICE REDUCTION ALERTS! The Ron Westphal Chevrolet dealership is located on the corner of Rt. 30 & 34 in Aurora only minutes away from Plainfield, Naperville, Oswego, Elburn and many other Fox Valley communities.

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #3

Tracking Number

PS 2017-09

Agenda Item Summary Memo

Title: Liquor Code Amendment Regarding License for Business in City Owned Building

Meeting and Date: City Council – April 25, 2017

Synopsis: Please see attached.

Council Action Previously Taken:

Date of Action: PS – 04/06/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PS 2017-09

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Lisa Pickering (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Public Safety Committee
From: Lisa Pickering, Deputy Clerk
CC: Bart Olson, City Administrator
Date: March 30, 2017
Subject: Request for Liquor Code Amendment to Allow Liquor License in a City Owned Building

---

Summary

Consideration of an amendment to the liquor code to allow liquor licenses to be issued to businesses in a city owned building.

Background

The City has received a request from Ginger and Soul located at 131 E. Hydraulic, Unit C for a Restaurant Class R-2 license and an outdoor patio license as well. Liquor sales are allowed under the license agreement that Ginger and Soul has with the City. Section 14.7 of Ginger and Soul's license agreement with the City states "The Licensee shall be permitted to sell alcoholic beverages at the Premises, provided that the City has issued the Licensee a liquor license for the Premises and the License maintains said liquor license while this Agreement remains in effect".

The proposed code amendment would allow Ginger and Soul to hold a Restaurant and Patio license if approved by the Mayor.

Recommendation

Staff recommends approval of the attached ordinance.

3-3-16: PROHIBITED ACTS:

A. Notify Police Department Of Disturbances[14]: All establishments, organizations, permittees, or licensees shall notify the Yorkville police department of any altercations, threats of violence, fighting, disturbances of the peace, disturbances of persons passing along the street or public way, the disturbance of the peace and quiet of persons doing business or residing in the neighborhood, or any damage to property whether it be private or public. Notice of any such activity will be given within forty eight (48) hours of this activity. (Ord. 1994-2, 2-24-1994)

B. ~~City Property; Special Event Permit, Temporary Permit:~~ Any and all sales or consumption of alcoholic beverages on all city property and parks is strictly prohibited except:

1. When the city liquor control commissioner has issued a permit or license for the sale or consumption in buildings and on property owned by the City, or ~~special event (SE) permit or a temporary (T) permit, or (Ord. 2015-04, 1-13-2015)~~

2. Possession and consumption of beer and wine is permitted at the Steven G. Bridge Park on Tuesdays and Thursdays between the hours of five o'clock (5:00) P.M. and eleven o'clock (11:00) P.M. between April 1 and November 30, but not on the playing fields or in the dugouts. Consumption of any alcoholic beverage is prohibited in the park's parking lot. (Ord. 2016-12, 1-26-2016)

Ordinance No. 2017- _____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, AMENDING THE LIQUOR REGULATIONS TO CLARIFY POSSESSION AND CONSUMPTION OF ALCOHOLIC BEVERAGES ON CITY PROPERTY

WHEREAS, the United City of Yorkville (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, section 6-15 of the Liquor Control Act, as amended (235 ILCS 5/6-15) authorizes the City to allow the sale of alcoholic beverages in buildings belonging to or under the control of the City in compliance with the regulations of the City; and,

WHEREAS, pursuant to section 4-1 of the Liquor Control Act, as amended, (235 ILCS 5/1-1 et seq.) the corporate authorities have the power to determine the regulations for the consumption of alcoholic beverages on City property; and in addition pursuant to its powers to protect the public's health, welfare and safety this Ordinance is hereby adopted.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1: That Title 3, Chapter 3, Subsection 3-3-16B(1), of the Yorkville City Code, as amended, be and is hereby amended to read as follows:

Any and all sales or consumption of alcoholic beverages on all city property and parks is strictly prohibited except:

"(1) When the City Liquor Control Commissioner has issued a permit or license for the sale or consumption in buildings and on property owned by the City, or"

Section 2: This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____ day of _____, 2017.

_____

CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____ day of _____, 2017.

_____
MAYOR

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #4

Tracking Number

PW 2017-24

Agenda Item Summary Memo

Title: Water Department Reports for January – March 2017

Meeting and Date: City Council – April 25, 2017

Synopsis: Monthly water reports.

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-24

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Tom Konen (Name) Public Works (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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United City of Yorkville
WATER DEPARTMENT REPORT

JANUARY 2017
MONTH / YEAR

WELLS

NO	WELL DEPTH (FEET)	PUMP DEPTH (FEET)	WATER ABOVE PUMP (FEET)	THIS MONTH'S PUMPAGE (GALLONS)
3	1335	0	0	0
4	1386	664	384	8,655,000
7	1527	1125	430	6,775,000
8	1384	840	456	18,321,000
9	1368	861	509	9,946,000
			TOTAL	40,599,000

CURRENT MONTH'S PUMPAGE IS 22,000 GALLONS more **THAN LAST MONTH**

833,000 GALLONS more **THAN LAST YEAR**

DAILY AVERAGE PUMPED: 1,309,645 GALLONS

DAILY MAXIMUM PUMPED: 1,832,000 GALLONS

DAILY AVERAGE PER CAPITA USE: 72.75 GALLONS

WATER TREATMENT:

CHLORINE: 951 LBS. FED CALCULATED CONCENTRATION: .30 MG/L

FLUORIDE: 277 LBS. FED CALCULATED CONCENTRATION: .86 MG/L

POLYPHOSPHATE: 1091 LBS. FED CALCULATED CONCENTRATION: 1.00 MG/L

WATER QUALITY:

BACTERIOLOGICAL SAMPLES ANALYZED BY ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:
23 SATISFACTORY 0 UNSATISFACTORY (EXPLAIN)

FLUORIDE: 3 SAMPLE(S) TAKEN CONCENTRATION: 0.75 MG/L

MAINTENANCE:

NUMBER OF METERS REPLACED: 4 NUMBER OF LEAKS OR BREAKS REPAIRED: 1
MXU'S: 13 BATTERIES REPLACED: 0

NEW CUSTOMERS:

RESIDENTIAL: 11 COMMERCIAL: 0 INDUSTRIAL/GOVERNMENTAL: 0

COMMENTS:

1 water main break lost about 432,000 gallons

United City of Yorkville
WATER DEPARTMENT REPORT

FEBRUARY 2017
MONTH / YEAR

WELLS

NO	WELL DEPTH (FEET)	PUMP DEPTH (FEET)	WATER ABOVE PUMP (FEET)	THIS MONTH'S PUMPAGE (GALLONS)
3	1335	0	0	0
4	1386	664	384	7,245,000
7	1527	1125	430	5,926,000
8	1384	840	456	20,111,000
9	1368	861	509	5,541,000
			TOTAL	36,091,000

CURRENT MONTH'S PUMPAGE IS 4,508,000 GALLONS less **THAN LAST MONTH**

536,000 GALLONS less **THAN LAST YEAR**

DAILY AVERAGE PUMPED: 1,288,000 GALLONS

DAILY MAXIMUM PUMPED: 2,136,000 GALLONS

DAILY AVERAGE PER CAPITA USE: 71.60 GALLONS

WATER TREATMENT:

CHLORINE: 846 LBS. FED — CALCULATED CONCENTRATION: .30 MG/L

FLUORIDE: 202 LBS. FED — CALCULATED CONCENTRATION: .75 MG/L

POLYPHOSPHATE: 804 LBS. FED — CALCULATED CONCENTRATION: 1.00 MG/L

WATER QUALITY:

BACTERIOLOGICAL SAMPLES ANALYZED BY ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:
23 SATISFACTORY 0 UNSATISFACTORY (EXPLAIN)

FLUORIDE: 3 SAMPLE(S) TAKEN — CONCENTRATION: 0.75 MG/L

MAINTENANCE:

NUMBER OF METERS REPLACED: 5 — NUMBER OF LEAKS OR BREAKS REPAIRED: 1
MXU'S: 5 — BATTERIES REPLACED: 17

NEW CUSTOMERS:

RESIDENTIAL: 14 COMMERCIAL: 0 INDUSTRIAL/GOVERNMENTAL: 0

COMMENTS:

1 water main break lost about 200,000 gallons

United City of Yorkville
WATER DEPARTMENT REPORT

MARCH 2017
MONTH / YEAR

WELLS

NO	WELL DEPTH (FEET)	PUMP DEPTH (FEET)	WATER ABOVE PUMP (FEET)	THIS MONTH'S PUMPAGE (GALLONS)
3	1335	0	0	0
4	1401	665	191	5,732,000
7	1527	1105	430	6,489,000
8	1384	840	170	15,486,000
9	1368	870	463	15,927,000
			TOTAL	40,028,000

CURRENT MONTH'S PUMPAGE IS 3,937,000 GALLONS more **THAN LAST MONTH**

803,000 GALLONS more **THAN LAST YEAR**

DAILY AVERAGE PUMPED: 1,291,225 GALLONS

DAILY MAXIMUM PUMPED: 1,672,000 GALLONS

DAILY AVERAGE PER CAPITA USE: 71.73 GALLONS

WATER TREATMENT:

CHLORINE: 1,002 LBS. FED CALCULATED CONCENTRATION: 1.00 MG/L

FLUORIDE: 213 LBS. FED CALCULATED CONCENTRATION: 0.75 MG/L

POLYPHOSPHATE: 856 LBS. FED CALCULATED CONCENTRATION: 1.00 MG/L

WATER QUALITY:

BACTERIOLOGICAL SAMPLES ANALYZED BY ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:
23 SATISFACTORY 0 UNSATISFACTORY (EXPLAIN)

FLUORIDE: 3 SAMPLE(S) TAKEN CONCENTRATION: .75 MG/L

MAINTENANCE:

NUMBER OF METERS REPLACED: 9 NUMBER OF LEAKS OR BREAKS REPAIRED: 0
MXU'S: 0 BATTERIES REPLACED: 0

NEW CUSTOMERS:

RESIDENTIAL: 13 COMMERCIAL: 0 INDUSTRIAL/GOVERNMENTAL: 0

COMMENTS:

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #5

Tracking Number

PW 2017-25

Agenda Item Summary Memo

Title: Route 47 ITEP (Streetlights)

Meeting and Date: City Council – April 25, 2017

Synopsis: Consideration of Authorization No. 5

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-25

Type of Vote Required:

Council Action Requested: Consideration of Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Lisa Pickering, Deputy City Clerk

Date: April 3, 2017
Subject: Route 47 ITEP (Streetlights) – Authorization No. 5

The purpose of this memo is to present Authorization No. 5 for the above referenced project.

An authorization, as defined by IDOT, is the written approval of a contract change and the written directive to the contractor to perform said work. By this definition, it alters the contract work from that awarded under the competitive bidding process. An Authorization of Contract Changes signed by the Regional Engineer signifies completed review of and support for the change proposed.

Background:
The State of Illinois and Thorne Electric, Inc. entered into an agreement for a contract value of $401,463.02 for the above referenced project. Construction began on October 11, 2016 and the project is substantially complete.

The construction costs are being funded by ITEP funds (federal) and local funds. The maximum federal participation amount is $390,410.00, inclusive of all change orders (authorizations) associated with this contract.

Questions Presented:
Should the City approve Authorization No. 5 in the amount of - $3,525.28?

Discussion:
Authorization No. 5 is a balancing authorization to adjust the final quantities to match the quantities measured in place in the field and as agreed to by the Contractor.

The net change to date for all authorizations is $3,575.36 which is a 0.89% increase to the original contract value bringing a revised contract value to date of $405,038.38.

We have attached IDOT form BC-22 for Authorization No. 5 for your information. All authorizations have a pre-approval from the IDOT District 3 Local Agency Bureau of Construction Engineer.

We are recommending approval of the Authorization.

Action Required:
Consideration of approval from the City Council for Authorization No. 5.

Illinois Department of Transportation

Authorization No. 5
Sheet 1 of 2

Authorization of Contract Changes

☑ Contract Adjustment ☐ Change Order	☐ PoDI/ PoCI
☑ Consultant ☐ InHouse	☐ Major Change ☑ Minor Change

Date: 04/03/2017
County: Kendall
Section: 13-00043-00-LS

Route FAP 326 IL-47
District: 03
Contract: 87603
Job No.: C9301215
Project No.: TE-D3(87)

Consultant's Name: Engineering Enterprises, Inc.

Contractor: Thorne Electric
Address: P.O. Box 321
Wheaton IL 60189-

The following change from the plans in the construction of the above designated section of highway improvement is authorized and directed. The estimated quantities are shown below at the awarded contract prices except as indicated. The first addition of an item not in the original contract under the fund type or county is indicated by an asterisk.

Item No.	*	Cat	Pay Item	Unit	Quantity	Unit Price	A/D	Addition	Deduction
		FAS ID:	L22RL01		CCS Code 0930031				
M8170040		33	EC C XLP USE 1C 6	METER	538.000	4.0900	D	$0.00	$2,200.42
		FAS ID:	M3E2L01		CCS Code 0930031				
FRC00100		33	CLEARING DUCT OBSTRUC	DOLLAR	94.120	1.0000	D	$0.00	$94.12
FRC00200		33	LIGHT POLE MOUNTING HA	DOLLAR	945.140	1.0000	D	$0.00	$945.14
FRC00300		33	ANCHOR BOLT THREAD CL	DOLLAR	579.600	1.0000	D	$0.00	$579.60
M8170030		33	EC C XLP USE 1C 8	METER	98.000	3.0000	A	$294.00	$0.00

Project Location: IL-47 from IL RTE 126 to Somonauk Street, Yorkville

Description and Reason: This is a Balacing Authorization to reflect the Final Quantities.

Determination: (G1) The undersigned determine that the change is germane to the original contract as signed, because provision for this work is included in the original contract.

THE STATE OF ILLINOIS
By the Department of Transportation

Randall S. Blankenhorn, Secretary Date

Jeff Heck, Chief Fiscal Officer, Director of F&A Date

William M. Barnes, Chief Counsel Date

Date Regional Engineer

Date Engineer of Construction

Date Director of Highways PI/Chief Engineer

Supervisor: Joseph C. Wick Jr.

Supervisor Date

Resident: Bart Olson

Resident Date

FHWA Acceptable to Proceed: Yes No

FHWA Participation: Yes No

FHWA Representative Date

Print Date: 04/04/2017

BC22 (rev. 01/24/17)

Illinois Department of Transportation

Authorization No. 5
Sheet 2 of 2

Authorization of Contract Changes

☑ Contract Adjustment ☐ Change Order	☐ PoDI/ PoCI
☑ Consultant ☐ InHouse	☐ Major Change ☑ Minor Change

Date: 04/03/2017
County: Kendall
Section: 13-00043-00-LS

Route FAP 326 IL-47
District: 03
Contract: 87603
Job No.: C9301215
Project No.: TE-D3(87)

Consultant's Name: Engineering Enterprises, Inc.

Contractor: Thorne Electric
Address: P.O. Box 321
Wheaton IL 60189-

The following change from the plans in the construction of the above designated section of highway improvement is authorized and directed. The estimated quantities are shown below at the awarded contract prices except as indicated. The first addition of an item not in the original contract under the fund type or county is indicated by an asterisk.

Item No.	*	Cat	Pay Item	Unit	Quantity	Unit Price	A/D	Addition	Deduction

Amount of Original Contract:	$401,463.02			Totals:	$294.00	$3,819.28
Net Change To Date:	$3,575.36	Percent Change:	0.89%	Net Change:	-3,525.28	

Project Location: IL-47 from IL RTE 126 to Somonauk Street, Yorkville

Description and Reason: This is a Balacing Authorization to reflect the Final Quantities.

Determination: (G1) The undersigned determine that the change is germane to the original contract as signed, because provision for this work is included in the original contract.

THE STATE OF ILLINOIS
By the Department of Transportation

Randall S. Blankenhorn, Secretary Date

Jeff Heck, Chief Fiscal Officer, Director of F&A Date

William M. Barnes, Chief Counsel Date

Date Regional Engineer

Supervisor: Joseph C. Wick Jr.

Supervisor Date

Date Engineer of Construction

Resident: Bart Olson

Date Director of Highways PI/Chief Engineer

Resident Date

FHWA Acceptable to Proceed: ☐ Yes ☐ No FHWA Participation: ☐ Yes ☐ No

FHWA Representative Date

Print Date: 04/04/2017

BC22 (rev. 01/24/17)

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #6

Tracking Number

PW 2017-26

Agenda Item Summary Memo

Title: Wrigley EDP Project – Change Order Nos. 2, 3 and 4

Meeting and Date: City Council – April 25, 2017

Synopsis: Consideration of Approval

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-26

Type of Vote Required:

Council Action Requested: Consideration of Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Lisa Pickering, Deputy City Clerk

Date: March 9, 2017
Subject: Wrigley EDP Project – Change Order Nos. 2, 3 and 4

The purpose of this memo is to present Change Order Nos. 2, 3 and 4 for the above referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Background:

The United City of Yorkville and Geneva Construction Co. entered into an agreement for a contract value of $400,504.10 for the above referenced project. Change Order No. 1 adjusted the contract value to $421,891.60. The construction budget (Grant Amount) for this project is $586,438.00.

Questions Presented:

Should the City approve Change Order Nos. 2, 3 and 4 which would increase the contract amount by $8,328.19, bringing the total contract to $429,881.79?

Discussion:

Change Order No. 2 includes additions/deductions to the contract quantities to reflect a change in the channel light detector amplifier and the cost for the ComEd service connection. The total value is $3,617.69.

Change Order No. 3 includes additional cost to remove the left turn arrow from a signal head as requested by IDOT. The total value is $506.58.

Change Order No. 4 is a balancing change order that reflects the actual quantities installed on the project. The total value is $4,203.92.

We are recommending approval of the Change Order Nos. 2, 3 and 4.

Action Required:

Consideration of approval from the City Council for Change Order Nos. 2, 3 and 4.

HRGreen

651 Prairie Pointe Drive | Suite 201 | Yorkville, IL 60560
Main 630.553.7560 + Fax 630.553.7646

HRGREEN.COM

January 24, 2017

Mr. Brad Sanderson, P.E.
Project Manager
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554

RE: Wrigley Way and Illinois Route 47
Geneva Construction – Change Order No. 2
HRG Job No.: 88140093

Dear Mr. Sanderson:

Attached you will find the second change order for the Wrigley Way and Illinois Route 47 Intersection Improvements. The change reflects the additional cost to switch the proposed 2 (Two) Channel Light Detector Amplifier to a 4 (Four) Channel Light Detector Amplifier, as well as the cost for Com Ed to install a new service connection.

Change Order #2:	$ 3,279.69
Previous Contract Amount:	$ 421,891.60
Adjusted Contract Amount:	$ 425,171.29

We recommend that the United City of Yorkville approve Change Order #2 to increase the contract to **$425,171.29.**

If you have any questions or require any additional information, please call. I can be reached at (815) 693-8915.

Sincerely,

HR Green, Inc.

Steve Hortega
Construction Technician III

SMH
Attachment

O:\88140093\88140093.03\Construction\Change Order\wrigleywayroute47-Change Order No 2Cover.doc

Illinois Department of Transportation

Request for Approval of Change in Plans

Date: 1/24/2017

Request No 2 ☐ Final

Contractor: GENEVA CONSTRUCTION

Address: P.O. Box 998

Aurora, IL 60507

County: Kendall

Road District or Municipality: United City of yorkville

Section No. 14-00046-00-TL

I recommend that this addition (addition, extension, deduction) be made to (to, from) the above contract.

The estimated quantities are shown below and the contractor agrees to furnish the materials and do the work at the unit prices.

Item Description	Unit	Quantity	Unit Price	Addition(A) or Deduction(D)	Total Addition	Total Deduction
2 ChannelLight Detector Amplifier	Each	1.00	2,558.00	D	$ -	$ 2,558.00
4 ChannelLight Detector Amplifier	Each	1.00	2,965.00	A	$ 2,965.00	$ -
Service Connection	Each	1.00	2,872.69	A	$ 2,872.69	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
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					$ -	$ -
				Total Changes:	$ 5,837.69	$ 2,558.00

BLR 13210 (Rev. 11/07/13)

Total Net Change: $ 3,279.69

Amount of Original Contract: $ 400,504.10

Amount of Previous Change Orders: $ 21,387.50

Amount of adjusted/final contract: $ 425,171.29

Total net addition (addition, deduction) to date $ 24,667.19 which is 6.16 % of the contract price.

State fully the nature and reason for the change: See attached sheet for explanation

When the net increase or decrease in the cost of the contract is $10,000.00 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements must be checked:

- ☐ The undersigned has determined that the circumstances which necessitate this change were not reasonably foreseeable at the time the contract was signed.
- ☒ The undersigned has determined that the change is germane to the original contract as signed.
- ☐ The undersigned has determined that this change is in the best interest of the Local Agency and is authorized by law.

Prepared by: Steve Hortega SH
Construction Technician
Title of Preparer

For County and Road District Projects

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

For Municipal Projects

Municipal Officer

Title of Municipal Officer

Date

Approved

Regional Engineer

Date

Note: Make out separate form for change in length quantities.
Give net quantities
Submit 6 Originals
If plans are required attached 3 sets.

VIRGIL COOK & SON, Inc.

Electrical Contractors **ELECTRICAL SUPPLIES & EQUIPMENT**

Phone: DeKalb 815/756-4854 • P. O. Box 805 • 119 North Eighth Street • DE KALB, IL 60115-0805
FAX 815/756-4289 • vcookson@aol.com

January 16th, 2017
Geneva Construction
1350 Aurora Ave
Aurora, IL 60505
Attn: Cass Price

RE: Add pay item to contract for SERVICE CONNECTION from COM ED for Wrigley Access Dr. & Rte 47:

Cass,

Please submit your pricing for the following addition to contract, requested by IDOT:

1.) SERVICE CONNECTION: ~~$4,013.44~~ $2872.69

Reason for revision: the existing Com Ed power at this intersection is 3 phase 277v/480v, when a single phase 110v is needed to power the traffic signals. Com Ed will need to install a new transformer on the existing Com Ed wood pole located adjacent to the traffic signal controller, on the SE quadrant of the intersection.

The Com Ed work order pricing is attached.

Sincerely,

Justin Jay R. Carlson
Project Manager
Virgil Cook & Son, Inc.

Over "50" Years of Service

AURORA OFFICE
2001 AUCUTT ROAD
MONTGOMERY, ILLINOIS 60538
708-295-8773

ComEd
An Exelon Company

VIRGIL COOK & SON
2800 N ROUTE 47
BRISTOL TWP, IL 60560

Date: **01/17/2017**

For Electrical Service To:
2800 N ROUTE 47
BRISTOL TWP, IL

Enclosed please find a copy of your Customer Work Agreement.
To ensure prompt processing of your agreement please do the following:

Review, sign and date the Customer Work Agreement.
Return the signed copy of the agreement and payment of **$2,872.69** in the enclosed envelope, to my attention.

Work cannot proceed until we have received the signed document with your remittance and a call to 1-866-NEW-ELEC (1-866-639-3532) letting us know your electrician has completed work and passed required municipal government inspections. Upon approval by our Company, one copy of the document will be returned to you for your records.

If this contract is not returned within 30 days, it will be cancelled.

You may make payments on the ComEd website or by phone. A $2.50 Bill Matrix, Inc. convenience fee will apply to each electronic payment transaction.

By **Internet** go to: https://paymentscomed.billmatrix.com/
(for payments of $5,000 or less for Credit/Debit)
(for payments of $90,000 or less for eCheck)

Or

By **Phone**, Call (English & Spanish)
1-800-334-7661 (for all payments of $5,000 or less: Credit, Debit and eCheck)
1-800-588-9477 (for all payments of $5,000 or less: Credit, Debit and eCheck)

Or

By **Customer Service Representatives**
1-800-334-7661 (for payments of $5,000 or less for Credit/Debit)
1-800-334-7661 (for payments of $90,000 or less for eCheck)

If you have any questions concerning this contract please contact your Field Representative.

Sincerely,

ELIZABETH MOESCH-CHIQUITO
GENERAL SERVICE REPRESENTATIVE
708-295-8773

Enclosures

CUSTOMER WORK AGREEMENT

PL#: 471163

CWA#: **WE170008** R:0000

Date: 01/17/2017

VIRGIL COOK & SON ("Customer") and **ComEd** ("Company") agree that the Company will furnish at the Customer's expense the labor and materials necessary to do the work for the Customer on or adjacent to the Customer's premises at **2800 N ROUTE 47, BRISTOL TWP, IL 60560**, described below.

CUSTOMER WORK AGREEMENT - CUSTOMER WORK ORDER

CHARGES FOR REQUESTED INSTALLATION	$2,872.69
TOTAL CUSTOMER CHARGE	**$2,872.69**

The Customer agrees to pay to the Company the sum of **$2,872.69**, payment in full due prior to beginning of Company work.

The charges listed in this contract are for performing the work identified herein under normal field conditions. If abnormal field conditions are encountered and additional labor and materials are required to complete the work, or if the scope of work is altered, ComEd reserves the right to collect, and the owner agrees to pay, additional money to cover the increased costs.

The sketch, if any, attached hereto is hereby made a part of this Agreement and expressly designates ownership of the facilities refered to.

The Total Customer Charge reflects the scope of work described in this Customer Work Agreement that will be performed by the Company. This does not include charges for the relocation or removal of equipment owned by others, such as cable television or communication companies, that are attached to the Company's poles. **It is the Customer's responsibility to contact these other companies to schedule the relocation or removal of their equipment from the poles. These companies will bill the Customer separately for the work they must perform.**

Work will be done during the Company's regular working hours, unless otherwise specified.

This Agreement shall be void if not accepted by the Customer within thirty days from date submited.

Transformers and metering equipment installed in conjunction with this work, shall in all cases, remain the property of the Company.

In the event the work covered by this Agreement cannot be completed within one year from the above date as a result of delays on the part of the Customer or because the Company has been denied access to the premises, the charge to the Customer shall be recomputed based on the level of costs prevailing at the time of completion of the work as stipulated in the Company's General Company Order No. 25.

This agreement is subject to the provisions of the Company's Schedule of Rates and Information and Requirements for Electric Services as on file with the Illinois Commerce Commision.

FOR THE COMPANY:

ELIZABETH MOESCH-CHIQUITO
Submitted By

Accepted By Signature

Print Name

FOR APPLICANT:

Accepted By Signature

Print Name

Official Capacity

Payment Stamp

Account Number: **3063013171**
Work Task Number: **1434703601**

Mail Bills To: **VIRGIL COOK & SON**
2800 N ROUTE 47
BRISTOL TWP, IL 60560

VIRGIL COOK & SON, Inc.

Electrical Contractors ELECTRICAL SUPPLIES & EQUIPMENT

Phone: DeKalb 815/756-4854 • P. O. Box 805 • 119 North Eighth Street • DE KALB, IL 60115-0805
FAX 815/756-4289 • vcookson@aol.com

January 16th, 2017
Geneva Construction
1350 Aurora Ave
Aurora, IL 60505
Attn: Cass Price

RE: Revise pay item from 2 Channel Light Detector Amplifier for EVP to 4 channel Light Detector Amplifier for Wrigley Access Dr. & Rte 47:

Cass,

Please submit your pricing for the following revision, requested by IDOT:

1.) Delete: 2 Channel Light Detector Amplifier	Quantity (1)	at ~~$2,220.00~~/EA	Total: ~~$2,220.00~~	$2558.00 / $2,558.00
2.) Add: 4 Channel Light Detector Amplifier	Quantity (1)	at $2,965.00/EA	Total: $2,965.00	

Amount added to contract: ~~$745.00~~ $407.00

Reason for revision: the original plan sheets depicted the EVP for the EB & WB Wrigley Access Drive cross street in error. The cross street is split phase and the EVP needs to be separated for each direction. In order for this to work properly, the EVP amplifier must be changed from 2 channel to 4 channel.

Sincerely,

Justin Jay R. Carlson
Project Manager
Virgil Cook & Son, Inc.

Over "50" Years of Service

HRGreen

▷651 Prairie Pointe Drive | Suite 201 | Yorkville, IL 60560
Main 630.553.7560 + **Fax** 630.553.7646

▷ HRGREEN.COM

RECEIVED
MAR - 8 2017
ENGINEERING ENTERPRISES, INC.

March 7, 2017

Mr. Brad Sanderson, P.E.
Project Manager
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554

RE: Wrigley Way and Illinois Route 47
Geneva Construction – Change Order No. 3
HRG Job No.: 88140093

Dear Mr. Sanderson:

Attached you will find the third change order for the Wrigley Way and Illinois Route 47 Intersection Improvements. The change reflects the additional cost to remove the left turn arrow, which was lined up with the through lane, from the north signal head.

Change Order #3:	$ 506. 58
Previous Contract Amount:	$ 425,171.29
Adjusted Contract Amount:	$ 425,677.87

We recommend that the United City of Yorkville approve Change Order #3 to increase the contract to **$425,677.87.**

If you have any questions or require any additional information, please call. I can be reached at (815) 693-8915.

Sincerely,

HR Green, Inc.

Steve Hortega
Construction Technician III

SMH
Attachment

O:\88140093\88140093.03\Construction\Change Order\wrigleywayroute47-Change Order No 2Cover.doc

Illinois Department of Transportation

Request for Approval of Change in Plans

Date: 3/7/2017

County: Kendall

Request No. 3 ☐ Final

Road District or Municipality: United City of yorkville

Contractor: GENEVA CONSTRUCTION

Section No. 14-00046-00-TL

Address: P.O. Box 998

Aurora, IL 60507

I recommend that this addition (addition, extension, deduction) be made to (to, from) the above contract.

The estimated quantities are shown below and the contractor agrees to furnish the materials and do the work at the unit prices.

Item Description	Unit	Quantity	Unit Price	Addition(A) or Deduction(D)	Total Addition	Total Deduction
Remove Left Turn Arrow Head	Dollar	506.58	1.00	A	$ 506.58	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
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					$ -	$ -
				Total Changes:	$ 506.58	$ -

Total Net Change: $ 506.58

Amount of Original Contract: $ 400,504.10

Amount of Previous Change Orders: $ 24,667.19

Amount of adjusted/final contract: $ 425,677.87

Total net addition (addition, deduction) to date $ 25,173.77 which is 6.29 % of the contract price.

State fully the nature and reason for the change: See attached sheet for explanation

When the net increase or decrease in the cost of the contract is $10,000.00 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements must be checked:

- ☐ The undersigned has determined that the circumstances which necessitate this change were not reasonably foreseeable at the time the contract was signed.
- ☒ The undersigned has determined that the change is germane to the original contract as signed.
- ☐ The undersigned has determined that this change is in the best interest of the Local Agency and is authorized by law.

Prepared by: Steve Hortega
Construction Technician
Title of Preparer

For County and Road District Projects

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

For Municipal Projects

Municipal Officer

Title of Municipal Officer

Date

Approved

Regional Engineer

Date

Note: Make out separate form for change in length quantities.
Give net quantities
Submit 6 Originals
If plans are required attached 3 sets.

GENEVA CONSTRUCTION COMPANY

INDIAN TRAIL and Route 25 * P.O. Box 998 - AURORA, ILLINOIS 60507
Phone: (630) 892-4357 - Fax: (630) 892-7738

CUSTOMER: CITY OF YORKVILLE
ADDRESS: 800 GAMEFARM ROAD
YORKVILLE, IL. 60560
JOB: RT47 & WRIGLEY - VIRGIL COOK REMOVE LEFT TURN ARROW EXTRA WORK

GCC JOB # 61075
CUSTOMER # 48700

EQUIPMENT EXPENSE:

DATE WORK COMPLETED: FEBRUARY 2017
15TH

EQUIPMENT	HOURS	HOURS	HOURS	TOTAL HOURS	RATE	AMOUNT
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00

TOTAL EQUIPMENT $0.00

SUB-CONTRACTOR EXPENSE:

MATERIAL	QUANTITY		QUANTITY	TOTAL QUANTITY	RATE	AMOUNT
VIRGIL COOK & SON INC.	1			1	$406.58	$406.58

TOTAL MATERIAL $406.58
5% SUB CONTRACTOR $100.00
TOTAL MATERIAL $506.58

AFFADAVIT

THIS IS TO CERTIFY THAT THE MATERIAL ENTERED ON THIS FORCE ACCOUNT BILL WHICH WAS TAKEN FROM STOCK IS SHOWN AT OUR COST.

TOTAL LABOR		$0.00
TOTAL EQUIPMENT EXPENSE		$0.00
TOTAL SUB CONTRACTOR		$506.58
	TOTAL	$506.58
BOND @ 0.75%		
	TOTAL BILL	$506.58

LOU GARZA, ASSISTANT CONTROLLER

Verified By: SM 3/7/17

VIRGIL COOK & SON, INC.

PO BOX 805
DEKALB, IL 60115

Invoice

Date	Invoice #
2/23/2017	OOO2928

Bill To	Ship To
Geneva Construction Co., Inc. P.O. Box 998 Aurora, IL 60507	GCC 61075 Wrigley & Rt. 47 United City of Yorkville Kendall County

P.O. Number	Terms	Project
GCC61075	NET 20	Force Account

Quantity	Item Code	Description	Price Each	Amount
		Force Account Per the Attached Report Dated 2/15/16 Wrigley & Rt. 47 - Kendall County		
1	LABOR	HOUR LABOR - Labor expense per the attached Force Account	327.80	327.80
1	EQUIPMENT USE	Equipment Expense per the attached Force Acct.	78.78	78.78

Any questions ? Please call us at 815/756-4854

Subtotal	$406.58
Sales Tax (8.0%)	$0.00
Total	$406.58
Payments/Credits	$0.00
Balance Due	$406.58

Rec'd By: SMO 3/7/17

Illinois Department of Transportation

Extra Work Daily Report

County KENDALL
Section 14-00046-00-TL
Route FAP 326 (IL47)
District 3
Contract No.
Job No.
Project No. WRIGLEY WAY/ROUTE 47
CITY OF YORKVILLE

Contractor Virgil Cook
Report No. _____ Date 2/15/17
Authorization No. _____

Description and Location of Work: West leg removal of left turn ARROW DUE TO SAFETY Concern
Left turn arrow was lined up in STRAIGHT LANE

LABOR

Name, Worker Classification	Total Hours Worked (Straight-Time)	(Overtime)
SMA Josh Bergman - ELECTRICIAN Apprentice	2°	
Jim Shanks - ELECTRICIAN Journeyman	2°	

EQUIPMENT USED

Description: List Manufacturer, Model, Year Built, Capacity	Number of Hours
2005 MERCEDES-BENZ ACTERRA BUCKET TRUCK	2°

MATERIAL USED

Description	Quantity

REMARKS: _____

APPROVED: _____ Contractor's Representative

APPROVED: _____ (HR GREEN) State's Representative

Original: Contractor
cc: District File

Printed 02/15/2017

BC 635 (Rev. 05/07)

Init By: SMA 3/7/17



Virgil Cook & Son Inc.

119 N. 8th P.O. Box 805
DeKalb, IL 60115
815-756-4854
vcookson@aol.com

FORCE ACCOUNT BILL FOR VIRGIL COOK & SON **INVOICE:** _____ **AUTH #** _____

ROUTE FAP 326 (Il47) **SECTION** 14-00046-00-TL **COUNTY** Kendall

PROJECT Wrigley/Rt.47 City of Yorkville - W.leg removal of left turn arrow due to safety concern **CONTRACT** GCC61075

EXTRA WORK DAILY REPORT DATED: 2/15/17

EMPLOYEE	ST	OT	RATE	PAYROLL AMOUNT	INS. AMOUNT	EARNINGS TO DATE	P/R AMT. ELIGIBLE UNEMPLOY. TAX
				0			
Jim Shanks Elec. - Line 196	2		$ 48.59	97.18	97.18	$ 1,287.65	
Josh Bargman Elec./Ap - Line 196	2		$ 31.58	63.16	63.16	$ 2,242.18	
				0			
Sub Total Labor	4			160.34			**FUTA:0** **SUTA:0**

IBEW Local 117:

Pension/Welfare Fund Per Hrs. $ 29.40 0 $ -

IBEW Local 196:

Pension %	**0.31**	$	160.34	$	49.71
Welfare Hrs.	**4**	$	5.25	$	21.00
Plus	**0.35**	$	70.71	$	24.75

Sub Total: **$ 255.79**

Plus: Workmen's Comp. Ins.:

$6.96 per hr. X 4 $27.84

Plus: Public Liability & Prop Damage Inxs.:

$6.34 per hr. X 4 $25.36

FUTA

SUTA

FICA 0.0765 Of $ 160.34 $ 12.27

0.1 Payroll Additives $65.47 $6.55

Total Labor **$ 327.80**

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above stated work and that the rates shown for taxes and insurance are actual costs.

Justin Carlson President
Virgil Cook & Son, Inc.

EquipmentWatch™

www.equipmentwatch.com

All prices shown in US$

Rental Rate Blue Book®

January 12, 2017

Miscellaneous On-Highway Flatbed Trucks
On-Highway Flatbed Trucks

Size Class:
26,001 - 33,000 GVW
Weight:
8,994 lbs.

Configuration for On-Highway Flatbed Trucks

Maximum Gross Vehicle Weight	**30000 lbs**	Power Mode	**Diesel**
Horsepower	**217**	Axle Configuration	**4X2**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	$1,890.00	$530.00	$135.00	$20.00	$17.50	$28.24
Adjustments						
Region (Illinois: 101.6%)	$30.24	$8.18	$2.16	$0.32		
Model Year (1993: 77.9%)	($424.37)	($119.00)	($30.31)	($4.49)		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	$1,495.87	$419.48	$106.85	$15.83	$17.50	$26.00

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	51%	$963.90/mo
Overhaul (ownership)	31%	$585.90/mo
CFC (ownership)	6%	$113.40/mo
Indirect (ownership)	12%	$226.80/mo
Fuel (operating) @ 2.36	57%	$10.04/hr

Revised Date: 2nd Half 2016

The equipment represented in this report has been exclusively prepared for David Farley (dfarley@plote.com)

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EquipmentWatch™

www.equipmentwatch.com

All prices shown in US$

Rental Rate Blue Book®

January 12, 2017

Miscellaneous Articulating Boom Aerial Lifts For Truck Mounting
Articulating Boom Aerial Lifts For Truck Mounting

Size Class:
41 - 50 ft
Weight:
N/A

Configuration for Articulating Boom Aerial Lifts For Truck Mounting

Maximum Platform Height	41 ft - 50 ft	Platform Capacity (1 Man)	540 lbs
Material Handling	No	Boom Configuration	Overcenter

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	$1,970.00	$550.00	$140.00	$21.00	$3.80	$14.99
Adjustments						
Region (Illinois: 101.6%)	$31.52	$8.80	$2.24	$0.34		
Model Year (1993: 84.3%)	($314.24)	($87.73)	($22.33)	($3.35)		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	**$1,687.28**	**$471.07**	**$119.91**	**$17.99**	**$3.80**	**$13.39**

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	66%	$1,300.20/mo
Overhaul (ownership)	22%	$433.40/mo
CFC (ownership)	4%	$78.80/mo
Indirect (ownership)	8%	$157.60/mo

Fuel cost data is not available for these rates.

Revised Date: 1st Half 2017

The equipment represented in this report has been exclusively prepared for David Farley (dfarley@plote.com)

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Illinois Department of Transportation

Certified Payroll Report

Subcontractor	VIRGIL COOK & SON, INC. 119 N EIGHTH ST. PO BOX 805 DEKALB, IL 60115	**Project**	Rt. 47 & Wrigley	**Project/Contract #**	GCC 61075
		County	Kendall City of Yorkville	**Payroll Number**	18
IDOT #	1221			**For Week Ending**	2/15/2017

Employee Name	ID	Work Classification		Pay Type	Hours Worked by Day Thu 9	Fri 10	Sat 11	Sun 12	Mon 13	Tue 14	Wed 15	Timesheet Hours	Paid Hours	Pay Rate	Job Gross Pay	Total Gross Pay	Social Security	Medi-care	Federal Tax	State Tax	Other	Total Deduct	Net Pay
BARGMAN, JOSHUA	1055 W	#70-Local 196-App. TS Tech-HR Apprentice JM Elec.	A	ST							4.50	4.50	4.50	31.58	142.11	221.06	13.71	3.20	0.00	3.58	6.63	27.12	193.94
SHANKS, JAMES E	7270 W	#70-Local 196 Elec-HR Journeyman Elec. - Line	J	ST							4.50	4.50	4.50	48.59	218.66	340.14	21.08	4.93	35.00	12.76	10.20	83.97	256.17

Date: Feb-23, 2017
I, Clarice D. Shivers, Administrative Assistant, do hereby state:

(1) That I pay or supervise the payment of the persons employed by VIRGIL COOK & SON, INC. on the project 9669; that during the payroll period commencing on Feb-09, 2017 and ending on Feb-15, 2017 all persons employed on the said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said VIRGIL COOK & SON, INC. from the full weekly wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat 357; 40 U.S.C. 276c), and described below:

All state and federal taxes.

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers and mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, of if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☒ in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in Section 4(c) below.

(c) EXCEPTIONS

Exception (Craft)	Explanation

Remarks:

Name and Title	Signature
Clarice D. Shivers, Administrative Assistant	Clarice D. Shivers

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

HRGreen

▷651 Prairie Pointe Drive | Suite 201 | Yorkville, IL 60560
Main 630.553.7560 + **Fax** 630.553.7646

▷ HRGREEN.COM

March 8, 2017

RECEIVED
MAR - 8 2017
ENGINEERING ENTERPRISES, INC.

Mr. Brad Sanderson, P.E.
Project Manager
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554

RE: Wrigley Way and Illinois Route 47
Geneva Construction – Change Order No. 4
HRG Job No.: 88140093

Dear Mr. Sanderson:

Attached you will find the fourth change order for the Wrigley Way and Illinois Route 47 Intersection Improvements. The change reflects the balancing of quantities due to actual field measurements.

Change Order #4:	$ 4,203.92
Previous Contract Amount:	$ 425,677.87
Adjusted Contract Amount:	$ 429,881.79

We recommend that the United City of Yorkville approve Change Order #4 to increase the contract to **$429,881.79.**

If you have any questions or require any additional information, please call. I can be reached at (815) 693-8915.

Sincerely,

HR Green, Inc.

Steve Hortega
Construction Technician III

SMH
Attachment

O:\88140093\88140093.03\Construction\Change Order\wrigleywayroute47-Change Order No 2Cover.doc

Illinois Department of Transportation

Request for Approval of Change in Plans

Date: 3/8/2017

County: Kendall

Request No. 4 ☐ Final

Road District or Municipality: United City of yorkville

Contractor: GENEVA CONSTRUCTION

Section No. 14-00046-00-TL

Address: P.O. Box 998

Aurora, IL 60507

I recommend that this addition (addition, extension, deduction) be made to (to, from) the above contract.

The estimated quantities are shown below and the contractor agrees to furnish the materials and do the work at the unit prices.

Item Description	Unit	Quantity	Unit Price	Addition(A) or Deduction(D)	Total Addition	Total Deduction
Underground Conduit, PVC 2"	Foot	7.40	14.50	A	$ 107.30	$ -
Underground Conduit, PVC 3"	Foot	45.00	37.80	A	$ 1,701.00	$ -
Underground Conduit, PVC 4"	Foot	6.00	41.60	A	$ 249.60	$ -
ECIC, Signal No. 14 3C	Foot	11.50	1.30	A	$ 14.95	$ -
ECIC, Signal No. 14 7C	Foot	16.00	1.60	A	$ 25.60	$ -
ECIC, Signal Lead-In No. 14 1P	Foot	32.00	1.30	A	$ 41.60	$ -
ECIC, Signal Service No. 6 2C	Foot	50.00	3.00	D	$ -	$ 150.00
ECIC, Equip Grnd Cond No. 6 1C	Foot	22.00	2.20	A	$ 48.40	$ -
Detector Loop, Type 1	Foot	274.00	19.00	A	$ 5,206.00	$ -
EVP Sys Lin Sens Cbl No.20 3/C	Foot	16.00	1.35	A	$ 21.60	$ -
ECIC, 600V XLP 3-1/C No. 10	Foot	23.50	3.15	D	$ -	$ 74.03
HMA Surf Crse, Mix D, N70	Ton	13.33	64.00	A	$ 853.12	$ -
HMA Surf Rem, 1 1/2"	SQYD	2.50	2.25	A	$ 5.63	$ -
Bituminous Materials (Tack Coat)	Pound	3661.00	0.01	D	$ -	$ 36.61
Agg Wedge Shoulder, Type B	Ton	119.07	32.00	D	$ -	$ 3,810.24
					$ -	$ -
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					$ -	$ -
				Total Changes:	$ 8,274.80	$ 4,070.88

BLR 13210 (Rev. 11/07/13)

Total Net Change: $ 4,203.92

Amount of Original Contract: $ 400,504.10

Amount of Previous Change Orders: $ 25,173.77

Amount of adjusted/final contract: $ 429,881.79

Total net addition (addition, deduction) to date $ 29,377.69 which is 7.34 % of the contract price.

State fully the nature and reason for the change: See attached sheet for explanation

When the net increase or decrease in the cost of the contract is $10,000.00 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements must be checked:

- ☐ The undersigned has determined that the circumstances which necessitate this change were not reasonably foreseeable at the time the contract was signed.
- ☒ The undersigned has determined that the change is germane to the original contract as signed.
- ☐ The undersigned has determined that this change is in the best interest of the Local Agency and is authorized by law.

Prepared by: Steve Hortega
Construction Technician
Title of Preparer

For County and Road District Projects

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

For Municipal Projects

Municipal Officer

Title of Municipal Officer

Date

Approved

Regional Engineer

Date

Note: Make out separate form for change in length quantities.
Give net quantities
Submit 6 Originals
If plans are required attached 3 sets.

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #7

Tracking Number

PW 2017-27

Agenda Item Summary Memo

Title: Center / Countryside Resurfacing – Contract Award

Meeting and Date: City Council – April 25, 2017

Synopsis: Recommendation of Contract Award

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-27

Type of Vote Required:

Council Action Requested: Consideration of Award

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Lisa Pickering, Deputy City Clerk

Date: April 12, 2017
Subject: Center / Countryside Resurfacing

Bids were received, opened and tabulated for work to be done on the Center / Countryside Resurfacing project at 3:15 p.m., April 11, 2017. Representatives of contractors bidding the project, the City, and our firm were in attendance. A tabulation of the bids and the engineer's estimate is attached for your information and record. The low bid was below our engineer's estimate and within the FY2018 budget.

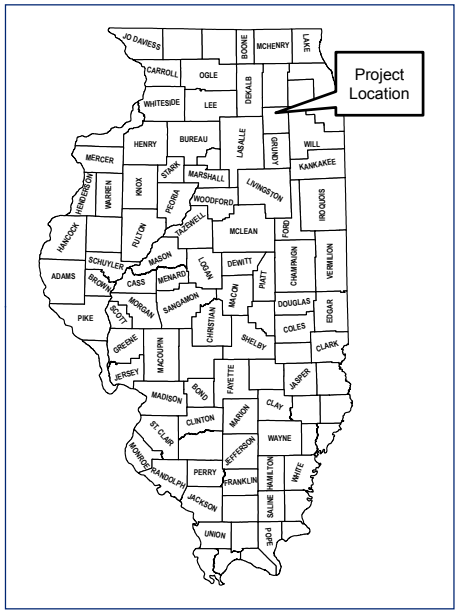
We recommend the acceptance of the bid and approval of award be made to the low bidder, D Construction, Co., 1488 S Broadway Street, Coal City, IL 60416 in the amount of **$239,317.66.**

If you have any questions or require additional information, please let us know.

Engineering Enterprises, Inc.

BID TABULATION
COUNTRYSIDE PARKWAY/CENTER PARKWAY RESURFACING
UNITED CITY OF YORKVILLE

		BID TABULATION BIDS RECD 4/11/2017		**D CONSTRUCTION** 1488 S. Broadway Coal City, IL 60416		**GENEVA CONSTRUCTION** P.O. Box 998 Aurora, IL 60507		**BUILDERS PAVING, LLC** 4413 Roosevelt Road-Ste 108 Hillside, IL 60162		**ENGINEER'S ESTIMATE** 52 Wheeler Road Sugar Grove, IL 60554	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	75	$ 10.00	$ 750.00	$ 10.00	$ 750.00	$ 8.15	$ 611.25	$ 20.00	$ 1,500.00
25200110	SODDING, SALT TOLERANT	SQ YD	75	10.00	$ 750.00	8.62	$ 646.50	8.65	$ 648.75	$ 20.00	$ 1,500.00
25200200	SUPPLEMENTAL WATERING	UNIT	5	330.00	$ 1,650.00	0.01	$ 0.05	20.00	$ 100.00	$ 100.00	$ 500.00
40600290	BITUMINOUS MATERIALS (TACKCOAT)	POUND	12,466	0.01	$ 124.66	0.01	$ 124.66	0.01	$ 124.66	$ 0.50	$ 6,233.00
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	285	9.00	$ 2,565.00	5.00	$ 1,425.00	9.00	$ 2,565.00	$ 2.00	$ 570.00
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	1,041	55.00	$ 57,255.00	57.00	$ 59,337.00	58.00	$ 60,378.00	$ 62.00	$ 64,542.00
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1,564	55.00	$ 86,020.00	57.00	$ 89,148.00	57.00	$ 89,148.00	$ 65.00	$ 101,660.00
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	10	150.00	$ 1,500.00	110.00	$ 1,100.00	195.00	$ 1,950.00	$ 75.00	$ 750.00
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	675	7.00	$ 4,725.00	6.00	$ 4,050.00	15.00	$ 10,125.00	$ 10.00	$ 6,750.00
45100100	CRACK ROUTING (PAVEMENT)	FOOT	9,050	0.04	$ 362.00	0.10	$ 905.00	0.10	$ 905.00	$ 1.00	$ 9,050.00
45100200	CRACK FILLING	POUND	2,400	2.51	$ 6,024.00	1.15	$ 2,760.00	1.15	$ 2,760.00	$ 10.00	$ 24,000.00
42400800	DETECTABLE WARNINGS	SQ FT	116	25.00	$ 2,900.00	18.00	$ 2,088.00	25.00	$ 2,900.00	$ 30.00	$ 3,480.00
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	18,466	1.50	$ 27,699.00	1.65	$ 30,468.90	2.25	$ 41,548.50	$ 3.00	$ 55,398.00
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	105	5.00	$ 525.00	6.00	$ 630.00	10.00	$ 1,050.00	$ 10.00	$ 1,050.00
44000600	SIDEWALK REMOVAL	SQ FT	675	2.00	$ 1,350.00	1.20	$ 810.00	3.00	$ 2,025.00	$ 3.00	$ 2,025.00
44201690	CLASS D PATCHES, TYPE I, 4 INCH	SQ YD	100	28.00	$ 2,800.00	38.00	$ 3,800.00	41.50	$ 4,150.00	$ 50.00	$ 5,000.00
44201692	CLASS D PATCHES, TYPE II, 4 INCH	SQ YD	100	28.00	$ 2,800.00	36.00	$ 3,600.00	37.00	$ 3,700.00	$ 45.00	$ 4,500.00
44201694	CLASS D PATCHES, TYPE III, 4 INCH	SQ YD	200	28.00	$ 5,600.00	29.00	$ 5,800.00	33.50	$ 6,700.00	$ 40.00	$ 8,000.00
44201696	CLASS D PATCHES, TYPE IV, 4 INCH	SQ YD	525	26.00	$ 13,650.00	24.00	$ 12,600.00	27.00	$ 14,175.00	$ 35.00	$ 18,375.00
60255500	MANHOLES TO BE ADJUSTED	EACH	4	375.00	$ 1,500.00	385.00	$ 1,540.00	500.00	$ 2,000.00	$ 450.00	$ 1,800.00
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	290.00	$ 290.00	385.00	$ 385.00	500.00	$ 500.00	$ 450.00	$ 450.00
60266600	VALVE BOXES TO BE ADJUSTED	EACH	2	150.00	$ 300.00	285.00	$ 570.00	500.00	$ 1,000.00	$ 300.00	$ 600.00
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	105	35.00	$ 3,675.00	22.50	$ 2,362.50	51.00	$ 5,355.00	$ 30.00	$ 3,150.00
67100100	MOBILIZATION	LSUM	1	1,000.00	$ 1,000.00	6,600.00	$ 6,600.00	10,145.11	$ 10,145.11	$ 13,000.00	$ 13,000.00
70300100	SHORT TERM PAVEMENT MARKING	FOOT	100	0.80	$ 80.00	0.70	$ 70.00	2.00	$ 200.00	$ 1.00	$ 100.00
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	35	1.00	$ 35.00	0.70	$ 24.50	13.00	$ 455.00	$ 10.00	$ 350.00
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	222	2.98	$ 661.56	5.00	$ 1,110.00	3.65	$ 810.30	$ 20.00	$ 4,440.00
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	950	1.02	$ 969.00	0.85	$ 807.50	0.48	$ 456.00	$ 1.00	$ 950.00
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,654	1.36	$ 2,249.44	1.05	$ 1,736.70	0.72	$ 1,190.88	$ 2.00	$ 3,308.00
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	429	1.70	$ 729.30	1.70	$ 729.30	1.00	$ 429.00	$ 5.00	$ 2,145.00
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	205	2.21	$ 453.05	2.50	$ 512.50	2.00	$ 410.00	$ 10.00	$ 2,050.00
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	69	3.85	$ 265.65	5.00	$ 345.00	3.95	$ 272.55	$ 12.00	$ 828.00
88600200	DETECTOR LOOP REPLACEMENT	FOOT	120	33.00	$ 3,960.00	24.90	$ 2,988.00	25.00	$ 3,000.00	$ 30.00	$ 3,600.00
X6026050	SANITARY MANHOLES TO BE ADJUSTED	EACH	2	850.00	$ 1,700.00	855.00	$ 1,710.00	750.00	$ 1,500.00	$ 850.00	$ 1,700.00
X6040205	FRAMES AND LIDS, SPECIAL	EACH	2	700.00	$ 1,400.00	400.00	$ 800.00	300.00	$ 600.00	$ 450.00	$ 900.00
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1	1,000.00	$ 1,000.00	3,400.00	$ 3,400.00	5,000.00	$ 5,000.00	$ 11,000.00	$ 11,000.00
	TOTAL (Items 1 - 46)				**239,317.66**		**245,734.11**		**278,888.00**		**365,254.00**
	% BELOW/ABOVE ENGINEER'S ESTIMATE				-34.5%		-32.7%		-23.6%		



0 800 Feet

CENTER PKWY AND COUNTRYSIDE PKWY

PROJECT ENDS - COUNTRYSIDE PKWY

PROJECT BEGINS - CENTER PKWY

COUNTRYSIDE PARKWAY

CENTER PARKWAY

IL 47 (FAP 326)

US 34 (FAP 591)

Anderson
Kendall
Center
Naden
Strawberry
Conover
Dickson
Bridge
Carpenter
Marketview
McHugh
Menard
Mulhern
Palmer
Countryside
Cannonball
John
Comell
Independence
Cody
Carly
Hillcrest
Leisure
Pleasure
Georgeanna
Game Farm
Prairie
Sunset
Conover
Veterans
Marketplace
Landmark
Dalton
Freemont
McHugh
Heartland

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MARCH 2016
PROJECT NO.:	YO1608
BY:	KKP
PATH:	H:\GIS\PUBLIC\YORKVILLE\2016\
FILE:	YO1608_CountrysidePkwy.MXD

CENTER PARKWAY AND COUNTRYSIDE PARKWAY (FAU 3797)
ATTACHMENT D
UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS

N

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

New Business #8

Tracking Number

PW 2017-28

Agenda Item Summary Memo

Title: Center / Countryside Resurfacing – Phase III Engineering Agreement

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached.

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-28

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Center / Countryside Resurfacing
United City of Yorkville, Kendall County, IL
Professional Services Agreement - Construction Engineering

THIS AGREEMENT, by and between the United City of Yorkville, hereinafter referred to as the "City" or “OWNER” and Engineering Enterprises, Inc. hereinafter referred to as the "Contractor" or “ENGINEER” agrees as follows:

A. Services:

ENGINEER agrees to furnish to the City the following services: The ENGINEER shall provide any and all necessary engineering services to the City as indicated on the included Attachment A. Construction engineering will be provided for all roadways on Attachment D. All Engineering will be in accordance with all City and Illinois Department of Transportation requirements.

B. Term:

Services will be provided beginning on the date of execution of this agreement and continuing, until terminated by either party upon 7 days written notice to the non-terminating party or upon completion of the Services. Upon termination the ENGINEER shall be compensated for all work performed for the City prior to termination.

C. Compensation and maximum amounts due to ENGINEER:

ENGINEER shall receive as compensation for all work and services to be performed herein, an amount based on the Estimate of Level of Effort and Associated Cost included in Attachment B. Construction Engineering will be paid for hourly at the actual rates for services to be performed, currently estimated at $34,648.00. The hourly rates for this project are shown in the attached 2016 Standard Schedule of Charges. All payments will be made according to the Illinois State Prompt Payment Act and not less than once every thirty days.

For outside services provided by other firms or subconsultants, the City shall pay the ENGINEER the invoiced fee to the ENGINEER, plus 0%. Such outside services include, but are not limited to services to be provided by Rubino Engineering, Inc.

D. Changes in Rates of Compensation:

In the event that this contract is designated in Section B hereof as an Ongoing Contract, ENGINEER, on or before February 1st of any given year, shall provide written notice of any change in the rates specified in Section C hereof (or on any attachments hereto) and said changes shall only be effective on and after May 1st of that same year.

E. Ownership of Records and Documents:

ENGINEER agrees that all books and records and other recorded information developed specifically in connection with this agreement shall remain the property of the City. ENGINEER agrees to keep such information confidential and not to disclose or disseminate the information to third parties without the consent of the City. This confidentiality shall not apply to material or information, which would otherwise be subject to public disclosure through the freedom of information act or if already previously disclosed by a third party. Upon termination of this agreement, ENGINEER agrees to return all such materials to the City. The City agrees not to modify any original documents produced by ENGINEER without contractors consent. Modifications of any signed duplicate original document not authorized by ENGINEER will be at OWNER's sole risk and without legal liability to the ENGINEER. Use of any incomplete, unsigned document will, likewise, be at the OWNER's sole risk and without legal liability to the ENGINEER.

F. Governing Law:

This contract shall be governed and construed in accordance with the laws of the State of Illinois. Venue shall be in Kendall County, Illinois.

G. Independent Contractor:

ENGINEER shall have sole control over the manner and means of providing the work and services performed under this agreement. The City's relationship to the ENGINEER under this agreement shall be that of an independent contractor. ENGINEER will not be considered an employee to the City for any purpose.

H. Certifications:

Employment Status : The Contractor certifies that if any of its personnel are an employee of the State of Illinois, they have permission from their employer to perform the service.

Anti-Bribery : The Contractor certifies it is not barred under 30 Illinois Compiled Statutes 500/50-5(a) - (d) from contracting as a result of a conviction for or admission of bribery or attempted bribery of an officer or employee of the State of Illinois or any other state.

Loan Default: If the Contractor is an individual, the Contractor certifies that he/she is not in default for a period of six months or more in an amount of $600 or more on the repayment of any educational loan guaranteed by the Illinois State Scholarship Commission made by an Illinois institution of higher education or any other loan made from public funds for the purpose of financing higher education (5 ILCS 385/3).

Felony Certification: The Contractor certifies that it is not barred pursuant to 30 Illinois Compiled Statutes 500/50-10 from conducting business with the State of Illinois or any agency as a result of being convicted of a felony.

Barred from Contracting : The Contractor certifies that it has not been barred from contracting as a result of a conviction for bid-rigging or bid rotating under 720 Illinois Compiled Statutes 5/33E or similar law of another state.

Drug Free Workplace: The Contractor certifies that it is in compliance with the Drug Free Workplace Act (30 Illinois Compiled Statutes 580) as of the effective date of this contract. The Drug Free Workplace Act requires, in part, that Contractors, with 25 or more employees certify and agree to take steps to ensure a drug free workplace by informing employees of the dangers of drug abuse, of the availability of any treatment or assistance program, of prohibited activities and of sanctions that will be imposed for violations; and that individuals with contracts certify that they will not engage in the manufacture, distribution, dispensation, possession, or use of a controlled substance in the performance of the contract.

Non-Discrimination, Certification, and Equal Employment Opportunity : The Contractor agrees to comply with applicable provisions of the Illinois Human Rights Act (775 Illinois Compiled Statutes 5), the U.S. Civil Rights Act, the Americans with Disabilities Act, Section 504 of the U.S. Rehabilitation Act and the rules applicable to each. The equal opportunity clause of Section 750.10 of the Illinois Department of Human Rights Rules is specifically incorporated herein. The Contractor shall comply with Executive Order 11246, entitled Equal Employment Opportunity, as amended by Executive Order 11375, and as supplemented by U.S. Department of Labor regulations (41 C.F.R. Chapter 60). The Contractor agrees to incorporate this clause into all subcontracts under this Contract.

International Boycott: The Contractor certifies that neither it nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act (30 ILCS 582).

Record Retention and Audits: If 30 Illinois Compiled Statutes 500/20-65 requires the Contractor (and any subcontractors) to maintain, for a period of 3 years after the later of the date of completion of this Contract or the date of final payment under the Contract, all books and records relating to the performance of the Contract and necessary to support amounts charged to the City under the Contract. The Contract and all books and records related to the Contract shall be available for review and audit by the City and the Illinois Auditor General. If this Contract is funded from contract/grant funds provided by the U.S. Government, the Contract, books, and records shall be available for review and audit by the Comptroller General of the U.S. and/or the Inspector General of the federal

sponsoring agency. The Contractor agrees to cooperate fully with any audit and to provide full access to all relevant materials.

United States Resident Certification: (This certification must be included in all contracts involving personal services by non-resident aliens and foreign entities in accordance with requirements imposed by the Internal Revenue Services for withholding and reporting federal income taxes.) The Contractor certifies that he/she is a: _x_ United States Citizen ___ Resident Alien ___ Non-Resident Alien The Internal Revenue Service requires that taxes be withheld on payments made to non resident aliens for the performance of personal services at the rate of 30%.

Tax Payer Certification : Under penalties of perjury, the Contractor certifies that its Federal Tax Payer Identification Number or Social Security Number is (provided separately) and is doing business as a (check one): ___ Individual ___ Real Estate Agent ___ Sole Proprietorship ___ Government Entity ___ Partnership ___ Tax Exempt Organization (IRC 501(a) only) _x_ Corporation ___ Not for Profit Corporation ___ Trust or Estate ___ Medical and Health Care Services Provider Corp.

I. Indemnification:

ENGINEER shall indemnify and hold harmless the City and City's agents, servants, and employees against all loss, damage, and expense which it may sustain or for which it will become liable on account of injury to or death of persons, or on account of damage to or destruction of property resulting from the performance of work under this agreement by ENGINEER or its Subcontractors, or due to or arising in any manner from the wrongful act or negligence of ENGINEER or its Subcontractors of any employee of any of them. In the event that the either party shall bring any suit, cause of action or counterclaim against the other party, the non-prevailing party shall pay to the prevailing party the cost and expenses incurred to answer and/or defend such action, including reasonable attorney fees and court costs. In no event shall the either party indemnify any other party for the consequences of that party's negligence, including failure to follow the ENGINEER's recommendations.

J. Insurance:

The ENGINEER agrees that it has either attached a copy of all required insurance certificates or that said insurance is not required due to the nature and extent of the types of services rendered hereunder. (Not applicable as having been previously supplied)

K. Additional Terms or Modification:

The terms of this agreement shall be further modified as provided on the attachments. Except for those terms included on the attachments, no additional terms are included as a part of this agreement. All prior understandings and agreements between the parties are merged into this agreement, and this agreement may not be modified orally or in any

manner other than by an agreement in writing signed by both parties. In the event that any provisions of this agreement shall be held to be invalid or unenforceable, the remaining provisions shall be valid and binding on the parties. The list of attachments are as follows:

Attachment A:	Scope of Services
Attachment B:	Estimated Level of Effort and Associated Cost
Attachment C:	Anticipated Project Schedule
Attachment D:	Location Map
Attachment E:	2016 Standard Schedule of Charges

L. Notices:

All notices required to be given under the terms of this agreement shall be given mail, addressed to the parties as follows:

For the City:

City Administrator and City Clerk
United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

For the ENGINEER:

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove Illinois 60554

Either of the parties may designate in writing from time to time substitute addresses or persons in connection with required notices.

Agreed to this _____day of _____, 2017.

United City of Yorkville:

_____
Gary Golinski
Mayor

_____
Beth Warren
City Clerk

Engineering Enterprises, Inc.:

_____
Brad Sanderson, P.E.
Vice President

_____
Angie Smith
Executive Assistant

Center / Countryside Resurfacing
United City of Yorkville
Kendall County, IL
Professional Services Agreement - Construction Engineering

Attachment A – Scope of Services

Construction Engineering:

- Attend the Pre-Construction Conference with the Contractor
- Provide resident engineering for on-site observation
- Daily documentation of work tasks and calculation of installed pay items
- Monitor adherence to specifications
- Gather material inspection and coordinate any required testing on behalf of the City
- Provide guidance to the contractor when questions arise during construction
- Prepare/verify payment estimates
- Prepare change orders
- Gather certified payrolls and waivers of lien
- Provide information to residents as required
- Perform punch list inspections, provide follow up inspections and recommend acceptance when appropriate
- Communicate activities with City weekly, or as required based on onsite activities
- Prepare necessary closeout paperwork

Engineering Enterprises, Inc.

ATTACHMENT B - ESTIMATE OF LEVEL OF EFFORT AND ASSOCIATED COST
PROFESSIONAL ENGINEERING SERVICES

CENTER / COUNTRYSIDE RESURFACING
United City of Yorkville, IL

WORK ITEM NO.	WORK ITEM	ENTITY:	ENGINEERING				SURVEYING			DRAFTING		ADMIN.	WORK ITEM HOUR SUMM.	COST PER ITEM
		PROJECT ROLE:	PRINCIPAL IN CHARGE	PROJECT MANAGER	SENIOR PROJECT ENGINEER	PROJECT ENGINEER	PROJECT MANAGER	SENIOR PROJECT SURVEYOR I	PROJECT TECHNICIAN	CAD MANAGER	SENIOR PROJECT TECHNICIAN	ADMIN.		
		HOURLY RATE:	$185	$163	$141	$129	$163	$141	$117	$163	$129	$78		
CONSTRUCTION ENGINEERING														
3.1	Contract Administration		4	16		16						4	40	$ 5,724
3.2	Construction Layout			2		30							32	$ 4,196
3.3	Observation and Documentation		8	16		160							184	$ 24,728
	Construction Engineering Subtotal:		**12**	**34**	**-**	**206**	**-**	**-**	**-**	**-**	**-**	**4**	**256**	**$ 34,648**
	PROJECT TOTAL:		**12**	**34**	**-**	**206**	**-**	**-**	**-**	**-**	**-**	**4**	**256**	**34,648**

DIRECT EXPENSES	
Printing =	-
Supplies & Misc. =	$ -
Material Testing (Rubino) =	$ 5,000
DIRECT EXPENSES =	**$ 5,000**

LABOR SUMMARY	
Engineering Expenses =	$ 34,336
Surveying Expenses =	$ -
Drafting Expenses =	$ -
Administrative Expenses =	$ 312
TOTAL LABOR EXPENSES =	**$ 34,648**

TOTAL EXPENSES =	**$ 39,648**

Engineering Enterprises, Inc.

ATTACHMENT C:
ANTICIPATED PROJECT SCHEDULE

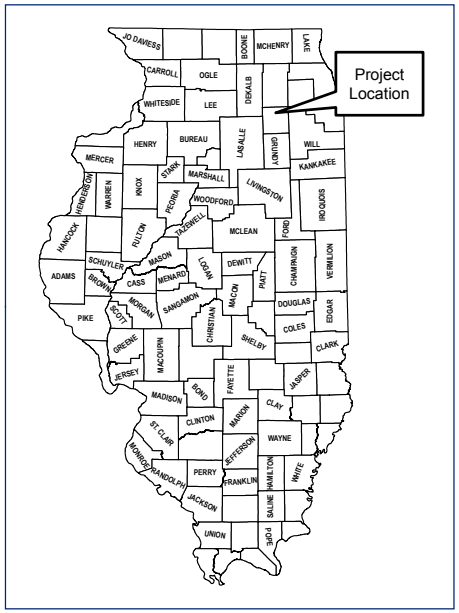
CENTER / COUNTRYSIDE RESURFACING
UNITED CITY OF YORKVILLE, IL

WORK ITEM NO.	WORK ITEM	Year:	2017																													
		Month:	January				February				March				April				May				June				July				August				September			
		Week Starting:	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CONSTRUCTION ENGINEERING																																						
3.1	Contract Administration																																					
3.2	Constructing Layout																																					
3.3	Observation and Documentation																																					

\\Milkyway\EEI_Storage\Docs\Public\Yorkville\2016\YO1608-P Center Parkway Countryside Parkway LAFO\PSA - Phase III\[Attachment C - Schedule.xls]Schedule

Legend

Project Management & QC/QA	Preliminary
Meeting(s)	Design Work Item
Bidding and Contracting	Construction



0 800 Feet

CENTER PKWY AND COUNTRYSIDE PKWY

PROJECT ENDS - COUNTRYSIDE PKWY

PROJECT BEGINS - CENTER PKWY

COUNTRYSIDE PARKWAY

CENTER PARKWAY

IL 47 (FAP 326)

US 34 (FAP 591)

Anderson
Kendall
Center
Naden
Strawberry
Conover
Dickson
Bridge
Carpenter
Marketview
McHugh
Menard
Mulhern
Palmer
Countryside
Cannonball
John
Comell
Independence
Cody
Carly
Hillcrest
Leisure
Pleasure
Georgeanna
Game Farm
Prairie
Sunset
Conover
Veterans
Marketplace
Landmark
Dalton
Freemont
McHugh
Heartland

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MARCH 2016
PROJECT NO.:	YO1608
BY:	KKP
PATH:	H:\GIS\PUBLIC\YORKVILLE\2016\
FILE:	YO1608_CountrysidePkwy.MXD

CENTER PARKWAY AND COUNTRYSIDE PARKWAY (FAU 3797)
ATTACHMENT D
UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS

N

Standard Schedule of Charges

January 1, 2016

EMPLOYEE DESIGNATION	CLASSIFICATION	HOURLY RATE
Senior Principal	E-4	$190.00
Principal	E-3	$185.00
Senior Project Manager	E-2	$180.00
Project Manager	E-1	$163.00
Senior Project Engineer/Planner/Surveyor II	P-6	$150.00
Senior Project Engineer/Planner/Surveyor I	P-5	$141.00
Project Engineer/Planner/Surveyor	P-4	$129.00
Senior Engineer/Planner/Surveyor	P-3	$117.00
Engineer/Planner/Surveyor	P-2	$108.00
Associate Engineer/Planner/Surveyor	P-1	$ 97.00
Senior Project Technician II	T-6	$141.00
Senior Project Technician I	T-5	$129.00
Project Technician	T-4	$117.00
Senior Technician	T-3	$108.00
Technician	T-2	$ 97.00
Associate Technician	T-1	$ 84.00
Engineering/Land Surveying Intern	I-1	$ 80.00
GIS Technician	G-1	$ 65.00
Administrative Assistant	A-3	$ 78.00

CREW RATES, VEHICLES AND REPROGRAPHICS		
1 Man Field Crew with Standard Survey Equipment		$153.00
2 Man Field Crew with Standard Survey Equipment		$240.00
1 Man Field Crew with RTS or GPS *		$190.00
2 Man Field Crew with RTS or GPS *		$276.00
Vehicle for Construction Observation		$15.00
In-House Scanning and Reproduction	$0.25/Sq. Ft. (Black & White) $1.00/Sq. Ft. (Color)	

*RTS = Robotic Total Station / GPS = Global Positioning System

52 Wheeler Road, Sugar Grove, IL 60554 ~ (630) 466-6700 tel ~ (630) 466-6701 fax ~ www.eeiweb.com

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #9

Tracking Number

PW 2017-29

Agenda Item Summary Memo

Title: Kennedy Road Resurfacing – Contract Award

Meeting and Date: City Council – April 25, 2017

Synopsis: Recommendation of Contract Award

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-29

Type of Vote Required:

Council Action Requested: Consideration of Award

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Lisa Pickering, Deputy City Clerk

Date: April 11, 2017
Subject: Kennedy Road Improvements

Bids were received, opened and tabulated for work to be done on the Kennedy Road Improvements at 11:30 a.m., April 10, 2017. Representatives of contractors bidding the project, the City, and our firm were in attendance. A tabulation of the bids and the engineer's estimate is attached for your information and record. The low bid was below our engineer's estimate and within the FY2018 budget.

We recommend the acceptance of the bid and approval of award be made to the low bidder, Geneva Construction Co., PO Box 998, Aurora, IL 60507 in the amount of **$388,437.24.**

If you have any questions or require additional information, please let us know.

Engineering Enterprises, Inc.

BID TABULATION
KENNEDY ROAD RESURFACING
UNITED CITY OF YORKVILLE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	BID TABULATION BIDS RECD 4/10/2017		**GENEVA CONSTRUCTION** P.O. Box 998 Aurora, IL 60507		**BUILDERS PAVING, LLC** 4413 Roosevelt Road-Ste 108 Hillside, IL 60162		**D. CONSTRUCTION** 1488 S. Broadway Coal City, IL 60416		**ENGINEER'S ESTIMATE** 52 Wheeler Road Sugar Grove, IL 60554	
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
1	BITUMINOUS MATERIALS (TACK COAT)	POUND	20,774	$ 0.01	$ 207.74	$ 0.01	$ 207.74	$ 0.01	$ 207.74	$ 0.50	$ 10,387.00		
2	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	889	5.00	$ 4,445.00	13.50	$ 12,001.50	9.00	$ 8,001.00	$ 7.00	$ 6,223.00		
3	LEVELING BINDER (HAND METHOD), N50	TON	20	97.00	$ 1,940.00	108.00	$ 2,160.00	130.00	$ 2,600.00	$ 85.00	$ 1,700.00		
4	LEVELING BINDER (MACHINE METHOD), N50	TON	1,769	57.00	$ 100,833.00	56.00	$ 99,064.00	59.50	$ 105,255.50	$ 66.00	$ 116,754.00		
5	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	2,654	57.00	$ 151,278.00	59.25	$ 157,249.50	59.00	$ 156,586.00	$ 67.00	$ 177,818.00		
6	INCIDENTAL HOT MIX ASPHALT SURFACING	TON	115	93.00	$ 10,695.00	108.00	$ 12,420.00	90.00	$ 10,350.00	$ 80.00	$ 9,200.00		
7	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	225	7.00	$ 1,575.00	10.50	$ 2,362.50	5.75	$ 1,293.75	$ 3.50	$ 787.50		
8	CLASS D PATCHES, 4-INCH	SQ YD	2,844	24.65	$ 70,104.60	24.50	$ 69,678.00	30.00	$ 85,320.00	$ 34.00	$ 96,696.00		
9	RESTORATION	SQ YD	512	11.45	$ 5,862.40	11.45	$ 5,862.40	10.00	$ 5,120.00	$ 10.00	$ 5,120.00		
10	AGGREGATE WEDGE SHOULDER, TYPE B	TON	610	25.00	$ 15,250.00	19.00	$ 11,590.00	24.00	$ 14,640.00	$ 100.00	$ 61,000.00		
11	THERMOPLASTIC PAVEMENT MARKINGS, LETTERS & SYMBOLS	SQ FT	59	4.50	$ 265.50	4.50	$ 265.50	2.87	$ 169.33	$ 6.25	$ 368.75		
12	THERMOPLASTIC PAVEMENT MARKINGS, 4"	FOOT	35,205	0.48	$ 16,898.40	0.48	$ 16,898.40	0.50	$ 17,602.50	$ 2.00	$ 70,410.00		
13	THERMOPLASTIC PAVEMENT MARKINGS, 6"	FOOT	1,389	0.90	$ 1,250.10	0.90	$ 1,250.10	0.68	$ 944.52	$ 2.10	$ 2,916.90		
14	THERMOPLASTIC PAVEMENT MARKINGS, 12"	FOOT	150	2.25	$ 337.50	2.25	$ 337.50	1.35	$ 202.50	$ 4.25	$ 637.50		
15	THERMOPLASTIC PAVEMENT MARKINGS, 24"	FOOT	50	4.50	$ 225.00	4.50	$ 225.00	2.86	$ 143.00	$ 8.50	$ 425.00		
16	RAILROAD PROTECTIVE LIABILITY INSURANCE	LSUM	1	4,850.00	$ 4,850.00	2,500.86	$ 2,500.86	3,400.00	$ 3,400.00	$ 6,500.00	$ 6,500.00		
17	CRACK SEALING	FOOT	200	3.00	$ 600.00	5.25	$ 1,050.00	5.20	$ 1,040.00	$ 2.00	$ 400.00		
18	SHORT TERM PAVEMENT MARKING	FOOT	2,100	0.70	$ 1,470.00	0.65	$ 1,365.00	0.80	$ 1,680.00	$ 1.00	$ 2,100.00		
19	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	700	0.50	$ 350.00	2.00	$ 1,400.00	1.00	$ 700.00	$ 1.00	$ 700.00		
	TOTAL (Items 1 - 19)				**388,437.24**		**397,888.00**		**415,255.84**		**570,143.65**		
	% BELOW/ABOVE ENGINEER'S ESTIMATE				-31.9%		-30.2%		-27.2%				

Big Bend
Pecos
Silver City
Cielo
Juanita
Thomas
Julie
Robert
Gordon
Dickson
Foster
Larkspur
Dogwood
Cypress
Park
Brookside
Willow
Galena
Storybook
Highland
Mill
Beresford
Bailey
Bissel
Kennedy
Cannonball
Berrywood
Anna Maria
Freedom
Matlock
Justice
Rehbehn
Constitution
Jeter
Grande
Royal Oaks
Plum
Grove
Division
Ridge
Division
Alden
Rood
Cryder
Henning
Old Glory
McLellan
Hobbs
Cranston
Ellsworth
Patriot
American
Squire
Burr
Bristol Ridge
Sunset
Parkway
Linden
Lillian
Bazan
Lilac
Slate
Ruby
Emerald
Violet
Madden
Cobalt
Emerald
Lakeview

Legend

Kennedy Road Improvements

1,600 800 0 1,600 Feet

Engineering Enterprises
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-9350
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

DATE:	February 2017
PROJECT NO.:	YO1710
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2017\
FILE:	YO1710 -Kennedy Rd Improve...MXD

ATTACHMENT D

N

Reviewed By:	
Legal	■
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #10

Tracking Number

PW 2017-30

Agenda Item Summary Memo

Title: Subordination of Surface Rights – Route 34 Improvements (Eldamain to Center)

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached.

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-30

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Ordinance No. 2017-____

AN ORDINANCE AUTHORIZING THE SUBORDINATION OF SURFACE RIGHTS FOR PUBLIC ROAD PURPOSES (U.S. ROUTE 34 FROM ELDAMAIN ROAD TO CENTER PARKWAY)

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the City desires to subordinate unto the People of the State of Illinois, Department of Transportation any interest it has in certain easements filed in the Recorder's Office of Kendall County, as set forth in an agreement between the parties, to the right of the State of Illinois to construct, reconstruct, operate, maintain and control access to FAP 591 (US 34) on certain parcels from Eldamain Road to Center Parkway located within the City.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1: The document entitled SUBORDINATION OF SURFACE RIGHTS FOR PUBLIC ROAD PURPOSES, attached hereto and made a part hereof, is hereby approved and the Mayor and City Clerk are hereby authorized to execute and deliver said document on behalf of the City.

Section 2: The Mayor and City Clerk are hereby authorized to execute any and all additional documents as may be required to implement the terms thereof.

Section 3: This Ordinance shall be in full force and effect from and after its passage, approval, and publication in pamphlet form as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois, this ___ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

APPROVED by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this ___ day of _____, 2017.

_____
MAYOR

Illinois Department of Transportation
Office of Highways Project Implementation / Region 2 / District 3
700 East Norris Drive / Ottawa, Illinois 61350-1628

March 22, 2017

United City of Yorkville
800 Game Farm Road
Yorkville, IL, 60560
Attn: City Clerk

LAND ACQUISITION
FAP 591 (US RT 34)
Section (13)R-2[(13BR)C,(13BR-1)BR]
Kendall County
Job No. R-93-010-13
SUBORDINATION OF SURFACE RIGHTS

Dear Sir or Madam:

The Illinois Department of Transportation is in the process of improving a portion of US RT 34 from Eldamain Road to Center Parkway in Yorkville, Illinois. Our record indicates the city has easements located within the project limits. It is necessary that a subordination of surface rights be secured from the city before we can complete the right of way acquisition process.

Enclosed are two (2) subordination forms with right of way plats attached and one (1) copy of the title report indicating the easement data. To aid in the identification of the project area, a highlighted plat book map is included. Please have the proper signatures affixed to the original document and return it to this office for filing.

If your Easement is not affected, please notify this office in writing so we can close our files.

If you should have any questions or require additional information, please contact Kristine Klieber at telephone number (815) 434-8467 or via e-mail at Kristine.Klieber@illinois.gov.

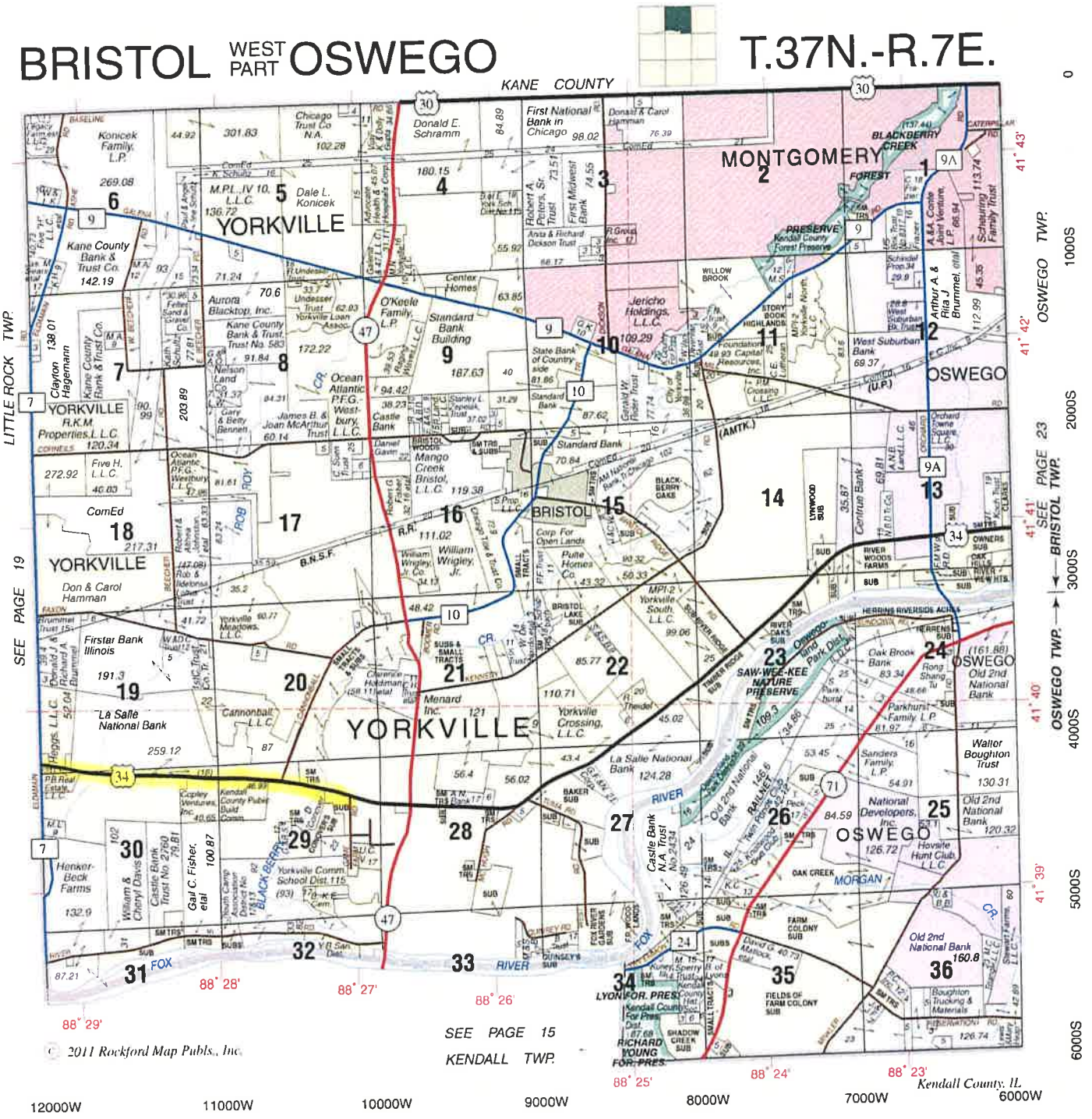
Sincerely,

Kevin Marchek, P.E.
Region Two Engineer

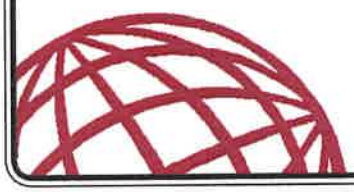
Steven B. Andrews

By: Steven B. Andrews
District Land Acquisition Engineer

BRISTOL WEST PART OSWEGO T.37N.-R.7E.



LATITUDE / LONGITUDE INFORMATION



Latitude and longitude information is a coordinate system written in degrees (°) and minutes (') and uses a grid that enables us to precisely locate a particular place or point on the earth's surface.

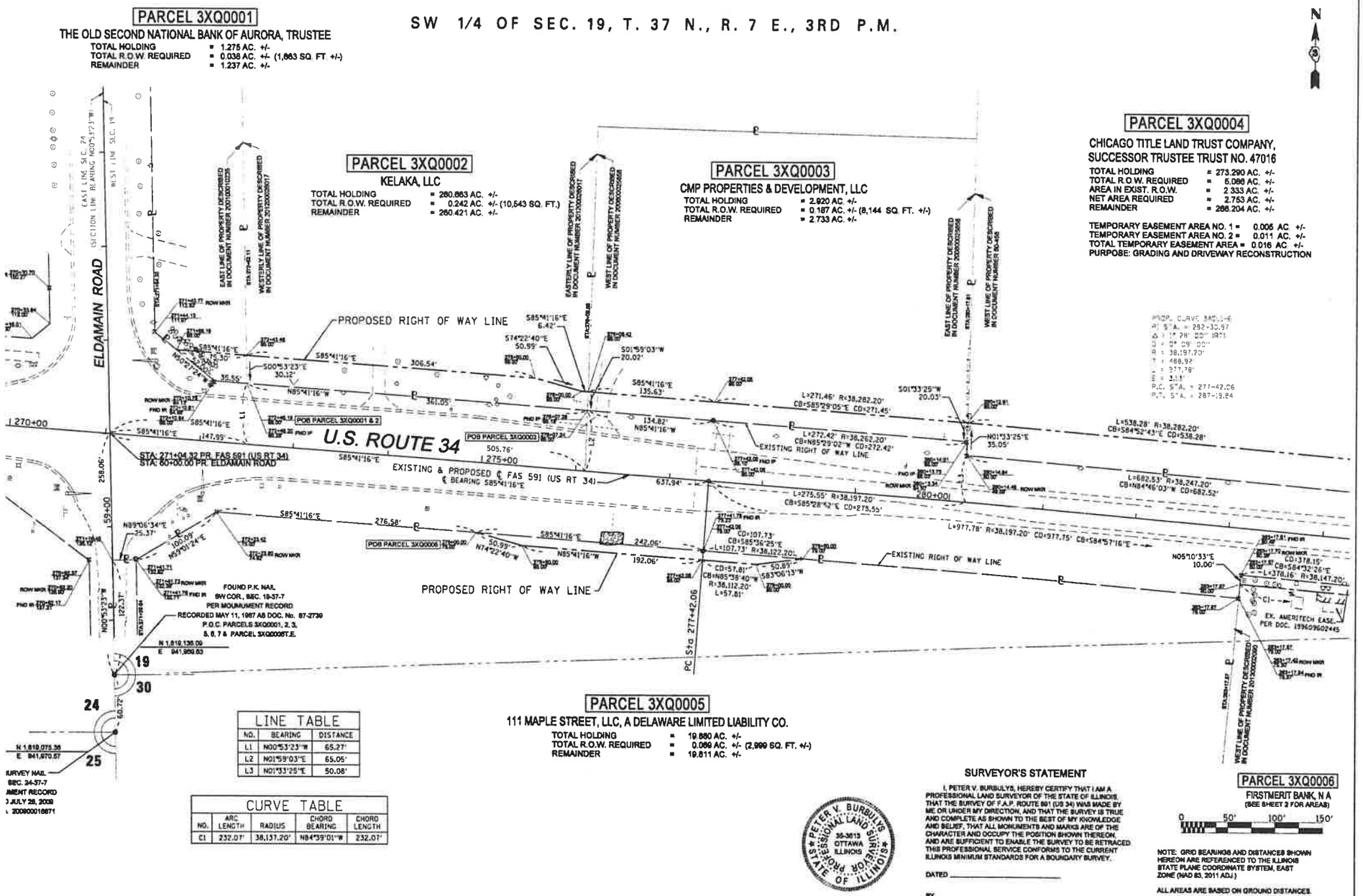
Latitude lines, or parallels, run horizontally across the surface of the map and is the angular distance north or south from the equator of a particular point on the earth's surface. The degrees continue 90° north and south, with 0° being located at the equator.

Longitude lines, or meridians, run vertically and is the angular distance of a particular point east or west of the prime meridian at 0° located in Greenwich, England. The degrees continue 180° east and 180° west where they come together to form the International Date Line in the Pacific Ocean.

Degrees latitude and longitude are divided into minutes and seconds for more precision in finding a particular point on earth. There are 60 minutes in each degree and each minute is divided into 60 seconds.

Rockford Map Publishers, Inc. is located at 42°15'N , 88°52'W (42 degrees and 15 minutes north of the equator and 88 degrees and 52 minutes west of the meridian in Greenwich, England.)

DOCUMENT NUMBER _____



LINE TABLE		
NO.	BEARING	DISTANCE
L1	N00°53'23"W	65.27'
L2	N01°59'03"E	65.05'
L3	N01°33'25"E	50.08'

CURVE TABLE				
NO.	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	232.07'	38,137.20'	N84°39'01"W	232.07'

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2016)

PETER V. BURBULYS * 35-3613 * OTTAWA ILLINOIS * PROFESSIONAL LAND SURVEYOR * STATE OF ILLINOIS

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004870

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = gmoore	DESIGNED -	REVISED NAME CHANGE P4 3/29/16 PVB
C:\Documents\IDOT Offices\District 3\Projects\EPE\23587\Drawings\Sheet01.dgn	DRAWN -	REVISED POB P4 4/04/16 PVB
PLOT SCALE = 50.2222 ' / in.	CHECKED -	REVISED NAME CHANGE P5 8/31/16 MRB
PLOT DATE = 8/31/2016	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

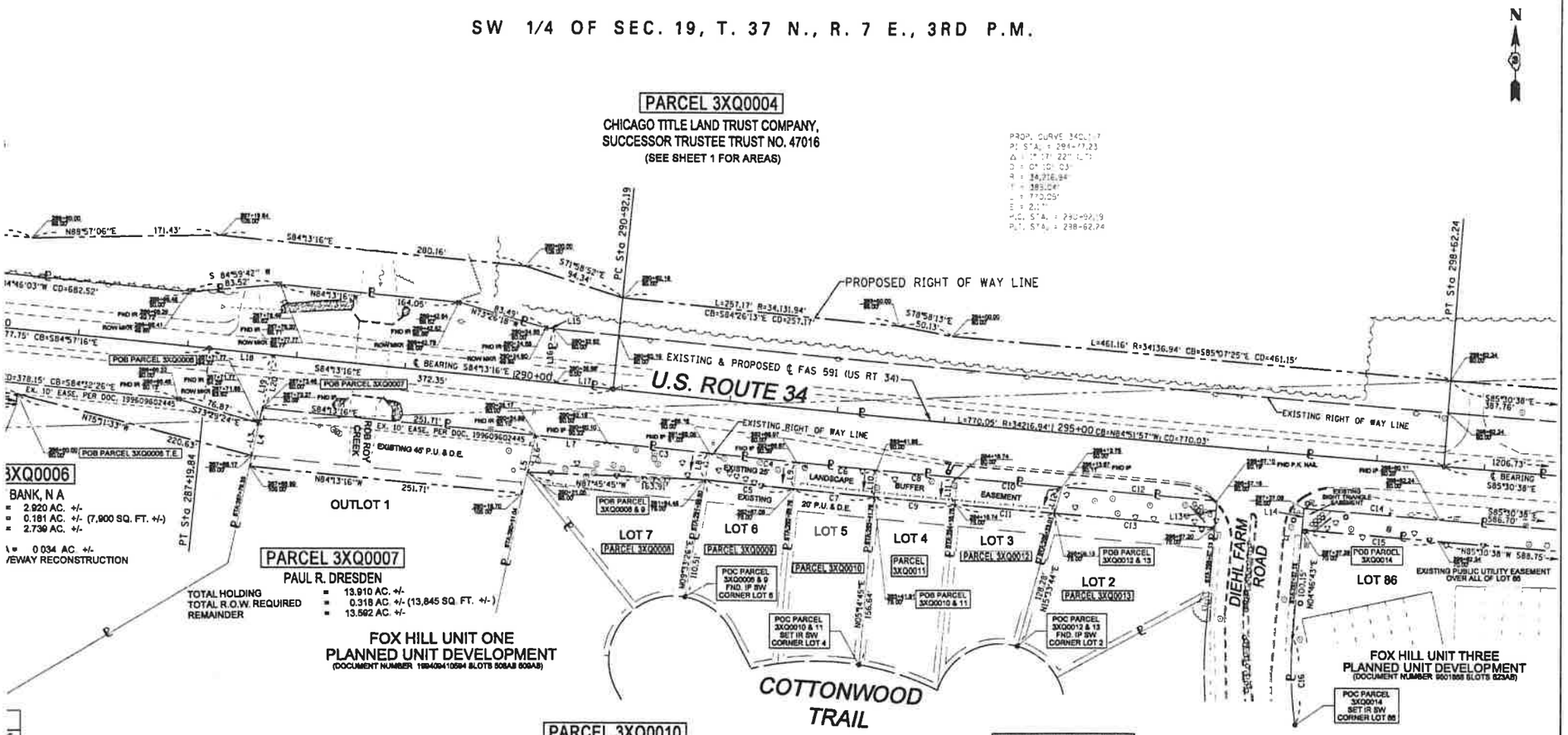
PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 50' SHEET 1 OF 9 SHEETS STA. 269+00.00 TO STA. 284+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
591	(13)R-2((13)BRIC,(13 BR-1)BR1	KENDALL	
	US ROUTE 34	CONTRACT NO. 66993	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

DOCUMENT NUMBER _____

SW 1/4 OF SEC. 19, T. 37 N., R. 7 E., 3RD P.M.



3XQ0006
BANK, N A
= 2.920 AC. +/-
= 0.161 AC. +/- (7,900 SQ. FT. +/-)
= 2.739 AC. +/-

\= 0.034 AC. +/-
/EWAY RECONSTRUCTION

PARCEL 3XQ0007
PAUL R. DRESDEN
TOTAL HOLDING = 13.910 AC. +/-
TOTAL R.O.W. REQUIRED = 0.318 AC. +/- (13,845 SQ. FT. +/-)
REMAINDER = 13.592 AC. +/-

PARCEL 3XQ0010
THOMAS W. JOSLIN
TOTAL HOLDING = 13,722 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 1,875 SQ. FT. +/-
REMAINDER = 11,847 SQ. FT. +/-

PARCEL 3XQ0013
JOBIE O. HULON, et ux.
TOTAL HOLDING = 21,787 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 3,651 SQ. FT. +/-
REMAINDER = 18,116 SQ. FT. +/-

PARCEL 3XQ0008
JESUS DIAZ, et ux.
TOTAL HOLDING = 17,371 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 4,851 SQ. FT. +/-
REMAINDER = 12,520 SQ. FT. +/-

PARCEL 3XQ0012
PAULA J. WHEET
TOTAL HOLDING = 13,251 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 2,372 SQ. FT. +/-
REMAINDER = 10,879 SQ. FT. +/-

PARCEL 3XQ0014
THE OAKS AT FOX HILL TOWNHOMES ASSOCIATION, INC.
TOTAL HOLDING = 0.327 AC. +/-
TOTAL R.O.W. REQUIRED = 0.327 AC. +/- (14,244 SQ. FT. +/-)
REMAINDER = 0.000 AC. +/-

PARCEL 3XQ0009
MICHAEL O. WILLIAMS, et al.
TOTAL HOLDING = 14,297 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 2,047 SQ. FT. +/-
REMAINDER = 12,250 SQ. FT. +/-

PARCEL 3XQ0011
JOSE HERNANDEZ, et al.
TOTAL HOLDING = 14,105 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 1,875 SQ. FT. +/-
REMAINDER = 12,230 SQ. FT. +/-

CURVE TABLE				
NO.	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	232.07'	38,137.20'	N84°39'01"W	232.07'
C2	149.76'	38,137.20'	S84°35'18"E	149.76'
C3	94.11'	34,266.94'	S84°17'59"E	94.11'
C4	80.93'	34,266.94'	S84°26'46"E	80.93'
C5	82.81'	34,291.94'	N84°26'41"W	82.81'
C6	75.00'	34,266.94'	S84°34'35"E	75.00'
C7	75.00'	34,291.94'	N84°34'36"W	75.00'
C8	75.00'	34,266.94'	S84°42'07"E	75.00'
C9	75.00'	34,291.94'	N84°42'07"W	75.00'
C10	97.15'	34,266.94'	S84°50'45"E	97.15'
C11	92.59'	34,291.94'	N84°50'31"W	92.59'
C12	143.64'	34,266.94'	S85°02'50"E	143.64'
C13	148.40'	34,291.94'	N85°02'36"W	148.40'
C14	125.36'	34,266.94'	S85°24'21"E	125.36'
C15	125.46'	34,286.94'	N85°24'21"W	125.46'
C16	81.56'	359.98'	N01°42'42"W	81.38'

NW 1/4 OF SEC. 30, T. 37 N., R. 7 E., 3RD P.M.

PETER V. BURBULYS 35-3613 OTTAWA ILLINOIS PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF. THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2016)

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004670

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = [illegible]	DESIGNED	REVISED 12/15/15 PVB REV PR ROW PT
[illegible]	REVISED 1/29/16 PVB NAME CHANGE PM	
PLOT SCALE = 50.0000 ' / in.	CHECKED	REVISED 8/26/16 MRB TOTAL TAKE M
PLOT DATE = 9/12/2016	DATE	REVISED 9/12/16 MRB CORRECTED NAME M

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

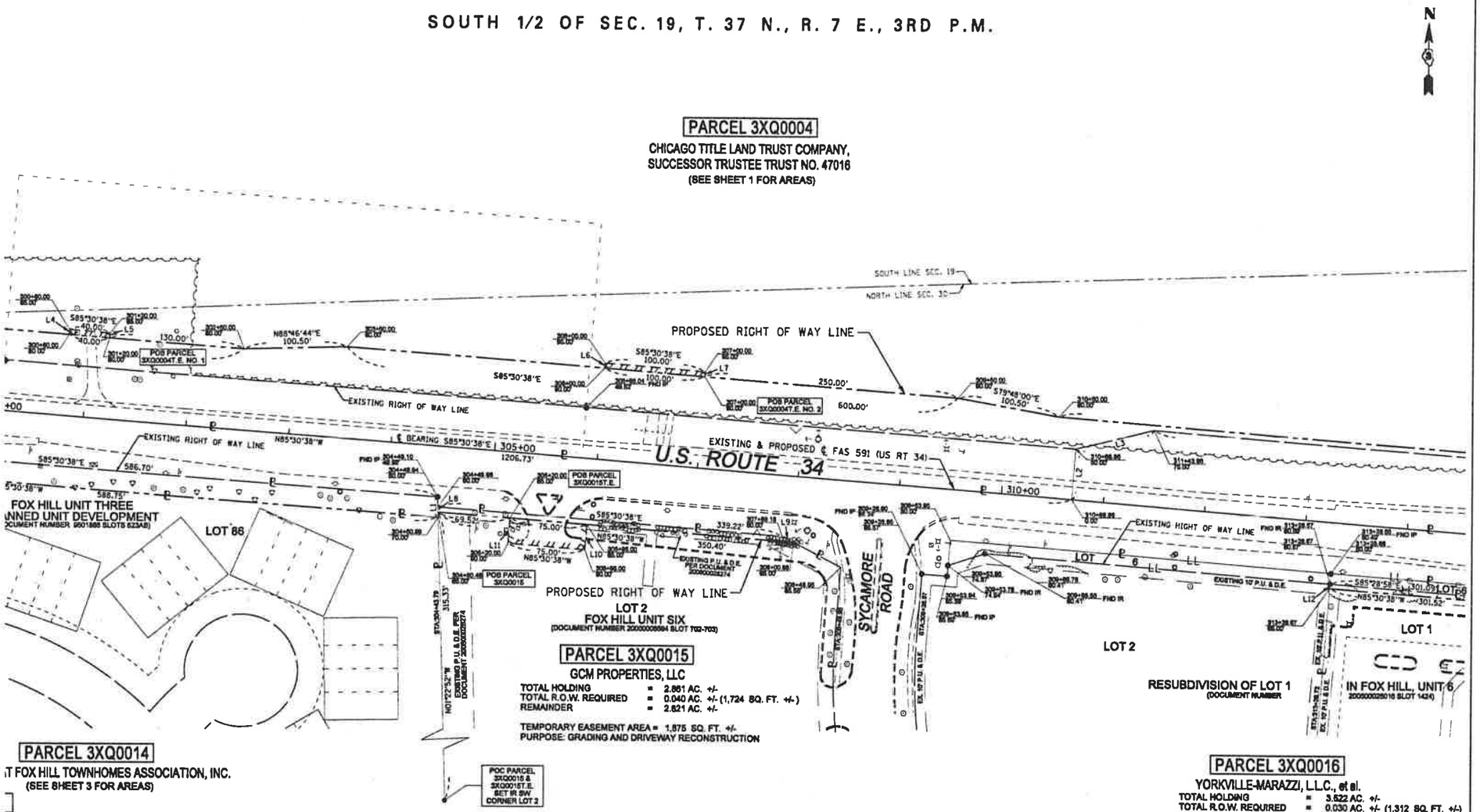
PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 50' SHEET 2 OF 9 SHEETS STA. 284+00.00 TO STA. 299+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13)R-2(13)BR,(13 BR-1)BR)	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
	FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT		

DOCUMENT NUMBER _____

SOUTH 1/2 OF SEC. 19, T. 37 N., R. 7 E., 3RD P.M.



NORTH 1/2 OF SEC. 30, T. 37 N., R. 7 E., 3RD P.M.

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2010)

PETER V. BURBULYS * PROFESSIONAL LAND SURVEYOR * 35-3613 OTTAWA ILLINOIS

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004870

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = brucknm	DESIGNED -	REVISED 3/23/18 PVB NAME CHANGE, PM
\Documents\1000 Offices\District 3\Projects\[illegible]\Data\Survey\dgn\[illegible]-Sheet03.dgn	DRAWN -	REVISED 8/22/18 AMB TOTAL TAKE, M
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED 9/28/18 AMB CORRECTED NAME, M
PLOT DATE = 9/12/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

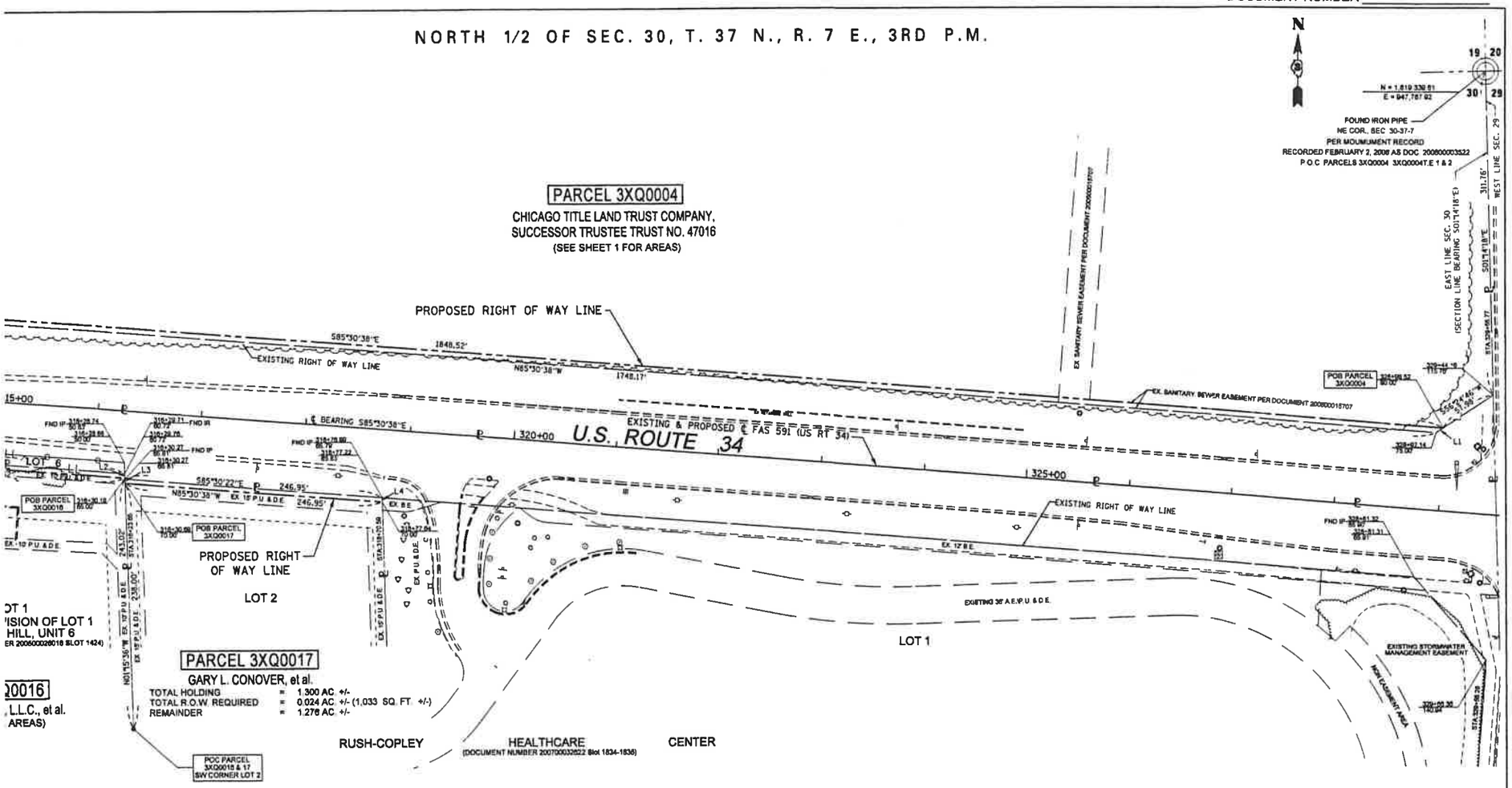
PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 50' SHEET 3 OF 9 SHEETS STA. 299+00.00 TO STA. 314+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13)R-2(13)BRIC,(13 BR-1)BR1	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT			

DOCUMENT NUMBER _____

NORTH 1/2 OF SEC. 30, T. 37 N., R. 7 E., 3RD P.M.



LINE TABLE	
BEARING	DISTANCE
S56°24'46"W	8.11'
S01°15'36"E	4.30'
N01°15'36"W	4.21'
S01°15'36" E	4.19'

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL
LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2016)

PETER V. BURBULYS * PROFESSIONAL LAND SURVEYOR * STATE OF ILLINOIS
35-3613
OTTAWA
ILLINOIS

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004670

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE

USER NAME = burbulysv	DESIGNED -	REVISED 3/29/16 PVB NAME CHANGE P4	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/29/2016	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

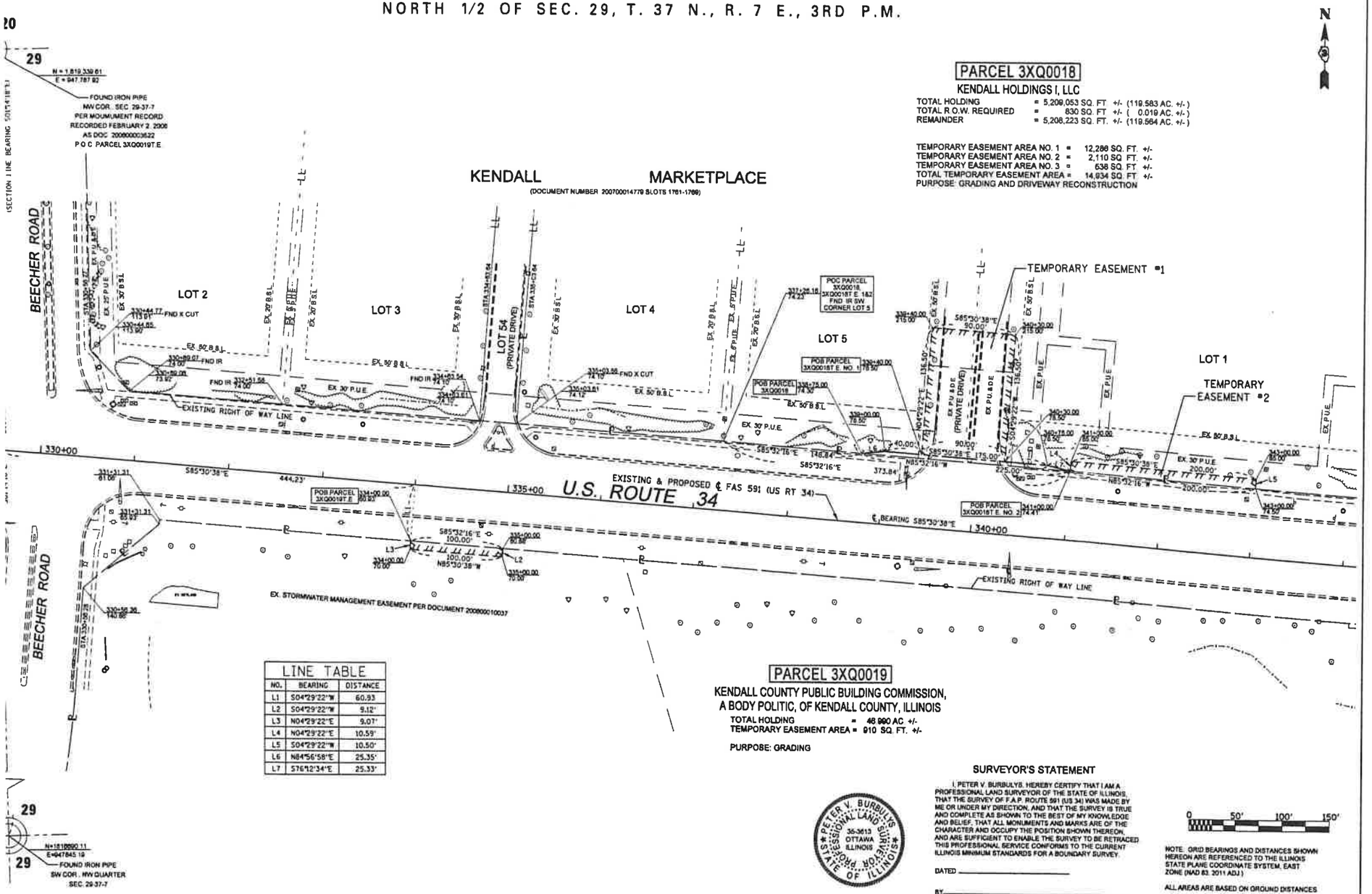
PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 50' SHEET 4 OF 9 SHEETS STA. 314+00.00 TO STA. 329+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13)R-2(13)BRIC,(13 BR-1)BRJ	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

DOCUMENT NUMBER _____

NORTH 1/2 OF SEC. 29, T. 37 N., R. 7 E., 3RD P.M.



PARCEL 3XQ0018

KENDALL HOLDINGS I, LLC

TOTAL HOLDING = 5,208,053 SQ. FT +/- (119.583 AC. +/-)
TOTAL R.O.W. REQUIRED = 830 SQ. FT +/- (0.019 AC. +/-)
REMAINDER = 5,208,223 SQ. FT. +/- (119.564 AC. +/-)

TEMPORARY EASEMENT AREA NO. 1 = 12,286 SQ. FT. +/-
TEMPORARY EASEMENT AREA NO. 2 = 2,110 SQ. FT. +/-
TEMPORARY EASEMENT AREA NO. 3 = 638 SQ. FT +/-
TOTAL TEMPORARY EASEMENT AREA = 14,934 SQ. FT +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

LINE TABLE		
NO.	BEARING	DISTANCE
L1	S04°29'22"W	60.93'
L2	S04°29'22"W	9.12'
L3	N04°29'22"E	9.07'
L4	N04°29'22"E	10.59'
L5	S04°29'22"W	10.50'
L6	N84°56'58"E	25.35'
L7	S76°12'34"E	25.33'

PARCEL 3XQ0019

KENDALL COUNTY PUBLIC BUILDING COMMISSION,
A BODY POLITIC, OF KENDALL COUNTY, ILLINOIS

TOTAL HOLDING = 46.990 AC +/-
TEMPORARY EASEMENT AREA = 910 SQ. FT. +/-

PURPOSE: GRADING

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL
LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2016)

PETER V. BURBULYS * PROFESSIONAL LAND SURVEYOR * STATE OF ILLINOIS
35-3613
OTTAWA
ILLINOIS

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES

GRID TO GROUND COMBINED FACTOR = 1.0000487D

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE

USER NAME = burbulysv	DESIGNED -	REVISED 12/21/15 PVB ADD 3Y00018	
I:\IDOT\Documents\IDOT Offices\District 3\Projects\EP02587\Sheets\EP02587-Sheet05.dgn	DRAWN -	REVISED 1/28/16 MIB NAME CHANGE (JB)	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED 03/03/16 PVB AREA 3Y00018	
PLOT DATE = 4/12/2016	DATE -	REVISED 04/12/16 PVB EASE. PURP. P19	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

SCALE: 1" = 50'

PROJECT _____ JOB NO. R-93-010-13
SHEET 5 OF 9 SHEETS STA. 329+00.00 TO STA. 344+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13)R-2(13BRIC,13) BR-1(BR)	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

DOCUMENT NUMBER _____

NORTH 1/2 OF SEC. 29, T. 37 N., R. 7 E., 3RD P.M.

CURVE TABLE				
NO.	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	67.37'	7,397.00'	S79°15'24"E	67.37'
C2	47.62'	7,380.00'	N78°48'17"W	47.62'
C3	70.70'	7,522.00'	N79°57'58"W	70.70'
C4	113.95'	7,522.00'	S80°40'10"E	113.95'

LINE TABLE		
NO.	BEARING	DISTANCE
L1	N04°29'22"E	5.00'
L2	S04°29'22"W	5.00'
L3	S85°30'38"E	31.39'
L4	S85°30'38"E	65.00'
L5	S04°29'22"W	20.00'
L6	N85°30'38"W	65.00'
L7	N04°29'22"E	20.00'
L8	N46°22'46"E	40.16'
L9	S06°58'40"W	5.51'
L10	S66°48'22"W	51.69'
L11	S07°00'13"W	5.20'
L12	S08°18'57"W	17.02'
L13	N84°18'15"W	19.92'
L14	N09°45'52"E	30.00'
L15	S10°18'11"W	30.00'

FOUND IRON ROD
N 1/4 COR., SEC. 29-37-7
PER MOUNUMENT RECORD
RECORDED SEPTEMBER 14, 1981
AS DOC. 81-3633
POC PARCEL 3XQ0020, 28, 27, 28 &
3XQ0020T E. & 28T.E
N=1,819,443.38
E=980,432.94

PRIOR CURVE DATA
R = 7,447.00'
L = 660.39'
P.C. STA. = 350+34.38
P.T. STA. = 357+09.24

PARCEL 3XQ0018
KENDALL HOLDINGS I, LLC
(SEE SHEET 5 FOR AREAS)

L MARKETPLACE
DOCUMENT NUMBER 2007000014779 SLOTS 1781-1782)

LOT 6 | LOT 7

POC PARCEL 3XQ0018T.E. 3 FND. IR SE CORNER LOT 6

LOT CORNER 348+73.80 100.12' FND X CUT

EXISTING 50' B.S.L.

EXISTING 30' P.U.E.

EXISTING RIGHT OF WAY LINE

POB PARCEL 3XQ0018T.E. NO. 3

EXISTING & PROPOSED ℄ FAS 591 (US RT 34)

℄ BEARING S85°30'38"E

CANNONBALL TRAIL

EXISTING RIGHT OF WAY LINE

U.S. ROUTE 34

350+00 | 355+00

POB PARCEL 3XQ0021T.E

POB PARCEL 3XQ0022

POB PARCEL 3XQ0023

POB PARCEL 3XQ0024

POB PARCEL 3XQ0025

EX. 10' UTILITY AND ACCESS STRIP EASE.

EX. 10' UTILITY EASE.

EXISTING 10' UTILITY EASEMENT

EXISTING 10' UTILITY AND

PROPOSED RIGHT OF WAY LINE

BLOCK 4

CIMARRON RIDGE
(DOCUMENT NUMBER 1991009132B4 SLOTS 466 A&B)

CANNONBALL TRAIL

LOT 9 BLOCK 1 SUBDIVISION

LOT 12

EXISTING 30' U.T.I.L.I.T.Y. EASEMENT

EAST LINE OF DOCUMENT NUMBER 200300023962

POC PARCEL 3XQ0021T.E FND IP SW CORNER BLOCK 4

POC PARCEL 3XQ0022, 23, 24, 26 SET IR SW CORNER LOT 9, BLOCK 1

PARCEL 3XQ0020
ESMER CAPITAL MANAGEMENT ENTERPRISES, LLC

TOTAL HOLDING	=	7.731 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.807 AC. +/-
AREA IN EXIST. R.O.W.	=	0.540 AC. +/-
NET AREA REQUIRED	=	0.267 AC. +/-
REMAINDER	=	6.924 AC. +/-

TEMPORARY EASEMENT AREA = 0.049 AC. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

POB PARCEL 3XQ0020 | POB PARCEL 3XQ0070T E

PROPOSED RIGHT OF WAY LINE

TEMPORARY EASEMENT LINE

40' UTILITY EASEMENT

PER DOCUMENT 1993003119A0

PARCEL 3XQ0021
FIRST NATIONAL BANK OF OTTAWA, TRUSTEE

TOTAL HOLDING	=	2.430 AC. +/-

TEMPORARY EASEMENT AREA = 1,300 SQ. FT. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

PARCEL 3XQ0022
KAI FENG LI

TOTAL HOLDING	=	0.940 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.027 AC. +/- (1,171 SQ. FT. +/-)
REMAINDER	=	0.913 AC. +/-

PARCEL 3XQ0023
FIRST NATIONAL BANK OF OMAHA, TRUSTEE

TOTAL HOLDING	=	1.521 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.029 AC. +/- (1,278 SQ. FT. +/-)
REMAINDER	=	1.492 AC. +/-

PARCEL 3XQ0024
FIRST NATIONAL BANK OF OMAHA, TRUSTEE

TOTAL HOLDING	=	1.666 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.091 AC. +/- (3,964 SQ. FT. +/-)
REMAINDER	=	1.575 AC. +/-

PARCEL 3XQ0025
FIRST NATIONAL BANK OF OMAHA, TRUSTEE

TOTAL HOLDING	=	4.026 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.100 AC. +/- (4,335 SQ. FT. +/-)
REMAINDER	=	3.926 AC. +/-

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF. THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2010)

PETER V. BURBULYS * PROFESSIONAL LAND SURVEYOR * STATE OF ILLINOIS
35-3613
OTTAWA
ILLINOIS

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004670

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = brucem	DESIGNED	REVISED 1/28/16 MG3 NAME CHANGE (18)
PLOT SCALE = 50.2000 ' / in.	CHECKED	REVISED 3/4/16 MG3 NAME CHANGE (21)
PLOT DATE = 4/13/2016	DATE	REV. 3/4/16 MG3 NAME CHANGE (21,23 - 25)
		REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 50' SHEET 6 OF 9 SHEETS STA. 344+00.00 TO STA. 359+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	113(R-2)113BRIC,113 BR-1(BRI	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT			

DOCUMENT NUMBER _____

NORTH 1/2 OF SEC. 29, T. 37 N., R. 7 E., 3RD P.M.

3XQ0026
/ MANAGEMENT, LLC
1.000 AC. +/-
0.258 AC. +/- (11,241 SQ. FT. +/-)
0.172 AC. +/- (7,496 SQ. FT. +/-)
0.086 AC. +/- (3,745 SQ. FT. +/-)
0.742 AC. +/-

PARCEL 3XQ0027
HARVEST PROPERTY MANAGEMENT, LLC
TOTAL HOLDING = 5.261 AC. +/-
TOTAL R.O.W. REQUIRED = 0.274 AC. +/- (11,933 SQ. FT. +/-)
AREA IN EXIST. R.O.W. = 0.187 AC. +/- (8,136 SQ. FT. +/-)
NET AREA REQUIRED = 0.087 AC. +/- (3,797 SQ. FT. +/-)
REMAINDER = 4.987 AC. +/-

PARCEL 3XQ0028
DANNY V. FRANTZ, et al.
TOTAL HOLDING = 1.914 AC. +/-
TOTAL R.O.W. REQUIRED = 0.153 AC. +/- (6,661 SQ. FT. +/-)
REMAINDER = 1.761 AC. +/-

TEMPORARY EASEMENT AREA = 8,044 SQ. FT. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

TOTAL HOLDING = 0.617 AC. +/-
TOTAL R.O.W. REQUIRED = 0.429 AC. +/- (18,695 SQ. FT. +/-)
REMAINDER = 0.188 AC. +/-

PARCEL 3XQ0029
THE UNITED CITY OF YORKVILLE
TOTAL HOLDING = 0.617 AC. +/-
TOTAL R.O.W. REQUIRED = 0.429 AC. +/- (18,695 SQ. FT. +/-)
REMAINDER = 0.188 AC. +/-

PARCEL 3XQ0030
COUNTRYSIDE VILLAGES II, LLC
TOTAL HOLDING = 4.250 AC. +/-
TOTAL R.O.W. REQUIRED = 0.126 AC. +/- (5,484 SQ. FT. +/-)
REMAINDER = 4.124 AC. +/-

PARCEL 3XQ0031
YORKVILLE MOB, LLC
TOTAL HOLDING = 3.312 AC. +/-
TOTAL R.O.W. REQUIRED = 0.217 AC. +/- (9,446 SQ. FT. +/-)
REMAINDER = 3.095 AC. +/-

PROP. CURVE ROWREV2
PI STA. = 373+49.97
Δ = 0° 29' 34" (LT)
D = 0° 14' 48"
R = 23,235.56'
T = 99.94'
L = 199.87'
E = 0.21'
P.C. STA. = 372+50.03
P.T. STA. = 374+49.91

COUNTRYSIDE CENTER UNIT NO. 2
(DOCUMENT NUMBER 71-3366 SLOT 91 A&B)

COUNTRYSIDE CENTER UNIT NO. 4
(DOCUMENT NUMBER 73-1496 SLOTS 53 A, 54 A&B, 55)

LOT 2 BLOCK 6

BLOCK 6 ⊙ LOT 1

BLOCK 2 ⊙ LOT 1

PROPOSED RIGHT OF WAY LINE

EXISTING RIGHT OF WAY LINE

TEMPORARY EASEMENT LINE

U.S. ROUTE 34

EXISTING & PROPOSED ℄ FAS 591 (US RT 34)

PROPOSED ℄ FAS 591 (US RT 34)

EXISTING CENTER LINE OF US ROUTE 34

BLOCK 3 LOT 12

CIMARRON RIDGE SUBDIVISION
(DOCUMENT NUMBER 1991009132B4 SLOTS 409 A&B)

LOT 12

GAME FARM ROAD

PARCEL 3XQ0025
FIRST NATIONAL BANK OF OMAHA, TRUSTEE
SEE SHEET 6 FOR AREAS)

PROP. CURVE 34CL1-8
PI STA. = 358+75.36
Δ = 12° 53' 10" (RT)
D = 0° 46' 10"
R = 7,447.00'
T = 840.98'
L = 1,674.87'
E = 47.34'
P.C. STA. = 350+34.38
P.T. STA. = 367+09.24

PARCEL 3XQ0032
DAVID L. FISHER, et ux.
TOTAL HOLDING = 10.309 AC. +/-
TOTAL R.O.W. REQUIRED = 0.577 AC. +/- (25,143 SQ. FT. +/-)
REMAINDER = 9.732 AC. +/-

PARCEL 3XQ0033
SUSAN I. KRITZBERG, TRUSTEE
TOTAL HOLDING = 3.624 AC. +/-
TOTAL R.O.W. REQUIRED = 0.030 AC. +/- (1,326 SQ. FT. +/-)
REMAINDER = 3.594 AC. +/-

TEMPORARY EASEMENT AREA = 4,982 SQ. FT. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

LINE TABLE

NO.	BEARING	DISTANCE
L1	S07°20'02"E	79.75'
L2	S07°20'02"E	80.34'
L3	S19°53'54"E	91.33'
L4	S23°21'05"E	32.71'
L5	N23°21'05"W	45.77'
L6	S70°17'50"E	79.59'
L7	S07°50'45"E	35.12'
L8	S73°53'04"E	87.65'
L9	S42°04'06"W	39.04'
L10	N72°37'28"W	73.27'
L11	N14°45'56"E	15.00'
L12	N15°36'42"E	30.00'
L13	S12°44'27"W	15.00'
L14	S72°37'28"E	40.78'
L15	N17°17'38"E	50.32'
L17	N34°10'01"E	18.51'
L18	S00°51'00"W	3.75'
L19	N66°30'21"W	30.29'
L20	N73°53'04"W	50.03'
L21	N75°56'10"W	100.04'
L22	N83°09'34"W	55.52'
L23	S16°04'08"W	20.00'
L24	N73°53'04"W	50.03'
L25	N73°53'04"W	40.00'
L26	N16°06'56"E	42.00'
L27	S07°50'45"E	20.00'
L28	N14°45'56"E	45.00'
L29	S19°53'54"E	30.40'

LINE TABLE

NO.	BEARING	DISTANCE
L30	S74°48'41"E	111.77'
L31	S74°14'04"E	40.81'
L32	S15°55'10"W	75.00'

CURVE TABLE

NO.	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	94.53'	7,532.00'	S72°59'02"E	94.53'
C2	64.67'	7,497.00'	N72°52'18"W	64.67'
C3	90.90'	23,155.56'	S73°59'49"E	90.90'
C4	73.96'	6,804.70'	N72°56'09"W	73.96'
C5	108.28'	23,155.56'	S74°14'36"E	108.28'
C6	70.42'	23,290.56'	N73°58'16"W	70.42'
C7	101.82'	6,904.71'	S73°02'49"E	101.82'
C8	51.41'	23,290.56'	S73°59'40"E	51.41'
C9	19.01'	23,290.56'	S73°54'28"E	19.01'
C10	19.03'	23,310.56'	N73°54'28"W	19.03'
C11	133.82'	7,382.00'	N76°17'33"W	133.82'
C12	8.32'	7,522.00'	S75°15'58"E	8.32'
C13	151.51'	7,522.00'	N74°39'27"W	151.51'

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

PETER V. BURBULYS PROFESSIONAL LAND SURVEYOR 35-3613 OTTAWA ILLINOIS STATE OF ILLINOIS

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2016)

0 50' 100' 150'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES

GRID TO GROUND COMBINED FACTOR = 1.00004870

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = wolteringgl
DESIGNED -
CHECKED -
DATE -
PLOT SCALE = 100.0000 ' / in.
PLOT DATE = 9/23/2016

REVISED	
REVISED	4/13/16 Name Change (28) MKB
REVISED	8/09/16 changed area (32) MKB
REVISED	09/20/16 revised T.E. (28) JJC
REVISED	09/22/16 revised T.E. (28) JJC

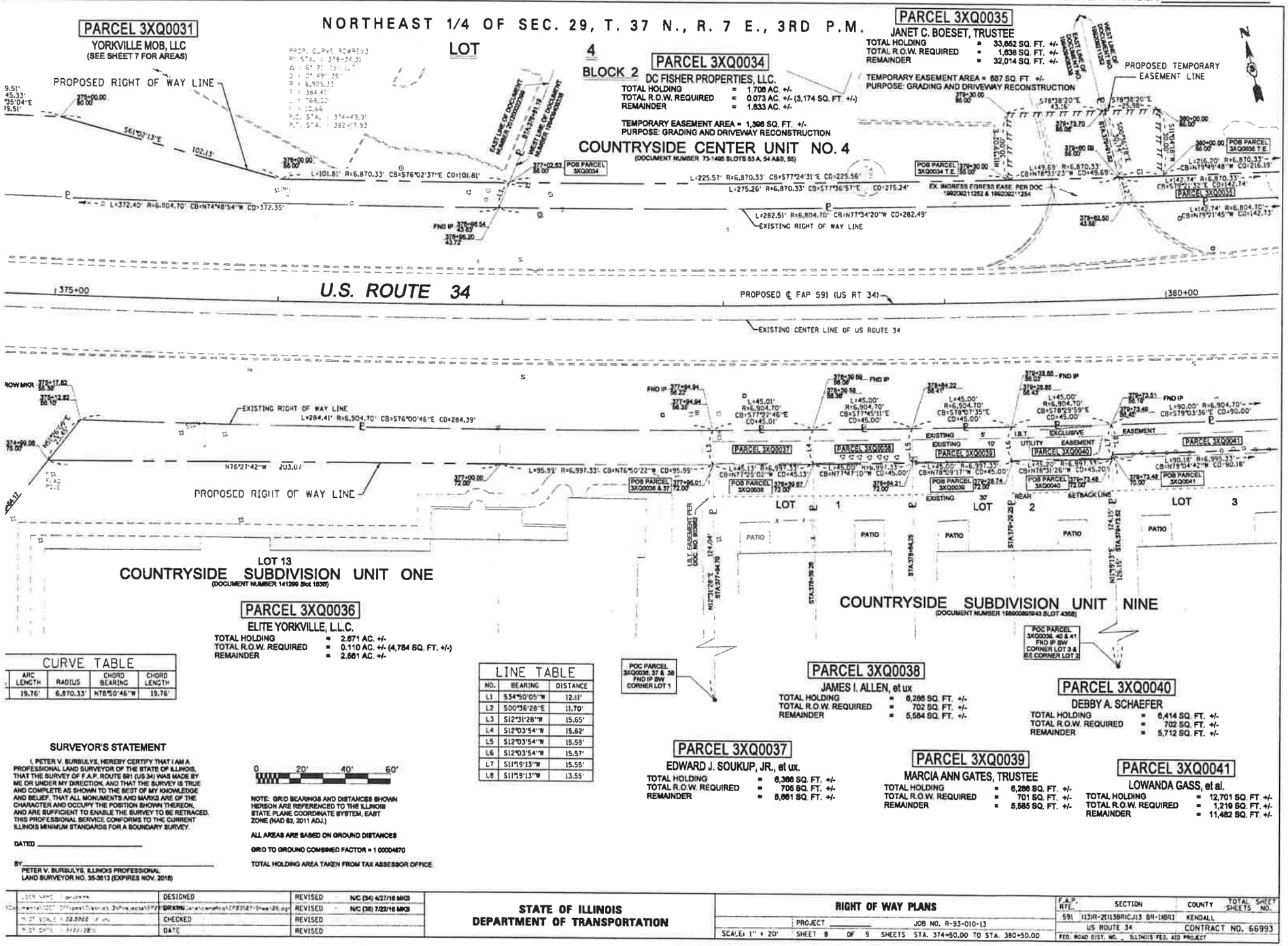
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

PROJECT _____ JOB NO. R-93-010-13
SCALE: 1" = 50' SHEET 7 OF 9 SHEETS STA. 359+00.00 TO STA. 374+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13R-2(113RIC,113 BR-1(BR)	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

DOCUMENT NUMBER _____



SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2018)

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES

GRID TO GROUND COMBINED FACTOR = 1.00004870

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE

USER NAME = pcburbulys	DESIGNED	REVISED	N/C (34) 4/27/16 MKB
[illegible]	DRAWN	REVISED	N/C (38) 7/22/16 MKB
PLOT SCALE = 20.0000 ' / in.	CHECKED	REVISED	
PLOT DATE = 7/22/2016	DATE	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

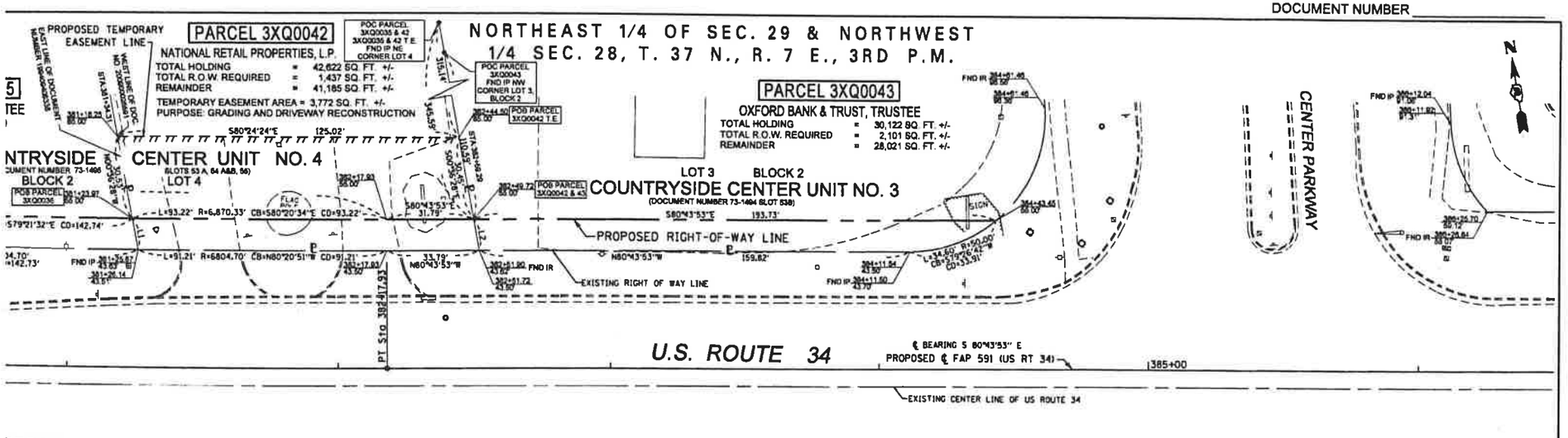
RIGHT OF WAY PLANS

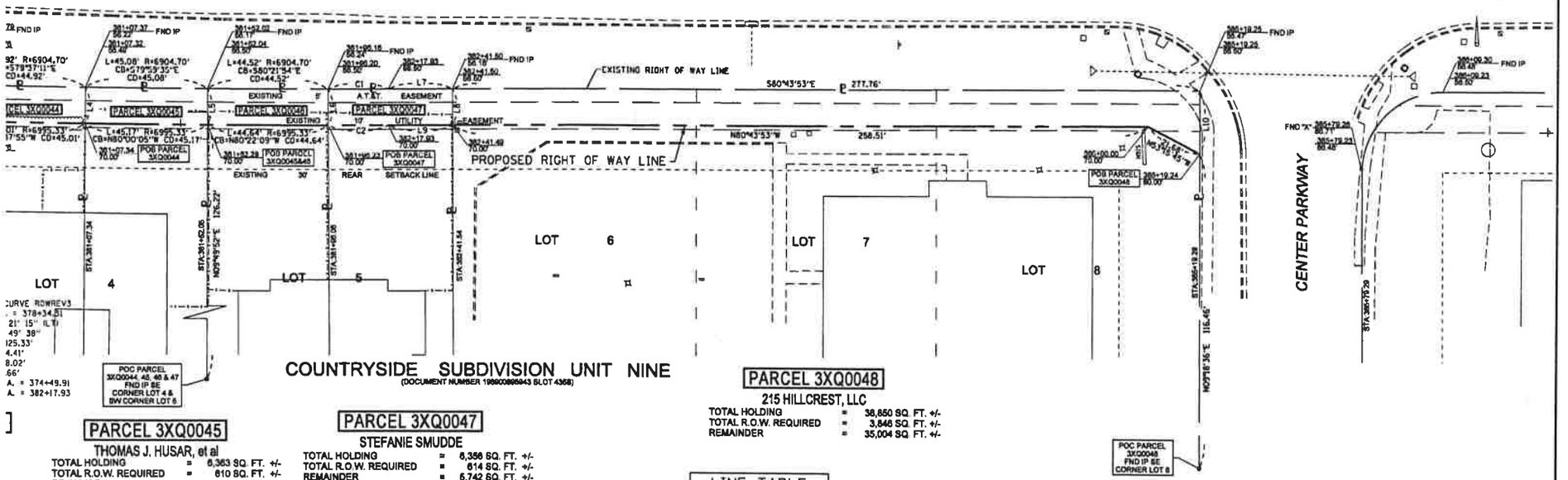
PROJECT _____ JOB NO. R-93-010-13

SCALE: 1" = 20' SHEET 8 OF 9 SHEETS STA. 374+50.00 TO STA. 380+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
591	(13)R-2(13)BR1C,(13 BR-1)BR1	KENDALL	
	US ROUTE 34	CONTRACT NO. 66993	
FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT		

DOCUMENT NUMBER _____





PARCEL 3XQ0045
THOMAS J. HUSAR, et al
TOTAL HOLDING = 6,363 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 610 SQ. FT. +/-
REMAINDER = 5,753 SQ. FT. +/-

PARCEL 3XQ0047
STEFANIE SMUDDE
TOTAL HOLDING = 6,356 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 614 SQ. FT. +/-
REMAINDER = 5,742 SQ. FT. +/-

PARCEL 3XQ0048
215 HILLCREST, LLC
TOTAL HOLDING = 38,650 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 3,646 SQ. FT. +/-
REMAINDER = 35,004 SQ. FT. +/-

L 3XQ0044
K. MCKENNA
IIRED = 6,340 SQ. FT. +/-
= 608 SQ. FT. +/-
= 5,732 SQ. FT. +/-

PARCEL 3XQ0046
MICHAEL SADLER
TOTAL HOLDING = 6,310 SQ. FT. +/-
TOTAL R.O.W. REQUIRED = 602 SQ. FT. +/-
REMAINDER = 5,708 SQ. FT. +/-

CURVE TABLE				
NO.	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	21.91'	6,904.70'	S80°38'26"E	21.91'
C2	21.92'	6,995.33'	N80°38'30"W	21.92'

LINE TABLE		
NO.	BEARING	DISTANCE
L1	S00°36'28"E	11.69'
L2	S00°36'28"E	11.67'
L3	S10°34'33"W	13.52'
L4	S10°12'12"W	13.51'
L5	S09°49'52"W	13.50'
L6	S09°18'36"W	13.50'
L7	S80°43'53"E	23.56'
L8	S09°18'36"W	13.50'
L9	N80°43'53"W	23.56'
L10	S09°18'36"W	23.50'

PETER V. BURBULYS PROFESSIONAL LAND SURVEYOR OF ILLINOIS 35-3613 OTTAWA ILLINOIS

SURVEYOR'S STATEMENT

I, PETER V. BURBULYS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS THAT THE SURVEY OF F.A.P. ROUTE 591 (US 34) WAS MADE BY ME OR UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____

BY _____
PETER V. BURBULYS, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3613 (EXPIRES NOV. 2018)

0 20' 40' 60'

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.00004870

TOTAL HOLDING AREA TAKEN FROM TAX ASSESSOR OFFICE.

USER NAME = brusken	DESIGNED -	REVISED - N/C (45 & 47) 4/26/18 MKB
PLOT SCALE = 48.0000 ' / in.	CHECKED -	REVISED - N/C (42) 4/27/18 MKB
PLOT DATE = 11/21/2018	DATE -	REVISED - DIMS #36 5/24/18 JJC
		REVISED - POB #46 JJC 9-22-18
		REVISED - N/C (42) 11/21/18 MKB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

PROJECT _____ JOB NO. R-93-010-13
SCALE: 1" = 20' SHEET 9 OF 9 SHEETS STA. 374+50.00 TO STA. 380+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(13R-2)(13BR)C,(13 BR-1)(BR)	KENDALL		
	US ROUTE 34	CONTRACT NO. 66993		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

Route (US RT 34)
County Kendall
Job No. R-93-010-13
Parcel No. VARIOUS
P.I.N. No.
Section (13)R-2[(13BR)C,(13BR-1)BR]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Office of Program Development

SUBORDINATION OF SURFACE RIGHTS FOR PUBLIC ROAD PURPOSES

UNITED CITY OF YORKVILLE , a Municipality by virtue of the laws of the of the State of Illinois and duly authorized to do business under the Statutes of the State of Illinois, (Grantor), for and in consideration of the sum of One and NO/100 Dollars ($1.00) in hand paid, the receipt of which is hereby acknowledged, does hereby subordinate unto the People of the State of Illinois, Department of Transportation (Grantee), its interest which has been acquired in, or through, or by easement or easements dated and filed in the Recorder's office of Kendall County, Illinois, as follows:

Parcel No.	Date Easement Signed	Date Recorded	Recorded In Book	Page	Document No.
3XQ0007	Plat of Subdivision	11/02/94			9410594
3XQ0008	Plat of Subdivision	11/02/94			9410594
3XQ0014	Plat of Subdivision	09/13/95			9507391
3XQ0015	Plat of Easement	09/06/06			200600028274
	Plat of Subdivision	01/18/95			9500419
3XQ0016	Plat of Subdivision				200500026016
3XQ0017	Plat of Subdivision				200700032622
3XQ0019	-	04/21/08			200800010037
3XQ0020	09/28/93	11/09/93			9311940
3XQ0022	-	05/21/91			913284
3XQ0023	-	05/21/91			913284
3XQ0024	-	05/21/91			913284
3XQ0025	-	05/21/91			913284
3XQ0031	Plat of Subdivision	04/03/73			73-1495
3XQ0037	Plat of Subdivision	10/13/89			895943
3XQ0038	Plat of Subdivision	10/13/89			895943
3XQ0039	Plat of Subdivision	10/13/89			895943
3XQ0040	Plat of Subdivision	10/13/89			895943
3XQ0041	Plat of Subdivision	10/13/89			895943
3XQ0044	Plat of Subdivision	10/13/89			895943
3XQ0045	Plat of Subdivision	10/13/89			895943
3XQ0046	Plat of Subdivision	10/13/89			895943
3XQ0047	Plat of Subdivision	10/13/89			895943
3XQ0048	Plat of Subdivision	10/13/89			895942

to the paramount right of the State of Illinois to construct, reconstruct, operate, maintain, and control access to FAP Route No. 591 (US RT 34), on the following described land in the County of Kendall and State of Illinois:

3XQ0007:

Part of the Southwest Quarter of Section 19 and the North Half of Section 30, Township 37 North, Range 7 East of the Third Principal Meridian, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj):

Commencing at a PK nail at the Southwest Corner of said Section 19, per monument record 87-2739; thence North 00 degree 53 minutes 23 seconds West 258.06 feet along the west line of the Southwest Quarter of Section 19 to the centerline of FAP 591 (US Route 34); thence South 85 degrees 41 minutes 16 seconds East 637.94 feet along said centerline to the point of curvature of a 38,197.20 foot radius curve to the right; thence easterly 977.78 feet along said curve whose chord bears South 84 degrees 57 minutes 16 seconds East 977.75 feet to the point of tangency; thence South 84 degrees 13 minutes 16 seconds East 59.50 feet along said centerline; thence South 12 degrees 29 minutes 01 second West 50.34 feet to the Point of Beginning at the northwest corner of Outlot 1 in Fox Hill Unit One Planned Unit Development, according to the plat thereof recorded as document number 199409410594 in the Kendall County Recorder's office; thence South 84 degrees 13 minutes 16 seconds East 251.71 feet along the south line of US Route 34 and the north line of Outlot 1; thence South 12 degrees 29 minutes 01 second West 55.38 feet along the east line of said Outlot 1; thence North 84 degrees 13 minutes 16 seconds West 251.71 feet to the west line of said Outlot 1; thence North 12 degrees 29 minutes 01 second East 55.38 feet along the west line of said Outlot 1 to the Point of Beginning, containing 0.318 acre (13,845 square feet), more or less, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0008:

That part of Lot 7 in Fox Hill Unit One Planned Unit Development according to the plat thereof recorded as document number 199409410594 in the Kendall County Recorder's office, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.):

Commencing at the Southwest Corner of Lot 6 in Fox Hill Unit One Planned Unit Development; thence North 09 degrees 33 minutes 26 seconds East 110.51 feet along the west line of said Lot 6 and the east line of Lot 7 to the Point of Beginning;; thence North 87 degrees 45 minutes 45 seconds West 163.91 feet to the west line of said Lot 7; thence North 12 degrees 29 minutes 01 second East 35.24 feet to the northwest corner of said Lot 7; thence South 84 degrees 13 minutes 16 seconds East 67.03 feet along the along the north line of said Lot 7; thence southeasterly 94.11 feet on a curve to the left, having a radius of 34,266.94 feet, whose chord bears South 84 degrees 17 minutes 59 seconds East, 94.11 feet along said north line of Lot 7 to the northeast corner of said Lot 7; thence South 09 degrees 33 minutes 26 seconds West 25.06 feet along the east line of said Lot 7 to the Point of Beginning, containing 4,851 square feet, more or less, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0014:

That part of Lot 86 in Fox Hill Unit Three Planned Unit Development according to the plat thereof recorded as document number 9501888 in the Kendall County Recorder's office, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.):

Commencing at the Southwest Corner of said Lot 86; thence northerly 81.56 feet along the west line of said Lot 86 on a 359.98 foot radius curve to the right, whose chord bears North 01 degree 42 minutes 42 seconds West 81.38 feet; thence North 04 degrees 46 minutes 43 seconds East 100.15 feet along said west line of Lot 86 to the Point of Beginning; thence continue North 04 degrees 46 minutes 43 seconds East 20.00 feet to the Northwest Corner of said Lot 86; thence easterly 125.36 feet along the north line of said Lot 86 on a 34,266.94 foot radius curve to the left, whose chord bears South 85 degrees 24 minutes 21 seconds East 125.36 feet; thence South 85 degrees 30 minutes 38 seconds East 586.70 feet along the north line of said Lot 86 to an existing iron pipe at the northeast corner of said Lot 86; thence South 01 degree 22 minutes 52 seconds East 20.11 feet along the east line of said Lot 86; thence North 85 degrees 30 minutes 38 seconds West 588.75 feet; thence westerly 125.46 feet on a curve to the right, having a radius of 34,286.94 feet, whose chord bears North 85 degrees 24 minutes 21 seconds West 125.46 feet to the Point of Beginning, containing 0.327 acre, more or less, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0015:

That part of Lot 2 in Fox Hill Unit Six Planned Unit Development, according to the plat thereof recorded as document number 20000006594 in the Kendall County Recorder's office, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.):

Commencing at the Southwest Corner of said Lot 2; thence North 01 degree 22 minutes 52 seconds West 315.33 feet along the west line of said Lot 2 to the Point of Beginning; thence continue North 01 degree 22 minutes 52 seconds West 5.03 feet to the existing south right of way line of FAP 591 (US Route 34); thence South 85 degrees 30 minutes 38 seconds East 339.22 feet along said right of way line; thence South 62 degrees 21 minutes 59 seconds East 12.72 feet along said south right of way line; thence North 85 degrees 30 minutes 38 seconds West 350.40 feet to the Point of Beginning, containing 1,724 square feet, more or less, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0016:

That part of Lot 1 in the re-subdivision of Lot 1 in Fox Hill, Unit 6, according to the plat thereof recorded as document number 200500026016, slot 1424 in the Kendall County Recorder's office, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.):
Commencing at the Southwest Corner of Lot 2 in Rush-Copley Healthcare Center Subdivision, according to the plat recorded as document number 200700032622 in the Kendall County Recorder's office; thence North 01 degree 15 minutes 36 seconds West 243.02 feet along the west line of said Lot 2, also being along the east line of said Lot 1 in the Re-subdivision of Lot 1 in Fox Hill, Unit 6 to the Point of Beginning; thence North 85 degrees 30 minutes 38 seconds West 301.52 feet to the west line of said Lot 1; thence North 04 degrees 31 minutes 48 seconds East 4.43 feet along the west line of said Lot 1 to the existing right of way line of FAP 591 (US

Route 34); thence South 85 degrees 28 minutes 58 seconds East 301.09 feet along said right of way line to the east line of said Lot 1; thence South 01 degree 15 minutes 36 seconds East 4.30 feet along said east line of Lot 1 to the point of beginning, containing 1312 square feet, more or less, (areas based on ground measurements) , situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0017:

Part of Lot 2 in Rush-Copley Healthcare Center Subdivision, according to the plat recorded as document number 200700032622, Slot 1834-1835, in the Kendall County Recorder's office, described as follows, using bearings and distances referenced to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.):

Commencing at the Southwest Corner of said Lot 2; thence North 01 degree 15 minutes 36 seconds West 238.00 feet along the west line of said Lot 2 to the point of beginning; thence continue North 01 degree 15 minutes 36 seconds West 4.21 feet to the Northwest Corner of said Lot 2; thence South 85 degrees 30 minutes 22 seconds East 246.95 feet along the north line of said Lot 2 to the northeast corner of said Lot 2; thence South 01 degree 15 minutes 36 seconds East 4.19 feet along the east line of said lot 2; thence North 85 degrees 30 minutes 38 seconds West 246.95 feet to the point of beginning, containing 1033 square feet, more or less, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0019:

Part of the North Half of Section 29, Township 37 North, Range 7 East of the Third Principal Meridian, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).
Commencing at the Northwest Corner of said Section 29; thence South 01 degree 14 minutes 18 seconds East 428.10 feet along the west line of said Northwest Quarter section to the centerline of US Route 34; thence South 85 degrees 30 minutes 38 seconds East 444.23 feet along said centerline; thence South 04 degrees 29 minutes 22 seconds West 60.93 feet to the Point of Beginning on the south right of way line of US Route 34; thence South 85 degrees 32 minutes 16 seconds East 100.00 feet along said right of way line; thence South 04 degrees 29 minutes 22 seconds West 9.12 feet; thence North 85 degrees 30 minutes 38 seconds West 100.00 feet; thence North 04 degrees 29 minutes 22 seconds East 9.07 feet to the Point of Beginning, containing 910 square feet, more or less (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0020:

That part of the Northeast Quarter of Section 29, Township 37 North, Range 7 East of the Third Principal Meridian, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Northwest Corner of said Northeast Quarter of Section 29; thence South 01 degree 24 minutes 09 seconds East 687.33 feet along the west line of said Northeast Quarter section to the Point of Beginning; thence easterly 464.16 feet along a 7522.00 foot radius curve to the right whose chord bears South 79 degrees 20 minutes 08 seconds East 464.09 feet to the west line of property described in document number 2004-15025 ; thence South 07 degrees 20 minutes 02 seconds East 79.75 feet along said west line to the centerline of FAP 591 (U.S Route 34); thence westerly 472.87 feet along said centerline along a 7447.00 foot radius curve to the left whose chord bears North 79 degrees 10 minutes 46 seconds West 472.79 feet to the

west line of the Northeast Quarter Section; thence North 01 degree 24 minutes 09 seconds West 76.24 feet along said west line to the Point of Beginning, containing 0.807 acre, more or less, of which 0.540 acre, more or less, (areas based on ground measurements)is within the existing right of way, (areas based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0022:

Part of Lot 9 in Block 1 in Cimarron Ridge Subdivision, recorded as document number 199100913284 in the Recorder's Office of Kendall County, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 9 in Block 1; thence North 06 degrees 22 minutes 46 seconds East 398.99 feet along the west line of said Lot 9 to the Point of Beginning, thence North 46 degrees 22 minutes 46 seconds East 40.16 feet along the northwest line of said Lot 9; thence South 84 degrees 26 minutes 42 seconds East 162.10 feet along the north line of said Lot 9; thence South 06 degrees 58 minutes 40 seconds West 5.51 feet; thence westerly 142.90 feet along a 7380.00 foot radius curve to the left whose chord bears North 84 degrees 27 minutes 03 seconds West 142.90 feet; thence South 66 degrees 48 minutes 22 seconds West 51.69 feet to the Point of Beginning, containing 0.027 acre (1171 square feet), more or less (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0023:

Part of Lot 9 in Block 1 in Cimarron Ridge Subdivision, recorded as document number 199100913284 in the Recorder's Office of Kendall County, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 9 in Block 1; thence North 06 degrees 22 minutes 46 seconds East 398.99 feet along the west line of said Lot 9; thence North 46 degrees 22 minutes 46 seconds East 40.16 feet along the northwest line of said Lot 9; thence South 84 degrees 26 minutes 42 seconds East 162.10 feet along the north line of said Lot 9 to the Point of Beginning; thence South 82 degrees 42 minutes 36 seconds East 289.85 feet along said north line of Lot 9; thence South 07 degrees 00 minutes 13 seconds West 5.20 feet ; thence westerly 289.87 feet along a 7380.00 foot radius curve to the left whose chord bears North 82 degrees 46 minutes 16 seconds West 289.85 feet; thence North 06 degrees 58 minutes 40 seconds East 5.51 feet to the Point of Beginning, containing 0.029 acre (1278 square feet), more or less (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0024:

Part of Lot 9 in Block 1 in Cimarron Ridge Subdivision, recorded as document number 199100913284 in the Recorder's Office of Kendall County, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 9 in Block 1; thence North 06 degrees 22 minutes 46 seconds East 398.99 feet along the west line of said Lot 9; thence North 46 degrees 22 minutes 46 seconds East 40.16 feet along the northwest line of said Lot 9; thence

South 84 degrees 26 minutes 42 seconds East 162.10 feet along the north line of said Lot 9; thence South 82 degrees 42 minutes 36 seconds East 289.85 feet along said the north line of Lot 9 to the Point of Beginning; thence South 83 degrees 02 minutes 28 seconds East 274.91 feet along said north line of Lot 9; thence easterly 67.37 feet along said north line of Lot 9 along a 7397.00 foot radius curve to the right whose chord bears South 79 degrees 15 minutes 24 seconds East 67.37 feet; thence South 08 degrees 18 minutes 57 seconds West 17.02 feet; thence westerly 342.15 feet along a 7380.00 foot radius curve to the left whose chord bears North 80 degrees 19 minutes 04 seconds West 342.11 feet; thence North 07 degrees 00 minutes 13 seconds East 5.20 feet to the Point of Beginning, containing 0.091 acre (3964 square feet), more or less (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0025:

Part of Lot 9 in Block 1 and part of Lot 12 in Block 3 in Cimarron Ridge Subdivision, recorded as document number 199100913284 in the Recorder's Office of Kendall County, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 9 in Block 1; thence North 06 degrees 22 minutes 46 seconds East 398.99 feet along the west line of said Lot 9; thence North 46 degrees 22 minutes 46 seconds East 40.16 feet along the northwest line of said Lot 9; thence South 84 degrees 26 minutes 42 seconds East 162.10 feet along the north line of said Lot 9; thence South 82 degrees 42 minutes 36 seconds East 289.85 feet along said the north line of Lot 9; thence South 83 degrees 02 minutes 28 seconds East 274.91 feet along said north line of Lot 9; thence easterly 67.37 feet along said north line of Lot 9 along a 7397.00 foot radius curve to the right whose chord bears South 79 degrees 15 minutes 24 seconds East 67.37 feet to the Point of Beginning; thence continue easterly 281.84 feet along said 7397.00 foot radius curve to the right whose chord bears South 77 degrees 54 minutes 15 seconds East 281.82 feet; thence South 12 degrees 44 minutes 27 seconds West 15.00 feet; thence westerly 213.13 feet along a 7382.00 foot radius curve to the left whose chord bears North 77 degrees 38 minutes 20 seconds West 213.12 feet; thence North 84 degrees 18 minutes 15 seconds West 19.92 feet; thence westerly 47.62 feet along a 7380.00 foot radius curve to the left whose chord bears North 78 degrees 48 minutes 17 seconds West 47.62 feet to the east line of property described in document number 200300022852; thence North 08 degrees 18 minutes 57 seconds East 17.02 feet along said east line to the Point of Beginning, containing 0.100 acre (4335 square feet), more or less (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0031:

Part of Lot 4 in Block 2 in Countryside Center Unit 4 Subdivision, recorded as document number 73-1495 (slots 53A, 54 A & B and 55) in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Northeast Corner of Lot 1 in Block 6 in Countryside Center, Unit No. 2, recorded as document no. 71-3355 in the Kendall County Recorder's office, which point is also on the west line of said Lot 4 in Countryside Center, Unit No. 4; thence South 07 degrees 50 minutes 45 seconds East 20.00 feet along the west line of said Lot 4; thence South 73 degrees 53 minutes 04 seconds East 87.65 feet to the point of curvature of a 23,155.56 foot radius curve to the left; thence easterly 90.90 feet along said curve whose chord bears South 73 degrees 59 minutes 49 seconds East 90.90 feet to the Point of Beginning on the east line of property

described in document number 2006-20242; thence continue easterly 108.28 feet along said curve whose chord bears South 74 degrees 14 minutes 36 seconds East 108.28 feet to the point of compound curve; thence easterly 49.51 feet along a 6845.33 foot radius curve to the left whose chord bears South 74 degrees 35 minutes 04 seconds East 49.51 feet; thence South 61 degrees 02 minutes 13 seconds East 102.13 feet; thence easterly 101.81 feet along a 6870.33 foot radius curve to the left whose chord bears South 76 degrees 02 minutes 37 seconds East 101.81 feet to a point on the west line of property described in document number 199409408338; thence South 34 degrees 50 minutes 05 seconds West 12.11 feet along said west line to the north existing right of way line of FAP 591 (US Route 34); thence westerly 372.40 feet along said right of way line along a 6804.70 foot radius curve to the right whose chord bears North 74 degrees 48 minutes 54 seconds West 372.35 feet; thence North 42 degrees 04 minutes 06 seconds East 39.04 feet along the east line of property described in document number 2006-20242 to the Point of Beginning, containing 0.217 acre, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0037:

Part of Lot 1 in Countryside Subdivision, Unit 9 recorded as document number 198900895943, Slot 435B, in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 1 in Countryside Subdivision, Unit 9, thence North 12 degrees 31 minutes 28 seconds East 124.04 feet along the west line of said Lot 1 to the Point of Beginning; thence continue North 12 degrees 31 minutes 28 seconds East 15.65 feet to the northwest corner of said Lot 1; thence easterly 45.01 feet along the north line of said Lot 1 along a 6904.70 foot radius curve to the left whose chord bears South 77 degrees 22 minutes 46 seconds East 45.01 feet; thence South 12 degrees 03 minutes 54 seconds West 15.62 feet parallel with the east line of said Lot 1; thence westerly 45.13 feet along a 6997.33 foot radius curve to the right whose chord bears North 77 degrees 25 minutes 02 seconds West 45.13 feet to the Point of Beginning, containing 705 square feet, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0038:

Part of East 45.00 feet of Lot 1 in in Countryside Subdivision, Unit 9 recorded as document number 198900895943, Slot 435B, in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 1 in Countryside Subdivision, Unit 9, thence North 12 degrees 31 minutes 28 seconds East 124.04 feet along the west line of said Lot 1; thence easterly 45.13 feet along a 6997.33 foot radius curve to the left whose chord bears South 77 degrees 25 minutes 02 seconds East 45.13 feet to the Point of Beginning; thence North 12 degrees 03 minutes 54 seconds East 15.62 feet parallel with the east line of said Lot 1 to the north line of said Lot 1; thence easterly 45.00 feet along said north line along a 6904.70 foot radius curve to the left whose chord bears South 77 degrees 45 minutes 11 seconds East 45.00 feet to the northeast corner of said Lot 1; thence South 12 degrees 03 minutes 54 seconds West 15.59 feet along the east line of said Lot 1; thence westerly 45.00 feet along a 6997.33 foot radius curve to the right whose chord bears North 77 degrees 47 minutes 10 seconds West 45.00 feet to the Point of Beginning, containing 702 square feet, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0039:

Part of West 45.00 feet of Lot 2 in in Countryside Subdivision, Unit 9 recorded as document number 198900895943, Slot 435B, in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southeast Corner of said Lot 2 in Countryside Subdivision, Unit 9, thence North 11 degrees 19 minutes 13 seconds East 124.15 feet along the east line of said Lot 2; thence westerly 45.20 feet along a 6997.33 foot radius curve to the right whose chord bears North 78 degrees 31 minutes 26 seconds West 45.20 feet to the Point of Beginning; thence continue westerly 45.00 feet along said curve whose chord bears North 78 degrees 09 minutes 17 minutes West 45.00 feet to the west line of said Lot 2; thence North 12 degrees 03 minutes 54 seconds East 15.59 feet to the northwest corner of said Lot 2; thence easterly 45.00 feet along the north line of said Lot 2 along a 6904.70 foot radius curve to the left whose chord bears South 78 degrees 07 minutes 35 seconds East 45.00 feet; thence South 12 degrees 03 minutes 54 seconds West 15.57 feet parallel with the west line of said Lot 2 to the Point of Beginning, containing 701 square feet, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0040:

Part of Lot 2, except the west 45.00 feet thereof, in in Countryside Subdivision, Unit 9 recorded as document number 198900895943, Slot 435B, in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southeast Corner of said Lot 2 in Countryside Subdivision, Unit 9, thence North 11 degrees 19 minutes 13 seconds East 124.15 feet along the east line of said Lot 2 to the Point of Beginning; thence westerly 45.20 feet along a 6997.33 foot radius curve to the right whose chord bears North 78 degrees 31 minutes 26 seconds West 45.20 feet; thence North 12 degrees 03 minutes 54 seconds East 15.57 feet parallel with the west line of said Lot 2 to the north line of said Lot 2; thence easterly 45.00 feet along said north line along a 6904.70 foot radius curve to the left whose chord bears South 78 degrees 29 minutes 59 seconds East 45.00 feet to the northeast corner of said Lot 2; thence South 11 degrees 19 minutes 13 seconds West 15.55 feet to the Point of Beginning, containing 702 square feet, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0041:

Part of Lot 3 in Countryside Subdivision, Unit 9 recorded as document number 198900895943, Slot 435B, in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 3 in Countryside Subdivision, Unit 9, thence North 11 degrees 19 minutes 13 seconds East 126.15 feet along the west line of said Lot 3 to the Point of Beginning; thence continue North 11 degrees 19 minutes 13 seconds East 13.55 feet to the northwest corner of said Lot 3; thence easterly 90.00 feet along the north line of said Lot 3 along a 6904.70 foot radius curve to the left whose chord bears South 79 degrees 03 minutes 36 seconds East 90.00 feet to the northeast corner of said Lot 3; thence South 10

degrees 34 minutes 33 seconds West 13.52 feet along the east line of said Lot 3; thence westerly 90.18 feet along a 6995.33 foot radius curve to the right whose chord bears North 79 degrees 04 minutes 42 seconds West 90.18 feet to the Point of Beginning, containing 1219 square feet, more or less, (area based on ground measurements), situated in the United City of Yorkville, Kendall County, State of Illinois.

3XQ0044:

Part of Lot 4 in Countryside Subdivision Unit 9, recorded as document number 198900895943, slot 435B in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southeast Corner of said Lot 4, thence North 09 degrees 49 minutes 52 seconds East 126.22 feet along the east line of said Lot 4; thence westerly 45.17 feet along a 6995.33 foot radius curve to the right whose chord bears North 80 degrees 00 minutes 05 seconds West 45.17 feet to the Point of Beginning; thence continue westerly 45.01 feet along said curve whose chord bears North 79 degrees 37 minutes 55 seconds West 45.01 feet to the west line of said Lot 4; thence North 10 degrees 34 minutes 33 seconds East 13.52 feet to the northwest corner of said Lot 4; thence easterly 44.92 feet along the north line of said Lot 4 along a 6904.70 foot radius curve to the left whose chord bears South 79 degrees 37 minutes 11 seconds East 44.92 feet; thence South 10 degrees 12 minutes 12 seconds West 13.51 feet to the Point of Beginning, containing 608 square feet, more or less, situated in the United City of Yorkville, State of Illinois.

3XQ0045:

Part of Lot 4 in Countryside Subdivision Unit 9, recorded as document number 198900895943, slot 435B in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southeast Corner of said Lot 4, thence North 09 degrees 49 minutes 52 seconds East 126.22 feet along the east line of said Lot 4 to the Point of Beginning; thence westerly 45.17 feet along a 6995.33 foot radius curve to the right whose chord bears North 80 degrees 00 minutes 05 seconds West 45.17 feet; thence North 10 degrees 12 minutes 12 seconds East 13.51 feet to the north line of said Lot 4; thence easterly 45.08 feet along the north line of said Lot 4 along a 6904.70 foot radius curve to the left whose chord bears South 79 degrees 59 minutes 35 seconds East 45.08 feet to the northeast corner of said Lot 4; thence South 09 degrees 49 minutes 52 seconds West 13.50 feet to the Point of Beginning, containing 610 square feet, more or less, situated in the United City of Yorkville, State of Illinois.

3XQ0046:

Part of Lot 5 in Countryside Subdivision Unit 9, recorded as document number 198900895943, slot 435B in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 5, thence North 09 degrees 49 minutes 52 seconds East 126.22 feet along the west line of said Lot 5 to the Point of Beginning; thence continue North 09 degrees 49 minutes 52 seconds East 13.50 feet to the northwest corner of said Lot 5; thence easterly 44.52 feet along the north line of said Lot 5 along a 6904.70 foot

radius curve to the left whose chord bears South 80 degrees 21 minutes 54 seconds East 44.52 feet along the north line of said Lot 5; thence South 09 degrees 18 minutes 36 seconds West 13.50 feet; thence westerly 44.64 feet along a 6995.33 foot radius curve to the right whose chord bears North 80 degrees 22 minutes 09 seconds West 44.64 feet to the Point of Beginning, containing 602 square feet, more or less, situated in the United City of Yorkville, State of Illinois.

3XQ0047:

Part of Lot 5 in Countryside Subdivision Unit 9, recorded as document number 198900895943, slot 435B in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southwest Corner of said Lot 5, thence North 09 degrees 49 minutes 52 seconds East 126.22 feet along the west line of said Lot 5; thence easterly 44.64 feet along a 6995.33 foot radius curve to the left whose chord bears South 80 degrees 22 minutes 09 seconds East 44.64 feet to the Point of Beginning; thence North 09 degrees 18 minutes 36 seconds East 13.50 feet to the north line of said Lot 5; thence easterly 21.91 feet along the north line of said Lot 5 along a 6904.70 foot radius curve to the left whose chord bears South 80 degrees 38 minutes 26 seconds East 21.91 feet; thence South 80 degrees 43 minutes 53 seconds East 23.56 feet to the northeast corner of said Lot 5; thence South 09 degrees 18 minutes 36 seconds West 13.50 feet along the east line of said Lot 5; thence North 80 degrees 43 minutes 53 seconds West 23.56 feet to the point of curvature of a 6995.33 foot radius curve to the right; thence westerly 21.92 feet along said curve whose chord bears North 80 degrees 38 minutes 30 seconds West 21.92 feet to the Point of Beginning, containing 614 square feet, more or less, situated in the United City of Yorkville, State of Illinois.

3XQ0048:

Part of Lots 6, 7 and 8 in Countryside Subdivision Unit 9, recorded as document number 198900895943, slot 435B in the Kendall County Recorder's Office, Kendall County, Illinois, described as follows, referencing bearings and distances to the Illinois State Plane Coordinate System, East Zone (NAD 83, 2011 adj.).

Commencing at the Southeast Corner of said Lot 8, thence North 09 degrees 18 minutes 36 seconds East 116.46 feet along the east line of said Lot 8 to the Point of Beginning; thence North 53 degrees 15 minutes 45 seconds West 21.68 feet; thence North 80 degrees 43 minutes 53 seconds West 258.51 feet to the west line of said Lot 6; thence North 09 degrees 18 minutes 36 seconds East 13.50 feet to the northwest corner of said Lot 6; thence South 80 degrees 43 minutes 53 seconds East 277.76 feet along the north lines of said Lots 6, 7 and 8 to the northeast corner of said Lot 8; thence South 09 degrees 18 minutes 36 seconds West 23.50 feet to the Point of Beginning, containing 3846 square feet, more or less, situated in the United City of Yorkville, State of Illinois.

Any alteration and/or relocation of said Grantor's facilities hereafter made within or adjacent to the aforesaid described land, which is required by order of the State in connection with any exercise by the State of its rights hereunder shall be performed by the Grantor, but the Grantee shall reimburse the Grantor for the actual reasonable cost of performance.

This subordination of the Grantor's easement or easements shall be effective only as to such air and surface rights and to such distance below the surface as may reasonably be required

to construct, reconstruct, operate and maintain said highway, to insure adequate and sufficient lateral and vertical support thereof, and to enable the State to control access thereto, and that otherwise this subordination shall in no way affect or impair the rights of the Grantor, its successors or assigns, under and by virtue of said easement or easements, including but not limited to, the right to construct additional facilities under, over and across said highway; provided, that the construction of any future facility under, over and across said highway shall be performed in such a manner as not to interfere with or impair the use of said highway and shall conform to reasonable rules and regulations as to such construction as may be promulgated by Federal or State authorities.

Dated this _____ day of _____, 2017.

UNITED CITY OF YORKVILLE

By: _____
Signature

_____
Print Name and Title

ATTEST:

By: _____
Signature

_____
Print Name and Title

State of _____)
) ss.
County of _____)

This instrument was acknowledged before me on _____ , 2017, by _____ , as _____ and _____ , as _____ of The United City of Yorkville .

(SEAL)

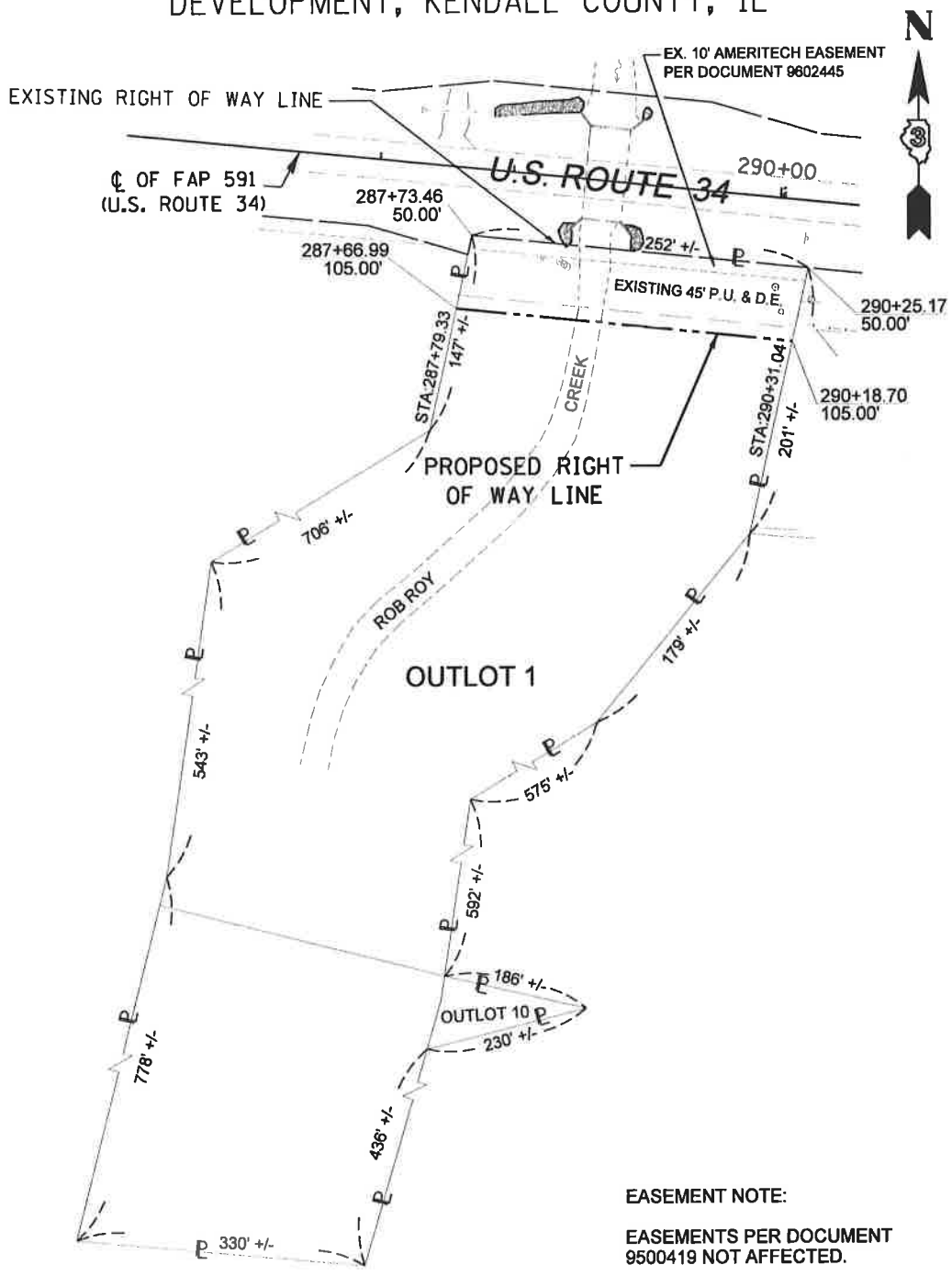
_____
Notary Public

My Commission Expires: _____

This instrument was prepared by and return to:

Illinois Department of Transportation
Attn: Land Acquisition
700 E Norris Drive
Ottawa, IL 61350

PART OF OUTLOT 1 FOX HILL UNIT ONE PLANNED UNIT DEVELOPMENT, KENDALL COUNTY, IL



EASEMENT NOTE:

EASEMENTS PER DOCUMENT 9500419 NOT AFFECTED.

100' 0' 100'

SCALE 1" = 100'

TAX # 02-03-101-001

TITLE COMMITMENT 2192.0

PARCEL 3XQ0007

PAUL R. DRESDEN

TOTAL HOLDING	=	13.910 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.318 AC. +/- (13,845 SQ. FT. +/-)
REMAINDER	=	13.592 AC. +/-

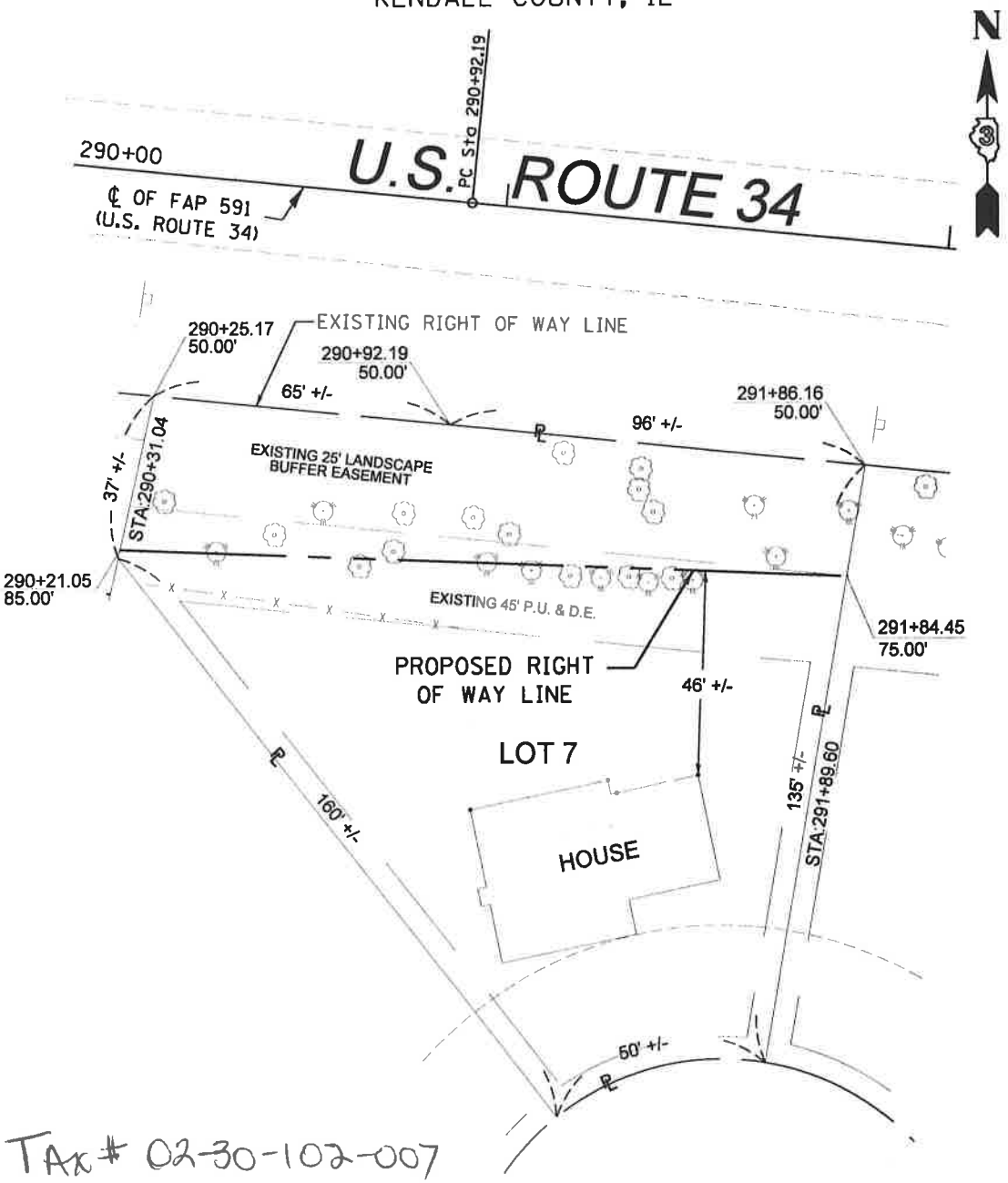
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

12/16/15 PWB REV PR ROW PT

3XQ0007.dgn 12/17/2015 8:51:56 AM User=burbulys

PART OF LOT 7 FOX HILL UNIT ONE PLANNED UNIT DEVELOPMENT, KENDALL COUNTY, IL



TAX # 02-30-102-007

EASEMENT NOTES:

AMERITECH EASEMENT PER DOC. 199609602444 NOT AFFECTED.

EASEMENTS PER DOCUMENT 9500419 NOT AFFECTED.

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2193.0

PARCEL 3XQ0008

JESUS DIAZ, et ux.

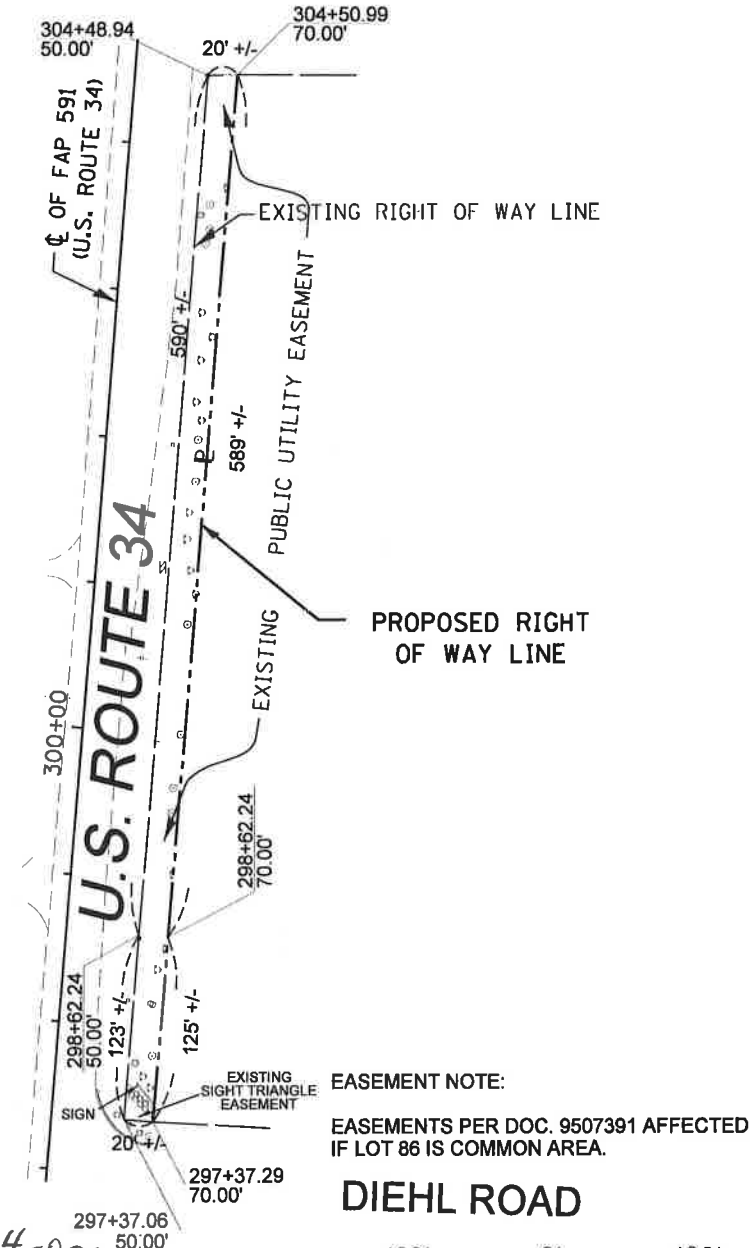
TOTAL HOLDING	= 17,371 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	= 4,851 SQ. FT. +/-
REMAINDER	= 12,520 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0008.dgn 10/15/2015 9:56:22 AM User=burbulys.spv

PART OF LOT 86 FOX HILL UNIT THREE
PLANNED UNIT DEVELOPMENT,
KENDALL COUNTY, IL



TAX# 02-30-104-001

TITLE COMMITMENT 2199.0

PARCEL 3XQ0014

THE OAKS AT FOX HILL TOWNHOMES ASSOCIATION, INC.

TOTAL HOLDING	=	0.327 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.327 AC. +/-
REMAINDER	=	0.00 AC. +/-

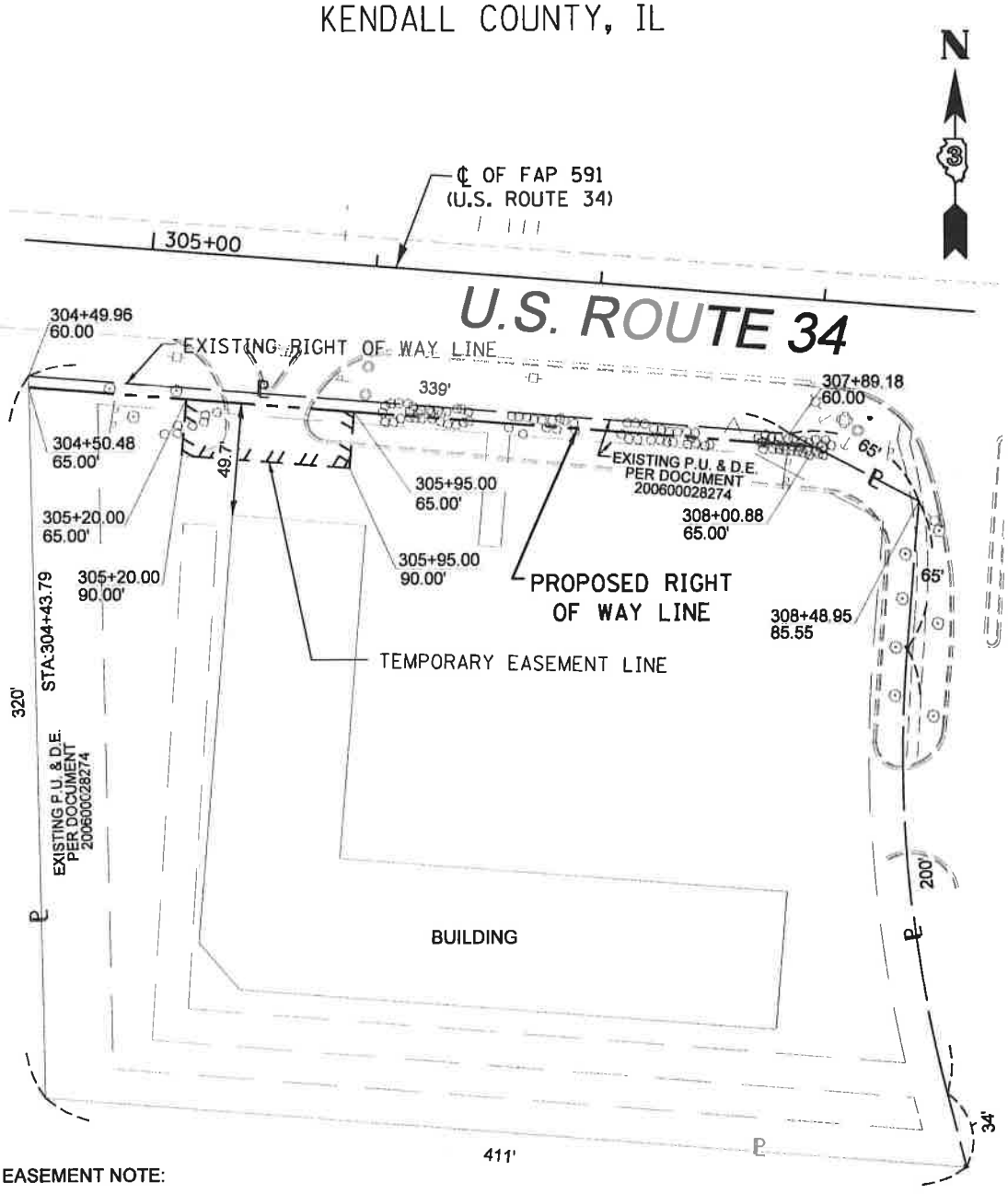
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

8/26/16 MKB TOTAL TAKE 9/12/16 MKB CORRECTED NAME

3XQ0014.dgn 9/12/2016 11:38:58 AM User=brucknik

PART OF LOT 2, FOX HILL UNIT SIX
KENDALL COUNTY, IL



EASEMENT NOTE:

EASEMENTS PER DOC. 9500419 AFFECTED IF LOT 2 HAS COMMON AREA.

EASEMENTS PER 200600028274 AFFECTED.

TAX # 02-30-203-001

60' 0' 60'

SCALE 1" = 60'

TITLE COMMITMENT 2200.0

PARCEL 3XQ0015

GCM PROPERTIES, LLC

TOTAL HOLDING	=	2.861 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.040 AC. +/- (1,724 SQ. FT. +/-)
REMAINDER	=	2.821 AC. +/-

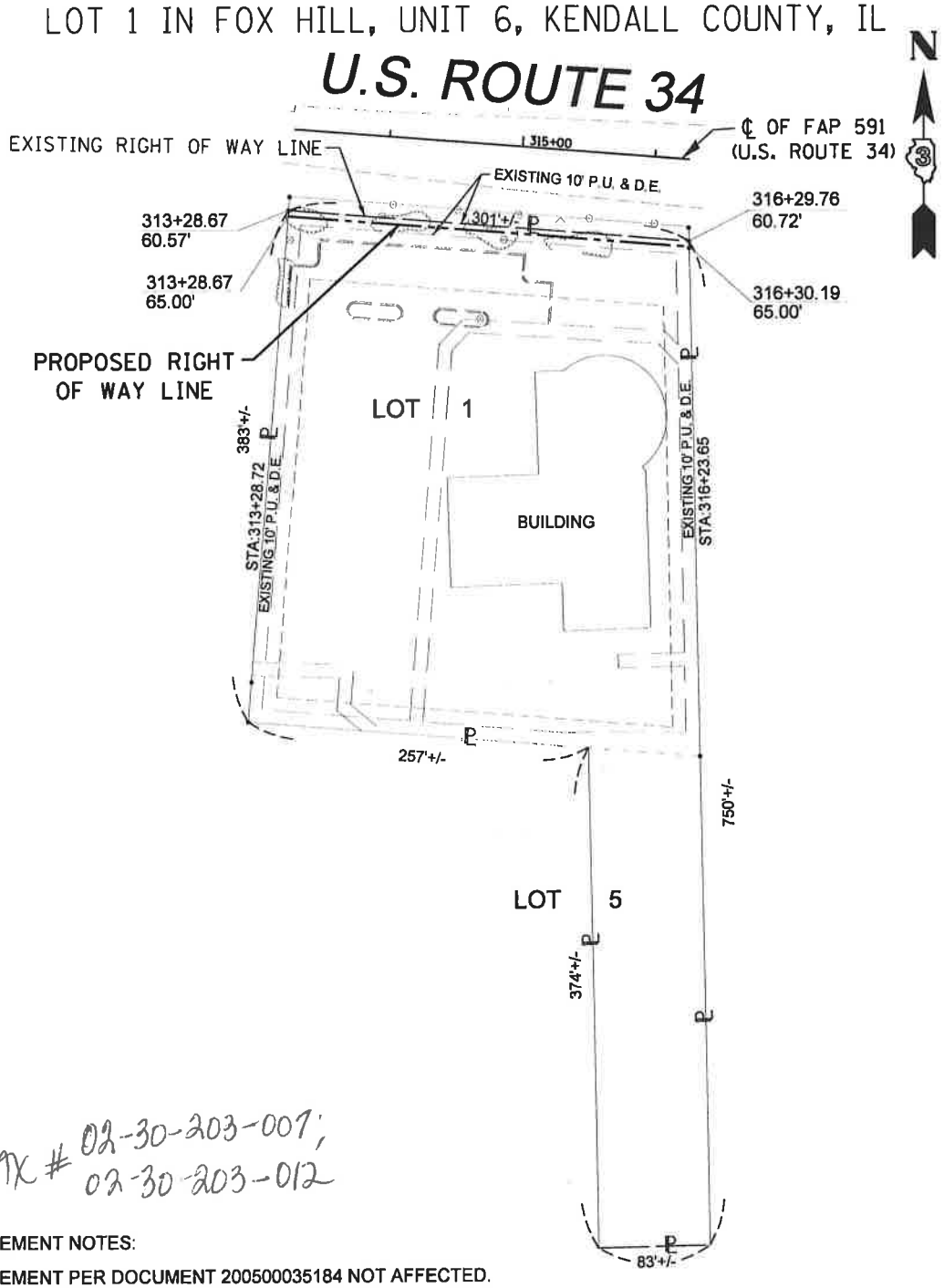
TEMPORARY EASEMENT AREA = 1,875 SQ. FT. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0015.dan 12/11/2015 9:56:06 AM User=bubulvspv

PART OF LOT 1 IN THE RE-SUBDIVISION OF LOT 1 IN FOX HILL, UNIT 6, KENDALL COUNTY, IL



TMX # 02-30-203-007;
02-30-203-012

EASEMENT NOTES:

EASEMENT PER DOCUMENT 200500035184 NOT AFFECTED.

EASEMENT PER DOCUMENT 199609602445 NOT AFFECTED.

EASEMENT PER SUBDIVISION DOCUMENT 200500026016 AFFECTED.

TITLE COMMITMENT 2202.0

PARCEL 3XQ0016

YORKVILLE-MARAZZI, L.L.C., et al

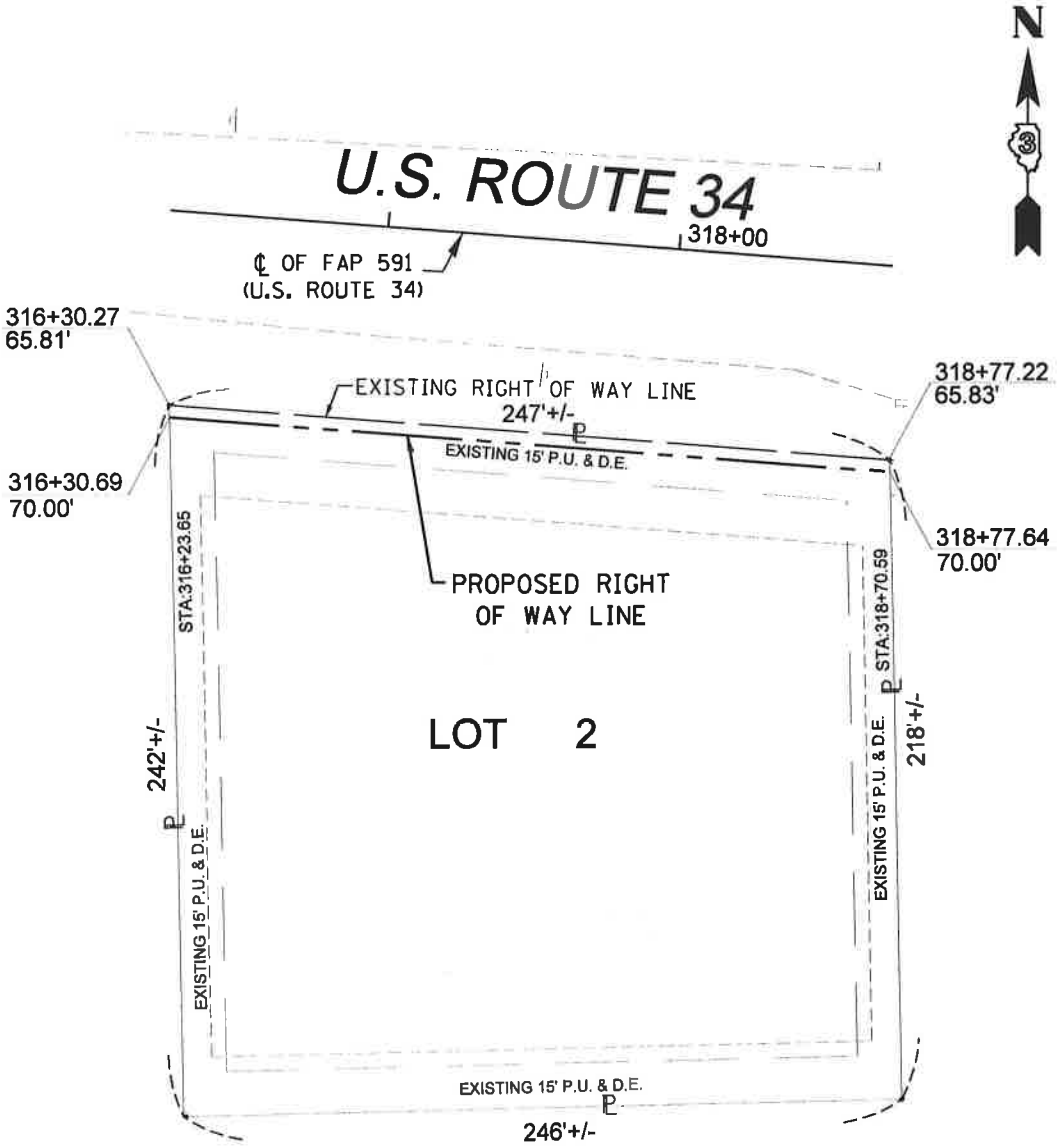
TOTAL HOLDING	=	3.522 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.030 AC. +/- (1,312 SQ. FT. +/-)
REMAINDER	=	3.492 AC. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0016.dgn 12/11/2015 11:47:59 AM User=burbuh.mw

PART OF LOT 2 IN RUSH-COPLEY HEALTHCARE CENTER SUBDIVISION, KENDALL COUNTY, IL



TAX # 02-30-200-015

EASEMENT NOTES:

EASEMENT PER SUBDIVISION DOCUMENT 200700032622 AFFECTED.

50' 0' 100'

SCALE 1" = 50'

TITLE COMMITMENT 2202.1

PARCEL 3XQ0017

GARY L. CONOVER, et al

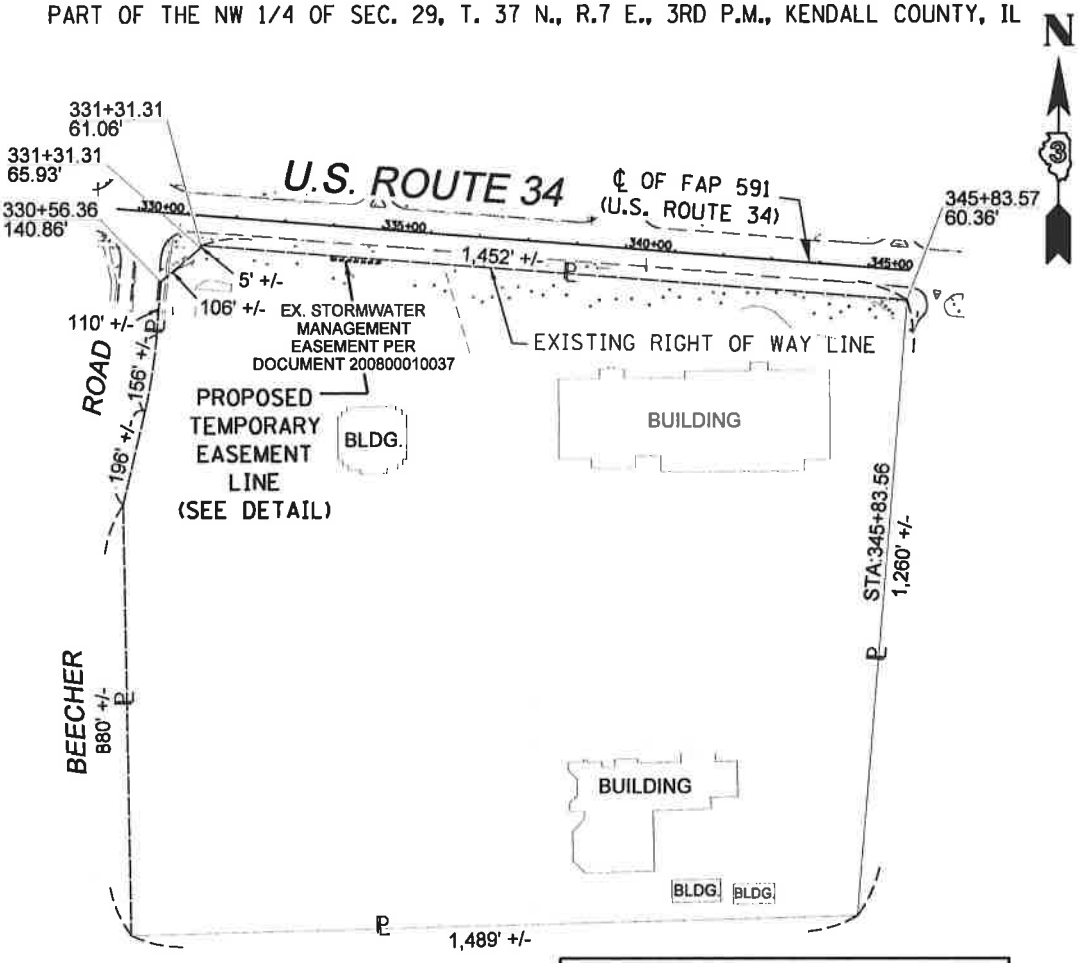
TOTAL HOLDING	=	1.300 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.024 AC. +/- (1,033 SQ. FT. +/-)
REMAINDER	=	1.276 AC. +/-

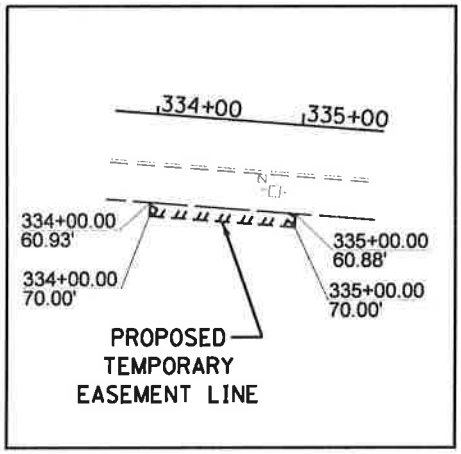
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0017.dgn 12/11/2015 1:45:15 PM User=burbulysp

PART OF THE NW 1/4 OF SEC. 29, T. 37 N., R.7 E., 3RD P.M., KENDALL COUNTY, IL





PROPOSED T.E. DETAIL
1"=100'

TAX # 02-29-100-006

EASEMENT NOTES:

BOOK 111 PAGE 134 NOT AFFECTED.

BOOK 109 PAGE 450 NOT AFFECTED.

DOCUMENT 910854 NOT AFFECTED.

UNABLE TO LOCATE EASEMENT PER DOCUMENT 200300040990.

DOCUMENT 200800010037 AFFECTED.

DOCUMENT 200800021638 NOT AFFECTED.

DOCUMENT 200800024856 NOT AFFECTED.

DOCUMENT 200900020994 NOT AFFECTED.

DOCUMENT 201000019660 NOT AFFECTED.

TITLE COMMITMENT 2202.7

300' 0' 300'

SCALE 1" = 300'

PARCEL 3XQ0019

KENDALL COUNTY PUBLIC BUILDING COMMISSION, A BODY POLITIC, OF KENDALL COUNTY, ILLINOIS

TOTAL HOLDING = 46.990 AC. +/-

TEMPORARY EASEMENT AREA = 910 SQ. FT. +/-
PURPOSE: GRADING

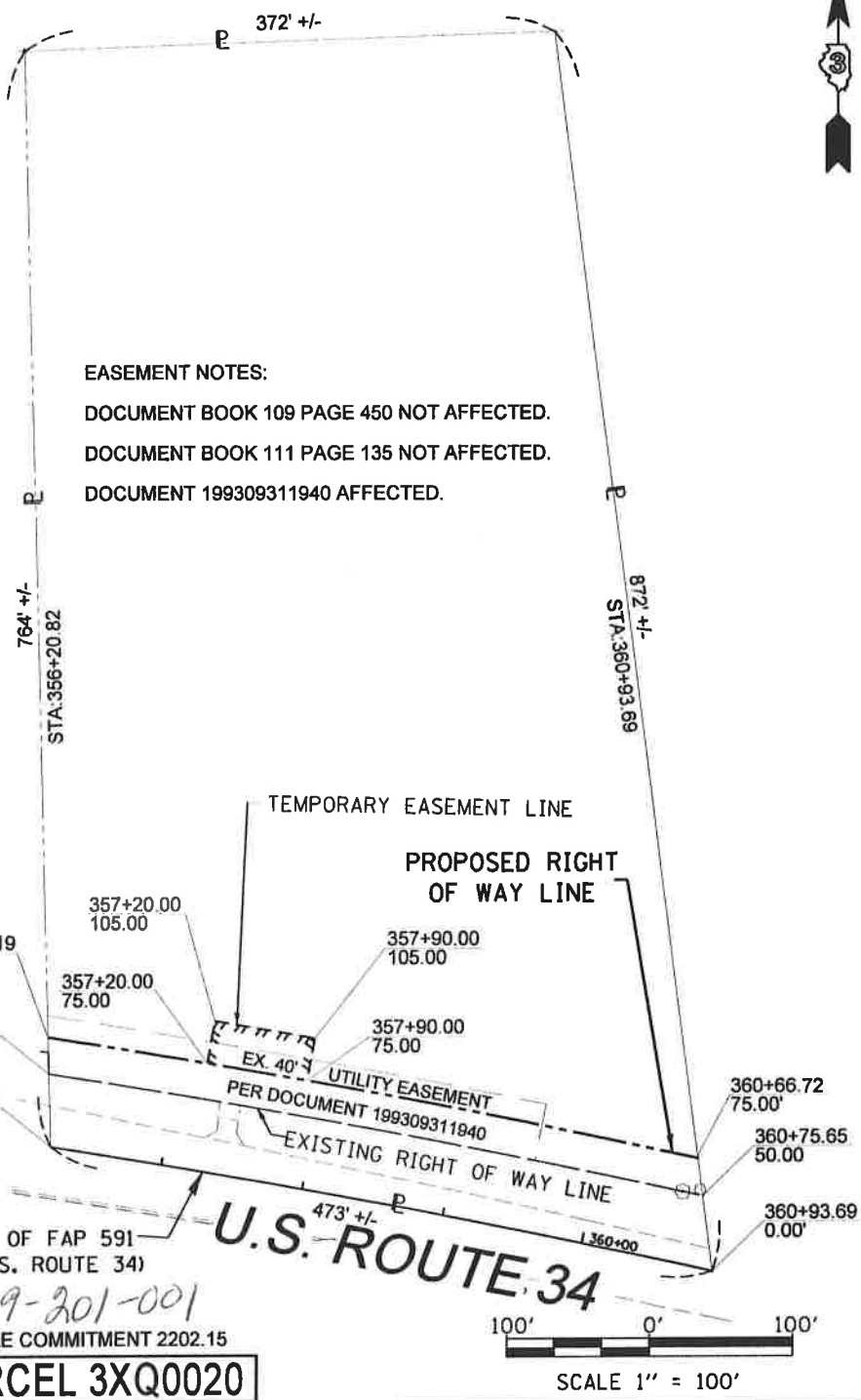
04/12/16 PVB REV. EASE. PURPOSE

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0019.dgn 4/12/2016 1:30:05 PM User=bubulysgv

PART OF THE NE 1/4 OF SEC. 29, T. 37 N., R.7 E., 3RD P.M., KENDALL COUNTY, IL



SCALE 1" = 100'

TAX # 02-29-201-001

TITLE COMMITMENT 2202.15

PARCEL 3XQ0020

ESMER CAPITAL MANAGEMENT ENTERPRISES, LLC

TOTAL HOLDING	=	7.731 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.807 AC. +/-
AREA IN EXIST. R.O.W.	=	0.540 AC. +/-
NET AREA REQUIRED	=	0.267 AC. +/-
REMAINDER	=	6.924 AC. +/-

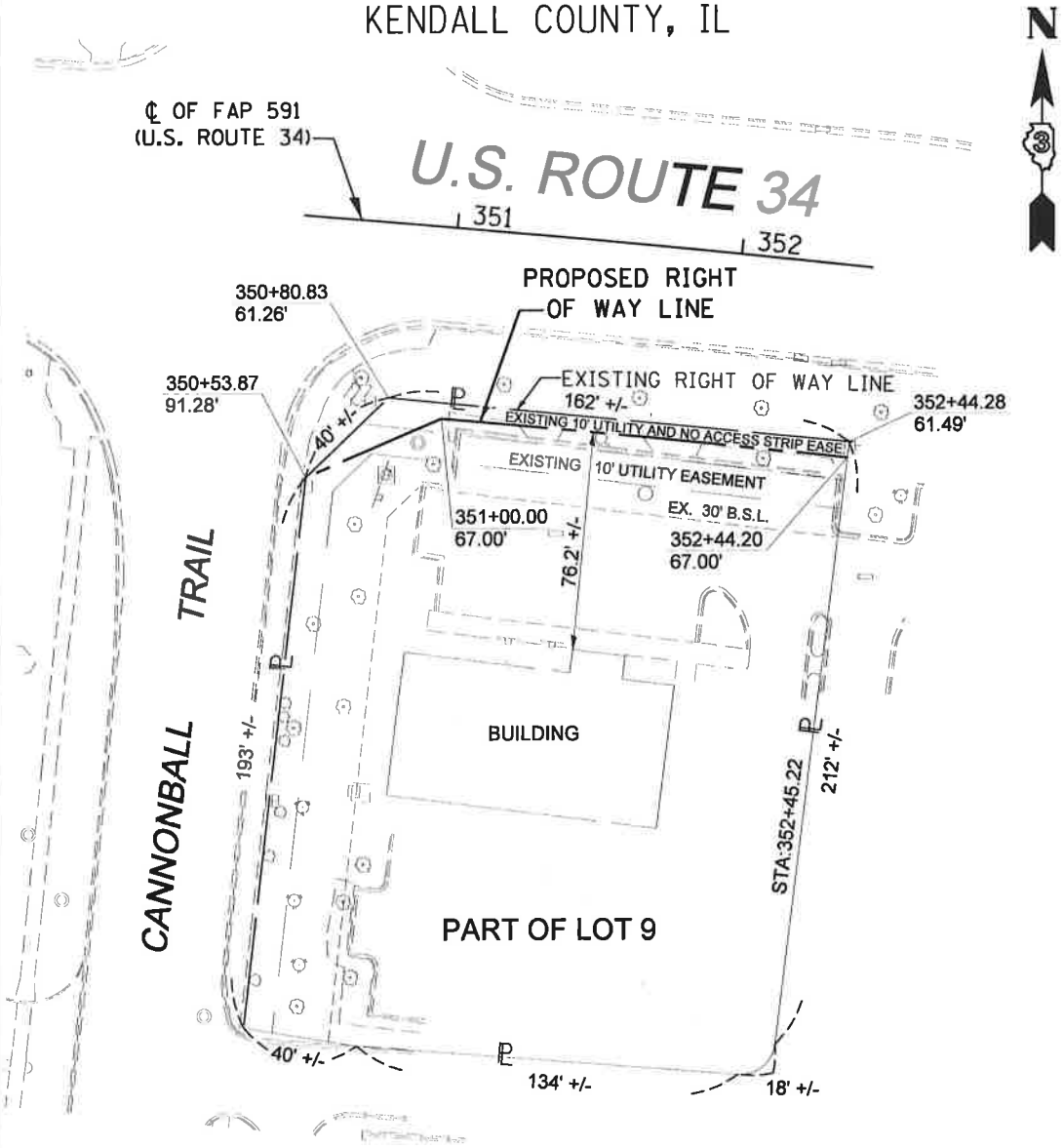
TEMPORARY EASEMENT AREA = 0.049 AC. +/-
PURPOSE: GRADING AND DRIVEWAY RECONSTRUCTION

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0020.dgn 12/22/2015 4:30:15 PM User=burbulysnv

PART OF LOT 9 IN CIMARRON RIDGE SUBDIVISION
KENDALL COUNTY, IL



EASEMENT NOTES:

DOCUMENT 199200921219 NOT AFFECTED.

EASEMENTS PER SUBDIVISION DOCUMENT 199100913284 AFFECTED.

TAX # 02-29-127-026

50' 0' 100'

SCALE 1" = 50'

TITLE COMMITMENT 2202.10

PARCEL 3XQ0022

KAI FENG LI

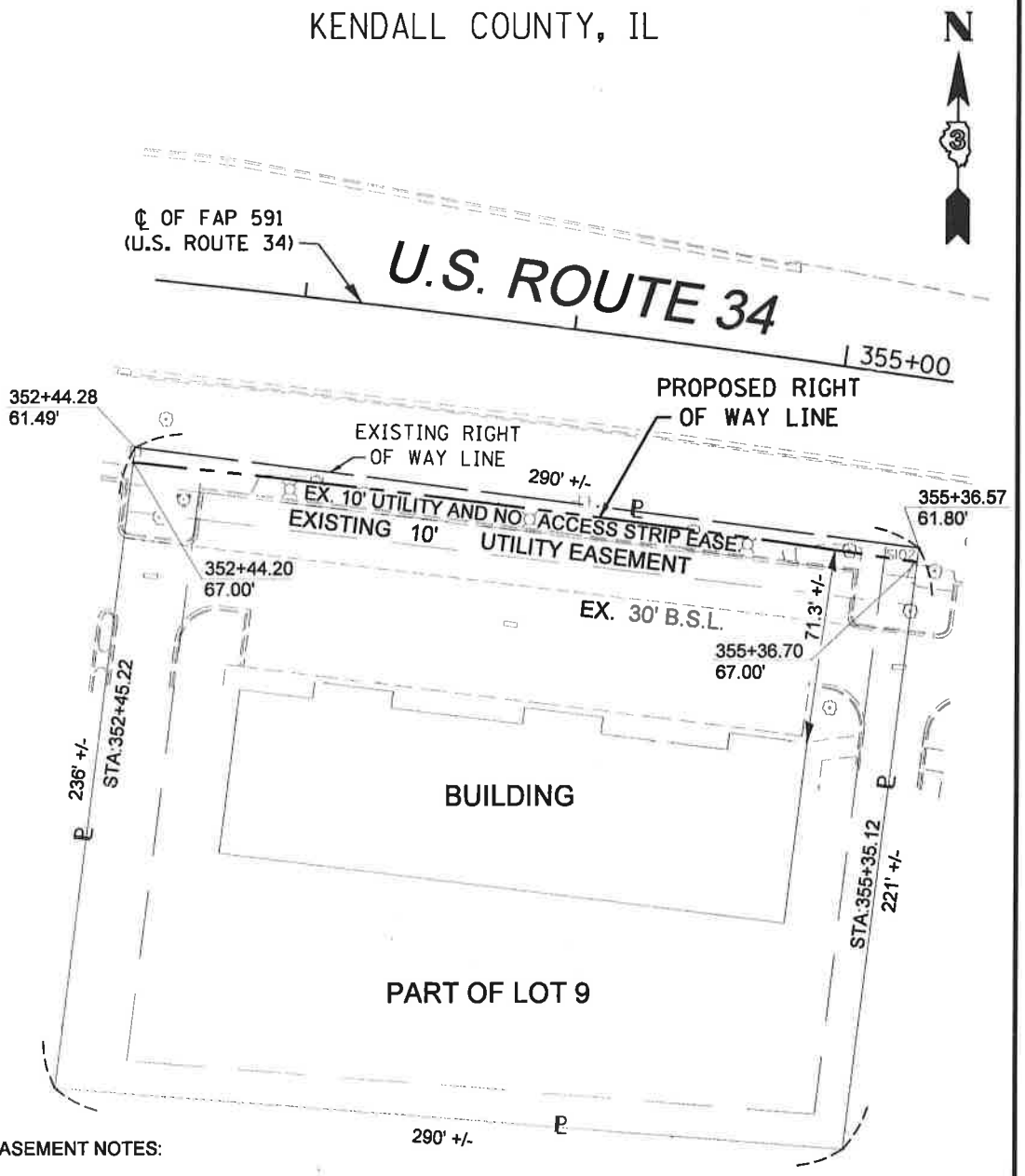
TOTAL HOLDING	=	0.940 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.027 AC. +/- (1,171 SQ. FT. +/-)
REMAINDER	=	0.913 AC. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0022.dgn 12/23/2015 10:37:50 AM User=burbulys

PART OF LOT 9 IN CIMARRON RIDGE SUBDIVISION
KENDALL COUNTY, IL



EASEMENT NOTES:

DOCUMENT 199200921219 NOT AFFECTED.

DOCUMENT 200300017151 NOT AFFECTED.

DOCUMENT 200300034587 AFFECTED.

EASEMENTS PER SUBDIVISION DOCUMENT 199100913284 AFFECTED.

TAX ID# 02-29-127-030

50' 0' 100'

SCALE 1" = 50'

TITLE COMMITMENT 2202.11

PARCEL 3XQ0023

FIRST NATIONAL BANK
OF OMAHA, TRUSTEE

TOTAL HOLDING	=	1.521 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.029 AC. +/- (1,278 SQ. FT. +/-)
REMAINDER	=	1.492 AC. +/-

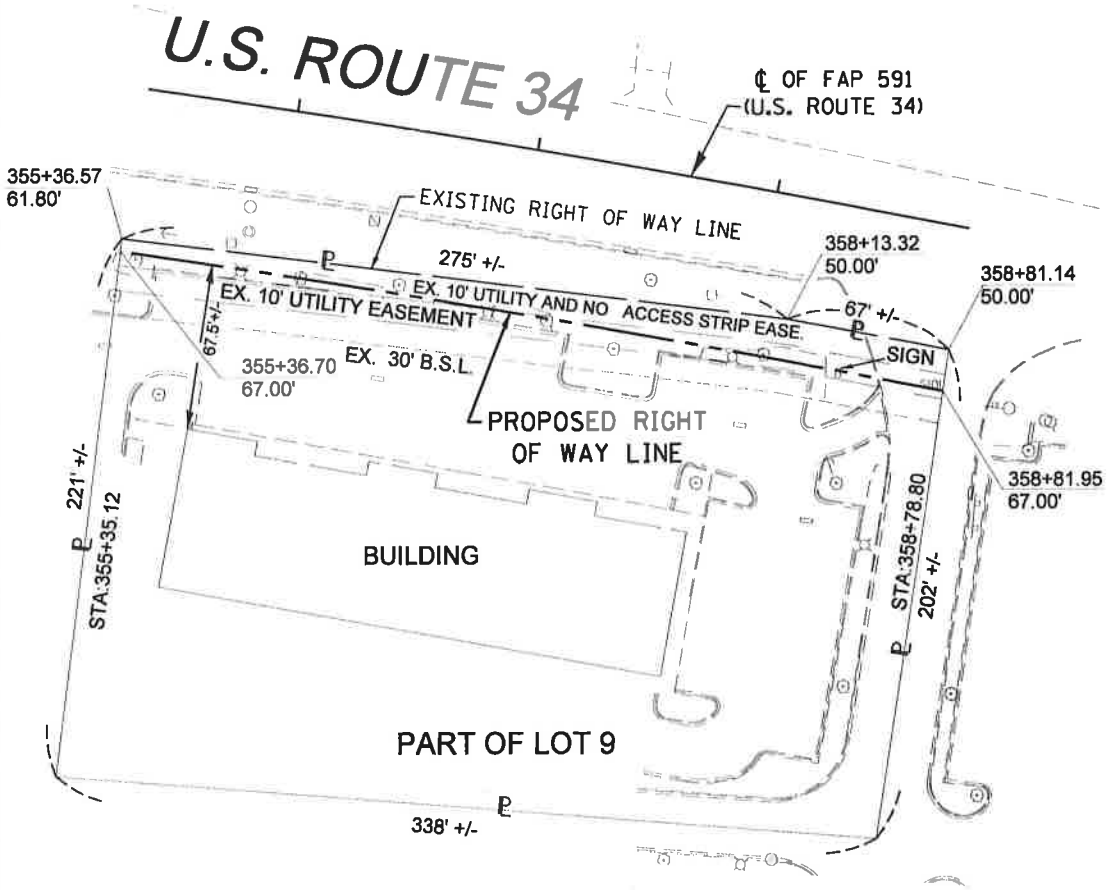
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

Name Change 4/13/16 MKB

3XQ0023.dgn 4/13/2016 10:29:29 AM User: bracknk

PART OF LOT 9 IN CIMARRON RIDGE SUBDIVISION
KENDALL COUNTY, IL



EASEMENT NOTES:

DOCUMENT 199200921219 NOT AFFECTED.

DOCUMENT 200300017151 AFFECTED.

EASEMENTS PER SUBDIVISION DOCUMENT 199100913284 AFFECTED.

TAX # 02-29-127-029

60' 0' 60'

SCALE 1" = 60'

TITLE COMMITMENT 2202.12

PARCEL 3XQ0024

FIRST NATIONAL BANK
OF OMAHA, TRUSTEE

TOTAL HOLDING	=	1.666 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.091 AC. +/- (3,964 SQ. FT. +/-)
REMAINDER	=	1.575 AC. +/-

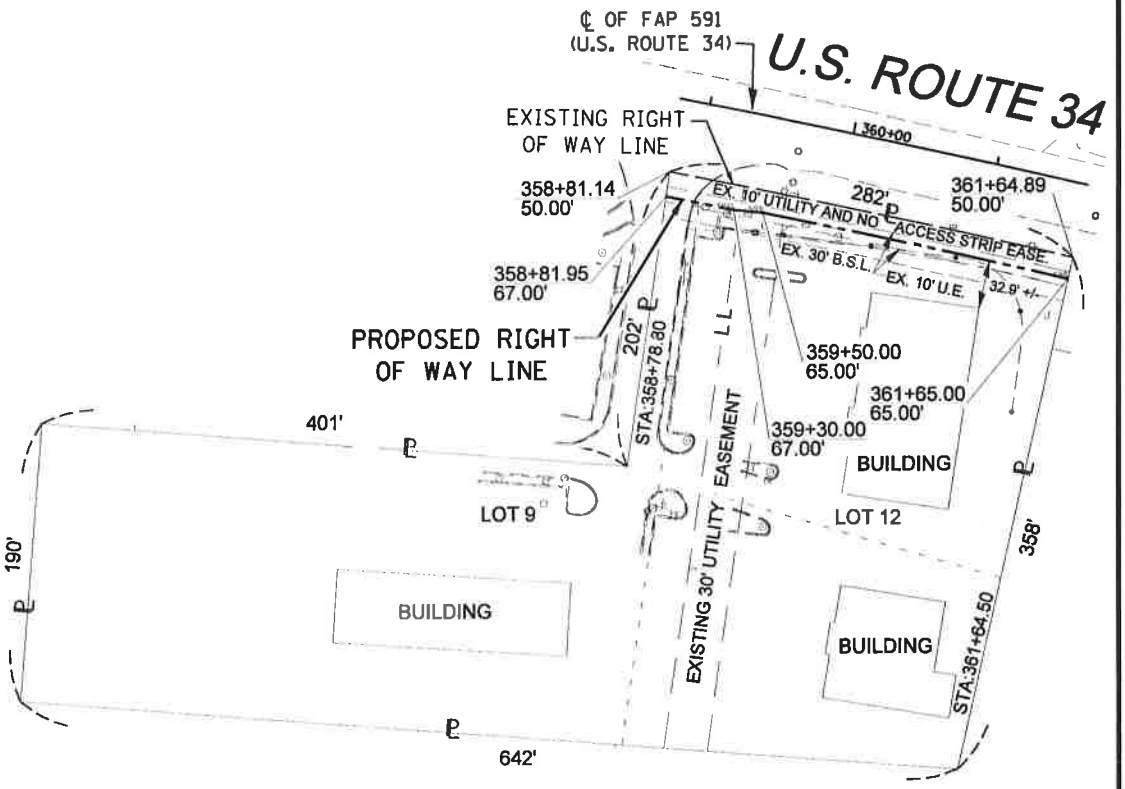
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

Name Change 4/13/16 MKB

3XQ0024.dgn 4/13/2016 10:31:19 AM User=bruckmk

PART OF LOT 9 AND 12 IN CIMARRON RIDGE SUBDIVISION KENDALL COUNTY, IL



EASEMENT NOTES:

DOCUMENT 199200921219 NOT AFFECTED.

DOCUMENT 200300017151 AFFECTED.

EASEMENTS PER SUBDIVISION DOCUMENT 199100913284 AFFECTED.

TAX # 02-29-127-038
02-29-203-016
02-29-127-037
02-29-203-017

100' 0' 100'

SCALE 1" = 100'

TITLE COMMITMENT 2202.13

PARCEL 3XQ0025

FIRST NATIONAL BANK OF OMAHA, TRUSTEE

TOTAL HOLDING	=	4.026 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.100 AC. +/- (4,335 SQ. FT. +/-)
REMAINDER	=	3.926 AC. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

Name Change 4/13/16 MKB

3XQ0025.dgn 4/13/2016 10:33:43 AM User=bruckmk

PART OF LOT 4 IN BLOCK 2 OF COUNTRYSIDE CENTER UNIT 4, IN THE UNITED CITY OF YORKVILLE.

N

EASEMENT NOTES:

EASEMENT PER DOCUMENT 200900002861 AFFECTED.

EASEMENT PER DOCUMENT 200400028838 NOT AFFECTED.

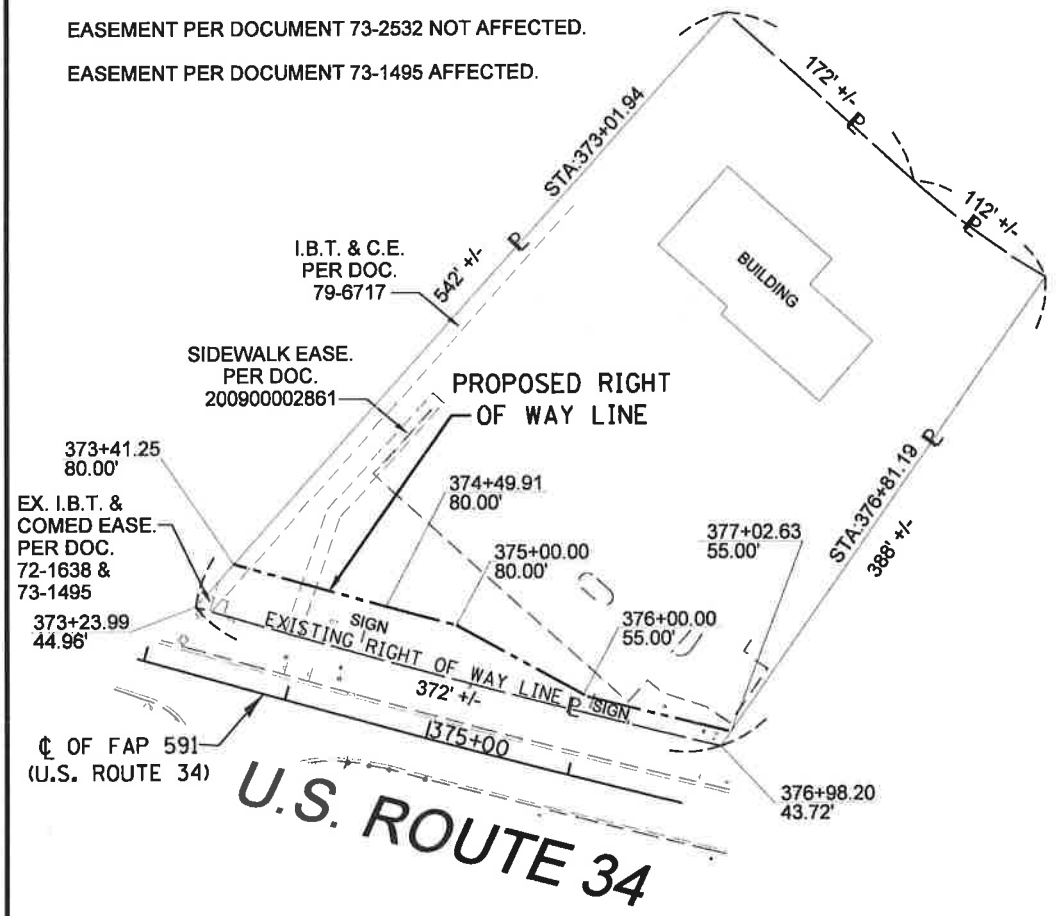
EASEMENT PER DOCUMENT 79-6717 AFFECTED.

EASEMENT PER DOCUMENT 72-1638 AFFECTED.

EASEMENT PER DOCUMENT 73-1972 NOT AFFECTED.

EASEMENT PER DOCUMENT 73-2532 NOT AFFECTED.

EASEMENT PER DOCUMENT 73-1495 AFFECTED.



TAX # 02-29-229-006

100' 0' 100'

SCALE 1" = 100'

TITLE COMMITMENT 2202.22

PARCEL 3XQ0031

YORKVILLE MOB, LLC

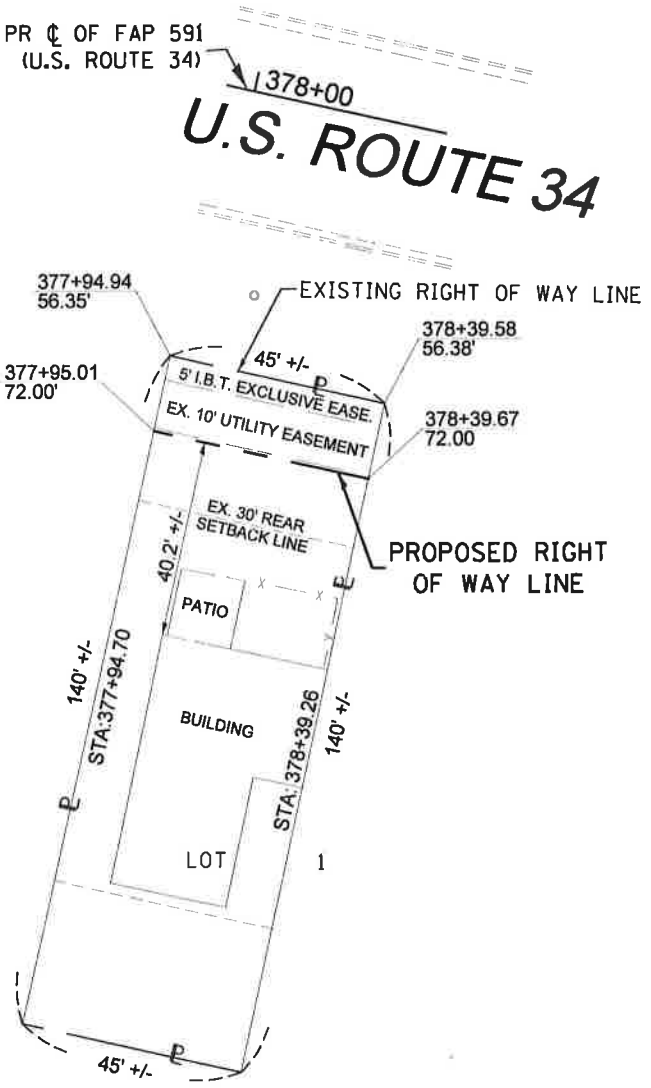
TOTAL HOLDING	=	3.312 AC. +/-
TOTAL R.O.W. REQUIRED	=	0.217 AC. +/- (9,446 SQ. FT. +/-)
REMAINDER	=	3.095 AC. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0031.dgn 1/29/2016 12:05:18 PM User=burbulys.spw

PART OF THE WEST 45.0' OF LOT 1 IN COUNTRYSIDE SUB. UNIT 9 IN THE UNITED CITY OF YORKVILLE, IL



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 915766 NOT AFFECTED.

TAX# 02-29-283-010

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.30

PARCEL 3XQ0037

EDWARD J. SOUKUP, JR., et ux

TOTAL HOLDING	=	6,366 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	705 SQ. FT. +/-
REMAINDER	=	5,661 SQ. FT. +/-

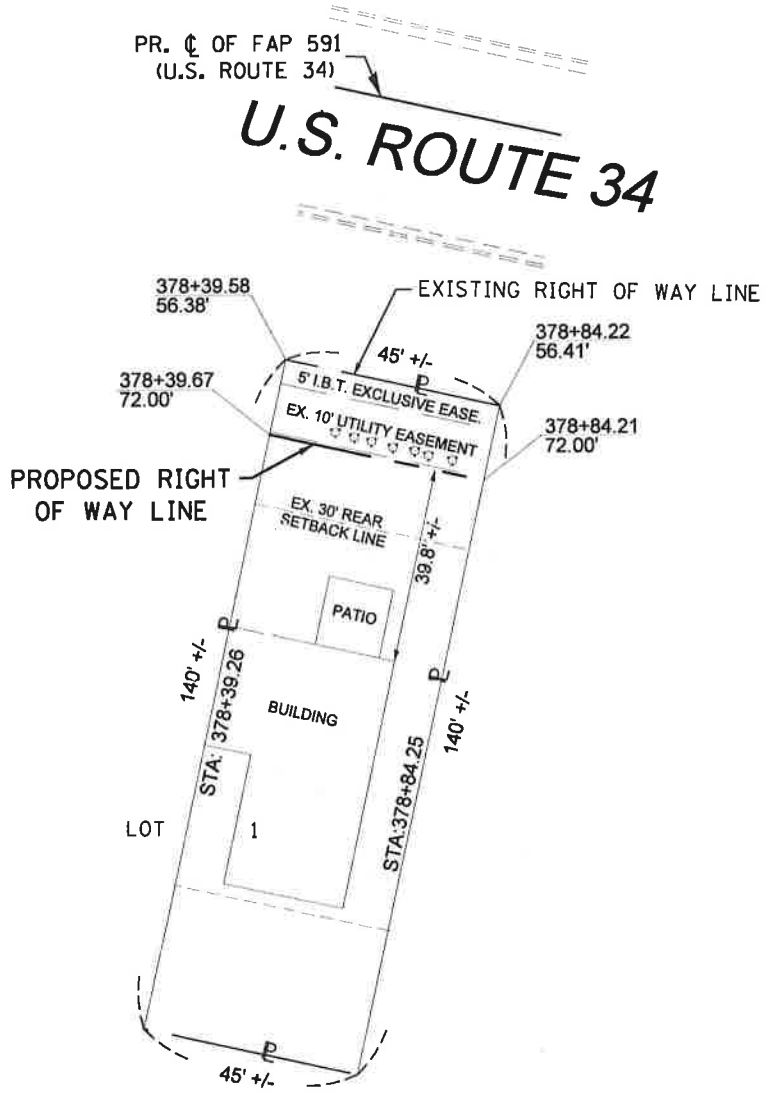
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0037.dgn 2/1/2016 9:30:00 AM User=burbulsuv

PART OF EAST 45.0' OF LOT 1 IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL.





EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 915766 NOT AFFECTED.

TAX # 02-29-283-011

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.31

PARCEL 3XQ0038

JAMES I. ALLEN, et ux

TOTAL HOLDING	=	6,286 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	702 SQ. FT. +/-
REMAINDER	=	5,584 SQ. FT. +/-

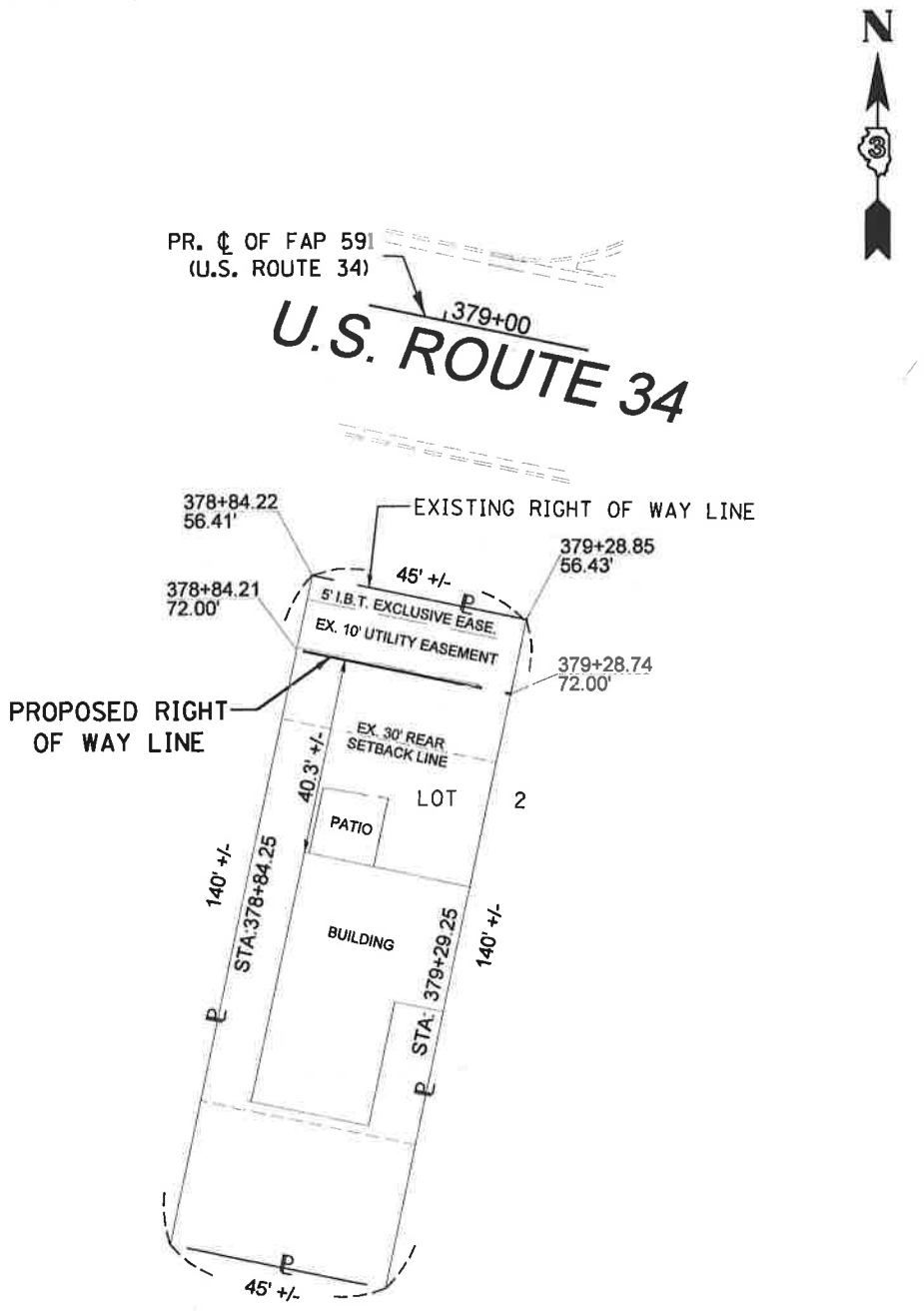
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

NAME CHANGE 7/22/16 MKB

3XQ0038.dgn 7/22/2016 9:35:08 AM User=bruckmk

PART OF THE WEST 45.0' OF LOT 2, COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 913833 NOT AFFECTED.

TAX # 02-29-283-008

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.32

PARCEL 3XQ0039

MARCIA ANN GATES, TRUSTEE

TOTAL HOLDING	=	6,286 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	701 SQ. FT. +/-
REMAINDER	=	5,585 SQ. FT. +/-

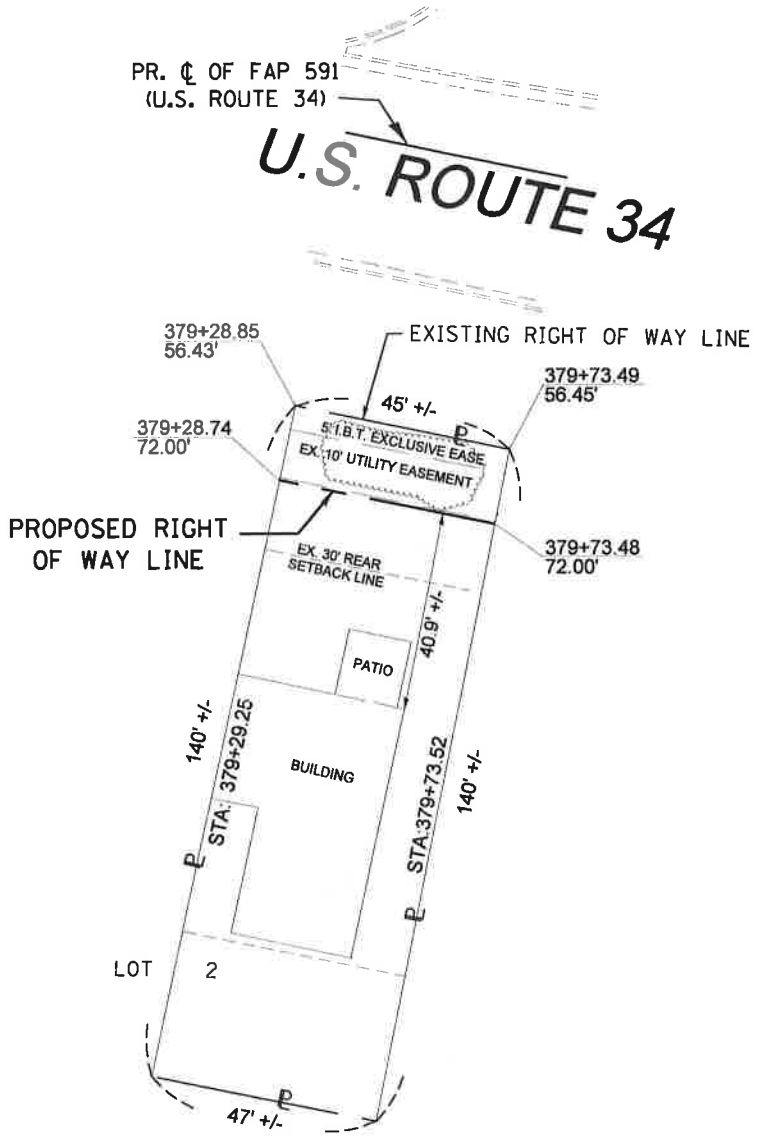
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0039.dgn 2/1/2016 4:47:37 PM User=bubulyspv

PART OF LOT 2, EXCEPT THE WEST 45.0' IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL

N



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 913633 NOT AFFECTED.

TAX# 02-29-283-009

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.33

PARCEL 3XQ0040

DEBBY A. SCHAEFER

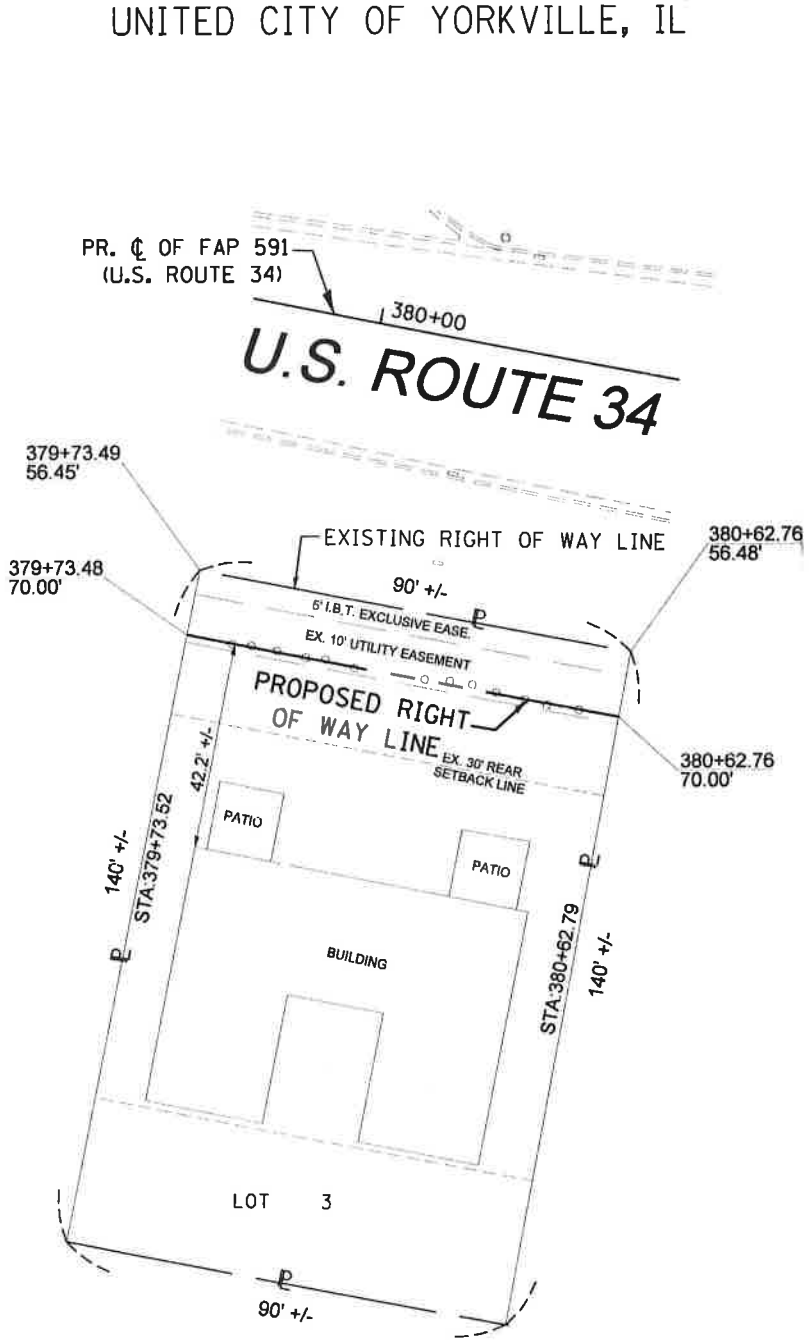
TOTAL HOLDING	=	6,414 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	702 SQ. FT. +/-
REMAINDER	=	5,712 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

3XQ0040.dgn 2/1/2016 4:45:17 PM User=burbulys-pw

PART OF LOT 3 IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 199000900001 NOT AFFECTED.

TAX # 02-29-283-003

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.34

PARCEL 3XQ0041

LOWANDA GASS, et al.

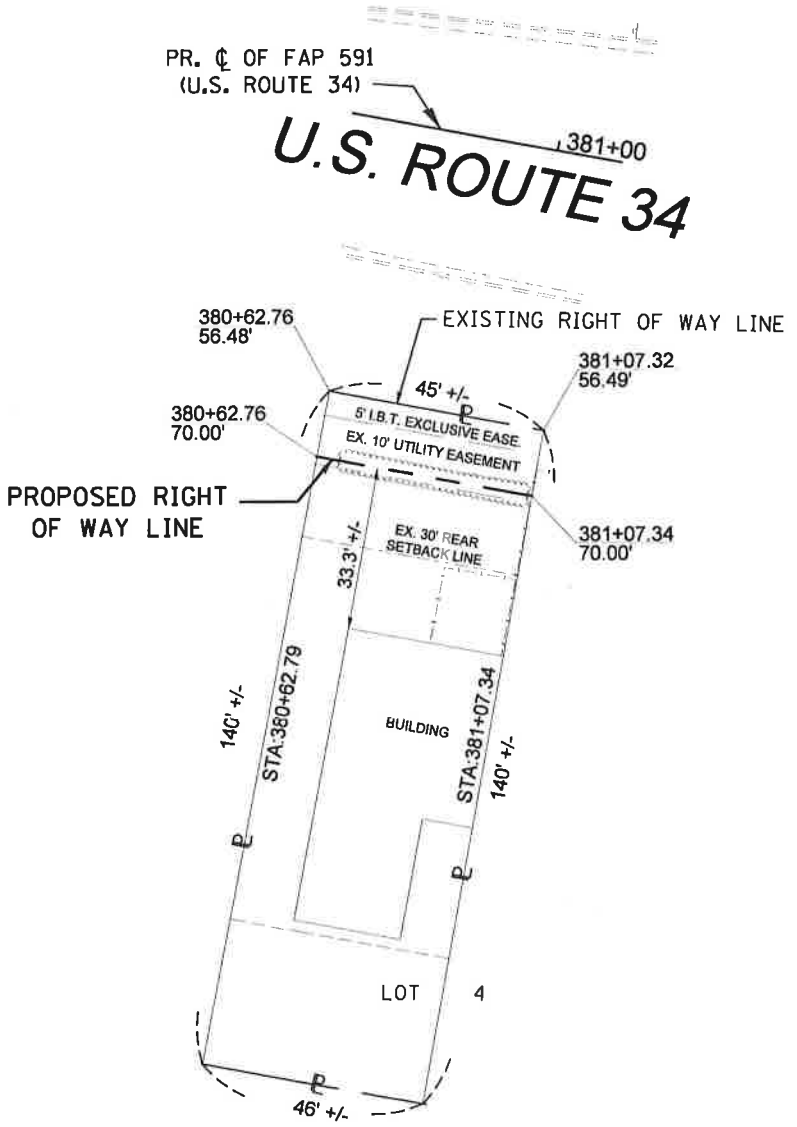
TOTAL HOLDING	=	12,701 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	1,219 SQ. FT. +/-
REMAINDER	=	11,482 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

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PART OF LOT 4, IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL



TAX# 02-29-283-013

EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 199000900001 NOT AFFECTED.

EASEMENTS PER DOCUMENT 200000004825 NOT AFFECTED.

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.35

PARCEL 3XQ0044

GINGER K. MCKENNA

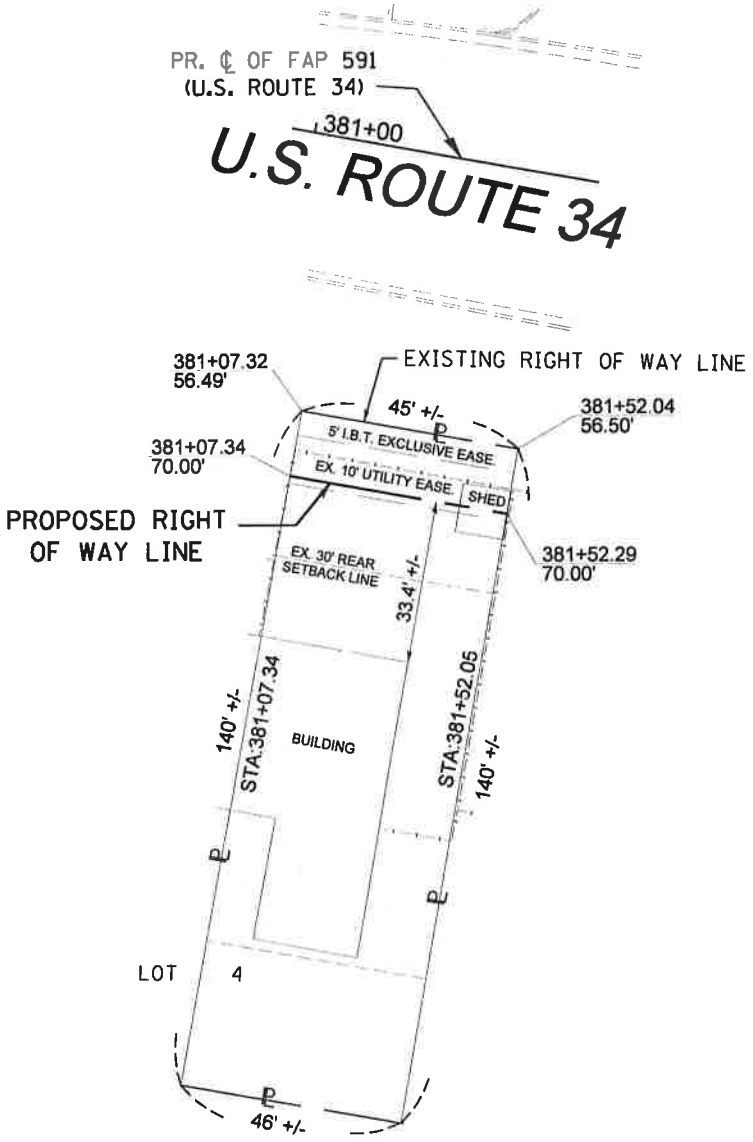
TOTAL HOLDING	=	6,340 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	608 SQ. FT. +/-
REMAINDER	=	5,732 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

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PART OF LOT 4, IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

EASEMENTS PER DOCUMENT 199000900001 NOT AFFECTED.

EASEMENTS PER DOCUMENT 200000004825 NOT AFFECTED.

PIN # 02-29-283-012

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.36

PARCEL 3XQ0045

THOMAS J. HUSAR, et al

TOTAL HOLDING	=	6,363 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	610 SQ. FT. +/-
REMAINDER	=	5,753 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

NAME CHANGE 4/25/16 MKB

320635

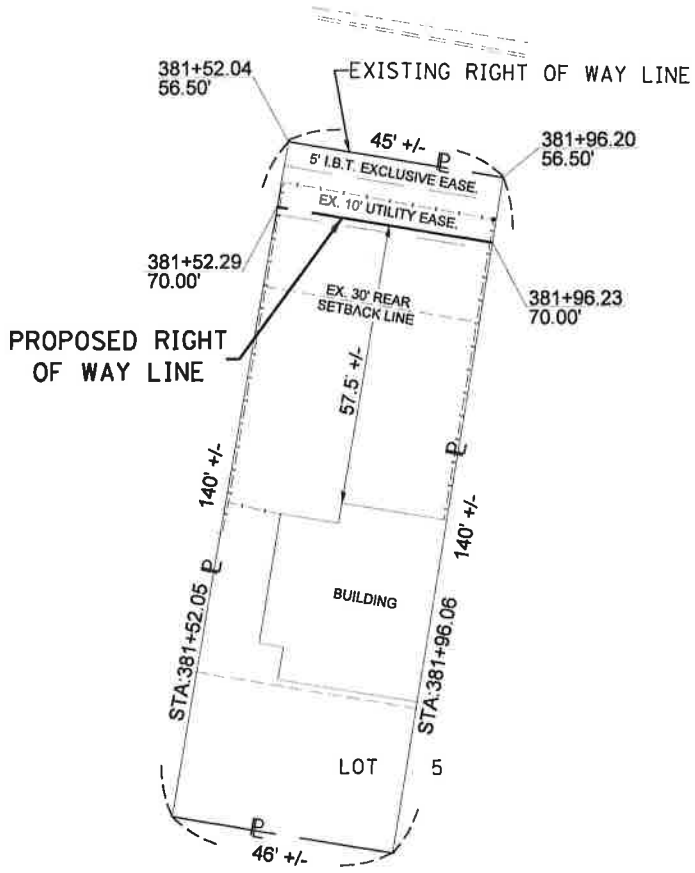
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PART OF LOT 5, IN COUNTRYSIDE SUB. UNIT 9,
UNITED CITY OF YORKVILLE, IL



℄ OF FAP 591
(U.S. ROUTE 34)

U.S. ROUTE 34



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

TAX# 02-29-283-015

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.37

PARCEL 3XQ0046

MICHAEL SADLER

TOTAL HOLDING	=	6,310 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	602 SQ. FT. +/-
REMAINDER	=	5,708 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

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PART OF LOT 5, IN COUNTRYSIDE SUB. UNIT 9, UNITED CITY OF YORKVILLE, IL



TAX # 02-29-283-014

EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

30' 0' 30'

SCALE 1" = 30'

TITLE COMMITMENT 2202.25

PARCEL 3XQ0047

STEFANIE SMUDDE

TOTAL HOLDING	=	6,356 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	614 SQ. FT. +/-
REMAINDER	=	5,742 SQ. FT. +/-

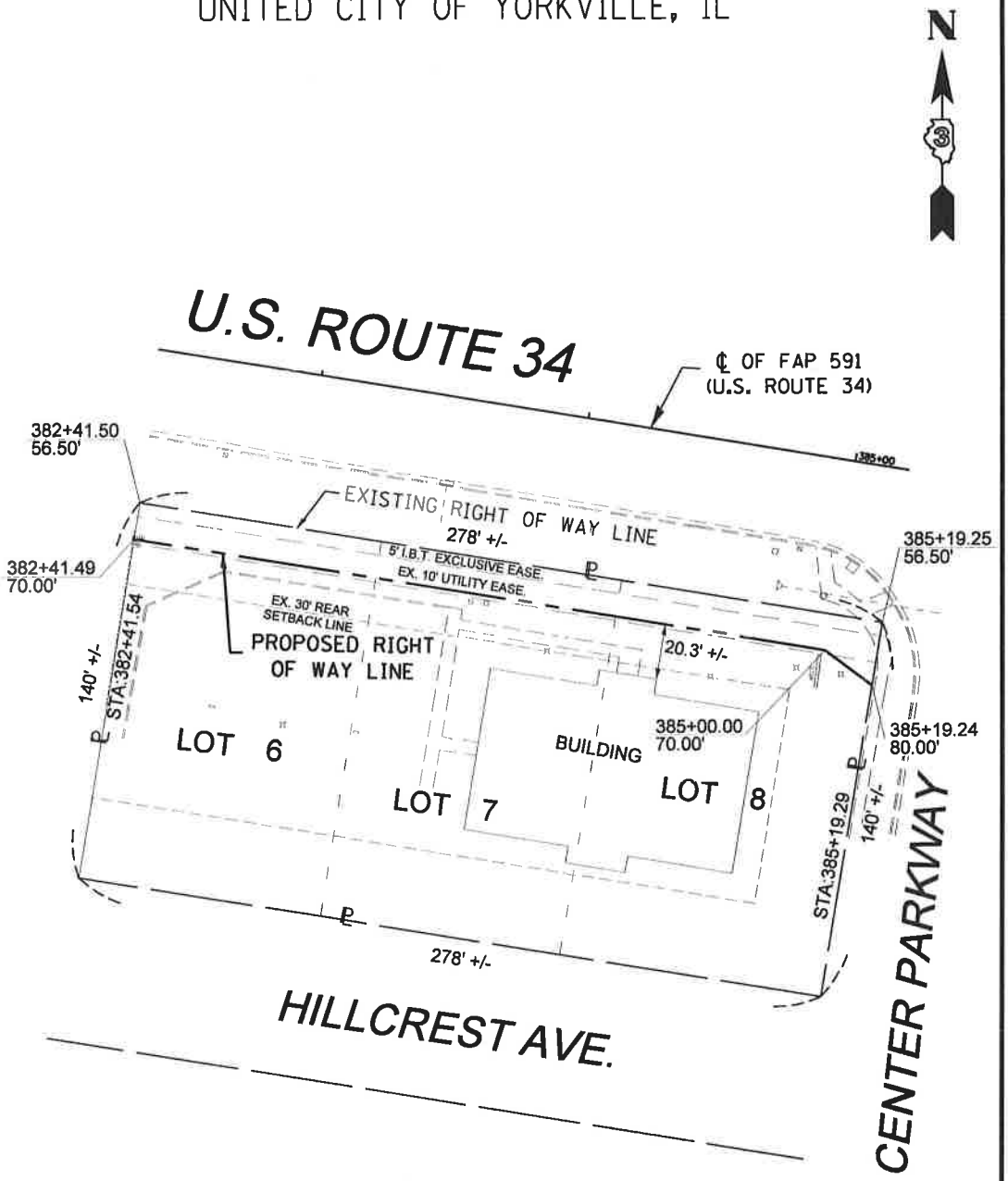
PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

NAME CHANGE 4/25/16 MKB S/O CHANGE 9/16/16 MKB

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PART OF LOTS 6-8, IN COUNTRYSIDE SUB. UNIT 9,
UNITED CITY OF YORKVILLE, IL



EASEMENT NOTES:

EASEMENTS PER DOCUMENT 895943 AFFECTED.

TAX # 02-28-155-008

50' 0' 100'

SCALE 1" = 50'

TITLE COMMITMENT 2202.23

PARCEL 3XQ0048

215 HILLCREST, L.L.C.

TOTAL HOLDING	=	38,850 SQ. FT. +/-
TOTAL R.O.W. REQUIRED	=	3,846 SQ. FT. +/-
REMAINDER	=	35,004 SQ. FT. +/-

PREMISE PLAT

ROUTE	FAP ROUTE 591 (US 34)
SECTION	(13)R-2[(13BR)C,(13BR-1)BR]
COUNTY	KENDALL
JOB NUMBER	R-93-010-13

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03/31/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0007

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2192.0
Effective Date: March 21, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Paul R. Dresden

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0007

WTG Number: I3-2013KL-2192.0

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

OUTLOT 1 OF FOX HILL UNIT ONE PLANNED UNIT DEVELOPMENT, BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

EXCEPT THAT PART OF THE SOUTHWEST QUARTER OF SECTION 19 AND THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN, KENDALL COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF OUTLOT 1 OF FOX HILL UNIT ONE PLANNED UNIT DEVELOPMENT, BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS, RECORDED IN CABINET 3, SLOTS 508 A & B AND 509 A & B AS DOCUMENT NUMBER 9410594 IN THE RECORDER'S OFFICE OF KENDALL COUNTY; THENCE NORTH 83 DEGREES 37 MINUTES 42 SECONDS WEST, ON A BEARING REFERENCED TO AN ASSUMED NORTH, 76.724 METERS [251.72 FEET]; TO THE NORTHWEST CORNER OF SAID OUTLOT 1; THENCE SOUTH 13 DEGREES 03 MINUTES 54 SECONDS WEST 4.397 METERS [14.43 FEET] ALONG THE WEST LINE OF SAID OUTLOT 1; THENCE NORTH 72 DEGREES 50 MINUTES 55 SECONDS WEST 23.342 METERS [76.58 FEET] TO THE SOUTHERLY EXISTING RIGHT OF WAY LINE OF F.A.P. 591 (U.S. ROUTE 34); THENCE WESTERLY ON SAID RIGHT OF WAY LINE 291.154 METERS [955.23 FEET] ON A CURVE TO THE LEFT WITH A RADIUS OF 11627.290 METERS [38147.20 FEET] WHOSE CHORD BEARS NORTH 84 DEGREES 22 MINUTES 40 SECONDS WEST 291.146 METERS [955.20 FEET]; THENCE NORTH 85 DEGREES 05 MINUTES 42 SECONDS WEST 193.965 METERS [636.37 FEET] TO THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 19; THENCE NORTH 00 DEGREES 18 MINUTES 30 SECONDS WEST 15.308 METERS [50.22 FEET] ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0007

SECTION 19 TO THE CENTERLINE OF F.A. 591 (U.S. ROUTE 34); THENCE SOUTH 85 DEGREES 05 MINUTES 42 SECONDS EAST 193.832 METERS [635.93 FEET] ALONG SAID CENTERLINE; THENCE EASTERLY ON SAID CENTERLINE 298.027 METERS [977.78 FEET] ON A CURVE TO THE RIGHT WITH A RADIUS OF 11642.530 METERS [38197.20 FEET] WHOSE CHORD BEARS SOUTH 84 DEGREES 21 MINUTES 42 SECONDS EAST 298.019 METERS [977.75 FEET]; THENCE SOUTH 83 DEGREES 37 MINUTES 42 SECONDS EAST 113.496 METERS [372.36 FEET] ALONG SAID CENTERLINE; THENCE EASTERLY ON SAID CENTERLINE 234.696 METERS [770.00 FEET] ON A CURVE TO THE LEFT WITH A RADIUS OF 10478.276 METERS [34377.48 FEET] WHOSE CHORD BEARS SOUTH 84 DEGREES 16 MINUTES 12 SECONDS EAST 234.692 METERS [769.98 FEET]; THENCE SOUTH 84 DEGREES 54 MINUTES 42 SECONDS EAST 537.610 METERS [1763.81 FEET] ALONG SAID CENTERLINE TO THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 30; THENCE SOUTH 00 DEGREES 43 MINUTES 32 SECONDS EAST 15.319 METERS [50.26 FEET] ALONG THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 30 TO THE SOUTHERLY EXISTING RIGHT OF WAY LINE OF F.A.P. 591 (U.S. ROUTE 34); THENCE NORTH 84 DEGREES 54 MINUTES 42 SECONDS WEST 537.638 METERS [1763.90 FEET] ALONG SAID RIGHT OF WAY LINE; THENCE WESTERLY ON SAID RIGHT OF WAY LINE 235.038 METERS [771.12 FEET] ON A CURVE TO THE RIGHT WITH A RADIUS OF 10493.516 METERS [34427.48 FEET] WHOSE CHORD BEARS NORTH 84 DEGREES 16 MINUTES 12 SECONDS WEST 235.033 METERS [771.10 FEET]; THENCE NORTH 83 DEGREES 37 MINUTES 42 SECONDS WEST 19.812 METERS [65.00 FEET] TO THE POINT OF BEGINNING, CONTAINING 2.1040 HECTARE [5.199 ACRE], MORE OR LESS, OF WHICH 2.0987 HECTARE [5.186 ACRE], MORE OR LESS, IS IN THE EXISTING RIGHT OF WAY. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-30-101-001

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2192.0

Note: First Amendment to Declaration recorded August 30, 1995 as Document No. 9506862.

11. An Easement for Public Utilities and Drainage over and across the northerly 45 feet of subject property as shown on the Plat of Subdivision recorded November 2, 1994 as Document No. 9410594.

12. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 9410594.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0008

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2193.0
Effective Date: March 21, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Jesus Diaz and Anita Diaz, husband and wife, as tenants by the entirety

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

03/31/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0008

WTG Number: I3-2013KL-2193.0

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 7 OF FOX HILL UNIT ONE PLANNED UNIT DEVELOPMENT, BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-30-102-007

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2193.0

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-30-102-007
Jesus Diaz and Anita Diaz
1615 Cottonwood Trl
Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Mortgage dated January 18, 2013 and recorded January 30, 2013 as Document No. 201300002469 made by Jesus Diaz and Anita Diaz to JPMorgan Chase Bank, NA to secure a note in the amount of $82,100.00 recorded in the Kendall County Recorder's Office.

10. An Easement dated November 3, 1994 and recorded March 8, 1996 as Document No. 9602444 made by Paul R. Dresden to Illinois Bell / aka Ameritech recorded in the Kendall County Recorder's Office.

11. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 9410594.

12. Covenants, conditions, restrictions and easements contained in Declaration for Fox Hill Planned Unit Development Association recorded January 18, 1995 as Document No. 9500419 in the Kendall County Recorder's Office.

Note: See copy for particulars.

13. Amendment to Covenants, Conditions and Restrictions recorded August 30, 1995 as Document Number 9506862.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/17/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0014

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2199.0
Effective Date: November 01, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   The Oaks at Fox Hill Townhomes Association, Inc.

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/17/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0014

WTG Number: I3-2013KL-2199.0

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 86 IN FOX HILL UNIT THREE PLANNED UNIT DEVELOPMENT ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT NUMBER 9501888 IN THE KENDALL COUNTY RECORDER'S OFFICE, DESCRIBED AS FOLLOWS, USING BEARINGS AND DISTANCES REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83, 2011 ADJ.): COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 86; THENCE NORTHERLY 81.56 FEET ALONG THE WEST LINE OF SAID LOT 86 ON A 359.98 FOOT RADIUS CURVE TO THE RIGHT, WHOSE CHORD BEARS NORTH 01 DEGREE 42 MINUTES 42 SECONDS WEST 81.38 FEET; THENCE NORTH 04 DEGREES 46 MINUTES 43 SECONDS EAST 100.15 FEET ALONG SAID WEST LINE OF LOT 86 TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 04 DEGREES 46 MINUTES 43 SECONDS EAST 20.00 FEET TO THE NORTHWEST CORNER OF SAID LOT 86; THENCE EASTERLY 125.36 FEET ALONG THE NORTH LINE OF SAID LOT 86 ON A 34,266.94 FOOT RADIUS CURVE TO THE LEFT, WHOSE CHORD BEARS SOUTH 85 DEGREES 24 MINUTES 21 SECONDS EAST 125.36 FEET; THENCE SOUTH 85 DEGREES 30 MINUTES 38 SECONDS EAST 586.70 FEET ALONG THE NORTH LINE OF SAID LOT 86 TO AN EXISTING IRON PIPE AT THE NORTHEAST CORNER OF SAID LOT 86; THENCE SOUTH 01 DEGREE 22 MINUTES 52 SECONDS EAST 20.11 FEET ALONG THE EAST LINE OF SAID LOT 86; THENCE NORTH 85 DEGREES 30 MINUTES 38 SECONDS WEST 588.75 FEET; THENCE WESTERLY 125.46 FEET ON A CURVE TO THE RIGHT, HAVING A RADIUS OF 34,286.94 FEET, WHOSE CHORD BEARS NORTH 85 DEGREES 24 MINUTES 21 SECONDS WEST 125.46 FEET TO THE POINT OF BEGINNING, CONTAINING 0.327 ACRE, MORE OR LESS, (AREAS BASED ON GROUND MEASUREMENTS), SITUATED IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, STATE OF ILLINOIS.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2199.0

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

   For Parcel(s): 02-30-104-001
   Old Second National Bank #5803
   % Stoneridge Yorkville Prop; 700 Duvall Dr.
   Woodstock, IL 60098

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

10. Covenants, conditions, restrictions and easements contained in Declaration for The Oaks at Fox Hill Townhome Association, Inc. recorded September 13, 1995 as Document No. 9507391 in the Kendall County Recorder's Office.

    Note: See copy for particulars.

11. Upon a conveyance or mortgage of said property in question, we should be furnished with a certified copy of proper resolutions passed by the proper parties authorizing the execution of the documents of conveyance or mortgage.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

08/19/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0015

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2200.0
Effective Date: August 03, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   GCM Properties, LLC

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/19/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0015

WTG Number: I3-2013KL-2200.0

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 2 IN FOX HILL UNIT 6 PLANNED UNIT DEVELOPMENT, BEING A SUBDIVISION OF PART OF THE NORTH 1/2 OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 7, EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS, EXCEPT THAT PART OF LOT 2 IN FOX HILL UNIT 6 PLANNED UNIT DEVELOPMENT DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE SOUTH 84 DEGREES 54 MINUTES 42 SECONDS EAST 375.00 FEET ALONG THE NORTH LINE THEREOF; THENCE SOUTH 34 DEGREES 43 MINUTES 02 SECONDS EAST ALONG THE NORTHEAST LINE THEREOF, 39.05 FEET; THENCE SOUTH 05 DEGREES 05 MINUTES 18 SECONDS WEST ALONG THE EAST LINE THEREOF, 5.00 FEET; THENCE NORTH 62 DEGREES 17 MINUTES 30 SECONDS WEST, 65.00 FEET TO A POINT IN A LINE PARALLEL WITH AND 10 FEET (10') SOUTH FROM THE SAID NORTH LINE; THENCE NORTH 84 DEGREES 54 MINUTES 42 SECONDS WEST ALONG SAID PARALLEL LINE, 338.97 FEET, TO THE WEST LINE THEREOF; THENCE NORTH 00 DEGREES 47 MINUTES 59 SECONDS WEST ALONG SAID WEST LINE, 10.05 FEET TO THE POINT OF BEGINNING, ALL IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS, SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-30-203-001

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-30-203-001
GCM Properties, LLC
12046 Flint Dr.
Homer Glen, IL 60491

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Mortgage dated January 31, 2007 and recorded May 3, 2007 as Document No. 200700014447 made by GCM Properties, LLC to Castle Bank N.A. to secure a note in the amount of $2,500,000.00 recorded in the Kendall County Recorder's Office.

10. An Assignment of Leases and Rents, dated January 31, 2007, and recorded May 3, 2007, as Document No. 200700014448, made by GCM Properties, LLC to Castle Bank, N.A., recorded in the Kendall County Recorder's Office.

11. A Subordination, Non-Disturbance and Attornment Agreement of above Mortgage dated March 25, 2008, and recorded April 24, 2008, as Document No. 200800010434, made by and between 7-Eleven Inc., Castle Bank NA and GCM Properties LLC.

12. A Modification of Mortgage dated October 19, 2011 and recorded November 2, 2011 as Document No. 201100017938 made by GCM Properties, LLC to First National Bank of Omaha recorded in the Kendall County Recorder's Office.

13. A Plat of Easement Grant recorded September 6, 2006 as Document No. 200600028274 made by Chris Mastorakos to United City of Yorkville recorded in the Kendall County Recorder's Office.

14. A Memorandum of Lease dated March 25, 2008 and recorded April 24, 2008 as Document No. 200800010435 made by GCM Properties LLC to 7-Eleven, Inc., and all

rights thereof and all acts done or suffered thereunder by said lessee or by any party claiming by, through or under said lessee, recorded in the Kendall County Recorder's Office.

15. Covenants, conditions, restrictions and easements contained in Declaration for Fox Hill Planned Unit Development Association recorded January 18, 1995 as Document No. 9500419 in the Kendall County Recorder's Office.

Note: See copy for particulars.

Note: As amended from time to time.

16. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

17. We require a copy of the Articles of Organization and Operating Agreement, if any, of the GCM Properties, LLC.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

12/08/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0016

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.0
Effective Date: September 08, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Yorkville-Marazzi, LLC; Yorkville-Brown-2, LLC; Yorkville-Walker, LLC; Yorkville-Simon, LLC; Yorkville-Scott, LLC; Yorkville-Oganeku-2, LLC; Yorkville-Oganeku-1, LLC; Yorkville-Brown-1, LLC; Yorkville-Cosenza, LLC; Yorkville-Smith, LLC; Yorkville-Pierce, LLC; Yorkville-Chiasson-2, LLC; Yorkville-Goldberg, LLC; Yorkville-Chiasson-1, LLC; Yorkville-Adler, LLC; Yorkville-Hook, LLC; Yorkville-Spaur-2, LLC; Yorkville-Spaur-1, LLC; Yorkville-Smookler-2, LLC; Yorkville-Smookler-1, LLC; and Yorkville-Harper, LLC; and Yorkville Medical 1031, L.L.C., a Delaware limited liability company as their interests may appear

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

12/08/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0016

WTG Number: I3-2013KL-2202.0

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 1 OF THE RESUBDIVISION OF LOT 1 OF FOX HILL, UNIT 6, BEING A RESUBDIVISION OF PART OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 7 EAST, OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED ON AUGUST 30, 2005, AS DOCUMENT NO. 05-26016, IN THE UNITED CITY OF YORKVILLE, BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

AND THE EAST 83.19 FEET OF LOT 5 (AS MEASURED PERPENDICULARLY THERETO) OF THE RESUBDIVISION OF LOT 1 OF FOX HILL, UNIT 6, BEING A RESUBDIVISION OF PART OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 7 EAST, OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED ON AUGUST 30, 2005, AS DOCUMENT NO. 05-26016, IN THE UNITED CITY OF YORKVILLE, BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-30-203-007; 02-30-203-012

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.0

12. A Cross Drainage Easement Agreement dated October 12, 2005 and recorded November 10, 2005 as Document No. 200500035184 made by Castle Bank NA, as Trustee under the provisions of a Trust Agreement dated November 7, 2003, and known as Trust Number 2181 to HD Partners XXIII, LLC recorded in the Kendall County Recorder's Office.

    Note: this Agreement does not appear to affect the proposed IDOT acquisition and will be removed when IDOT acquires title.

13. An Agreement with respect to Detention Area, as amended dated November 9, 2004 and recorded November 15, 2004 as Document No. 200400031930 made by Castle Bank NA, as Trustee under the provisions of a Trust Agreement dated November 7, 2003, and known as Trust Number 2181 to HD Partners XXIII, LLC recorded in the Kendall County Recorder's Office.

    Note: this Agreement does not appear to affect the proposed IDOT acquisition and will be removed when IDOT acquires title.

14. An Easement dated October 5, 1994 and recorded March 8, 1996 as Document No. 9602445 made by Paul R. Dresden to Illinois Bell / AKA Ameritech recorded in the Kendall County Recorder's Office.

15. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 200500026016.

16. Covenants, conditions, restrictions and easements contained in Declaration of Covenants and Use Restrictions recorded November 15, 2004 as Document No. 200400031931 in the Kendall County Recorder's Office.

    Note: See copy for particulars.

17. We require a copy of the Articles of Organization and Operating Agreement, if any, of the Yorkville-Marazzi, LLC; Yorkville-Brown-2, LLC; Yorkville-Walker, LLC; Yorkville-Simon, LLC; Yorkville-Scott, LLC; Yorkville-Oganeku-2, LLC; Yorkville-Oganeku-1, LLC; Yorkville-Brown-1, LLC; Yorkville-Cosenza, LLC; Yorkville-Smith, LLC; Yorkville-Pierce, LLC; Yorkville-Chiasson-2, LLC; Yorkville-Goldberg, LLC; Yorkville-Chiasson-1, LLC; Yorkville-Adler, LLC; Yorkville-Hook, LLC; Yorkville-Spaur-2, LLC; Yorkville-Spaur-1, LLC; Yorkville-Smookler-2, LLC; Yorkville-Smookler-1, LLC; and Yorkville-Harper, LLC; and .

- End Schedule B -

05/20/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0017

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.1
Effective Date: May 02, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Gary L. Conover, Delores C. Lies, Gail C. Fisher and Diane J. Conover; each as to an undivided 1/4 interest

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

05/20/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0017

WTG Number: I3-2013KL-2202.1

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 2 OF RUSH-COPLEY HEALTHCARE CENTER, BEING A PART OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-30-200-015

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-30-200-015
Gary L. Conover % Gail C. Fisher
501 Conover Lane
Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. Note: The legal description referred to in this commitment has been amended from that used in prior conveyances to more accurately describe the land.

10. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 200700032622.

11. An Agreement Establishing Restrictive Covenant dated May 16, 2007 and recorded June 1, 2007 as Document No. 200700017430 made by Gary L. Conover, Delores C. Lies, Gail C. Fisher and Diane J. Conover to Copley Ventures, Inc. recorded in the Kendall County Recorder's Office.

12. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

11/02/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0019

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.7
Effective Date: October 07, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   County of Kendall, a Body Politic

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0019

WTG Number: I3-2013KL-2202.7

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF THE NORTH WEST ¼ OF SECTION 29, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTH WEST CORNER OF SAID NORTH WEST 1/4; THENCE SOUTH 00 DEGREES, 39 MINUTES, 10 SECONDS EAST ALONG THE WEST LINE OF SAID NORTH WEST 1/4, 429.15 FEET TO THE CENTER LINE OF U.S. ROUTE 34 FOR A POINT OF BEGINNING; THENCE SOUTH 84 DEGREES, 57 MINUTES, 39 SECONDS EAST ALONG SAID CENTER LINE, 1628.05 FEET; THENCE SOUTH 05 DEGREES, 02 MINUTES, 21 SECONDS WEST, 1320.13 FEET TO THE LINE OF A FENCE NOW MONUMENTING THE SOUTH LINE OF PROPERTY ONCE OWNED BY T. SPENCER; THENCE SOUTH 89 DEGREES, 05 MINUTES, 0 SECONDS WEST ALONG SAID FENCE LINE, 1489.11 FEET TO SAID WEST LINE; THENCE NORTH 00 DEGREES, 39 MINUTES, 10 SECONDS WEST ALONG SAID WEST LINE, 1481.95 FEET TO THE POINT OF BEGINNING, IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS.

EXCEPT THAT PART OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 29; THENCE SOUTH 01 DEGREE 14 MINUTES 12 SECONDS EAST, 479.49 FEET ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 29 TO THE SOUTHERLY RIGHT OF WAY LINE OF U.S. ROUTE 34 PER DEDICATION RECORDED JUNE 3, 1942 IN BOOK 98 PAGE 177; THENCE SOUTH 85 DEGREES 32 MINUTES 10 SECONDS EAST, 170.27 FEET ALONG SAID SOUTHERLY RIGHT OF WAY LINE FOR THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 85 DEGREES 32 MINUTES 10 SECONDS EAST, 1451.62 FEET ALONG SAID

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0019

SOUTHERLY RIGHT OF WAY LINE; THENCE SOUTH 04 DEGREES 27 MINUTES 50 SECONDS WEST, 10.00 FEET TO A POINT 10.00 FEET SOUTH OF SAID SOUTHERLY RIGHT OF WAY LINE; THENCE NORTH 85 DEGREES 32 MINUTES 10 SECONDS WEST, 1451.62 FEET PARALLEL WITH AND 10.00 FEET SOUTH OF SAID SOUTHERLY RIGHT OF WAY LINE OF US ROUTE 34; THENCE NORTH 04 DEGREES 27 MINUTES 50 SECONDS EAST, 10.00 FEET TO SAID SOUTHERLY RIGHT OF WAY LINE TO THE POINT OF BEGINNING, ALL IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS.

ALSO, EXCEPTING THEREFROM THAT PART DESCRIBED ON THE PLAT OF DEDICATION RECORDED MAY 31, 2007 AS DOCUMENT NO. 200700017217.

SITUATED IN THE COUNTY OF KENDALL AND THE STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-100-006

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Document No. 910854 made by Kendall County Public Building Commission to State of Illinois recorded in the Kendall County Recorder's Office.

14. An Easement dated November 18, 2003 and recorded November 18, 2003 as Document No. 200300040990 made by Kendall County Public Building Commission to SBC Communications, Inc., Commonwealth Edison Co., Nicor, Comcast, Yorkville-Bristol Sanitary District and the United City of the Village of Yorkville recorded in the Kendall County Recorder's Office.

15. An Agreement dated March 15, 1994 and recorded August 9, 2001 as Document No. 200100014570 made by Kendall County Public Building Commission to United City of Yorkville recorded in the Kendall County Recorder's Office.

16. An Intergovernmental Agreement dated July 21, 1992 and recorded August 10, 2001 as Document No. 200100014649 made by Kendall County Public Building Commission to United City of Yorkville recorded in the Kendall County Recorder's Office.

17. An Intergovernmental Agreement dated August 15, 2006 and recorded October 18, 2006 as Document No. 200600033568 made by County of Kendall, Kendall County Public Building Commission to United City of Yorkville recorded in the Kendall County Recorder's Office.

18. A Plat of Dedication of Right of Way for Public Road Purposes recorded May 31, 2007 as Document No. 200700017217 made by County of Kendall recorded in the Kendall County Recorder's Office.

19. An Easement recorded April 21, 2008 as Document No. 200800010037 made by Kendall County to United City of Yorkville recorded in the Kendall County Recorder's Office.

20. A Maintenance and Public Easement Agreement dated August 26, 2008 and recorded October 1, 2008 as Document No. 200800021638 made by and between Kendall County Public Building Commission, United City of Yorkville and the County of Kendall recorded in the Kendall County Recorder's Office.

21. A Memorandum of Understanding dated August 26, 2008 and recorded October 1, 2008 as Document No. 200800021639 made by Kendall County Public Building Commission, et al. recorded in the Kendall County Recorder's Office.

22. An Easement recorded November 20, 2008 as Document No. 200800024856 made by Kendall County Public Building Commission to Nicor Gas Company recorded in the Kendall County Recorder's Office.

02/22/2017

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0020

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.15
Effective Date: February 01, 2017

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Esmer Capital Management Enterprises, LLC

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

02/22/2017

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0020

WTG Number: I3-2013KL-2202.15

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF THE NORTHEAST 1/4 OF THE SECTION 29, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHEAST 1/4; THENCE SOUTH 0 DEGREES 49 MINUTES 35 SECONDS EAST ALONG THE WEST LINE OF SAID NORTHEAST 1/4, 763.83 FEET TO THE CENTER LINE OF U.S. ROUTE NO. 34; THENCE EASTERLY ALONG SAID CENTER LINE, 473.0 FEET; THENCE NORTH 06 DEGREES 45 MINUTES 28 SECONDS WEST, 872.55 FEET TO A POINT ON THE SOUTH LINE OF OAK KNOLLS SUBDIVISION WHICH IS 372.0 FEET EASTERLY OF THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 36 MINUTES 23 SECONDS WEST ALONG SAID SOUTH LINE, 372.0 FEET TO THE POINT OF BEGINNING IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-201-001

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

   For Parcel(s): 02-29-201-001
   Esmer Capital Management Enterprises, LLC
   P. O. Box 51
   Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Dedication of Right of Way for Public Road Purposes dated December 16, 1944 and recorded December 21, 1944 in Book 99, Page 569 made by John G. Goldenstein and Eva F. Goldenstein to The People of the State of Illinois acting by and through the Department of Public Works and Buildings recorded in the Kendall County Recorder's Office.

10. A Dedication of Right of Way for Public Road Purposes dated February 2, 1948 and recorded April 26, 1948 in Book 103, Page 575 made by John G. Conover and Alice V. Conover to The People of the State of Illinois acting by and through the Department of Public Works and Buildings recorded in the Kendall County Recorder's Office.

11. An Easement dated February 26, 1952 and recorded May 24, 1952 in Book 109 Page 450 made by John G. Conover and Alice V. Conover to Illinois Bell Telephone Company recorded in the Kendall County Recorder's Office.

12. A Gas Pipe Line Right of Way dated February 20, 1953 and recorded May 22, 1953 in Book 111 Page 135 made by John Conover and Alice Conover to Public Service Company of Northern Illinois recorded in the Kendall County Recorder's Office.

13. A Grant of Permanent Sewer and Water Easement Agreement dated September 28, 1993 and recorded November 9, 1993 as Document No. 9311940 made by Gary L. Conover and Sandra H. Conover to United City of the Village of Yorkville recorded in the Kendall County Recorder's Office.

06/07/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0022

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.10
Effective Date: May 02, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Kai Feng Li

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

06/07/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0022

WTG Number: I3-2013KL-2202.10

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 9 IN BLOCK 1 IN CIMARRON RIDGE SUBDIVISION IN THE VILLAGE OF YORKVILLE BEING DESCRIBED AS FOLLOWS BY COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER OF SAID LOT 9 FOR THE POINT OF BEGINNING; THENCE SOUTH 6 DEGREES 58 MINUTES 24 SECONDS WEST ALONG SAID WEST LINE 192.90 FEET, THENCE SOUTH 79 DEGREES 59 MINUTES 9 SECONDS EAST 40.01 FEET; THENCE SOUTH 84 DEGREES 57 MINUTES 49 SECONDS EAST 134.22 FEET TO THE POINT CURVATURE OF A CURVE TO THE LEFT HAVING A RADIUS OF 12.0 FEET; THENCE EASTERLY AND NORTHERLY ALONG SAID CURVE TO THE LEFT, A DISTANCE OF 18.31 FEET TO THE POINT OF TANGENT OF SAID CURVE WHOS CHORD BEARS NORTH 51 DEGREES 18 MINUTES 52 SECONDS EAST 16.59 FEET TO SAID POINT OF TANGENT; THENCE NORTH 7 DEGREES 34 MINUTES 18 SECONDS EAST 208.21 FEET TO A POINT ON THE NORTH LINE OF SAID LOT 9; THENCE NORTH 82 DEGREES 36 MINUTES 27 SECONDS WEST ALONG SAID NORTH LINE 162.05 FEET TO A POINT OF BEND IN SAID NORTH LINE; THENCE SOUTH 46 DEGREES 58 MINUTES 24 SECONDS WEST ALONG SAID NORTH LINE 40.16 FEET TO THE POINT OF BEGINNING SITUATED IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-127-026

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: 13-2013KL-2202.10

14. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 913284.

15. Covenants, conditions, restrictions and easements contained in Conditions, Covenants, Restrictions and Reservations of Cimarron Ridge Subdivision recorded February 10, 1992 as Document No. 921219 in the Kendall County Recorder's Office.

Note: See copy for particulars.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

07/25/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0023

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.11
Effective Date: May 02, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   First National Bank of Omaha as successor to Castle Bank, N.A., as Trustee under the provisions of a Trust Agreement dated August 1, 2003, and known as Trust Number 2155

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

07/25/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0023

WTG Number: I3-2013KL-2202.11

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 9 IN BLOCK 1 OF CIMARRON RIDGE SUBDIVISION IN THE CITY OF YORKVILLE BEING DESCRIBED BY COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER SAID LOT 9; THENCE NORTH 46 DEGREES 58 MINUTES 24 SECONDS EAST, 40.16 FEET TO A POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 7423.42 FEET; THENCE EASTERLY ALONG SAID CURVE TO THE RIGHT, A DISTANCE OF 162.11' TO A POINT ON SAID CURVE WHO'S CHORD BEARS SOUTH 83 DEGREES 49 MINUTES 23 SECONDS EAST 162.10' FOR THE POINT OF BEGINNING; THENCE EASTERLY ALONG SAME SAID CURVE TO THE RIGHT, A DISTANCE OF 289.90 FEET TO A POINT ON SAID CURVE WHO'S CHORD BEARS SOUTH 82 DEGREES 04 MINUTES 33 SECONDS EAST, 289.87 FEET; THENCE SOUTH 07 DEGREES 35 MINUTES 51 SECONDS WEST, 221.12 FEET; THENCE NORTH 84 DEGREES 57 MINUTES 30 SECONDS WEST, 290.05 FEET TO A LINE BEARING SOUTH 7 DEGREES 34 MINUTES 18 SECONDS WEST FROM THE POINT OF BEGINNING; THENCE NORTH 07 DEGREES 34 MINUTES 18 SECONDS EAST, 235.71 FEET TO THE POINT OF BEGINNING, SITUATED IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-127-030

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.11

Trust Agreement dated August 1, 2003, and known as Trust Number 2155 dated August 26, 2003 and recorded September 23, 2003 as Document No. 200300034587.

21. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 913284.

22. Covenants, conditions, restrictions and easements contained in Conditions, Covenants, Restrictions and Reservations of Cimarron Ridge Subdivision recorded February 10, 1992 as Document No. 921219 in the Kendall County Recorder's Office.

Note: See copy for particulars.

23. The record holders of any grants, rights of ways, easements, etc., have been added as necessary parties herein. However, we have not made an examination as to the current non-record holders or assignees of those rights, or the current property owner of the property which may benefit from that right or grant, and make no representation as to the ownership of that right other than the grantee shown on the document itself. Please contact our office should a complete search of adjacent property or entities holding these rights be needed to identify the current owners of those rights as this will involve additional time and cost. Note: in order to remove any of the above grants, easements, rights of way, etc., on the policy when issued, a release or subordination (or in the case of condemnation proceedings, an order extinguishing or subordinating said grants, easements, rights of way, etc.) should be provided.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0024

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.12
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   First National Bank of Omaha as successor to Castle Bank, as Trustee under the provisions of a Trust Agreement dated May 14, 2003, and known as Trust Number 2154

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0024

WTG Number: I3-2013KL-2202.12

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 9 IN BLOCK 1 OF CIMARRON RIDGE SUBDIVISION IN THE CITY OF YORKVILLE BEING DESCRIBED BY COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER OF SAID LOT 9; THENCE NORTH 46 DEGREES 58 MINUTES 24 SECONDS EAST, 40.16 FEET TO A POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 7423.42 FEET; THENCE EASTERLY ALONG SAID CURVE TO THE RIGHT, A DISTANCE OF 162.17' TO A POINT ON SAID CURVE WHO'S CHORD BEARS SOUTH 83 DEGREES 49 MINUTES 23 SECONDS EAST, 162.11' TO THE POINT OF BEGINNING; THENCE EASTERLY ALONG SAME SAID CURVE TO THE RIGHT, A DISTANCE OF 632.19 FEET TO A POINT ON SAME SAID CURVE WHO'S CHORD BEARS SOUTH 80 DEGREES 45 MINUTES 18 SECONDS EAST, 631.99 FEET; THENCE SOUTH 8 DEGREES 54 MINUTES 35 SECONDS WEST, 189.59 FEET; THENCE NORTH 84 DEGREES 57 MINUTES 30 SECONDS WEST, 627.90 FEET TO A LINE BEARING SOUTH 7 DEGREES 34 MINUTES 18 SECONDS WEST FROM THE POINT OF BEGINNING. SITUATED IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS.

EXCEPT THAT PART OF LOT 9 OF CIMARRON RIDGE SUBDIVISION IN THE CITY OF YORKVILLE BEING DESCRIBED BY COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER SAID LOT 9; THENCE NORTH 46 DEGREES 58 MINUTES 24 SECONDS EAST, 40.16 FEET TO A POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 7423.42 FEET; THENCE EASTERLY ALONG SAID CURVE TO THE RIGHT, A DISTANCE OF

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162.11' TO A POINT ON SAID CURVE WHO'S CHORD BEARS SOUTH 83 DEGREES 49 MINUTES 23 SECONDS EAST 162.10' FOR THE POINT OF BEGINNING; THENCE EASTERLY ALONG SAME SAID CURVE TO THE RIGHT, A DISTANCE OF 289.90 FEET TO A POINT ON SAID CURVE WHO'S CHORD BEARS SOUTH 82 DEGREES 04 MINUTES 33 SECONDS EAST, 289.87 FEET; THENCE SOUTH 07 DEGREES 35 MINUTES 51 SECONDS WEST, 221.12 FEET; THENCE NORTH 84 DEGREES 57 MINUTES 30 SECONDS WEST, 290.05 FEET TO A LINE BEARING SOUTH 7 DEGREES 34 MINUTES 18 SECONDS WEST FROM THE POINT OF BEGINNING; THENCE NORTH 07 DEGREES 34 MINUTES 18 SECONDS EAST, 235.71 FEET TO THE POINT OF BEGINNING, SITUATED IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-127-029

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-127-029
Castle Bank, Trust Number 2154
c/o George Kappos 319 Trinity Ln
Oak Brook, IL 60523

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. An Ordinance #2002-15 (Authorizing execution of a Development/Economic Initiative Agreement) recorded August 6, 2002 as Document No. 200200017949 in the Kendall County Recorder's Office.

10. A Development/Economic Initiative Agreement dated June 11, 2002 and recorded August 6, 2002 as Document No. 200200017950 made by United City of Yorkville to James Ratos recorded in the Kendall County Recorder's Office.

11. A Mutual and Reciprocal Ingress and Egress Easement Agreement dated May 15, 2003 and recorded May 21, 2003 as Document No. 200300017151 made by Castle Bank, as Trustee under the provisions of a Trust Agreement dated January 22, 2001, and known as Trust Number 2029 to Castle Bank, as Trustee under the provisions of a Trust Agreement dated May 14, 2003, and known as Trust Number 2154 recorded in the Kendall County Recorder's Office.

12. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 913284.

13. Covenants, conditions, restrictions and easements contained in Conditions, Covenants, Restrictions and Reservations of Cimarron Ridge Subdivision recorded February 10, 1992 as Document No. 921219 in the Kendall County Recorder's Office.

Note: See copy for particulars.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

05/19/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0025

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.13
Effective Date: May 02, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   First National Bank of Omaha as successor to Castle Bank, as Trustee under the provisions of a Trust Agreement dated January 22, 2001, and known as Trust Number 2029

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0025

WTG Number: I3-2013KL-2202.13

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

PARCEL I:

THAT PART OF LOT 12 IN BLOCK 3 OF CIMARRON RIDGE SUBDIVISION, BEING A SUBDIVISION OF PART OF THE NORTH HALF OF SECTION 29, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 21, 1991 AS INSTRUMENT NO. 91-3284, IN THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 12, ALSO BEING THE NORTHEAST CORNER OF LOT 9 IN BLOCK 1 OF SAID SUBDIVISION, SAID POINT BEING ON THE SOUTHERLY RIGHT OF WAY LINE OF ILLINOIS ROUTE 34; THENCE SOUTHEASTERLY ALONG SAID SOUTHERLY RIGHT OF WAY LINE ON A CURVE TO THE RIGHT HAVING A RADIUS OF 7423.42 FEET, A DISTANCE OF 228.62 FET; THENCE SOUTH 13 DEGREES 20 MINUTES 05 SECONDS WEST, 345.26 FEET TO THE SOUTH LINE OF SAID LOT 9 EXTENDED EASTERLY; THENCE NORTH 84 DEGREES 57 MINUTES 39 SECONDS WEST ALONG SAID EXTENDED LINE, 202.02 FEET TO THE SOUTHEAST CORNER OF SAID LOT 9; THENCE NORTH 08 DEGREES 55 MINUTES 39 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 9, A DISTANCE OF 373.79 FEET TO THE POINT OF BEGINNING; EXCEPTING THEREFROM THAT PART OF SAID LOT 12 AS CONVEYED BY TRUSTEE'S DEED RECORDED JUNE 23, 2010 AS DOCUMENT NO. 201000010878.

PARCEL II:

THAT PART OF LOT 9 OF CIMARRON RIDGE SUBDIVISION, BEING A SUBDIVISION OF PART OF THE NORTH HALF OF SECTION 29, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL

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Parcel 3XQ0025

MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 21, 1991 AS DOCUMENT NO. 91-3284, IN THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS, EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCELS:

A) COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER OF SAID LOT 9 FOR THE POINT OF BEGINNING; THENCE SOUTH 6 DEGREES 58 MINUTES 24 SECONDS WEST ALONG SAID WEST LINE 192.90 FEET; THENCE SOUTH 79 DEGREES 59 MINUTES 9 SECONDS EAST 40.01 FEET; THENCE SOUTH 84 DEGREES 57 MINUTES 49 SECONDS EAST 134.22 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE LEFT HAVING A RADIUS OF 12.0 FEET; THENCE EASTERLY AND NORTHERLY ALONG SAID CURVE TO THE LEFT, A DISTANCE OF 18.31 FEET TO THE POINT OF TANGENT OF SAID CURVE WHOSE CHORD BEARS NORTH 51 DEGREES 18 MINUTES 52 SECONDS EAST 16.59 FEET TO SAID POINT OF TANGENT; THENCE NORTH 7 DEGREES 34 MINUTES 18 SECONDS EAST 208.21 FEET TO A POINT ON THE NORTH LINE OF SAID LOT 9; THENCE NORTH 82 DEGREES 36 MINUTES 27 SECONDS WEST ALONG SAID NORTH LINE 162.05 FEET TO A POINT OF BEND IN SAID NORTH LINE; THENCE SOUTH 46 DEGREES 58 MINUTES 24 SECONDS WEST ALONG SAID NORTH LINE 40.16 FEET TO THE POINT OF BEGINNING.

B) COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE NORTH 6 DEGREES 58 MINUTES 24 SECONDS EAST ALONG THE WEST LINE OF SAID LOT 9, 399.01 FEET TO A POINT OF BEND AT THE NORTHWEST CORNER OF SAID LOT 9; THENCE NORTH 46 DEGREES 58 MINUTES 24 SECONDS EAST A DISTANCE OF 40.16 FEET TO A POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 7423.42 FEET; THENCE EASTERLY ALONG SAID CURVE TO THE RIGHT, A DISTANCE OF 162.17 FEET TO A POINT ON SAID CURVE WHOSE CHORD BEARS SOUTH 83 DEGREES 49 MINUTES 23 SECONDS EAST, 162.11 FEET TO THE POINT OF BEGINNING; THENCE EASTERLY ALONG SAME SAID CURVE TO THE RIGHT, A DISTANCE OF 632.18 FEET TO A POINT ON SAME SAID CURVE WHOSE CHORD BEARS SOUTH 80 DEGREES 45 MINUTES 18 SECONDS EAST 631.99 FEET; THENCE SOUTH 8 DEGREES 54 MINUTES 35 SECONDS WEST, 189.59

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Parcel 3XQ0025

FEET; THENCE NORTH 84 DEGREES 57 MINUTES 30 SECONDS WEST, 627.90 FEET TO A LINE BEARING SOUTH 7 DEGREES 34 MINUTES 18 SECONDS WEST FROM THE POINT OF BEGINNING; THENCE NORTH 7 DEGREES 34 MINUTES 18 SECONDS EAST, 235.71 FEET TO THE POINT OF BEGINNING.

C) COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9 FOR THE POINT OF BEGINNING; THENCE SOUTH 84 DEGREES 57 MINUTES 39 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 9, 232.57 FEET; THENCE NORTH 05 DEGREES 02 MINUTES 21 SECONDS EAST AT RIGHT ANGLES TO SAID SOUTH LINE, 190.00 FEET; THENCE NORTH 84 DEGREES 57 MINUTES 39 SECONDS WEST PARALLEL WITH THE SOUTH LINE OF SAID LOT 9, 226.15 FEET TO THE EAST LINE OF CANNONBALL TRAIL ALSO BEING THE WEST LINE OF SAID LOT 9; THENCE SOUTH 06 DEGREES 58 MINUTES 24 SECONDS WEST ALONG SAID WEST LINE. 190.11 FEET TO THE POINT OF BEGINNING.

D) COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE SOUTH 84 DEGREES 57 MINUTES 39 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 9, 232.57 FEET FOR THE POINT OF BEGINNING; CONTINUING SOUTH 84 DEGREES 57 MINUTES 39 SECONDS EAST ALONG THE LAST DESCRIBED LINE, 186.67 FEET; THENCE NORTH 05 DEGREES 02 MINUTES 21 SECONDS EAST, 190.00 FEET; THENCE NORTH 84 DEGREES 57 MINUTES 39 SECONDS WEST, 106.67 FEET; THENCE SOUTH 05 DEGREES 02 MINUTES 21 SECONDS WEST, 190.00 FEET TO THE POINT OF BEGINNING.

E) THAT PART OF SAID LOT 9 AS CONVEYED BY TRUSTEE'S DEED RECORDED JUNE 23, 2010 AS DOCUMENT NO. 201000010878.

PARCEL III:

THAT PART OF LOT 9 IN BLOCK 1 AND LOT 12 IN BLOCK 3 OF CIMARRON RIDGE SUBDIVISION BEING DESCRIBED BY COMMENCING AT THE SOUTHWEST CORNER OF SAID LOT 9; THENCE SOUTH 84 DEGREES 57 MINUTES 39 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 9, A DISTANCE OF 830.53 FEET FOR THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 84 DEGREES 57 MINUTES 39 SECONDS EAST ALONG THE LAST DESCRIBED LINE,

Job R-93-010-013
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County Kendall
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Parcel 3XQ0025

230.62 FEET TO A POINT OF THE EAST LINE OF SAID LOT 12; THENCE NORTH 13 DEGREES 20 MINUTES 15 SECONDS EAST ALONG SAID EAST LINE, 134.16 FEET; THENCE NORTH 72 DEGREES 57 MINUTES 39 SECONDS WEST 213.86 FEET TO THE WEST LINE OF SAID LOT 12; THENCE NORTH 08 DEGREES 56 MINUTES 21 SECONDS EAST ALONG SAID WEST LINE OF LOT 12, A DISTANCE OF 193.84 FEET TO THE SOUTH LINE OF U.S. ROUTE #34; THENCE WESTERLY ALONG SAID SOUTH LINE BEING ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 7423.42 FEET, A DISTANCE OF 29.26 FEET TO A LINE BEARING NORTH 08 DEGREES 54 MINUTES 35 SECONDS EAST FROM THE POINT OF BEGINNING; THENCE SOUTH 08 DEGREES 54 MINUTES 35 SECONDS WEST ALONG SAID LINE, 377.37 FEET TO THE POINT OF BEGINNING IN THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS. ALL SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-127-038; 02-29-203-016; 02-29-127-037; 02-29-203-017

WTG Number: I3-2013KL-2202.13

Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Mortgage dated November 30, 2010 and recorded December 6, 2010 as Document No. 201000022845 made by Castle Bank, as Trustee under the provisions of a Trust Agreement dated January 22, 2001, and known as Trust Number 2029 to The National Bank and Trust Company to secure a note in the amount of $2,367,418.77 recorded in the Kendall County Recorder's Office.

10. A Rezoning Ordinance #2000-61 recorded January 10, 2001 as Document No. 200100000547 in the Kendall County Recorder's Office.

11. An Ordinance #2002-15 (Authorizing execution of a Development/Economic Initiative Agreement) recorded August 6, 2002 as Document No. 200200017949 in the Kendall County Recorder's Office.

12. A Development/Economic Initiative Agreement dated June 11, 2002 and recorded August 6, 2002 as Document No. 200200017950 made by United City of Yorkville to James Ratos recorded in the Kendall County Recorder's Office.

13. A Mutual and Reciprocal Ingress and Egress Easement Agreement dated May 15, 2003 and recorded May 21, 2003 as Document No. 200300017151 made by Castle Bank, as Trustee under the provisions of a Trust Agreement dated January 22, 2001, and known as Trust Number 2029 to Castle Bank, as Trustee under the provisions of a Trust Agreement dated May 14, 2003, and known as Trust Number 2154 recorded in the Kendall County Recorder's Office.

14. A Sidewalk Installation Covenant recorded October 7, 2005 as Document No. 200500031006 in the Kendall County Recorder's Office.

15. An Ordinance No. 2009-12 (Variance) recorded May 14, 2009 as Document No. 200900010974 made by United City of Yorkville, recorded in the Kendall County Recorder's Office.

16. Restrictions, Easements and Building Lines, as shown on the plat of Subdivision, recorded as Document No. 913284.

17. Covenants, conditions, restrictions and easements contained in Conditions, Covenants, Restrictions and Reservations of Cimarron Ridge Subdivision recorded February 10, 1992 as Document No. 921219 in the Kendall County Recorder's Office.

11/16/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0031

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.22
Effective Date: November 01, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Yorkville Mob, LLC, an Illinois limited liability company

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/16/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0031

WTG Number: I3-2013KL-2202.22

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 4, BLOCK 2, COUNTRYSIDE CENTER, UNIT NO. 4, YORKVILLE, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTH EAST CORNER OF SAID LOT 4, THENCE NORTH 80 DEGREES, 07 MINUTES 17 SECONDS WEST 37.17 FEET TO A POINT OF CURVATURE, THENCE NORTHWESTERLY ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 6,825.55 FEET FOR AN ARC DISTANCE OF 512.66 FEET (TO A POINT 549.83 FEET WESTERLY FROM THE POINT OF COMMENCEMENT) FOR THE POINT OF BEGINNING, THENCE NORTH 35 DEGREES, 24 MINUTES, 38 SECONDS EAST 388.42 FEET TO THE NORTHERLY LINE OF SAID LOT (SAID POINT BEING 326.23 FEET FROM THE NORTHEAST CORNER OF SAID LOT AS MEASURED ALONG THE ARC AND HAVING A RADIUS OF 533.0 FEET), THENCE NORTHWESTERLY ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 533.0 FEET, FOR AN ARC DISTANCE OF 111.93 FEET TO A POINT OF TANGENCY, THENCE NORTH 47 DEGREES, 21 MINUTES, 21 SECONDS WEST 172.11 FEET TO A POINT WHICH IS 292.76 FEET SOUTHEASTERLY OF THE NORTHERNMOST NORTHWEST CORNER OF SAID LOT 4, THENCE SOUTH 42 DEGREES, 38 MINUTES, 39 SECONDS WEST ALONG A LINE DRAWN PERPENDICULAR TO THE LAST DESCRIBED COURSE 542.11 FEET TO THE SOUTHERLY LINE OF SAID LOT 4, THENCE SOUTHEASTERLY ALONG SAID SOUTHERLY LINE, BEING ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 6,825.55 FEET, AN ARC DISTANCE OF 372.46 FEET TO THE POINT OF BEGINNING, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-229-006

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.22

13. A Financing Statement recorded November 13, 2012, as Document No. 201200022402, made by Yorkville Mob, LLC to Wilson HCF Wisconsin Holdings 2, LLC.
NOTE: The above Financing Statement is attached to the property.

14. An Amendment (assignment) of Financing Statement recorded April 10, 2013 as Document No. 201300007515 made by Wilson HCF Wisconsin Holdings 2, LLC to Wilson HCF Wisconsin Holdings 2-A, LLC recorded in the Kendall County Recorder's Office.

15. A Grant of Permanent Sidewalk Easement Agreement dated December 22, 2008 and recorded February 9, 2009 as Document No. 200900002861 made by Windrose Yorkville Properties, LLC to United City of Yorkville recorded in the Kendall County Recorder's Office.

16. An Easement recorded October 14, 2004 as Document No. 200400028838 made by Copley Ventures, Inc. to Yorkville-Bristol Sanitary District recorded in the Kendall County Recorder's Office.

AT+T + ComEd

17. An Easement dated December 6, 1979 recorded December 20, 1979 as Document No. 79-6717 made by The Merchants National Bank of Aurora, Trustee under Trust No. 2976 to Illinois Bell Telephone Company and Commonwealth Edison Company recorded in the Kendall County Recorder's Office.

AT+T + ComEd

18. An Electric and Telephone Line Right dated March 16, 1972 and recorded April 12, 1972 as Document No. 72-1638 made by TER-JAC Construction Company, Inc. to Commonwealth Edison Company and Illinois Bell Telephone Company recorded in the Kendall County Recorder's Office.

19. Covenants, conditions, restrictions and easements contained in Declaration recorded May 1, 1973 as Document No. 73-1972 in the Kendall County Recorder's Office.

Note: See copy for particulars.

20. Covenants, conditions, restrictions and easements contained in Amendment to Declaration recorded May 30, 1973 as Document No. 73-2532 in the Kendall County Recorder's Office.

Note: See copy for particulars.

yorkville

21. Easements as shown on the plat of Subdivision recorded April 3, 1973 as Document No. 73-1495.

WTG Number: I3-2013KL-2202.22

22. Building setback lines as shown on the Plat of Subdivision recorded April 3, 1973 as Document Number 73-1495.

23. We require a copy of the Articles of Organization and Operating Agreement, if any, of the Yorkville Mob, LLC.

24. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0037

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.30
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Edward J. Soukup, Jr. and Charmaine H. Soukup, husband and wife, in Joint Tenancy

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0037

WTG Number: I3-2013KL-2202.30

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 1, (EXCEPT THE EASTERLY 45.0 FEET THEREOF) COUNTRYSIDE SUBDIVISION, UNIT NINE, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-010

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.30

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-010
Edward J. Soukup, Jr. and Charmaine H. Soukup
229 A Hillcrest Ave.
Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

11. Covenants, conditions, restrictions and easements contained in Declaration of Covenats, Conditions, Restrictions and Easements for Hillcrest Avenue Townhouse Association recorded August 13, 1991 as Document No. 915766 in the Kendall County Recorder's Office.

Note: See copy for particulars.

12. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

07/18/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0038

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.31
Effective Date: July 07, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   James I. Allen and Carol L. Allen, husband and wife, as joint tenants

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

07/18/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0038

WTG Number: I3-2013KL-2202.31

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THE EASTERLY 45 FEET OF LOT 1 OF COUNTRYSIDE SUBDIVISION, UNIT NINE, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-011

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-011
James I. Allen and Carol L. Allen
651 South Beverly Avenue
Addison, IL 60101

7. Conveyances within the past five years: 1

A Trustee's Deed dated October 15, 2015 and recorded October 19, 2015 as Document No. 201500016781 made by Carol L. Allen, as Successor Trustee of the Edna M. Hagstrom Living Trust dated July 26, 2007 to James I. Allen and Carol L. Allen recorded in the Kendall County Recorder's Office.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

11. Covenants, conditions, restrictions and easements contained in Declaration of Covenants, Conditions, Restrictions and Easements recorded August 13, 1991 as Document No. 915966 in the Kendall County Recorder's Office.

Note: See copy for particulars.

12. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0039

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.32
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Marcia Ann Gates, as Trustee of the Marcia Ann Gates Trust dated February 13, 2013

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0039

WTG Number: I3-2013KL-2202.32

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THE WEST 45 FEET OF LOT 2 OF COUNTRYSIDE SUBDIVISION, UNIT NINE, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-008

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-008
Marcia Ann Gates
227 W. Hillcrest Ave.
Yorkville, IL 60560

7. Conveyances within the past five years: 1

A Quit Claim Deed dated February 13, 2013 and recorded February 19, 2013 as Document No. 201300003833 made by Marcia Gates to Marcia Ann Gates, as Trustee of the Marcia Ann Gates Trust dated February 13, 2013 recorded in the Kendall County Recorder's Office.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

11. Covenants, conditions, restrictions and easements contained in Declaration of Hillcrest Avenue Townhouse No. 1 Association recorded June 12, 1991 as Document No. 913883 in the Kendall County Recorder's Office.

Note: See copy for particulars.

12. Terms, powers, provisions and limitations of the Trust under which title to said land is held.

13. The Company should be furnished the following: a.) A Certification of Trust executed by the Trustee in accordance with 760 ILCS 5/8.5, together with excerpts of the Trust Agreement and amendments thereto relating to the designation of Trustees and the

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0040

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.33
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Debby A. Schaefer

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0040

WTG Number: I3-2013KL-2202.33

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 2 (EXCEPT THE WEST 45 FEET) OF COUNTRYSIDE SUBDIVISION, UNIT NINE, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-009

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-009
Debby A. Schaefer
227 E Hillcrest Ave.
Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 20, 1989 as Document Number 896282.

11. Covenants, conditions, restrictions and easements contained in Declaration of Covenants, Conditions, Restrictions and Easements for the Hillcrest Avenue Townhouse No. 1 Association recorded June 12, 1991 as Document No. 913883 in the Kendall County Recorder's Office.

Note: See copy for particulars.

12. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

04/20/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0041

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.34
Effective Date: April 11, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Lowanda Gass and Judy Priar, in Joint Tenancy

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

04/20/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0041

WTG Number: I3-2013KL-2202.34

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 3 OF COUNTRYSIDE SUBDIVISION UNIT NINE, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-003

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.34

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-003
Lowanda Gass and Judy Priar
225 Hillcrest Ave.
Yorkville, IL 60560

7. Conveyances within the past five years: 1

A Warranty Deed dated October 8, 2012 and recorded October 11, 2012 as Document No. 20120019767 made by Lowanda Gass to Lowanda Gass and Judy Priar recorded in the Kendall County Recorder's Office.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

11. An Easement dated December 1, 1989 and recorded January 2, 1990 as Document No. 900001 made by John G. Conover and Alice J. Conover to Commonwealth Edison Company and Illinois Bell Telephone Company recorded in the Kendall County Recorder's Office.

12. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0044

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.35
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Ginger K. McKenna

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0044

WTG Number: I3-2013KL-2202.35

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 4 OF COUNTRYSIDE SUBDIVISION UNIT 9, BEING DESCRIBED BY COMMENCING AT A POINT ON THE SOUTH LINE OF SAID LOT, 45.83 FEET EASTERLY OF THE SOUTHWEST CORNER OF SAID LOT FOR THE POINT OF BEGINNING; THENCE WESTERLY ALONG THE SOUTH LINE OF SAID LOT ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 7065.55 FEET, A DISTANCE OF 45.83 FEET TO THE SOUTHWEST CORNER OF SAID LOT 4; THENCE NORTH 05 DEGREES 05 MINUTES 36 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 4, 140 FEET TO THE NORTHWEST CORNER OF SAID LOT; THENCE EASTERLY ALONG THE NORTH LINE OF SAID LOT ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 6925.55 FEET, A DISTANCE OF 44.92 FEET TO A LINE BEARING NORTH 04 DEGREES 43 MINUTES 08 SECONDS EAST FROM THE POINT OF BEGINNING; THENCE SOUTH 04 DEGREES 43 MINUTES 08 SECONDS WEST ALONG SAID LINE 140.00 FEET TO THE POINT OF BEGINNING, ALL IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-013

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

or irrigation systems which would be disclosed by an accurate survey and inspection of the premises.

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

For Parcel(s): 02-29-283-013
Ginger K. McKenna
223 B Hillcrest Ave.
Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Mortgage dated June 24, 2003 and recorded July 7, 2003 as Document No. 200300022896 made by Ginger K. McKenna to Harris Trust and Savings Bank to secure a note in the amount of $79,000.00 recorded in the Kendall County Recorder's Office.

10. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

11. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

12. An Easement dated December 1, 1989 and recorded January 2, 1990 as Document No. 900001 made by John G. Conover and Alice J. Conover to Commonwealth Edison Company and Illinois Bell Telephone Company recorded in the Kendall County Recorder's Office.

13. Covenants, conditions, restrictions and easements contained in Declaration for Party Wall recorded April 27, 2000 as Document No. 0004825 in the Kendall County Recorder's Office.

Note: See copy for particulars.

14. Existing unrecorded leases, if any, and all rights thereof and all acts done or

11/16/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0045

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.36
Effective Date: November 01, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Thomas J. Husar and Cindy J. Husar, in joint tenancy

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/16/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0045

WTG Number: I3-2013KL-2202.36

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THAT PART OF LOT 4 OF COUNTRYSIDE SUBDIVISION UNIT 9, BEING DESCRIBED BY COMMENCING AT A POINT ON THE SOUTH LINE OF SAID LOT, 45.83 FEET EASTERLY OF THE SOUTHWEST CORNER OF SAID LOT FOR THE POINT OF BEGINNING; THENCE EASTERLY ALONG THE SOUTH LINE OF SAID LOT ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 7065.55 FEET A DISTANCE OF 45.96 FEET TO THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 04 DEGREES 20 MINUTES 46 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 4; 140 FEET TO THE NORTHEAST CORNER OF SAID LOT; THENCE WESTERLY ALONG THE NORTH LINE OF SAID LOT ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 6925.55 FEET, A DISTANCE OF 45.05 FEET TO A LINE BEARING NORTH 4 DEGREES 43 MINUTES 08 SECONDS EAST FROM THE POINT OF BEGINNING; THENCE SOUTH 04 DEGREES 43 MINUTES 08 SECONDS WEST ALONG SAID LINE 140.00 FEET TO THE POINT OF BEGINNING, ALL IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-012

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.36

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

   For Parcel(s): 02-29-283-012
   Rita M. Wilson
   223 A Hillcrest Ave.
   Yorkville, IL 60560

7. Conveyances within the past five years: 1

   A Warranty Deed dated January 26, 2015 and recorded January 29, 2015 as Document No. 201500001498 made by Rita M. Wilson to Thomas J. Husar and Cindy J. Husar recorded in the Kendall County Recorder's Office.

8. Contiguous property owned by record title holder: None.

9. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

10. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

11. An Easement dated December 1, 1989 and recorded January 2, 1990 as Document No. 900001 made by John g. Conover and Alice J. Conover to Commonwealth Edison Company and Illinois Bell Telephone Company recorded in the Kendall County Recorder's Office.

12. Covenants, conditions, restrictions and easements contained in Declaration for Party Wall recorded April 27, 2000 as Document No. 0004825 in the Kendall County Recorder's Office.

    Note: See copy for particulars.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

12/22/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0046

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.37
Effective Date: December 05, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Michael Sadler

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

12/22/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0046

WTG Number: I3-2013KL-2202.37

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOT 5, COUNTRYSIDE SUBDIVISION, UNIT 9 (EXCEPT THE EAST 45.58 FEET, AS MEASURED PERPENDICULAR TO TIIE EAST LINE THEREOF), YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-015

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.37

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

   For Parcel(s): 02-29-283-015
   Michael Sadler
   1118 Wellshire Dr.
   Katy, TX 77494

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. A Mortgage dated May 12, 2003 and recorded October 21, 2003 as Document No. 200300037882 made by Michael Sadler to Chicago Bancorp, Inc. to secure a note in the amount of $148,400.00 recorded in the Kendall County Recorder's Office.

10. Assignment of Mortgage dated May 12, 2003, and recorded June 2, 2003, as Document No. 200300018387, made by Chicago Bancorp, Inc. to CitiMortgage, Inc., recorded in the Kendall County Recorder's Office.

11. Assignment of Mortgage dated September 17, 2014, and recorded September 29, 2014, as Document No. 201400013393, made by CitiMortgage, Inc. to Green Tree Servicing, LLC, recorded in the Kendall County Recorder's Office.

12. Building Lines and Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

13. Certificate of Correction recorded October 30, 1989 as Document Number 896282.

14. A Party Wall Agreement dated May 12, 2003 and recorded May 21, 2003 as Document No. 200300017085 made by Emerald City, Inc. to Michael Sadler recorded in the Kendall County Recorder's Office.

15. The record holders of any grants, rights of ways, easements, etc., have been added as necessary parties herein. However, we have not made an examination as to the current non-record holders or assignees of those rights, or the current property owner of the property which may benefit from that right or grant, and make no

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0047

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.25
Effective Date: August 10, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   Stefanie Smudde

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

08/21/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0047

WTG Number: I3-2013KL-2202.25

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

THE EAST 45.48 FEET, AS MEASURED PERPENDICULAR TO THE EAST LINE OF LOT 5, COUNTRYSIDE SUBDIVISION, UNIT 9, YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-29-283-014

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.25

10. A Party Wall Agreement dated May 12, 2003 and recorded May 21, 2003 as Document No. 200300017085 made by Emerald City, Inc. to Michael Sadler recorded in the Kendall County Recorder's Office.

11. Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

12. Building setback lines as shown on the Plat of Subdivision recorded October 13, 1989 as Document Number 895943.

13. A Certificate of Correction to Plat recorded as document 896282.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/17/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0048

A.L.T.A. COMMITMENT FORM

Schedule A

WTG Number: I3-2013KL-2202.23
Effective Date: November 01, 2016

1. Policy or Policies to be issued: 2006 ALTA Owner's

   Proposed Amount of Insurance: $1,000.00

   Proposed Insured: The People of the State of Illinois
   Department of Transportation

2. The estate or interest in the land described or referred to in this commitment is a Fee Simple and title hereto is at the effective date hereof vested in:

   215 Hillcrest, LLC, an Illinois limited liability company

3. The land referred to in this commitment is described as follows:

See Attached Page 2 of Schedule A

ISSUED BY:

Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

11/17/2016

Job R-93-010-013
FAP 591 (US 34)
County Kendall
Section (13) R-2 & BY
Parcel 3XQ0048

WTG Number: I3-2013KL-2202.23

A.L.T.A. COMMITMENT FORM

Schedule A Continued

LEGAL DESCRIPTION

LOTS 6, 7 AND 8 OF COUNTRYSIDE SUBDIVISION UNIT 9, YORKVILLE, KENDALL COUNTY, ILLINOIS, IN THE UNITED CITY OF THE VILLAGE OF YORKVILLE, KENDALL COUNTY, ILLINOIS. SITUATED IN THE COUNTY OF KENDALL AND STATE OF ILLINOIS.

PERMANENT TAX NUMBER(S): 02-28-155-002

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

WTG Number: I3-2013KL-2202.23

3. Rights of the Public, the State and the Municipality in and to that part of the land, if any, taken or used for road purposes.

4. Confirmed Special Assessments, if any, not certified to by the Company.

5. Financing Statements, if any, not certified to by the Company.

6. For information purposes only, the taxes are assessed to the following:

   For Parcel(s): 02-28-155-002
   215 Hillcrest LLC
   P.O. Box 577
   Yorkville, IL 60560

7. Conveyances within the past five years: None.

8. Contiguous property owned by record title holder: None.

9. An Ordinance Rezoning and Reclassifying Real Property made by the City of Yorkville recorded as document 912406.

10. Easements as shown on the plat of Subdivision recorded October 13, 1989 as Document No. 895943.

11. Building setback lines as shown on the Plat of Subdivision recorded October 13, 1989 as Document Number 895943.

12. A Certificate of Correction to Plat recorded as document 896282.

13. Existing unrecorded leases, if any, and all rights thereof and all acts done or suffered thereunder by any lessee or by any party claiming by, through or under said lease or lessees.

- End Schedule B -

Please refer all inquiries to John D. Ammons at (630) 892-2323.

ISSUED BY:
Wheatland Title Guaranty Company
105 W. Veterans Parkway
Yorkville, Illinois 60560

Agent for:
Fidelity National Title Insurance Company

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #11

Tracking Number

PW 2017-31

Agenda Item Summary Memo

Title: Stormwater Management Program Plan Update

Meeting and Date: City Council – April 25, 2017

Synopsis: Consideration of Approval

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-31

Type of Vote Required:

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Lisa Pickering, Deputy City Clerk

Date: April 18, 2017
Subject: Stormwater Management Program Plan

The final version of the revised Stormwater Management Program Plan is attached for formal adoption by the City Council. The changes were a requirement of the City's revised IEPA NPDES MS4 permit issued in February 2016.

We have also attached a memo from our office dated August 10, 2016 that noted the required changes and recommendations.

Let us know if you have any questions.

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Lisa Pickering, Deputy City Clerk

Date: August 10, 2016
Subject: NPDES MS4 Stormwater Permit

The IEPA issued a revised NPDES MS4 permit in February of 2016. The new MS4 permit went into effect on March 1, 2016. The permit instructs communities to comply with the new permit provisions within 180 days (September 1, 2016) and to report on the changes implemented and provide supporting documentation with next year's Annual Report due by June 1, 2017.

Some of the changes are administrative, some do not apply to the City's circumstances and some the City is already in compliance with; however, there are some changes that require modifications to the City's activities and Stormwater Management Plan. This memo provides a summary of these changes to each of the six minimum control measures in the MS4 permit and the actions that must be taken to comply with the new provisions.

Public Education and Outreach on Storm Water Impacts

Changes: Public Education now has to include a component regarding potential impacts of climate change on stormwater discharges. In addition, there are added requirements for educational materials for non stormwater discharges and discharges from private properties. The permit includes a list of topic examples.

Current Status: The City currently complies with this measure through stormwater education materials available at the Information Center at City Hall.

Recommended Action: City staff should review and inventory the current materials available, compare with new requirements and topic list, identify need for new materials, obtain new materials and make available at City Hall. This should be completed during this permit year and updated materials provided as documentation in the next Annual Report.

Public Involvement/Participation

Changes: The new permit requires communities to identify Environmental Justice Areas within their jurisdiction and provide appropriate public involvement/participation. There is also a requirement that the community have a least one public meeting a year for the public to provide input on the adequacy of the City's stormwater program.

Current Status: The City had been meeting this requirement by allowing public comment at Board Meetings and through the Environmental Fair.

Recommended Action: The City will have to hold a public meeting during this permit year to allow public input on the stormwater program. The meeting may be part of a regular Council Meeting but would have to be part of the agenda and not just during the public comment period. Meeting minutes would be submitted with the next Annual Report as documentation.

In addition, the City will have to investigate the requirements for identifying Environmental Justice Areas and take appropriate action if areas are identified. These items should be completed during this permit year and reported on in next year's Annual Report. (See Page 14 of the Attached MS4 Permit for definitions of Environmental Justice and Environmental Justice Area.)

Illicit Discharge Detection and Elimination

Changes: The new permit now requires dry weather inspections of stormwater outfalls to look for non-stormwater of illicit discharges. The permit allows the City to prioritize their list of outfalls for inspections with high priority outfalls requiring at least annual inspection.

Current Status: The City currently addresses this requirement by responding to reports of illicit discharges and taking action with their ordinances and procedures when necessary.

Recommended Actions: The City has their stormwater outfalls identified on their inventory maps. Staff should develop a prioritization list and schedule for inspecting outfalls. Documentation of inspections should be included in the next Annual Report.

Construction Site Storm Water Runoff Control

Changes: There are a number of changes to the runoff and erosion control requirements.

Current Status: The City addresses this requirement through implementation of their Stormwater and other ordinances.

Recommended Action: The City's current ordinances comply with or are more stringent than the changes in the MS4 permit. Therefore, there are no changes to the City's current ordinances or activities required for this control measure.

Post-Construction Stormwater Management for New Development and Redevelopment

Changes: There are a number of changes to Post Construction Best Management Practices (BMPs). These changes add the requirement to consider climate control impacts on BMPs. There are also requirements to limit the use of infiltration practices (i.e. not adjacent to fuel stations, wells, etc.). A requirement has also been added for the City to develop a process to assess existing and current flood control projects for water quality and climate change impacts.

Current Status: The City addresses this requirement through implementation of their current Stormwater and other ordinances and by assisting Homeowner Associations when requested.

Recommended Action: The City's current ordinances generally comply with or are more stringent then the changes in the MS4 permit and no changes are required. However, this section of the Stormwater Management Plan should be reviewed in regards to climate change impacts and developing a plan to assess flood control projects and any necessary changes be made to the Stormwater Plan. This should be completed this permit year and the revised Stormwater Management Plan submitted with the next Annual Report as documentation.

The limits on infiltration practices are consistent with the requirements in the IEPA NPDES General Construction Permit and can be enforced through that permit for proposed infiltration BMPs. Compliance with these requirements is part of the engineering review process on new development or redevelopment projects.

Pollution Prevention/Good Housekeeping for Municipal Operations

Changes: There are added requirements for the storage of deicing materials. The City must have permanent storage or temporary storage with seasonal tarping. In addition, permanent storage structures must be constructed within two years.

Current Status: The City currently maintains and reports on good housing keeping requirements. The City currently has permanent storage so no action is required.

Monitoring

Changes: There are new requirements for monitoring and assessing the program. There are several options for monitoring from inventorying BMPs to sampling. For the City, we recommend the option to Evaluate BMP effectiveness based on published research. This requires the City to inventory BMPs implemented in the Community and estimating the resultant pollutant reduction.

Current Status: There was no monitoring of this type required under the previous permit.

Recommended Action: The Fox River Study Group is making an evaluation tool available to MS4 communities in the watershed. The tool is a spreadsheet that will allow the City to enter the areas of BMPs that are to be implemented; the spreadsheet will then estimate the pollutant reduction resulting from implementation of the BMPs. All BMPs implemented since the start of this permit (March 1, 2016) will need to be inventoried. The City will have to enter all newly constructed BMPs moving forward as well. The BMP inventory should be provided as documentation with each year's Annual Report.

Other

Changes: Communities that perform deicing operations that can cause or contribute to a violation of State chloride water quality standards have to participate in any watershed group organized to implement control measures.

Current Status: This is a new requirement.

Recommended Action: This item requires additional research to see if there are watershed groups that the City could participate in. This should be done during this permit year and documentation provided with the Annual Report.

Summary

We recommend that City staff move forward with the recommend action items outlined in this memo. In addition, the Stormwater Management Plan should be reviewed and updated to include the changes to the stormwater management procedures, policies and monitoring forms. The revised Stormwater Management Plan should then be submitted to IEPA as an attachment to the next Annual Report due on June 1, 2017.

Ordinance No. 2017-____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, APPROVING A REVISED STORMWATER MANAGEMENT PROGRAM PLAN

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, by Ordinance No. 2010-13 adopted on March 9, 2010, the Mayor and City Council of the City approved the United City of Yorkville Stormwater Management Program Plan (the "*Stormwater Management Plan*"); and,

WHEREAS, in February of 2016, the Illinois Environmental Protection Agency (the "*IEPA*") issued a revised National Pollutant Discharge Elimination System ("*NPDES*") Small Municipal Separate Storm Sewer Systems ("*MS4*") permit that requires changes to the City's Stormwater Management Plan; and,

WHEREAS, the City believes it to be in the best interests of its citizens to revise its Stormwater Management Plan to meet the requirements of the IEPA.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. Ordinance No. 2010-13 adopted on March 9, 2010 is hereby repealed.

Section 2. That the United City of Yorkville Stormwater Management Program Plan Dated March 9, 2010 Revised April 25, 2017, attached hereto and made a part hereof, is hereby approved.

Section 3. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this ____ day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk

United City of Yorkville

Stormwater Management

Program Plan

Kendall County, Illinois

March 9, 2010

Revised April 25, 2017

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1 Overview of the Stormwater Management Program Plan

1.1 Introduction

This Stormwater Management Program Plan (SMPP) was developed by the United City of Yorkville based off a SMPP template created by the Lake County Stormwater Management Commission. The purpose of the SMPP is to meet the minimum standards required by the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II program. Federal regulations through the USEPA require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas based on the 2000 census, obtain stormwater permits for their discharges into receiving waters.

The SMPP describes the procedures and practices that can be implemented by the City toward the goal of reducing the discharge of pollutants within stormwater runoff in order to comply with Federal standards. The SMPP is applicable to all properties within city limits. Compliance with the plan is intended to protect water quality and contribute to the following amenities:

- cleaner lakes and streams,
- improved recreational opportunities and tourism,
- flood damage reduction,
- better aesthetics and wildlife habitat, and
- a safer and healthier environment for the citizens.

1.2 State & Federal Regulations

Federal environmental regulations based on the 1972 Clean Water Act (CWA) require that MS4s, construction sites and industrial activities control polluted stormwater runoff from entering receiving bodies of water (including navigable streams and lakes). The NPDES permit process regulates the discharge from these sources based on amendments to CWA in 1987 and the subsequent 1990 and 1999 regulations by the U.S. Environmental Protection Agency (USEPA). In Illinois, the USEPA has delegated administration of the Federal NDPES program to the Illinois Environmental Protection Agency (IEPA). On December 20, 1999 the IEPA issued a general NPDES Phase II permit for all MS4s. Under the General ILR 40 Permit each MS4 was required to submit a Notice of Intent (NOI) declaring compliance with the conditions of the permit by March 10, 2003. The original NOI describes the proposed activities and best management practices that occurred over the original 5-year period toward the ultimate goal of developing a compliant SMPP. At the end of the 5th year (March 1, 2008) the components of the SMPP were required to be implemented; per the ILR40 permit. The IEPA reissued the ILR 40 permit on April 1, 2009. The reissued permit is included in Appendix 5.10.

Additionally, under the General ILR10 permit also administered IEPA, all construction projects that disturb greater than 1 acre of total land area are required to obtain an NPDES permit from IEPA prior to the start of construction. Municipalities covered by the General ILR40 permit are automatically covered under ILR10 30 days after the IEPA receives the NOI from the municipality.

On February 10, 2016 the IEPA released a new General NPDES Permit for Discharges from Small Municipal Separate Storm Sewer Systems effective March 10, 2016 thru February 28, 2021. Changes to the permit requirements with the newly issued permit prompted the 2017 revision to the United City of Yorkville Stormwater Management Plan. In addition, this revision captures changes that were implemented through the City's 2013 Annual Report.

1.3 Organization of SMPP

The SMPP identifies best management practices to be implemented in six different categories. These categories are:

- Public Education and Outreach
- Public Participation/Involvement
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Illicit Discharge Detection and Elimination
- Pollution Prevention/Good Housekeeping

Chapter 1: Overview of the Stormwater Management Program Plan - discusses the format of the SMPP document and the regulations associated with NPDES II through state and federal agencies.

Chapter 2: Program Management - discusses the logistics of the plan. This includes the organization, implementation and responsible parties necessary to achieve overall compliance with the SMPP and NPDES Permit. It also identifies how the United City of Yorkville coordinates with other governmental agencies and discusses the legal authority that the MS4s have to implement the plan components.

Chapter 3: The Program - addresses stormwater pollutant control measures implemented by the United City of Yorkville per the six minimum control categories established by the USEPA.

Chapter 4: Monitoring, Program Evaluation and Reporting - describes the monitoring, evaluation and reporting procedures associated with the program. The SMPP is a guide created to protect United City of Yorkville receiving waters from pollution and resultant degradation. This chapter assists in identifying best management practices and processes that may require modifications in the future to help the document become an effective tool.

Chapter 5: Appendices – including forms, references, and exhibits.

1.4 Watersheds and Receiving Waters

The United City of Yorkville is primarily located within the Fox River watershed, with southern areas tributary to the Illinois River. There are several receiving waters tributary to the Fox and Illinois Rivers which are located within the Village. These streams include Blackberry Creek, Rob

Roy Creek, and Aux Sable Creek. Ponds, intermittent streams, and other on-stream bodies of water are also considered part of the receiving water system.

Watershed: The land area that contributes stormwater to one of the two major rivers draining Kendall County.

***Sub-Watershed*:** The land area that contributes stormwater to one of the receiving waters tributary to a major river.

Receiving Water: A natural or man-made system into which stormwater or treated wastewater is discharged, including the Fox River, Illinois River, and their tributaries.

The major Watersheds and receiving waters are presented on Figure 1 *Map of Major Sub-watershed and Receiving Waters.*

Fox River Watershed

The Fox River originates about 15 miles northwest of Milwaukee, Wisconsin. The river enters the northeast corner of Kendall County at Montgomery. About 165 square miles of Kendall County drain to the Fox River.

Major tributaries to the Fox River in Kendall County include Blackberry Creek, Rob Roy Creek, Big Rock Creek, Little Rock Creek, Morgan Creek, Hollenback Creek, and Roods Creek. Only Blackberry Creek, Rob Roy Creek, and Hollenback Creek are located within the current city limits.

The watersheds of the creeks within the city are primarily agricultural, although significant development activity has occurred in the Blackberry Creek and Rob Roy Creek watersheds since 2000.

The Fox River watershed includes all or portions of the communities of Aurora, Millbrook, Millington, Montgomery, Newark, Oswego, Plano, Sandwich, and Yorkville.

Illinois River Watershed

The Illinois River originates at the confluence of the Des Plaines and Kankakee Rivers in Grundy County, about 10 miles southwest of Joliet, Illinois. About 155 square miles of Kendall County drain to the Illinois River.

The Illinois River does not run directly through Kendall County, but reaches into the county via Aux Sable Creek and Valley Run Creek. Only the Middle Branch of the Aux Sable Creek is located within the current city limits.

The Middle Branch Aux Sable Creek is primarily agricultural, although some development activity has occurred since 2000.

The Illinois River watershed includes all or portions of the communities of Joliet, Lisbon, Minooka Plattville, Plainfield, and Yorkville.

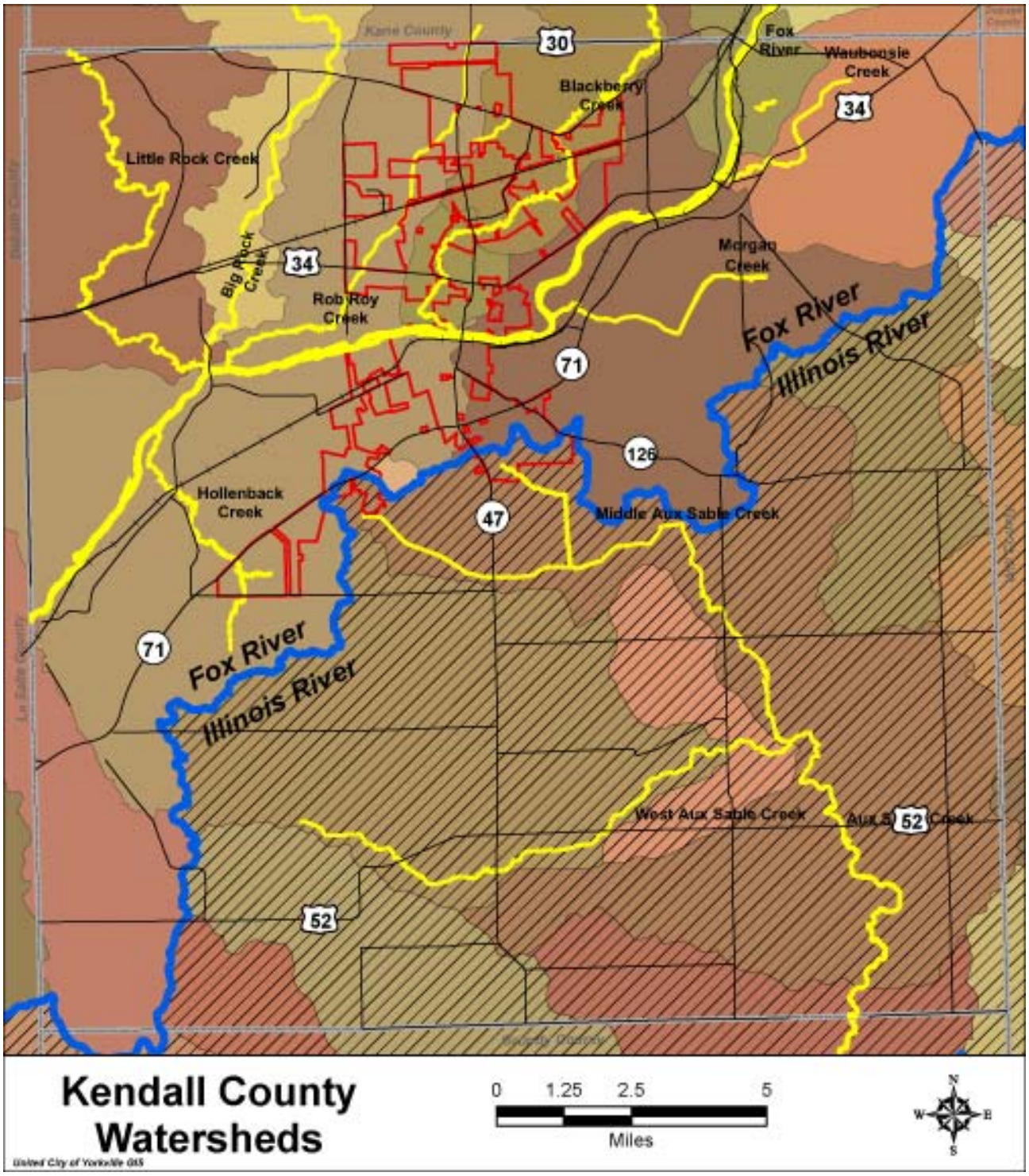


Figure 1. Map of Major Sub-Watersheds and Receiving Waters

2 Program Management

This Chapter describes the organizational structures of the United City of Yorkville and the Illinois EPA. It further discusses the roles and responsibilities of the involved parties.

2.1 Implementation of this SMPP

The SMPP includes tasks that are required to meet the permit conditions under the NPDES II program and how to perform these tasks. These forms should be printed annually and the progress of all tasks tracked. At the end of the yearly reporting period (March 1 – February 28/29) the forms should be filed in a binder to document SMPP related activities to IEPA in the case of an audit. It is anticipated that implementation of this SMPP constitutes compliance with the program. The SMPP will be posted on the United City of Yorkville's website.

The measurable goals will be evaluated and modified to maintain compliance with General Permit each year during the preparation of the Annual Report to IEPA due on June 1st of each year.

2.2 Departmental Responsibilities

The City Council is the policy and budget setting authority for United City of Yorkville. The Engineering, Community Development, and Public Works Departments work together to implement this SMPP. The City Engineer has primary responsibility for managing the overall program. The city will also work with Kendall County and adjacent municipalities regarding stormwater issues.

The Community Development Department is designated as the primary entity responsible for performing the duties related to Public Education and Outreach and Public Participation and Involvement. Much of this work will be achieved through coordination with the Green Committee. The Engineering Department is designated as the primary entity responsible for performing the duties related to Construction Site Runoff Control, Post-Construction Runoff Control, and Illicit Discharge Detection and Elimination activities. The Building Department will assist as necessary by performing certain duties during the construction of private developments. The Public Works Department is designated as the primary entity responsible for performing the duties related to Pollution Prevention and Good Housekeeping.

Measurable goals are established to document the efforts performed by the various city departments and ultimately the effectiveness of the SMPP. Those departments responsible for implementation of the SMPP shall perform, record, and forward monthly report memos to the City Engineer regarding their individual areas of responsibility. The report memos shall be prepared and forwarded during the first week of the following month. The City Engineer shall use these reports in preparing the annual report to the Illinois EPA.

2.3 Coordination with the IEPA

The United City of Yorkville is required to complete annual reports which describe the status of compliance with the ILR40 permit. The annual report will be posted on the City's website and submitted to the IEPA by the first day of June each year. Annual reporting to IEPA should include information regarding SMPP goals that are in compliance as well as those goals that need further work or modification.

Records regarding the completion and progress of the SMPP commitments will be documented on task sheets and updated throughout the year. The completed task sheets should be located in a binder with necessary supporting documentation. The binder will be available for inspection by both IEPA and the general public.

3 The Program

This Stormwater Management Program Plan includes six components, each of which is necessary to reduce/eliminate stormwater pollution in receiving water bodies. These are:

- Public Education and Outreach
- Public Participation and Involvement
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Illicit Discharge Detection and Elimination
- Pollution Prevention and Good Housekeeping

3.1 Public Education and Outreach

City staff at the United City of Yorkville is responsible for providing research and advice as well as making recommendations to the City Council on environmental issues facing the community. City staff should also promulgate information related to recycling, conservation design, soil conservation, rain gardens, open space/watershed protection, water conservation, landscape maintenance, etc. through environmental fairs, pamphlet distribution, and the city website.

The annual NPDES permit report shall be placed on a City Council agenda once each year for discussion.

3.1A Measurable Goals

- Place Stormwater Management Program Plan on the city's website.
- Maintain an information center at City Hall, which will include informational items regarding stormwater-related issues. Review and update materials as necessary to maintain compliance with Permit requirements.

3.2 Public Participation and Involvement

City staff should encourage citizen participation and involvement for stormwater-related issues on both individual and community levels.

Citizen calls related to the Stormwater Management Program Plan shall be documented and directed to the appropriate department for follow-up.

3.2A Measurable Goals

- Document the number and type of calls received from the public regarding potential illicit discharges.

- Sponsor an annual environmental fair, and document the number and type of exhibitors and public attendance.
- Hold one public meeting per year to allow public input on the City's Stormwater Management Program
- Identify if there are areas meeting the Environmental Justice Area criteria within the City

3.3 Construction Site Runoff Control

The City adopted Ordinance No.2003-19 (Appendix 5.1) to regulate soil erosion and sediment control practices for construction activities that disturb more than 10,000 SF of soil. This ordinance requires the following:

- Requires the developer/contractor to follow Illinois EPA requirements regarding NPDES permitting for construction activities.
- Issuance of a Site Development Permit regulating earthwork and erosion/sediment control.
- Contractor requirements for periodic inspections during construction.
- Surety bonding to ensure that stabilization work is completed according to plan.

The City passed Resolution No. 2004-39 (Appendix 5.2) to establish the Standard Specifications for Improvements. This resolution creates standards regarding the various aspects of construction for public and quasi-public infrastructure, including responsible construction activities. Regarding stormwater management, this resolution requires:

- Sizing requirements for stormwater collection and detention facilities.
- A soil erosion and sediment control plan.
- The ability to require stormwater best management practices in the design of the stormwater collection and storage systems.

The City passed Ordinance No. 2008-01 (Appendix 5.3) to provide Wetland Protection Regulations for Water Quality and Stormwater Management Benefits. This ordinance creates requirements for the evaluation and protection of non-jurisdictional wetlands within city limits that may be affected by new development.

3.3A Complaints

Site design comments are handled on a case by case basis. Any complaints received during the review, construction, or build-out of a private development shall be directed to the City Engineer and documented. Construction and build-out related calls are typically addressed by performing a site inspection.

3.3B Violation Notification Procedures

Investigation of complaints should be performed within one business day of receipt of the complaint. In general, the compliance due date should be within 5-working days. However, if the city determines that the violation is or will result in significant environmental, health or safety hazards a 24-hour compliance requirement should be set. For such time-critical violations, the developer should also be advised to complete a Notice of Incidence report with the IEPA for all sites that were required to submit a Notice of Intent to the IEPA.

Step 1 can be initiated by observation of a violation during a routine inspection, or in response to a complaint.

Step 1: Violation Is Observed

- The inspector completes the ***NPDES/Erosion Control Inspection Report*** (Appendix 5.11).
- Photographs of the violation(s) should be taken and saved.
- The development project manager/property owner (a.k.a. construction site contact) shall be informed of the violation.
- A copy of the ***NPDES/Erosion Control Inspection Report*** is provided to the contractor and the developer. The ***NPDES/Erosion Control Inspection Report*** indicates the deficiencies and a maximum time frame for action.
- At the end of the indicated time frame the City shall perform a follow-up site inspection.

Step 2: 1st Follow-Up Site Inspection

The construction site contact shall be notified of the anticipated inspection time. The site shall be inspected including all items previously documented on the previous ***NPDES/Erosion Control Inspection Report***. The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed, then the ***NPDES/Erosion Control Inspection Report*** is filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 3 discussed below. Photographs of the violations should be taken and saved.

Step 3: 1st Notice of Violation

A formal ***Notice of Violation*** (Appendix 5.12) letter will be sent to the contractor and developer. A copy of the ***Notice of Violation*** shall also be provided to the Yorkville Building Department. The letter will include the following information:

- Description of the violations (including ordinance provisions)
- Maximum time frame for resolution (typically 5 working days),

Step 4: 2nd Follow-Up Site Inspection

The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed, then the ***NPDES/Erosion Control Inspection Report*** shall be filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 5 discussed below. Photographs of the violations should be taken.

Step 5: 2nd Notice of Violation

- Depending on the severity of the outstanding violations the inspector may arrange for the Building Department to issue a Red Tag and a Conditional Stop Work Order upon completion of the inspection. The Stop Work Order allows for the resolution of the violation but no other on-site improvements. Building and/or Occupancy Permits will not be issued and surety/letter of credit reductions will not be considered until the violation is resolved. A formal ***Notice of Violation*** letter will be sent, via certified mail, to the contractor and developer. A copy of the Notice of Violation shall also be provided to the Yorkville Building Department.

Step 6: 3rd Follow-Up Site Inspection

The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed, then the ***NPDES/Erosion Control Inspection Report*** is filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 7 discussed below. Photographs of the violations should be taken and saved.

Step 7: 3rd Notice of Violation

The inspector issues a Red Tag and a Conditional Stop Work Order upon completion of the inspection, if one has not already been issued. The Stop Work Order allows for the resolution of the violation but no other on-site improvements. Building and/or Occupancy Permits will not be issued and surety/letter of credit reductions will not be considered or processed until the violation is resolved. Representatives from the Building and Engineering Departments shall meet to discuss the violation and subsequent actions. These actions may include: issuing fines for each day of violation since the 1st notice of violation; draw from surety to enable the City to have the remedial measures corrected; seeking United City of Yorkville legal counsel and pursuing injunctive or other legal relief.

A formal ***Notice of Violation*** letter will be sent, via certified mail, to the contractor and developer. A copy of the Notice of Violation shall also be provided to the Building Department and City Administrator. The letter will also include additional penalties or measures that will be imposed if the violation(s) persist.

Steps 6 and 7 will be repeated until resolution of the violation.

3.3C Measurable Goals

- Track the number of site development permits issued.
- Document any citizen complaints regarding construction site runoff and follow-up activities.
- Inspect construction sites for erosion/sediment control measures and record inspection on ***NPDES/Erosion Control Inspection Report*** forms**.**

3.4 Post Construction Runoff Control

The City adopted Ordinance No. 2009-78 (Appendix 5.4) to establish standards for design, construction, and maintenance of stormwater best management practices. This ordinance requires the following:

- All development/redevelopment projects shall incorporate stormwater Best Management Practices (BMP's) into their site designs.
- Agreements providing for the adequate maintenance of the stormwater BMP's by the developer/property owner.
- Periodic inspections and meetings with property owners by the city to ensure proper functioning of the stormwater Bumps.

The City will inspect stormwater outfalls, on existing properties with stormwater management facilities, on a priority and as needed basis. The inspections schedule should allow for inspection of priority outfalls on a regular basis. Detention basins will be inspected on an as requested basis.

3.4A Long Term Operation and Maintenance

The SMPP includes two long term maintenance agreements.

- The first agreement (Appendix 5.13) is the recommended plan for existing detention and stormwater management facilities, whether publicly or privately maintained. The intent of this sample plan is to provide guidance for the maintenance of facilities that do not have an approved plan. If an existing facility already has an adequate plan, this document would supersede the sample plan.
- The second agreement (Appendix 5.14) is provided to applicants during the permit review period for new detention and stormwater management facilities. This agreement should be reviewed and enhanced to reflect the specific design of the new development. Receipt of the signed and recorded maintenance agreement is required.

Receipt of the signed and recorded maintenance agreement is required prior to recording of a plat of subdivision, site development permit, or building permit for the property, whichever occurs first.

3.4B Site Inspections

This section focuses on post-construction inspections of previously developed sites, streambanks, shorelines, streambeds, and detention / retention ponds.

Previously Developed Sites

The United City of Yorkville will inspect outfalls for existing properties with stormwater management facilities on an as needed and priority basis. Previously developed properties that are still to be inspected should be inspected with respect to the approved development plan. A letter indicating the maintenance activity highlights, deficiencies, or modifications to the plan should be provided to the responsible party. The responsible party is encouraged to implement an annual maintenance program.

Shorelines

The City will inspect detention basin shorelines on an as needed and priority basis. They should, however, inspect all reported detention basins by using the ***Stormwater Basin Annual Inspection Report*** (Appendix 5.15). Observed erosion, seeding/re-seeding or slope stabilization needs should be documented. Documented deficiencies should be reported to the City Engineer who evaluates and determines appropriate remedial activities. Remedial actions might include notifying the property owner or including maintenance activities in the city's work program for city-maintained basins.

Streambanks and Stream Bed Sediment Accumulation

The City will inspect receiving water streambanks for erosion and flowlines for sediment plumes/deposits on an as needed and priority basis. Inspections should be performed in the spring or fall depending upon weather conditions. Stream locations are depicted on **Figure 1.** Document observed erosion and/or sediment accumulation. Documented

deficiencies should be reported to City Engineer who evaluates and determines appropriate remedial activities. Remedial actions would typically consist of notifying the property owner.

Detention / Retention Pond Sediment Accumulation

Ensure that new detention/retention pond is constructed per the approved development plan. The developer is responsible for ensuring that the design grade is established prior to the city's approval of the pond. Pond information, including the design permanent pool depth, is added to the ***Stormwater Basin Annual Inspection Report*** upon final approval of the pond.

The City will inspect detention basins to determine the normal pool depth on an as needed and priority basis. However, when detention basins are reported to the City or an inspection is requested, the City will perform an inspection, and the normal pool depth of the basin should be determined during the inspection. Observed depths should be recorded onto the ***Stormwater Basin Annual Inspection Report***. If the inspected pond depth is found to be more than 2 feet shallower than the design normal pool depth, this information should be reported to City Engineer who evaluates and determines appropriate remediation activities.

3.4C Measurable Goals

- Inspect stormwater basins and outfalls reported as being deficient and document on ***Stormwater Basin Annual Inspection Report*** forms. Inspect other stormwater basins and outfalls on a priority and as needed basis.
- Develop a plan and process to assess climate change impacts on BMPs
- Develop a plan and process to assess flood control projects for water quality and climate change impacts.
- Provide assistance for citizens and homeowner associations (HOA's) on an as requested basis. The request and follow up action taken should be documented.
- Require new developments to enter into maintenance agreements for their stormwater management facilities, and maintain a record of those agreements.

3.5 Illicit Discharge Detection and Elimination

Illicit discharges contribute considerable pollutant loads to receiving waters. There are two primary situations that constitute illicit discharges; these include non-stormwater runoff from contaminated sites and the deliberate discharge or dumping of non-stormwater into the stormwater system. Illicit discharges can enter the storm sewer system as either an indirect or direct connection.

3.5A Regulatory Authority

Effective implementation of an Illicit Discharge Detection and Elimination (IDDE) program requires adequate legal authority to remove illicit discharges and prohibit future

illicit discharges. This regulatory authority is achieved through adoption of United City of Yorkville Ordinance No. 2010-05 (Appendix 5.5). Additionally, IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above MS4 jurisdiction.

3.5B Illicit Discharge Detection and Elimination

The United City of Yorkville maintains, operates, and publicizes a call-in phone number (630-553-4350) where parties can contact the city with environmental concerns. Primary advertisement venues include the website and all related municipal publications. Telephone calls received from residents, other internal Departments or other agencies are logged on the ***Illicit Discharge Tracking Form*** (Appendix 5.16). The City Engineer, or his designee, should transfer information from the tracking form to the ***Illicit Discharge Summary Form*** (Appendix 5.17) monthly. The summary form should be reviewed annually to determine if trends can be seen and if any additional outreach efforts are warranted.

Subdivision and Public Utility Ordinance

The United City of Yorkville created and adopted Ordinance No. 94-4 (Appendix 5.6) to prohibit the discharge of any toilet, sink, basement, septic tank, cesspool, industrial waste or other polluting substances to any open ditch, drain, or drainage structure. This ordinance can be used to further support the activities required by the city's Stormwater Management Program Plan.

3.5C Understanding Outfalls and Illicit Discharges

Understanding the potential locations and the nature of illicit discharges in urban watersheds is essential to find, fix and prevent them.

Identifying Outfalls and Receiving Waters

An Outfall is a point source where a municipal separate storm sewer discharges into Waters of the United States "receiving water". Open conveyances connecting two municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the United States are not considered outfalls. For the purposes of this program the following definitions shall be used:

> *Outfall:* A storm sewer outlet, or other open conveyance point discharge location, that discharges into a Waters of the U.S, receiving water or another MS4.

Regulated systems include the conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, gutters, ditches, swales, man made channels or storm sewers.

The outfall inventory was prepared by the United City of Yorkville. The outfall locations have been numbered to facilitate detection and tracking of identified illicit discharges.

This information can be obtained from the city's Geographic Information System (GIS), which is maintained by the Community Development Department.

The outfall map should be revised annually to incorporate permitted outfalls associated with new developments. An outfall inventory should be performed every 5 years; the focus of this effort is to search for new outfalls (i.e. those not already included in the existing GIS). The search for new outfalls should be combined with the pre-screening efforts.

USEPA Exclusions

It is noted that not all dry-weather flows are considered inappropriate discharges. Under certain conditions, the following discharges are allowed:

- Water line flushing
- Landscaping irrigation
- Diverted stream flows
- Rising groundwater
- Uncontaminated groundwater infiltration
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Flows from foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl spaces
- Lawn watering
- Individual car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool water
- Street wash water

Pollutant Indicators

Outfalls should be inspected for evidence of the following pollutant indicators:

- Odor
- Color of discharge water or staining of outfall pipe
- Turbidity (clarity) of discharge water
- Floatables in or residue from discharge water, such as scum, foam, suds, oil sheen, etc.
- Excessive plant growth or lack of plant growth at outfall
- Sediment plume.

3.5D Indirect Connections

Indirect connections are typically the result of events such as dumping or spillage of materials into storm sewer drains. Intentional dumping is a common type of illicit discharge. Generally, indirect modes of entry produce random, infrequent discharges, with the exception of groundwater seepage.

There are five main modes of indirect entry for discharges. These are groundwater seepage, unintentional spills, intentional dumping, outdoor washing, and over-irrigation of landscaping.

Seepage discharges can be either continuous or intermittent, depending on the depth of the water table and the season. Groundwater seepage usually consists of relatively clean water that is not an illicit discharge by itself, but can carry other illicit discharges. If storm drains are located close to sanitary sewers, groundwater seepage may intermingle with sewage. Seepage will be addressed by taking samples to check for contamination from nearby sanitary sewers or septic systems. Mitigation measures would consist of repairs to sewers or notification to the Kendall County Health Department as appropriate.

See Chapter 3.6 for the Spill Response Plan for unintentional spills.

Intentional dumping is minimized through public education. The city also maintains an Illegal Dumping Hotline which is described in Chapter 3.5B. The procedure for handling a dumping incident is described in Chapter 3.6.

Outdoor washing and over-irrigation are minimized through public education.

3.5E Direct Connections

Direct connections enter through direct piping connections to the storm sewer system, and are most easily detected during dry-weather periods. Inspection of stormwater outfalls during dry-weather conditions reveals whether non-stormwater flows exist. If non-stormwater flows are observed, they can be screened and tested to determine whether pollutants are present. If the presence of pollutants is indicated, the detective work of identifying the source of the discharge can begin and be corrected.

The process to eliminate direct connection illicit discharges consists of the following components:

1. ***Program Planning*** consists of the organizational efforts required to perform outfall screening and follow-up investigative activities of the program. Program planning identifies the regulatory authority to remove directly connected illicit discharges, identification of the outfalls and receiving waters, and providing personnel and equipment to perform the outfall screening and follow-up work.

2. ***Outfall Screening*** consists of pre-screening to determine whether dry-weather flows are present and outfall inspection which includes field visits to determine whether an illicit discharge exists.

3. ***Follow-Up Investigation and Program Evaluation*** are necessary to determine the source of any identified pollutant flows and eliminate them. The major follow-up investigation evaluation components include:

- reviewing and assessing outfall inspection results
- internal coordination
- tracing upstream to identify the source of the illicit discharge
- exercising the appropriate legal means to eliminate the illicit discharge and schedule follow-up inspections as necessary

3.5F Access to Private Property

In some cases, it may be necessary for City personnel to enter or cross private property to investigate probable illicit discharges. A form letter should be prepared that includes a short description of the project, the purpose of the access to the property, and the name of a project contact person with a telephone number. If the owner is not present, a letter should be left at the premises to facilitate return inspection. If permission to access property is denied, a public official should then contact the owner at a later date.

3.5G Confined Space Entry

Confined space entry for this program would include climbing into or inserting one's head into a pipe, manhole, or catch basin. In general, do not cross the vertical plane defining an outfall pipe or the horizontal plane defining a manhole unless properly prepared for confined space entry. Confined space entry shall be conducted only by trained personnel with appropriate rescue and monitoring equipment.

Outfall Inspection

The City is unable to perform inspections on all stormwater outfalls but will take action to correct problems with storm water outfalls as they are reported. The request and follow up action taken should be recorded. Those outfalls which are reported and are followed up with an inspection should be assessed to determine which one of the three following conditions applies:

(1) The outfall is dry or damp with no observed flow

(2) Flowing discharges are observed from the outfall

(3) The outfall is partially or completely submerged with no observed flow or is inaccessible

Scenario 1: No Observed Flow. The field crew should photograph the outfall and complete applicable sections of the ***Stormwater Outfall Inspection Form*** (Appendix 5.18).

Scenario 2: Observed Flow. The field crew photographs the outfall and complete applicable sections of the ***Stormwater Outfall Inspection Form.*** The intent is to gather additional information to determine if an illicit discharge is present.

Scenario 3: Submerged or Inaccessible Outfall. If standing water is present in an outfall or if it is inaccessible, then complete available information from Sections 1, 2, 3 and 7 of the ***Stormwater Outfall Inspection Form***, with appropriate comments being written in the "Remarks" section of the data form.

Determine the upstream sampling location using the city's storm sewer atlas. Manholes, catch basins, or culvert crossings can be used for upstream sampling locations. Make reasonable efforts to locate upstream sampling points that are accessible and exhibit flow. If inaccessible, resolve the problem in the office with appropriate supervisory personnel.

Outfall Assessment & Documentation

Complete the ***Stormwater Outfall Inspection Form*** for all outfall inspections. A separate data form must be completed for each outfall. In addition to standard information, the data form is used to record other information that is noted at the time the outfall inspection is conducted (e.g. dead or dying plants, fish kills, excessive algae growth, construction activities, etc. that might provide information regarding the potential for illicit discharges).

3.5H Office Closeout

Update the outfall screening scheduling and completion form and plan the next screening day's activities. Discuss any problems locating outfalls with appropriate supervisory personnel so that alternate sampling locations can be identified. Once a month, compile data from the ***Stormwater Outfall Inspection Form*** onto the ***Outfall Inspection Summary Form*** (Appendix 5.19).

3.5I Source Identification

Follow-up investigation is required for all outfalls with positive indicators for illicit discharges. The procedure for detailed investigation and source identification has three major components: 1) mapping and evaluation, 2) storm sewer investigation, and 3) tracing.

Mapping Evaluation

For each outfall to be investigated, a large-scale working map should be created to show the entire upstream storm sewer network, outfall locations, and parcel boundaries.

Storm Sewer Investigation

After conducting the mapping evaluation, a manhole-by-manhole inspection is conducted to pinpoint the location of the illicit discharge. All flows are tracked upstream until the dry-weather discharge is no longer detected. The field crew should also determine whether there has been a significant change in the flow rate between manholes.

Tracing

Once the manhole inspection has identified the reach area, testing may be necessary. If there is only one possible source to this section of the storm sewer system in the area, source identification and follow-up for corrective action is straightforward. Multiple sources, or non-definitive sources, may require testing in order to identify the contributing source. The method of testing must be approved by the Public Works Director prior to testing. Potential testing methods include dye testing, smoke testing, and/or remote video inspections.

3.5J Removal of Illicit Discharges

Removal of illicit discharge connections is required at all confirmed contributing sources. Nine steps are taken to positively identify and remove an illicit discharge to the storm sewer system. These steps are as follows:

Step 1. Have an outside laboratory service take a grab sample and test for the illicit discharge at the manhole located immediately downstream of the suspected discharge connection.

Step 2: Conduct an internal meeting with appropriate personnel to include Public Works personnel, Building Code Official, and the City Engineer to discuss inspection and testing results and remedial procedures.

Step 3: The City Engineer shall send a notification letter to the owner/operator of the property/site suspected of discharging a pollutant. The letter should state the apparent violation, and request that the owner/operator describe the activities on the site and the possible sources of non-stormwater discharges including information regarding the use and storage of hazardous substances, chemical storage practices, materials handling and disposal practices, storage tanks, types of permits, and pollution prevention plans.

Step 4: Arrange a meeting for an inspection of the property with the Building Code Official and the owner/operator of the property. After inspection, notify the site owner/operator of the findings and instruct them verbally and in writing to take any necessary corrective measures.

Step 5: Conduct additional tests as necessary if the initial site inspection is not successful in identifying the source of the problem. The Public Works Director is responsible for determining the appropriate testing measure to pinpoint the source.

Step 6: If the owner/operator does not voluntarily initiate corrective action, the Building Code Official shall issue a Notification of Noncompliance. The notification shall include a description of the required action(s) and a time

frame in which to take corrective action. Upon notification of noncompliance, the owner can be subject to penalties as stipulated by Municipal Code.

Step 7: Conduct follow-up inspections to determine whether corrective actions have been implemented to: 1) remove the illicit connection or 2) establish a proper disposal practice.

Step 8: If corrective actions have been completed (i.e. the illicit discharge has been eliminated) the City Engineer shall send a notification of compliance letter to the owner/operator of the property/site where the illicit discharge occurred.

Step 9: If corrective actions have not been completed additional internal meetings shall be held to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

3.5K Program Evaluation

The results of the screening program shall be reviewed periodically to determine if any trends can be identified that relate the incidence of dry-weather flow observations to the age of developed properties or land uses. These determinations may guide future outfall screening activities. Although the outfall screening program will be successful in identifying and eliminating most pollutants in dry-weather discharges, the continued existence of dry-weather flows and associated pollutants will require an ongoing commitment to continue the outfall screening program. The annual inspection screening will determine the effectiveness of the program.

3.5L Measurable Goals

- Track the number and type of potential illicit discharge on the ***Illicit Discharge Tracking Forms*** and ***Illicit Discharge Summary Forms.***
- Inspect reported and priority storm water outfalls and record those inspections on the ***Stormwater Outfall Inspection Forms*** and ***Outfall Inspection Summary Forms.***

3.6 Pollution Prevention and Good Housekeeping

The United City of Yorkville is responsible for the care and upkeep of public facilities, municipal roads, associated maintenance yards, and city parks. Many maintenance activities are most regularly performed directly by staff; however, from time to time contractors are employed to perform specific activities. This chapter describes how the compliance with permit requirements is achieved by incorporating pollution prevention and good housekeeping stormwater quality management into day-to-day operations. On-going education and training shall be provided to ensure that the appropriate employees

have the knowledge and skills necessary to perform their functions effectively and efficiently. The following lists describe activities performed by the Public Works Department and Parks Department.

Street Sweeping
All streets are swept are least 3 times per year or more often on an as-needed basis.

Fall Leaf Pick-up
The city provides free leaf pick-up service to residents every fall. Shredded and compacted leaves are removed and land-applied as fertilizer by a local farmer.

Catch Basin Cleaning
The city owns and operates a vacuum sewer cleaner truck. Catch basin cleaning is performed on an as-needed basis. Locations of cleaned catch basins are tracked.

Ice Removal
The city uses Geo-Melt (beet juice) additive with salt-spreading operations to reduce the amount of salt used in the winter, resulting in an average annual reduction in salt usage of about 500 tons.

Snow Removal
The city does not plow or salt roadways in new developments unless occupied homes exist along those roadways.

Salt Storage
The city has a salt storage building on Tower lane to provide protection for stockpiled salt from rain. After the winter season remaining salt is trucked to the Kendall County storage facility for storage until the following winter.

Spill Prevention
The city keeps Material Safety Data Sheets for all chemical agents used by the Public Works Department.

Weed Control
The city uses herbicide when needed to control the growth of vegetation in roadside ditches. Ditches are mowed where possible to avoid the application of herbicide. The Public Works Department has several employees that are certified herbicide applicators.

Illicit Connections
Public Works and Engineering Department personnel are instructed to watch for unusual discharges from storm sewers or unusual events at stormwater basins.

Landscape Maintenance
The Public Works Department and Parks Department are responsible for litter and debris control, as well as pickup and proper disposal of roadkill. The city shall endeavor to provide trash/recycling bins in more highly used parks.

Vehicle Maintenance

Vehicle maintenance procedures and practices are designed to minimize or eliminate the discharge of petroleum based pollutants to the stormwater system. Used motor oil and antifreeze are collected and stored indoors. Waste fluids are removed on a regular basis by vendors for recycling. Used batteries are stored in an enclosed covered container at the Tower Lane maintenance yard. The batteries are collected on a regular basis by a local vendor. Tires are replaced at local commercial vendor sites. Used tires are disposed of by those vendors.

Waste Management

Waste Management consists of procedural and structural practices for handling, storing and disposing of wastes generated by a maintenance activity. This helps prevent the release of waste materials into the stormwater system. Waste management practices include removal of materials such as asphalt and concrete, excess earth excavation, contaminated soil, hazardous wastes, and sanitary waste.

A spoil stock pile is located at the Tower Lane maintenance yard. Asphalt, concrete, and excess earth excavation materials are temporarily stored in the stock pile. Attempts are made to recycle asphalt and concrete products prior to storage in the spoil stock pile. Clean spoil is re-used around town where needed to backfill excavations and re-grade properties. If contaminated spoil is encountered, it is collected for treatment or disposal. Attempts are made to avoid stockpiling of contaminated spoil. If temporary stock piling is necessary, the stockpile shall be placed on an impermeable liner. Additional protective measures shall be used to protect the downslope of the stockpiled area for erosion downstream. Access to a contaminated stockpile shall be located on the upstream side of the stock pile.

Hazardous wastes shall be stored in labeled, sealed containers constructed of appropriate material. The containers are located in non-flammable storage cabinets or on shelving. These items include paint, aerosol cans, gasoline, solvents and other hazardous wastes. Paint brushes and equipment used for water and oil-based paints are cleaned within a designated cleaning area.

Sanitary wastewater shall be discharged into a sanitary sewer when possible. Portable toilets shall be maintained at high-usage parks.

Water Conservation

Water conservation practices minimize water use and help to avoid erosion and/or the transport of pollutants into the stormwater system. Ordinance No. 2006-123 (Appendix 5.7) limits the use of permanent landscape irrigation systems for certain properties as follows:

- For non-residential properties with one building, permanent irrigation systems using city water are prohibited where the total landscaped area exceeds one acre.
- For non-residential properties with more than one building, permanent irrigation systems using city water are prohibited where the total landscaped area exceeds three acres.

- For common open space properties of a primarily residential development, permanent irrigation systems using city water are prohibited.

The city has adopted Ordinance 2004-20 (Appendix 5.8) that establishes odd-even watering schedules throughout the city based on mailing addresses. This ordinance also requires a property owner to obtain a watering permit to use city water to establish new lawns. From July 1st to August 31st, watering permits are not issued and city water may not be used to water newly sodded or seeded lawns. From May 1st to June 30th, and September 1st to September 30th, watering permits are issued. Watering on the 1st day a lawn is sodded or seeded is limited to no more than eight hours. Watering on the 2nd through 10th days is limited to no more than seven hours, those hours being 5am-9am and 9pm to midnight. After Day 10, a lawn is considered established and a permit is no longer required, however, the property owner must still follow the odd-even and seven-hour restrictions.

Spill Response Plan

Spill prevention and control procedures are implemented wherever hazardous or non-hazardous chemicals substances are stored or used. The following general guidelines are implemented when cleanup activities and safety are not compromised, regardless of the type or location of the spill:

- Cover and protect spills from stormwater run-on and rainfall, until they are removed
- Dry cleanup methods are used when ever possible
- Properly dispose of used cleanup materials, contaminated materials and recovered spill material
- Contaminated water used for cleaning and decontamination shall not be allowed to enter the stormwater system
- Keep waste storage areas clean, well organized and equipped with appropriate cleanup supplies
- Maintain perimeter controls, containment structures, covers and liners to ensure proper function

Non-Hazardous Spills/Dumping

Non-hazardous spills typically consist of an illicit discharge of household materials into the street or stormwater system. Upon notification or observance of a non-hazardous spill, Public Works personnel implement the following procedure:

- Sandbag the receiving inlet to prevent additional discharge into the storm sewer system. It may be necessary to sand bag the next downstream inlet.
- Check structures in the immediate and downstream area. If possible, pollutant materials are vacuumed out. The structures are then jetted to dilute and flush the remaining unrecoverable material.

- Clean up may consist of applying "Oil Dry" or sand and then sweeping up the remnant material.
- After containment and cleanup activities have been performed, the Public Works Director shall fill out the ***Spill Response Notice*** (Appendix 5.20) door hanger and distribute it to adjoining residences/businesses. In residential areas, the hanger should be provided to residences on both sides of the spill and on both sides of the street.
- Public Works personnel document the location, type of spill and action taken on the ***Illicit Discharge Tracking Form*** and submit the tracking form to their supervisor. The supervisor or his designee takes the information from the form and transfers it to the ***Illicit Discharge Summary Form***.
- If a person is observed causing an illicit discharge, the Building Code Official shall be notified and appropriate citations issued.

Hazardous Spills

Upon notification or observance of a hazardous illicit discharge, the Public Works Department shall implement the following procedure:

- Call 911 and explain the incident. The Fire Protection District responds.
- The Public Works and/or Police Departments provide emergency traffic control.
- The Fire Protection District evaluates the situation and applies "No Flash" or "Oil Dry" as necessary.
- The Fire Protection District's existing emergency response procedure, for hazardous spill containment clean-up activities, is followed.
- Public Works personnel document the location, type of spill and action taken on the ***Illicit Discharge Tracking Form*** and submit the tracking form to their supervisor. The supervisor or his designee takes the information from the form and transfers it to the ***Illicit Discharge Summary Form***.

Employee Training

The United City of Yorkville's practice is to provide education and training to those employees of its Public Works and Engineering Departments that have stormwater-related responsibilities to ensure that they have the knowledge and skills necessary to perform their functions effectively and efficiently. Employees are encouraged to attend training sessions on topics related to the goals/objectives of the SMPP. Additionally, the Public Works Director will develop an employee training programs with curricula and materials tailored to specific employees. The materials will focus on stormwater pollution prevention measures and practices relating to the maintenance of facilities, infrastructure and properties.

The initial training program will be offered within one year of the acceptance of the SMPP. Copies of training materials will be kept and shared with appropriate new employees as part of their job introduction. The Public Works Director will monitor the

potential need for overall refresher material distributions and offer additional training as necessary.

3.6A Measurable Goals

- Maintain records for number curb miles swept each year.
- Maintain records on amount of leaves collected each fall.
- Maintain records on amount of road salt used each winter.
- Maintain records for number of catch basins cleaned.
- Maintain records for amount of herbicides and pesticides used each year.
- Maintain records on type and number of training sessions and employees in attendance.
- Monitor BMPs by Evaluating BMP effectiveness based on published research by keeping an inventory of BMPs implemented in the community and document the estimated pollution reduction provided by the BMP.
- Participate in watershed groups organized to implement control measures for chloride water quality standards for deicing operations.

4 Program and Performance Monitoring, Evaluation, & Reporting

The SMPP represents an organized approach to achieving compliance with the expectations of the NPDES Phase II program for both private and public activities within the United City of Yorkville. Land development and city projects and activities are to comply with the SMPP. Additionally, the city has numerous written and unwritten procedures for various tasks. This SMPP documents and organizes previously existing procedures to create one cohesive program addressing pre-development, construction, and post-development activities, as well as municipal operations.

This chapter describes how the United City of Yorkville will monitor and evaluate the SMPP. As part of the stormwater management program, the city will:

- review its activities
- inspect its facilities
- oversee, guide, and train its personnel
- evaluate the allocation of resources available to implement stormwater quality efforts

This chapter describes how program monitoring, evaluation and reporting will be accomplished.

4.1 Performance Milestones

Previously established ordinances and programs implement many of the anticipated tasks. The following schedule describes general performance expectations.

- Within one year following the acceptance of the SMPP, appropriate employees will receive training regarding the implementation of the SMPP.

- Within one year following the acceptance of the SMPP, items within Chapter 3 will be implemented with the exception of the IDDE program milestones discussed below. Refer to Chapter 2.1 for a description of tasks associated with the implementation of the SMPP.

- Within three years following the acceptance of the SMPP, the Outfall Inspection Procedure will be completed for all pipes identified, during the pre-screening efforts, as having dry weather flow.

- Within five years following the acceptance of the SMPP, tracing and removal procedures will be completed for all sewers identified during the Outfall Inspection Procedure as having illicit discharges.

4.2 Program Monitoring and Research

Currently water quality sampling/monitoring is not required under the NPDES Phase II program. Therefore, monitoring efforts focus on qualitative, not quantitative, examination of stormwater practices. It is anticipated that the USEPA and IEPA programs will evolve to require water quality monitoring and sampling. Future efforts may involve collecting information regarding discharges from outfalls, identifying other sources of pollutants, characterizing the receiving waters, sampling construction site discharges, and identifying the performance of stormwater pollution control measures. The United City of Yorkville will comply with future federal and state mandates regarding stormwater issues.

The United City of Yorkville will consider research conducted by others regarding the effectiveness of various alternative stormwater practices, procedures and technologies. The city will continue to seek innovative stormwater practices and technologies.

4.3 Program Evaluation

The primary mechanism for evaluating the SMPP and ensuring that the field staff has adequate knowledge is supervision by responsible managers. Management personnel include the directors and supervisors of the Public Works and Engineering Departments. Management support tasks include observing and evaluating design, construction, and field personnel as they implement the requirements of the SMPP on both municipal and private projects, and maintenance personnel as they conduct their assigned activities.

The following types of questions/answers are discussed annually between management and field staff.

- Are proper stormwater management practices used in planning, designing and constructing both city and private projects?
- Are efforts to incorporate stormwater practices into maintenance activities effective and efficient?
- Is the training program sufficient?
- Is the SMPP sufficient?
- Are the procedures for implementing the SMPP adequate?

5 Appendices

APPENDIX A

WETLAND PERMIT APPLICATION AND PERMIT SUBMITTAL FLOWCHART

UNITED CITY OF YORKVILLE WETLAND PERMIT APPLICATION

(For City use only) Date Application Received: Date Permit Issued:

Instructions: Applicant shall submit completed application permit sumbittal checklist. permit submittal flowchart. miligation plan checklist and all other applicable submittal items as required within the Wetland Ordinance to the Administrator. The wetland permit review process shall begin once a complete submittal has been provided

Name & Address of Applicant:

Name & Address of Owner(s):

Name & Address of Developer:

Telephone No. during business hours:

( ) _____

( ) _____ fax

Telephone No during business hours:

( ) _____

( ) _____ fax

Describe the general intent of the proposed activity, its purpose and the proposed Category (I-VI) of impact.

Names. addresses and telephone numbers of all adjoining property owners within 250 feet of the development site.

Location of activity:

_____
Street. road or other descriptive location

_____
City County State Zip Code

_____
Name of waterbody within or adjacent to site (if applicable)

Legal Description:

___ ___ ___ ___
1/4 Sec Twp Range

Tax Assessor's Description (if known):

_____

___ ___ ___
Map No. Subdiv No Lot No

Is any portion of activity for which a wetland permit is sought now complete? ___No ___Yes, if yes explain:

I hereby certify that all information presented in this application is true and accurate to the best of my knowledge. I have read and understand the United City of Yorkville Wetland Protection Ordinance, and fully intend to comply with its provisions

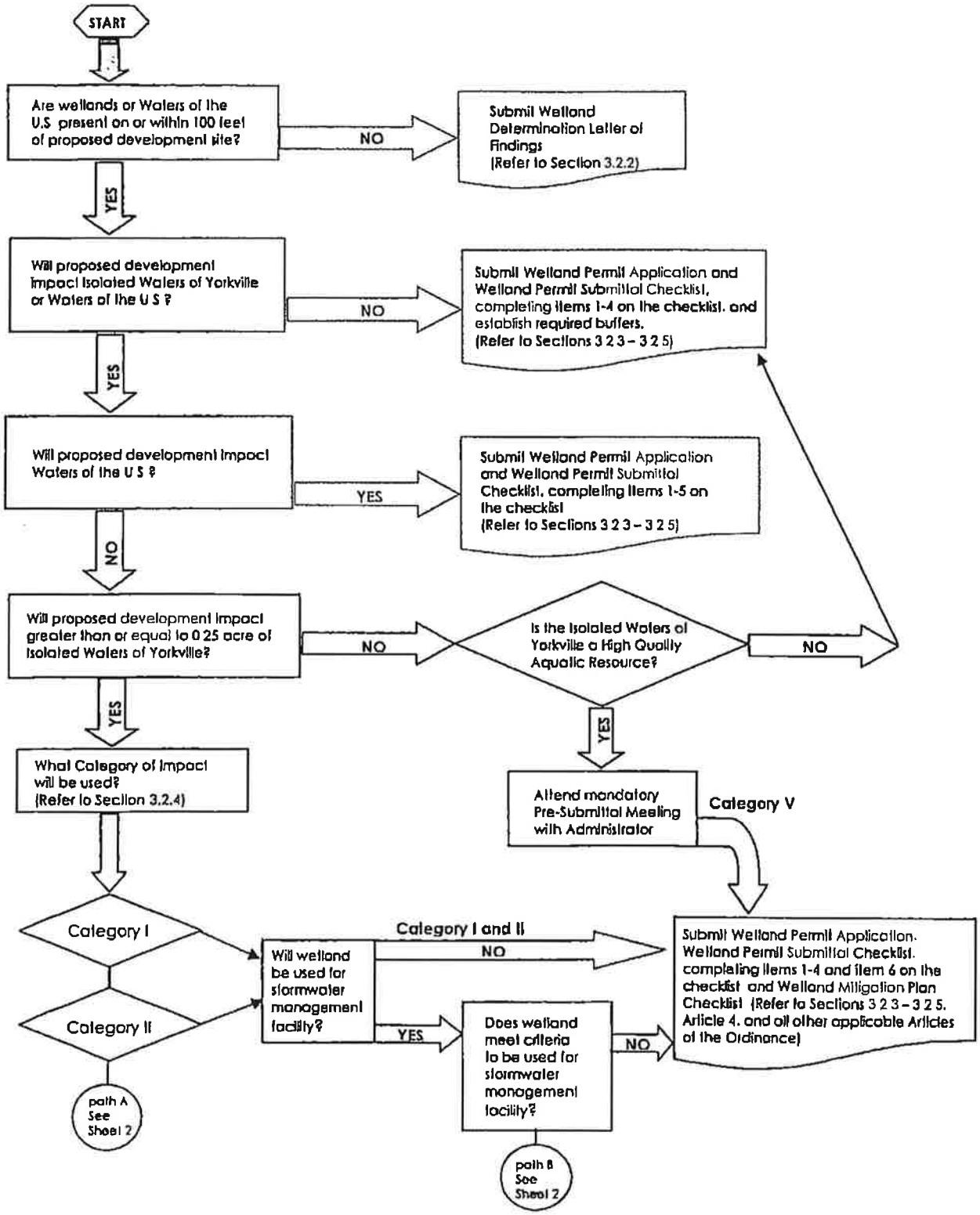
_____ _____
Signature of Developer Date

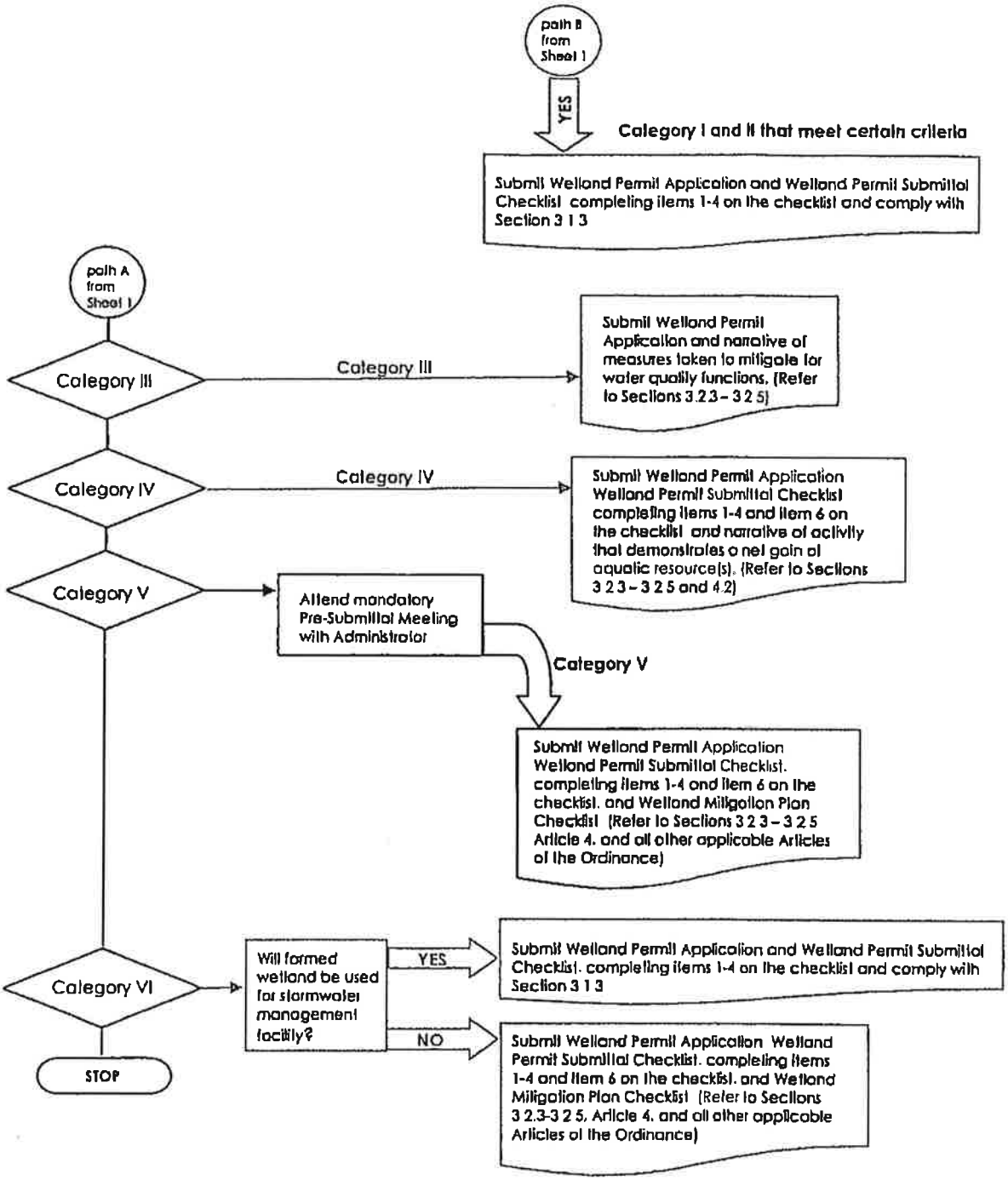
_____ _____
Signature of Owner Date

UNITED CITY OF YORKVILLE TYPICAL WETLAND PERMIT SUBMITTAL FLOWCHART

The following flowchart identifies the typical submittal items that are required for a permit application based on the type of proposed impact. Highlight the appropriate path and circle the required submittal items.

Type of Development Project:_____ Project Site Acreage:_____ Proposed Wetland Impact Acreage:_____
(Residential, Commercial, PUD, etc.)




path B from Sheet 1
YES
Category I and II that meet certain criteria
Submit Wetland Permit Application and Wetland Permit Submittal Checklist completing items 1-4 on the checklist and comply with Section 3 1 3
path A from Sheet 1
Category III
Category III
Submit Wetland Permit Application and narrative of measures taken to mitigate for water quality functions. (Refer to Sections 3.2.3 – 3 2 5)
Category IV
Category IV
Submit Wetland Permit Application Wetland Permit Submittal Checklist completing items 1-4 and item 6 on the checklist and narrative of activity that demonstrates a net gain of aquatic resource(s). (Refer to Sections 3 2 3 – 3 2 5 and 4.2)
Category V
Attend mandatory Pre-Submittal Meeting with Administrator
Category V
Submit Wetland Permit Application Wetland Permit Submittal Checklist. completing items 1-4 and item 6 on the checklist. and Wetland Mitigation Plan Checklist (Refer to Sections 3 2 3 – 3 2 5 Article 4. and all other applicable Articles of the Ordinance)
Category VI
Will formed wetland be used for stormwater management facility?
YES
Submit Wetland Permit Application and Wetland Permit Submittal Checklist. completing items 1-4 on the checklist and comply with Section 3 1 3
NO
Submit Wetland Permit Application Wetland Permit Submittal Checklist. completing items 1-4 and item 6 on the checklist. and Wetland Mitigation Plan Checklist (Refer to Sections 3 2.3-3 2 5, Article 4. and all other applicable Articles of the Ordinance)
STOP

APPENDIX B

WETLAND PERMIT SUBMITTAL CHECKLIST

United City of Yorkville
WETLAND PERMIT SUBMITTAL CHECKLIST

REQUIREMENT	ITEM REQUIRED (√)	ITEM PROVIDED (√)	IF NOT PROVIDED, EXPLANATION
1. Wetland Delineation Report that provides all information as required in Section 3.2.5 of the Ordinance.			
2. Narrative Report and Site Plan that demonstrates compliance of:			
a. Section 3.1.1 Buffer Requirements, including planting plan for buffer area(s).			
b. Section 3.1.2 Wetland Hydrology Protection			
c. Section 3.1.3 Stormwater Management within Isolated Waters of Yorkville (including buffer and 3-year management and monitoring plan)			
d. Section 3.1.4 Discharge to Isolated Water of Yorkville or Waters of the U.S.			
e. Section 3.1.5 Protection of Isolated Waters of Yorkville During Development			
3. Narrative that specifies prescribed management activities and long-term management provisions for all buffers, perserved wetlands, and wetland mitigation (if applicable), and includes the following:			
a. Maintenance activities and tentative schedule			
b. Maintenance activities and tentative schedule subsequent to required monitoring period			
c. Description of funding source			
d. Designation of the responsible party following Article 5.			
4. USACE statement of jurisdictional determination for all wetlands on development site.			
5. For proposed **Impacts to Waters of the U.S.** the following shall be provided:			
a. Completed United City of Yorkville Wetland Permit Application			
b. Provide USACE permit submittal for the proposed development or a letter from the USACE that states the proposed development does not require USACE authorization			
c. Provide copies of all USACE, IEPA, and IDNR Office of Water Resources authorizations to the Administrator			
d. Statement that all wetlands within the City's jurisdiction will be mitigated for within the same primary watershed as the impact(s) at the mitigation ratio specified by the USACE			
e. Soil Erosion and Sediment Control Plan that demonstrates compliance with the City's Soil Erosion and Sediment Control Ordinance.			
6. For proposed **Impacts to Isolated Waters of Yorkville** the following shall be provided:			
a. Completed United City of Yorkville Wetland Permit Application			
b. Statement of Permit Category (Category I-VI) to be used for development impact(s)			
c. Documentation for compliance with Illinois Department of Natural Resources' Endangered Species Consultation Program and the Illinois Natural Areas Preservation Act.			

WETLAND PERMIT SUBMITTAL CHECKLIST

REQUIREMENT	ITEM REQUIRED (√)	ITEM PROVIDED (√)	IF NOT PROVIDED, EXPLANATION
6. d Documentation for compliance with U S Fish and Wildlife Service's Endangered Species Act			
e 1) Statement on the occurrence of High Quality Aquatic Resources on or within 100 feet of the development site			
2) Applicant has completed a Pre-Submittal meeting with the Administrator if so give date of meeting			
f Mitigation Plan (if applicable) refer to Appendix C for Mitigation Plan checklist			
g For **Category II or Category V Impacts** provide the following:			
1) Narrative of measures taken in sequence, to avoid and minimize wetland impacts before mitigation is considered.			
2) Detailed discussion of alternative analysis to avoid minimize and mitigate for wetland impacts			
h For **Category III Impacts** provide the following:			
1) Narrative of measures taken to mitigate for water quality functions			
i For **Category IV Impacts** provide the following:			
1) Narrative of proposed plan that demonstrates net gains in aquatic resource functions			
j For **CategoryVI Impacts** provide the following:			
1) Narrative of mitigation measures that demonstrates an environmental benefit e.g Improved habitat. water quality etc.			

APPENDIX C

WETLAND MITIGATION PLAN CHECKLIST

United City of Yorkville
WETLAND MITIGATION PLAN CHECKLIST

REQUIREMENT	ITEM REQUIRED (√)	ITEM PROVIDED (√)	IF NOT PROVIDED, EXPLANATION
1. Narrative description of wetland impacts and proposed mitigation. Provide a summary table with acreage for each existing wetland, proposed impact, and proposed mitigation.			
2. Narrative of proposed mitigation plan that includes a description of the following parameters:			
a. Hydrologic Conditions – Identify source(s) of water, both on-site and off-site surface and groundwater. Describe and provide model results of the expected hydroperiod (at a minimum, 2-yr, 10-yr, and 100-yr, 24-hr storm events) that include frequency, duration, and elevation of inundation or saturation.			
b. 1) Planting Plan – Describe each proposed plant community and approximate size. Provide a list of plant species for each community, including proposed cover crop. NOTE: All seed and plant material shall originate within 200 miles of site.			
2) Planting narrative that describes the planting methods and planting schedule.			
c. Soil Characteristics – Provide a soil profile of the proposed conditions. Identify soil conditions that will be present from 12 - 24 inches below the surface			
d. Topography – Submit existing and proposed grades with 1-foot contour lines and reference elevations.			
3. Specifications for wetland mitigation earthwork including final grading, allowable compaction limits, treatment of compacted soils, and topsoil placement; water control structures, if applicable; BMP design and implementation if proposed within wetland buffer area; plant and seed procurement, installation methods and schedule; and all other appropriate specifications for the wetland mitigation activities.			
4. Proposed implementation schedule that includes: a. Site preparation.			
b. Installation of soil erosion and sediment control measures.			
c. Planting schedule.			

WETLAND MITIGATION PLAN CHECKLIST

REQUIREMENT	ITEM REQUIRED (√)	ITEM PROVIDED (√)	IF NOT PROVIDED, EXPLANATION
4. d. Post-planting maintenance and monitoring.			
5. Maintenance and Monitoring Plan that includes: a Proposed monitoring protocol that follows Section 4 4 of the Ordinance.			
b. Specified performance standards that follows Section 4.5.			
c. Proposed annual maintenance activities to be performed during the 5-year monitoring period. Activities should include, but not be limited to control of undesirable plant species, herbivore control, burn management, enhancement planting.			
6 Provide a **Wetland Mitigation Plan Graphic** that contains the following information. a. A summary table with acreage for each existing wetland, proposed impact acreage, and proposed mitigation acreage.			
b. Clearly identify proposed wetland impacts, wetland mitigation area(s) denoting creation vs. enhancement wetlands, and limits of required buffer areas.			
c. Planting Plan that includes a complete list of plants by common and scientific name for each community type; quantities per species of seed, plugs, rootstock, transplants, or propagules; and specific planting zones			
d. Existing and proposed grades with 1-foot contour lines and reference elevations to bench marks.			
e. Protection measures for all preserved Isolated Waters of Yorkville and Waters of the U S.			
f. Location of water level control structures, BMPs, etc.			
7. If off-site mitigation is proposed, the following maps shall be provided with the location of the mitigation site clearly marked: a. USGS topographic map.			
b. County soil survey			
c. NWI map.			
d. NRCS swampbuster map (if applicable)			
e. Hydrologic Atlas.			
f. Aerial photograph(s).			

WETLAND MITIGATION PLAN CHECKLIST

REQUIREMENT	ITEM REQUIRED (√)	ITEM PROVIDED (√)	IF NOT PROVIDED, EXPLANATION
7. g Site photographs			
8. Performance Security following the provisions of Article 10.			
9. If owner of the property is different then the applicant, provide written assurance from the owner that the applicant has permission to use the site for mitigation.			

Ordinance No. 2009-78

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, PROVIDING FOR THE REGULATION OF POST-CONSTRUCTION IMPLEMENTATION OF STORMWATER BEST MANAGEMENT PRACTICES

WHEREAS, the United City of Yorkville (the "*City*") is a duly organized and validly existing non-home-rule municipality created in accordance with Article VII, Section 7 of the Constitution of the State of Illinois of 1970; and,

WHEREAS, pursuant to 35 Ill. Administrative Code, Subtitle C, Chapter 1, the United City of Yorkville storm sewer system has been identified by the Illinois Environmental Protection Agency (IEPA) as a Small Municipal Separate Storm Sewer System (MS4); and,

WHEREAS, the IEPA has issued a National Pollutant Discharge Elimination System (NPDES) General Storm Water Permit for the United City of Yorkville's Small MS4; and,

WHEREAS, said NPDES permit requires the United City of Yorkville to adopt an ordinance or other regulatory mechanism related to post-construction runoff minimum control measures; and,

WHEREAS, proper implementation of stormwater Best Management Practices are essential to minimizing the pollutant content of storm water discharges to receiving streams,

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That the United City of Yorkville Standards for Regulating Post-Construction Maintenance of Stormwater Best Management Practices, dated October 12, 2009, a copy of which is attached as Exhibit "A", is hereby approved and adopted.

Section 2. This ordinance shall be in full force and effect upon its passage, approval and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois, this 8 Day of December, A.D. 2009.

ATTEST: _____
CITY CLERK

ROBYN SUTCLIFF	—	DIANE TEELING	Yes
GARY GOLINSKI	Yes	ARDEN JOSEPH PLOCHER	Yes
WALTER WERDERICH	Yes	MARTY MUNNS	—
ROSE ANN SPEARS	Yes	GEORGE GILSON, JR.	Yes

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this 7 Day of JANUARY, A.D. 2010.

Valerie Burd
MAYOR

Exhibit "A"

UNITED CITY OF YORKVILLE

STANDARDS FOR REGULATING POST-CONSTRUCTION IMPLEMENTATION OF STORMWATER BEST MANAGEMENT PRACTICE(S)

This document establishes stormwater Best Management Practice(s) which shall be used to meet the requirements of the National Pollutant Discharge Elimination System and the Illinois Environmental Protection Agency Small Municipal Separate Storm Sewer Systems (MS4's).

Section 1. Definitions

For the purposes of these standards, the following definitions are adopted:

1. Best Management Practice (BMP) - Any technique, process, activity, structure, prohibition of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. Best Management Practice(s) also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage of raw materials storage.

2. City – The United City of Yorkville, Kendall County, Illinois.

3. Development - Any man-made change to real estate including, but not limited to:

    a. More than fifty percent (50%) increase in impervious area of an existing building and/or the affected parcel.

    b. Installation of utilities, construction of roads, bridges, culverts or similar projects.

    c. Construction or erection of levees, dams, walls or fences.

    d. Drilling, mining, filling, dredging, grading, excavating, paving, or other alterations of the ground surface.

    e. Storage of materials including the placement of gas and liquid storage tanks, and channel modifications or any other activity that might change the direction, height, or velocity of flood or surface waters.

f. Development does not include routine maintenance or existing buildings and facilities, resurfacing roads, or gardening, plowing, and similar practices that do not involve filling, grading, or construction of levees.

4. Maintenance Agreement – An agreement between the City and the Responsible Party, recorded against the real estate to which it pertains, that acts as a property deed restriction and which provides for long-term operation and maintenance of stormwater Best Management Practice(s).

5. Responsible Party – The developer, organization, property owner or entity owning the property upon which the stormwater Best Management Practice(s) is required to be performed.

6. Violation- The failure of a developer, organization, property owner, or other entity to be fully compliant with the City's Post-Construction Stormwater Best Management Practice ordinance.

Section 2. Best Management Practices

Examples of structural stormwater Best Management Practice(s) include but are not limited to:

Application	Benefit
Buffer Strips	Provides additional distance between homes and natural areas; attenuates runoff rates and promotes infiltration.
Created Wetlands	Can move existing wetlands and re-create at a new location.
Infiltration Trenches	Attenuates runoff rates and promotes infiltration.
Naturalized Basins	Attenuates runoff rates and promotes infiltration.
Sand Filters	Allows additional water infiltration.
Stream Bank Reinforcement	Reduces long-term erosion of stream banks.
Turf Reinforcement Mat	Prevents rainfall from washing away plant seeds.
Vegetated Filter Strips	Attenuates runoff rates and promotes infiltration.

Examples of non-structural stormwater Best Management Practice(s) include but are not limited to:

Method
Education and enforcement campaigns
Educational and participation programs
Pollution prevention practices and procedures (street sweeping, fertilizer control, etc.)
Regulatory controls
Stormwater drain stenciling
Strategic planning
Town planning controls
Training programs

Section 3. Implementation

All redevelopment of previously developed properties and all development of previously undeveloped properties shall incorporate stormwater Best Management Practice(s) into the design, construction, operation, and maintenance requirements of those properties. The final design of stormwater Best Management Practice(s) is subject to approval as provided in Section 7 of these Standards. Said Best Management Practice(s) shall vary based on specific characteristics of the property, and may include but are not limited to grassy swales, disconnected impervious areas, minimization of impervious areas, green roofs, naturalized stormwater basins, etc. All stormwater Best Management Practice(s) shall be operated, maintained, or performed by the Responsible Party as necessary to ensure that the intended function and/or benefit of the stormwater Best Management Practice(s) is realized.

Proposed developments/re-developments shall submit a plan detailing specific stormwater Best Management Practice(s), and shall include:

- A written or graphic inventory of the natural resources at the site and surrounding area as it exists prior to commencement of the project and a description of the watershed and its relation to the project site. This description shall include a discussion of soil conditions, forest cover, topography, wetlands, and other native or man-made vegetative areas on the site. Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development.

- A specific analysis to show that the proposed stormwater Best Management Practice(s) are capable of improving or maintaining the quality or stormwater runoff from the site.

- A written description of the required operation and maintenance requirements for compliance with proposed Best Management Practice(s).

Section 4. Inspections

1. All Responsible Parties shall adequately construct, operate, maintain and/or perform the stormwater Best Management Practice(s) that have been incorporated into the design of their property. Said stormwater Best Management Practice(s) shall be subject to inspection by the City at least once a year. Responsible Parties shall keep records of all maintenance and repairs, and shall retain the records for a minimum of 5 years. These records shall be made available to the City during inspection of the stormwater Best Management Practice(s) and at other times upon request.

Section 5. Maintenance Agreements

1. All stormwater Best Management Practice(s) shall be subject to an enforceable Maintenance Agreement to ensure that the system functions as designed. This agreement will include any and all maintenance easements required to access and inspect the stormwater Best Management Practice(s), and to perform routine maintenance as necessary to ensure proper functioning of the stormwater Best Management Practice(s). In addition, a legally binding covenant specifying the parties responsible for the proper operation and maintenance of all Best Management Practice(s) shall be secured prior to issuance of any building permits or recording of plats of subdivision for the property in question.

Section 6. Previously Developed Properties

1. Most stormwater facilities inherently result in some improvement to stormwater quality and meet the requirements of a stormwater Best Management Practice(s). Such facilities shall be operated and maintained by the Responsible Party as approved in their original design. No changes shall be made to tributary conveyances, basins, or outfalls without specific approval from the City.

Section 7. Administration

1. The City Administrator or his/her designee shall be responsible for the general administration of these standards and ensure that all development and/or maintenance activities within the United City of Yorkville meet the requirements of these standards. Specifically, the City Administrator or his/her designee shall:

    a. Perform periodic site inspections of all properties that have stormwater facilities to ensure compliance with this ordinance.

    b. Meet with the Responsible Parties regarding construction, operation, maintenance and/or performance of stormwater Best Management Practice(s) as necessary to ensure that they understand their responsibilities regarding stormwater Best Management Practice(s).

    c. At his/her discretion, issue a stop-work order requiring the suspension of the subject development or activity if there is a violation of these standards. The stop-work order shall be in writing, indicate the reason for the issuance, and shall order the action, if necessary, to resolve the circumstances requiring the stop-work order.

    d. Arrange for city personnel or contractors to mitigate/repair any damage to stormwater Best Management Practice(s) if the Responsible Party does not perform the work within 60 days (or other timeframe specified by the City) of written direction from the City to do so. The cost of mitigation/repair and any related administrative or legal activities shall be borne by the Responsible Party.

e. If the Responsible Party does not perform the work or reimburse the City within the specified timeframe, the City Administrator or his/her designee shall prosecute the Responsible Party through the administrative adjudication process or other available means.

Section 8. Variances

1. If a Responsible Party feels that these standards place undue hardship on a specific development proposal or property, the Responsible Party may apply to the City Administrator for a variance. The City Administrator or his/her designee shall review the applicant's request for a variance and shall submit his/her recommendation to the City Council. The City Council may attach such conditions to granting of a variance as it deems necessary to further the intent of these standards.

2. No variance shall be granted unless the applicant demonstrates that all of the following conditions are met.

   a. An exceptional hardship would result if the variance were not granted. Economic hardship is not a valid reason to grant a variance.

   b. The relief requested is the minimum necessary.

   c. The applicant's circumstances are unique and do not establish a pattern inconsistent with the intent of the city's NPDES General Storm Water Permit.

Section 9. Best Management Practice(s) **Lien Claim**

1. Lien Claim: All costs for work performed under Section 7.1.d of these Standards are the responsibility of the Responsible Party. Whenever a bill for such costs remains unpaid for thirty (30) days after it has been rendered, the clerk may file with the recorder of deeds of Kendall County a lien claim. This lien claim shall contain the legal description of the property, the costs incurred and the date(s) when the work was performed.
2. Notice Of Lien Claim: Notice of such lien claim shall be mailed to the responsible party at the last known address of such Responsible Party; provided, however, that failure of the clerk to record such lien claim or to mail such notice, or the failure of the Responsible Party to receive such notice, shall not affect the rights of the city to collect for such charges as provided in this section.

Section 10. Backup Special Service Areas

1. For properties that have back-up special service areas established or allowed by agreement to fund maintenance of common areas, the city may activate said SSA to collect un-reimbursed costs or to fund ongoing or future costs related to operation, maintenance, or performance of stormwater Best Management Practice(s). Prior to the activation of a back up special service area, notice shall be published in a newspaper with circulation in the effected area.

Section 11. Conflicts

1. These standards do not repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where this ordinance and other easements, covenants or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Section 12. Separability

1. The provisions and sections of these standards shall be deemed separable and the invalidity of any portion of these standards shall not affect the validity of the remainder.

Ordinance No. 2010-05

ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS TO PROVIDE FOR THE REGULATION OF ILLICIT DISCHARGES AND CONNECTIONS TO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM

BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, that the City Code be and is hereby amended to add the following new Chapter 17 to Title 8:

CHAPTER 17
PROVISIONS REGULATING NON-STORM WATER DISCHARGES AND CONNECTIONS TO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM

8-17-1: Purpose. The objections of this chapter are to provide for the health, safety, and general welfare of the citizens of the United City of Yorkville through the regulation of non-storm water discharges to the municipal separate storm sewer system to the maximum extent practicable as required by federal and state law. This chapter establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process by:

(1) Regulating the contribution of pollutants to the municipal separate storm sewer system by stormwater discharges by any user;
(2) Prohibiting illicit connections and discharges, as hereinafter defined, to the municipal separate storm sewer system; and,
(3) Establishing legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this chapter.

8-17-2: Definitions. For the purposes of this chapter, the following shall mean:

Authorized Enforcement Agency: Employees or designees of the Mayor of the United City of Yorkville designated to enforce the provisions of this chapter.

Best Management Practices: Schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. Best Management Practices also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act: The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), as amended from time to time.

Construction Activity: Activities subject to NPDES construction permits. These include construction projects resulting in land disturbance of 10,000 square feet or more. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Hazardous Materials: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a potential substantial hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illegal Discharge: Any direct or indirect non-storm water discharge to the Municipal Separate Storm Sewer System, as hereinafter defined, except as exempted in Section 8-17-5 of this chapter.

Illicit Connection: Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the Municipal Separate Storm Sewer System including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the Municipal Separate Storm Sewer System and any connection to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an Authorized Enforcement Agency or, any drain or conveyance connected from a commercial or industrial land use to the Municipal Separate Storm Sewer System which has not been documented in plans, maps, or equivalent records and approved by an Authorized Enforcement Agency.

Industrial Activity: Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b) (14).

Municipal Separate Storm Sewer System: Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: Permit issued by EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-Storm Water Discharge: Any discharge to the Municipal Separate Storm Sewer System that is not composed entirely of storm water.

Person: Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Pollutant: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Premises. Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Storm Water: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Pollution Prevention Plan: A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to a Storm Drainage System, to the maximum extent practicable.

Wastewater: Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

8-17-3: Applicability: This Chapter shall apply to all water entering the Municipal Separate Storm Sewer System generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

8-17-4: Responsibility for Administration: The City shall administer, implement, and enforce the provisions of the Chapter.

8-17-5: Discharge Prohibitions:

A. No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water, except for the following:

(i) Water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one particle per million chlorine), fire fighting activities, and any other water source not containing Pollutants.

(ii) Discharges specified in writing by the City Engineer as being necessary to protect public health and safety.

(iii) Dye testing if a verbal notification to the City Engineer is given prior to the time of the test.

(iv) Any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

8-17-6: Prohibited Illicit Connections: The construction, use, maintenance or continued existence of Illicit Connections to the Municipal Separate Storm Sewer System is prohibited, including, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

8-17-7: Suspension of Municipal Separate Storm Sewer System Access:

A. The City may, without prior notice, suspend access to the Municipal Separate Storm Sewer System when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the Municipal Separate Storm Sewer System or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the Authorized Enforcement Agency may take such steps as deemed necessary to prevent or minimize damage to the Municipal Separate Storm Sewer System or waters of the United States, or to minimize danger to persons.

B. Any person discharging to the Municipal Separate Storm Sewer System in violation of this chapter may have access terminated if such termination would abate or reduce an illegal discharge. The City Engineer shall notify a violator of the proposed termination of its Municipal Separate Storm Sewer System access.

Municipal Separate Storm Sewer System access to premises terminated pursuant to this Section shall not be reinstated without the prior approval of the City Engineer.

8-17-8: Industrial or Construction Activity Discharges: Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City Engineer prior to the allowing of discharges to the Municipal Separate Storm Sewer System.

Section 8-17-9: Monitoring of Discharges:

(a) The City Engineer shall be permitted to enter and inspect facilities subject to regulation under this chapter as often as may be necessary to determine compliance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the City.

(b) Facility operators shall allow the City Engineer ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

(c) The City Engineer shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the Authorized Enforcement Agency to conduct monitoring and/or sampling of the facility's storm water discharge.

(d) The City Engineer has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(e) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the City Engineer and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(f) Unreasonable delays in allowing the City Engineer access to a permitted facility is a violation of a storm water discharge permit and of this chapter. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the City Engineer reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.

(g) If the City Engineer has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the City Engineer may seek issuance of a search warrant from any court of competent jurisdiction.

Section 8-17-10: Requirement to Prevent, Control and Reduce Storm Water Pollutants by the Use of Best Management Practices: The City has adopted requirements identifying Best Management Practices for any activity, operation, or facility which may cause or contribute to pollution or

contamination of storm water, the storm drain system, or waters of the United States. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the Municipal Separate Storm Sewer System or watercourses through the use of these structural and non-structural facilities meeting Best Management Practices requirements. Any person responsible for a property or premise, which is, or may be, the source of an illegal discharge, may be required to implement, at said person's expense, additional structural and non-structural facilities to prevent the further discharge of pollutants to the Municipal Separate Storm Sewer System. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section.

8-17-11: Watercourse Protection: Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

Section 8-17-12: Notification of Spills: Any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in Illegal Discharges or pollutants discharging into storm water, the Municipal Separate Storm Sewer System, or water of the United States said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release and immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the City in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the City within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

Section 8-17-13: Ultimate Responsibility: The standards set forth herein and promulgated pursuant to this Chapter are minimum standards; therefore this Chapter does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

Section 8-17-14: Enforcement: Whenever the City Engineer finds that a person has violated a prohibition or failed to meet a requirement of this chapter, the authorized enforcement agency may order compliance by written notice of violation to the responsible person in accordance with the requirements of Chapter 14, Title I of this City Code.

The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance.

This Ordinance shall be in full force and effect from and after its passage and approval as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois, this 12 Day of January, A.D. 2010.

ATTEST: _____
CITY CLERK

ROBYN SUTCLIFF	Yes	DIANE TEELING	Yes
GARY GOLINSKI	Yes	ARDEN JOSEPH PLOCHER	Yes
WALTER WERDERICH	Yes	MARTY MUNNS	Yes
ROSE ANN SPEARS	Yes	GEORGE GILSON, JR.	Yes

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this 19 Day of JANUARY, A.D. 2010.

Valerie Burd
MAYOR

2348d

AN ORDINANCE 94-4
PROHIBITING THE CONNECTION OF SANITARY SEWAGE AND INDUSTRIAL WASTE WATER INTO STORM SEWERS AND OTHER HIGHWAY DRAINAGE SYSTEMS

BE IT ORDAINED, by the city of Yorkville, Kendall County, Illinois:

Section 1. It shall be unlawful for any person, firm or corporation, or institution, public or private, to connect or cause to be connected, any drain carrying, or to carry, any toilet, sink, basement, septic tank, cesspool, industrial waste or any fixture or device discharging polluting substances, to any open ditch, drain, or drainage structure installed solely for street or highway drainage purposes in the city of Yorkville.

Section 2. This ordinance is intended to and shall be in addition to all other ordinances, State statutes, rules and regulations concerning pollution and shall not be construed as repealing or rescinding any other ordinance or part of any ordinance unless in direct conflict herewith.

Section 3. Any person, firm, or corporation violating this ordinance shall be ~~fined~~ not less than Twenty-five Dollars ($25.00), nor more than Five Hundred Dollars ($500.00) for each offense, and a separate offense shall be deemed committed for each and every day during which a violation continues or exists.

APPROVED: _____
MAYOR

PASSED: 3-10-94
SIGNED: ~~February 24, 1994~~ March 10, 1994

STATE OF ILLINOIS)
CITY OF YORKVILLE)
COUNTY OF KENDALL)

I, Jacqueline S. Allison City Clerk in and for the city of Yorkville hereby certify the foregoing to be a true, perfect, and complete copy of an Ordinance adopted by the Yorkville City Council at its meeting on ~~February 24, 1994~~ March 10 1994.

(SEAL)

Jacqueline S. Allison
City Clerk

STATE OF ILLINOIS)
) ss
COUNTY OF KENDALL)

ORDINANCE No. 2006-123

ORDINANCE AMENDING CITY CODE

TITLE 7 – PUBLIC WAYS AND PROPERTIES,

CHAPTER 5 – WATER USE AND SERVICE,

SECTION 15 – WATER CONSERVATION REGULATIONS

Whereas the United City of Yorkville has taken up, discussed and considered amending the City Code (Title and Chapter as referenced above) regarding dissemination of information, and

Whereas the Mayor and City Council have discussed that it may be prudent to amend Title 7 – Public Ways and Properties, Chapter 5 – Water Use and Service, Section 15 – Water Conservation Regulations, by amending Item J as depicted on the attached Exhibit "A".

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE UNITED CITY OF YORKVILLE, upon Motion duly made, seconded and approved by a majority of those so voting, that Title 7 – Public Ways and Properties, Chapter 5 – Water Use and Service, Section 15 – Water Conservation Regulations, by amending Item J as depicted on the attached Exhibit "A".

This Ordinance shall be effective upon its passage.

JAMES BOCK	Yes	JOSEPH BESCO	Yes
VALERIE BURD	Yes	PAUL JAMES	Yes
DEAN WOLFER	Yes	MARTY MUNNS	Yes
ROSE SPEARS	Yes	JASON LESLIE	Yes

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this 24 day of October, A.D. 2006.

MAYOR

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this 24 day of October, A.D. 2006.

ATTEST:

CITY CLERK

Prepared by:

John Justin Wyeth
City Attorney
United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

EXHIBIT A

TITLE 7 – PUBLIC WAYS AND PROPERTY

Chapter 5 – Water Use and Service

Section 15 – Water Conservation Regulations

J. Restriction On Permanent Landscape Watering Systems Of Nonresidential Properties:

1. This subsection J shall apply only to nonresidential properties, and common and/or open space areas of residential developments.

2. For this subsection J, a "permanent landscape watering system" shall be defined as any system of pipes, sprinkler heads or similar devices installed underground to be used to provide landscape watering.

3. Landscape watering upon nonresidential properties shall be limited as follows:

a. For properties with one building, a total area within the property not to exceed one (1) acre may be watered by a permanent landscape watering system using the City's potable water. This area shall be measured by the amount of non-impervious surface on the property including all landscaped areas, lawn areas and greenspace regardless of the size of the area initially planned to be irrigated .

b. For properties with more than one building, a total area within the property not to exceed three (3) acres may be watered by a permanent landscape watering system using the City's potable water. This area shall be measured by the amount of non-impervious surface on the property including all landscaped areas, lawn areas and greenspace regardless of the size of the area initially planned to be irrigated.

c. For the common space and/or open space of a primarily residential development, no permanent landscape watering system shall be allowed using the City's potable water.

d. All permanent landscape watering systems permitted to use the City's potable water shall be metered the same as domestic water service. No special meters will be permitted.

4. The total area to be watered shall be measured as the area within reach of any permanent device used to water landscape including, but not limited to, sprinkler heads, hoses, trenches or similar devices to water landscape. (Ord. 2005-47, 5-24-2005)

States of Illinois)
) ss
County of Kendall)

ORDINANCE No. 2004-20

ORDINANCE AMENDING
UNITED CITY OF YORKVILLE WATER CONSERVATION REGULATIONS
ORDINANCE NO. 2004-17

WHEREAS, THE UNITED CITY OF YORKVILLE, after careful consideration by the Mayor and City Council, has determined it necessary to amend the Water Conservation Regulations; and

WHEREAS, THE UNITED CITY OF YORKVILLE, after careful consideration by the Mayor and City Council has determined that it is in the best interests of the community to amend the Section 7-5-15 (I) Penalty in order to ensure the orderly and efficient enforcement of the Water Conservation Regulations.

NOW THEREFORE BE IT ORDAINED BY THE UNITED CITY OF YORKVILLE; that Section 7-5-15(I) Penalty is hereby revoked; and a new Section 7-5-15(I) is created to read as follows:

1. Any United City of Yorkville inspector, employee, officer or citizen observing a violation of Title 7 may file a complaint for violation of Title 7 by notifying the United City of Yorkville Police Department.

2. Any person who or which violates, disobeys, neglects, fails to comply with or resists enforcement of the provisions of this Article other than Section (3)(A)(3) or Section (3)(F) above, shall be subject to penalties as provided in section 1-4-1 of this code in conjunction with the following provisions:

   a. $50.00 for a first offense;
   b. $125.00 for a second offense; and
   c. $500.00 for each subsequent offense.

3. Within ten (10) days of receiving notice of such violation any person may pay at the Office of the United City of Yorkville Water Department the fine.

4. The amount of any fine due pursuant to Title 7, for a violation of the provisions of Title 7 occurring at a property in the City, if not paid as provided therein, a notice to appear shall issue and upon adjudication of the matter and assessment of a fine, the fine amount owed to the City shall be added to the bill for water consumption for the property at which the offense occurred.

Any Ordinance or parts thereof in conflict with the provisions of this Ordinance are hereby repealed to the extent of such conflict. The various parts, sections, and clauses of this Ordinance are hereby declared to be severable. If any part, sentence, paragraph, section of clause is adjudged unconstitutional or invalid by a Court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

IN WITNESS WHEREOF, this Ordinance has been enacted this 27th day of ~~May~~ April, 2004.

PAUL JAMES	Y	MARTY MUNNS	Y
RICHARD STICKA	Y	WANDA OHARE	-
VALERIE BURD	-	ROSE SPEARS	Y
LARRY KOT	Y	JOSEPH BESCO	Y

APPROVED by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this 27th day of ~~May~~ April, 2004.

Mayor

PASSED by the City Council of the United City of Yorkville, Kendall County, Illinois this 27th day of ~~May~~ April 2004.

City Clerk

This Document Prepared by:
Law Offices of Daniel J. Kramer
1107A South Bridge Street
Yorkville, IL 60560
630-553-9500

United City of Yorkville
Ordinance No. 2004-20
Ordinance Amending
Water Conservation Regulations
Ordinance No. 2004-17

Text

TITLE 7 PUBLIC WAYS

CHAPTER 5 WATER CONSERVATION REGULATIONS

SECTION 7-5-15

7-5-15. Definitions. The following words and phrases when used in this Article shall, for the purpose of this Article, have the following meanings:

Drip-Irrigation System: A soaking hose that when in use does not result in an actual dissipation of Water.

Drip-Line: Pertaining to a tree or shrub, the ground area immediately beneath the branches of the tree or shrub.

Landscape/Landscaping: Sod and seeded turf lawns, gardens, trees, shrubs, and other living plants.

Permitted Hours of Water Use: A time period between 5:00a.m. and 9:00a.m., and between 9:00p.m. and 12:00 midnight, each day.

Person: Any individual, firm, partnership, association, corporation, company, organization, or entity of any kind.

City: The United City of Yorkville.

Water: The water provided by and obtained by a person from the City water supply and distribution system.

A. Application

1. The provisions of this Article shall apply to all Persons using Water, and to all properties within the City or unincorporated areas which are connected to the City's Water supply and distribution system, regardless of whether any Person using the Water has a contract for service with the City.

2. The provisions of this Article shall apply annually from May 1 through September 30, subject to any modifications thereof, including application of these or other regulations during this or any other time, by an Emergency Proclamation issued pursuant to Section (1) below.

B. Restricted Hours and Days for Specified Uses:

1. Water may be used for landscape watering or the filling of swimming pools only as follows:

a. All properties with even-number street numbers (i.e. numbers ending in 0, 2, 4, 6 or 8) may use Water for landscape watering or for pool filling, only on even-number calendar dates during Permitted Hours of Water Use.

b. All properties with odd-numbered street numbers (i.e. number ending in 1, 3, 5, 7, and 9) may use Water for landscape watering or for pool filling only on odd-numbered calendar dates during Permitted Hours of Water Use.

c. There shall be no restrictions as to hours or days when Water may be used for any of the following:

a) Landscape watering or sprinkling where such watering or sprinkling is done by a Person using a hand-held watering device;

b) Filling swimming pools with a volume of fifty (50) gallons or less;

c) The automatic watering of trees and shrubs by means of automatic root-feed or Drip-Irrigation Systems within the drip line of the tree or shrub; or

d) Vehicle and equipment washing; or

e) Any other lawful use of Water such as bathing, clothes washing, and other normal household uses not otherwise specifically restricted by the provisions of this Article.

C. Restrictions for Sod Laying and Lawn Seeding for New Lawns. Notwithstanding the provisions of Section 8-3-3 above, the following special regulations shall apply:

1. Sod laying, lawn seeding, and the planting of other landscaping for the establishment of a new lawn or new landscaping is prohibited from July 1st through August 31st each year unless the source of watering for said sod, lawn seeding and/or planting of landscaping is derived from a private well, imported water source or means other than any municipal water source.

2. From May 1st through June 30th and from September 1st through September 30th, Water may be used on new lawns (sod or seed), only as follows:

   Prior to sod laying or lawn seeding, a Sod Watering Permit (Exhibit A) must be obtained from the United City of Yorkville.

   a. On the day new sod or seed has been placed on a property, a Person may use an automatic sprinkling device to apply Water to the sod or seed for a total period of time not to exceed eight (8) hours.
   b. For the next nine (9) days thereafter, a Person may apply water to said sod or seed each day during Permitted Hours of Water Use.
   c. Following the first ten (10) days after the sod or seed is placed, the provisions of Section 8-3-3 above shall apply.

3. Prior to the execution of any real estate contract for the sale of newly constructed property, the builder or owner of such new construction shall:

   A. Inform prospective purchasers of the restrictions upon the installation of new lawns set forth in this Article;
   B. Attach a Copy of these regulations to the contract; and
   C. Obtain the signature of the purchaser(s) on a statement that he, she or they has (have) been informed of the new lawn installation restrictions set forth in this Article.

4. The applicant for a certificate of occupancy for any newly constructed property shall submit as a part of his application, and as a condition of issuance of such certificate, a copy of said signed statement. When an application for certificate of occupancy is submitted prior to sale of the property, and the future occupant is unknown, the applicant shall submit his signed statement that he shall comply with the requirements of this Section at the time the real estate contract is executed.

D. Waste of Water Prohibited. No Person shall allow a continuous stream of Water to run off into any gutter, ditch, drain, or street inlet while using Water for restricted purposes during the Permitted Hours of Water Use.

E. Exceptions. The provisions of the article shall not apply any commercial or industrial entity for which use of Water is necessary to continue normal business operations, or to maintain stock or inventory. Provided, however, this exception shall not apply to any and all uses of Water not essential to normal business operations or maintenance of inventory or stock, and specifically shall not apply to landscape watering or pool filling.

F. Bulk Water Rates. Bulk Water rates shall be increased to three (3) times the non-resident Water rate during the time described in Section 8-3-2 (B) above.

G. Hydrant Use Prohibited. Hydrants connected to the City water supply and distribution system for the purpose of providing Water for fire fighting purposes shall not be opened by any Person, other than authorized City or Fire District personnel, except for the purpose of fighting a fire.

H. Emergency proclamation.

1. Whenever the Water supply of the City is diminished from any cause, including but not limited to prolonged dry period, increased Water demand, equipment failure, or Water quality concerns, to an amount which in the opinion of the City Engineer or Director of Public Works is or is likely to become dangerous to the health and safety of the public, the City Mayor is hereby authorized and empowered to issue an Emergency Proclamation specifying different or additional regulations on the use of water.
2. Such regulations may provide for limitations on the usage of Water, limitations on days and hours of use of Water for some or all purposes, and the prohibition of specified uses of Water.
3. Upon issuing such Proclamation, the City Mayor shall make the contents thereof known to the public by posting a copy at the City Hall, and by new release to local newspapers and radio media, and may also endeavor to notify the City residents and other Persons in any other practical manner that he or she shall devise. Further, the City Mayor shall immediately deliver notice of such Proclamation, and the regulations that have been imposed by such Proclamation, to all members of the City Council.
4. The Emergency Proclamation of the City Mayor, and the regulations imposed thereby, shall remain in full force and effect until any one of the following shall first occur:

    a. The City Mayor determines that the emergency no longer exists and that the Emergency Proclamation, and the regulations imposed thereby, shall no longer continue in effect.
    b. The City Council modifies or repeals the Emergency Proclamation, and the regulations imposed thereby, by means of an ordinance enacted at any regular or special meeting of the City Council
    c. The first regular meeting of the City Council occurring more than 30 days after the date of the Emergency Proclamation of the City Mayor.

5. Any City employee or officer may, at the direction of the City Mayor, notify and warn any Person of the effect of said Emergency Proclamation and direct said Person to comply with said watering or sprinkling restrictions. If any said Person, after having first been warned about said restrictions of the Emergency Proclamation, they shall be deemed to be in violation of this Article.

I. Penalty.

1. Any United City of Yorkville inspector, employee, officer or citizen observing a violation of Title 7 may file a complaint for violation of Title 7 by notifying the United City of Yorkville Police Department.

2. Any person who or which violates, disobeys, neglects, fails to comply with or resists enforcement of the provisions of this Article other than Section (3)(A)(3) or Section (3)(F) above, shall be subject to penalties as provided in section 1-4-1 of this code in conjunction with the following provisions:

   a. $50.00 for a first offense;
   b. $125.00 for a second offense; and
   c. $500.00 for each subsequent offense.

3. Within ten (10) days of receiving notice of such violation any person may pay at the Office of the United City of Yorkville Water Department the fine.

4. The amount of any fine due pursuant to Title 7, for a violation of the provisions of Title 7 occurring at a property in the City, if not paid as provided therein, a notice to appear shall issue and upon adjudication of the matter and assessment of a fine, the fine amount owed to the city shall be added to the bill for water consumption for the property at which the offense occurred.

Exhibit A

UNITED CITY OF YORKVILLE
800 Game Farm Road
Yorkville, IL 60560
Phone: 630-553-4350
Fax: 630-553-7575

Sod Watering Permit

Name: _____ Date: _____

Address: _____

Start Date: _____ Ending Date: _____

Official Sod Watering Rules:

1. Sod laying, lawn seeding, and the planting of other landscaping for the establishment of a new lawn or new landscaping is prohibited from July 1st through August 31st of each year unless the source of watering for said sod, lawn seeding and/or planting of landscaping is derived from a private well, imported water source or means other than any municipal water source.

2. From May 1st through June 30th and September 1st through the end of the season, water may be used on new lawns (sod or seed) only as follows:

   a. On the day new sod or seed has been placed on a property, a person may use an automatic sprinkling device to apply water to the sod or seed for a total period of time not to exceed eight (8) hours.

   b. For the next nine (9) days thereafter, a person may apply water to said sod or seed each day during permitted hours of water use.

   c. Following the first ten (10) days after the sod or seed is placed, the provisions of the Water Conservation Regulations Ordinance No. 2004-17 (copy attached) shall apply.

Signature of Responsible Party: _____

General NPDES Permit No. ILR40

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand East
P.O. Box 19276
Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

General NPDES Permit
For
Discharges from Small Municipal Separate Storm Sewer Systems

Expiration Date: February 28, 2021

Issue Date: February 10, 2016

Effective Date: March 1, 2016

In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act, the following discharges may be authorized by this permit in accordance with the conditions herein:

Discharges of only storm water from small municipal separate storm sewer systems (MS4s), as defined and limited herein. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Receiving waters: Discharges may be authorized to any surface water of the State.

To receive authorization to discharge under this general permit, a facility operator must submit a Notice of Intent (NOI) as described in Part II of this permit to the Illinois Environmental Protection Agency (Illinois EPA). Authorization, if granted, will be by letter and include a copy of this permit.

Alan Keller

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

NPDES/Hutton/stormwater/MS4/MSFinal2-9-16.daa

CONTENTS OF GENERAL PERMIT ILR40

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PART I. COVERAGE UNDER GENERAL PERMIT ILR40

A. Permit Area

This permit covers all areas of the State of Illinois.

B. Eligibility

1. This permit authorizes discharges of storm water from MS4s as defined in 40 CFR 122.26 (b)(16) as designated for permit authorizations pursuant to 40 CFR 122.32.

2. This permit authorizes the following non-storm water discharges provided they have been determined not to be substantial contributors of pollutants to a particular small MS4 applying for coverage under this permit:

   - Water line and fire hydrant flushing,
   - Landscape irrigation water,
   - Rising ground waters,
   - Ground water infiltration,
   - Pumped ground water,
   - Discharges from potable water sources, (excluding wastewater discharges from water supply treatment plants)
   - Foundation drains,
   - Air conditioning condensate,
   - Irrigation water, (except for wastewater irrigation),
   - Springs,
   - Water from crawl space pumps,
   - Footing drains,
   - Storm sewer cleaning water,
   - Water from individual residential car washing,
   - Routine external building washdown which does not use detergents,
   - Flows from riparian habitats and wetlands,
   - Dechlorinated pH neutral swimming pool discharges,
   - Residual street wash water,
   - Discharges or flows from fire fighting activities
   - Dechlorinated water reservoir discharges, and
   - Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed).

3. Any municipality covered by this general permit is also granted automatic coverage under Permit No. ILR10 for the discharge of storm water associated with construction site activities for municipal construction projects disturbing one acre or more. The permittee is granted automatic coverage 30 days after Agency receipt of a Notice of Intent to Discharge Storm Water from Construction Site Activities from the permittee. The Agency will provide public notification of the construction site activity and assign a unique permit number for each project during this period. The permittee shall comply with all the requirements of Permit ILR10 for all such construction projects.

C. Limitations on Coverage

The following discharges are not authorized by this permit:

1. Storm water discharges that are mixed with non-storm water or storm water associated with industrial activity unless such discharges are:

   a. In compliance with a separate NPDES permit; or

   b. Identified by and in compliance with Part I.B.2 of this permit.

2. Storm water discharges that the Agency determines are not appropriately covered by this general permit. This determination may include discharges identified in Part 1.B.2 or that introduce new or increased pollutant loading that may be a significant contributor of pollutants to the receiving waters.

3. Storm water discharges to any receiving water specified under 35 Ill. Adm. Code 302.105(d) (6).

4. The following non-storm water discharges are prohibited by this permit: concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution.

5. Discharges from dewatering activities (including discharges from dewatering of trenches and excavations) are allowable if managed by appropriate controls as specified in a project's storm water pollution prevention plan, erosion and sediment control plan, or storm water management plan.

D. Obtaining Authorization

In order for storm water discharges from small MS4s to be authorized to discharge under this general permit, a discharger must:

1. Submit a Notice of Intent (NOI) in accordance with the requirements of Part II using an NOI form provided by the Agency (or a photocopy thereof).

2. Submit a new NOI in accordance with Part II within 30 days of a change in the operator or the addition of a new operator.

3. Unless notified by the Agency to the contrary, an MS4 owner submitting a complete NOI in accordance with the requirements of this permit will be authorized to discharge storm water from their small MS4s under the terms and conditions of this permit 30 days after the date that the NOI is received. Authorization will be by letter and include a copy of this permit. The Agency may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI or other information.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

A. Deadlines for Notification

1. If an MS4 was automatically designated under 40 CFR 122.32(a)(1) to obtain permit coverage, then you were required to submit an NOI or apply for an individual permit by March 10, 2003.

2. If an MS4 has coverage under the previous general permit for storm water discharges from small MS4s, you must renew your permit coverage under this part. Unless previously submitted for this general permit, you must submit a new NOI within 90 days of the effective date of this reissued general permit for storm water discharges from small MS4s to renew your NPDES permit coverage. The permittee shall comply with any new provisions of this general permit within 180 days of the effective date of this permit and include modifications pursuant to the NPDES permit in its Annual Report.

3. If an MS4 is designated in writing by Illinois EPA under 40 CFR 122.32(a)(2) during the term of this general permit, then you are required to submit an NOI within 180 days of such notice.

4. MS4s are not prohibited from submitting an NOI after established deadlines for NOI submittals. If a late NOI is submitted, your authorization is only for discharges that occur after permit coverage is granted. Illinois EPA reserves the right to take appropriate enforcement actions against MS4s that have not submitted a timely NOI.

B. Contents of Notice of Intent

Dischargers seeking coverage under this permit shall submit the Illinois MS4 NOI form. The NOI shall be signed in accordance with Standard Condition 11 of this permit and shall include all of the following information:

1. The street address, county, and the latitude and longitude of the municipal office for which the notification is submitted;

2. The name, address, and telephone number of the operator(s) filing the NOI for permit coverage and the name, address, telephone number, and email address of the person(s) responsible for implementation and compliance with the MS4 Permit; and

3. The name and segment identification of the receiving water(s), whether any segments(s) is or are listed as impaired on the most recently approved list pursuant to Section 303(d) of the Clean Water Act or any currently applicable Total Maximum Daily Load (TMDL) or alternate water quality study, and the pollutants for which the segment(s) is or are impaired. The most recent 303(d) list may be found at http://www.epa.state.il.us/water/water-quality/index.html. Information regarding TMDLs may be found at http://www.epa.state.il.us/water/tmdl/.

4. The following shall be provided as an attachment to the NOI:

   a. A description of the best management practices (BMPs) to be implemented and the measurable goals for each of the storm water minimum control measures in paragraph IV. B. of this permit designed to reduce the discharge of pollutants to the maximum extent practicable;

   b. The month and year in which you implemented any BMPs of the six minimum control measures, and the month and year in which you will start and fully implement any new minimum control measures or indicate the frequency of the action;

   c. For existing permittees, provide adequate information or justification on any BMPs from previous NOIs that could not be implemented; and

   d. Identification of a local qualifying program, or any partners of the program if any.

5. For existing permittees, certification that states the permittee has implemented necessary BMPs of the six minimum control measures.

C. All required information for the NOI shall be submitted electronically and in writing to the following addresses:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276

epa.ms4noipermit@illinois.gov

D. Shared Responsibilities

Permittees may partner with other MS4s to develop and implement their storm water management program. Each MS4 must fill out the NOI form. MS4s may also jointly submit their individual NOI in coordination with one or more MS4s. The description of their storm water management program must clearly describe which permittees are responsible for implementing each of the control measures. Each permittee is responsible for implementation of best management practices for the Storm Water Management Program within its jurisdiction.

PART III. SPECIAL CONDITIONS

A. The Permittee's discharges, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.

B. If there is evidence indicating that the storm water discharges authorized by this permit cause, or have the reasonable potential to cause or contribute to a violation of water quality standards, you may be required to obtain an individual permit or an alternative general permit or the permit may be modified to include different limitations and/or requirements.

C. If a TMDL allocation or watershed management plan is approved for any water body into which you discharge, you must review your storm water management program to determine whether the TMDL or watershed management plan includes requirements for control of storm water discharges. If you are not meeting the TMDL allocations, you must modify your storm water management program to implement the TMDL or watershed management plan within eighteen months of notification by the Agency of the TMDL or watershed management plan approval. Where a TMDL or watershed management plan is approved, the permittee must:

1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from your MS4.

2. Determine whether the TMDL includes a pollutant waste load allocation (WLA) or other performance requirements specifically for storm water discharge from your MS4.

3. Determine whether the TMDL addresses a flow regime likely to occur during periods of storm water discharge.

4. After the determinations above have been made and if it is found that your MS4 must implement specific WLA provisions of the TMDL, assess whether the WLAs are being met through implementation of existing storm water control measures or if additional control measures are necessary.

5. Document all control measures currently being implemented or planned to be implemented to comply with TMDL waste load allocation(s). Also include a schedule of implementation for all planned controls. Document the calculations or other evidence that shows that the WLA will be met.

6. Describe and implement a monitoring program to determine whether the storm water controls are adequate to meet the WLA.

7. If the evaluation shows that additional or modified controls are necessary, describe the type and schedule for the control additions/revisions.

8. Continue requirements 4 through 7 above until monitoring from two continuous NPDES permit cycles demonstrate that the WLAs or water quality standards are being met.

9. If an additional individual permit or alternative general permit includes implementation of work pursuant to an approved TMDL or alternate water quality management plan, the provisions of the individual or alternative general permit shall supersede the conditions of Part III.C. TMDL information may be found at http://www.epa.state.il.us/water/tmdl/.

D. If the permittee performs any deicing activities that can cause or contribute to a violation of an applicable State chloride water quality standard, the permittee must participate in any watershed group(s) organized to implement control measures which will reduce the chloride concentration in any receiving stream in the watershed.

E. Authorization: Owners or operators must submit either an NOI in accordance with the requirements of this permit or an application for an individual NPDES Permit to be authorized to discharge under this General Permit. Authorization, if granted will be by letter and include a copy of this Permit. Upon review of an NOI, the Illinois EPA may deny coverage under this permit and require submittal of an application for an individual NPDES permit.

1. Automatic Continuation of Expired General Permit: Except as provided in III.E.2 below, when this General Permit expires the conditions of this permit shall be administratively continued until the earliest of the following:

   a. 150 days after the new General Permit is reissued;

   b. The Permittee submits a Notice of Termination (NOT) and that notice is approved by Illinois EPA;

   c. The Permittee is authorized for coverage under an individual permit or the renewed or reissued General Permit;

   d. The Permittee's application for an individual permit for a discharge or NOI for coverage under the renewed or reissued General Permit is denied by the Illinois EPA; or

   e. Illinois EPA issues a formal permit decision not to renew or reissue this General Permit. This General Permit shall be automatically administratively continued after such formal permit decision.

2. Duty to Reapply:

   a. If the permittee wishes to continue an activity regulated by this General Permit, the permittee must apply for permit coverage before the expiration of the administratively continued period specified in III.E.1 above.

   b. If the permittee reapplies in accordance with the provisions of III.E.2.a above, the conditions of this General Permit shall continue in full force and effect under the provisions of 5 ILCS 100/10-65 until the Illinois EPA makes a final determination on the application or NOI.

   c. Standard Condition 2 of Attachment H is not applicable to this General Permit.

F. The Agency may require any person authorized to discharge by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Agency to take action under this paragraph. The Agency may require any owner or operator authorized to discharge under this permit to apply for an individual or alternative general NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. The Agency may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit in a timely manner an individual or alternative general NPDES permit application required by the Agency under this paragraph, then the applicability of this permit to the individual or alternative general NPDES permittee is automatically terminated by the date specified for application submittal.

G. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request, in accordance with the requirements of 40 CFR 122.28, to the Agency. The request will be granted by issuing an individual permit or an alternative general permit if the reasons cited by the owner are adequate to support the request.

H. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the issue date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

PART IV. STORM WATER MANAGEMENT PROGRAMS

A. Requirements

The permittee must develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from their MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act. The permittee's storm water management program must include the minimum control measures described in section B of this Part. For new permittees, the permittee must develop and implement specific program requirements by the date specified in the Agency's coverage letter. The U.S. Environmental Protection Agency's National Menu of Storm Water Best Management Practices (http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm) and the most recent version of the Illinois Urban Manual should be consulted regarding the selection of appropriate BMPs.

B. Minimum Control Measures

The 6 minimum control measures to be included in the permittee's storm water management program are:

1. Public Education and Outreach on Storm Water Impacts

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

a. Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The educational materials shall include information on the potential impacts and effects on storm water discharge due to climate change. Information on climate change can be found at http://epa.gov/climatechange/. The permittee shall incorporate the following into its education materials, at a minimum:

i. Information on effective pollution prevention measures to minimize the discharge of pollutants from private property and activities into the storm sewer system, on the following topics:

A. Storage and disposal of fuels, oils and similar materials used in the operation of or leaking from, vehicles and other equipment;
B. Use of soaps, solvents or detergents used in the outdoor washing of vehicles, furniture and other property,
C. Paint and related décor;
D. Lawn and garden care; and
E. Winter de-icing material storage and use.

ii. Information about green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells, and permeable pavement that mimic natural processes and direct storm water to areas where it can be infiltrated, evaporated or reused.

iii. Information on the benefits and costs of such strategies and provide guidance to the public on how to implement them.

b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in the permittee's storm water discharges to the maximum extent practicable; and

c. Provide an annual evaluation of public education and outreach BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

2. Public Involvement/Participation

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

a. At a minimum, comply with State and local public notice requirements when implementing a public involvement/ participation program;

b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP, which must ensure the reduction of all of the pollutants of concern in the permittee's storm water discharges to the maximum extent practicable;

c. Provide a minimum of one public meeting annually for the public to provide input as to the adequacy of the permittee's MS4 program. This requirement may be met in conjunction with or as part of a regular council or board meeting;

d. The permittee shall identify environmental justice areas within its jurisdiction and include appropriate public involvement/participation. Information on environmental justice concerns may be found at http://www.epa.gov/environmentaljustice/. This requirement may be met in conjunction with or as part of a regular council or board meeting; and

e. Provide an annual evaluation of public involvement/participation BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

3. Illicit Discharge Detection and Elimination

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

a. Develop, implement, and enforce a program to detect and eliminate illicit connections or discharges into the permittee's small MS4;

b. Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters that receive discharges from those outfalls. Existing permittees renewing coverage under this permit shall update their storm sewer system map to include any modifications to the sewer system;

c. To the extent allowable under state or local law, prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions, including enforceable requirements for the prompt reporting to the MS4 of all releases, spills and other unpermitted discharges to the separate storm sewer system, and a program to respond to such reports in a timely manner;

d. Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system;

e. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste and the requirements and mechanisms for reporting such discharges;

f. Address the categories of non-storm water discharges listed in Section I.B.2 only if you identify them as significant contributor of pollutants to your small MS4 (discharges or flows from firefighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States);

g. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable;

h. Conduct periodic inspections of the storm sewer outfalls in dry weather conditions for detection of non-storm water discharges and illegal dumping. The permittee may establish a prioritization plan for inspection of outfalls, placing priority on outfalls with the greatest potential for non-storm water discharges. Major/high priority outfalls shall be inspected at least annually; and

i. Provide an annual evaluation of illicit discharge detection and elimination BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

4. Construction Site Storm Water Runoff Control

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

a. Develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the permittee's small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Control of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more or has been designated by the permitting authority.

At a minimum, the permittee must develop and implement the following:

i. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law;

ii. Erosion and Sediment Controls - The permittee shall ensure that construction activities regulated by the storm water program require the construction site owner/operator to design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:

A. Control storm water volume and velocity within the site to minimize soil erosion;
B. Control storm water discharges, including both peak flow rates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
C. Minimize the amount of soil exposed during construction activity;
D. Minimize the disturbance of steep slopes;
E. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
F. Provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal, and maximize storm water infiltration, unless infeasible; and
G. Minimize soil compaction and preserve topsoil, unless infeasible.

iii. Requirements for construction site operators to control or prohibit non-storm water discharges that would include concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution;

iv. Require all regulated construction sites to have a storm water pollution prevention plan that meets the requirements of Part IV of NPDES permit No. ILR10, including management practices, controls, and other provisions at least as protective as the requirements contained in the Illinois Urban Manual, 2014, or as amended including green infrastructure techniques where appropriate and practicable;

v. Procedures for site plan reviews which incorporate consideration of potential water quality impacts and site plan review of individual pre-construction site plans by the permittee to ensure consistency with local sediment and erosion control requirements;

vi. Procedures for receipt and consideration of information submitted by the public; and

vii. Site inspections and enforcement of ordinance provisions.

b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.

c. Provide an annual evaluation of construction site storm water control BMPs and measureable goals in the Annual Report pursuant to Part V.C.1.

5. Post-Construction Storm Water Management in New Development and Redevelopment

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs, as necessary, to comply with the terms of this section.

a. Develop, implement, and enforce a program to address and minimize the volume and pollutant load of storm water runoff from projects for new development and redevelopment that disturb greater than or equal to one acre, projects less than one acre that are part of a larger common plan of development or sale or that have been designated to protect water quality, that discharge into the permittee's small MS4 within the MS4's jurisdictional control. The permittee's program must ensure that appropriate controls are in place that would protect water quality and reduce the discharge of pollutants to the maximum extent practicable. In addition, each permittee shall adopt strategies that incorporate the infiltration, reuse, and evapotranspiration of storm water into the project to the maximum extent practicable. The permittee shall also develop and implement procedures for receipt and consideration of information submitted by the public.

b. Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for all projects within the permittee's jurisdiction for all new development and redevelopment that disturb greater than or equal to1 acre (at a minimum) that will reduce the discharge of pollutants and the volume and velocity of storm water flow to the maximum extent practicable. These strategies shall include effective water quality and watershed protection elements and shall be amenable to modification due to climate change. Information on climate change can be found at http://www.epa.gov/climatechange/. When selecting BMPs to comply with requirements contained in this Part, the permittee shall adopt one or more of the following general strategies, listed in order of preference below. The proposal of a strategy shall include a rationale for not selecting an approach from among those with a higher preference.

   i. Preservation of the natural features of development sites, including natural storage and infiltration characteristics;

   ii. Preservation of existing natural streams, channels, and drainage ways;

   iii. Minimization of new impervious surfaces;

   iv. Conveyance of storm water in open vegetated channels;

   v. Construction of structures that provide both quantity and quality control, with structures serving multiple sites being preferable to those serving individual sites; and

   vi. Construction of structures that provide only quantity control, with structures serving multiple sites being preferable to those serving individual sites.

c. If a permittee requires new or additional approval of any development, redevelopment, linear project construction, replacement or repair on existing developed sites, or other land disturbing activity covered under this Part, the permittee shall require the person responsible for that activity to develop a long term operation and maintenance plan including the adoption of one or more of the strategies identified in Part IV.B.5.b. of this permit.

d. Develop and implement a program to minimize the volume of storm water runoff and pollutants from public highways, streets, roads, parking lots, and sidewalks (public surfaces) through the use of BMPs that alone or in combination result in physical, chemical, or biological pollutant load reduction, increased infiltration, evapotranspiration, and reuse of storm water. The program shall include, but not be limited to the following elements:

   i. Annual Training for all MS4 employees who manage or are directly involved in (or who retain others who manage or are directly involved in) the routine maintenance, repair, or replacement of public surfaces in current green infrastructure or low impact design techniques applicable to such projects; and

   ii. Annual Training for all contractors retained to manage or carry out routine maintenance, repair, or replacement of public surfaces in current green infrastructure or low impact design techniques applicable to such projects. Contractors may provide training to their employees for projects which include green infrastructure or low impact design techniques.

e. Develop and implement a program to minimize the volume of storm water runoff and pollutants from existing privately owned developed property that contributes storm water to the MS4 within the MS4 jurisdictional control. Such program must be documented and may contain the following elements:

   i. Source Identification – Establish an inventory of storm water and pollutants discharged to the MS4;

   ii. Implementation of appropriate BMPs to accomplish the following:

      A. Education on green infrastructure BMPs;
      B. Evaluation of existing flood control techniques to determine the feasibility of pollution control retrofits;
      C. Evaluation of existing flood control techniques to determine potential impacts and effects due to climate change;
      D. Implementation of additional controls for special events expected to generate significant pollution (fairs, parades, performances);
      E. Implementation of appropriate maintenance programs, (including maintenance agreements, for structural pollution control devices or systems);
      F. Management of pesticides and fertilizers; and
      G. Street cleaning in targeted areas.

f. Infiltration practices should not be implemented in any of the following circumstances:

i. Areas/sites where vehicle fueling and/or maintenance occur;

ii. Areas/sites with shallow bedrock which allow movement of pollutants into the groundwater;

iii. Areas/sites near Karst features;

iv. Areas/sites where contaminants in soil or groundwater could be mobilized by infiltration of storm water;

v. Areas/sites within a delineated source water protection area for a public drinking water supply where the potential for an introduction of pollutants into the groundwater exists. Information on groundwater protection may be found at:

http://www.epa.state.il.us/water/groundwater/index.html

vi. Areas/sites within 400 feet of a community water supply well if there is not a wellhead protection delineation area or within 200 feet of a private water supply well. Information on wellhead protection may be found at :

http://www.epa.state.il.us/water/groundwater/index.html

g. Develop and implement an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects, public surfaces, and existing developed property as set forth above to the extent allowable under state or local law.

h. Require all regulated construction sites to have post-construction management plans that meet or exceed the requirements of Part IV.D.2.h of NPDES permit No. ILR10 including management practices, controls, and other provisions at least as protective as the requirements contained in the most recent version of the Illinois Urban Manual, 2014.

i. Ensure adequate long-term operation and maintenance of BMPs.

j. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.

k. Within 3 years of the effective date of the permit, the permittee must develop and implement a process to assess the water quality impacts in the design of all new and existing flood management projects that are associated with the permittee or that discharge to the MS4. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives. This will also include assessment of any potential impacts and effects on flood management projects due to climate change.

l. Provide an annual evaluation of post-construction storm water management BMPs and measureable goals in the Annual Report pursuant to Part V.C.1 .

6. Pollution Prevention/Good Housekeeping for Municipal Operations

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

a. Develop and implement an operation and maintenance program that includes an annual training component for municipal staff and contractors and is designed to prevent and reduce the discharge of pollutants to the maximum extent practicable.

b. Pollution Prevention- The permittee shall design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from municipal properties, infrastructure, and operations. At a minimum, such measures must be designed, installed, implemented and maintained to:

i. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

ii. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, chemical storage tanks, deicing material storage facilities and temporary stockpiles, detergents, sanitary waste, and other materials present on the site to precipitation and to storm water;

iii. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures; and

iv. Provide regular inspection of municipal storm water management BMPs. Based on inspection findings, the permittee shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of structural storm water BMPs. Necessary maintenance shall be completed as soon as conditions allow to prevent or reduce the discharge of pollutants to storm water.

c. Deicing material must be stored in a permanent or temporary storage structure or seasonal tarping must be utilized. If no permanent structures are owned or operated by the Permittee, new permanent deicing material storage structures shall be constructed within two years of the effective date of this permit. Storage structures or stockpiles shall be located and managed to minimize storm water pollutant runoff from the stockpiles or loading/unloading areas of the stockpiles. Stockpiles and loading/unloading areas should be located as far as practicable from any area storm sewer drains. Fertilizer, pesticides, or other chemicals shall be stored indoors to prevent any discharge of such chemicals within the storm water runoff.

d. Using training materials that are available from USEPA, the State of Illinois, or other organizations, the permittee's program must include annual employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, operation of storage yards, snow disposal, deicing material storage handling and use on roadways, new construction and land disturbances, and storm water system maintenance procedures for proper disposal of street cleaning debris and catch basin material. In addition, training should include how flood management projects impact water quality, non-point source pollution control, green infrastructure controls, and aquatic habitat.

e. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.

f. Provide an annual evaluation of pollution prevention/good housekeeping for municipal operations and measureable goals in the Annual Report pursuant to Part V.C.1.

C. Qualifying State, County, or Local Program

If an existing qualifying local program requires a permittee to implement one or more of the minimum control measures of Part IV. B. above, the permittee may follow that qualifying program's requirements rather than the requirements of Part IV.B. above. A qualifying local program is a local, county, or state municipal storm water management program that imposes, at a minimum, the relevant requirements of Part IV. B. Any qualifying local programs that permittees intend to follow shall be specified in their storm water management program.

D. Sharing Responsibility

1. Implementation of one or more of the minimum control measures may be shared with another entity, or the entity may fully take over the control measure. A permittee may rely on another entity only if:

a. The other entity implements the control measure;

b. The particular control measure, or component of that measure is at least as stringent as the corresponding permit requirement;

c. The other entity agrees to implement any minimum control measure on the permittee's behalf. A written agreement of this obligation is recommended. This obligation must be maintained as part of the description of the permittee's Storm Water Management Program. If the other entity agrees to report on the minimum control measure, the permittee must supply the other entity with the reporting requirements contained in Part V.C of this permit. If the other entity fails to implement the minimum control measure on the permittee's behalf, then the permittee remains liable for any discharges due to that failure to implement the minimum control measure.

E. Reviewing and Updating Storm Water Management Programs

1. Storm Water Management Program Review- The permittee must perform an annual review of its Storm Water Management Program in conjunction with preparation of the annual report required under Part V.C. The permittee must include in its annual report a plan for complying with any changes or new provisions in this permit, or in any State or federal regulations. The permittee must also include in its annual report a plan for complying with all applicable TMDL Report(s) or watershed management plan(s). Information on TMDLs may be found at:

http://www.epa.state.il.us/water/tmdl/.

2. Storm Water Management Program Update - The permittee may modify its Storm Water Management Program during the life of the permit in accordance with the following procedures:

a. Modifications adding (but not subtracting or replacing) components, controls, or requirements to the Storm Water Management Program may be made at any time upon written notification to the Agency;

b. Modifications replacing an ineffective or infeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the Agency, modifications proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If the request is denied, the Agency will send the permittee a written response giving a reason for the decision. The permittee's modification requests must include the following:

i. An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);

ii. Expectations on the effectiveness of the replacement BMP; and

iii. An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.

c. Modification of any ordinances relative to the storm water management program, provided the updated ordinance is at least as stringent as the provisions stipulated in this permit; and

d. Modification requests or notifications must be made in writing and signed in accordance with Standard Condition II of Attachment H.

3. Storm Water Management Program Updates Required by the Agency. Modifications requested by the Agency must be made in writing, set forth the time schedule for permittees to develop the modifications, and offer permittees the opportunity to propose alternative program modifications to meet the objective of the requested modification. All modifications required by the Permitting Authority will be made in accordance with 40 CFR 124.5, 40 CFR 122.62, or as appropriate 40 CFR 122.63. The Agency may require modifications to the Storm Water Management Program as needed to:

a. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

b. Include more stringent requirements necessary to comply with new federal or State statutory or regulatory requirements; or

c. Include such other conditions deemed necessary by the Agency to comply with the goals and requirements of the Clean Water Act.

PART V. MONITORING, RECORDKEEPING, AND REPORTING

A. Monitoring

The permittee must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts within 180 days of the effective date of this permit. The program should be tailored to the size and characteristics of the MS4 and the watershed. The permittee shall provide a justification of its monitoring and assessment program in the Annual Report. By not later than 180 days after the effective date of this permit, the permittee shall initiate an evaluation of its storm water program. The plan for monitoring/evaluation shall be described in the Annual Report. Evaluation and/or monitoring results shall be provided in the Annual Report. The monitoring and assessment program may include evaluation of BMPs and/or direct water quality monitoring as follows:

1. An evaluation of BMPs based on estimated effectiveness from published research accompanied by an inventory of the number and location of BMPs implemented as part of the permittee's program and an estimate of pollutant reduction resulting from the BMPs, or

2. Monitoring the effectiveness of storm water control measures and progress towards the MS4's goals using one or more of the following:

a. MS4 permittees serving a population of less than 25,000 may conduct visual observations of the storm water discharge documenting color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of storm water pollution; or

b. MS4 permittees may evaluate storm water quality and impacts using one or more of the following methods;

i. Instream monitoring in the highest level hydrological unit code segment in the MS4 area. Monitoring shall include, at a minimum, quarterly monitoring of receiving waters upstream and downstream of the MS4 discharges in the designated stream(s).

ii. Measuring pollutant concentrations over time.

iii. Sediment monitoring.

iv. Short-term extensive network monitoring. Short-term sampling at the outlets of numerous drainage areas to identify water quality issues and potential storm water impacts, and may help in ranking areas for implementation priority. Data collected simultaneously across the MS4 to help characterize the geographical distribution of pollutant sources.

v. Site-specific monitoring. High-value resources such as swimming beaches, shellfish beds, or high-priority habitats could warrant specific monitoring to assess the status of use support. Similarly, known high-priority pollutant sources or impaired water bodies with contaminated aquatic sediments, an eroding stream channel threatening property, or a stream reach with a degraded fish population could be monitored to assess impacts of storm water discharges and/or to identify improvements that result from the implementation of BMPs.

vi. Assessing physical/habitat characteristics such as stream bank erosion caused by storm water discharges.

vii. Outfall/Discharge monitoring.

viii. Sewershed-focused monitoring. Monitor for pollutants in storm water produced in different areas of the MS4. For example, identify which pollutants are present in storm water from industrial areas, commercial areas, and residential areas.

ix. BMP performance monitoring. Monitoring of individual BMP performance to provide a direct measure of the pollutant reduction efficiency of these key components of a MS4 program.

x. Collaborative watershed-scale monitoring. The permittee may choose to work collaboratively with other permittees and/or a watershed group to design and implement a watershed or sub-watershed-scale monitoring program that assesses the water quality of the water bodies and the sources of pollutants. Such programs must include elements which assess the impacts of the permittee's storm water discharges and/or the effectiveness of the BMPs being implemented.

c. If ambient water quality monitoring under 2b above is performed, the monitoring of storm water discharges and ambient monitoring intended to gauge storm water impacts shall be performed within 48 hours of a precipitation event greater than or equal to one quarter inch in a 24-hour period. At a minimum, analysis of storm water discharges or ambient water quality shall include the following parameters: total suspended solids, total nitrogen, total phosphorous, fecal coliform, chlorides, and oil and grease. In addition, monitoring shall be performed for any other pollutants associated with storm water runoff for which the receiving water is considered impaired pursuant to the most recently approved list under Section 303(d) of the Clean Water Act.

B. Recordkeeping

The permittee must keep records required by this permit for 5 years after the expiration of this permit. Records to be kept under this Part include the permittee's NOI, storm water management plan, annual reports, and monitoring data. All records shall be kept onsite or locally available and shall be made accessible to the Agency for review at the time of an on-site inspection. Except as otherwise provided in this permit, permittees must submit records to the Agency only when specifically requested to do so. Permittees must post their NOI, storm water management program plan, and annual reports on the permittee's website. The permittee must make its records available to the public at reasonable times during regular business hours. The permittee may require a member of the public to provide advance notice, in accordance with the applicable Freedom of Information Act requirements. Storm sewer maps may be withheld for security reasons.

C. Reporting

The permittee must submit Annual Reports to the Agency by the first day of June for each year that this permit is in effect. If the permittee maintains a website, a copy of the Annual Report shall be posted on the website by the first day of June of each year. Each Report shall cover the period from March of the previous year through March of the current year. Annual Reports shall be maintained on the permittees' website for a period of 5 years. The Report must include:

1. An assessment of the appropriateness and effectiveness of the permittee's identified BMPs and progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), and the permittee's identified measurable goals for each of the minimum control measures;

2. The status of compliance with permit conditions, including a description of each incidence of non-compliance with the permit, and the permittee's plan for achieving compliance with a timeline of actions taken or to be taken;

3. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

4. A summary of the storm water activities the permittee plans to undertake during the next reporting cycle, including an implementation schedule;

5. A change in any identified BMPs or measurable goals that apply to the program elements;

6. Notice that the permittee is relying on another government entity to satisfy some of the permit obligations (if applicable);

7. Provide an updated summary of any BMP or adaptive management strategy constructed or implemented pursuant to any approved TMDL or alternate water quality management study. Use the results of your monitoring program to assess whether the WLA or other performance requirements for storm water discharges from your MS4 are being met; and

8. If a qualifying local program or programs with shared responsibilities is implementing all minimum control measures on behalf of one or more entities, then the local qualifying program or programs with shared responsibilities may submit a report on behalf of itself and any entities for which it is implementing all of the minimum control measures.

The Annual Reports shall be submitted to the following office and email addresses:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
Municipal Annual Inspection Report
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

epa.ms4annualinsp@illinois.gov

PART VI. DEFINITIONS AND ACRONYMS

All definitions contained in Section 502 of the Clean Water Act, 40 CFR 122, and 35 Ill. Adm. Code 309 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided. In the event of a conflict, the definition found in the statute or regulation takes precedence.

Best Management Practices (BMPs) means structural or nonstructural controls, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BMP is an acronym for "Best Management Practices."

CFR is an acronym for "Code of Federal Regulations."

Control Measure as used in this permit refers to any Best Management Practice or other method used to prevent or reduce storm water runoff or the discharge of pollutants to waters of the State.

CWA or The Act means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 ET. seq.

Discharge when used without a qualifier, refers to discharge of a pollutant as defined at 40 CFR 122.2.

Environmental Justice (EJ) means the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies

Environmental Justice Area means a community with a low-income and/or minority population greater than twice the statewide average. In addition, a community may be considered a potential EJ community if the low-income and/or minority population is less than twice the state-wide average but greater than the statewide average and it has identified itself as an EJ community. If the low-income and/or minority population percentage is equal to or less than the statewide average, the community should not be considered a potential EJ community.

Flood management project means any project which is intended to control, reduce or minimize high stream flows and associated damage. This may also include projects designed to mimic or improve natural conditions in the waterway.

Green Infrastructure means wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse. Green infrastructure approaches currently in use include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, porous and permeable pavements, porous piping systems, dry wells, vegetated median strips, reforestation/revegetation, rain barrels, cisterns, and protection and enhancement of riparian buffers and floodplains.

Illicit Connection means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge is defined at 40 CFR 122.26(b)(2) and refers to any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

MEP is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by CWA Section 402(p). A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34.

MS4 is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to a Large, Medium, or Small Municipal Separate Storm Sewer System (e.g. "the Dallas MS4"). The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (e.g., the Houston MS4 includes MS4s operated by the city of Houston, the Texas Department of Transportation, the Harris County Flood Control District, Harris County, and others).

Municipal Separate Storm Sewer is defined at 40 CFR 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

NOI is an acronym for "Notice of Intent" to be covered by this permit and is the mechanism used to "register" for coverage under a general permit.

NPDES is an acronym for "National Pollutant Discharge Elimination System."

Outfall is defined at 40 CFR 122.26(b) (9) and means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Owner or Operator is defined at 40 CFR 122.2 and means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Permitting Authority means the Illinois EPA.

Point Source is defined at 40 CFR 122.2 and means any discernable, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutants of Concern means pollutants identified in a TMDL waste load allocation (WLA) or on the Section 303(d) list for the receiving water, and any of the pollutants for which water monitoring is required in Part V.A. of this permit.

Qualifying Local Program is defined at 40 CFR 122.34(c) and means a local, state, or Tribal municipal storm water management program that imposes, at a minimum, the relevant requirements of paragraph (b) of Section 122.34.

Small Municipal Separate Storm Sewer System is defined at 40 CFR 122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State [sic], city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State [sic] law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States, but is not defined as "large" or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Storm Water is defined at 40 CFR 122.26(b) (13) and means storm water runoff, snowmelt runoff, and surface runoff and drainage.

Storm Water Management Program (SWMP) refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

SWMP is an acronym for "Storm Water Management Program."

TMDL is an acronym for "Total Maximum Daily Load."

Waters (also referred to as waters of the state or receiving water) is defined at Section 301.440 of Title 35: Subtitle C: Chapter I of the Illinois Pollution Control Board Regulations and means all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois, except that sewers and treatment works are not included except as specially mentioned; provided, that nothing herein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under Agency permit is allowable.

"You" and "Your" as used in this permit is intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's responsibilities (e.g., the city, the country, the flood control district, the U.S. Air Force, etc.).

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated

facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.

(a) **Application.** All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a); and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

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

(12) **Reporting requirements.**

(a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).

(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.

(d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Any upset which exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass.**

(a) Definitions.

(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).

(c) Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).

(d) Prohibition of bypass.

(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:

(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(iii) The permittee submitted notices as required under paragraph (13)(c).

(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset.**

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).

(4) The permittee complied with any remedial measures required under paragraph (4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:

(a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

(b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:

(1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;

(2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and

(3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:

(a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;

(b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

(Rev. 7-9-2010 bah)

United City of Yorkville

County Seat of Kendall County
800 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-8545
Fax: 630-553-3436
Website: www.yorkville.il.us

NPDES / EROSION CONTROL INSPECTION REPORT

Date of Inspection: _____ Project: _____
Name of Inspector: _____
Type of Inspection: Weekly _____ > 0.5" Precip. _____
Contractor: _____
Subs: _____
_____

1. Are all of the temporary and permanent controls contained in the pollution prevention (erosion control) plan or as directed by the engineer in place? ___ YES ___ NO
If not, why not? _____
_____

2. Are the temporary and permanent erosion and sediment controls that have been installed operating correctly? ___ YES ___ NO If not, what additional controls or adjustments is the contractor hereby directed to install or perform? _____
_____

3. Are the erosion and sediment controls being properly maintained? ___ YES ___ NO
If not, what maintenance is the contractor hereby directed to perform? _____
_____

4. Is there tracking of sediment from locations where vehicles enter and leave the project? ___ YES ___ NO If yes, describe the location(s) and the actions the contractor is hereby directed to perform. _____
_____

5. Have the additional controls, adjustments, or maintenance directed as a result of the last inspection been implemented within seven (7) calendar days? ___ YES ___ NO
If not, the contractor is hereby notified that no further work activity will be permitted to take place until the necessary corrective measures have been taken.

Other comments: _____
_____
_____

_____
Inspector Signature

United City of Yorkville

County Seat of Kendall County
800 Game Farm Road
Yorkville, Illinois, 60560
Telephone: 630-553-4350
Fax: 630-553-7575
Website: www.yorkville.il.us

Date:

1ST NOTICE OF VIOLATION

Applicant Name

Company

Address

City State Zip

Subject: Project Name
Site Development Permit No._____
1st Notice of Violation

Gentlemen:

You are hereby notified of the following violation(s) to your Site Development Permit:

☐ Failure to notify the city prior to construction.

☐ Failure to install/maintain a non-erosive outlet from the structure to the watercourse
Location(s) _____

☐ Failure to install/maintain soil erosion and sediment control features prior to commencing earthwork.
Location(s) _____

☐ Failure to install/maintain temporary or permanent seeding.
Location(s) _____

☐ Failure to install/maintain sod.
Location(s) _____

☐ Failure to install/maintain erosion control blanket.
Location(s) _____

☐ Failure to properly install/maintain silt fence.
Location(s) _____

☐ Failure to install/maintain sediment traps.
Location(s) _____

☐ Failure to install/maintain storm inlet protection.

Location(s) _____

☐ Failure to route dewatering services through an effective sediment control measure.

Location(s) _____

☐ Failure to install/maintain stabilized construction entrance. Failure to clean right of way/pavement.

Location(s) _____

☐ Failure to install/maintain runoff diversion controls.

Location(s) _____

☐ Failure to prevent erosion from stockpile, or the placement of stockpile in a flood-prone or buffer area.

Location(s) _____

☐ Failure to maintain dust control.

Location(s) _____

☐ Failure to follow permitted construction sequencing.

Location(s) _____

_____

You must take immediate action and cure all deficiencies identified above within five (5) working days, or the city may issue a Stop Work Order or invoke penalties and legal actions that provides for fines for each offense each day the violation continues. Once all deficiencies have been cured, please call our office to schedule a re-inspection. If you have any questions please contact the City Engineer at (630)553-8545.

Sincerely,

XX
Code Official

cc:_____

STORMWATER MANAGEMENT SYSTEM
ANNUAL MAINTENANCE PLAN FOR EXISTING FACILITIES

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The existing storm water management system was designed to help slow the rate of runoff from the development and maintain the quality of the storm water leaving the site.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on inspection experience.

Record Keeping:

Separate and distinct records should be maintained by the responsible party for all tasks performed associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

Post-Construction Stormwater Management System
Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

- Litter and debris shall be controlled.
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of adequate size and shape.
- Roads and parking lots shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Storage Facilities (Detention, Retention and Water Quality Treatment Facilities)

Dams and berms

____ Settlement. If settlement observed, hire a PE.
____ Breaks or failures. If failure observed, notify the Village immediately and hire a PE.
____ Erosion. Repair as needed.
____ Signs of leakage, seepage or wet spots. If observed, hire a PE.
____ Unwanted growth or vegetation. Remove as needed.

Shorelines

____ Erosion or rip-rap failures. Repair as needed
____ Undermining. Stabilize and repair as needed.

Outlet and inlet structure

____ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
____ Separation of joints. Repair as needed.
____ Cracks, breaks, or deterioration of concrete. Repair as needed
____ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).
____ Condition of trash racks. Remove any collected debris.

____ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

____ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. If a detention facility includes specific locations designed to accumulate sediment these locations should be dredged every 5-yrs or when 50% of the volume has been lost.

____ Wet ponds lose 0.5 - 1.0% of their volume annually. Dredging is required when accumulated volume loss reaches 15%, or approximately every 15-20 years.

Storm Sewers

____ System is free draining into collection channels or catch basins. If concerned, clean or repair.

____ Catch basins. Remove sediment when more than 50% of basin sump is filled.

____ Siltation in Culvert. Culverts shall be checked for siltation deposit, clean out as necessary.

Bridges

____ Any scouring around wing walls. Stabilize and repair as needed. If concerned, hire a PE.

____ Any undermining of footings. Stabilize and repair as needed. If concerned, hire a PE.

Swales –

____ All ditches or pipes connecting ponds in series should be checked for debris that may block flow.

____ Repair and replace permanent check-dams as necessary.

____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas –

____ Need for planting, reseeding or sodding of native areas. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area).

Reseed with alternative grass species if original grass cover has not successfully established.

____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist, or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers –

____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.

____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.

____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed no more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.

____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

STORMWATER MANAGEMENT SYSTEM
MAINTENANCE PLAN FOR NEW FACILITIES

Subject: INSERT DEVELOPMENT NAME HERE

SUCH PROPERTY BEING THE REAL PROPERTY NOW DULY PLATTED AS INSERT DEVELOPMENT NAME HERE, AS SUCH PLAT IS NOW RECORDED AS DOCUMENT NO. INSERT DOCUMENT NUMBER, IN THE OFFICE OF THE RECORDER OF DEEDS OF THE COUNTY OF KENDALL, STATE OF ILLINOIS, HEREBY MAKES THE FOLLOWING DECLARATIONS OF MAINTENANCE RESPONSIBILITIES.

Responsibilities

Adequate provisions for maintenance of the stormwater system are an essential aspect of long-term drainage performance. Responsibility for the overall maintenance shall rest with the insert responsible party name here.

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The storm water management system was designed to help slow the rate of runoff from the development and improve the quality of the storm water leaving the site.

Interpretation as to Requirements Under This Maintenance Plan:

The requirement for this Maintenance Plan is generated by the City of Yorkville Ordinance 2009-78. The interpretation of the maintenance requirements set forth in this Maintenance Plan shall be interpreted on the basis of the intent and requirements of said Ordinance.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on experience recorded over the initial period of occupancy of the development.

Record Keeping:

Separate and distinct records shall be maintained by the responsible party for all tasks performed associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

_____, the owner's agent, has caused these presents to be signed and acknowledged, this _____ day of _____, 2_____.

By: _____

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

- Litter and debris shall be controlled.
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of adequate size and shape.
- Roads and parking lots shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Dams and berms

____ Settlement. If settlement observed, hire a PE.
____ Breaks or failures. If failure observed, notify the Village immediately and hire a PE.
____ Erosion. Repair as needed.
____ Signs of leakage, seepage or wet spots. If observed, hire a PE.
____ Unwanted growth or vegetation. Remove as needed.

Shorelines

____ Erosion or rip-rap failures. Repair as needed
____ Undermining. Stabilize and repair as needed.

Outlet and inlet structure

____ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
____ Separation of joints. Repair as needed.
____ Cracks, breaks, or deterioration of concrete. Repair as needed
____ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).
____ Condition of trash racks. Remove any collected debris.
____ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

____ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. If a detention facility includes specific locations designed to accumulate sediment these locations should be dredged every 5-yrs or when 50% of the volume has been lost.

____ Wet ponds lose 0.5 - 1.0% of their volume annually. Dredging is required when accumulated volume loss reaches 15%, or approximately every 15-20 years.

Storm Sewers

____ System is free draining into collection channels or catch basins. Clean and/or repair as necessary.

____ Catch basins. Remove sediment when more than 50% of basin sump is filled.

____ Siltation in Culvert. Culverts shall be checked for siltation deposit, clean out as necessary.

Bridges

____ Any scouring around wing walls. Stabilize and repair as needed. If concerned, hire a PE.

____ Any undermining of footings. Stabilize and repair as needed. If concerned, hire a PE.

Swales –

____ All ditches or pipes connecting ponds in series should be checked for debris that may block flow.

____ Repair and replace permanent check-dams as necessary.

____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas –

____ Need for planting, reseeding or sodding of native areas. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers –

____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.

____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.

____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.

____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

United City of Yorkville

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800 Game Farm Road
Yorkville, Illinois 60560
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Fax: 630-553-3436
Website: www.yorkville.il.us

STORM WATER BASIN ANNUAL INSPECTION REPORT

Basin Address and/or Location: _____

Basin Type (circle): Dry Detention Wet Detention Naturalized

Owner Name: _____ Owner Contact Number: _____
Owner Address: _____
Owner Email: _____

Maintainer Name: _____ Maintainer Contact Number: _____
Maintainer Address: _____
Maintainer Email: _____

Inspection Date: _____ Submittal Date: _____

Complete ONLY the "Annual Inspection Items" and sign below for all years between 5th Year Inspections. The 5th Year Inspection to be completed entirely by a professional engineer, licensed in the State of Illinois. See Page 2 for more information regarding 5th Year Inspection requirements.

ANNUAL INSPECTION ITEMS
CIRCLE 'YES' OR 'NO' FOR ALL ITEMS BELOW

A. Has debris or trash accumulated? …….	YES	NO
B. Has sediment accumulated? …….	YES	NO
C. Are noxious weeds present that prevent the desired vegetation from growing properly?	YES	NO
D. Is there exposed soil not covered with vegetation, mulch, or other non-erodable material?	YES	NO
E. Is soil erosion present along standing or moving surface water?	YES	NO
F. Is soil erosion present at basin sides, inlet, or outlet?	YES	NO
G. Are holes present from animals, or is there undesirable soil loss?	YES	NO
H. Is algae or stagnant moisture present?	YES	NO
I. Are unpleasant odors emerging?	YES	NO
J. Are wet or soggy areas present that prevent desired vegetation from growing?	YES	NO
K. Is runoff entering or leaving the basin in a manner which prevents proper function of its inflow or outflow systems?	YES	NO
L. Does flow out of basin occur in a manner that creates erosion or damage to adjacent property?	YES	NO
M. Are the basin functions impaired?	YES	NO

N. Other items and comments: _____
_____

O. Corrective measures for all 'YES' answers above: _____
_____
_____
_____
_____
_____

ATTACH ADDITIONAL PAGES IF NECESSARY, TO PROPERLY DOCUMENT INSPECTION.

THE INFORMATION PROVIDED IS AN ACCURATE AND CURRENT DESCRIPTION OF THE BASIN AT THIS LOCATION:

_____ _____
SIGNATURE PRINTED NAME

DATE: _____

The 5th Year Inspection must be completed entirely by a professional engineer, licensed in the State of Illinois.

The 5th Year Inspection shall include at a minimum, the annual inspection items shown on Page 1 and the 5th Year Inspection items shown below:

5TH YEAR INSPECTION ITEMS

A. ASSESSMENT OF ANY PIPE, RIPRAP, AND STRUCTURES PRESENT:
(i.e. Is there a need for replacement or maintenance of basin components?)
……..
……..
……..

B. GENERAL ASSESSMENT OF THE BASIN:
(i.e. Does the basin appear to function properly? Modifications recommended for improved function)
……..
……..
……..

C. ASSESSEMENT OF BASIN ELEVATIONS:
(i.e. Are major storm overflow paths and elevations unchanged from the as-built plans?)
(NOTE: the elevation reasonableness check is intended to be a visual check for large settlement, channel erosion, or basin modifications, and not a requirement for a survey.)
……..
……..
……..

D. ASSESSMENT OF BASIN VOLUMES:
(i.e. Is there evidence of basin changes affecting the storage volume from that shown on the as-built plans?)
(NOTE: The volume reasonableness check is intended to be a visual check for large accumulations of sediment or basin modifications, and not a requirement for a survey.)
……..
……..
……..

E. OTHER ITEMS AND COMMENTS:
(i.e. Safety, shelf, etc.)
……..
……..
……..
……..
……..

F. CORRECTIVE MEASURES NEEDED:
……..
……..
……..
……..
……..
……..
……..
……..

ATTACH ADDITIONAL PAGES IF NECESSARY, TO PROPERLY DOCUMENT INSPECTION.

THE INFORMATION PROVIDED IS AN ACCURATE AND CURRENT DESCRIPTION OF THE BASIN AT THIS LOCATION:

_____ _____
SIGNATURE PRINTED NAME

DATE: _____

ENGINEER'S SEAL
FOR 5TH YEAR INSPECTION

Illicit Discharge Tracking Form

Incident ID:			
Responder Information			
Call taken by:		Call date:	
Call time:		Precipitation (inches) in past 24-48 hrs:	
Reporter Information			
Incident time:		Incident date:	
Caller contact information (*optional*):			
Incident Location *(complete one or more below)*			
Latitude and longitude:			
Stream address or outfall #:			
Closest street address:			
Nearby landmark:			
Primary Location Description	**Secondary Location Description:**		
☐ Stream corridor *(In or adjacent to stream)*	☐ Outfall	☐ In-stream flow	☐ Along banks
☐ Upland area *(Land not adjacent to stream)*	☐ Near storm drain	☐ Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:			
Upland Problem Indicator Description			
☐ Dumping	☐ Oil/solvents/chemicals	☐ Sewage	
☐ Wash water, suds, etc.	☐ Other: _____		
Stream Corridor Problem Indicator Description			
Odor	☐ None	☐ Sewage	☐ Rancid/Sour	☐ Petroleum (gas)
	☐ Sulfide (rotten eggs); natural gas	☐ Other: Describe in "Narrative" section		
Appearance	☐ "Normal"	☐ Oil sheen	☐ Cloudy	☐ Suds
	☐ Other: Describe in "Narrative" section			
Floatables	☐ None:	☐ Sewage (toilet paper, etc)	☐ Algae	☐ Dead fish
	☐ Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, etc.):				

Investigation Notes	
Initial investigation date:	Investigators:
☐ No investigation made	Reason:
☐ Referred to different department/agency:	Department/Agency:
☐ Investigated: No action necessary	
☐ Investigated: Requires action	Description of actions:
Hours between call and investigation:	Hours to close incident:
Date case closed:	
Notes:	

City of Yorkville
Illicit Discharge Summary Form

Incident ID No.	Date	Flow Observed?	Color	Turbidity	Odor?	Oil Sheen?	Vegetation	Remarks

Stormwater Outfall Inspection Form

Section 1: Background Data

Subwatershed:	Outfall ID:	
Date:	Time (Military):	
Temperature:	Inspector(s):	
Previous 48 Hours Precipitation:	Photo's Taken (Y/N)	If yes, Photo Numbers:
Land Use in Drainage Area (Check all that apply):	☐ Open Space	
☐ Industrial	☐ Institutional	
☐ Residential	Other: _____	
☐ Commercial	Known Industries: _____	

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
Storm Sewer (Closed Pipe)	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Clay / draintile ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other:____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
Open drainage (swale/ditch)	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other:	☐ Trapezoid ☐ Parabolic ☐ Other:		Depth: Top Width: Bottom Width:	

Section 3: Physical Indicators

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe algae/growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Do physical indictors suggest an illicit discharge is present (Y/N):			

Flow Present?	☐ Yes ☐ No	**If No, Skip to Section 7 and Close Illicit Discharge Investigation**
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial	

Section 4: Physical Indicators (Flowing Outfalls Only)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Sulfide ☐ Petroleum/gas ☐ Laundry ☐ Other:	☐ 1–Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color (color chart)	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange/Red ☐ Multi-Color ☐ Other:	☐ 1–Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1–Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage ☐ Suds and Foam ☐ Petroleum (oil sheen) ☐ Grease ☐ Other:	☐ 1–Few/slight; origin not obvious	☐ 2 – Some; indications of origin	☐ 3 - Some; origin clear
Do physical indictors (flowing) suggest an illicit discharge is present (Y/N):					

Section 5: On-Site Sampling / Testing (Flowing Outfalls Only)

PARAMETER	RESULT	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)	EQUIPMENT
Temperature		NA	NA	Thermometer
pH		6 – 9		5-in-1 Test Strip
Ammonia		<3 mg/L April – Oct < 8 mg/L Nov - March		Test Strip
Free Chlorine		NA	NA	5-in-1 Test Strip
Total Chlorine		< 0.05 mg/L		5-in-1 Test Strip
Phenols		< 0.1mg/L		Test Kit
Detergents as Surfactants		> 0.25 mg/L residential > 5 mg/L non-residential		Test Kit
Copper		<0.025 mg/L		Test Strip
Alkalinity		NA	NA	5-in-1 Test Strip
Hardness		NA	NA	5-in-1 Test Strip
Sample Location				

(Note NA values used for future tracing procedures)

Section 6: Data Collection for Lab testing (see flow chart)

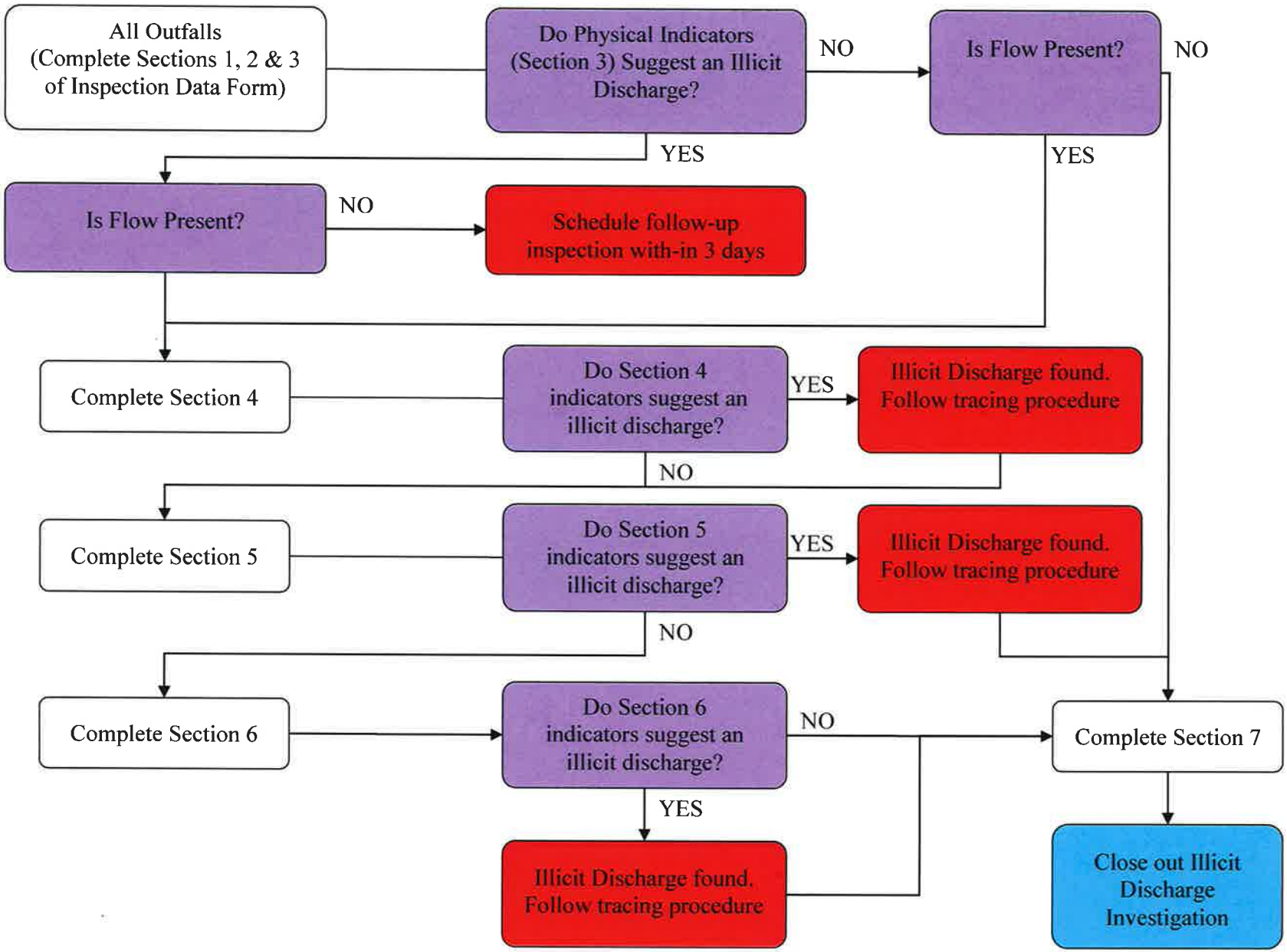
1. Sample for the lab?	☐ Yes	☐ No
2. If yes, collected from:	☐ Flow	☐ Pool

PARAMETER	RESULT (from lab)	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)
Fecal Coliform		400 per 100 mL	
Flouride		0.6 mg/l	
Potassium		Ammonium/Potassium ratio or > 20mg/l	

*note label sample with outfall number

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Outfall Inspection Procedure Flow Chart



Instructions for completing the *Stormwater Outfall Inspection Form*

Strike out incorrect entries with a single line; correct values or descriptions are written above or near the struck-out entries. Do not use a new data entry form to correct an incorrect entry. At the completion of each outfall inspection, the field crews are responsible for ensuring that a ***Stormwater Outfall Inspection Form*** has been completely and correctly filled out and that all data and remarks are legible.

Section 1: Background Data

Sub-watershed: The receiving water from the stormwater outfall inventory to be entered here.

Outfall ID: Enter the outfall identification number from the stormwater outfall inventory.

Date: To avoid confusion, dates are be written in the following manner: DAY MONTH YEAR. For example, 10 MARCH 2007.

Time: Military time (24-hour clock) to be used (for example, 8:30 a.m. would be written as 0830; likewise, 1:30 p.m. would be written as 1330).

Temperature: A concise description of the weather conditions at the time of the screening is to be recorded (for example, Clear, 75○ F).

Inspector: The name(s) of the field personnel.

Previous 48 Hours Precipitation: The total amount of precipitation during the 48 hours preceding the inspection is to be noted (for example, none-72 Hours or 0"=4 days). If the total precipitation is not known, it is appropriate to enter a qualitative assessment if the precipitation was minor. For example, *Drizzle-36 Hours* if appropriate. If the precipitation amount was significant, actual precipitation totals is obtained from a local rain gage, if available.

Photo's taken (Yes/No): Photographs are to be taken with a camera that superimposes a date and time on the film. The date and time should correspond to the date and time recorded on the data form.

Photo Numbers: If photographs are taken, the number(s) is recorded.

Land Use: Check all that apply, noting which land use is predominate. If the industrial box is checked, any known industries are listed to facilitate potential tracing efforts.

Section 2: Outfall Description

Type of Outfall: Storm Sewer (Closed Pipe) or Open Drainage (Swale/Ditch):
First check if the outfall is either from a Closed Pipe or Open Drainage. Then complete the following row to describe outfall characteristics.

Section 3: Physical Indicators

Indicators: Complete rows describing outfall characteristics (Outfall Damage, Deposits/Stains, Abnormal Vegetation, Poor pool quality, Pipe algae/growth). This section is filled out regardless of current flow conditions. No flow during the time of the inspection, does not rule out the potential of illicit discharges. Corroding or stained pipes, dead or absence of vegetation, are potential indicators of illicit discharges from direct or indirect (i.e. dumping) sources.

Likelihood: After inspecting the physical conditions of the outfall, the likelihood of an illicit discharge is assessed.

Flow Present (Yes/No): A *Yes* or *No* is entered here to indicate the presence or absence of dry-weather flow. If the outfall is submerged or inaccessible, "See Notes" is entered and an explanation provided in the "Notes" section.

Flow Description: A description of the quantity of the dry-weather flow is provided. Refer to Figure 6 of the SMPP.

Flow Chart Procedure:

- If *No* is entered in the "Flow Present" block and no non-flowing physical indicators appear present the inspection can be closed, skip to Section 7 of the form.
- If *No* is entered in the "Flow Present" block but indicators appear present, place the outfall on the follow-up inspection log, then the current inspection can be closed, skip to Section 7 of the form.
- If *Yes* is entered in the "Flow Present" block (regardless of the presence of non-flowing physical indicators), complete remainder of Section and proceed to Section 4.

Section 4: Physical Indicators (Flowing Outfalls Only)

Complete rows describing outfall characteristics (Odor, Color, Turbidity, and Floatables). This section is filled out for flowing outfalls only.

Odor: The presence of an odor is to be assessed by fanning the hand toward the nose over a wide-mouth container of the sample, keeping the sample about 6 to 8 inches from the face. Be careful not to be distracted by odors in the air. Provide a description of the odor, if present.

Color: The presence of color in the discharge is to be assessed by filling a clean glass sample container with a portion of the grab sample and comparing the sample with a color chart, if color is present. If a color chart is used, the number corresponding to the color matching the sample is to be entered in this blank. Color is not assessed by looking into the discharge. Refer to Table 3 of the SMPP.

Turbidity "clarity": Turbidity is a measure of the clarity of water. Turbidity may be caused by many factors, including suspended matter such as clay, silt, or finely divided organic and inorganic matter. Turbidity is a measure of the optical properties that cause light to be scattered and not transmitted through a sample. The presence of turbidity is to be assessed by comparing the sample to clean glass sample container with colorless distilled water.

Floatables: The presence of floating scum, foam, oil sheen, or other materials on the surface of the discharge are to be noted. Describe of any floatables present that are attributable to discharges from the outfall. Do not include trash originating from areas adjacent to the outfall in this observation.

Likelihood: After inspecting the physical conditions of the outfall discharge, the likelihood of an illicit discharge is assessed. If flowing physical indicators are present the tracing procedure are immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.

Flow Chart Procedure:

- If flowing physical indicators are present the tracing procedure is immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.
- If flowing physical indicators do not suggest an illicit discharge continue with the inspection by performing the on-site testing in Section 5.

Section 5: On-Site Sampling/Testing (Flowing Outfalls Only)

Parameters: Test strip or kit chemical analyses are conducted for the following parameters:

- pH, test strip,
- Color, color chart,
- Chlorine, test strip,
- Copper, test strip,
- Ammonia, test strip,
- Phenols, test kit, and
- Detergents, test kit.

Testing is done by either a test strip or test kit as applicable (refer to the equipment column). The results are compared with the "acceptable range" and the "within range" column is filled out with a Yes or No. Note that the Temperature, Alkalinity and Hardness are determined although these results do not need to be compared with an "acceptable range". These values are used to assist in determining the source of the illicit discharge during the tracing procedure.

Sampling Location: A description of the actual sampling location is to be recorded (for example, at end of outfall pipe). If the outfall is submerged or is inaccessible for sampling, an upstream sampling location may be required. A description of any upstream sampling locations is recorded here. Grab samples are collected from the middle, both vertically and horizontally, of the dry-weather flow discharge in a critically cleaned glass container. Samples can be collected by manually dipping a sample container into the flow.

Sampling Procedures: Use the following procedures for all test kit analyses:

1. Take a grab sample and swirl to ensure that the sample is well mixed.
2. Rinse the sample cup (25ml) twice with distilled water. Next, rinse the sample cup twice with water from the grab sample.
3. Fill the sample cup to the 25 ml mark, or as required by the instructions for the test kits. Hold the sample cup at eye level to ensure that measurements are accurate.
4. Conduct the test kit analyses following the manufacturer's instructions.
5. Dispose of the sample as follows:
   - If no chemical or reagents have been added to the sample, the water can be poured on the ground.
   - If any chemical or reagent is added to the sample, pour the water into a container marked "Liquid Waste" for proper disposal to a sanitary sewer system at the end of the day.
6. Rinse the sample cup three times with tap water and dry with a paper towel.

Flow Chart Procedure:

- If any parameter is outside of the "acceptable range" then an illicit discharge has likely been found. The tracing procedure is immediately implemented by one of the field crew. Testing can be stopped, and the second member of the field crew continues with the inspection by completing Section 7.
- If none of the parameters are outside of the acceptable range, proceed to Section 6.

Section 6: Data Collection for Lab Testing

Determine if the Yorkville-Bristol Sanitary District has adequate staff capacity to analyze the samples.

- If YBSD has adequate staff capacity, collect grab samples and provide them to YBSD. Note the location of the sample. Label the sample with the outfall ID number. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
- If YBSD does not currently have adequate capacity, determine if Sections 3 or 4 of the inspection form suggest an illicit discharge.
  - If Sections 3 or 4 suggest an illicit discharge contact and outside lab to perform the testing. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
  - If Sections 3 or 4 do not suggest an illicit discharge, note the outfall ID number. Place the outfall on the follow-up inspection log and proceed to Section 7 of the form. Re-inspect and sample the discharge when YBSD has adequate capacity.

Sample Location: The location of the sample is noted. Additionally, the sample is labeled with the outfall ID number. Use the city's sampling procedures. The following additional items are noted.

1. When you collect any samples you must fill out an ***Outfall Sampling Report.*** The report must document time you arrive on location, take the sample and get to the plant to drop off the sample.
2. A 500-ml glass bottle sample is used to collect the sample. If you are collecting a sample that has grease 2-250ml samples taken with a glass container are required.
3. If you use the sampling container that is on a rope, it must be washed with soap and water after every use.

Parameters: Grab samples and lab testing is performed. After lab results are available enter the results here.

- If any parameter is outside of the "acceptable range" then an illicit discharge has likely been found. The tracing procedure should be immediately implemented.
- If none of the parameters are outside of the acceptable then the investigation can be closed.

Section 7: Any Non-Illicit Discharge Concerns

Any problems or unusual features are to be entered here. If the outfall appears to be potentially impacted by inappropriate discharges, this can be recorded here. This section is to be completed even if no flow is observed.

City of Yorkville
Outfall Inspection Summary Form

Outfall ID No.	Inspection Date	Flow Observed?	Color	Turbidity	Odor?	Oil Sheen?	Scum?	Floatables?	Vegetation	Remarks

Stormwater Pollution Found in Your Area!

This is not a citation.

This is to inform you that our staff found the following pollutants in the storm sewer system in your area. This storm sewer system leads directly to

_____.

- ☐ Motor oil
- ☐ Oil filters
- ☐ Antifreeze/ transmission fluid
- ☐ Paint
- ☐ Solvent/degreaser
- ☐ Cooking grease
- ☐ Detergent
- ☐ Home improvement waste (concrete, mortar)
- ☐ Pet waste
- ☐ Yard waste (leaves, grass, mulch)
- ☐ Excessive dirt and gravel
- ☐ Trash
- ☐ Construction debris
- ☐ Pesticides and fertilizers
- ☐ Other





_____

For more information or to report an illegal discharge of pollutants, please call:

United City of Yorkville

630-553-4350

WHEN IT RAINS IT DRAINS

www.epa.gov/npdes/stormwater

EPA
United States Environmental Protection Agency

EPA 833-F-03-002
April 2003

Stormwater runoff is precipitation from rain or snowmelt that flows over the ground. As it flows, it can pick up debris, chemicals, dirt, and other pollutants and deposit them into a storm sewer system or waterbody.

Anything that enters a storm sewer system is discharged *untreated* into the waterbodies we use for swimming, fishing, and providing drinking water.

Remember:
Only Rain Down the Drain

To keep the stormwater leaving your home or workplace clean, follow these simple guidelines:



- Use pesticides and fertilizers sparingly.
- Repair auto leaks.
- Dispose of household hazardous waste, used auto fluids (antifreeze, oil, etc.), and batteries at designated collection or recycling locations.
- Clean up after your pet.
- Use a commercial car wash or wash your car on a lawn or other unpaved surface.
- Sweep up yard debris rather than hosing down areas. Compost or recycle yard waste when possible.
- Clean paint brushes in a sink, not outdoors. Properly dispose of excess paints through a household hazardous waste collection program.
- Sweep up and properly dispose of construction debris like concrete and mortar.



Reviewed By:	
Legal	■
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #12

Tracking Number

PW 2017-33

Agenda Item Summary Memo

Title: Ordinance amending City Code regarding truck traffic in the Caledonia Subdivision

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached memo.

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-33

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Public Works Committee
From: Bart Olson, City Administrator
CC:
Date: April 13, 2017
Subject: Code Amendment Regarding Restricting of Semi Trucks in Caledonia

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Summary

Consideration of an ordinance restricting truck traffic in the Caledonia subdivision, due to the request of a resident, memorializing a restriction on Corneils Rd, and proposing a restriction on Baseline Rd.

Background

City staff received an email complaint from a resident about large semi trucks using the Caledonia subdivision as a cut-through to Corneils Rd. While there is legal semi-traffic from home construction in the subdivision, the trucks in the complaint appear to be from the area businesses. Staff reviewed the matter and agreed that large semi trucks should not be using the residential subdivision as a pass-through to Corneils Rd. Accordingly, we've drafted an ordinance amending the City Code to prohibit said truck traffic. Trucks making a delivery to a home or a construction site would be exempt from this ordinance under normal Illinois Vehicle Code regulations, which is why that exemption is not explicitly referenced in the ordinance.

While reviewing the above matter, staff also realized that the City Code had never been amended to explicitly reference the Corneils Rd restriction. That amendment was added into the ordinance as a result. Also, City Engineer Sanderson and Public Works Director Dhuse recommended that the deteriorated surface course of Baseline Rd warranted a similar restriction. That amendment is also added into the ordinance.

Recommendation

Staff recommends approval of the attached ordinance.

Bart Olson

From: Bart Olson
Sent: Friday, March 31, 2017 12:18 PM
To: [redacted]
Cc: Ward3 Funkhouser; Ward3 Frieders; [redacted]
Subject: RE: Fwd: Caledonia- Semi truck traffic

Great, thanks. It's possible the sign may go up in the next few weeks, but the City will need to pass a City code amendment to enforce it through tickets. That could take a few more weeks.

Bart Olson, ICMA-CM
City Administrator
United City of Yorkville
630-553-8537 direct
630-553-4350 City Hall
630-308-0582 cell
bolson@yorkville.il.us
City of Yorkville 2.0: Facebook, Twitter, and YouTube

From: [redacted]
Sent: Friday, March 31, 2017 12:08 PM
To: Bart Olson
Cc: Ward3 Funkhouser; Ward3 Frieders; [redacted]
Subject: Re: Fwd: Caledonia- Semi truck traffic

Hi Bart,

We know a sign won't prevent all truck traffic, but if it can help minimize it, we would appreciate it. The majority of the traffic is from both CJ Insulation and Boombah, we do see some construction traffic recently, but it's quite clear when it's a trailer for one of those businesses. We often see the insulation trucks parked overnight right outside CJ. (They tend to drop quite a bit of insulation along the way!)

We're not trying to get the businesses into trouble or anything - CJ is actually a customer of ours, so no ill will towards them at all! But, we do recognize their semi trailers as a result. If we can just at least reduce the 18-wheeler traffic, we'll be happy!

Hope this helps! Any questions, let me know!

On Fri, Mar 31, 2017 at 11:00 AM, Bart Olson <BOlson@yorkville.il.us> wrote:

Hello [redacted]

We think the truck restriction in your subdivision is a good idea. Even after the restriction, my guess is that there will still be a few trucks a day through the subdivision while home construction occurs. For the trucks you've seen, do you think the majority of them are coming from Boombah or CJ Insulation?

Bart Olson, ICMA-CM

City Administrator

United City of Yorkville

630-553-8537 direct

630-553-4350 City Hall

630-308-0582 cell

bolson@yorkville.il.us

City of Yorkville 2.0: Facebook, Twitter, and YouTube

From: Chris Funkhouser [mailto:funkhouser.ward3@gmail.com]
Sent: Thursday, March 30, 2017 1:45 PM
To: Ward3 Frieders
Cc: [redacted] Bart Olson
Subject: Re: Fwd: Caledonia- Semi truck traffic

Thanks for the heads up Joel. I'll make sure to follow up on this.

Chris Funkhouser
Alderman - Ward 3
The United City of Yorkville
Funkhouser.ward3@gmail.com
p. 630-708-6605

On Mar 30, 2017 1:41 PM, "Joel Frieders" <joelfrieders.ward3@gmail.com> wrote:

Good afternoon gentlemen,

Attached is an email from 3rd ward/Caledonia resident [redacted] regarding unnecessary semi traffic up on Caledonia's awesome new roads.

Is her idea about putting up a no semi traffic sign up a possibility? Is there something in the MUTCD that says you can't?

What else can we do besides that?

Should this topic be placed on a public works agenda or is it a simple fix?

Please reply all when you have a chance to look at her email, and she is included on this forwarding as well.

thank you gentlemen

joel

---------- Forwarded message ----------
From: [redacted]
Date: Thu, Mar 30, 2017 at 1:34 PM
Subject: Caledonia- Semi truck traffic
To: Joel Frieders <joelfrieders.ward3@gmail.com>

Hi Joel,

Hope you are doing well! Wondering if we could put up a "no semi traffic" signs at the entrance to our neighborhood. (Past the companies like Boombah & CJ Insulation). There is already a no semi-traffic sign on Corneils. Trucks will try to cut through our neighborhood to Corneils.

Construction traffic is different, but these are just semi truck drivers trying to find shortcuts - and I think they sometimes get a little lost trying to get through, because it's not uncommon for them to take several laps around the neighborhood.

My concerns are for the life of the roads, I'm guessing the roads in the subdivision are not designed to support regular semi traffic, and also kid safety - we often have to contend with trucks while walking, riding bikes, etc.

On a daily basis, we probably see 5-7 trucks through the neighborhood.

Ordinance No. 2017-_____

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS REGULATING TRUCK AND COMMERCIAL VEHICLES; LOADS AND WEIGHTS

NOW THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. Title 6, Chapter 1, Section 6, of the United City of Yorkville Code of Ordinances is hereby amended by deleting paragraph A and replacing with:

A. The wheel and axle load and gross weight restrictions contained in 625 Illinois Compiled Statutes 5/15-111, as amended from time to time, are hereby adopted by Yorkville as if set forth verbatim herein, provided however, that:

East Main Street (from Illinois Route 47 to McHugh Road) and McHugh Road (from East Main Street to U.S. Route 34), Corneils Road (from Route 47 to Eldamain Road), Boombah Boulevard (from the entrance of the Caledonia subdivision approximately 2,150 feet west of Route 47 to Caledonia Drive), and Baseline Road (from Route 47 to Eldamain Road) shall have a gross vehicle weight limit of eight (8) tons.

The River Road Bridge over Blackberry Creek, identified by the Illinois department of transportation as structure 047-3007, shall have a weight limit of twenty two (22) tons for single unit vehicles, twenty nine (29) tons for combination vehicles with three (3) or four (4) axles, and thirty six (36) tons for combination vehicles with five (5) or more axles.

Section 2. If any Section, subsection, sentence, clause, phrase or portion of this Chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions hereof.

Section 3. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

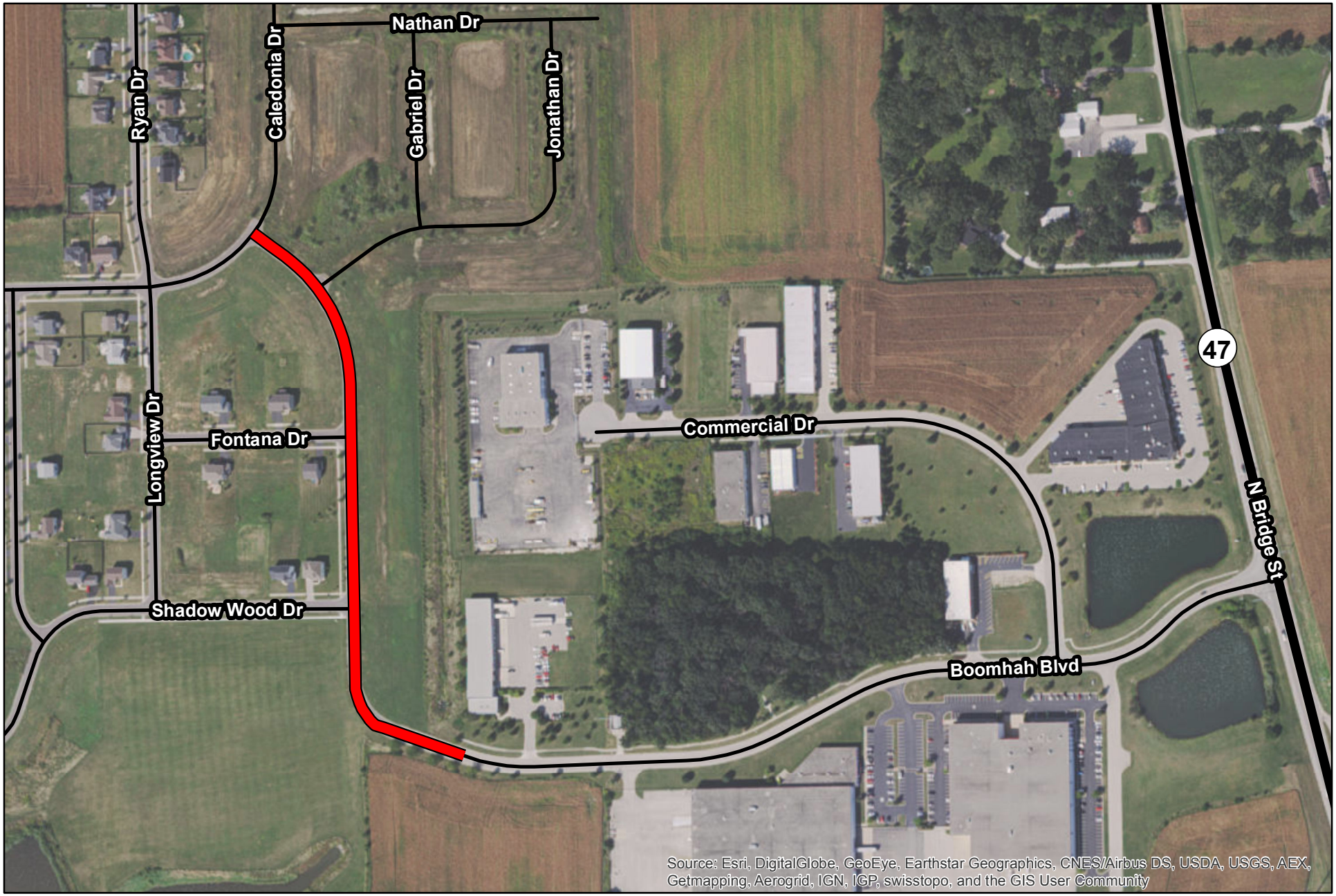
_____

CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

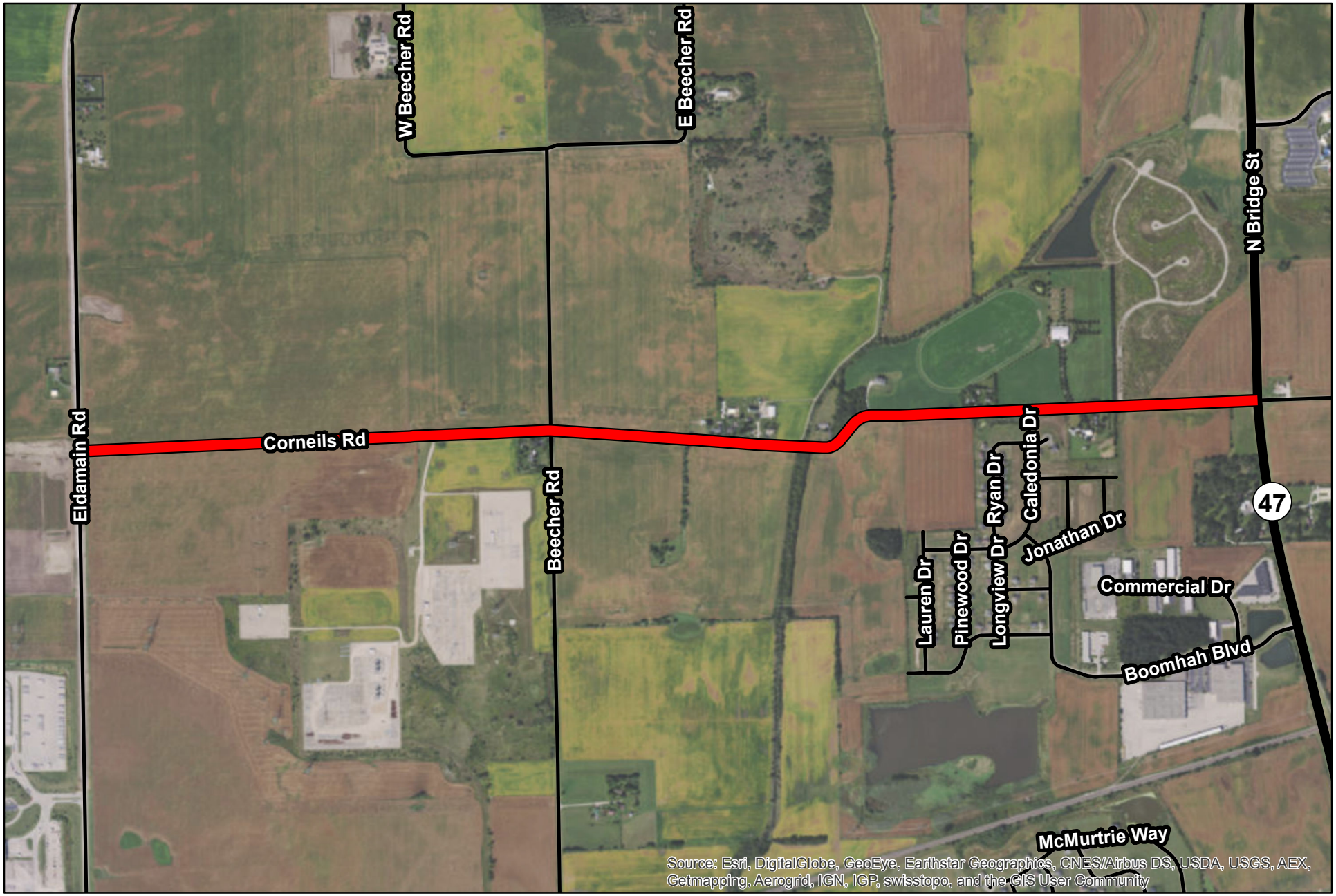
Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

_____
MAYOR



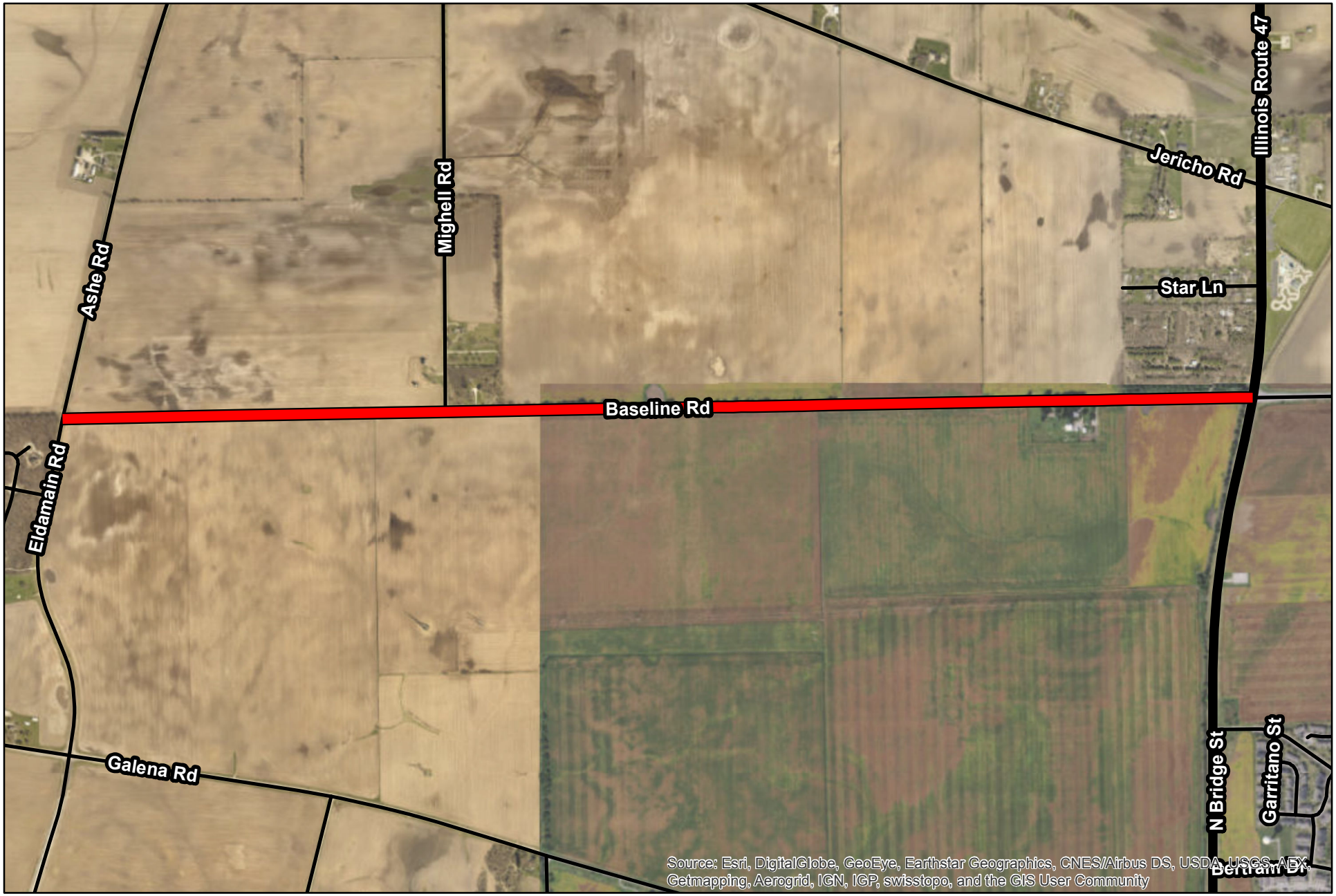
Boombah Boulevard | From Caledonia Entrance to Caledonia Drive

United City of Yorkville, Illinois
Yorkville GIS 2017



Corneils Road | From Route 47 to Eldamain Road

United City of Yorkville, Illinois
Yorkville GIS 2017



Baseline Road | From Route 47 to Eldamain Road

United City of Yorkville, Illinois
Yorkville GIS 2017

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #13

Tracking Number

PW 2017-34

Agenda Item Summary Memo

Title: Fox Hill and Sunflower SSA Management Services RFP

Meeting and Date: City Council – April 25, 2017

Synopsis: Recommendations to go out to RFP for Management Services for Fox Hill and Sunflower SSA

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-34

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Erin Willrett (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Public Works Committee
From: Erin Willrett, Assistant City Administrator
CC:
Date: April 18, 2017
Subject: Fox Hill and Sunflower SSA Management Services RFP

Summary

Recommendation to go out for proposals for Management Services of Fox Hill and Sunflower SSA.

Background

During the February 7, 2017 Public Works Committee meeting it was discussed that staff would like go out for proposals for the use of a professional property management company to administer the mowing and maintenance contract for Fox Hill and Sunflower Subdivisions and provide the necessary oversight to the contractor along with detailed weekly documentation to the City that will ensure a quality product for the residents of these subdivisions. Currently, the City has always performed these duties and absorbed the cost, in time spent, to administer these contracts. The Committee was supportive of staff's request. The Request for Proposal for Fox Hill and Sunflower SSA Management Services is attached for your review.

The RFP scope includes, a professional property management company to prepare bid packages and manage the bid process for any budgeted work, prepare annual operating budget, day to day interactions with the residents, provide the necessary oversight to the landscape contractor, and send bi-weekly property reports to the city ensuring a quality product for the residents of Sunflower Estates and Fox Hill subdivisions. The proposals are scheduled to be opened on May 26, 2017 at noon with services beginning in June, 2017.

Recommendation

Staff recommends going out for proposal for Management Services of Fox Hill and Sunflower SSA.



United City of Yorkville, Illinois

Request for Proposal

for Management Services for
Fox Hill and Sunflower Estates subdivisions

Optional Pre-Bid Conference:	**May 12, 2017 at 10:00AM**
Proposals Due:	**May 26, 2017 at 12:00PM**

United City of Yorkville, Illinois
800 Game Farm Road, Yorkville, Illinois 60560
Request for Proposal

The United City of Yorkville, Illinois will accept proposals for:

> A professional property management company to prepare bid packages and manage the bid process for any budgeted work, prepare annual operating budget, day to day interactions with the residents, provide the necessary oversight to the landscape contractor, and send bi-weekly property reports to the city ensuring a quality product for the residents of Sunflower Estates and Fox Hill subdivisions

It is the intent of the City to negotiate an agreement for services based on the bid specifications contained in this RFP.

Proposals will be received at the City Hall, at 800 Game Farm Road, Yorkville, Illinois 60560 **until 12:00 PM on May 26, 2017 (the closing date).** Proposals not physically received by the City by 12:00 PM on May 26, 2017 will be returned, unopened to the firm. Emailed or faxed bids will not be accepted. Take note that overnight deliveries may not arrive on the day of the bid opening prior to 12:00 PM. City Hall is open Monday through Friday, 8:00AM to 4:30PM.

All Proposals shall be sealed and addressed as follows:

United City of Yorkville
RE: (Vendor Name)
Bid for Management Services at Sunflower Estates & Fox Hill
Attention: Annie Callahan, Purchasing Manager
800 Game Farm Road
Yorkville, IL 60560

General questions regarding this Request for Proposals shall be directed to Annie Callahan, Purchasing Manager at 630-553-8566. All detailed questions concerning the actual specifications are to be forwarded by email to Eric Dhuse at edhuse@yorkville.il.us not less than ten (10) business days prior to the scheduled closing date.

The person or firm submitting the proposal shall at all times observe and conform to all laws, ordinances, and regulations of the Federal, State, and City which may in any manner affect the proposal.

The City Council reserves the right to accept or reject any and all proposals, to waive technicalities and to accept or reject any item of any proposal.

No informal communication shall occur regarding this RFP, including requests for information, or speculation between Offeror's or any of their individual members and any City elected official, employee or independently contracted employees or consultants. Failure to comply with this provision may result in offeror's proposal being removed from consideration

Any cost incurred by the Offeror in preparation, transmittal, or presentation of any information or material submitted in response to the RFP, shall be borne solely by the Offeror.

General Overview

The City of Yorkville (herein called the "City") is seeking a professional management company (herein called the "Contractor") to perform high quality management services for their SSA areas: Fox Hill and Sunflower Estates subdivisions beginning on the later of the execution of a contract agreement or June 1, 2017 . The subdivisions site maps are attached. Fox Hill is located West of Route 47 on Route 34 and Sunflower Estates is located North of Route 71 on the West side of Route 47.

The nature of the service requested is a professional management company to manage the daily operations of the SSA areas of Fox Hill and Sunflower Estates to ensure a quality product for the residents of these said subdivisions.

The City is governed by a Mayor and eight elected Alderman. The appointed City Administrator is responsible for day-to-day operations. Departments include Administration, Finance, Community Development, Building Safety and Zoning, Public Works, Engineer, Police, and Parks and Recreation. Budgeted expenditures are $33,275,572, including General Fund expenditures of $14,803,097. Yorkville has 168 full-time equivalent employees.

Pre-Bid Conference

There will be an optional pre-bid conference at the City Hall beginning at 10:00 a.m. on May 12, 2017, at which time staff will answer proposal questions. The City will offer site tours immediately following the pre-bid conference on May 12, 2017. Contractor's representatives are encouraged to inspect the subdivision areas prior to this conference to have questions available that will help them provide a comprehensive bid under this proposal.

Bid Specifications

1. Bid preparation – follow a formal bid process to prepare a Request for Proposal (RFP). RFP's for the SSA can include but not be limited to trail maintenance (sealcoating and/or patching), pond naturalization, landscape maintenance, and entry sign monuments. Bid preparation of RFP documents include but is not limited to advertise in the local newspapers, answer bid questions, distribute addendums if necessary, hold bidder's meetings for questions, collect and open bids, prepare bid tabulation sheets, mail bid tabulation sheets to all bidders and meet with winning contractor to go over the specifications to make sure that all

aspects of the contract are agreed upon. The City has the final approval on all contracts.

2. Preparing a budget for the SSA areas - complete a budget estimate for both SSA areas. This can include multiyear planning to pay for large projects such as pond naturalization and trail patching and sealing.
3. Resident calls – become the point of contact for the residents of Fox Hill and Sunflower Estates subdivisions. Handle all daily calls from residents.
4. Contractor interaction – interact with the landscape contractor on a weekly basis by email, phone or text
5. Maintain records of weekly reports at company's location for review, if necessary
6. Service level oversight – weekly drive through each SSA area and assess the quality of work that the contractor is providing, look for possible problems (weeds, lack of mulch, trees that need trimming, sign maintenance, etc.) and provide a bi-weekly report to the city.
7. Meet with the Director of Public Works quarterly to discuss issues and upcoming projects.
8. Manage special projects – special projects can include but not be limited to monument sign maintenance, trail patching and/or sealcoating and pond naturalization.

UNITED CITY OF YORKVILLE, ILLINOIS
SPECIAL CONDITIONS

1. *Persons submitting proposals Qualifications*. If requested, the interested Person submitting the proposal must provide a detailed statement regarding the business and technical organization of the Person submitting the proposal that is available for the work that is contemplated. Information pertaining to financial resources, experiences of personnel, previously completed projects, plant facilities, and other data may also be required to satisfy the City that the Person submitting the proposal is equipped and prepared to fulfill the Contract should the Contract be awarded to him/her. The competency and responsibility of Persons submitting proposals and of their proposed subcontractors will be considered in making awards.

If requested by the City, the Person submitting the proposal shall include a complete list of all equipment and manpower available to perform the work intended on the Plans and Specifications. The list of equipment and manpower must prove to the City that the Person submitting the proposal is well qualified and able to perform the work, and it shall be taken into consideration in awarding the Contract.

The City may make such investigations as it deems necessary, and the Person submitting the proposal shall furnish to the City all such information and data for this purpose as the City may request. A responsible Person submitting the proposal is one who meets all of the following requirements:

- Have adequate financial resources or the ability to secure such resources.
- Have the necessary experience, organization, and technical qualifications, and has or can acquire, the necessary equipment to perform the proposed Contract.
- Is able to comply with the required performance schedule or completion date, taking into account all existing commitments.
- Has a satisfactory record of performance, integrity, judgment, and skills.
- Is qualified and eligible under all applicable laws and regulations.

If the Person submitting the proposal possesses a current Illinois Department of Transportation "Certificate of Eligibility" with an amount for the work specified at least equal to the minimum amount of qualification indicated on the Legal Notice he may choose to provide the City a copy of the certificate in lieu of providing the above mentioned Persons submitting proposals Qualification requirements.

2. *Basis of Payment:* The City shall make monthly payments for services performed under this contract, pending receipt of the contractor's correct monthly invoice.

3. *General Guarantee*: Neither the final certificate of payment nor any provision in the Contractor Documents, nor partial or entire occupancy of the premises by the City, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of final acceptance of the work unless a longer period is specified. The United City of Yorkville will give notice of observed defects with reasonable promptness. The Contractor shall guarantee all materials and workmanship as defined by the Performance Bond, Labor and Material Payment Bond, and Maintenance Bond requirements, if required.

4. Termination of Contract: the United City of Yorkville reserves the right to terminate the whole or any part of this Contract, upon written notice to the Contractor, in the event that sufficient funds to complete the Contract are not appropriated by the corporate authorities of the United City of Yorkville.

The United City of Yorkville further reserves the right to terminate the whole or any part of this Contract, upon written notice to the Contractor, in the event of default by the Contractor. Default is defined as failure of the Contractor to perform any of the provisions of this Contract, or failure to make sufficient progress so as to endanger performance of this Contract in accordance with its terms. In the event of default and termination, the United City of Yorkville may procure, upon such terms and in such manner as the United City of Yorkville may deem appropriate, supplies or services similar to those so terminated.

The Contractor shall be liable for any excess costs for such similar supplies or service unless acceptable evidence is submitted to the United City of Yorkville that failure to

perform the Contract was due to causes beyond the control and without the fault or negligence of the Contractor.

UNITED CITY OF YORKVILLE, ILLINOIS
GENERAL CONDITIONS

These General Conditions apply to all proposals requested and accepted by the City and become a part of the contract unless otherwise specified. Persons submitting proposals or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting proposals. The City assumes that submission of a proposal means that the person submitting the proposal has familiarized himself with all conditions and intends to comply with them unless noted otherwise.

1. **Forms** – All proposals must be submitted on the forms provided, complete with all blank spaces filled in and properly signed in ink in the proper spaces. All proposal forms and Proposal packets are available online at www.yorkville.il.us or at the United City of Yorkville city hall which is located at 800 Game Farm Rd., Yorkville, Illinois and when completed delivered to the same Office prior to the proposal closing date and time. Persons submitting proposals may attach separate sheets for the purpose of explanation, exception, or alternative proposal and to cover required unit prices.

2. **Submittal of Proposal** – Proposals must be submitted to the attention of the Purchasing Manager of the United City of Yorkville.

3. **Examination of Proposal Forms, Specifications, and Site** – The person submitting the proposal shall carefully examine the proposal forms which may include the request for proposal, instruction to Persons submitting proposals, general conditions, special conditions, plans, specifications, proposal form, bond, and any addenda to them, and sites of the proposed work (when known) before submitting the proposal. The person submitting the proposal shall verify all measurements relative to the work, shall be responsible for the correctness of same. The person submitting the proposal will examine the site and the premises and satisfy themselves as to the existing conditions under which the person submitting the proposal will be obligated to operate. Failure of the person submitting the proposal to notify the City, in writing, of any condition(s) or measurement(s) making it impossible to carry out the work as shown and specified, will be construed as meaning no such conditions exist and no additional moneys will be added to the contract.

   The submission of the proposal shall be considered conclusive evidence that the person submitting the proposal has investigated and is satisfied as to all conditions

to be encountered in performing the work, and is fully informed as to character, quality, quantities, and costs of work to be performed and materials to be furnished, and as to the requirements of the proposal forms. If the proposal is accepted, the person submitting the proposal will be responsible for all errors in his proposal resulting from his failure or neglect to comply with these instructions, and the City shall not be responsible for any charge for extra work or change in anticipated profits resulting from such failure or neglect.

4. **Scope of Work** – The person submitting the proposal shall supply all required supervision, skilled labor, transportation, new materials, apparatus, and tools necessary for the entire and proper completion of the work. This work shall be completed to the satisfaction of the City.

5. **Completeness** – All information required by the Request for Proposal must be supplied to constitute a responsive proposal. The Person submitting the proposal shall include the completed Proposal Sheet. The City will strictly hold the person submitting the proposal to the terms of the proposal. The proposal must be executed by a person having the legal right and authority to bind the person submitting the proposal.

6. **Error in Proposals** – When an error is made in extending total prices, the unit proposal price and/or written words shall govern. Otherwise, the person submitting the proposal is not relieved from errors in proposal preparation. Erasures in proposals must be explained over signature of person submitting the proposal.

7. **Withdrawal of Proposals** – A written request for the withdrawal of a proposal or any part thereof may be granted if the request is received by the Director of Parks and Recreation prior to the Closing Date.

8. **Person submitting the proposal Interested in More than One Proposal** – Unless otherwise specified, if more than one proposal is offered by any one party, by or in the name of his or their agent, partner, or other persons, all such proposals may be rejected. A party who has quoted prices on work, materials, or supplies to other Persons submitting proposals is not thereby disqualified from quoting prices to other Persons submitting proposals or from submitting a proposal directly for the work, materials, or supplies.

9. **Person submitting the proposal's qualifications** – No award will be made to any person submitting the proposal who cannot satisfy to the City that they have sufficient ability and experience in this class of work, as well as sufficient capital and equipment to do the job and complete the work successfully within the time named (i.e. responsible). The City's decision or judgment on these matters shall be final and binding. The City may make such investigations as it deems necessary. The person submitting the proposal shall furnish to the City all information and data the City may request for the purpose of investigation.

10. **Proposal Award for All or Part** – Unless otherwise specified, proposals shall be submitted for all of the work or items for which proposals are requested. The City reserves the right to make award on all items, or any of the items, according to the best interests of the City.

11. **Price** – Management fees will be a flat monthly rate for all work described in the Specifications as noted above. The City is exempt, by law, from paying State and City Retailer's Occupation Tax, State Service Occupation and Use Tax and Federal Excise Tax. The City will supply the successful person submitting the proposal with its tax exemption number.

12. **Consideration of Proposal** – No proposal will be accepted from or contract awarded to any person, firm or corporation that is in arrears or is in default to the City upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to the City or had failed to perform faithfully any previous contract with the City.

    The person submitting the proposal, if requested, shall present within 48 hours evidence satisfactory to the City of performance ability and possession of necessary facilities, pecuniary recourses and adequate insurance to comply with the terms of these specifications and contract documents.

13. **Execution of Contract** – The successful person submitting the proposal shall, within fourteen (14) days after notification of the award: (a) enter into a contract in writing with the City covering all matters and things as are set forth in the specifications and his proposal and (b) carry insurance acceptable to the City, covering public liability, property damage, and workmen's compensation.

    After the acceptance and award of the proposal and upon receipt of a written purchase order executed by the proper officials of the City, this Instruction to Persons submitting proposals, including the specifications, will constitute part of the legal contract between the United City of Yorkville and the successful person submitting the proposal.

14. **Compliance with All Laws** – All work under the contract must be executed in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations which may in any manner affect the preparation of the proposal or performance of the contract.

15. **Prevailing Wage** – Not less than the prevailing rate of wages as established by the City shall be paid by the Contractor and each subcontractor to its laborers, workers, and mechanics constructing public works under this contract as determined by the Illinois Department of Labor pursuant to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.). It shall be the responsibility of the Contractor to monitor the prevailing wage rates for any increase in rates during the contract and adjust wage rates accordingly. The current prevailing wage rates are available on the Illinois

Department of Labor web site at www.state.il.us/agency/idol or by calling the United City of Yorkville at 630-553-4350.

The Contractor and its subcontractors shall comply with Section 5 of the Act that requires the Contractor and its subcontractors to submit to the City monthly certified payroll records along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the Contractor or subcontractor is aware that filing records it knows to be false is a Class B misdemeanor. Each month's certified payroll(s) must be filed with the City before the end of the next month or prior to payment by the City for work that includes that payroll.

16. **Compliance with the Substance Abuse Prevention on Public Works Projects Act** – The Contractor and its Subcontractors shall comply with the Substance Abuse Prevention on Public Works projects Act (820 ILCS 265/1 et seq.) and prior to commencing work on a "public works" project (as defined in the Prevailing Wage Act) file with the City its program to comply with the Act or file that portion of its collective bargaining agreement that deals with the matters covered by the Act.

17. **Equal Employment Opportunity** – During the performance of the contract and/or supplying of materials, equipment, and suppliers, person submitting the proposal must be in full compliance with all provisions of the Acts of the General Assembly of the State of Illinois relating to employment, including equal opportunity requirements.

18. **Contract Alterations** – No amendment of a contract shall be valid unless made in writing and signed by the City Administrator or his authorized agent.

19. **Notices** – All notices required by the contract shall be given in writing.

20. **Nonassignability** – The Contractor shall not assign the contract, or any part thereof, to any other person, firm, or corporation without the previous written consent of the City Administrator. Such assignment shall not relieve the Contractor from his obligations, or change the terms of the contract.

21. **Indemnity** – To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify, and hold harmless the City, its officials, agents, and employees, against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, cost, and expenses, which may in anywise accrue against the City, its officials, agents, and employees, arising in whole or in part or in consequence of the performance of this work by the Contractor, its employees, or subcontractors, or which may anywise result therefore, except that arising out of the sole legal cause of the City, its agents, or employees, the Contractor shall, at its own expense, appear, defend, and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be

rendered against the City, its officials, agents, and employees, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same.

Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep, and save harmless and defend the City, its officials, agents, and employees as herein provided.

22. **Insurance** – In submission of a proposal, the person submitting the proposal is certifying that he has all insurance coverages required by law or would normally be expected for person submitting the proposal's type of business. Commercial General Liability Insurance: Contractor shall provide commercial general liability insurance policy that includes products, operations and completed operations (with no exclusion for sexual abuse or molestation). Limits should be at least: Bodily injury & property damage with an occurrence limit of $1,000,000: Personal & advertising injury limit of $1,000,000 per occurrence: General aggregate limit of $2,000,000 (other than products and completed operations): Products and completed operations aggregate limit of $2,000,000. The policy shall name the City as an additional insured. Such coverage will be provided on an occurrence basis and will be primary and shall not contribute in any way to any insurance or self- insured retention carried by the City. Such coverage shall contain a broad form contractual liability endorsement or similar wording within the policy form.

23. **Default** – The City may terminate a contract by written notice of default to the Contractor if:

    a. The Contractor fails to make delivery of the materials or perform the services within the time specified in the proposal, or

    b. fails to make progress so as to endanger performance of the contract, or

    c. fails to provide or maintain in full force and effect, the liability and indemnification coverages or performance bond as required.

    If the City terminates the contract, the City may procure supplies or services similar to those so terminated, and the Contractor shall be liable to the City for any excess costs for similar supplies and services, unless the Contractor provides acceptable evidence that failure to perform the contract was due to causes beyond the control and without the fault or negligence of the Contractor.

24. **Inspection** – The City shall have a right to inspect, by its authorized representative, any material, components, or workmanship as herein specified. Materials, components, or workmanship that has been rejected by the authorized representative as not in accordance with the terms of the specifications shall be replaced by the Contractor at no cost to the City.

25. **Supplementary Conditions** – Wherever special conditions are written into the specifications or supplementary conditions which are in conflict with conditions stated in these Instructions to Person submitting the proposal, the conditions stated in the specifications or supplementary conditions shall take precedence.

26. **Permits and Licenses** – The successful person submitting the proposal and their subcontractor(s) shall obtain, at their own expense, all permits and licenses which may be required to complete the contract. Fees for all City permits and licenses shall be waived.

27. **Person submitting the proposal's Certification** – - In compliance with the Illinois State Law that requires each person submitting the proposal to file a certification regarding proposal rigging and proposal rotating and that it is not delinquent in its taxes.

28. **Change Orders** – After the contract award, changes in or additions to the work and/or a change in the amount of money to be paid to the person submitting the proposal must be the result of an approved change order first ordered by the Director of the lead department and approved by the City Administrator and/ or City Council.

29. **Time of Completion** – The successful person submitting the proposal shall completely perform its proposal in strict accordance with its terms and conditions within the number of consecutive calendar days after notification of award of the contract as stated in the proposal proposal.

30. **Payment** – Payment will be made within sixty (60) days after acceptance of a correct invoice for the work as covered within the contract documents.

31. **Guarantees and Warranties** – All guarantees and warranties required shall be furnished by the successful person submitting the proposal and shall be delivered to the City before final payment on the contract is issued.

32. **Waiver of Lien** – where applicable a waiver of lien and contractor's affidavit must be submitted by the successful person submitting the proposal, verifying that all subcontractors and material invoices have been paid prior to the City approving final payment.

Notes to Design and Proposal:

I, _____, do represent that I am (title) _____ of (company) _____, and that the attached submittal complies in all respects with the safety and accessibility standards as set forth in this request for proposals either by inclusion or by reference. **Please attach required submittals and any additional supporting information.**

___ Our firm has not altered any of the written texts within this document. Only those areas requiring input by the respondent have been changed or completed.

___ Our firm will comply with the Prevailing Wage requirements as outlined in section entitled "*A. General Conditions"* and Public Act 095-0635.

If it is the Contractor's intention to utilize a subcontractor(s) to fulfill the requirements of the Contract, the City must be advised of the subcontractor's company name, address, telephone and fax numbers, and a contact person's name at the time of proposal submittal.

	YES	NO
Will you be utilizing a subcontractor?	____	____
If yes, have you included all required Information with your proposal submittal?	____	____

I hereby certify that the item(s) proposed is/are in accordance with the specifications as noted and that the prices quoted are not subject to change; and that

The Person submitting the proposal is not barred by law from submitting a proposal to the City for the project contemplated herein because of a conviction for prior violations of either Illinois Compiled Statutes, 720 ILCS 5/33E-3 (Proposal Rigging) or b720 ILCS 5/33-4 (Proposal Rotating); and that

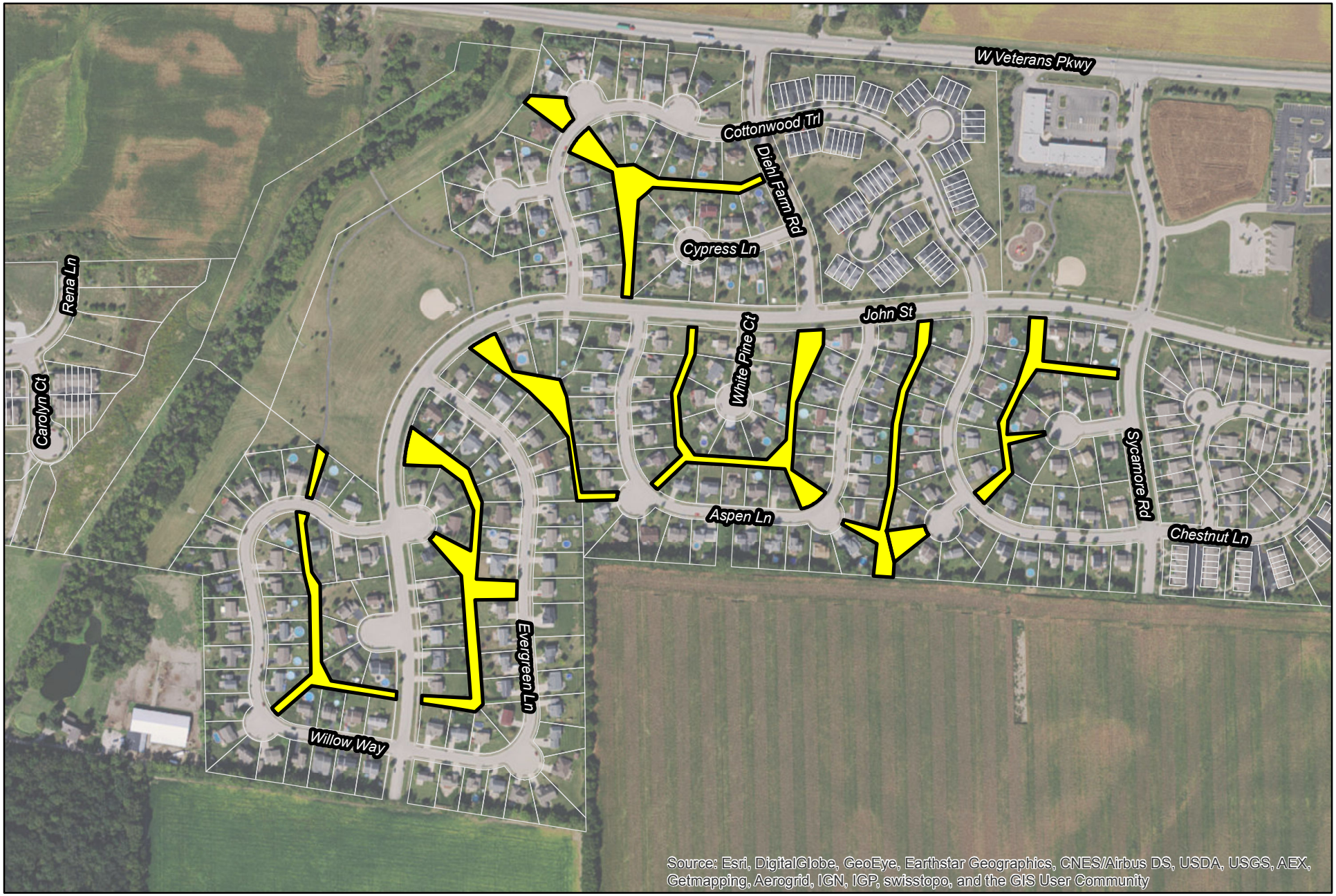
The Person submitting the proposal is not delinquent in payment of any taxes to the Illinois Department of Revenue in accordance with 65 ILCS 5/11-42.1; and that

The Person submitting the proposal provides a drug free workplace pursuant to 30 ILCS 580/1, *et seq*., and that

The Person submitting the proposal certifies they have a substance-abuse program and provide drug testing in accordance with 820 ILCS 130/11G, Public Act 095-0635; and that

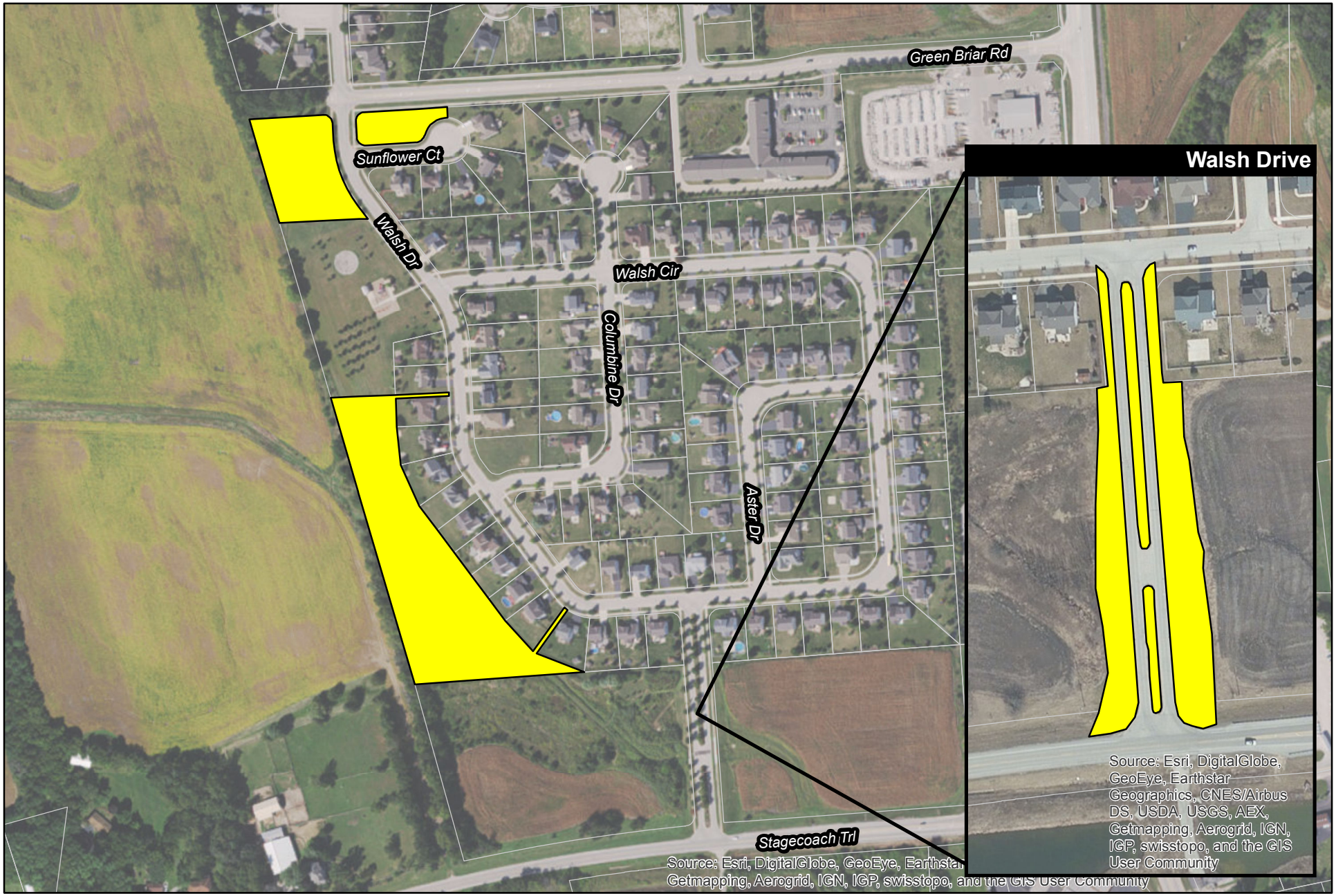
The Person submitting the proposal is in compliance with the Illinois Human Rights Act 775 ILCS 5/1.101 *et seq*. including establishment and maintenance of sexual harassment policies and program.

Firm Name	Signed Name and Title
Street Address	Print Name and Title
City State Zip	E-mail Address
Phone Number	Fax Number
Date	



Fox Hill SSA Mowing and Maintenance Areas

United City of Yorkville, Illinois
Yorkville GIS 2017



Sunflower Estates SSA Mowing and Maintenance Areas

United City of Yorkville, Illinois
Yorkville GIS 2017

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	■
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #14

Tracking Number

PW 2017-35

Agenda Item Summary Memo

Title: Water Study Update

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached.

Council Action Previously Taken:

Date of Action: PW – 4/18/17 Action Taken: Moved forward to CC consent agenda.

Item Number: PW 2017-35

Type of Vote Required:

Council Action Requested:

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Engineering Enterprises, Inc.



Comprehensive Water Works System Master Plan - 2016

March 2017

52 Wheeler Road, Sugar Grove, IL 60554 ~ (630) 466-6700 tel ~ (630) 466-6701 fax ~ www.eeiweb.com

WATER WORKS SYSTEM MASTER PLAN

United City of Yorkville, Kendall Co, IL

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COMPREHENSIVE WATER WORKS SYSTEM MASTER PLAN - 2016

United City of Yorkville, IL

ACKNOWLEDGEMENTS

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Alderman	Ken Koch
Alderman	Jacquelyn Milschewski
Alderman	Larry Kot
Alderman	Chris Funkhouser
Alderman	Joel Frieders
Alderman	Seaver Tarulis
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Finance Director
Rob Fredrickson

Public Works Director
Eric Dhuse

Community Development Director
Krysti Barksdale-Noble

Water Department Foreman
Tom Konen

ABBREVIATIONS	MEANING
ADD	AVERAGE DAY DEMAND
AMCL	ALTERNATIVE MAXIMUM CONTAMINANT LEVEL
AWWA	AMERICAN WATER WORKS ASSOCIATION
BAC	BIOLOGICALLY ACTIVATED CARBON
BCL	BOTTOM CAPACITY LINE
BMP	BEST MANAGEMENT PRACTICE
BP/PRV	BOOSTER PUMPING / PRESSURE REDUCING VALVE
BPS	BOOSTER PUMP STATION
CCL	CONTAMINANT CANDIDATE LIST
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CLCJAWA	CENTRAL LAKE COUNTY JOINT ACTION WATER AGENCY
CITY	UNITED CITY OF YORKVILLE
CIP	CAPITAL IMPROVEMENT PROJECT
CMAP	CHICAGO METROPOLITAN AGENCY FOR PLANNING
CMAP PLAN	2050: NORTHEASTERN ILLINOIS REGIONAL WATER SUPPLY/DEMAND PLAN
CT	CURRENT TRENDS
DBP	DISINFECTANT/DISINFECTION BYPRODUCT
DWC	DUPAGE WATER COMMISSION
EWST	ELEVATED WATER STORAGE TANK
FBRR	FILTER BACKWASH RECYCLING RULE
FF	FIRE FLOW
FPS	FEET PER SECOND
FT	FOOT
GAL	GALLON(S)
GIS	GRAPHICAL INFORMATION SYSTEM
GPCD	GALLONS PER CAPITA PER DAY
GPM	GALLONS PER MINUTE
GST	GROUND STORAGE TANK
GWR	GROUND WATER RULE (2006)
GWS	GROUNDWATER SYSTEM

GWUDI	GROUND WATER UNDER THE DIRECT INFLUENCE OF SURFACE WATER
HE	HIGH EFFICIENCY
HAA5	HALOACETIC ACIDS
HGL	HYDRAULIC GRADE LINE
HET	HIGH EFFICIENCY TOILET
IDSE	INITIAL DISTRIBUTION SYSTEM EVALUATION
IDNR	ILLINOIS DEPARTMENT OF NATURAL RESOURCES
IEMA	ILLINOIS EMERGENCY MANAGEMENT AGENCY
IEPA	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
IESWTR	INTERIM ENHANCED SURFACE WATER TREATMENT RULE
IN	INCH(ES)
ILI	INFRASTRUCTURE LEAKAGE INDEX
ISGS	ILLINOIS STATE GEOLOGICAL SURVEY
ISO	INSURANCE SERVICE OFFICE
ISWS	ILLINOIS STATE WATER SURVEY
IWC	ILLINOIS WATER COMPANY
JAWA	JOINT ACTION WATER AGENCY
LCR	LEAD AND COPPER RULE (1991)
LRAA	LOCATIONAL RUNNING ANNUAL AVERAGE
LRI	LESS RESOURCE INTENSIVE
LT2SWTR	LONG TERM 2 SURFACE WATER TREATMENT RULE
MCL	MAXIMUM CONTAMINANT LEVEL
MCLGs	MAXIMUM CONTAMINATE LEVEL GOALS
MOU	THE CALIFORNIA MEMORANDUM OF UNDERSTANDING
MMM	MULTIMEDIA MITIGATION
MRDLGs	MAXIMUM RESIDUAL DISINFECTANT LEVEL GOALS
MRDLs	MAXIMUM RESIDUAL DISINFECTANT LEVELS
MDD	MAXIMUM DAY DEMAND
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MG/L	MILLIGRAMS PER LITER
MHD	MAXIMUM HOUR DEMAND (PEAK HOUR DEMAND)
MRI	MORE RESOURCE INTENSIVE
MSL	MEAN SEA LEVEL

MTBE	METHYL-T-BUTYL ETHER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NSMJAWA	NORTHWEST SUBURBAN MUNICIPAL JOINT ACTION WATER AGENCY
PCI/L	PICOCURIES PER LITER
PE	POPULATION EQUIVALENT
PLC	PROGRAMMING LOGIC CONTROLLERS
PPB	PARTS PER BILLION
PPC	PUBLIC PROTECTION CLASSIFICATION
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
RO	REVERSE OSMOSIS
RTBR	ROAD TO BETTER ROADS
RWSP	REGIONAL WATER SUPPLY PLAN
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SDWA	SAFE DRINKING WATER ACT
SIU	SOUTHERN ILLINOIS UNIVERSITY CARBONDALE
SF	SQUARE FEET
SFU	SINGLE FAMILY UNIT
SMCL	SECONDARY MAXIMUM CONTAMINANT LEVEL
TCL	TOP CAPACITY LINE
TCR	TOTAL COLIFORM RULE
TTHM	TOTAL TRIHALOMETHANE
UCM	UNREGULATED CONTAMINANT MONITORING
UCMR	UNREGULATED CONTAMINANT MONITORING RULES
UG/L	MICROGRAMS PER LITER
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
USGS	UNITED STATES GEOLOGICAL SURVEY
UV-AOP	ULTRA VIOLET ADVANCED OXIDATION PROCESS
VFD	VARIABLE FREQUENCY DRIVE
WIFIA	WATER INFRASTRUCTURE FINANCE AND INNOVATION ACT
WM	WATER MAIN
WRT	WATER RECLAMATION TECHNOLOGY, LLC
WTP	WATER TREATMENT PLANT
WWTF	WASTEWATER TREATMENT FACILITY

EXECUTIVE SUMMARY

The United City of Yorkville is a flourishing community that is situated on the western edge of the Chicago suburbs. The City is the County Seat of Kendall County and has many scenic and recreational assets. Much like the surrounding communities, Yorkville saw a decrease in development during the economic downturn. Recently, Yorkville has once again begun to see an increase in growth within the City.

Meanwhile, regional projections suggest the population in Northeastern Illinois (11 county region of Cook, Lake, DuPage, Will, Kane, Kendall, McHenry, Dekalb, Boone, Kankakee and Grundy) may increase to more than 12 million by 2050, which is an increase of nearly 4 million from the 2000 census population. With this increase in growth, there will be additional demand on the region's water resources. Regional water planning by the Chicago Metropolitan Agency For Planning (CMAP) led Regional Water Supply Planning Group (RWSPG) have quantified the water supply and demand relationship throughout the region, and have concluded water conservation is necessary to provide for a sustainable region. In addition, there are portions of Northeastern Illinois whose current water supply will not be sustainable even with conservation and without growth.

Given the anticipated growth, the City wisely decided it was an ideal time to reevaluate the long-term expansion of the City's Water Works System. Therefore, the City embarked on completing this Comprehensive Water Master Plan. The main goal of this plan is to provide planning to maintain a sustainable and cost-efficient Water Works System for current and projected future water uses. In addition to evaluating the needs for the United City of Yorkville alone, the report will evaluate the needs for the combined communities of Montgomery, Yorkville and Oswego in order to determine the feasibility of combining water procurement and treatment resources. This master plan also evaluates water demands based on business as usual or current trends (CT) scenarios, as well as a less resource intensive (LRI) scenario that would occur if Yorkville committed to moderate water conservation best management practices. Less water use typically results in less infrastructure needs. Finally, this report outlines the capital costs savings that would be associated with moderate water conservation.

The Water Works System Master Plan is divided into ten sections. A summary of each of the sections follows.

Introduction

The current United City of Yorkville corporate limits encompasses about 20.15 square miles while the planning area outside of the corporate boundary adds another 52.77 square miles of land for a total of 72.92 square miles of land within the study area. The City offers many opportunities for growth with a significant amount of undeveloped land in the northern and southern portions of the study area and infill growth within the existing City limits. These areas will one day provide homes to new City residents, as well as contribute to the local economy with new commercial, industrial and institutional land uses. Based

on the 2010 US Census, the City's population was estimated to be 16,921. CMAP estimates the United City of Yorkville's population will grow at a rate of 3.2% until 2040. If this growth rate remains constant for ten years after 2040, the City is projected to have a population of 59,565 people in 2050.

Existing Water Works System

The United City of Yorkville first installed a public water supply that was sourced from springs located in a hillside in 1886. These hillside springs were sufficient until 1923 when the City constructed its first well. The City has since built a total of eight wells, five of which are still being utilized by the City. Wells No. 1 and 2 were both decommissioned and Well No. 5 was sold to the City of Plano after its construction was completed.

While the water quality withdrawn from the deep sandstone wells is good, all of the wells exceed the maximum contaminant limit (MCL) of 5.0 pCi/l for combined radium. The City utilizes cation exchange treatment at all of the WTPs to reduce the combined radium levels below its MCL. The cation exchange water treatment process also softens the water. Wells No. 3 and 4 are tributary to the same water treatment plant (WTP) at the heart of the City, Well No. 7 and its WTP are located in the southern area of the City, and Wells No. 8 and 9 are located in the northeastern area of the City and share a WTP.

The City's Water Works System contains five elevated water storage tanks (EWSTs) that have a combined storage of 4.55 million gallons (MG). The City's water main network consists of approximately 150 miles of 1" to 16" pipe and operates as four pressure zones. The City utilizes a Supervisory Control and Data Acquisition (SCADA) system to monitor the supply, treatment, storage and distribution components of the Water Works System. With Staff's continual focus on system maintenance, the Water Works System components are currently in good condition.

Historical and Projected Water Use

The City's water use from 2010–2014 was reviewed to identify water use trends for the Water Works System. The water supply and storage systems were assessed for adequacy using evaluation parameters that rate the adequacy of their components. The evaluation concluded that the water supply and storage were sufficient for the 2010-2014 evaluated period and will continue to be sufficient for the near-future. If current trends are followed, the City will need to add additional supply around 2025 and additional storage around 2040. If moderate conservation efforts result in a LRI scenario, the City will need additional supply around 2035 and additional storage after 2045.

The average 2010–2014 water use for the City was calculated to be 88 gallons per capita per day (gpcd) with an average maximum day demand to average day demand (MDD:ADD) ratio of 1.91. Typically, residential and commercial development engenders higher water use due to the amount of water it takes to start landscaping a previously undeveloped area. In order to project business as usual trends, the per capita usage was rounded up to 90 gpcd and the MDD:ADD ratio was rounded up to 2.0 in order to allow

for factor of safety. An assumed value of 2.0 was used to establish the max hour demand to max day demand ratio (MHD:MDD). The needs assessment calculations determined that if current trends are followed, the water supply and treatment deficit in 2050 would be approximately 6,700 gpm and the storage deficit would be 1.7 MG.

The City does have the potential of reducing that deficit, though. In an effort to define a reasonable LRI demand scenario for the City, a systematic process was used to efficiently review available information, select relevant water conservation strategies and calculate estimated savings. Following a review of the 13 water conservation measures recommended by the CMAP and a quantification of the amount of demand reduction applicable for the United City of Yorkville, it was determined the projected water use per capita per day could be reduced by 11% to 80 gpcd under the LRI demand projection. Utilizing a 80 gpcd usage rate, a MDD:ADD ratio of 1.75 and a MHD:MDD ratio of 2.0, the 2050 LRI projected water demands were developed. The water supply and treatment deficit is cut to approximately 4,200 gpm under the LRI scenario. The water storage capacity deficit is reduced to 0.63 MG, which is less than half of the CT value.

Regulatory Review

A comprehensive review of the existing and future regulations was conducted to determine the current and future regulatory status of the Water Works System. The City's Water Works System is meeting all existing and near future regulations. If the City decides to switch their water source to surface water from the Fox River, they will become subject to applicable surface water regulations.

Sustainable Source Water Assessment

Groundwater from shallow and deep aquifers, surface water from the Fox River and surface water from Lake Michigan were all evaluated for their long-term ability to serve as Yorkville's potable water source.

A review of the underlying Sub-Regional planning area revealed that the potential for municipal shallow sand and gravel or shallow bedrock wells is low in the Yorkville area. Regional modeling of the deep sandstone aquifer indicates its long-term sustainability could be an issue in parts of Northeastern Illinois by 2050. As part of this planning effort, multiple groundwater withdrawal and future local well configurations were evaluated through the use of the Illinois State Water Survey (ISWS) regional deep sandstone water model. All models indicate that the deep sandstone aquifers will likely be sustainable not too far past 2050. Of course, the rate of desaturation is highly dependent on how much Yorkville and the surrounding communities are withdrawing from the deep aquifers. While obtaining water from the deep sandstone wells is currently the most economical option, it is unwise to completely dewater this aquifer before switching to an alternate water source. Depleting the aquifer may result in the drying up of private or public wells, water quality concerns and a lack of backup supply once another source is identified.

Modeling completed by the ISWS revealed that the Fox River is able to serve as a sustainable source of Yorkville's water for the average and maximum day future demands. While the Fox River would typically be able to provide all source water, under certain scenarios (such as drought or poor water quality) the City of Yorkville would need to utilize an alternate water source. The low flow years are projected to occur once in 10-20 years on the long-term average. That being said, historical research along with future conditions analyses with the ILSAM surface water model demonstrated the likely number of low flow days per year where Yorkville would need to have a backup supply of water would be minimal. Therefore, if the deep aquifer is used as the back-up supply source, it would be a sustainable backup supply due to its minimal long term use.

The use of surface water from Lake Michigan was also evaluated. While portions of the Illinois American system appear to have capacity, the cost for extending service to the City (including the piping and connection fees) would be cost prohibitive.

For the basis of this report and for the 2050 planning period, use of the Fox River, either alone or in conjunction with the neighboring communities of Montgomery and Oswego, is deemed as the most sustainable option.

Water Supply and Treatment Evaluation

The sustainable source water assessment revealed that the aquifer used by the United City of Yorkville is expected to be unable to sustain Yorkville's projected long-term water demands. This section outlines the first four of the six total water demand and procurement scenarios to be considered by the United City of Yorkville. The last two alternatives (3A and 3B) are evaluated in the Sub-Regional Water Supply and Treatment Analysis section. All six alternatives are outlined below.

- Alternative 1A (1A-CT) – The City's 2050 CT projected water demand is met entirely by collecting groundwater from deep sandstone wells.
- Alternative 1B (1B-LRI) - The City's 2050 LRI projected water demand is met entirely by collecting groundwater from deep sandstone wells.
- Alternative 2A (2A-CT) – The City's 2050 CT projected water demand is met by using surface water from the Fox River and from one additional deep sandstone well. All current wells will be used as backup.
- Alternative 2B (2B-LRI) – The City's 2050 LRI projected water demand is met entirely by using surface water from the Fox River. All current wells will be used as backup.
- Alternative 3A (3A-CT) – The United City of Yorkville's, the Village of Oswego's and the Village of Montgomery's 2050 CT projected water demands are met entirely by constructing a surface water treatment plant near the Fox River/Orchard Road intersection that is capable of providing water for all three communities. Select current and future wells will be used as backup.
- Alternative 3B (3B-LRI) – The United City of Yorkville's, the Village of Oswego's and the Village of

Montgomery's 2050 LRI projected water demands are met entirely by constructing a surface water treatment plant near the Fox River/Orchard Road intersection that is capable of providing water for all three communities. Select current and future wells will be used as backup.

If the City were to continue to use groundwater as their main water source, as outlined in Alternatives 1A and 1B, it is recommended that the City continue to treat their water using cation exchange water treatment plants. These facilities can remove the cations associated with hardness, as well as the cations that cause hardness in water. The locations of Alternates 1A and 1B water infrastructure, along with additional descriptions, can be found in section 6.

If the City were to utilize the Fox River as a main water source, it is recommended to use lime-softening as the main treatment mechanism. Lime softening can be used to treat hardness and other contaminants found in the Fox River. The locations of Alternates 2A and 2B water infrastructure, along with additional descriptions, can be found in section 6.

Water Storage and Distribution Evaluation

Water storage and distribution were also evaluated. Modeling included information gathering for the pipe network, pressure zones, water storage tanks, booster pump stations and ground elevations. Information gathering also took place for water treatment plants and water use demands. While some information was provided by the City, there were on-site visits to key water facilities as well as fire flow and static pressure testing in several areas. The measurement of fire flow and static pressure testing assisted with model verification for all scenarios.

Modeling was completed both for the existing infrastructure, as well as for potential future Alternatives 1, 2 and 3 as listed in the Water Supply and Treatment Evaluation. Modeling for the existing scenario was based off of knowledge of the existing system coupled with knowledge of the existing water demands. Comparison of the calculated maximum day demands and maximum hour demands found that the calculated and modeled demands were higher than the actual demands, which lead to a conservative model.

Modeling of the existing water distribution system revealed no major issues. While there are some areas with marginally higher than optimal water pressure levels and some areas with marginally lower than optimal water pressure levels, all water pressures meet the applicable standards. Modeling of fire flow demands revealed no major issues; however, flows within the North pressure zone were generally low due to a lack of looped mains. The City plans to continue to connect dead-end water mains as land is developed and funds become available. The North Central pressure zone has some of the most notable fire flow demand issues; the combination of the older, smaller water mains in combination with the higher fire flow demands of businesses compared to residential areas are the primary causes of the issue. It is recommended the City take into consideration the replacement of these water mains as funds become

available and as land develops. There were no specific improvements listed for the South Central or North Pressure Zones.

Scenarios for both the CT and LRI trends gave a need for additional storage regardless of water supply and treatment alternatives. The projected CT storage deficit was approximately 1,624,000 gallons per day and the projected LRI storage deficit was approximately 631,000 gallons per day. All scenarios assumed the addition of a 2.0 MGD EWST within the planning period. While the new EWST would be oversized for the LRI demand scenario, it would fit with the projected future demands beyond 2050. The addition of an 2.0 MG EWST was evaluated at a capital cost of $4.9 million for all scenarios. As stated in Section 3, if the City were to alternate to a less resource intensive water use scenario, the City would be able to put the EWST online later than if the City continued to use water at their current rate.

Water Distribution for all three scenarios was also evaluated. Water distribution for Alternates 2 and 3 presented more changes to the Alternate 1 distribution system due to the change in a multi-point system (from several wells) to a single-point distribution system (from a Fox River intake and WTP). Alternates 1, 2 and 3 had proposed water distribution estimated costs of approximately $4.5 million, $22.2 million and $22.6 million respectively. All three scenarios include costs for necessary capital improvements projects as well as for projects which are not necessary but should be completed as funds become available and roads are repaved.

Sub-Regional Water Supply and Treatment Analysis

The feasibility of constructing a Sub-Regional Fox River intake and WTP that would be able to serve Montgomery, Yorkville and Oswego through the year 2050 was evaluated. The analysis was based off population projections and water usage projections for all three communities. CMAP projected population growth rates, along with the open area within each community were considered to evaluate population projections in 2050. In order to evaluate likely future water usage projections, historic water usage trends for each community was considered. Two different scenarios for water usage projections were evaluated for each community. The CT water scenario evaluated the water needs that if each community continued to use water at historical rates. The LRI water use scenario evaluated a water scenario where each community makes a moderately higher commitment to water conservation strategies.

The projected 2050 populations of Montgomery, Yorkville and Oswego are 42,000, 59,565 and 90,996 respectively. If each community continues to use water according to current trends, the combined maximum day demand water needs of the sub-region are 32.9 MGD. If each community commits to more water conservation tactics, the combined maximum day demand of the Sub-Region is 24.8 MGD.

Aquifer modeling completed as part of this project has revealed evidence that the aquifer utilized for the majority of each communities' water needs is being used at a rate which is unsustainable. Modeling of the projected scenarios revealed that while the aquifer has no threat of dewatering in the short term, if the

aquifer continues to be used unsustainably, the aquifer may dewater to a point where it is at the top of the Ironton-Galesville within the next few decades.

The ability of the Fox River to provide water for all three communities under various demand scenarios was evaluated. It was determined that the Fox River is a viable source of potable water for a Sub-Regional WTP. If a Sub-Regional intake and WTP were to be built, the proposed best area would be in the Orchard Rd/Fox River corridor in the western area of Oswego. This location would allow for near equidistant travel between the main distribution infrastructure for Montgomery, Yorkville and Oswego. This central location would ensure that the water age for all communities is similar and that the costs for distribution mains are fairly split between communities. Finally, the central location would allow for the connection of existing and future wells to the WTP to serve as a backup source of water during events where the Fox River may not be able to be used. These events may include droughts or periods of poor water quality.

The costs of each community to utilize the Sub-Regional WTP was evaluated as part of this study. This evaluation considered the projected capital and operating costs for the WTP and distribution system split between each community based on usage. Section 8.9 outlines the projected change to the average Montgomery, Yorkville and Oswego water bills and Section 8.9 also compares the projected average monthly water bill of the communities to other communities which are utilizing surface water. The analysis completed shows that all three communities would have lower or comparable rates to other local communities using surface water.

The Sub-Regional analysis also outlined the next steps that must be taken if the United City of Yorkville were to decide to build a Sub-Regional WTP with the neighboring communities of the Village of Montgomery and the Village of Oswego.

Water Works System Evaluation and Recommendations

This report evaluated the United City of Yorkville's future water use based on two different water demand scenarios and three different supply and treatment scenarios. This section outlines the recommended improvements for Alternatives 3A and 3B, which are the recommended scenarios. The recommended improvements will meet the projected water supply and treatment needs of the United City of Yorkville given both CT and LRI demand scenarios. The recommendations are broken down into general, supply & treatment and storage & distribution. Under the CT demand scenario, the following improvements are recommended:

- *CT General*
  - Governance $20,000
- *CT Supply & Treatment:*
  - Fox River Water Quality Testing $45,000

- Land Acquisition $400,000
- WTP Component Pilot Testing $33,000
- Well No. 6 $2,419,000
- Well No. SR-1 $2,339,000
- 32 MGD Fox River Intake Pump Station $2,389,000
- 32 MGD Single Stage Claricone® $24,290,000
- Well Transmission Mains $9,616,000
- Treated Water Transmission Mains $12,990,000

♦ *CT Storage & Distribution:*

- EWST No. 6 (2.0 MG) $4,870,000
- Water Distribution System Improvements $22,561,000

With the reduction in water demands for the LRI scenario, the planning period system needs decrease. The changes to the recommended improvements with a future water demand that is consistent with the LRI projections are as follows:

♦ *LRI General*

- Governance $20,000

♦ *LRI Supply & Treatment:*

- Fox River Water Quality Testing $45,000
- Land Acquisition $400,000
- WTP Component Pilot Testing $33,000
- Well No. 6 $2,419,000
- Well No. SR-1 $714,000
- 25 MGD Fox River Intake Pump Station $2,161,000
- 25 MGD Single Stage (ClariCone® LSWTP) $21,886,000
- Well Transmission Main $9,298,000
- Treated Water Transmission Mains $12,990,000

♦ *LRI Storage & Distribution:*

- EWST No. 6 (2.0 MG) $4,870,000
- Water Distribution System Improvements $22,561,000

The costs were split into immediate, near-future and long-term investments. The total projected capital cost of the CT scenario was $82.1 million and the total projected capital cost of the LRI scenario was $77.5 million. The recommended path going forward is the LRI path which is projected to save the City over $4.5 million. If the City pairs with the communities of Montgomery and Oswego, those communities are projected to save on capital costs by switching to a LRI scenario, as well.

Although both population and approximate timeframes for improvements were provided as part of the Master Plan Phasing and Implementation Plans, it will ultimately be the water demands on the system

that dictate when and what improvements will need to be constructed. Additionally, if the sub-regional WTP moves forward, the City should be aware of the time frames that will be associated with such a major project. As the City continues to mature, expand and practice water conservation strategies, the water demands will evolve. It is recommended the City continuously monitor and evaluate its Water Works System as they develop. The staging of these water works improvements is dependent on the construction schedule and financing of annexed and proposed developments.

Sustainable Water Works System and Wastewater System Planning

The over $4.5 million capital cost difference between the CT and LRI water scenarios clearly demonstrates the financial benefits of a modest reduction in per capita water use through increased water conservation. To that end, this Water Works Master Plan is a valuable planning tool and stepping stone for the City's Water Works System. The next steps for the City are to review the existing policies regarding the City's water conservation strategies and goals and to develop financing alternatives for the identified improvements. By evaluating water conservation opportunities, the City will not only show how they continue to be good stewards of our limited resource of water, but the City also has the potential to significantly reduce the required capital investment in the Water Works System.

Next steps for the City also include working with the communities of Montgomery and Oswego in order to move the potential Sub-Regional WTP forward. A Sub-Regional surface water treatment plant would likely be more cost-effective for the United City of Yorkville to complete and operate than a surface water treatment that only treats Yorkville's water. Whether the City chooses to move forward with a sub-regional WTP or a local surface water treatment plant is an important decision the City should work with the other communities in order to discover. It is known that at the current rate at which the aquifer used by the City is being pumped, is unsustainable.

This Master Plan advocates similar goals to those of the regional water supply planning efforts championed by CMAP. The water supply sources of the western portion of Northeastern Illinois know no political boundaries. Their geographic extent is such that their availabilities are dependent on everyone's wise use of the resource.

SECTION 1: INTRODUCTION

The United City of Yorkville is a flourishing community that is situated approximately 45 miles southwest of downtown Chicago. Illinois Route 47, Illinois Route 71, and US Route 34 all pass through Yorkville. The Fox River, which offers multiple scenic and recreational amenities, is at the heart of the City.

The City has rich history; it was settled in 1833, named in 1836 and officially incorporated as a city in 1874. The United City of Yorkville had originally been two separate cities located on different sides of the Fox River– Yorkville and Bristol. The cities merged to form the United City of Yorkville in 1975. Currently, the City has a population of approximately 20,000 people and offers many amenities such as parks, recreation centers, easy commutes to Chicago and nearby continued education. Yorkville is also the county seat of Kendall County.

The City's population has grown significantly over the last two decades and the utility infrastructure has grown proportionately to meet the added demands. In the latter part of the 2000s and early part of the 2010s, the housing market took a downward turn and residential growth in the community went to a near standstill. With the indicators for development pointing towards another period of population growth, City leadership prudently decided it was a wise time to reevaluate the asset planning and expansion approach of the Water Works System. Therefore, the City engaged EEI to assist with the completion of this Comprehensive Water Works System Master Plan.

1.1 Purpose

The Chicago Metropolitan Agency for Planning (CMAP) continuously conducts regional planning for the Chicago Metropolitan Area. In addition to conducting housing, transportation and population growth planning, the agency also provides planning for water resources. With the development of CMAP's Water 2050 plan, the Regional Water Supply Planning Group has concluded the current supply of water within Northeastern Illinois will be unable to meet the regional current trends water use for portions of the planning area. Therefore, it is imperative that the region place a focus on developing a framework for water supply planning and management including water conservation measures as a means to extend our limited water supply resources. Because the population growth for the United City of Yorkville is expected to significantly increase, it is wise to consider the effect the additional future population will have on the City's existing resources and the resources shared throughout Northeastern Illinois.

With the United City of Yorkville's sustainability focus, and with the recommendations of Water 2050, the City decided it would be appropriate to evaluate the expansion of the Water Works System under two water demand scenarios. Utilizing water demand terminology from Water 2050, the Current Trends (CT) water demand scenario will evaluate the expansion of the system under "business as usual" water use patterns. Following a review of potential water conservation programs and establishment of water conservation goals, a Less Resource Intensive (LRI) water demand projection will be created. The system expansion will then be

planned under the lower demand projection, as well. Lastly, the capital cost for the improvements needed to expand the system to meet both demand projections will be compared to determine the capital cost savings with the higher water conservation commitment.

In addition to defining the expansion of the Water Works System and evaluating the capital cost savings of a focused community wide comprehensive conservation effort, this report also will present findings from a sustainable source water assessment and a regulatory audit review. With sustainability at this Master Plan's core, the United City of Yorkville will have the roadmap for expanding and operating a sustainable Water Works System into the future.

1.2 Previous Water Works System Planning Documents

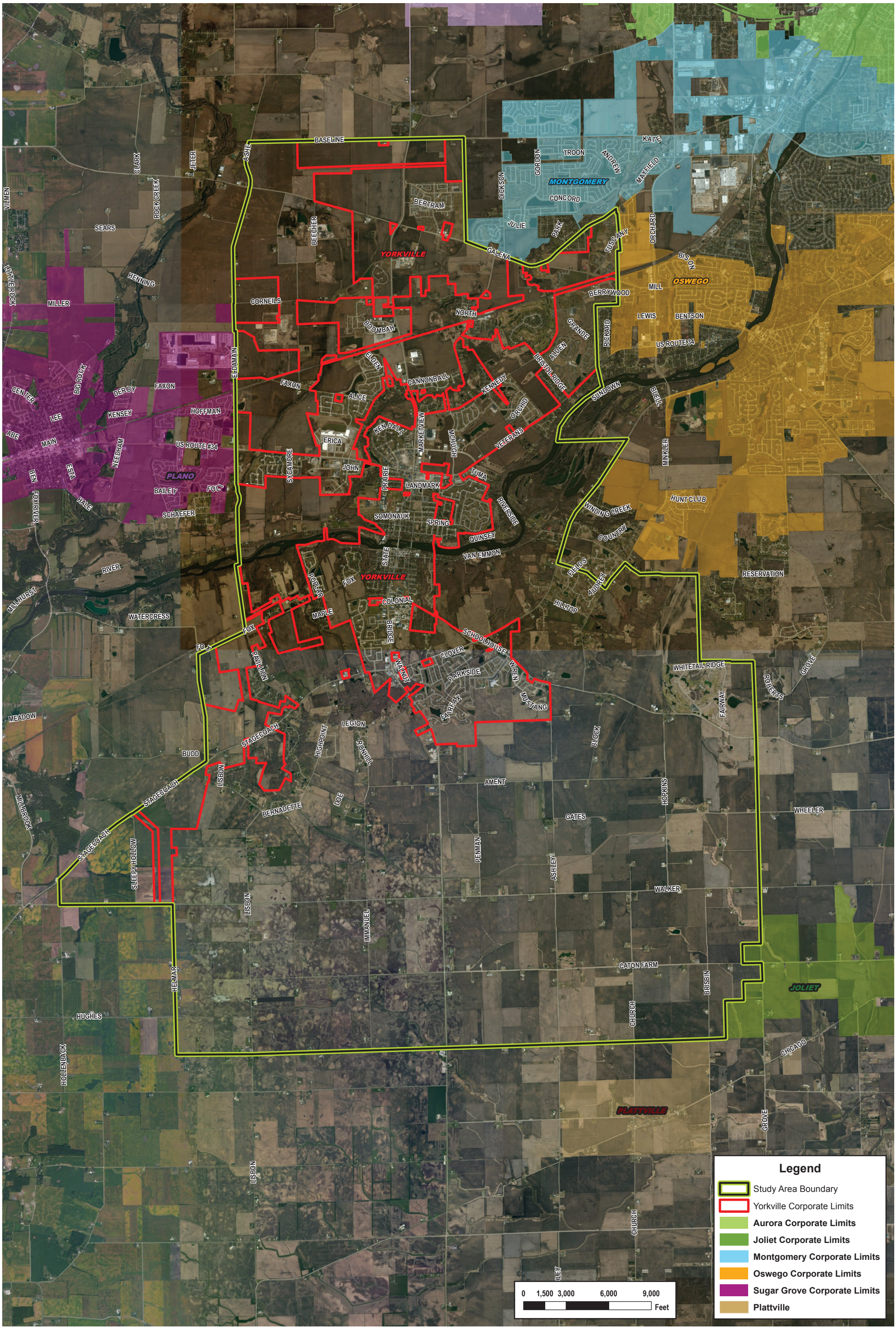
As the growth and water use patterns of the City have changed, the United City of Yorkville has continued to plan for the infrastructure management and expansion of their Water Works System. The most recent Water Works System Planning efforts prior to this Master Plan were the 1999/2000 Water System Project Plan and associated update in 2004. Where applicable, the findings of these reports and studies are referenced and built upon within the context of this Master Plan. The 'Groundwater Studies for Water Supply Planning in Kendall County, Illinois' document is also referenced. This document was prepared by the Prairie Research Institute and outlines various intricacies of the groundwater system in Kendall County.

1.3 Study Area

The study area for this report, as well as, the City's corporate boundaries are depicted on Exhibit 1-1. The current City corporate limits encompass about 20.15 square miles while the planning area outside of the corporate boundary adds another 52.77 square miles for a total of 72.92 square miles within the study area. Exhibit 1-1 also identifies the neighboring communities' corporate limits.

1.4 Historical Population

Table No. 1-1 provides the City's population figures from 1960 to 2014. Yorkville experienced relatively moderate growth between 1960 and 1990, growing from 1,568 persons in 1960 to 3,925 persons in 1990. Like many communities located in northeastern Illinois, Yorkville grew significantly throughout the 1990s and early 2000s. From 1990 to 2000 the population grew over 58% whereas the decade of 2000 to 2010 saw an expansive growth of 173%. By 2014, the City's population had grown to just under 18,000 people as identified in the Special Census conducted that year.



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DATE:	AUGUST 2015
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FILE:	YO1437_EXH1-1.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 1-1
STUDY AREA

NORTH

Table No. 1-1: Historical Population

United City of Yorkville, IL

Year	Population	Annual % Increase
1960	1,568	--
1970	2,049	2.7%
1980	3,422	5.3%
1990	3,925	1.4%
2000	6,189	4.7%
2003	8,789	12.4%
2005	11,204	12.9%
2008	16,838	14.5%
2010	16,921	0.2%
2014	17,878	1.4%

1.5 Projected Population

Forecasting future population patterns in a geographic location can be very complex. Economic conditions, social perspectives, governmental influences, environmental factors and many other circumstances can disrupt population dynamics. A perfect example of a situation that altered the City's potential population growth pattern occurred just in the last few years. With the rapid growth trends of the 1990s and early 2000s, and the available land remaining to develop within the planning boundary, the City was preparing for a continued steady population increase. However, with the subsequent downturn in the economy, the situation has changed and now the City is trying to balance Water Works System planning for a moderate growth rate consistent with current patterns, all the while preparing for a potential upswing in the economy that could attract a massive influx of developers back to the City. Nevertheless, reasonable population projections should be made utilizing the most current, best available sources of information in order to establish a baseline for determining immediate, near-future and long-term Water Works System needs.

The United City of Yorkville offers many opportunities for population growth with a significant amount of undeveloped land throughout the outer limits of the study area and infill within the existing City limits. When a municipality in Northeastern Illinois is preparing a Master Plan, the basis for population projections is often those published by CMAP. CMAP had estimated a population of 43,486 for the year 2040; from that calculation, the growth rate was calculated to be 3.20% per annum. That growth rate was then projected from 2014 to 2050 using the same growth rate projected through 2040 and found to be 59,565.

The projected population trends are summarized in Table No. 1-2 and graphed with the historical trends in Exhibit 1-2.

Table No. 1-2: Projected Population

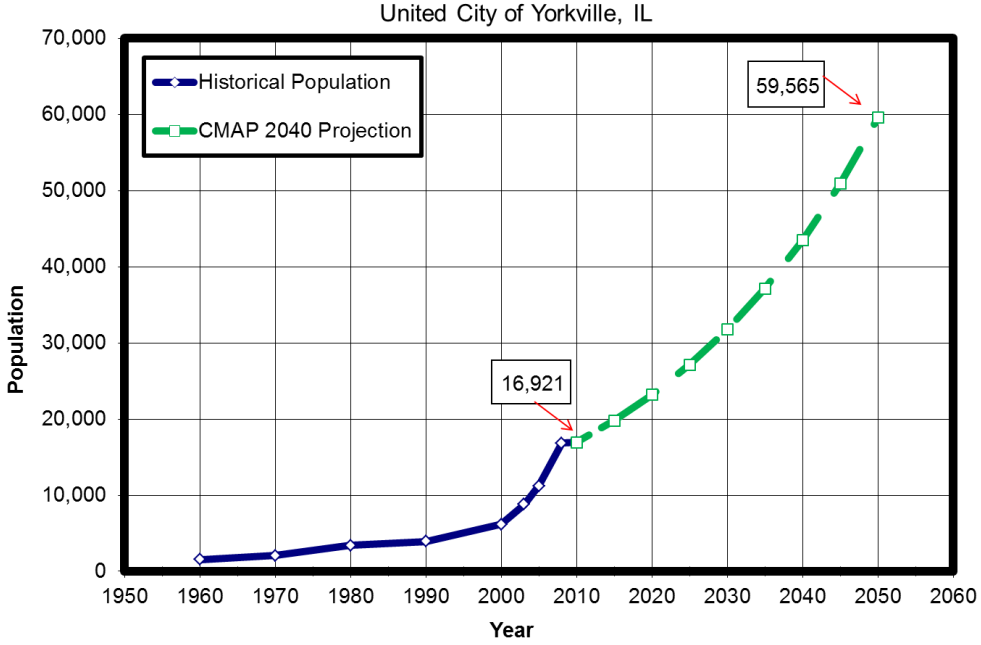
United City of Yorkville, IL

Year	Population	Annual % Increase
2010	16,921	3.20%
2015	19,804	3.20%
2020	23,178	3.20%
2025	27,126	3.20%
2030	31,747	3.20%
2035	37,156	3.20%
2040[Δ]	43,486	3.20%
2045	50,894	3.20%
2050	59,565	3.20%

Notes:
[Δ] CMAP 2040 population projection

Exhibit 1-2: Historical and Projected Population Summary

United City of Yorkville, IL



SECTION 2: EXISTING WATER WORKS SYSTEM

The United City of Yorkville's existing Water Works System can be divided into five main components, namely: 1) supply, 2) treatment, 3) storage, 4) distribution and 5) controls. The condition of all of the City's Water Works System facilities is excellent. It is obvious City staff operates and maintains the system with diligence and intelligence. In order to establish a foundation for asset management and system expansion, an inventory of the existing system must first be completed. Following a brief overview of the City's Water Works System, this section of the report will provide that inventory. Exhibit 2-1 summarizes the existing layout of the City's Water Works System.

2.1 Overview

The initial water supply for Yorkville was installed in 1886. The supply water was obtained from springs located on a hillside about 0.5 miles south of town. The springs were located approximately 2,400 feet north and 1,400 feet east of the southwest corner of Section 4, Township 36 North, Range 7 East (Woller and Gibb). Water was collected by tiles within the springs, stored in a collecting reservoir located at the site of the springs and then piped to the water distribution system in town. As the town grew, the springs were capable of producing only a portion of the water supply to meet the consumer demands. Additionally, because the springs were sometimes adversely affected by seasonal fluctuations, such as drought, they were not reliable and the need for additional water resources became apparent.

Well No. 1 was built to supplement the spring water in 1923, and Well No. 2 was built to eliminate the need for the springs in 1954. Well No. 1 was taken out of service in 1964 and Well No. 2 has also been abandoned. Since then, Wells No. 3, 4, 5, 7, 8 and 9 have all been built to take care of the water needs for Yorkville. Well No. 5 has since been sold to Plano, but the remaining wells are all still in service. The City's three water treatment plants (WTPs) were constructed in the 2000s. Elevated water storage tanks (EWSTs) have been added to the system and water main extension have been completed as the City grew.

2.2 Supply

The United City of Yorkville currently utilizes the deep sandstone aquifer as its sole source of water supply. The construction and capacity characteristics of the City's five (5) deep water wells are summarized in Table No. 2-1 along with a summary of the pumping equipment and maintenance history.

The City had historically obtained water from the shallow sand and gravel deposits, as well as, the Galena-Platteville, Glenwood-St. Peter and Ironton-Galesville Formations. The following sections provide detailed descriptions of the City's former and current sources of water supply.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- Elevated Water Storage Tank (EWST)
- Water Treatment Plant
- BP/PRV Station
- PRV Station
- Well
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main

1.0 MG NORTH EWST

1.5 MG NORTHEAST EWST
WELL NO. 8, WELLS NO. 8 & 9
WATER TREATMENT PLANT

WELL NO. 9

NORTH BP/PRV STATION

NORTH CENTRAL
PRV STATION

300,000 GAL NORTH
CENTRAL EWST

WELLS NO. 3 & 4
WATER TREATMENT PLANT

WELL NO. 4

WELL NO. 3

SOUTH BP/PRV STATION

SOUTH CENTRAL
BP/PRV STATION

500,000 GAL SOUTH
CENTRAL EWST

1.25 MG SOUTH EWST
WELL NO. 7, AND WELL NO. 7
WATER TREATMENT PLANT

SOUTH CENTRAL
PRV STATION

0 1,250 2,500 5,000 7,500 10,000 12,500
Feet

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DATE:	AUGUST 2015
PROJECT NO.:	YO1437-P
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FILE:	YO1437_EXHS-1.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 2-1
EXISTING WATER WORKS SYSTEM

NORTH

Table No. 2-1: Existing Water Supply Summary

United City of Yorkville, IL

WELL NO.	AQUIFER							DEPTH (BELOW GRADE)			EQUIPMENT INSTALL DATE	DESIGN CONDITION		INSTALLED MANUFACTURER AND TYPE		PUMPING ASSEMBLY		COMMENTS
	SG	SL	GP	SP	IG	CO	MS	WELL (FT)	CASING (FT)	PUMP (FT)		FLOW (GPM)	TDH (FT)	PUMP	MOTOR	PUMP	MOTOR	
3				♦	♦			1335	430 (AND 88' OF 12" I.D. LINER FROM DEPTH OF 723' TO 811')	505	2009	600	550	BJ/FS - 11MQH 9 Stage	BJ 150 HP, 14" H, 460V	Rebuilt	Refurbished	Pulled due to severe sand wear of bowl, a fairly constant issue with this well that typically produces 650-675 GPM. The City minimizes use of this well.
										505	2008	700	550	BJ/FS - 11MQH 9 Stage	BJ 150 HP, 14" H, 460V	Refurbished	New	Motor Replaced due to Presumed Lightning Strike; Pump Reused
										500	2004	700	550	BJ/FS - 11MQH 9 Stage	BJ 200 HP	Rebuilt	New	Motor Replaced due to Presumed Lightning Strike; Pump Rebuilt due to Sand Corrosion
										UN	1998	700	UN	BJ/FS - 11MQH 9 Stage	BJ 175 HP	New	UN	TV Survey Showed 16-Inch Casing Badly Corroded, So Raised Pump Setting. During the well rehab, it was noted that the power cable had some nicks.
										UN	1991	650	550	BJ/FS	BJ	New	New	Well Development with Primacord 1 LB Block Shots - Created Current Sand Issues; Modified to Pump Into System Rather Than Reservoir
										UN	1972	UN	UN	UN	100 HP Westinghouse	UN	UN	None
										UN	1960	650	UN	UN	100 HP Westinghouse	New	New	None
4				♦	♦			1401	476	665	2008	1,100	655	BJ/FS - 13/12MQLH(5)L(5) 10 Stage	BJ 250 HP 14" H 460V	New	Refurbished	No apparent sand issues. The well was bailed to a new depth of 1401 ft.
								1,393		542	1992	1,225	650	BJ/FS - 13MQL/12MQL 10 Stage	BJ 250 HP 14" H 460V	Refurbished	Refurbished	None
										569	1976	1,000	650	BJ/FS - 13MQ/12MQL 10 Stage	BJ 250 HP 14" H 460V	New	New	Work started in August of 1975, finished in January of 1976.
7					♦			1,527	1,318	1,105	2007	1,200	1,270	BJ/FS - 13MQ/12MQH(9)L(6) 15 Stage	BJ 400 HP 17" H 2,300 V	Rebuilt	Rebuilt	Repairs were required due to pipe separation with culminated in fishing of pipe, bowl, motor and cable. Motor sent back for routine factory repair, bowl rebuilt, all pipe rethread and new cable.
										1,125	2004	1,000	1,270	BJ/FS - 13MQ/12MQH(9)L(6) 15 Stage	BJ 400 HP 17" H 2,300 V	New	New	None
8					♦			1,384	930	840	2004	1,100	900	BJ/FS - 13MQ/12MQH5L7 12 stage	BJ 400 HP 17" H 2,300V	New	New	There is a well rehab scheduled to begin in 2015.
9					♦			1,368	1,170	870	2009	1,100	1,000	BJ/FS - 13MQ/12MWH5L9 14 Stage	BJ 400 HP 17" H 2,300V	Rebuilt	Rebuilt	Well rehab included repairs due to pipe separation, similar to well #7. Reused motor & bowl, rethreaded all pipe and furnished new cable.
										870	2004	1,000	1,000	BJ/FS - 13MQ/12MQH5L9 14 stage	BJ 400 HP 18" H 2,300V	New	New	None
TOTAL FLOW CAPACITY ALL SOURCES:												**5,100 GPM**						
												7.34 MGD						
TOTAL FIRM CAPACITY:												**3,900 GPM**						
												5.62 MGD						

Notes:

♦ Aquifer Designations: SG = Sand & Gravel; SL = Silurian Dolomite; GP = Galena-Platteville Dolomite; SP = St. Peter (Ancell) Sandstone; IG = Ironton-Galesville Sandstone; MS = Mt. Simon Sandstone, CO = Cambrian-Ordovician

♦ UN = Unknown

2.2.1 Shallow Sand and Gravel Wells (Abandoned) – Well No. 2 was completed in 1954 to a depth of 42 feet by Layne Christensen and has since been abandoned. Little documentation is available regarding the history of Well No. 2.

Well No. 5 was completed in 1998 to a depth of 91 feet by Layne Christensen. This well was located northwest of the intersection Route 34 and Eldamain Road. When the pump was installed, the static water level was 23 feet from grade. The well was sold to the City of Plano in 2007 – the well was never connected to the United City of Yorkville's Water Works system.

2.2.2 Deep Sandstone Wells – Well No. 1, which was drilled in 1923 to a depth of 590 feet by B.L. Palmer and Sons, was taken out of service in 1964 and sealed in 1970. This well was open to the Galena-Platteville and the Glenwood-St. Peter Formations.

Well No. 3, which is open to the St. Peter (Ancell) aquifer, was drilled in 1960. Well No. 3 has had some maintenance problems due to sand and other issues – for that reason it is not utilized as much as the other wells and will likely be abandoned prior to the end of the planning period.

Well No. 4 was constructed in 1976. Well No. 4 is onsite with the Wells No. 3 & 4 WTP and the Tower Lane water tower. It is approximately 1401 feet deep and is open to the St. Peter-Ancell and the Ironton-Galesville aquifer.

Wells No. 7, 8 and 9 were all constructed in 2004 into the Ironton-Galesville aquifer at a depth of 1538 feet, 1384 feet and 1368 feet respectively.

More information about the City's well construction can be found in Table No. 2-1. The combined raw water capacity of all of the City's wells is 5,100 GPM whereas the firm capacity with the largest well out of service is 3,900 GPM. Schematics for each of the City's existing water wells are included in Appendix A of this report. Section 5 reviews the deep aquifer system and evaluates its continued use as a sustainable water supply source.

2.2.3 Well Water Quality – Table No. 2-2 presents a summary of the water quality of the raw water from the City's active wells. It should be pointed out that the values listed were obtained from the latest available data provided by the City or obtained from the IEPA Drinking Water Watch website. It is recommended that the City sample and test the raw water for those wells with results listed from sample collection dates more than a few years old.

Table No. 2-2: Well Water Quality Summary

United City of Yorkville, IL

Well No.	Bedrock Aquifer$^{\phi}$ SG	SL	GP	SP	IG	CO	MS	Alkalinity mg/l as $CaCO_3$	Hardness mg/l as $CaCO_3$	Ca (mg/l)	Mg (mg/l)	pH	SO_4^{2-} (mg/l)	TDS (mg/l)	Na (mg/l)	Cl (mg/l)	NH_3 mg/l as N	As (ug/l)	Ba (mg/l)	CN^- (ug/l)	F (mg/l)	Fe (mg/l)	Mn (mg/l)	Ra-226 (pCi/l)	Ra-228 (pCi/l)	Comb. Ra (pCi/l)	Comments
Primary MCL								**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**10**	**2**	**200**	**4**	**1**	**0.15**	**N/A**	**N/A**	**5**	
Secondary MCL								**N/A**	**N/A**	**N/A**	**N/A**	**6.5-8.5**	**250**	**500**	**N/A**	**250**	**N/A**	**10**	**2**	**200**	**2**	**0.3**	**0.05**	**N/A**	**N/A**	**5**	
3				♦	♦			343*	284*	165.5*	115.6*	7.2*	19.8*	318*	21.1*	4.13*	0.56*	ND**	0.088*	NR	0.71*	0.17*	0.006*	10.9*	4.43*	15.33*	*Data from USGS Survey, 2014; **Data from 2015 reported by Tom Konen.
4				♦	♦			319*	298*	175	120	7.5	NR	360*	18.0	4.5	0.15	ND**	0.13	NR	0.86	0.20	ND*	7.9*	6.5*	14.4*	*Data from a Well Water Quality Summary report in 2000; and The Basis of Design. **Data from 2015 reported by Tom Konen.
7					♦			288*	282*	170	112	7.63*	12*	304*	21.5*	10*	NR	ND***	ND*	NR	0.76	ND*	ND*	3.7**	5.8**	9.5**	*Data from a 'TestAmerican Analytical Testing Corporation Analytical Report' (2004). ** Data from ARRO Laboratory Testing in 2005. ***Data from 2015 reported by Tom Konen.
8					♦			290	252	153	104	7.5	NR	265	23.0	8.0	NR	ND*	ND	NR	0.82	0.16	ND	2.6	10.9	13.5	*Data from 2015 reported by Tom Konen. Otherwise values found in the design summary YO0316.
9					♦			290	270	173	97	7.5	NR	280	17.4	5.0	NR	ND**	ND	NR	0.82	0.31	ND	3.9*	4.7*	8.6*	*Data from ARRO Laboratory Testing in 2005. **Data from 2015 reported by Tom Konen.

Notes:

ϕ Aquifer Designations: SG = Sand & Gravel; SL = Silurian Dolomite; GP = Galena-Platteville Dolomite; SP = St. Peter (Ancell) Sandstone; IG = Ironton-Galesville Sandstone; MS = Mt. Simon Sandstone, CO = Cambrian-Ordovician

Ca = Calcium; Mg = Magnesium; SO_4^{2-} = Sulfate; TDS = Total Dissolved Solids; Na = Sodium; Cl = Chloride; NH_3 = Ammonia; As = Arsenic; Ba = Barium; F = Fluoride; Fe = Iron; Mn = Manganese; Ra-### = Radium; Comb. Ra = Combined Radium 226 & 228; NR = No Record Found; ND = Non Detect

Highlighted value indicates raw water concentration exceeds Primary MCL for parameter. In all cases, treatment is in place to reduce concentration below the MCL. Routine monitoring is required.

Highlighted value indicates raw water concentration exceeds Secondary MCL for parameter. In some cases, treatment is in place to reduce concentration below the MCL. Routine monitoring is recommended.

Highlighted value indicates raw water concentration for parameter that may be approaching Primary or Secondary MCL or may cause water quality issues. Routine monitoring is recommended.

2.3 Treatment

The United City of Yorkville operates three WTPs, two of the WTPs are connected to two wells each, and one WTP only has one connected well. All three of the WTPs employ processes that provide drinking water that meets or exceeds federal and state drinking water quality standards. Cation exchange is used at every facility to remove barium, radium, hardness and to a certain degree, iron from the connected deep wells.

2.3.1 Wells No. 3 and 4 Water Treatment Plant (WTP) – The Wells No. 3 and 4 WTP was originally constructed in 2006. It includes four vertical cation exchange vessels, chemical treatment mechanisms, and equipment for backwashing the cation exchange resins. Regeneration water from the cation exchange vessels is captured in the below slab concrete backwash holding tank and then drains into the sanitary sewer system. Chemical treatment includes disinfection with chlorine gas, blended phosphates for corrosion control and hydrofluosilicic acid for fluoridation. Exhibit 2-2 presents a flow diagram depicting Well No. 3 and 4 WTP unit processes. Table No. 2-3 provides summary information on Wells No. 3 and 4 WTP unit processes.

An inventory and audit of each process identified some potential deficiencies or asset management elements that should be considered for the planning period.

- Resin analysis should be considered, to EEI's knowledge, the resin has not been tested since its installment in 2006.
- A motor protective relay should be considered for the electrical gear.
- Replacing the brine system Badger Flow Meters with Mag-Meters should be considered.

Exhibit 2-2: Well No. 3 & 4 Water Treatment Plant Process Flow Diagram

United City of Yorkville, IL

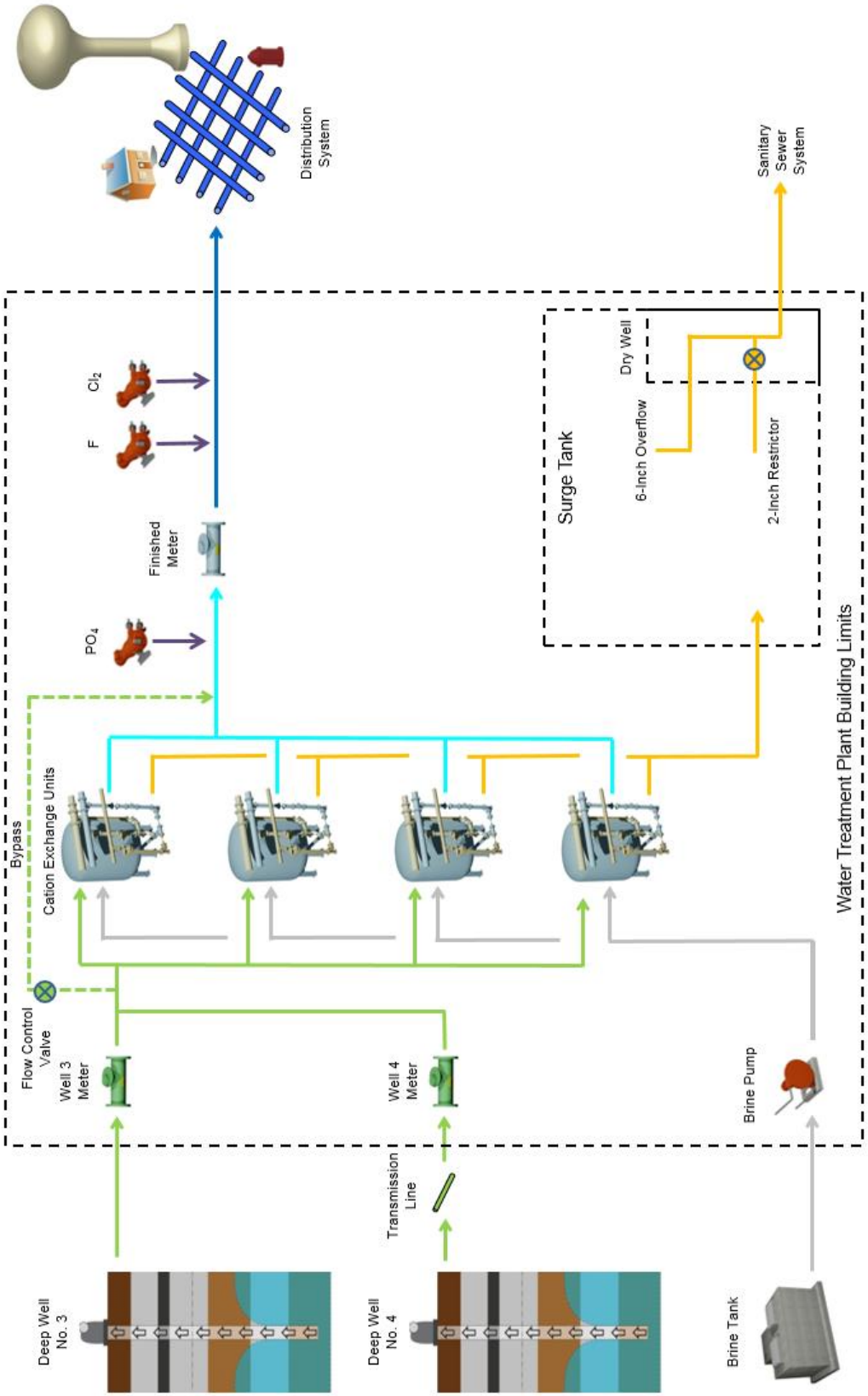


Table No. 2-3: Wells No. 3 & 4 Water Treatment Plant Unit Process Summary

United City of Yorkville, IL

Treatment Application Point No.	Process Unit	Components	Year Installed	Total Years in Operation	Last Modification	Condition	Size	Design Loading Rate *	Design Capacity	Comments and Recommendations
Wells No. 3 & 4 Water Treatment Plant										
Supply Wells No. 3 & 4	Cation Exchange (CE)	4 Vertical Pressure Vessels - 17" Gravel, 3" Torpedo Sand, 48" (254 cf) CE Resin per tank	2006	9	N/A	Good	9' Dia x 8' Sidewall Height Each	Surface Loading Rate: 4.99 GPM/SF @ 317 GPM	6.65 GPM/SF Max	Softening and radium removal. Consider resin analysis. No painting since the original.
	Backwash Holding Tank	Concrete Structure Below Treatment Room Floor	2006	9	N/A	Good	Depth = 6.5', Length = 45.0', Width = 12.0', Volume = 25,262 gallons	N/A	N/A	2" Restrictor and 6" Overflow Pipe
	Brine Pump	Watson-Marlow Brine Feed Pump	2006	9	N/A	Good	34 GPM @ 14.7 PSI; 5 HP	N/A	34 GPM	Consider Replacing Brine System Badger Flow Meters with Mag-Meters
	Brine Tank	Brine Storage Tank	2006	9	N/A	Good	2 - 12'-0" x 12'-0" x 7'-3" (Max Salt Bed Depth) Tank Sections (Overall Tank Dimensions 27'-0" x 21-'0")	N/A	N/A	
	Chlorine Gas Disinfection	Chemical Feed Equipment	2006	9	N/A	Good	Dual Cylinder Scale, 2 Booster Pumps each rated for 10 GPM @ 100 PSI and 1.5 HP, Injector, Regulator and Dual Switch Over Valve	N/A	N/A	Added before entering distribution system
	Hydrofluosilicic Acid	Chemical Feed Equipment	2006	9	N/A	Good	2 Day Tanks w/ Scale; 2 Feed Pumps: 10 GPD @ 140 PSI	N/A	N/A	Added before entering distribution system
	Phosphate	Chemical Feed Equipment	2006	9	N/A	Good	2 Day Tanks w/ Scale; 2 Feed Pumps: 24 GPD @ 110 PSI	N/A	N/A	Ortho/Poly blend For corrosion control and sequestering; Added before entering distribution system
	Electrical Gear	Motor Control Centers	2006	9	N/A	Good	N/A	N/A	N/A	Cutler-Hammer Freedom 2100 Motor Control Center, consider motor protective relay
	Controls	AB PLC & OIT	2006	9	N/A	Good	N/A	N/A	N/A	1 Main PLC and 1 Softener PLC
	Emergency Electrical Supply	No Generator; Wall Mounted Generator Cabinet/Receptacle and Manual Transfer Switch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Temporary Generator Sizing Should be Confirmed

Notes:
Design Loading Rates are per IEPA standards and/or published water treatment plant design manuals.

2.3.2 Well No. 7 Water Treatment Plant (WTP) – The Well No. 7 WTP was constructed in 2005. The WTP acts nearly identically to the Wells No. 3 & 4 WTP. The treatment train begins with three vertical cation exchange vessels and then the typical municipal water treatment chemicals are added. Chemical treatment includes disinfection with chlorine gas, blended phosphates for corrosion control and hydrofluosilicic acid for fluoridation. Regeneration water from the cation exchange vessels is captured in the below slab concrete backwash holding tank and then pumped into the sanitary sewer system. There is no emergency generator for Well No. 7. Exhibit 2-3 presents a flow diagram depicting Well No. 7 WTP unit processes. Table No. 2-4 provides summary information on Well No. 7 WTP unit processes.

An inventory and audit of each process identified some potential deficiencies or asset management elements that should be considered for the planning period.

- To EEI's knowledge, the resin has not been tested since its installment in 2005; a resin analysis for the WTP should be considered.
- A motor protective relay should be considered for the electrical gear.

Exhibit 2-3: Well No. 7 Water Treatment Plant Process Flow Diagram

United City of Yorkville, IL

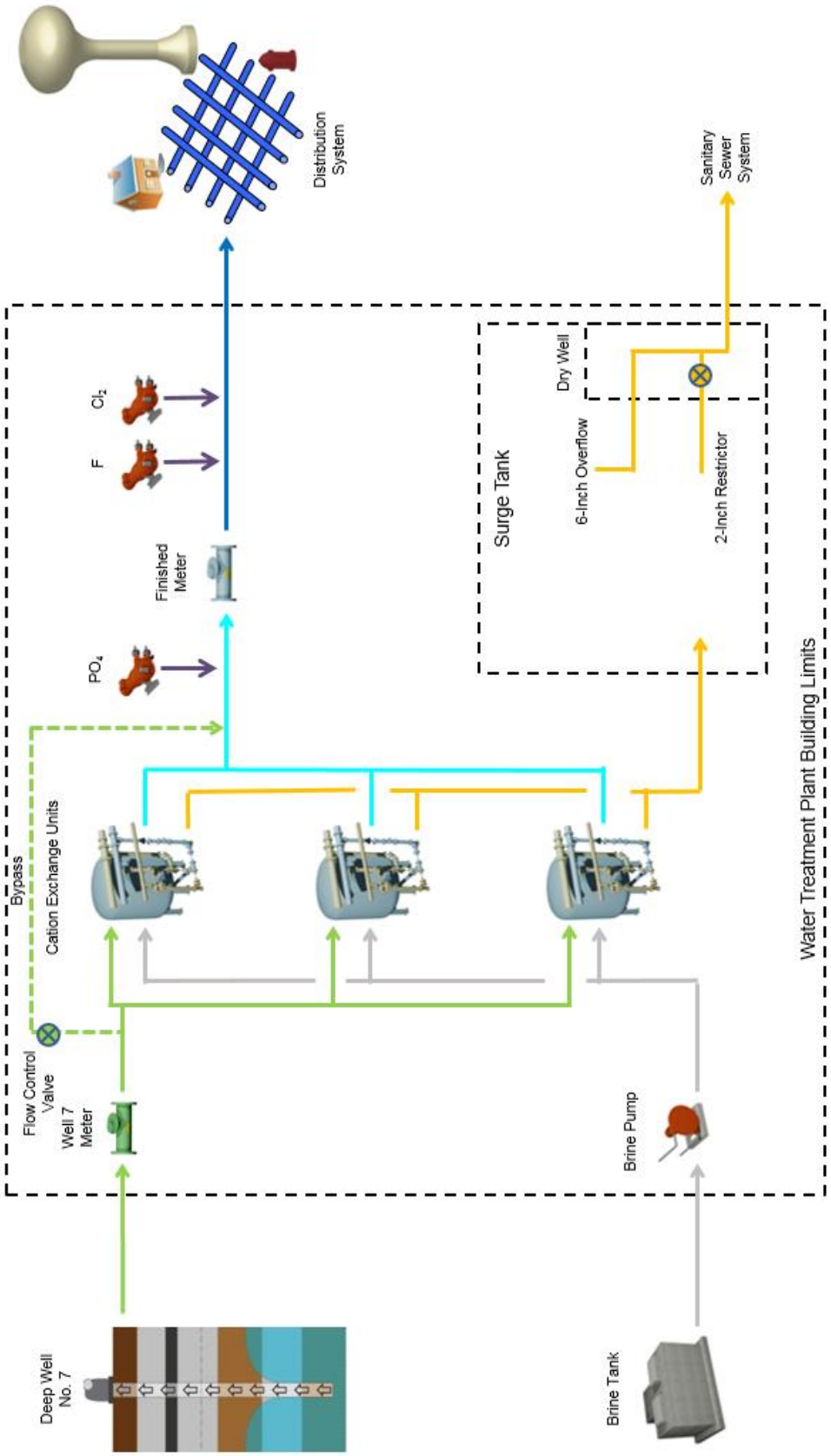


Table No. 2-4: Well No. 7 Water Treatment Plant Unit Process Summary

United City of Yorkville, IL

Treatment Application Point No.	Process Unit	Components	Year Installed	Total Years in Operation	Last Modification	Condition	Size	Design Loading Rate *	Design Capacity	Comments and Recommendations
Well No. 7 Water Treatment Plant										
Supply Well No. 7	Cation Exchange (CE)	3 Vertical Pressure Vessels - 17" Gravel, 3" Torpedo Sand, 48" (254 cf) CE Resin per tank	2005	10	N/A	Good	8' Dia x 8' Sidewall Height Each	Surface Loading Rate: 5.97 GPM/SF @ 300 GPM	7.04 GPM/SF Max	Softening and radium removal. Consider resin analysis. No painting since the original.
	Backwash Holding Tank	Concrete Structure Below Treatment Room Floor	2005	10	N/A	Good	Depth = 7'-3", Length = 32'-4", Width = 12'-0", Volume = 21,042 gallons	N/A	N/A	2" Restrictor and 6" Overflow Pipe
	Brine Pump	Barnant Ponndorf Brine Feed Pump	2005	10	2005	Good	34 GPM @ 14.7 PSI ;5 HP	N/A	34 GPM	
	Brine Tank	Brine Storage Tank	2005	10	N/A	Good	2-9'-6" x 9'-6" x 7'-3" (Max Salt Bed Depth) Tank Sections (Overall Tank Dimensions 21'-2" x 18'-0")	N/A	N/A	
	Chlorine Gas Disinfection	Chemical Feed Equipment	2005	10	2015 - Well 7 Booster Pump Replaced	Good	Dual Cylinder Scale, Booster Pump rated for 10 GPM @ 100 PSI, 1.5 HP, Injector, Regulator and Dual Switch Over Valve	N/A	N/A	Added before entering distribution system
	Hydrofluosilicic Acid	Chemical Feed Equipment	2005	10	N/A	Good	1 Day Tank w/ Scale; 1 Feed Pump: 10 GPD @ 140 PSI	N/A	N/A	Added before entering distribution system
	Phosphate	Chemical Feed Equipment	2005	10	N/A	Good	1 Day Tank w/ Scale; 1 Feed Pump: 24 GPD @ 110 PSI	N/A	N/A	Ortho/Poly blend For corrosion control and sequestering; Added before entering distribution system
	Electrical Gear	Motor Control Centers	2005	10	N/A	Good	N/A	N/A	N/A	Freedom, 2100 Series, Consider Motor Protective Relay
	Controls	AB PLC & OIT	2005	10	N/A	Good	N/A	N/A	N/A	1 Main PLC and 1 Softener PLC
	Emergency Electrical Supply	No Generator; Connection for Portable Generator and Kirk Key Interlock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Temporary Generator Sizing: 3P, 480 V, 600 A, 300 KW - Should be Confirmed

Notes:
Design Loading Rates are per IEPA standards and/or published water treatment plant design manuals.

2.3.3 Wells No. 8 and 9 Water Treatment Plant (WTP) – The Wells No. 8 and 9 Water Treatment Plant was constructed in 2004. Well No. 8 is located on site at the WTP and Well No. 9 is located approximately 180 ft. west of the intersection of Kennedy Road and Bristol Ridge Rd. The WTP for Wells No. 8 and 9 works similarly to how the WTPs for Wells No. 3, 4 and 7 work. Raw water is brought into the plant where it is treated by one of four vertical cation exchange units. The water is then chemically treated with chlorine, phosphates and fluoridation. Backwash equipment is also included at this site in order to be able to backwash the cation exchange resin. Exhibit 2-4 presents a flow diagram depicting Wells No. 8 & 9 WTP unit processes. Table No. 2-5 provides summary information on Wells No. 8 & 9 WTP unit processes.

An inventory and audit of each process identified some potential deficiencies or asset management elements that should be considered for the planning period.

- To EEI's knowledge, the resin has not been tested since its installment in 2004. An analysis of the resin should be considered for this plant.

Exhibit 2-4: Wells No. 8 & 9 Water Treatment Plant Process Flow Diagram

United City of Yorkville, IL

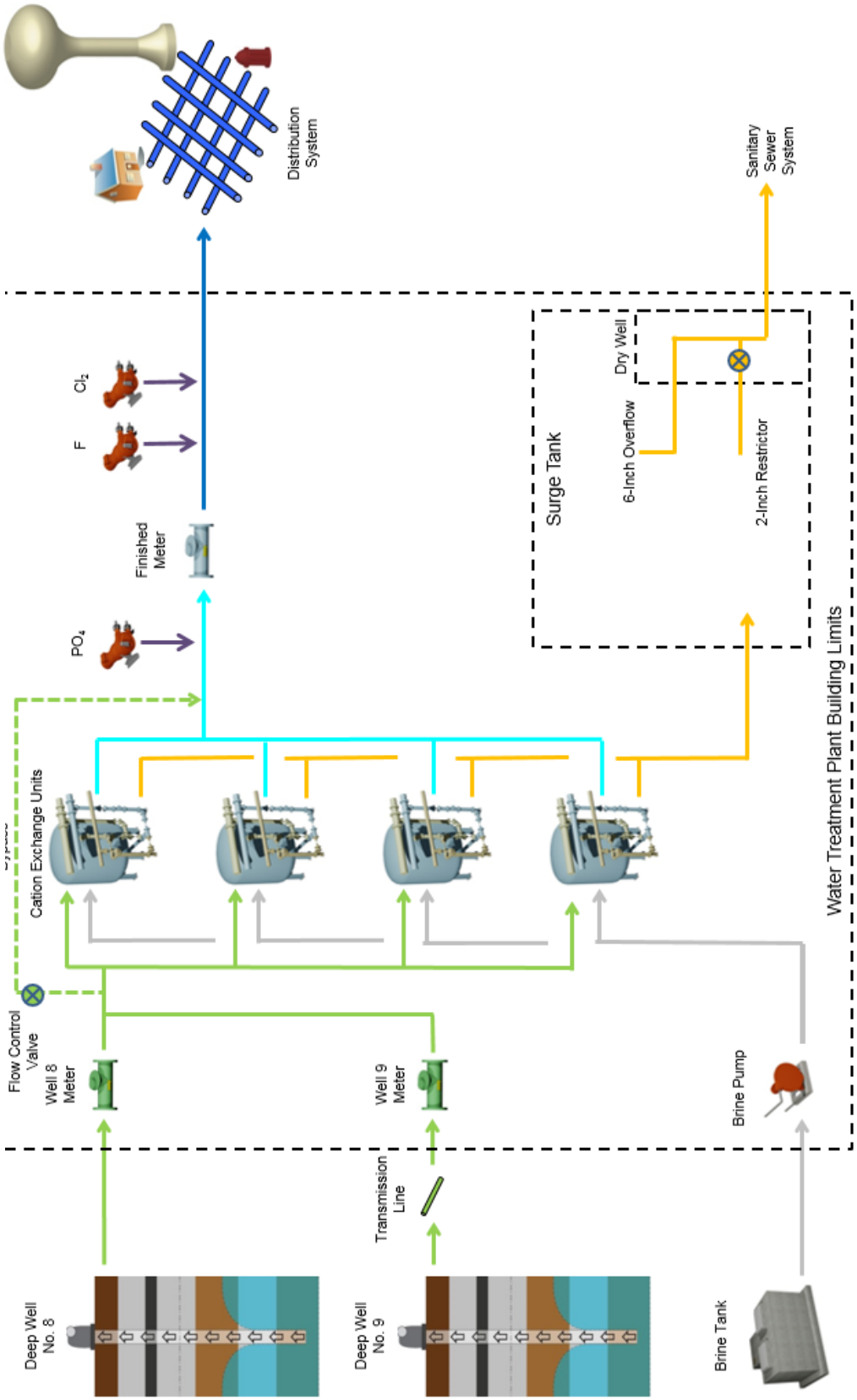


Table No. 2-5: Wells No. 8 & 9 Water Treatment Plant Unit Process Summary

United City of Yorkville, IL

Treatment Application Point No.	Process Unit	Components	Year Installed	Total Years in Operation	Last Modification	Condition	Size	Design Loading Rate *	Design Capacity	Comments and Recommendations
Wells No. 8 & 9 Water Treatment Plant										
Supply Wells No. 8 & 9	Cation Exchange (CE)	4 Vertical Pressure Vessels - 17" Gravel, 3" torpedo sand, 48" (201 cf) CE Resin per tank	2004	11	N/A	Good	8' Dia x 8' Sidewall Height Each	Surface Loading Rate: 5.97 GPM/SF @ 300 GPM	7.96 GPM/SF Max	Softening and radium removal. Consider resin analysis. No painting since the original.
	Backwash Holding Tank	Concrete Structure Below Treatment Room Floor	2004	11	N/A	Good	Depth = 6.5', Length = 35.0', Width = 12.0', Volume = 20,426 gallons	N/A	N/A	2" Restrictor and 6" Overflow Pipe
	Brine Pump	Watson-Marlow/Bredel Brine Feed Pump	2004	11	N/A	Good	32 GPM @ 15 psi; 5 HP	N/A	32 GPM	
	Brine Tank	Brine Storage Tank	2004	11	N/A	Good	2 - 12'-0" x 12'-0" x 7'-3" (Max Salt Bed Depth) Tank Sections (Overall Tank Dimensions 27'-0" x 21'-0")	N/A	N/A	
	Chlorine Gas Disinfection	Chemical Feed Equipment	2004	11	2014 - Well 9 Booster Pump Replaced	Good	Dual Cylinder Scale, Booster Pumps, rated for 13 gpm @ 75 PSI; 1.5 HP, Injector, Regulator and Dual Switch Over Valve	N/A	N/A	Added before entering distribution system
	Hydrofluosilicic Acid	Chemical Feed Equipment	2004	11	N/A	Good	2 Day Tanks w/ Scales; 2 Feed Pumps: 1.75 GPH @ 150 PSI	N/A	N/A	Added before entering distribution system
	Phosphate	Chemical Feed Equipment	2004	11	N/A	Good	2 Day Tanks w/ Scales; 2 Feed Pumps: 1.75 GPH @ 150 PSI	N/A	N/A	Ortho/Poly blend For corrosion control and sequestering; Added before entering distribution system
	Electrical Gear	Motor Control Centers	2005	10	N/A	Good	N/A	N/A	N/A	Cutler-Hammer with Motor Protective Relay
	Controls	AB PLC & OIT	2004	11	N/A	Good	N/A	N/A	N/A	1 Main PLC and 1 Softener PLC
	Emergency Electrical Supply	Standby Generator with ATS	2004	11	N/A	Good		N/A	N/A	800 KW Diesel Generator

Notes:

Design Loading Rates are per IEPA standards and/or published water treatment plant design manuals.

2.4 Storage

The City's Water Works System currently includes 4.55 million gallons of water storage, all of which is elevated storage with spheroid type storage tanks. The water storage components are distributed within the four pressure zones of the system, which will be further discussed in section 6. Exhibit 2-1 identifies the locations of all of the storage tanks and Table No. 2-6 provides the capacity, type of storage and pertinent elevations for each tank.

Table No. 2-6: Existing Water Storage Summary
United City of Yorkville, IL

Site/ Tank Name	Type	Year Constr.	Capacity (Gallons)	Top of Foundation (Feet)	Headrange (Feet)	Overflow Elevation (Foot)	Comments
North Pressure Zone							
North EWST	Spheroid	2003	1,000,000	661.0	770.0 - 810.0	810.0	
Northeast EWST	Spheroid	2004	1,500,000	652.5	764.0 - 810.0	810.0	Also known as Grande Reserve.
		Subtotal:	**2,500,000**				
North Central Pressure Zone							
North Central EWST	Spheroid	1969	300,000	633.5	730.5-763.0	763.0	Also known as Tower Lane; Rehabilitated (overcoat) in 2008.
		Subtotal:	**300,000**				
South Central Pressure Zone							
South Central EWST	Spheroid	1986	500,000	715.0	812.50 - 850.0	850.0	Also known as South. Rehabilitated (full blast with polyurethane and clearcoat on the exterior) in 2005.
		Subtotal:	**500,000**				
South Pressure Zone							
South EWST	Spheroid	2004	1,250,000	768.0	874.0 - 920.0	920.0	Also known as Raintree.
		Subtotal:	**1,250,000**				
		TOTAL:	**4,550,000**				

Pressures and pressure zones directly correspond to the ground elevations and hydraulic grade lines of the Water Works System. If elevated tanks are part of the system, the water level within the tank typically controls the hydraulic grade line. One (1) psi of pressure is equivalent to 2.31 feet of water (i.e. the elevation difference between the tank level and the ground elevation at any location). Targeted pressure ranges are based on several different standards including AWWA, Ten State Standards and the USEPA. These ranges are listed in Table No. 2-7.

In areas of variable topography, multiple pressure zones can be created to maintain consistent and adequate pressures throughout the service area and to generally meet the pressure ranges defined above. If necessary, booster pump stations and pressure reducing valve stations are placed at pressure zone boundaries to allow transfer of water between the different zones. A booster pump allows water to be transferred from a lower pressure zone to a higher pressure zone. Alternately, a pressure reducing valve allows water to be transferred from a higher pressure zone to a lower pressure zone.

Table No. 2-7: Recommended Pressures By AWWA, Ten State Standards, & USEPA

United City of Yorkville, IL

Minimum Pressure	20 psi	All ground level points
	35 psi	All points within distribution system
Maximum Pressure	100 psi	All points within distribution system
Fire Flow Minimum	20 psi	All points within distribution system
Ideal Range	50 - 75 psi	Residences
	35 - 60 psi	All points within distribution system

The ground elevations throughout the Yorkville planning boundary range from approximately 575 feet (near the Fox River) to approximately 775 feet (in the south pressure zone) above mean sea level (MSL). The Fox River flowing generally east to west through the center of the City is largely responsible for shaping the local topography resulting in lower ground elevations in the moderate river valley that spans through the City center.

Given the elevation variances throughout the City planning area, the City has split the water distribution system into four different zones. Table No. 2-8 outlines the ground elevations throughout the pressure zone and the associated range of pressures at the corresponding ground elevation. Table No. 2-8 also highlights the operating pressures and the corresponding ground elevation for each of Yorkville's four pressure zones. the blue shaded area represents the ideal range of operating pressures (40-80 psi +/-) and the yellow shaded area represents the near-ideal operating pressures. The North Pressure Zone, North Central Pressure Zone and South Pressure Zone all have areas of minor low pressure. The South Central Pressure Zone and the South Pressure Zone both have areas of minor high pressure. As shown in Table No. 2-8, while there are some zones that are slightly too high or too low, the pressure zones are currently adequate for the areas they serve. Exhibit 2-5 provides the hydraulic profile for the existing overall Water Works System.

Table No. 2-8: Pressure Zone Summary Table

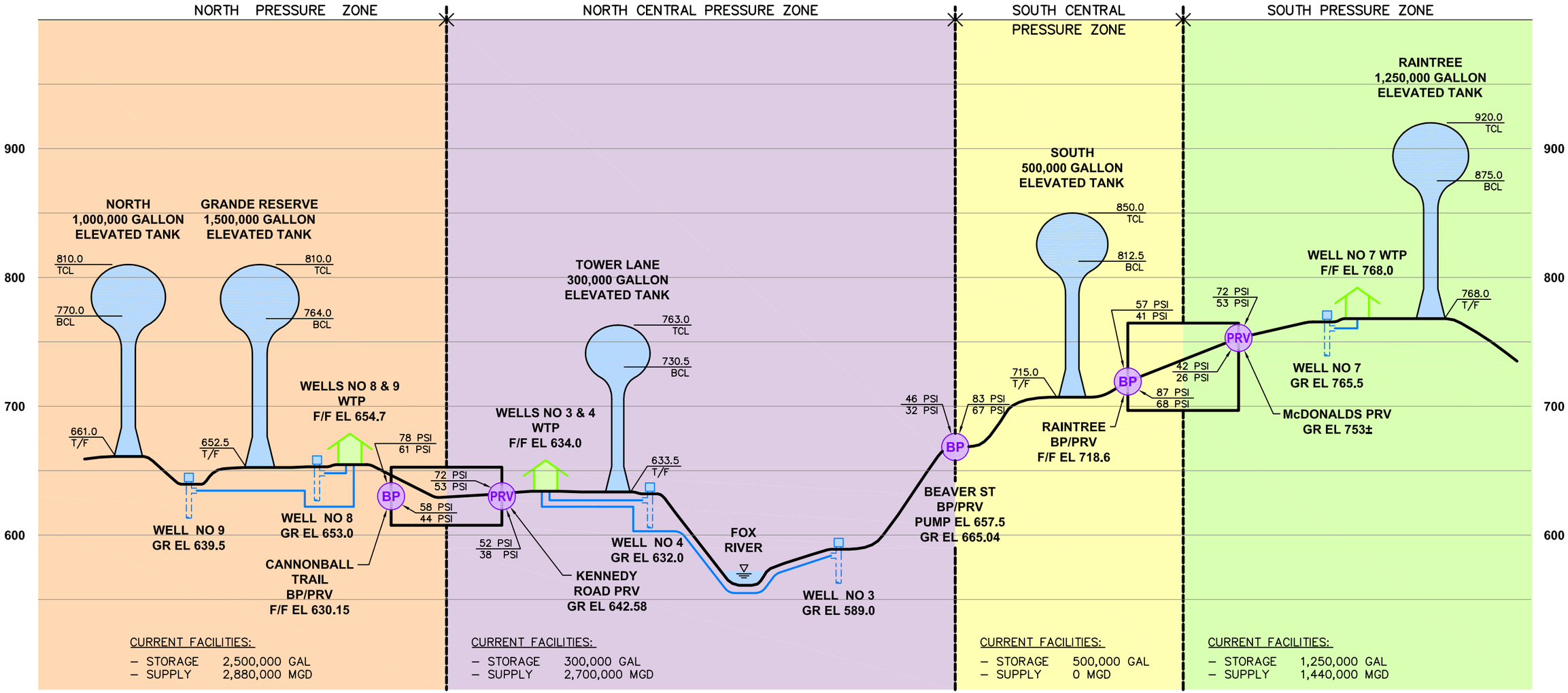
United City of Yorkville, IL

	Hydraulic Grade Line			Ground	Static Pressure		
	High (Feet)	Mid (Feet)	Low Design (Feet)	Elevation (Feet)	High (Psi)	Mid (Psi)	Low Design (Psi)
North Pressure Zone				690	52.0	42.0	32.0
North EWST (1,000,000 Gal)	810.00	790.00	770.00	680	56.3	46.3	36.4
Northeast EWST (1,500,000 Gal)	810.00	787.00	764.00	670	60.6	50.7	40.7
				660	65.0	55.0	45.0
				650	69.3	59.3	49.4
				640	73.6	63.7	53.7
				630	77.9	68.0	58.0
				625	80.1	70.1	60.2
North Central Pressure Zone				660	44.6	37.6	30.5
North Central EWST (300,000 Gal)	763.00	746.75	730.50	650	48.9	41.9	34.9
				640	53.3	46.2	39.2
				630	57.6	50.6	43.5
				620	61.9	54.9	47.8
				610	66.2	59.2	52.2
				600	70.6	63.5	56.5
				590	74.9	67.9	60.8
				580	79.2	72.2	65.2
South Central Pressure Zone				715	58.5	50.3	42.2
South Central EWST (300,000 Gal)	850.00	831.25	812.50	710	60.6	52.5	44.4
				700	65.0	56.8	48.7
				690	69.3	61.2	53.0
				680	73.6	65.5	57.4
				670	77.9	69.8	61.7
				660	82.3	74.2	66.0
South Pressure Zone				790	56.3	46.5	36.8
South EWST (1,250,000 Gal)	920.00	897.50	875.00	780	60.6	50.9	41.1
				770	65.0	55.2	45.5
				760	69.3	59.5	49.8
				750	73.6	63.9	54.1
				740	77.9	68.2	58.5
				730	82.3	72.5	62.8
				720	86.6	76.9	67.1
				715	88.8	79.0	69.3

Notes:

1) High Hydraulic Grade Line = Tank's TCL
2) Mid Hydraulic Grade Line = (Tank's TCL + Tank's BCL) / 2
3) Low Hydraulic Grade Line = Tank's BCL
4) If a zone has more than 1 tank, the static pressure is calculated at the lowest elevation
5) The blue shaded area represents the ideal range of operating pressures (40-80 psi +/-) and corresponding ground elevation served
6) The yellow shaded area represents ground surface elevations within Village service area that are marginally above or below ideal range

EXHIBIT 2-5:
EXISTING WATER WORKS SYSTEM HYDRAULIC PROFILE
UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS



CURRENT FACILITIES:
- STORAGE 2,500,000 GAL
- SUPPLY 2,880,000 MGD

CURRENT FACILITIES:
- STORAGE 300,000 GAL
- SUPPLY 2,700,000 MGD

CURRENT FACILITIES:
- STORAGE 500,000 GAL
- SUPPLY 0 MGD

CURRENT FACILITIES:
- STORAGE 1,250,000 GAL
- SUPPLY 1,440,000 MGD

LEGEND:

BCL	=	BOTTOM CAPACITY LINE
BP/PRV	=	BOOSTER PUMP/PRESSURE REDUCING VALVE STATION
EL	=	ELEVATION
F/F	=	FINISHED FLOOR
GAL	=	GALLONS
GR	=	GROUND
MGD	=	MILLION GALLONS PER DAY
PSI	=	POUNDS PER SQUARE INCH
T/F	=	TOP OF FOUNDATION
TCL	=	TOP CAPACITY LINE
WTP	=	WATER TREATMENT PLANT

Engineering Enterprises, Inc.
CONSULTING ENGINEERS
52 Wheeler Road
Sugar Grove, Illinois 60554
Phone: (630) 466-9350

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2.5 Distribution

The City's water distribution system is an interconnected conveyance system that transfers water through approximately 150 miles of piping, ultimately providing water to the public for domestic, industrial and fire protection uses. Depending on the well and WTP, either the well pumps or high service pumps pressurize the Water Works System and allow water to move throughout it. Since the system is served by four pressure zones, booster pump stations and pressure reducing valves are necessary to ensure adequate water transfer across the pressure zones throughout the city.

2.5.1 Pressure Zones – The United City of Yorkville has four pressure zones: the North Pressure Zone, the North Central Pressure Zone, The South Central Pressure Zone and the South Pressure Zone.

The North Pressure Zone includes the North and Grande Reserve EWSTs, Wells No. 8 and 9 and the Wells No. 8 and 9 WTP. The North Pressure Zone has a storage capacity of 2.5 million gallons and a supply capacity of 2.88 MGD.

The North Central Pressure Zone includes the Tower Lane EWST, Wells No. 3 and 4 and the Wells No. 3 and 4 WTP. The North Central Pressure Zone has a storage capacity of 300,000 gallons and a supply capacity of 2.7 MGD.

The South Central Pressure Zone includes the South EWST. The South Central Pressure zone has a storage capacity of 500,000 gallons and has no supply capacity.

The South Pressure Zone includes the Raintree EWST, Well No. 7 and the Well No. 7 WTP. The South Pressure Zone has a storage capacity of 1.25 million gallons and has a supply capacity of 1.44 MGD.

When the City expands to the south, a new pressure zone will need to be created. This pressure zone is designated as the 'Southeast Pressure Zone'. In the coming years, if new residential, commercial, or industrial land uses begin to develop in or near the Southeast Pressure Zone, the United City of Yorkville will have to ensure that there is adequate water resource infrastructure to serve the water customers.

2.5.2 Booster Pump Stations and Pressure Reducing Valve Stations – The United City of Yorkville has three Booster Pump/Pressure Reducing Valve (BP/PRVs) Stations and two Pressure Reducing Valve Stations (PRVs). Table No. 2-9 outlines the information for the BP/PRV and PRV stations in Yorkville. Booster Pumps can be used to increase pressure when water needs to flow from a lower elevation to a higher one. Pressure Reducing Valves are used to ensure that water flowing from a higher pressure zone to a lower one meets the hydraulic grade line of the lower zone. The system is currently operated by leaving the PRVs slightly open so that some water is able to flow from each of the higher pressure zones into the lower zones. Opening of these PRVs ensures that water is not becoming stagnant in the pipes.

Table No. 2-9: Booster Pumping & Pressure Reducing Valve Stations Summary

United City of Yorkville, IL

Treatment Application Point No.	Process Unit	Components	Year Installed	Total Years in Operation	Last Modification	Condition	Size	Design Loading Rate *	Design Capacity	Comments and Recommendations
North Booster Pump/Pressure Reducing Valve Station (Cannonball Trail)										
Transfers Water Between North Central Pressure Zone and North Pressure Zone	Booster Pumps	3 Horizontal Split Case Centrifugal Pumps	2005	10	NA	Good	Pump 1: 50 GPM @ 135' TDH 5 HP; Pumps 2 & 3: 800 GPM @ 135' TDH 40 HP	Firm Capacity 850 GPM	1.2 MGD	Located in building. Pump 1: Aurora Series 341 Model 1 1/4 x 1 1/2 x 7; Pumps 2 & 3: Aurora Series 341 Model 4 x 4 x 7B
	Pressure Reducing Valves	1 - 3" Cla-Val PRV; 1- 10" Cla-Val PRV	2005	10	NA	Good	3" Valve Max Rated Flowrate: 460 GPM; 10" Valve Max Rated Flowrate: 4,900 GPM	NA	7.1 MGD	
	Emergency Electrical Supply	Natural Gas Generator	2005	10	NA	Good	100kW	NA	N/A	
South Central Booster Pump/Pressure Reducing Valve Station (Beaver St)										
Transfers Water Between North Central Pressure Zone and South Central Pressure Zone	Booster Pumps	2 Horizontal Split Case Centrifugal Pumps	1986	29	NA	Good	Pumps 1 & 2: 700 GPM @ 115' TDH 30 HP (4" x 5" x 11")	Firm Capacity 700 GPM	1.0 MGD	Located in Unground Vault. Built by Engineered Fluid.
	Pressure Reducing Valves	1 - 3" Cla-Val PRV; 1- 10" Cla-Val PRV	1986	29	NA	Good	3" Valve Max Rated Flowrate: 460 GPM; 10" Valve Max Rated Flowrate: 4,900 GPM	NA	7.1 MGD	
South Booster Pump/Pressure Reducing Valve Station (Raintree)										
Transfers Water Between South Central Pressure Zone and South Pressure Zone	Booster Pumps	3 Horizontal Split Case Centrifugal Pumps	2004	11	NA	Good	Pump 1: 50 GPM @ 125' TDH 5 HP; Pump 2: 1000 GPM @ 125' TDH 60 HP; Pump 3: 1000 GPM @ 125' TDH 60 HP	Firm Capacity 1050 GPM	1.5 MGD	Located in building. Pump 1: Aurora Series 321 Model 1 1/4 x 1 1/2 x 7A; Pumps 2 & 3: Aurora Series 341 Model 5 x 6 x 12
	Pressure Reducing Valves	1 - 3" Cla-Val PRV; 1- 10" Cla-Val PRV	2004	11	NA	Good	3" Valve Max Rated Flowrate: 460 GPM; 10" Valve Max Rated Flowrate: 4,900 GPM	NA	7.1 MGD	
	Emergency Electrical Supply	Natural Gas Generator	2004	11	NA	Good	150kW	NA	NA	
North Central Pressure Reducing Valve Station (Kennedy Rd.)										
Transfers Water From North Pressure Zone to North Central Pressure Zone	Pressure Reducing Valves	1 - 1.5" Cla-Val PRV; 1- 4" Cla-Val PRV; 1- 12" Cla-Val PRV	2007	8	NA	Good	1.5" Valve Max Rated Flowrate: 125 GPM; 4" Valve Max Rated Flowrate: 800 GPM; 12" Valve Max Rated Flowrate: 7,000 GPM	NA	10.1 MGD	Underground
South Pressure Reducing Valve Station (Mc Donalds)										
Transfers Water From South Pressure Zone to South Central Pressure Zone	Pressure Reducing Valves	1 - 1.5" Cla-Val PRV; 1- 4" Cla-Val PRV; 1- 12" Cla-Val PRV	2005	10	NA	Good	1.5" Valve Max Rated Flowrate: 125 GPM; 4" Valve Max Rated Flowrate: 800 GPM; 12" Valve Max Rated Flowrate: 7,000 GPM	NA	10.1 MGD	Planning began in 2003, ground broke in 2004, and the station was completed in 2005.

Notes:
Firm Capacity is based on largest pump out of service.

The Cannonball Trail BP/PRV connects the North Pressure Zone to the North Central Pressure Zone, the Beaver Street BP/PRV connects the North Central Pressure Zone to the South Central Pressure Zone and Raintree BP/PRV connects the South Central Pressure Zone to the South Pressure Zone.

The Kennedy Road PRV connects the North Pressure Zone to the North Central pressure zone and the McDonald's PRV station connects the South Pressure Zone to the South Central Pressure Zone.

2.5.3 Water Main Network – Yorkville has approximately 792,000± feet (150± miles) of water main network throughout the city. The City has mains ranging from 1" to 16" in diameter.

2.6 Controls

The United City of Yorkville utilizes a SCADA system, consisting of Allen Bradley programming logic controllers (PLCs) to monitor the operation of the supply, treatment, storage and distribution components of the water system. The main SCADA node is located at the Wells No. 3 & 4 WTP.

SECTION 3: HISTORICAL AND PROJECTED WATER USE

The United City of Yorkville's historical water use has intensified along with the City's growth in population. The purpose of this section of the report is to provide a summary of the City's historical water production and use.

3.1 Historical Water Use

The City's Water Department tracks water production in daily, monthly and yearly increments. Water use by all of the City residents, businesses, industrial users and government/ institutions is tracked through bi-monthly meter readings.

The historical total water use, or essentially the total amount of source water utilized in the production and distribution of potable water within the City's Water Works System, was analyzed from January 1, 2010 – December 31, 2014. Table No. 3-1 summarizes the total raw water pumped by the City's Water Department.

Table No. 3-1: Historical Water Production
United City of Yorkville, IL

YEAR	2010	2011	2012	2013	2014	AVG.
WATER CONSUMERS	16,921	17,160	17,400	17,639	17,878	
ANNUAL PUMPAGE	552,211,400 GAL	623,194,100 GAL	598,997,900 GAL	513,563,000 GAL	504,429,000 GAL	
MAXIMUM MONTHLY PUMPAGE	55,228,200 GAL	75,797,700 GAL	73,414,800 GAL	56,361,000 GAL	48,679,000 GAL	
MAXIMUM DRY WEATHER MONTH	JULY	JULY	JUNE	JULY	JULY	
AVERAGE DAILY PUMPAGE	1,512,900 GAL	1,707,400 GAL	1,636,600 GAL	1,407,000 GAL	1,382,000 GAL	
AVERAGE DAILY PUMPAGE DURING MONTH WITH MAXIMUM PUMPAGE	1,781,555 GAL	2,445,087 GAL	2,447,160 GAL	1,818,097 GAL	1,570,290 GAL	
MAXIMUM DAILY PUMPAGE	2,947,000 GAL	3,513,100 GAL	3,246,000 GAL	2,771,000 GAL	2,170,000 GAL	
COMPUTED MAXIMUM HOUR	245,583 GAL	292,758 GAL	270,500 GAL	230,917 GAL	180,833 GAL	
COMPUTED MAXIMUM HOUR	4,093 GPM	4,879 GPM	4,508 GPM	3,849 GPM	3,014 GPM	
AVG. GAL./PERSON/DAY	89 GPCD	99 GPCD	94 GPCD	80 GPCD	77 GPCD	88
RATIO OF MAX. AVG. DAY TO AVG. D	1.18	1.43	1.50	1.29	1.14	1.31
RATIO OF MAX. DAY TO AVG. DAY	1.95	2.06	1.98	1.97	1.57	1.91

Notes:
Assumed ratio of max hour to max day demand (MHD:MDD) = 2.0

Inspection of this table indicates that the water use characteristics and metrics are fairly consistent with many Northeastern Illinois communities during the same period. For instance, the maximum day demand to average day demand ratio (MDD:ADD) has averaged 1.91 for the past five years. It reached its maximum in 2011 at 2.06 which occurred during a summer when Illinois experienced below average rainfall in July and August. Coupled with above-average temperatures, the result was a rapidly developed drought that continued through 2012. The drought in turn led to extensive lawn irrigation and peak maximum day water use. The significance of the MDD:ADD ratio is that it is proportional to the amount of supply, treatment and storage required for a municipality. A greater ratio results in greater supply, treatment and storage requirements. The system must be designed to meet these requirements for every day of every year while the increased demand may be limited to just a few days of each year. Therefore, this value should be minimized as much as possible. In 2013, the MDD:ADD ratio stabilized in parallel with the normalizing temperature and precipitation trends which is likely indicative of decreased water use for landscaping activities. In 2014, the MDD:ADD ratio dropped to 1.57. In addition to the climate, the rate of development can also impact the MDD:ADD ratio because seasonal construction water use for activities such as watering newly placed sod increases the maximum day use. Therefore, in the event of an economic upswing and subsequent industrial or housing development, or when the region experiences another drought, there is a potential that the MDD:ADD ratio could creep up again.

Another significant water use parameter to be mindful of is the average gallons (of water production) per person per day. A population equivalent (PE) is a unit of measure often utilized to determine the impacts of existing and additional water consumers to the system. For many northeastern Illinois communities, one PE is typically in the range of 75 – 120 gpd. Lower values are often times associated with established mainly residential communities that practice water conservation, while larger values are typically observed in developing communities that may have a significant commercial and industrial base that consumes a fair amount of water. Inspection of Table No. 3-1 shows that the historical average water use per PE per day in the United City of Yorkville is approximately 88 gpcd which is in the range of expected values for the community. It should be noted, this water use per PE also accounts for all consumer types including residential, commercial, industrial, government/industrial, etc. Similar to the MDD:ADD ratio, this value has a direct impact on the water system infrastructure and therefore, should be minimized when possible. Section 3.2.2 provides an overview of means to reduce the MDD:ADD ratio and the average gallons per person per day including water conservation goals and strategies, many of which the City has already incorporated.

3.1.1 Historical System Evaluation – The water supply and storage systems of the City were evaluated for adequacy using five parameters which generally rate the strength of the supply and storage systems. The parameters used are as follows:

1. *Ultimate Source Capacity* - The ability of the system to supply the maximum day demand with the largest well out of service.

2. *Reliable Source Capacity* - The ability of the system to supply the maximum day demand with all wells operating 16 hours per day.

3. *Peak Hour Storage* - The ability of the system to have sufficient storage to meet the peak hour demand for 4 hours without depleting storage more than 50 percent.

4. *Fire Flow* - The ability of the system to meet a design fire flow rate for the design period and meet maximum day demand with the largest well out of service. A common design fire flow is 3,000 GPM for 3 hours.

5. *Emergency Supply* - The ability of the system to supply the average day demand using elevated storage and supply sources with standby power generator systems only. Normally 80% of storage tank capacity is assumed to be available.

Table No. 3-2 summarizes the system analysis for the previous five calendar years (2010–2014). Table No. 3-3 indicates the corresponding excess or required capacity needed to meet 100% of each of the parameters listed above. Tables No. 3-2 and 3-3 consider all existing active wells are on-line and that each water treatment plant is available to meet the City's water demand.

For further clarification, a summary of the system analysis calculations using all active wells for calendar year 2011 follows (the year of the highest maximum daily demand over the analysis period).

Test No. 1: *Ultimate Source Capacity* – The 2011 maximum day demand was 3,513,100 gallons per day (gpd). The total supply capacity for the water system is 5,616,000 gpd. To obtain the *Ultimate Source Capacity* of the existing system, the capacity of the largest well (Well No. 7 is 1,728,000 gpd) is subtracted from the total well capacity:

Total Well Capacity	=	7,344,000 gpd
Largest Well Capacity	=	1,728,000 gpd
Ultimate Source Capacity	=	5,616,000 gpd

Since the *Ultimate Source Capacity* (5,616,000 gpd) is more than the 2011 maximum day demand (3,513,100 gpd) the supply facilities are adequate for Test No. 1.

Table No. 3-2: Water Works System Evaluation - *Historical Analysis*

United City of Yorkville, IL

TEST PARAMETERS		YEAR				
		2010	2011	2012	2013	2014
1.0	Ultimate Source Capacity	2,669,000 GAL	2,102,900 GAL	2,370,000 GAL	2,845,000 GAL	3,446,000 GAL
2.0	Reliable Source Capacity*	1,949,000 GAL	1,382,900 GAL	1,650,000 GAL	2,125,000 GAL	2,726,000 GAL
3.0	Peak Hour Storage	1,292,667 GAL	1,103,967 GAL	1,193,000 GAL	1,351,333 GAL	1,551,667 GAL
4.0	Fire Flow	3,433,625 GAL	3,362,863 GAL	3,396,250 GAL	3,455,625 GAL	3,530,750 GAL
5.0	Emergency Supply	3,711,100 GAL	3,516,600 GAL	3,587,400 GAL	3,817,000 GAL	3,842,000 GAL

Table No. 3-3: Water Works System Evaluation - *Historical Analysis*
Corresponding Available Or Required Capacity

United City of Yorkville, IL

TEST PARAMETERS		YEAR				
		2010	2011	2012	2013	2014
1.0	Ultimate Source Capacity	1,853 GPM	1,460 GPM	1,646 GPM	1,976 GPM	2,393 GPM
2.0	Reliable Source Capacity*	2,030 GPM	1,441 GPM	1,719 GPM	2,214 GPM	2,840 GPM
3.0	Peak Hour Storage	1,292,667 GAL	1,103,967 GAL	1,193,000 GAL	1,351,333 GAL	1,551,667 GAL
4.0	Fire Flow	3,433,625 GAL	3,362,863 GAL	3,396,250 GAL	3,455,625 GAL	3,530,750 GAL
5.0	Emergency Supply	3,711,100 GAL	3,516,600 GAL	3,587,400 GAL	3,817,000 GAL	3,842,000 GAL

Notes:
Assumes wells are operating 16 hours/day for Reliable Source Capacity.

Test No. 2: *Reliable Source Capacity* – The 2011 maximum day demand was 3,513,100 gpd. The *Reliable Source Capacity* is determined by calculating the maximum volume of water deliverable by the supply source(s) in 16 hours, or two-thirds of the daily well capacity (16 hours/day / 24 hours/day = 66%).

Total Well Capacity = 7,344,000 gpd

16 Hour Pumping Capacity = 7,344,000 gpd x $\frac{16 \text{ hours}}{24 \text{ hours}}$ = 4,896,000 gpd

The *Reliable Source Capacity* (4,896,000 gpd) is more than the 2011 maximum day demand (3,513,100 gpd), so the supply facilities are adequate for Test No. 2.

Test No. 3: *Peak Hour Storage* – The 2011 peak hour demand is 292,758 gal/hr.

Peak Hour Demand = Max. Day Demand x 2 x $\frac{1 \text{ day}}{24 \text{ hours}}$

= 3,513,100 gpd x 2 x $\frac{1 \text{ day}}{24 \text{ hours}}$

= 292,758 gal/hr

The storage required to meet the peak hour demand for 4 hours is:

4-Hour, Peak Demand = 292,758 gal/hr x 4 hrs = 1,171,032 gal

The total storage capacity of the existing facilities, at their current operating levels, is 4,550,000 gallons, and therefore 50% of the existing facilities is 2,275,000 gallons. Since the required *Peak Hour Storage* for 4 hours (1,171,200 gal) is less than 50% of the existing facilities (2,275,000 gal), the storage facilities for Test No. 3 are adequate.

Test No. 4: *Fire Flow* – The maximum day demand plus fire flow demands for 3 hours is 979,140 gallons.

Maximum Day Demand (3 Hours) = 3,513,100 gpd x 3 hrs x $\frac{1 \text{ day}}{24 \text{ hours}}$ = 439,138 gal

Fire Flow Demand (3 Hours) = 3,000 GPM X 60 min/hr X 3 hr = 540,000 gal

Maximum Day + Fire Flow = 979,138 gal

The total flow rate available from the system with the largest supply out of service is 3,900 GPM. The total amount of water from the remaining wells over 3 hours is 702,000 gallons. If 80% of the 4,550,000 gallons from EWST storage is available, there is 3,640,000 gallons available from storage. The total supply available for 3 hours is then 4,342,000 gallons.

Storage	=	3,640,000 gal
Wells	= +	702,000 gal
		4,342,000 gal

Since the 3-hour maximum day demand plus fire flow (979,138 gal) is less than 80% of the available storage facilities and the available supply (4,342,000 gal), the facilities are adequate for Test No. 4.

Test No. 5: *Emergency Supply* – The 2011 average day demand is 1,707,400 gpd and 80% of the available storage is 3,640,000 gallons. The only Yorkville well that has an emergency generator is Well No. 8, this emergency generator is also able to power the WTP for Wells No. 8 and 9.

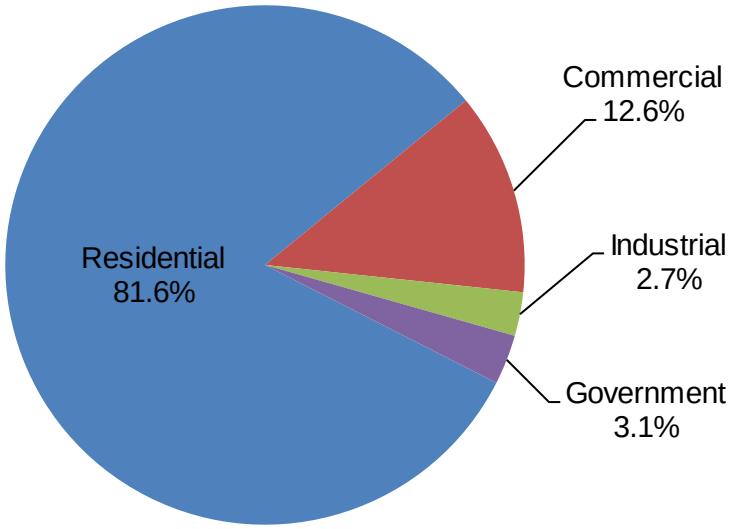
80% of Existing Storage	=	4,550,000 x 80% =	3,640,000 gal
Emergency Generator Supply	=		+ 1,584,000 gal
Total Emergency Supply	=		5,224,000 gal

Since the Total Emergency Supply (5,224,000 gal) is greater than the Average Daily Demand (1,707,400 gal), the system is adequate for Test No. 5, *Emergency Supply*.

Inspection of Tables No. 3-2 and 3-3 shows that all five parameters are satisfied for all five years for the United City of Yorkville. The year where the most demand occurred was 2011, this year was the year of a drought which increased the city's demand on water for irrigation. The parameters used to evaluate the water system show that the city's water system is adequate for the time being. However, considering the City's expected growth, the City needs to consider the best means for a sustainable system that can be expanded in the coming years. In sections 3.2.1 and 3.2.3, this report will use the five parameters used above to evaluate the City's Water Works System against future population and corresponding water usage expectations.

3.1.2 Water Consumption – The City's 2014 annual fiscal/reporting year (May – April) records were reviewed based on the various water use classifications. Exhibit 3-1 presents the water usage by consumer type for Reporting Year 2014. Residential usage within the City consumes the largest percentage of water at 81.6%. Industrial and Commercial users account for 12.6% and 2.7% respectively. The remaining 3.1% of the total annual water usage is from government sources.

Exhibit 3-1: FY 2014-15 Billed Water Use By Consumer Type
United City of Yorkville, IL



3.1.3 Water Audit – As defined in the AWWA Manual M36: Water Audits and Loss Control, 4th Edition (2016), Non-Revenue Water is the difference between system input volume (water produced) and billed authorized consumption. It consists of the following:

- Unbilled Authorized Consumption (fire hydrant flushing, water treatment plant process water, municipal buildings whose water is not metered, etc.);
- Apparent Losses (non-physical losses such as unauthorized consumption (water theft), meter inaccuracies, systematic data handling errors, etc.) and;
- Real Losses (physical losses from the distribution system and storage tanks up to the point of connection to the customer meter).

Water loss in the system equates to lost revenue for the utility. It is critical to the success of any water utility to manage and minimize water loss. In response to the need for consistent water loss auditing and benchmarking, the AWWA released Version 5 of their audit software in August 2014. This tool is focused on identifying water distribution system losses, not water treatment losses. This smart Microsoft Excel based audit program offers water utilities a tool to accurately and consistently identify, record, trend and benchmark the apparent and real losses in their water system. The audit provides a roadmap to help utilities reduce water waste and better prioritize infrastructure investments by identifying water losses that are viable to eliminate and economically recoverable. Another benefit of the audit is that it provides a yardstick by which to

compare against past performance or other similar sized utilities. For instance, by completing the audit, several operational efficiency and financial performance indicators are calculated. A common operational efficiency performance indicator that many utilities refer to is the Infrastructure Leakage Index (ILI). The ILI is a comparison benchmark that focuses on real losses. The ILI score ranges from 0 to 10 with a lower score representing a more robust distribution system.

During 2014 the United City of Yorkville has tracked their water loss using available resources. The data was recovered and input into the AWWA Version 5 audit program. The water used for treatment processes (unbilled & metered) in 2014 was approximately 0.2% whereas water used for purposes such as flushing, fire-fighting and main breaks (unbilled & unmetered) is estimated at approximately 1.2% over the same period. Made up of the apparent losses and real losses, the total water loss was 10.3%. Adding the unbilled water identified above to the total water loss provides the non-revenue water which averages about 11.8% of the pumped water supply. The ILI score was 0.68 for this period, which is indicative of a fairly tight distribution system. Table No. 3-4 outlines the information evaluated in the summary.

Table No. 3-4: Water Accounting

United City of Yorkville, IL

	Water Supply Treated	Water Billed and Metered	Water Unbilled and Metered		Water Unbilled and Unmetered		Authorized Consumption (C+D+F)	Water Losses				Non-Revenue Water D+F+K		Infrastructure Leakage Index
								Apparent	Real (B-H-I)	Total (I+J) or (B-H)				
Year A	MG B	MG C	MG D	% E	MG F	% G	MG H	MG I	MG J	MG K	% L	MG M	% N	O
2014	500.503	441.505	1.184	0.24%	6.256	1.25%	448.946	16.046	35.511	51.558	10.30%	58.998	2.93%	0.68

Currently, there are no water loss regulatory requirements or standards that apply to the United City of Yorkville. However, in order to establish a reasonable goal for water loss, it is recommended that the benchmarking indicators of other utilities be reviewed for comparison. In 2011, as a result of a water audit data collection initiative, the AWWA Water Loss Control Committee created its first dataset of validated water audit data which has been posted for review by water utility stakeholders. The document is titled *Validated Water Audit Data For Reliable Utility Benchmarking.* Twenty-one utilities provided their water audit data for review and careful validation by members of the Committee's Water Audit Software Subcommittee. Data from the entire group of utilities was assembled with results that document the first North American benchmark performance indicators using the AWWA water audit methodology. This is a significant step toward improving the level of accountability and the robustness of water audit data within North America.

Table No. 3-5 presents a comparison of the United City of Yorkville's performance indicators alongside the North American Data set for utilities with less than 50,000 service connections. Review of this table suggests that the United City of Yorkville is performing better than the average of the water utilities compared against. However, there is always room for improvement. As noted in Table No. 3-5, the validity score was 61, based on a scale of 0 to 100. The higher the validity score, the more accurate the water audit information and results will be. We recommend the City continue to improve this validity in the future years. In addition, based on the water audit, the annual cost of apparent and real losses is over $100,000 as demonstrated in

Table No. 3-5. Minimizing lost revenue should be an incentive for continued water loss reduction. Understanding that a certain amount of water loss is unavoidable (i.e. leakage that cannot be detected, all meters have a certain level of inaccuracy, etc.), it is recommended the City aim to achieve an economic level of water loss where the benefit of Water Works System Improvements to correct water loss is greater than or equal to the cost of the improvements.

Table No. 3-5: Water Audit Summary and Comparison

United City of Yorkville, IL

Key Performance Indicators	FY2014-15	2013 AWWA Validated Data Set (Average)
Financial Indicators		
Non-Revenue Water as Percent by Volume of Water Supplied:	11.8%	21.0%
Non-Revenue Water as Percent by Cost of Operating System:	2.6%	9.6%
Annual Cost of Apparent Losses:	$ 70,123	N/A
Annual Cost of Real Losses:	$ 35,376	N/A
Operational Efficiency Indicators		
Apparent Losses Per Service Connection Per Day (gallons/connection/day):	6.3	11.5
Real Losses Per Service Connection Per Day (gallons/connection/day):	14.0	56.0
Unavoidable Annual Real Losses (UARL) (million gallons/year):	NA	N/A
From Above, Real Losses = Current Annual Real Losses (CARL) (million gallons/year):	35.51	N/A
Infrastructure Leakage Index (ILI) [CARL/UARL]:	0.68	3.0
Validity Score	61	77

Notes:

City's Water Distribution System has achieved a better score than the 2013 Validated Data Set

City's Water Distribution System has achieved a lesser score than the 2013 Validated Data Set

As indicated in Section 1.1, this Comprehensive Water Works System Master Plan is being prepared for an approximate 35-year planning period through the year 2050. The population of the United City of Yorkville is anticipated to grow at an annual rate of 3.2%. In addition to the residential growth, the City also expects commercial and industrial properties to continue to develop at a steady rate thereby increasing the water demand during the next 35 years. With this growth, the water demand of the City's Water Works System is expected to grow also.

3.2 Planning Period Projected Water Use

Understanding that water resources are limited and water use trends are likely to change during the next 35 years, two different water demand scenarios were investigated as part of this Master Plan. The first scenario is based on the current trends of the existing Water Works System, reflecting current demand conditions and recent trends in development. The second scenario is the less resource intensive water demand projection, which is based on potential intervention by the municipality to optimize water use through water conservation.

3.2.1 Current Trends (CT) Water Use Projection & System Evaluation – In Section 1.5, the population projections for the planning period were summarized. The next step is to equate the population to a water use demand per capita. Table No. 3-6 summarizes the total projected CT water use for incremental PE increases to the year 2050 population projection of 59,565 (+41,687 PE).

As previously identified, the estimated historical average water use per person per day in the United City of Yorkville is approximately 88 gpcd. The 88 gpcd was rounded up to 90 gpcd and that usage rate was used to project the demand to 2050. This projection assumes the proportion of the residential water use to all other types of water users will remain the same into the future. The CT MDD for the planning period was established utilizing an MDD:ADD ratio of 2.00. As seen in Table No. 3-1, the average MDD:ADD over the course of the last five years was 1.91; however, a factor of safety was added for future calculations due to the fact that during a dry year, this number will increase. A MHD:MDD ratio of 2.0 was used for all calculations.

Table No. 3-7 summarizes the CT projected water capacity analysis for 5,000 PE increment increases to the year 2050 population projection. Table No. 3-8 indicates the corresponding excess or required capacity needed to meet 100% of each of the test parameters. Tables No. 3-7 and 3-8 consider all existing active wells are on-line and that each water treatment plant is available to meet the City's water demand. It should be noted that although Tables No. 3-7 and 3-8 assume all wells to be online, future water use predictions in Section 6 factor in the potential for Well No. 3 to be abandoned due to maintenance issues.

Review of Tables No. 3-7 and 3-8 show that if water usage statistics remain the same, the water supply will fail to be adequate when 10,000 people have been added to the population (expected to happen around 2025). When 10,000 people are added, the Reliable Source Capacity is no longer met. When more people are added to the population, such as is expected on the path to 2050, Ultimate Source Capacity, Peak Hour Storage, and Emergency Supply also fail to become adequate when 15,000 people, 25,000 people and 41,687 people have been added to the population, respectively.

Table No. 3-6: Projected Water Use - CT

United City of Yorkville, IL

YEAR ESTIMATED POPULATION	2014 17,878	FUTURE 22,878	FUTURE 27,878	FUTURE 32,878	FUTURE 37,828	FUTURE 42,878	FUTURE 47,878	FUTURE 52,878	FUTURE 59,565
ADDITIONAL POPULATION EQUIVALENTS	--	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
ANNUAL PUMPAGE	504,429,000 GAL	751,542,300 GAL	915,792,300 GAL	1,080,042,300 GAL	1,244,292,300 GAL	1,408,542,300 GAL	1,572,792,300 GAL	1,737,042,300 GAL	1,956,710,250 GAL
MAXIMUM MONTHLY PUMPAGE	48,679,000 GAL								
MAXIMUM DRY WEATHER MONTH	JULY								
AVERAGE DAILY PUMPAGE	1,381,997 GAL	2,059,020 GAL	2,509,020 GAL	2,959,020 GAL	3,409,020 GAL	3,859,020 GAL	4,309,020 GAL	4,759,020 GAL	5,360,850 GAL
AVERAGE DAILY PUMPAGE DURING MONTH WITH MAXIMUM PUMPAGE	1,570,290 GAL								
MAXIMUM DAILY PUMPAGE	2,170,000 GAL	4,118,040 GAL	5,018,040 GAL	5,918,040 GAL	6,818,040 GAL	7,718,040 GAL	8,618,040 GAL	9,518,040 GAL	10,721,700 GAL
COMPUTED MAXIMUM HOUR	180,833 GAL	343,170 GAL	418,170 GAL	493,170 GAL	568,170 GAL	643,170 GAL	718,170 GAL	793,170 GAL	893,475 GAL
COMPUTED MAXIMUM HOUR	3,014 GPM	5,720 GPM	6,970 GPM	8,220 GPM	9,470 GPM	10,720 GPM	11,970 GPM	13,220 GPM	14,891 GPM
AVG. GAL./PERSON/DAY	77 GPCD	90 GPCD	90 GPCD	90 GPCD	90 GPCD	90 GPCD	90 GPCD	90 GPCD	90 GPCD
RATIO OF MAX. DAY TO AVG. DAY	1.57	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Notes:

Assumed ratio of Max Hour to Max Day Demand (MHD:MDD) = 2.0

Table No. 3-7: Water Works System Evaluation - CT

United City of Yorkville, IL

TEST PARAMETERS	YEAR	POPULATION EQUIVALENT INCREASE							
	2014	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
1.0 Ultimate Source Capacity	3,446,000 GAL	1,497,960 GAL	597,960 GAL	(302,040) GAL	(1,202,040) GAL	(2,102,040) GAL	(3,002,040) GAL	(3,902,040) GAL	(5,969,700) GAL
2.0 Reliable Source Capacity	2,726,000 GAL	777,960 GAL	(122,040) GAL	(1,022,040) GAL	(1,922,040) GAL	(2,822,040) GAL	(3,722,040) GAL	(4,622,040) GAL	(6,401,700) GAL
3.0 Peak Hour Storage	1,551,667 GAL	902,320 GAL	602,320 GAL	302,320 GAL	2,320 GAL	(297,680) GAL	(597,680) GAL	(897,680) GAL	(1,298,900) GAL
4.0 Fire Flow	3,530,750 GAL	3,287,245 GAL	3,174,745 GAL	3,062,245 GAL	2,949,745 GAL	2,837,245 GAL	2,724,745 GAL	2,612,245 GAL	2,353,788 GAL
5.0 Emergency Supply	3,842,003 GAL	3,164,980 GAL	2,714,980 GAL	2,264,980 GAL	1,814,980 GAL	1,364,980 GAL	914,980 GAL	464,980 GAL	(136,850) GAL

Table No. 3-8: Water Works System Evaluation - CT
Corresponding Available Or Required Capacity

United City of Yorkville, IL

TEST PARAMETERS	YEAR	POPULATION EQUIVALENT INCREASE							
	2014	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
1.0 Ultimate Source Capacity	2,393 GPM	1,040 GPM	415 GPM	(210) GPM	(835) GPM	(1,460) GPM	(2,085) GPM	(2,710) GPM	(4,146) GPM
2.0 Reliable Source Capacity*	2,840 GPM	810 GPM	(127) GPM	(1,065) GPM	(2,002) GPM	(2,940) GPM	(3,877) GPM	(4,815) GPM	(6,668) GPM
3.0 Peak Hour Storage	1,551,667 GAL	902,320 GAL	602,320 GAL	302,320 GAL	2,320 GAL	(372,100) GAL	(747,100) GAL	(1,122,100) GAL	(1,623,625) GAL
4.0 Fire Flow	3,530,750 GAL	3,287,245 GAL	3,174,745 GAL	3,062,245 GAL	2,949,745 GAL	2,837,245 GAL	2,724,745 GAL	2,612,245 GAL	2,353,788 GAL
5.0 Emergency Supply	3,842,003 GAL	3,164,980 GAL	2,714,980 GAL	2,264,980 GAL	1,814,980 GAL	1,364,980 GAL	914,980 GAL	464,980 GAL	(171,063) GAL

Notes:
Assumes wells are operating 16 hours/day for Reliable Source Capacity

3.2.2 Water Conservation Goals & Strategies – As part of the Master Plan, the United City of Yorkville is interested in understanding the potential reduction in future water system capital improvements resulting from a LRI demand scenario for the City. The LRI demand scenario is calculated based on water conservation practices that are judged to be suitable for the City based on a variety of factors including regional climate, and political and social appropriateness.

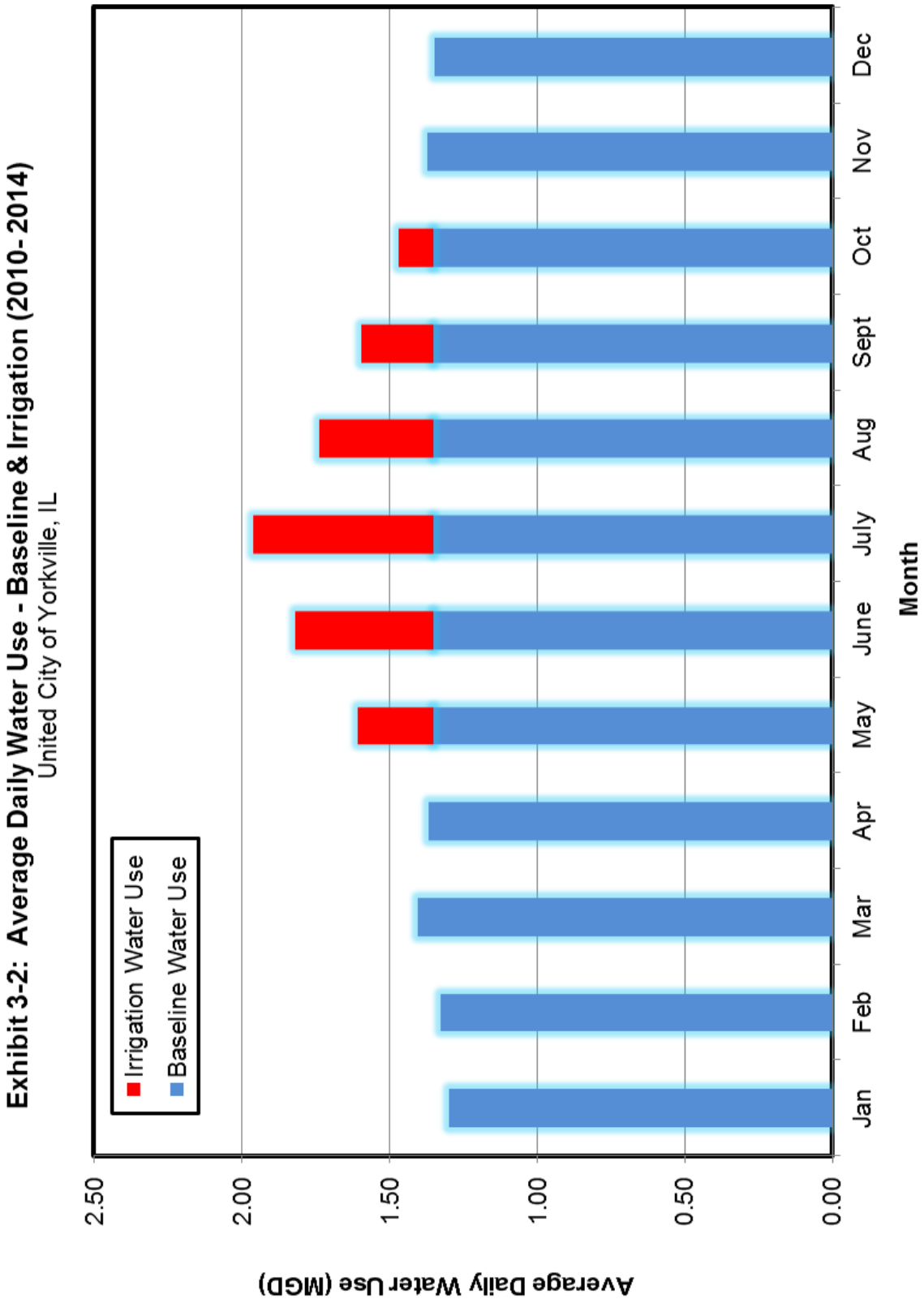
To define a reasonable LRI demand scenario, a systematic process was used to efficiently review available information, select relevant water conservation strategies and calculate estimated savings. The resulting water demand savings are applied to the baseline water use projections developed for the Master Plan and the LRI demand scenario can be established.

3.2.2.1 *Water Use Review* – In the first step, baseline water use was reviewed and further analyzed to better understand the allocation of water across the City's customer base and categories relevant to water conservation planning.

The first water use breakdown focused on defining the City's water use in the categories of indoor use, outdoor use and non-revenue water. These categories are important because they represent the most common three areas where water conservation strategies can be applied to reduce water use in any community.

Outdoor water use as a percentage of annual water use is calculated by first estimating the average water use during cool weather months from November through April. This average water use can be considered the baseline indoor use because air temperature and precipitation in the Midwestern United States between November and April timeframe limits the need for outdoor water use. This calculation was performed for the period of 2010 through 2014. Based on this calculation, the average amount of outdoor water use from 2010-2014 was 12.9% of the total water use. Exhibit 3-2 summarizes the monthly analysis for the time period.

In any water utility, there is a difference between the amount of source water obtained and the total amount of water that the utility can reasonably account for in terms of customer billing and estimates. This water is often referred to as non-revenue water. As previously discussed in Section 3.1.3, an analysis of the City's annual water production was performed and it was estimated that the real losses associated with the distribution system is on average approximately 8% of the annual water pumpage. In terms of water conservation, this number reflects the baseline amount of water loss that the City can work to decrease through utility best management practices.


Exhibit 3-2: Average Daily Water Use - Baseline & Irrigation (2010- 2014)
United City of Yorkville, IL
Irrigation Water Use
Baseline Water Use
2.50
2.00
1.50
1.00
0.50
0.00
Average Daily Water Use (MGD)
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec
Month

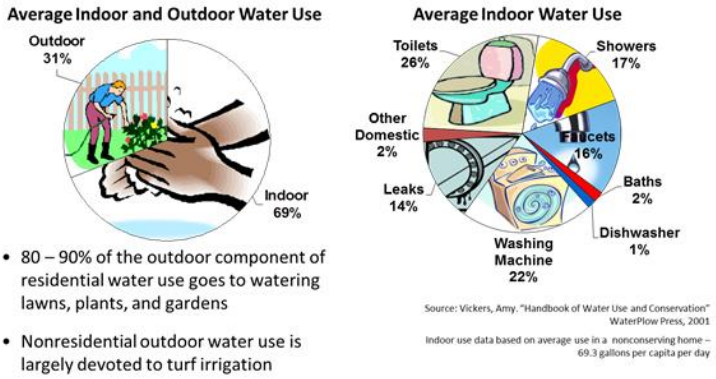
Because the City's water is used predominately by residential customers, significant water savings can be realized from conservation programs that specifically address residential water use. To better understand potential areas for water savings inside residential properties, a review was performed of typical indoor water uses in a non-conserving home. Exhibit 3-3 illustrates how the average residential household in the United States uses water, with an approximate 31% of their water use for outdoor use and 69% for indoor use. While an annual average outdoor water use across the nation is approximately 31%, outdoor water use in the Midwest likely is much lower than that value. It is unknown whether a study has evaluated the Midwest or Illinois outdoor water use, but past master plans completed by EEI have determined average outdoor water use in the City of Elgin, City of Algonquin and the Village of Huntley are 10%, 6% and 22% respectively. At 12.9%, the United City of Yorkville's outdoor water use is below the national average; however, it is comparable with some of its neighbors. Even though Yorkville's outdoor water usage is not comparatively high, it is always advantageous to conserve water in the outdoors where possible.

In addition to water savings on the outdoor water use side, there also are some opportunities where additional water conservation approaches on indoor water use can make an impact on overall water use. For instance, Exhibit 3-3 shows the estimated indoor water use breakdown, which indicates toilets and washing machines are the top two indoor water users with approximately 26% and 22% of indoor water use, respectively.

Several conclusions relevant to potential water use reductions from water conservation were made from this analysis. First, because the City's customer base is mainly residential, significant water savings can be realized from conservation programs that specifically address residential water use. In addition, outdoor water use on average is approximately 12.9% of total annual water use. Since it is likely a portion of the outdoor water use is wasted and the fact that outdoor water use drives the maximum day demands on the Water Works System, it would seem reductions in outdoor water use could make a big effect on the total water use within the community and create a considerable cost savings. Finally, real losses for the City are estimated at 8% and the City could realize water savings in this category by further implementing utility best management practices.

Exhibit 3-3: Average Indoor and Outdoor Water Use in a Residential Non-Conserving Home

National Average



3.2.2.2 BMP Overview – In the second step, drivers, goals and criteria for evaluating potential water conservation programs are evaluated and an inventory is made of all potential water saving measures or strategies.

The current drivers for implementing water conservation in the United City of Yorkville are a combination of stewardship and cost savings. In recent years, the City has taken a proactive approach to increasing their focus on sustainability across all parts of the City's operation. Water is a finite and precious resource and water conservation is an area that the City has a significant opportunity to influence leadership provided by the Water Department. Therefore, as part of this Master Plan, a goal was established to calculate potential water savings that could be achieved with conservation strategies relevant to Yorkville.

The City also wanted to understand the potential reduction in future water system capital requirements that would result from a LRI demand scenario for the City in the planning year of 2050. Water conservation has been demonstrated as a cost effective strategy to reduce capital expenditures by deferring system improvements associated with expanding infrastructure to meet increasing water demands. With this information, the City would be able to further justify spending resources to implement water conservation programming if there were savings identified in future capital expenditures using the LRI demand scenario.

The City's current philosophy regarding water conservation is that education is a key first step in creating awareness around the City's finite water supply and has been involved with student and adult outreach in this area. The next logical step in promoting water conservation is selection and implementation of water conservation programs that can result in measurable water savings.

Potential water savings estimated for the LRI scenario should be determined by selecting water conservation best practices that would result in measurable water savings, are relevant to the United City of Yorkville and would be reasonably accepted by the local community.

A review of best management practices in water conservation was performed with the goal of creating a consolidated list of the potential options to use as a basis for the estimated water savings for the City's LRI demand scenario. In the context of water conservation, a Best Management Practice (BMP) consists of generally accepted conservation measures or incentives that directly or indirectly result in proven, beneficial and cost-effective water savings. BMPs vary depending on local or regional water-use characteristics and demand reduction needs.

While water conservation has recently become more relevant in the Midwestern United States, other parts of the country including California have experienced decades of drought and have applied water conservation to help address serious water supply challenges. The most popular set of water conservation BMPs were developed as part of The California Memorandum of Understanding (MOU) Regarding Urban Water

Conservation in California. The document has been signed by more than 260 water utilities, public advocacy organizations and other interested groups who are members of the California Urban Water Conservation Council and are committed to ensuring adequate water supply to residents of California. A set of 14 BMPs are outlined in the MOU and provide guidelines on the expected water savings and requirements for program implementation.

The BMPs developed for the California MOU were selected because they have proven significant conservation benefits, are technically and economically feasible, are environmentally and socially acceptable and are not otherwise unreasonable for most water suppliers to carry out.

These BMPs have been adopted by water utilities across the United States and recently were evaluated and adopted by the Chicago Metropolitan Agency for Planning (CMAP) document titled *Water 2050: Northeastern Illinois Regional Water Supply/Demand Plan* (CMAP Plan). CMAP, the official regional planning agency for northeastern Illinois, released their Water Supply and Demand Plan in March of 2010, which includes a set of 13 water conservation measures and recommendations for demand management. These recommendations are based on the BMPs developed for the California MOU.

Table No. 3-9 provides a summary of the 13 recommendations from the CMAP Plan which were determined to be relevant for the Northeastern Illinois region. These BMPs address each of the main categories of water use within the City including indoor, outdoor and non-revenue water as well as a variety of customer classes such as residential and non-residential customers. An evaluation was performed to assess the relevance of these BMPs to the United City of Yorkville and their ability to address the main categories of water use within the City.

The BMPs presented in the CMAP Plan represent demonstrated, successful water conservation programs each with specific water conservation measures and incentives that contribute to the program's success. A *water conservation measure* is a device or practice that results in a more efficient use of water and reduces water demand. A *water conservation incentive* increases customer awareness about the value of reducing water use and motivates water users to implement conservation or efficiency measures. Successful water conservation programs appropriately match measures with incentives to drive reduction in water use.

Table No. 3-9: Evaluation of Best Management Practices (BMPs) for Water Conservation

United City of Yorkville, IL

Conservation Program Description	RWSP Number	California MOU Number	Utility	All Customers	Residential	Non-Residential	Purpose/Description	Description of Basis for Water Savings	Low Estimate from RWSP (mgd)	High Estimate from RWSP (mgd)	Program Cost	Implementation Obstacles
System Water Audits, Leak Detection and Repair	6	1	x				To perform a water audit by the water utility which consists of compiling the consumptive uses and losses of water managed in a single system; losses can be either apparent (paper losses due to metering and billing errors) and real losses (physical losses including leakage from distribution mains, customer service lines and overflows from distribution system tanks to storage facilities).	A leak-free water system is not a technically feasible or an economic objective, but a good rule of thumb is that losses should not constitute more than 10% of the total volume of water entering the system.	5.9	29.7	Varies for each utility based on the amount of water loss and reduction goal	Utility staff capacity
Metering with commodity rates for all new connections and retrofit of existing connections	7	2	x				To bill customers for the volume of water they use which is measured by meters for each customer; require that each new connection is metered and provide meters to all existing connections without a meter; maintain a record of all meters including testing, repair and replacement schedule and status.	Assume meter retrofits and volumetric rates combined will result in a 20% reduction in demand for retrofitted accounts.	30.3	31.5	Utility: meter purchase, meter installation	Utility investment cost
Retail Conservation Pricing	11	3		x			To provide economic incentives (a price signal) to customers to use water efficiently. Because conservation pricing requires a volumetric rate, metered water service is a necessary condition of conservation pricing; can include a uniform rate, seasonal rate, tiered rate or allocation-based rate.	Not quantified			Utility: administrative; Customer: increased water bill	Utility staff capacity, political will
Water Waste Prohibition for residential and non-residential customers	8	4		x			Standard Accounts: To enact and enforce measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative fountains. Large-Landscape: To provide non-residential customers with support and incentives to improve their landscape water use efficiency; should include landscape water use analysis/surveys, voluntary water use budgets, and when cost effective, include the following: installation of dedicated landscape meters, training in landscape maintenance and irrigation design, and financial incentives such as loans, rebates, or grants for the purchase and/or installation of water efficient irrigation systems. Regular-Landscape: To provide residential customers with clear information and guidelines on when to water outdoor landscapes and provide a financial incentive (fine or additional fee) when water schedules are broken.	Not quantified Assume landscape surveys and assistance will result in a 15% reduction in demand for landscape water use by accounts that participate in survey/assistance programs.	12.1	60.3	Political will (i.e. ordinance creation); Utility: enforcement Utility: survey/budget calculation; Customer: hardware investment	Political will (i.e. ordinance creation); Utility staff capacity for enforcement Investment cost, social mindset
Conservation Coordinator	1	5		x			To designate a water conservation coordinator (and support staff if necessary) whose duties would include the following: coordination and oversight of conservation programs and BMP implementation; preparation and submittal of annual implementation report; communication and promotion of water conservation issues to utility management, operations and planning staff; preparation of annual conservation budget; and coordination with other regional utility conservation specialists. Agencies jointly operating regional conservation programs are not intended to have staff duplication and redundant conservation coordinator positions.	Not quantified	na	na	Utility: variable	Utility staff capacity
School Education Programs	13	6		x			To educate students in the service area about water conservation and efficient water use; program examples include: working with school districts and private schools to provide instructional assistance, education materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Education materials shall meet the state education framework requirements, and grade appropriate materials shall be distributed to grade levels K-3, 4-6, 7-8, and high school.	Not quantified	na	na	Variable depending on the scale, frequency and type of public programs; school district: administrative; government advocates: programmatic	Already full classroom curriculum
Public Information Programs	12	7		x			To promote and educate customers about water conservation and water conservation benefits; program examples include: providing speakers to employees, community groups and the media; using paid and public service advertising; using bill inserts; providing information on customers' bills showing use in gallons per day for the last billing period compared to the same period the year before; providing public information to promote water conservation practices; and coordinating with other government agencies, industry groups, public interest groups and the media.	Not quantified	na	na	Variable depending on the scale, frequency and type of public programs	Difficult to quantify cost/benefits; investment cost
Water Survey for Residential Customers	2	8			x		To conduct on-site survey and assessment of water-using hardware, fixtures, equipment, landscaping, irrigation systems and management practices to determine the efficiency of water use and to develop recommendations for improving indoor and outdoor water-use efficiency for residential customers.	Dependent on house age, device, leaks, etc. customers to see 3 - 20 gpcpd reduction in indoor water use and 10% reduction in outdoor water use if they implement the recommendations from the survey	0.1	0.7	Utility: hardware, administrative; customer: lead repair	Utility staff capacity, investment cost, customer cooperation
Residential Plumbing Retrofit	3	9			x		To provide assistance and resources to residential customers to help them change, alter, or adjust plumbing fixtures or other equipment or appliances to save water or make them operate more efficiently; typically includes the replacement of shower heads and sink faucets	Assume between 2.9 - 7.2 gpcpd water savings from low-flow showerhead retrofit and 1.3 gpcpd water savings for toilet retrofit	5.2	26.0	Utility: administrative/programmatic (rebate); Customer: cost or retrofit equipment	Utility staff capacity, investment cost of retrofit equipment, customer cooperation, rebate program funding

Table No. 3-9: Evaluation of Best Management Practices (BMPs) for Water Conservation

United City of Yorkville, IL

Conservation Program Description	RWSP Number	California MOU Number	Utility	All Customers	Residential	Non-Residential	Purpose/Description	Description of Basis for Water Savings	Low Estimate from RWSP (mgd)	High Estimate from RWSP (mgd)	Program Cost	Implementation Obstacles
High-Efficiency Clothes Washing Machine Financial Incentive Replacement	5	10			x		To encourage the replacement and purchase of high-efficiency clothes washing machines by providing incentives (such as rebates, bill credits, and tax incentives) to water customers; Could include partnering with energy utilities or government organizations; applies to residential customers.	Water use by clothes washers is typically the second largest source of indoor residential water demand, representing 21.7% of indoor water use. Assume 4,200 gal/year/household of water savings for each high-efficiency clothes washing machine replacement.	3.2	16.1	Sponsor: rebate offer; Customer: purchase price minus rebate	Utility staff capacity, organization support from regional/county agency
Residential Ultra Low Flush Toilet Replacement Program	4	11			x		To encourage the replacement and purchase of Ultra Low Flush Toilets (1.6 gal or less) by providing incentives (such as rebates, bill credits, and tax incentives) to water customers; Could include partnering with energy utilities or government organizations; applies to residential customers.	Water use by toilets is typically the largest source of indoor residential water demand, representing 26% of indoor water use for the average non-conserving household. Assume 4,000 - 11,000 gal/year/household of water savings for each ultra low flow toilet replacement.	15.0	74.8	Sponsor: rebate offer; Customer: purchase price minus rebate	Utility staff capacity, organization support from regional/county agency
Conservation Programs for Commercial, Industrial, and Institutional Accounts	10	12				x	To provide assistance and incentives to commercial, industrial and institutional customers to encourage them to improve indoor and outdoor water-use efficiency; program can include replacement of existing toilets with ultra-low-flush toilets, water-use surveys, incentives and performance targets.	Savings is variable, depending on action taken	5.0	25.2	Utility: survey administration; Customer: hardware investment	Utility staff capacity; Customer cooperation, feasibility
Efficient Water Use Landscaping for Large Landscape Areas	9	13				x	To provide non-residential customers with support and incentives to improve their landscape water use efficiency; should include landscape water use analysis/surveys, voluntary water use budgets, and when cost effective, include the following: installation of dedicated landscape meters, training in landscape maintenance and irrigation design, and financial incentives such as loans, rebates, or grants for the purchase and/or installation of water efficient irrigation systems.	Assume landscape surveys and assistance will result in a 15% reduction in demand for landscape water use by accounts that participate in survey/assistance programs.	1.0	5.1	Utility: survey/budget calculation; Customer: hardware investment	Investment cost, social mindset

Notes:
Adapted from the Memorandum of Understanding regarding Urban Water Conservation in California and the CMAP Plan

3.2.2.3 BMP Selection – During the third step, the BMPs and other conservation measures are evaluated for their relevance to the United City of Yorkville and potential water savings are estimated.

Table No. 3-10 presents a summary of the evaluation of CMAP Plan BMPs with respect to their relevance for the United City of Yorkville. All of these BMPs were determined to be relevant for the City and could be reasonably relied on for measurable water savings with proper implementation. The BMPs address all the areas that were previously identified as high potential water savings for the City including residential water use, outdoor water use and non-revenue water. Potential water savings for each BMP were calculated and are discussed in more detail in this section. Because the CMAP Plan recommended BMPs are comprehensive and include programs that address each of the areas of water savings within the City, no additional water conservation measures were selected for incorporation into the LRI water demand scenario.

As indicated in Table 3-10, all of the CMAP Plan recommended BMPs are relevant for the United City of Yorkville. The City is already metering all of their customers based on the volume of water that each customer uses. This practice is fundamental to water conservation program success because volumetric metering allows customers to see the impacts of their behaviors and changes in hardware. It is recommended that the City continue to follow this practice. Another key output of the BMP evaluation is that baseline education and public outreach activities are essential elements to support all other water conservation programs. The City has already taken steps to implement education and public outreach programs and should continue to do so to increase these activities as the City moves forward with other conservation programming.

Potential water savings associated with each of the BMPs listed in Table No. 3-9 were calculated for use in the LRI demand scenario. The estimated water savings were calculated using information provided in the CMAP Plan and the California MOU. A summary of key assumptions related to potential water savings calculated for each BMP are listed in Table No. 3-11. The LRI water saving calculations are presented in Appendix B.

Potential water savings for each BMP are presented in Table No. 3-12. Based on the assumptions outlined previously, the City could implement water conservation BMPs and realize approximately 11% of water use reduction from the 2050 base demands. The two largest categories of water savings would be realized from outdoor water use and utility focused programs, which make up 33% and 37% of the water reduction respectively. The remainder of the water savings is provided through indoor residential and commercial, industrial and institutional focused programs.

Table No. 3-10: Summary of BMP Evaluation for the United City of Yorkville LRI Water Demand Scenario

United City of Yorkville, IL

Conservation Program Description	Sector Focus	Recommendations for Yorkville
System Water Audits, Leak Detection and Repair	Utility	●
Metering with commodity rates for all customers	Utility	○
Retail Conservation Pricing	All Customers	○○
Water Waste Prohibition for residential and non-residential customers	All Customers	●
Conservation Coordinator	All Customers	
School Education Programs	All Customers	□
Public Information Programs	All Customers	
Water Survey for Residential Customers	Residential	□
Residential Plumbing Retrofit	Residential	●
High-Efficiency Clothes Washing Machine Financial Incentive Replacement	Residential	●
Residential Ultra Low Flush Toilet Replacement Program	Residential	●
Conservation Programs for Commercial, Industrial and Institutional Accounts	Non-residential	●
Efficient Water Use Landscaping for Large Landscape Areas	Non-residential	□

Legend	
Symbol	**Symbol Description**
●	Recommended for the United City of Yorkville. Potential water savings estimated for the LRI water demand scenario
○	Currently being completed by the United City of Yorkville. No additional water savings estimated.
○○	Recommended for the United City of Yorkville. No additional water savings estimated due to political nature of item.
□	Recommended for the United City of Yorkville Considered to be a baseline educational component or part of another program; no water savings estimated

Table No. 3-11: Potential Water Savings Calculation Assumptions by BMP

United City of Yorkville, IL

Best Management Practice	Key Assumptions
High Efficiency Toilet Replacement	Assume 90% of Households Upgrade to HET by 2050
High Efficiency Clothes Washing Machines	Assume 100% of Households Replace Washing Machines
Faucet and Showerhead retrofits	Assume 90% of Households Replace Faucets & Showerheads
Water Conservation for Commercial, Industrial and Institutional	Assume 15% of CII Is Non Process Related Water Use
	Nonresidential is 18% of Yorkville's Daily Demand
	Assume 50% of CII Participation
Water waste prohibition programs –	50% of Outdoor Water used is Wasted (EPA)
Existing Properties	Assume 50% Reduction of Outdoor Waste
New Construction	Assume 5% New Landscape Water Waste Reduction
Efforts to reduce system losses	8.0% of Water Supply Loss from Unidentified Losses
	Assume 50% Reduction in Unidentified Losses
Baseline Education Efforts: Conservation Coordinator, School Education Programs and Public Information Programs	Assumed to be a baseline component of any water conservation program; no specific water savings calculated from these programs.

Table No. 3-12: Potential Estimated Water Savings From Water Conservation and Efficiency

United City of Yorkville, IL

Category		Water Saved (MGD)	% Of Total (%)
Outdoor	All Customers	0.172	3.2%
	New Landscape	0.017	0.3%
Utility Water - System Losses		0.214	4.0%
Indoor Residential	High Efficiency Toilets (HET)	0.049	0.9%
	High Efficiency Washing Machines (HEWM)	0.019	0.3%
	Retrofits	0.032	0.6%
Commercial, Industrial, and Institutional Customers		0.074	1.4%
	Total Estimated Savings =	**0.578**	**11%**

3.2.2.4 Implementation – The final step in the process is to implement the chosen conservation programs by integrating them into the City's current operation and programs. The potential water savings will only be achieved by proper investment into the implementation of the water conservation programs. Developing an implementation plan and investment budget for the City was not in the scope for this Master Plan; however this would be the next required step to realize the future potential water savings.

3.2.3 Less Resource Intensive (LRI) Water Use Projection Evaluation – As discussed in Section 3.1.2.3, successful implementation of the water conservation strategies could result in meeting a 11% reduction goal in water use by the year 2050. Table No. 3-13 summarizes the total projected LRI water use for incremental PE increases to the year 2050 population projection of 59,565 (+41,687 PE).

With the LRI adjustment, the average water use per person per day in the United City of Yorkville is projected to be reduced from 90 gpcd under the CT scenario to 80 gpcd under the LRI scenario. The United City of Yorkville's anticipated average day demand in 2050 is reduced from 5.36 MGD under the CT scenario to 4.77 MGD under the LRI scenario. As stated previously, outdoor water use makes up a large portion of the City's total water use, and it has a large effect on the maximum day water use within the community. With enforcement of existing water conservation programs focused on wiser outdoor water use along with spreading out the water demand (i.e. odd/even lawn sprinkling requirements), the MDD:ADD ratio should come down. Therefore, the LRI MDD:ADD ratio was established at 1.75 (the CT MDD:ADD average ratio was 2.00). The MHD:MDD ratio of 2.0 was maintained the same as CT water projection. Mature communities with minimal growth will often experience MDD:ADD ratios between 1.3 – 1.5. Given the United City of Yorkville's growth potential, a ratio higher than 1.5 was deemed appropriate.

Table No. 3-14 summarizes the LRI projected water capacity analysis for incremental PE increases to the year 2050 population projection. Table No. 3-15 indicates the corresponding excess or required capacity needed to meet 100% of each of the test parameters. Tables No. 3-14 and 3-15 consider that all existing active wells are on-line and that each water treatment plant is available to meet the City's water demand.

Inspection of Tables No. 3-14 and 3-15 indicates that while the *Ultimate Source Capacity, Reliable Source Capacity and Peak Hour Storage* continue to fail with additional PE increases, the water supply and storage deficits are roughly cut in half under the LRI scenario when compared to the CT scenario by the end of the planning period.

Table No. 3-13 Projected Water Use - LRI

United City of Yorkville, IL

YEAR ESTIMATED POPULATION	2014 17,878	FUTURE 22,878	FUTURE 27,878	FUTURE 32,878	FUTURE 37,828	FUTURE 42,878	FUTURE 47,878	FUTURE 52,878	FUTURE 59,565
ADDITIONAL POPULATION EQUIVALENTS	--	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
ANNUAL PUMPAGE	504,429,000 GAL	668,037,600 GAL	814,037,600 GAL	960,037,600 GAL	1,106,037,600 GAL	1,252,037,600 GAL	1,398,037,600 GAL	1,544,037,600 GAL	1,739,298,000 GAL
MAXIMUM MONTHLY PUMPAGE	48,679,000 GAL								
MAXIMUM DRY WEATHER MONTH	JULY								
AVERAGE DAILY PUMPAGE	1,381,997 GAL	1,830,240 GAL	2,230,240 GAL	2,630,240 GAL	3,030,240 GAL	3,430,240 GAL	3,830,240 GAL	4,230,240 GAL	4,765,200 GAL
AVERAGE DAILY PUMPAGE DURING MONTH WITH MAXIMUM PUMPAGE	1,570,290 GAL								
MAXIMUM DAILY PUMPAGE	2,170,000 GAL	3,202,920 GAL	3,902,920 GAL	4,602,920 GAL	5,302,920 GAL	6,002,920 GAL	6,702,920 GAL	7,402,920 GAL	8,339,100 GAL
COMPUTED MAXIMUM HOUR	180,833 GAL	266,910 GAL	325,243 GAL	383,577 GAL	441,910 GAL	500,243 GAL	558,577 GAL	616,910 GAL	694,925 GAL
COMPUTED MAXIMUM HOUR	3,014 GPM	4,449 GPM	5,421 GPM	6,393 GPM	7,365 GPM	8,337 GPM	9,310 GPM	10,282 GPM	11,582 GPM
AVG. GAL./PERSON/DAY	77 GPCD	80 GPCD	80 GPCD	80 GPCD	80 GPCD	80 GPCD	80 GPCD	80 GPCD	80 GPCD
RATIO OF MAX. DAY TO AVG. DAY	1.57	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75

Notes:
Assumed ratio of Max Hour to Max Day Demand (MHD:MDD) = 2.0

Table No. 3-14: Water Works System Evaluation - LRI

United City of Yorkville, IL

TEST PARAMETERS	YEAR	POPULATION EQUIVALENT INCREASE							
	2014	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
1.0 Ultimate Source Capacity	3,446,000 GAL	2,413,080 GAL	1,713,080 GAL	1,013,080 GAL	313,080 GAL	(386,920) GAL	(1,086,920) GAL	(1,786,920) GAL	(3,587,100) GAL
2.0 Reliable Source Capacity	2,726,000 GAL	1,693,080 GAL	993,080 GAL	293,080 GAL	(406,920) GAL	(1,106,920) GAL	(1,806,920) GAL	(2,506,920) GAL	(4,019,100) GAL
3.0 Peak Hour Storage	1,551,667 GAL	1,207,360 GAL	974,027 GAL	740,693 GAL	507,360 GAL	274,027 GAL	40,693 GAL	(192,640) GAL	(504,700) GAL
4.0 Fire Flow	3,530,750 GAL	3,401,635 GAL	3,314,135 GAL	3,226,635 GAL	3,139,135 GAL	3,051,635 GAL	2,964,135 GAL	2,876,635 GAL	2,651,613 GAL
5.0 Emergency Supply	3,842,003 GAL	3,393,760 GAL	2,993,760 GAL	2,593,760 GAL	2,193,760 GAL	1,793,760 GAL	1,393,760 GAL	993,760 GAL	458,800 GAL

Table No. 3-15: Water Works System Evaluation - LRI
Corresponding Available Or Required Capacity

United City of Yorkville, IL

TEST PARAMETERS	YEAR	POPULATION EQUIVALENT INCREASE							
	2014	+5000	+10000	+15000	+20000	+25000	+30000	+35000	+41687
1.0 Ultimate Source Capacity	2,393 GPM	1,676 GPM	1,190 GPM	704 GPM	217 GPM	(269) GPM	(755) GPM	(1,241) GPM	(2,491) GPM
2.0 Reliable Source Capacity*	2,840 GPM	1,764 GPM	1,034 GPM	305 GPM	(424) GPM	(1,153) GPM	(1,882) GPM	(2,611) GPM	(4,187) GPM
3.0 Peak Hour Storage	1,551,667 GAL	1,207,360 GAL	974,027 GAL	740,693 GAL	507,360 GAL	274,027 GAL	40,693 GAL	(240,800) GAL	(630,875) GAL
4.0 Fire Flow	3,530,750 GAL	3,401,635 GAL	3,314,135 GAL	3,226,635 GAL	3,139,135 GAL	3,051,635 GAL	2,964,135 GAL	2,876,635 GAL	2,651,613 GAL
5.0 Emergency Supply	3,842,003 GAL	3,393,760 GAL	2,993,760 GAL	2,593,760 GAL	2,193,760 GAL	1,793,760 GAL	1,393,760 GAL	993,760 GAL	458,800 GAL

Notes:
* Assumes wells are operating 16 hours/day for Reliable Source Capacity.

3.3 Projected Water Use Summary

Table No. 3-16 summarizes the comparison between the CT and LRI scenarios demonstrating a 11% water use reduction between the CT scenario to LRI scenario by the year 2050. The 11% reduction will occur incrementally over the next 35 years. Exhibit 3-4 further illustrates the significance water conservation can have based on the LRI scenario. By reducing water use, capacity improvements in the Water Works System can be delayed or avoided altogether. This concept will be discussed in detail in Section 9.

Table No. 3-16: Water Use Projection Summary

United City of Yorkville, IL

Year / Increment	Population Projection	ADD[υ] Water Use Projection		MDD[ζ] Water Use Projection		MHD[π] Water Use Projection	
		CT (MGD)	LRI (MGD)	CT (MGD)	LRI (MGD)	CT (MGD)	LRI (MGD)
2014	17,878	1.38	1.38	2.17	2.17	4.34	4.34
+5,000	22,878	2.06	1.83	4.12	3.20	8.24	6.41
+10,000	27,878	2.51	2.23	5.02	3.90	10.04	7.81
+15,000	32,878	2.96	2.63	5.92	4.60	11.84	9.21
+20,000	37,878	3.41	3.03	6.82	5.30	13.64	10.61
+25,000	42,878	3.86	3.43	7.72	6.00	15.44	12.01
+30,000	47,878	4.31	3.83	8.62	6.70	17.24	13.41
+35,000	52,878	4.76	4.23	9.52	7.40	19.04	14.81
+41,687	59,565	5.36	4.77	10.72	8.34	21.44	16.68

Notes:

ADD = Average Day Demand; MDD = Maximum Day Demand; MHD = Maximum Hour Demand

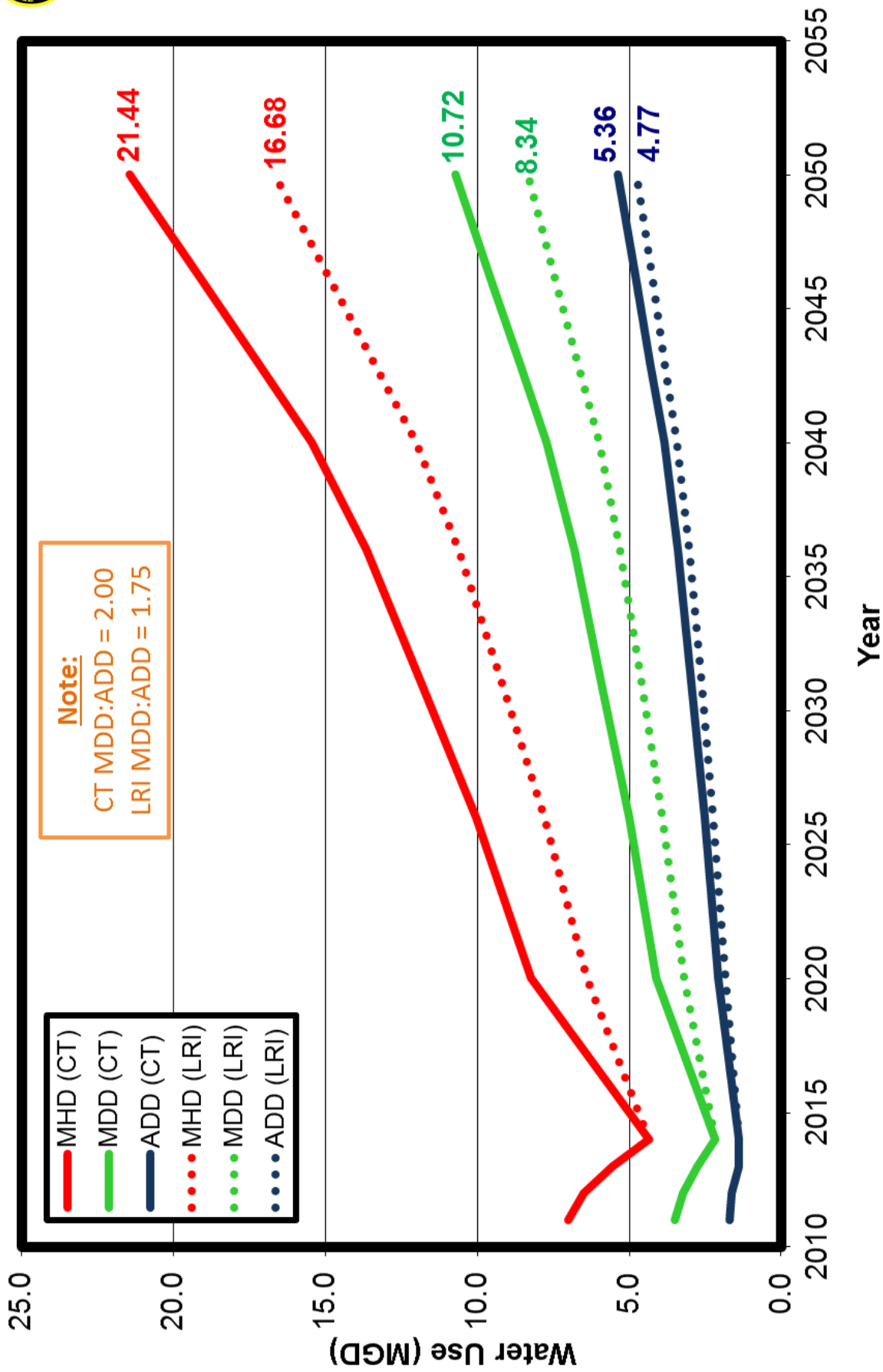
[u] CT ADD based on 90 gpcd; LRI ADD based on 80 gpcd

[z] CT MDD:ADD = 2.00; LRI MDD:ADD = 1.75

[p] MHD:MDD = 2.00

Exhibit 3-4: Historical and Projected Water Use Summary

United City of Yorkville, IL



SECTION 4: REGULATORY REVIEW

Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (USEPA) sets legal limits on the levels of certain contaminants in drinking water. The legal limits reflect both the level that protects human health and the level that water systems can achieve using the best available technology. Besides prescribing these legal limits, USEPA rules set water testing schedules and methods that water systems must follow. The rules also list acceptable techniques for treating drinking water. SDWA gives individual states the opportunity to set and enforce their own drinking water standards if the standards are at least as strong as USEPA's national standards. The Illinois Environmental Protection Agency (IEPA) directly oversees the water systems within Illinois. The purpose of this section of the report is to evaluate the City's current compliance with existing, near future and potential future regulations relative to the Water Works System.

4.1 Existing Regulations

USEPA has drinking water regulations for more than 90 chemical and microbiological contaminants. Table No. 4-1 presents the recent and near future drinking water regulations that could apply to the United City of Yorkville's water treatment systems. Table No. 4-1 also presents the City's status with regard to compliance with the regulations. A brief description of the regulations is presented below.

4.1.1 Surface Water Treatment Rule – The Surface Water Treatment Rule (1989) seeks to prevent waterborne diseases caused by viruses, *Legionella* and *Giardia lamblia*. These disease-causing microbes are present at varying concentrations in most surface waters and in groundwater under the direct influence of surface water (GWUDI). The rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.

4.1.2 Total Coliform Rule – The current Total Coliform Rule (TCR) (published in 1989) continues to be the only microbial drinking water regulation that applies to all public water systems. Systems are required to meet legal limits (i.e. Maximum Contaminant Levels (MCL)) for total coliforms, including fecal coliforms, as determined by monthly monitoring. The TCR specifies the frequency and timing of the monthly microbial testing by water systems based on population served. The rule also requires public notification as indicated by monitoring results.

4.1.3 Lead and Copper Rule – The Lead and Copper Rule (LCR) (1991) requires systems to monitor drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb or copper concentrations exceed an action level of 1.3 parts per million (ppm) or milligrams per liter (mg/L) in more than 10% of customer taps sampled, the system must undertake a number of additional actions to control corrosion. If the action level for lead is exceeded, the system must also inform the public about steps they should take to protect their health and may have to replace lead service lines under their control.

Table No. 4-1: Drinking Water Regulation Compliance Summary

United City of Yorkville, IL

Regulation	Year Enacted	In Compliance?		Compliance Status
		Yes	No	
Surface Water Treatment Rule	1989	N/A		Only applies to surface water and GWUDI systems
Total Coliform Rule (TCR)	1989	♦		System is routinely monitored as required
Lead and Copper Rule	1991	♦		System is routinely monitored as required
Unregulated Contaminant Monitoring Rule	1998	♦		System is routinely monitored as required
Interim Enhanced Surface Water Treatment Rule	1998	N/A		Only applies to surface water and GWUDI systems
Stage 1 Disinfectant / Disinfection Byproducts Rule	1998	♦		System is routinely monitored as required
Radionuclides Rule	2000	♦		System is routinely monitored as required
Arsenic Rule	2001	♦		System is routinely monitored as required
Filter Backwash Recycling Rule	2001	♦		System is routinely monitored as required
Long Term 1 Surface Water Treatment Rule	2002	N/A		Only applies to surface water and GWUDI systems with fewer than 10,000 customers
Long Term 2 Surface Water Treatment Rule	2005	N/A		Only applies to surface water and GWUDI systems
Stage 2 Disinfectant / Disinfection Byproducts Rule	2005	♦		IDSE Completed; Compliance Monitoring Plan submitted to IEPA
Ground Water Rule	2006	♦		System is routinely monitored as required
Total Coliform Rule (TCR 2010)	2010	♦		System is routinely monitored as required
Radium Treatment Residuals Rule	2011	♦		IEMA registration required for WTPs and the WWTF sludge disposal; Monitoring and reporting required for WWTF biosolids disposal
Radon Rule	Proposed	N/A		Proposed rule would set MCL at 300 pCi/L or 4,000 pCi/L with a multimedia mitigation program to address radon in indoor air

4.1.4 Unregulated Contaminant Monitoring Rule – EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) (1988) program to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act. Every five years EPA reviews the list of contaminants, largely based on the Contaminant Candidate List.

4.1.5 Interim Enhanced Surface Water Treatment Rule – The Interim Enhanced Surface Water Treatment Rule (IESWTR) (1998) amends the existing Surface Water Treatment Rule to strengthen microbial protection, including provisions specifically to address *Cryptosporidium,* and to address risk trade-offs with disinfection byproducts. The final rule includes treatment requirements for waterborne pathogens, e.g., *Cryptosporidium*. In addition, systems must continue to meet existing requirements for *Giardia lamblia* and viruses.

4.1.6 Stage 1 Disinfectant/Disinfection Byproducts Rule – The Stage 1 Disinfectant/Disinfection Byproducts Rule (Stage 1 DBPR) (1998) establishes maximum residual disinfectant level goals (MRDLGs) and maximum residual disinfectant levels (MRDLs) for three chemical disinfectants – chlorine, chloramines and chlorine dioxide. It also establishes maximum contaminant level goals (MCLGs) and maximum contaminant levels (MCLs) for total trihalomethanes, haloacetic acids, chlorite and bromate.

4.1.7 Radionuclides Rule – The Radionuclides Rule (2000) retained the existing MCLs for combined radium-226 and radium-228, gross alpha particle radioactivity and beta particle and photon activity. The rule regulated uranium for the first time. The current combined radium MCL is 5 pCi/L.

4.1.8 Arsenic Rule – The Arsenic Rule (2001) reduced the MCL for drinking water from 50 parts per billion (ppb) or micrograms per liter (ug/L) to 10 ppb. Water systems had to comply with this standard by January 23, 2006.

4.1.9 Filter Backwash Recycling Rule – The Filter Backwash Recycling Rule (FBRR) (2001) requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

4.1.10 Long Term 1 Surface Water Treatment Rule – This EPA promulgated rule requires cryptosporidium removal, enhanced filtration requirements, microbial inactivation benchmarking and other requirements for surface water or ground water under the direct influence of surface water. The Long Term 1 Surface Water Treatment Rule (2002) does not apply to Yorkville because this rule is only for systems with less than 10,000 customers.

4.1.11 Long Term 2 Surface Water Treatment Rule – The Long Term 2 Surface Water Treatment Rule (LT2SWTR) (2005) requires systems to monitor their source water, calculate and average Cryptosporidium concentration and use those results to determine if their source is vulnerable to contamination and may

require additional treatment. This rule will become applicable to Yorkville if the decision is made to switch from using groundwater to using surface water or groundwater under the direct influence of surface water.

4.1.12 Stage 2 Disinfectant/Disinfection Byproducts Rule – The Stage 2 Disinfectant/Disinfection Byproducts Rule (Stage 2 DBPR) (2005) requires some systems to complete an initial distribution system evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases total trihalomethane (TTHM) and haloacetic acids (HAA5) compliance on a locational running annual average (LRAA) calculated at each monitoring location. A Compliance Monitoring Plan was due April 1, 2012. The plan includes the compliance monitoring locations, dates and compliance calculation procedures.

4.1.13 Groundwater Rule – The Ground Water Rule (GWR) (2006) establishes a risk-targeted approach to identify groundwater systems (GWSs) susceptible to fecal contamination and requires corrective action to correct significant deficiencies and source water fecal contamination in all public GWSs.

4.1.14 Total Coliform Rule – The proposed revisions to the TCR (2010) will require public water systems that are vulnerable to microbial contamination to identify and fix problems, and establish criteria for systems to qualify for and stay on reduced monitoring.

4.1.15 Radium Treatment Residuals Rule – In 2011, the Illinois Emergency Management Agency (IEMA) provided the leadership for the revisions to Title 32 of the Illinois Administrative Code, Section 330.40(d). With these revisions, entities handling water and wastewater treatment residuals containing radium must register with IEMA and meet the disposal standards specified in the rule. The rule only applies to Water Treatment Plants and Wastewater Treatment Facilities who are part of a 'system' where deep sandstone aquifers known to contain radium are used as a water supply source.

4.2 Near Future Regulations

The SDWA includes a process that USEPA follows to identify and list unregulated contaminants which may require a national drinking water regulation in the future. USEPA must periodically publish this list of contaminants (called the Contaminant Candidate List or CCL) and decide whether to regulate at least five or more contaminants on the list (called Regulatory Determinations). EPA uses this list of unregulated contaminants to prioritize research and data collection efforts to help determine whether a specific contaminant should be regulated. Based on the current discussion relative to these proposed rules, it is anticipated the United City of Yorkville will have no compliance concerns with meeting them.

4.2.1 Radon Rule – The USEPA proposed new regulations for radon in drinking water. The proposed regulations provide flexibility in how to limit exposure to radon by focusing efforts on the greatest public health risks from radon - those in indoor air - while also reducing the highest risks from radon in drinking water. The

proposed rule provides for a multimedia approach to address risks from radon in drinking water and radon in indoor air from soil. The Safe Drinking Water Act directs the EPA to propose and finalize a maximum contaminant level (MCL) for radon in drinking water, but also to make available an alternative approach: a higher alternative maximum contaminant level (AMCL) accompanied by a multimedia mitigation (MMM) program to address radon risks in indoor air. The proposed rule would set the MCL at 300 pCi/L or 4,000 pCi/L for a system with a MMM program.

4.2.2 Lead and Copper Rule Revisions – The USEPA proposed revisions to the LCR to enhance the implementation of the LCR in the areas of monitoring, treatment, customer awareness and lead service line replacement and to improve compliance with the public education requirements of the LCR and ensure drinking water consumers receive meaningful, timely and useful information needed to help them limit their exposure to lead in drinking water.

Given the recent heightened attention to lead concentrations, primary sparked by the unfortunate circumstances that arose in Flint, Michigan, the USEPA currently is evaluating the lead standard. The USEPA is scheduled to issue a revised rule in 2017.

4.2.3 Contaminant Candidate List (CCL) – As noted above, SDWA includes a process that USEPA must follow to identify and list unregulated contaminants which may require a national drinking water regulation in the future. The contaminants on the CCL are not regulated by existing national primary drinking water regulations, are known or anticipated to occur in public water systems and may require regulation. In preparing the 2009 CCL, USEPA evaluated approximately 7,500 chemicals and microbes and selected 104 chemicals or chemical groups and 12 microbiological contaminants for the Final CCL3.

4.3 Potential Future Water Works System Regulations

USEPA has identified three additional chemical contaminants through the CCL and UCMR process that are currently being considered for regulation. These are MTBE (methyl-t-butyl ether), Perchlorate and Sulfate. No schedule for regulatory action has been presented by USEPA. Based on the current discussion relative to these potential rules, it is anticipated the United City of Yorkville will have no compliance concerns with meeting them.

4.3.1 MTBE – MTBE is a member of a group of chemicals commonly known as fuel oxygenates. Oxygenates are added to fuel to increase its oxygen content. MTBE is used in gasoline throughout the United States to reduce carbon monoxide and ozone levels caused by auto emissions. MTBE has replaced the use of lead as an octane enhancer since 1979. Releases of MTBE to ground and surface water can occur through leaking underground storage tanks and pipelines, spills, emissions from marine engines into lakes and reservoirs and to some extent from air deposition.

4.3.2 Perchlorate – Perchlorate is both a naturally occurring and man-made chemical that is used to produce rocket fuel, fireworks, flares and explosives. Perchlorate can also be present in bleach and in some fertilizers. Perchlorate may have adverse health effects because scientific research indicates that this contaminant can disrupt the thyroid's ability to produce hormones needed for normal growth and development.

4.3.3 Sulfate – Sulfate is a substance that occurs naturally in drinking water. Health concerns regarding sulfate in drinking water have been raised because of reports that diarrhea may be associated with the ingestion of water containing high levels of sulfate. Of particular concern are groups within the general population that may be at greater risk from the laxative effects of sulfate when they experience an abrupt change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations.

Sulfate in drinking water currently has a secondary maximum contaminant level (SMCL) of 250 milligrams per liter (mg/L), based on aesthetic effects (i.e., taste and odor). This regulation is not a federally enforceable standard, but is provided as a guideline for States and public water systems. USEPA estimates that about 3% of the public drinking water systems in the country may have sulfate levels of 250 mg/L or greater.

SECTION 5: SUSTAINABLE SOURCE WATER ASSESSMENT

The foundation of all Water Works Systems is the source of supply. Therefore, the foundation of a sustainable Water Works System must be built on a sustainable source water assessment. The United City of Yorkville generally has four potential sources of water to consider, namely: 1) local shallow groundwater, 2) deep sandstone groundwater, 3) surface water through the Fox River and 4) surface water from Lake Michigan. The City currently utilizes five deep sandstone wells for water supply sources. In this section, the sustainability of the City's current supply source will be evaluated and then the potential integration of other sources of water will be explored.

5.1 Existing Groundwater Resources in the Yorkville Area

Many municipalities in Northeastern Illinois who do not receive Lake Michigan water rely on the deep sandstone aquifer as their main source of supply. Based on the current and projected area deep sandstone withdrawal rates, the deep sandstone aquifers likely will have significant water level drawdown into the future. With this increase in drawdown, energy costs of pumping water from the deep sandstone aquifer will continue to rise, water quality within the deep sandstone aquifers could degrade and the long-term sustainability of the deep sandstone aquifer for the region will continue to be a question. At the time of this report, 100% of Yorkville's potable water is supplied from groundwater; therefore, it is vital that Yorkville ensures that this groundwater is sustainable.

Since the construction of the City's community Water Works System, the United City of Yorkville has relied on groundwater resources for its source of supply. As stated in Section 2.2.1, one of the City's abandoned wells was in the shallow sand and gravel aquifer and another was in the Galena-Platteville and Glenwood-St. Peter-Ancell Formations. Six more wells have been constructed by the City since that time, one of which was constructed as a shallow well and was sold to the city of Plano. The other five wells, which are all still fully utilized by the City, are deep wells into the Glenwood St. Peter and/or Ironton-Galesville aquifers. Two of the five wells, Wells No. 3 and 4, were constructed to be open to the Ancell-St. Peter and Ironton-Galesville aquifers, the other three wells are open to only the Ironton-Galesville aquifer. As the City's planning boundary expands and the need for additional water supply increases, the City will need to determine if they should continue to seek water from the aquifers they currently are withdrawing from or whether alternative water sources would be more sustainable and cost effective to utilize.

Shallow groundwater, if available in sustainable capacity, can reduce demand on the deep aquifers, reduce radium levels in the water supply and add water supply at an affordable cost. Like deep groundwater sources, shallow groundwater sources typically have few organic constituents, so the cost to treat shallow groundwater is typically considerably less costly to treat than surface water supplies. Shallow well water can be obtained from sand and gravel aquifers in the glacial drift and/or the fractured dolomite bedrock in the

Maquoketa or Galena-Platteville systems. Diversifying water resources when possible is always encouraged to minimize a community's susceptibility to drawing down the water supply in a specific groundwater aquifer.

In recent years, several water studies have focused on water supply availability within Northeastern Illinois. Two of the studies, which include the *Groundwater Studies for Water Supply Planning in Kendall County, Illinois (ISWS, 2013)* and the *Northeastern Illinois Regional Water Supply/Demand Plan* (*CMAP/RWSPG, 2010)*, have evaluated the sustainability of the shallow aquifers, deep sandstone aquifers and the Fox River within the Northeastern Illinois region. As part of these studies, the Illinois State Geologic Survey (ISGS) and Illinois State Water Survey (ISWS) staffs have developed a three-dimensional geologic model of a portion of Northeastern Illinois and deep sandstone macroscale geologic and groundwater flow models that cover a portion of the Midwest. In this section of the report, a summary of the work completed by the ISGS & ISWS will be reviewed to identify the groundwater resource availability for the City.

5.1.1 Shallow Sand & Gravel and Bedrock Aquifers – In Northeastern Illinois, the availability of shallow well water sufficiently productive for a municipal well varies and shallow well construction and development often requires extensive studies, exploration, drilling and testing. In the Yorkville area, there are several known Quaternary period (2.588 million years ago to present) aquifers; however, these sand and gravel aquifers lie mainly directly northwest of the City. These sand and gravel aquifers are remnants of the last major episode of glaciation in the Midwest (approximately 110,000 to 10,000 years ago). These glacial sand and gravel deposits rest on a surface of eroded Silurian aged bedrock (443.7 to 416 million years ago) and the Upper Bedrock Unit. These aquifers have been studied extensively by the ISGS and ISWS and mapped with a relative degree of certainty.

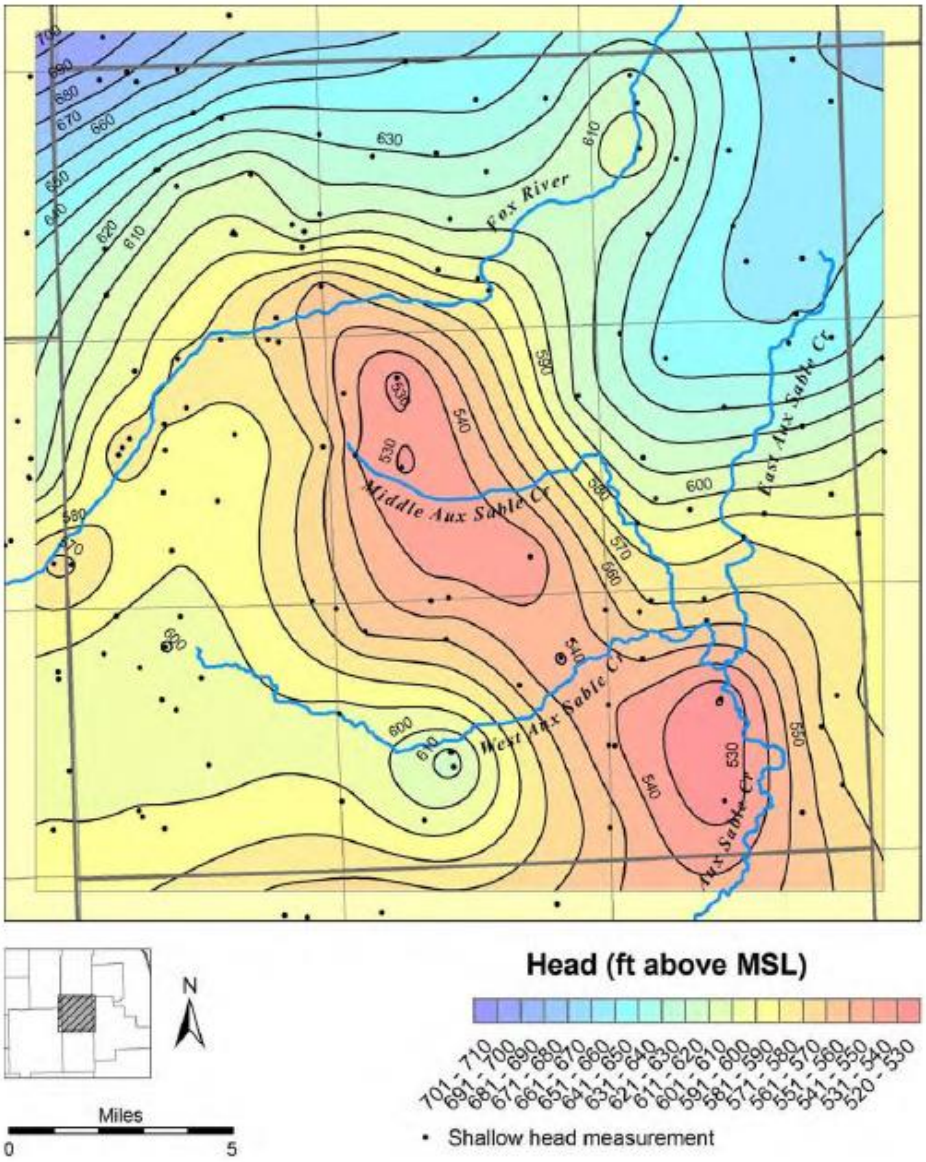
Exhibit 5-1 outlines the head in feet above MSL for the sand and gravel aquifers and the Shallow Bedrock aquifers in Kendall County. The map shows a belt of lower heads trending from the northwest part of the county to the southeast part of the county. The area of lower heads approximately follows the Sandwich Fault and is comprised of predominantly shaly, relatively impermeable rocks of the Maquoketa Unit. There are several potential reasons why heads along the Sandwich Fault may be so low:

1) Reduced heads may reflect the low transmissivity of the Shallow Bedrock Aquifer where even relatively low pumpage, such as from domestic wells, could cause steep, narrow cones of depression.
2) Wells in this central area may be completed into the Galena-Platteville dolomite and thusly could be impacted by the lower water levels in the underlying Ancell unit.
3) Groundwater may be moving down the Sandwich Fault into the deeper units where heads have been greatly lowered by pumping. While the vertical permeability of the fault is unknown, chemical evidence suggests groundwater was previously moved upward through the fault and flow directions may have changed from upward to downward due to the increasing use of the lower aquifers.

Areas around the Fox River and Aux Sable Creek also demonstrate lower heads than other areas. Lower heads around these areas suggest that the wells are hydraulically connected to the surface water.

Exhibit 5-1: 2006 Potentiometric Surface of Sand and Gravel Aquifers and Shallow Bedrock Aquifer

United City of Yorkville, IL



5.1.2 Deep Sandstone Aquifer – Within the City's Planning Area, deep well water can be obtained from formations in the Ordovician and/or the Cambrian aquifer systems. In general, the Ordovician aquifer system consists of (in descending order) the Maquoketa Unit, the Galena-Platteville dolomite, the Glenwood-St. Peter-Ancell sandstone (hereinafter referred to as the St. Peter or Ancell Unit) and the Prairie du Chien-Eminance dolomite/sandstone formations. Furthermore, the Cambrian aquifer system generally consists of (in descending order) the Potosi-Franconia unit, the Ironton-Galesville sandstone, the Eau Claire sandstone

and the Mt. Simon sandstone formations. The major deep water bearing formations in order from the ground surface to the deepest are the St. Peter sandstone, the Ironton-Galesville sandstone and the Mt. Simon sandstone formations. With observed water production capacities in the maximum range of 400 GPM to 500 GPM, the St. Peter formation is generally the greatest water producer of the Ordovician aquifer system. Based on capacities of other wells in this formation within northeastern Illinois, the water production from the Ironton-Galesville formation of the Cambrian aquifer system can be projected at a rate of 1,000 GPM. The Eau Claire and Mt. Simon formations have also demonstrated high production capability. Because they are deeper (and hence more costly to construct and operate) than the Ironton-Galesville formation and because, in some cases, the total dissolved solids levels and brackishness within the Mt. Simon aquifer have been excessive, the Eau Claire and Mt. Simon formations are often times not considered for potable water supply.

In the past (1970s and 1980s), the deep formations throughout Northeastern Illinois had experienced declining static and pumping water levels, in some instances, due to aquifer mining of groundwater systems. Aquifer mining occurs when groundwater is withdrawn from an aquifer at unsustainable rates for a period of time such that the critical water level is reached and exceeded. The critical water level for the deep bedrock system in Northeastern Illinois according to most researchers is the top of the Ironton-Galesville aquifer. The demand from growing populations resulted in over-pumping and thus, lowered groundwater levels. In fact some literature has suggested that water levels within the high pumping centers had dropped more than 900 feet in the deep sandstone aquifers lying deep below the Fox River Valley. This trend was due to the fact that the demand from the deep wells was in excess of the naturally occurring recharge rate. Because of the declining yields of the deep well formations, many Chicago suburban communities turned to alternate sources of supply including shallow groundwater and surface water from adjacent rivers. Moreover, Lake Michigan water became available for many communities in Cook, DuPage, Lake and Will Counties. Since many suburban communities took advantage of these alternate water supply sources, the burden on the deep well supply has been reduced and the static water levels have rebounded to a certain extent.

Exhibits 5-2 and 5-3 display the ISWS modeled head for the Ancell and Ironton-Galesville aquifers in 2005; purple lines represent the Sandwich Fault and the red box outlines Kendall County. The cone of depression in each exhibit is centered over Joliet and is spreading towards the Yorkville region. This model data was created to have uniform and re-creatable results. Actual measured heads in high usage areas can be below the modeled values displayed in the map.

Literature from the Illinois State Water Survey (ISWS) has suggested that in 1995 the deep bedrock withdrawals totaled 67 MGD and in 2000 the total was about 72 MGD. It has been suggested that the maximum sustainable yield of the deep aquifer system in Northeastern Illinois is approximately 65 – 80 MGD. If the estimates of the practical sustained yield are correct and if the withdrawals continue to exceed that level, the recovery may eventually discontinue and water levels could potentially decline once again. In fact, it has been documented that there already is some additional decline in some localized cases.

The Mt. Simon aquifer has not been used widely and therefore has not experienced a significant drawdown due to water use. One of the main reasons the Mt. Simon aquifer has not been used heavily is because it currently is more expensive to draw water from as compared with other options. The aquifer is further underground and therefore extra energy usage must be used to pump the water to the surface. Additionally, the water in the aquifer is brackish and therefore more expensive and difficult to treat.

Exhibit 5-2: Modeled Heads in 2005 for the Ancell Sandstone Aquifer

United City of Yorkville, IL

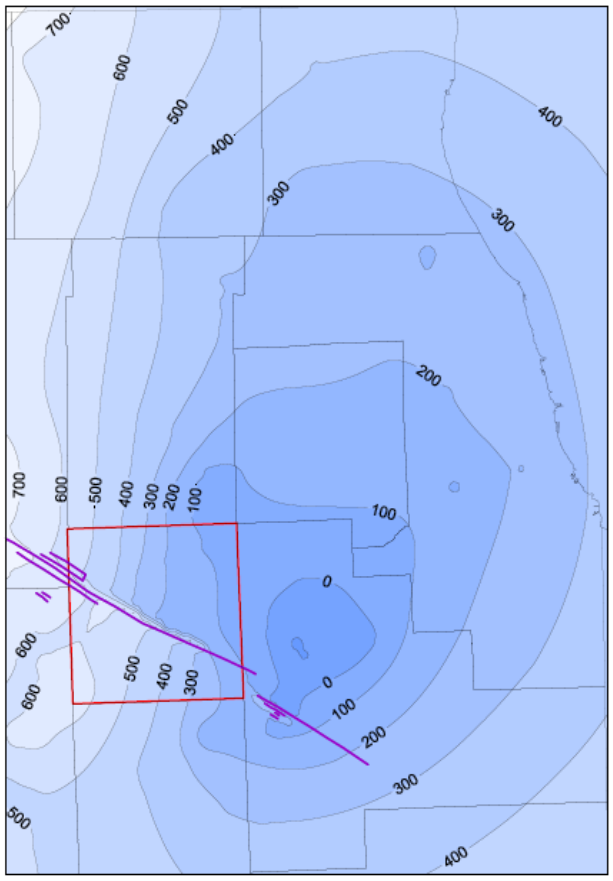
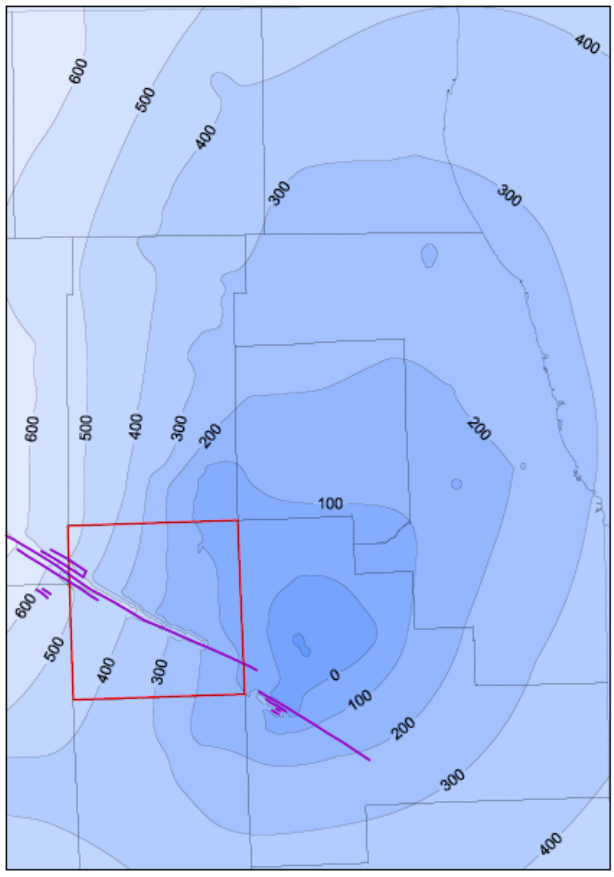


Exhibit 5-3: Modeled Heads in 2005 for the Ironton-Galesville Sandstone Aquifer

United City of Yorkville, IL



5.1.3 Sustainable Groundwater Supply Planning Map – In an effort to pull all of the existing groundwater resources information together, the project team, which included staff from the ISWS, utilized the ISGS/ISWS Northeastern Illinois geodatabase to map the existing water wells within, and adjacent to, the planning area. The Ashmore and Glasford Unit that lies north and west of Yorkville is typically thicker than in Yorkville itself thus lending itself to be used more readily for groundwater. Directly to the west of Yorkville, the City of Plano fully utilizes shallow wells instead of using deep wells. Exhibit 5-4 shows the viability of shallow wells in the study area along with the local shallow and deep wells utilized by Montgomery, Yorkville, Oswego and Plano.

Legend

- Municipal Shallow Bedrock Well
- Municipal Deep Bedrock Well
- Deep Bedrock One Mile Diameter Planning Setback
- Shallow Well 2000 Ft Diameter Planning Setback
- Existing Water Main
- Yorkville Study Area

Thickness of Ashmore and Glasford Unit

- Thickness < 25'
- Thickness =>25', <50'
- Thickness =>50', <75'
- Thickness =>75', <100'
- Thickness =>100', <125'
- Thickness =>125'

MO 11 (59')
MO 10 (87')
MO 12 (190')
MO 13 (183')
MO 4 (1353')
MO 14 (1403')
MO 15 (1397')
MO 3 (1336')
MO 8 (1378')
OS 11 (1403')
OS 7 (1535')
OS 9 (1514')
OS 6 (1392')
YO 8 (1384')
OS 4 (1396')
YO 9 (1368')
OS 3 (1370')
OS 8 (1425')
OS 10 (1397')
YO 4 (1393')
YO 3 (1335')
YO 7 (1527')
PL 9 (117')
PL 8 (97')
PL 3 (39.5')
PL 4 (36.5')
PL 5 (40.75')
PL (40')
PL 7 (91')

0 1,800 3,600 7,200 10,800 14,400 Feet

NORTH

Engineering Enterprises, Inc. 52 Wheeler Road Sugar Grove, Illinois 60554 (630) 466-6700 *www.eeiweb.com*	**United City of Yorkville 800 Game Farm Road Yorkville, IL 60560**
DATE:	JANUARY, 2017
PROJECT NO.:	YO1437-P
BY:	CLV
PATH:	H:\GIS\PUBLIC\YORKVILLE\2014\
FILE:	YO1437_EXH5-4.MXD

SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 5-4
SUSTAINABLE GROUNDWATER SUPPLY PLANNING MAP

5.1.4 Sandwich Fault - The Sandwich Fault, which runs along the southeast side of the City, affects all aquifers discussed in this report to some extent. The Sandwich Fault is actually a series of parallel faults in a 2-mile wide zone which runs from northwest to southeast. The location and number of faults in Kendall County is difficult to determine because of the thick overlying till. Evidence from the shallow water levels and the chemistry within the fault suggest that there is a vertical flow along the fault but the transmissivity along the fault should be much smaller than the horizontal transmissivities of the sandstone.

Geologic uplift has caused area southwest of the fault line to rise which subsequently caused the erosion and removal of younger rocks. While northeast of the fault, the Ancell sandstone is overlaid by an aquitard, southwest of the fault the Ancell sandstone is at, or near the surface. Due to the proximity to the surface, the Ancell aquifer southwest of the fault is in a much more advantageous position for recharge as compared with the Ancell aquifer northeast of the fault. It is unlikely that the Mt. Simon aquifer is not significantly affected by the fault due to the fact that its thickness is greater than the thickness of the fault. Exhibits 5-5, 5-6 and 5-7 display the thicknesses of the shallow and deep aquifers, the proximity to the surface of the various geological units and how the geological units are affected by the Sandwich Fault.

While there is the possibility for water conductivity within the fault itself, it is unwise to consider drilling wells directly on the fault. Fractures within the bedrock can adversely affect drilling and can cause difficulties with both schedule and cost of wells. Drilling wells both northeast and southwest of the fault will allow the City to take advantage of the water levels on either side and build a factor of safety into their water supply by diversifying their aquifer usage.

Exhibit 5-5: Bedrock Surface Hydrogeology of Kendall County Illinois

United City of Yorkville, IL

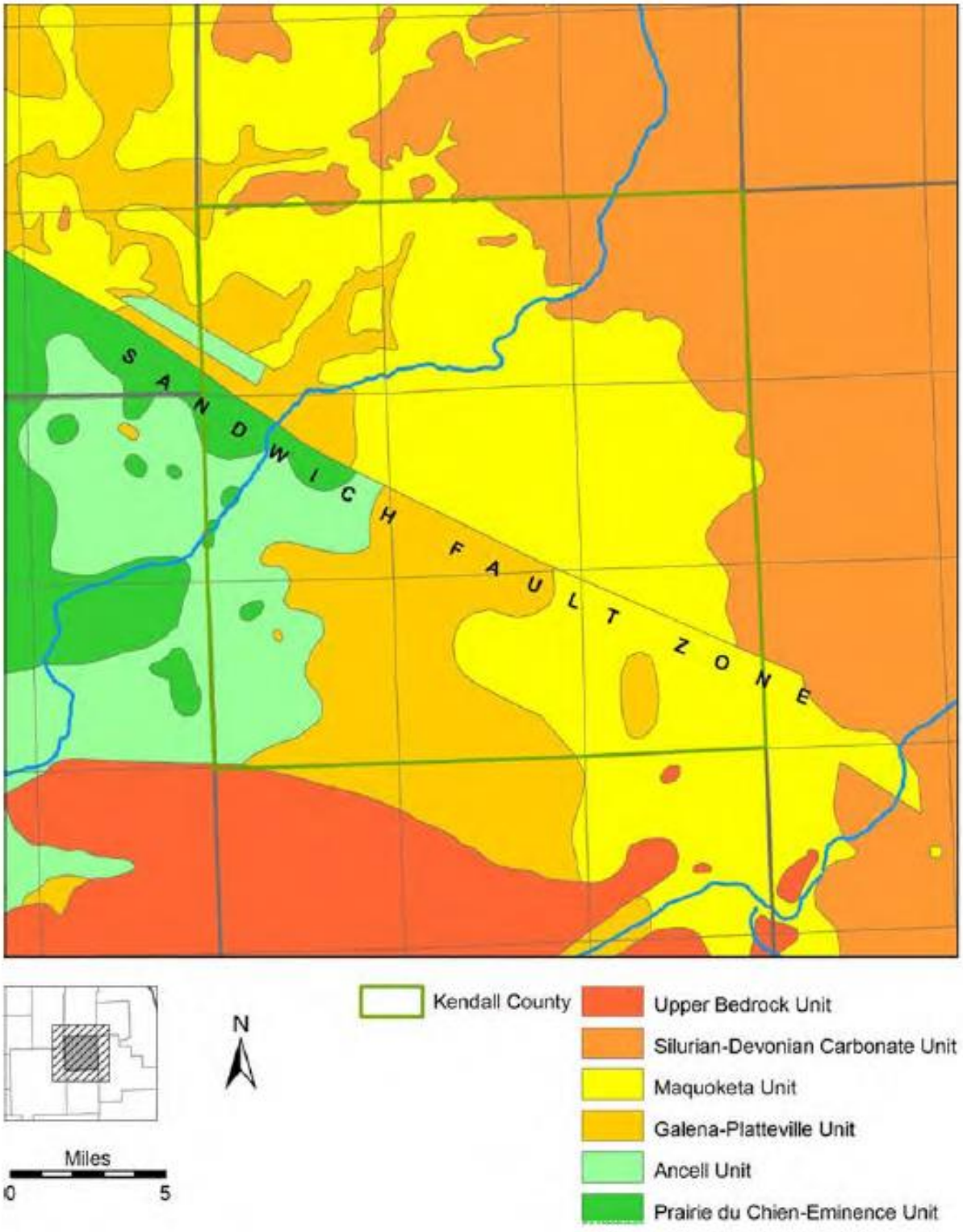


Exhibit 5-6: North/South View of Illinois Aquifers

United City of Yorkville, IL

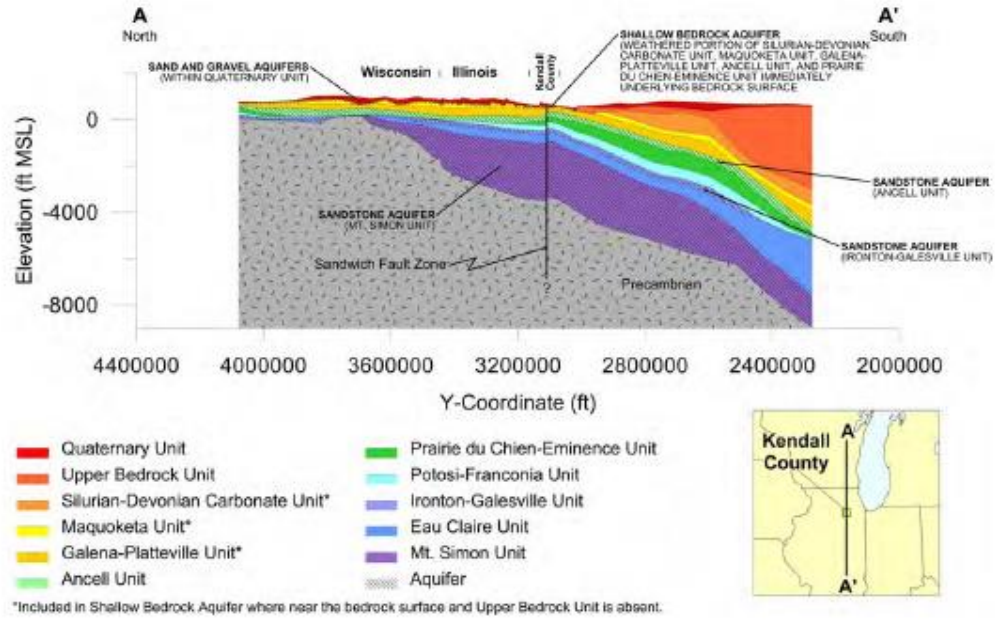
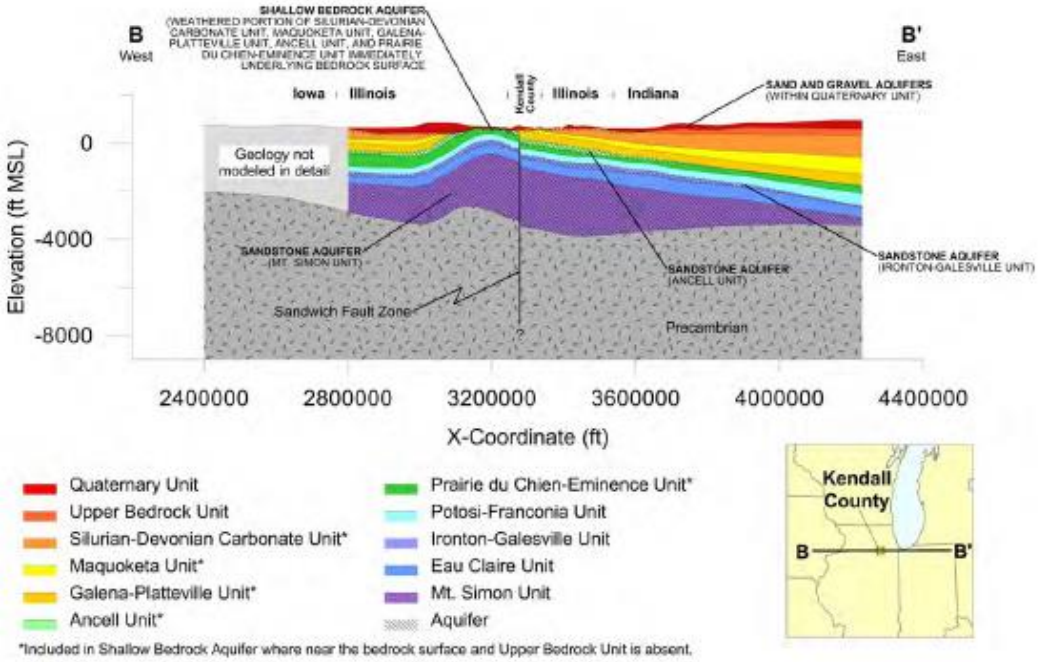


Exhibit 5-7: East/West View of Illinois Aquifers

United City of Yorkville, IL



5.2 Deep Sandstone Aquifer Modeling

As previously summarized, the ISGS and ISWS collaboratively developed a multistate deep sandstone aquifer model. Initial model results indicate the water levels within the aquifer are declining. The results also suggest the projected growth in the region, along with a current trends per capita water usage, could create some major aquifer challenges in portions of the region – primarily in Southeast Kane County, Northeast Kendall and Northwest Will County. Alternative water use scenarios also were modeled to project water levels under those scenarios. As one would expect, lower water demands under less resource intensive water use scenarios extend the capacity of the deep sandstone water supply resource further into the future.

When looking at the geologic stratigraphy of the region, the St. Peter Sandstone (Ancell Unit) and the Ironton-Galesville Sandstone appear to be separate aquifer units. However, many municipal wells in Northeastern Illinois are open to both units, and therefore water has transferred across those two units for many years. Given the manmade connection between the two units, the water levels of each individual unit have essentially merged together in most areas of Northeastern Illinois. Even though three of five of the City's current wells are cased through the Ancell unit, the hydraulic interconnection between the Ancell and Ironton-Galesville units likely exists in the Yorkville area. Therefore, water levels in the model utilized the upper Ancell Unit as the reference point.

The top of the Ancell Unit in the Yorkville area is approximately at an elevation of 155 ft MSL at Well No. 4, 150 at Well No. 7 and 135 ft MSL at Well No. 9. Therefore, at a static water elevation of approximately 280 ft, the artesian head above the top of the Ancell Unit at Well No. 4 was approximately 130 feet in 2010. At a static water level elevation of approximately 230 ft MSL, the head of Well No. 7 was 80 ft of artesian head above the top of the Ancell unit in 2010. At a static water elevation of approximately 115 ft MSL, the head of Well No. 9 was 20 ft below the top of the Ancell Unit in 2010.

5.2.1 2050 Northeastern Illinois Regional Deep Sandstone Aquifer Modeling – As part of this master planning project, the ISWS modified the regional deep sandstone model for multiple local scale alternatives. Six different scenarios were modeled using various assumptions in order to gain a better understanding of how the aquifer would respond to local projected changes in aquifer withdrawal. The scenarios have two different variables; one variable has three alternates and the other has two.

One variable is whether or not the city is using their CT, LRI, or MCT (modified current trends) to withdraw water from the aquifer. The MCT variable makes the assumption that the city will continue water use with the 'current trends' model, but takes into account whether or not the City is going to place all of their future wells into the Ironton-Galesville aquifer. While the Ironton-Galesville is currently the most cost-feasible aquifer to pull from, the assumption could be made that at some point the City would be willing to invest more money in order to pull from a different aquifer if it meant a more sustainable outcome. Additionally, future technology

may make obtaining water from other aquifers more cost-feasible than it currently is. This CT/LRI/MCT variable can be simplified down to be how much water the City is withdrawing from the St. Peter and Ironton-Galesville aquifer from a certain amount of wells.

The second variable is whether or not the City of Joliet, who currently has the largest regional effect on the aquifer, continues to obtain all of their water from deep sandstone wells. The variable accounts for what would occur if Joliet continued to withdraw water from the Ironton-Galesville aquifer at their current trends or if Joliet began to obtain 80% of their water from another source and only obtained 20% of their water from the Ironton-Galesville aquifer.

As described in Section 2, Well No. 3 has been pumping excessive amounts of sand and often requires expensive extra maintenance. Therefore, for the scenarios in Section 5, Well No. 3 is considered to be abandoned.

Exhibit 5-8 displays head projections for Yorkville Wells No. 4, 7 and 9 with comparisons for all CT, LRI and MCT values for both the variables of Joliet switching to surface water and continuing to use groundwater. Additionally, the CT static water levels have a corresponding pumping water level in the graph. The pumping water level was found by assuming the historical specific capacity will continue into the future. It is important to take note of the pumping level as well as the 'pump setting level' in all the hydrographs in Exhibit 5-8. When pumping water levels approach the pump setting level, the pump and motor will need to be lowered. At some point, the pump can no longer be lowered and sustain the same pumping rate. If the pumping water level drops to be near the top of the Ironton-Galesville then the production rate will need to be significantly reduced or the well will need to be abandoned.

Exhibit 5-9 displays several different modeling scenarios. The first picture displays the head above the Ironton-Galesville in 2014 and the following five pictures show the modeled drawdown for five different scenarios, each of these scenarios are described further in sections 5.2.2 through 5.2.6.

5.2.2 2050 CT Deep Sandstone Aquifer Modeling With Proposed Ironton-Galesville Wells – The first modeled scenario makes the assumption that the City of Joliet and the United City of Yorkville will both continue to make withdrawals at historical rates (scaled for population increase) until the year 2050. In this scenario, it is assumed that Well No. 3 is abandoned and seven new wells are added to supply a total of 5.36 MGD of water to Yorkville. Each of these wells would be pumping from the Ironton-Galesville aquifer exclusively apart from Well No. 4 which would continue pumping from both the Ironton-Galesville and the Ancell aquifers.

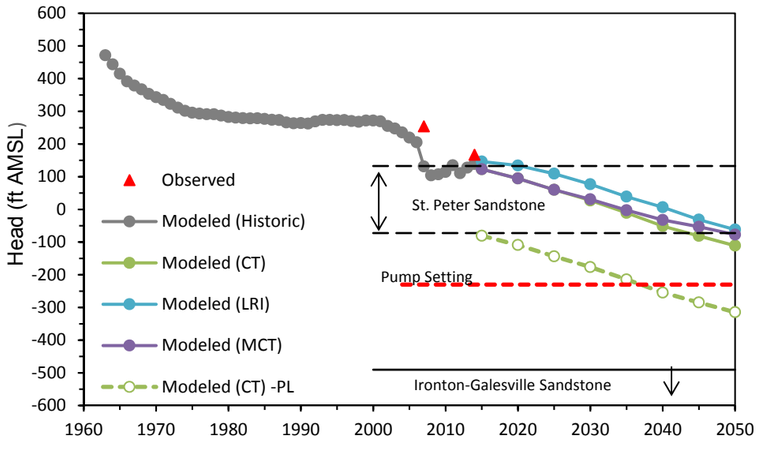
This scenario is considered to be the worst case scenario as far as aquifer use modeled in this study. As one can see by looking at Exhibit 5-9, this scenario predicts that the pumping water level in Well No. 9 would decrease below the current pump setting level between 2035 and 2040. The pumping level for Well No. 4 would be approaching the current pump setting level in the year 2050.

Exhibit 5-8: Historical and Projected Water Levels in Select Wells

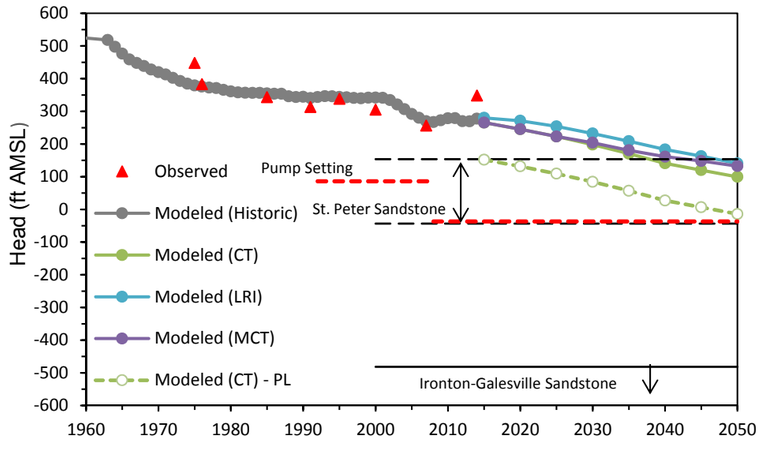
United City of Yorkville, IL

Projections with Joliet Continuing on Ground Water Supply Only

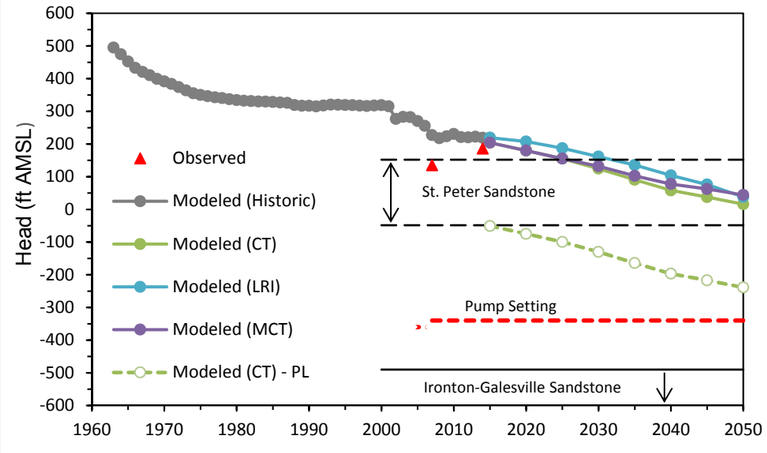
Well No. 9



Well No. 4

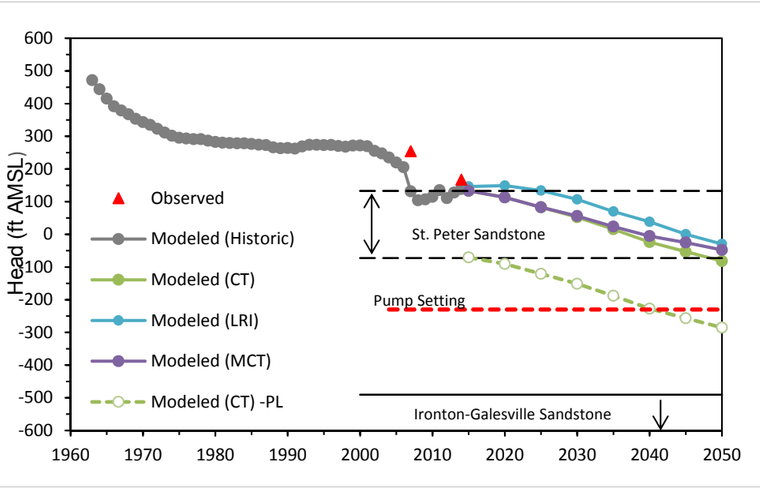


Well No. 7

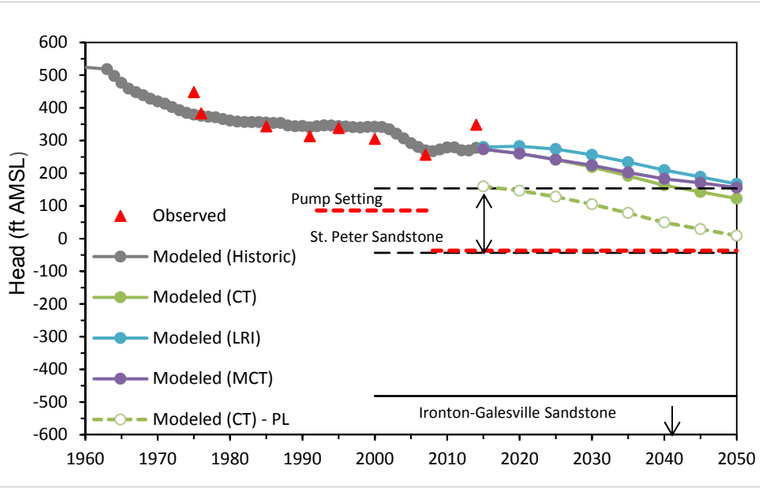


Projections with Joliet Integrating Surface Water into Water Supply Portfolio

Well No. 9



Well No. 4



Well No. 7

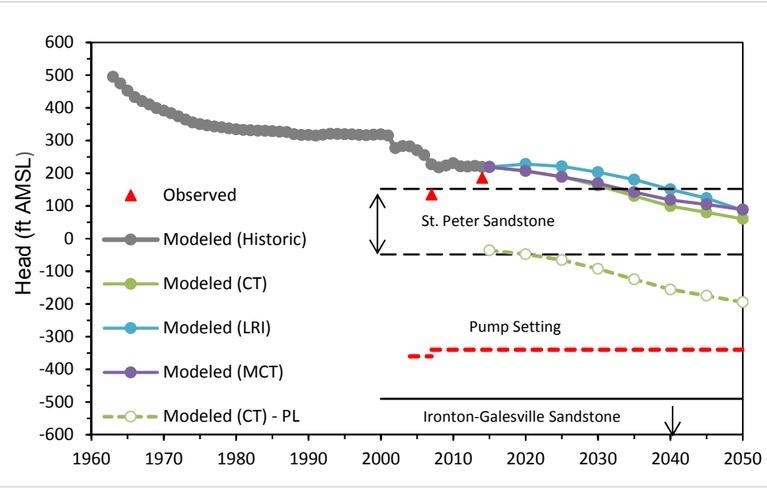
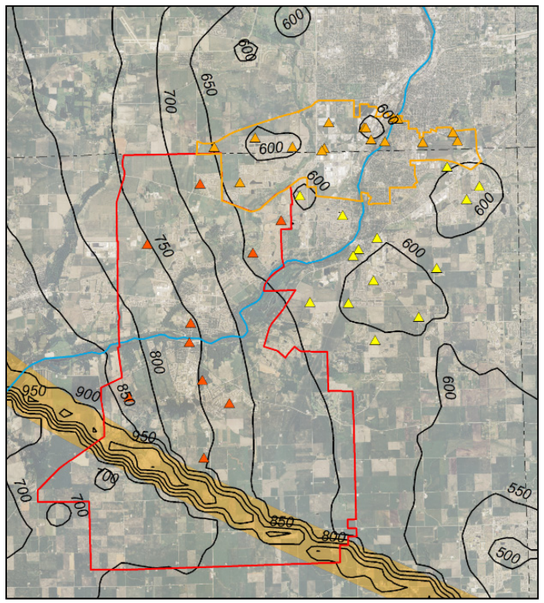


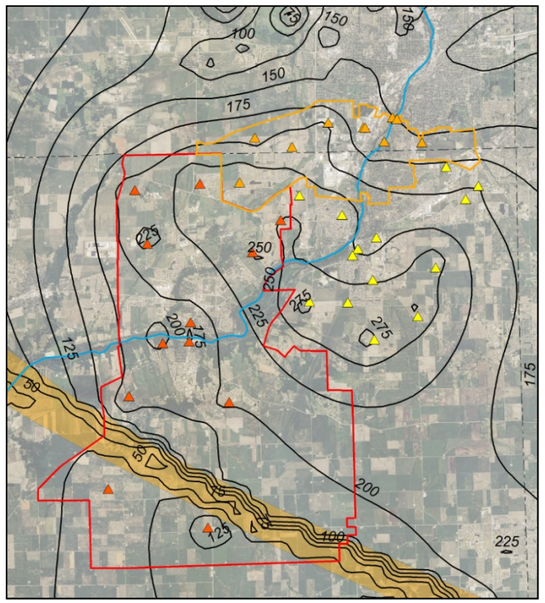
Exhibit 5-9: 2014 Head and Projected 2050 Drawdown in the Regional Deep Sandstone Aquifer

United City of Yorkville, IL

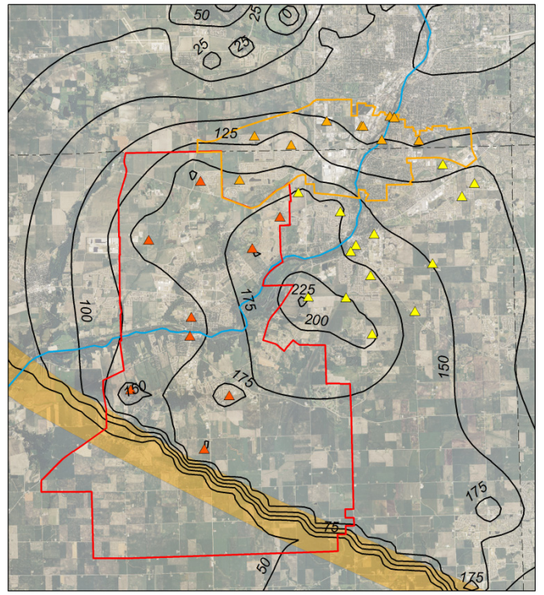
2014 Head Above Top of Ironton Galesville Aquifer



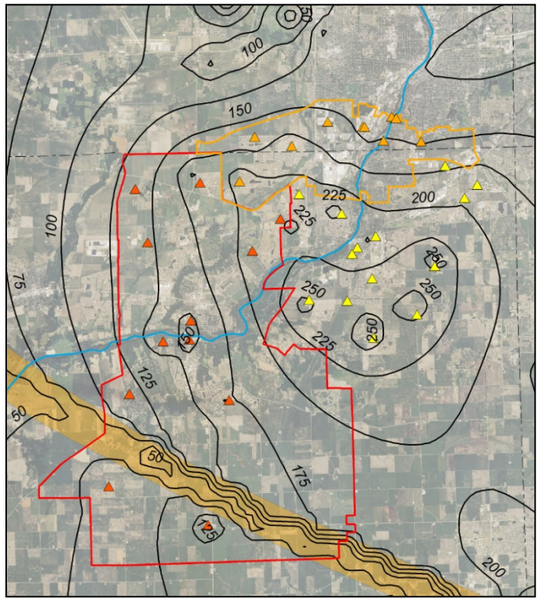
Alternate 1: 2050 Drawdown W/ CT Water Use; Joliet on Deep Aquifer



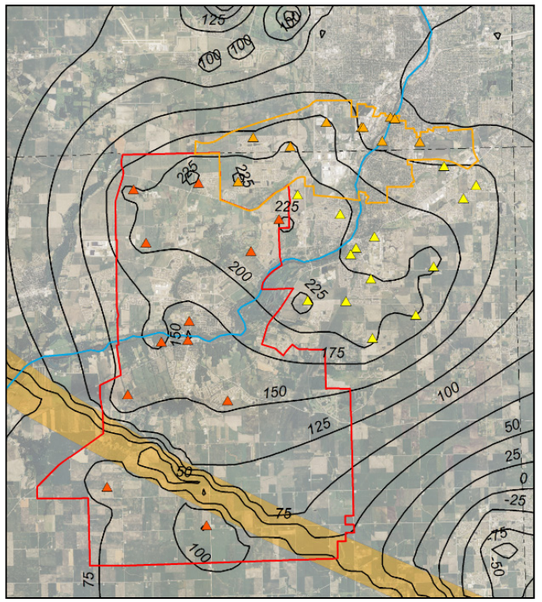
Alternate 2: 2050 Drawdown W/ LRI Water Use; Joliet on Deep Aquifer



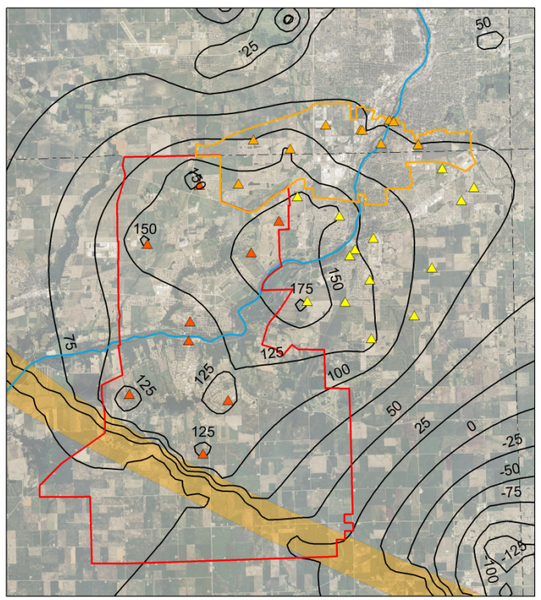
Alternate 3: 2050 Drawdown W/ MCT Water Use; Joliet on Deep Aquifer



Alternate 4: 2050 Drawdown W/ CT Water Use; Joliet Switches to Surface Water



Alternate 5: 2050 Drawdown W/ LRI Water Use; Joliet Switches to Surface Water



Explanation

- Village of Oswego Wells
- Village of Montgomery Wells
- City of Yorkville Wells
- Drawdown from 2014 (CT)
- County Boundary
- City of Yorkville Planning Boundary
- Village of Montgomery Planning Boundary
- Sandwich Fault Zone
- Fox River

In this scenario, the static water level for Wells No. 7 and 9 would be approaching, or be below, the bottom of the Ancell aquifer by 2050. In other words, the Ancell Aquifer would be fully dewatered at these two well locations. The static water level for Well No. 4 is not projected to drop as much as wells No. 7 and 9. Given wells No. 4's location in the center of town, where Joliet and Aurora's withdrawal have less of an effect, and its high specific capacity, Well No. 4's water levels will not decrease as much as the other wells.

5.2.3 2050 LRI Deep Sandstone Aquifer Modeling with Proposed Ironton-Galesville Wells – The purpose of the second scenario was to determine the change in water levels if Yorkville used moderate conservation efforts to reach the LRI scenario and Joliet continued to obtain its potable water from the Ironton-Galesville aquifer. In this scenario, Well No. 3 is abandoned and four new wells are added to the original wells for an average of 4.77 MGD drawn from the 8 wells total.

This scenario is called out as 'Alternate 2' in Exhibit 5-8. The difference between Yorkville CT and LRI values when Joliet has not modified from their current usage can be found in Exhibit 5-9. The model results suggest that when the United City of Yorkville uses moderate conservation efforts to reduce their water usage, the static water level rises by 49' for Well No. 9, 41' for Well No. 4 and 16' for Well No. 7 when compared to Alternate No. 1.

5.2.4 2050 MCT Deep Sandstone Aquifer Modeling with Partial Alternate Aquifer Withdrawal – The third scenario evaluated the change in ground water levels if Yorkville continued to use water at the current rate, but switched half of the future wells to pump from an aquifer other than the Ironton-Galesville. Currently, the Ironton-Galesville is the most cost feasible aquifer to draw from; however, future events may justify the added cost of utilizing a different aquifer.

This scenario is identified as 'Alternate 3' in Exhibit 5-9. Head in the Yorkville area drops by around 125' in the east part of the City, 150' in the central part of the City and 175' in the east part of the City. As seen in Exhibit 5-8, if Joliet does not switch to surface water and Yorkville does not implement conservation efforts, but instead chooses to obtain half of their new wells to an aquifer other than the Ironton-Galesville, the static water level head lowers by 34' for Well No. 9, 32' for Well No. 4 and 28' for Well No. 7 as compared to the 2014 head.

5.2.5 2050 CT Deep Sandstone Aquifer Modeling With Proposed Ironton-Galesville Wells and Joliet Moves to Predominantly Surface Water – The purpose of the fourth scenario was to determine if the Yorkville CT water use could be sustained if Joliet began to obtain 80% of their demand from surface water. In this scenario, Well No. 3 is abandoned and seven new wells are added to supply a total of 5.36 MGD of water to Yorkville. Each of these wells would be pumping from the Ironton-Galesville aquifer exclusively, except Well No. 4, which would continue to pull from both the Ironton-Galesville and the Ancell aquifers.

The drawdown that would occur in this scenario is called out as 'Alternate 4' in Exhibit 5-9. The differences between CT values when Joliet is using surface water and when Joliet is using ground water can be found in Exhibits 5-8 and 5-9. When Joliet switches to obtaining 80% of their water from surface water, the 2050 static water level projections only differ by 24' of head for Well No. 9, 23' of head for Well No. 4 and 44' of head for Well No. 7. The CT Scenario Model demonstrates Joliet's conversion to predominately surface water appears to have some affect on water levels within the region, but the affect is minimal. Joliet switching to surface water delays the CT static water levels from reaching the worst-case scenario for 4 years by Wells No. 9 and 4 and by 10 years for Well No. 7.

5.2.6 2050 LRI Deep Sandstone Aquifer Modeling with Proposed Ironton-Galesville Wells and Joliet Moves To Predominantly Surface Water – The purpose of the fifth scenario was to determine the change in water levels if Yorkville reduced their water usage to the LRI scenario and if Joliet switches to obtain 80% of their water needs from surface water. In this scenario, which is similar to scenario 2, Well No. 3 is abandoned and four new wells are added to the original for and an average of 4.77 MGD would be drawn from the 8 wells.

This scenario is called out as 'Alternate 5' in Exhibit 5-9. The head above the Iron-Galesville actually increases in the Joliet area that is southeast of the Yorkville planning area. Head in the Yorkville area drops by around 125' in the south part of the City, 150' in the northwest part of the City and 175' in the northeast part of the City. As seen in Exhibit 5-8, the difference in static water levels between the worst case scenario (no conservation efforts from Yorkville, Joliet remains on ground water) and the best case scenario (Yorkville implements conservation efforts, Joliet uses surface water) is 82' for Well No. 9, 67' for Well No. 4 and 71' for Well No. 7.

5.2.7 Model Results Summary – There is an infinite number of events which may have small or large effects on the head of the Ironton-Galesville aquifer; additionally, the region could grow differently than predicted and the regional withdrawals from the aquifer could be different as well. The purpose of modeling for this report was to evaluate, with the best information at the time, if the Ironton-Galesville aquifer will be able to support the United City of Yorkville's water needs through 2050. The modeling results found that the ability of the Ironton-Galesville aquifer to support the United City of Yorkville through 2050 is likely. However, there will continue to be additional decline in water levels in the Yorkville area as the aquifer continues to be pumped beyond its sustainable yield. The modeling results indicate water levels in the Joliet area would likely rebound if Joliet switches to surface water as its primary source. However, the water source change in the Yorkville area would not have much of a positive effect on water levels in the Yorkville area because withdrawals from Yorkville, and its neighbors would cause further drawdown in the aquifer.

The model results suggest there is little difference in water level declines no matter what water demand scenario is considered. The LRI scenario withdrawal would reduce water level declines as compared to the CT scenario, but the difference is minimal. The model results suggest the Ancell/St. Pete Sandstone Aquifer,

in 2050, will be dewatered in a portion of Yorkville's planning area. During, the pumping conditions the water levels will be within 200 feet of the top of the Ironton-Galesville in some areas.

It is hard to predict exactly when the aquifer levels would be so low that the well can no longer practically be used. It is highly unlikely that pumping assemblies could be lowered to withdraw near the top of the Ironton-Galesville. Motor horsepower limitations will likely reduce the amount of water the well can produce as the water wells continue to decline. As deeper formations are exposed to air, water quality changes could create unmanageable treatment requirements, too.

While a specific year for aquifer dewatering cannot be identified, the modeling has shown the aquifer is not sustainable for the Yorkville region for the long-term. The sooner the City switches to a more sustainable source, the better off the City will be for the long-term.

It also should be noted that non-municipal users in the region may have wells that only extend to the St. Peter sandstone and do not reach the Ironton-Galesville. If the regional water levels lower to the bottom of the St. Peter, many homeowners' and some business owners' wells may run dry. They may have to seek new sources of water for themselves. The sooner the deep sandstone water levels can be stabilized, the more the risk of these shallower wells being dewatered will be reduced.

Additionally, it is considered prudent to have a backup source of water when using either surface water or obtaining water from a third party such as JAWA or other chartered water group. Natural or manmade events such as a critical main break or drought could leave the City without any source of water for several days. If the City cannot use its typical water source, it is necessary to have water from an alternate source for the sake of baseline water use and firefighting uses. If the water levels in the deep aquifer are stabilized, it could be used as a backup source for Yorkville and the Sub-Region.

5.3 Fox River

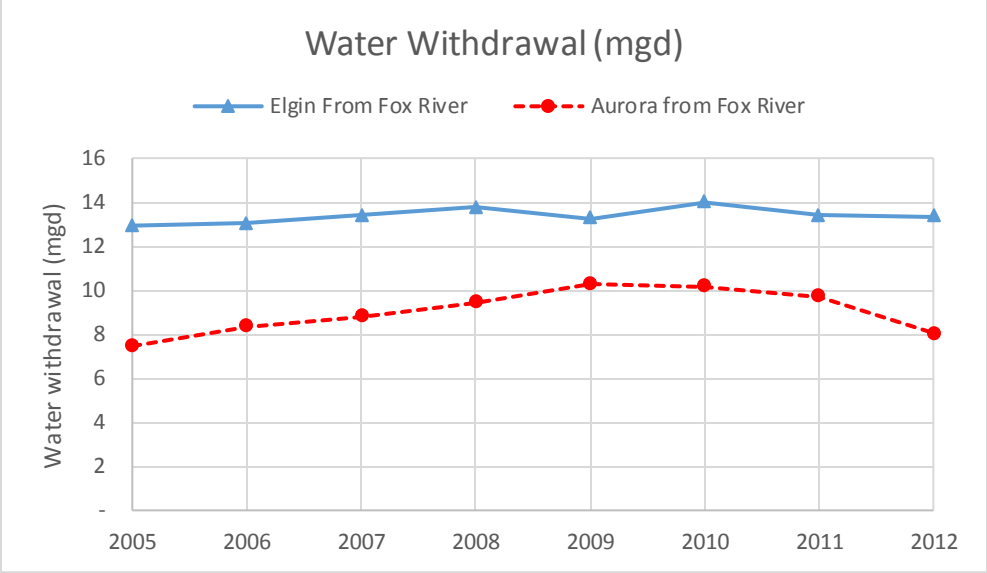
As part of the scope of this project, the ISWS evaluated the feasibility of the Fox River being the primary source of supply for United City of Yorkville, as well as the combined communities of Montgomery, Yorkville and Oswego, with potable water through the year 2050. All graphs and tables in section 5.3 represent data that has been compiled by the ISWS as part of the aforementioned study.

5.3.1 Fox River Watershed – Beginning in southeastern Wisconsin and running southwest to Ottawa, Illinois, the Fox River is approximately 202 miles long and is tributary to the Illinois River. The Fox River Watershed is currently only being used for potable water by the upstream communities of Elgin and Aurora. The Fox River also serves as the discharge point for several communities' wastewater treatment plants. On average, Aurora obtains about half of their water supply from the Fox River, whereas Elgin obtains approximately 90% of their

water from the Fox River. Exhibit 5-10 graphs the water withdrawals by both Elgin and Aurora from the years of 2005 to 2012 (most recent data).

Exhibit 5-10: Historical Fox River Withdrawal Information for Elgin and Aurora

United City of Yorkville, IL



5.3.2 Historical Fox River Flows – Over the historical monitored period of 100 years at the Dayton Dam, streamflows in the Fox River have increased. The changes in streamflow reflect increases in population and thus an increased effluent from wastewater treatment plants tributary to the Fox River. Two other factors which affect the Fox River flowrates are changes in river withdrawals from the Fox River and modifications in releases from the Stratton Dam immediately downstream of the Fox Chain of Lakes.

In the context of an investigation into a river for the purposes of determining whether or not it is fit to serve as the primary water source for one community or several communities, the streamflow must be taken into prime consideration. One of the two parameters that was used in the ISWS report to evaluate the low flows of the Fox River is the 'lowest 10%' number which is representative of streamflow in the bottom 10th percentile of flow; the bottom 10th percentile of flow is considered to be an extremely dry condition. The other parameter used is the 'Q7,10' number; the Q7,10 number demonstrates the streamflow during a 7-day 10-year low flow condition which is estimated to be about 80% of the lowest monthly flow.

An IDNR permit for any new Fox River withdrawal would likely include a protected low flow restriction, which could stipulate that the withdrawal must cease and an alternative source of water must be used if the river's flow were to fall below an established protected low flow amount. For instituting the protected flow amount, IDNR has in all cases to date used the Q7,10 number as the protected level. Based on its previous practices, IDNR would be expected to refer to the most recently published map of Q7,10 values, which for the Fox River

was issued by the ISWS in 2003. The possibility exists that IDNR could approach ISWS for a more recent estimate of the Q7,10; however, IDNR has not done this with any prior withdrawal request.

As indicated before, the Q7,10 of any river can shift over time, often in response to changes in water use practices (effluents, withdrawals, diversions) in its watershed but also to climatic variations and other factors. In contrast, the protected flow amount designated by IDNR is expected be a fixed flow value and thus will remain constant even as low flow conditions change in the future.

In Table No. 5-1, the 'Total Number of Deficit Days' column counts every day where the streamflow was below the Q7,10 number and the 'Longest Period of Nearly-Consecutive Deficit Days' column outlines how many of those days occurred consecutively or nearly consecutively. If the United City of Yorkville did not have a backup source of water, they would need to be able to store enough water for the days when they would not be able to pull from the Fox River.

Table No. 5-1: Historical Drought Information at Dayton, IL

United City of Yorkville, IL

Year	Total Number of Deficit Days	Longest Period of Nearly-Consecutive Deficit Days
1934	98	57 of 62 days
2005	50	25 of 26 days
1956	43	37 of 39 days
1946	38	24 of 26 days

5.3.3 Potential Fox River Withdrawal Locations – If Yorkville installed a Fox River Intake and subsequent treatment plant to serve their own community, it would be recommended to place the intake along the Fox River at the East end of the City. Positioning the WTP to be on the east end of the City would provide the City with the option of connecting the WTP to existing Wells No. 8 and 9 via a raw water main. If the wells were connected via raw water main, the wells would be able to pump raw water to the WTP in the event that the City was unable to draw from the River for any reason. Lastly, by locating the intake on the East end of the City and East of the dam, the water levels in the river will be fairly stable as they will be primarily continuous by the elevation at the top of the Dam.

Two other locations, in addition to the location for the Yorkville intake, were also evaluated for the potential Fox River Intakes, as part of this analysis by ISWS. Withdrawal just upstream of the Montgomery Dam was analyzed to determine if there was sufficient flow in the location to meet Montgomery's long-term demands. The third location evaluation reviewed whether a withdrawal from the Fox River near Orchard Road could supply water to Yorkville, Montgomery and Oswego (Sub-Regional withdrawal).

5.3.4 Fox River Flow Projections – Similarly to the past increases in streamflow, the Fox River flows are likely to increase due to an increased population in Northeast Illinois and thus an increase in effluent from WWTFs

upstream of Yorkville. Appendices C and D summarize the projected Fox River flow rates for taking into considerations the Yorkville and Sub-Regional withdrawal locations, respectively. The appendices clearly show future flows are projected to be higher than the current Q7,10 flows for the various flow ranges evaluated.

Waukesha Wisconsin currently discharges their WWTF effluent into the Fox River. Waukesha has recently requested to switch from their current water source to Lake Michigan water. If their request is granted, under law they must return their wastewater effluent to Lake Michigan. The flows from Wisconsin currently augment the Fox River base flow by approximately 40 cubic feet per second (cfs); Waukesha, along with the surrounding communities, provides more than half of the flow from Wisconsin into the Fox River Chain of Lakes. Thus, if Waukesha's request to use Lake Michigan is granted and they no longer discharge their WWTF effluent into the Fox River, the Fox River's flowrate will decrease.

Another factor which could affect the streamflow of the Fox River is the operation of the Stratton Dam. The Stratton Dam, operated by the Illinois Department of Natural Resources (IDNR), is located in McHenry County between the Fox River Chain of Lakes and the Fox River. The operation of this Dam could potentially increase the Q7,10 outflow estimate of the Fox River.

Apart from long-term trends regarding increases or decreases in flowrate, the Fox River's flow rates fluctuate throughout various months based on snow melt, precipitation and groundwater. Over the last 100 years the Fox River has been surveyed, all months except March have had at least one Q7,10 flow rate day. Table No. 5-2 shows the likelihood of at least one day reaching the Q7,10 low flow conditions based on the month for both the historical conditions and scenarios with increases in flow. As the flow rates increase, the likelihood of the river reaching current Q7,10 numbers decreases. Historically, September has been the month displaying the lowest flows and has seen a 4.7% chance where there is at least one day per month where the streamflow is below the Q7,10 number. Table No. 5-2 also summarizes the change in monthly risk of the flow falling below the Q7,10 level at 10 CFS increment increases. The table clearly shows how the risk diminishes considerably especially at a 50 CFS increase.

Table No. 5-2: Monthly Distribution of Probability of The Fox River Reaching Q7,10 Low Flow Rates at Dayton, IL

United City of Yorkville, IL

Month	Historical Conditions	Low Flows Change by +10 CFS	Low Flows Change by +20 CFS	Low Flows Change by +30 CFS	Low Flows Change by +40 CFS	Low Flows Change by +50 CFS
May	0.4%	0.1%	0.1%	<0.1%	<0.1%	<0.1%
June	0.3%	0.2%	0.1%	<0.1%	<0.1%	<0.1%
July	1.7%	1.1%	1.1%	0.5%	0.2%	<0.1%
August	3.6%	2.7%	2.5%	1.5%	0.9%	0.5%
September	4.7%	3.2%	3.0%	2.1%	1.4%	0.9%
October	2.4%	1.8%	1.5%	1.2%	1.0%	0.7%
November	0.4%	0.4%	0.3%	0.3%	0.3%	0.2%

Table No. 5-3 outlines how Table No. 5-1 above would have been changed if 50 CFS had been added to the Fox River by finding the number of deficit days for each drought year where the deficit would have been more than 50 CFS. Although the statistically probable number of days drops heavily, the 1946, 1956 and 2005 droughts all show several days of nearly-consecutive days in a row. Therefore, while the risk of the river dropping below the Q7,10 level is reduced, there likely will be periods of time when a backup supply source will be needed.

Table No. 5-3: Deficit Days of Select Drought Years at Dayton, IL

United City of Yorkville, IL

Year	Total Number of Days With a Deficit ≥ 50 CFS	Nearly-Consecutive Days With Deficits ≥ 50 CFS
1934	1	1 day
2005	22	16 of 17 days
1956	24	24 of 35 days
1946	15	10 of 12 days

5.3.5 Fox River Withdrawal Permitting – As previously stated, an IDNR permit for any new Fox River withdrawal would likely include a protected low flow restriction, this restriction would stipulate that the withdrawal from the river must cease and an alternative source of water must be used if the river's flow were to fall below an established protected low flow amount. In all previous cases, the IDNR has used the Q7,10 value as the protected flow amount.

If Waukesha's request to use Lake Michigan water is granted, the flows in the Fox River would revert back to the levels that existed in the 1980s. Due to the fact that this is about the time when the IDNR implemented their Q7,10 estimate for Algonquin, the Q7,10 number would be likely to remain unchanged. However, if Waukesha's request is rejected the Q7,10 flowrate may be increased to reflect the increases in the Fox River Flows.

The values in Table No. 5-4 outline several scenarios showing the CT and LRI values for both historical (2007) and predicted future values for 2030, 2040 and 2050. The CT and LRI values, similarly to when CT and LRI values are used elsewhere in this report, represent how much water is used compared to the baseline scenario; CT designates current trends and LRI designates less resource intensive trends. If the communities upstream of Yorkville are collectively using less potable water, they will be discharging less wastewater effluent into the Fox River. The difference between the Q7,10 CT and LRI scenarios change from 17 CFS in 2030 to 29 CFS in 2050.

As seen in the tables in this section, the historical Q7,10 numbers are lower than the predicted future Q7,10 numbers; if the IEPA sets the low flow regulation based off of the predicted future number it will be higher, and thus more restrictive than if the regulation was based off of the historical Q7,10 number. There is a chance that if the Q7,10 number was increased after Yorkville began to use surface water, Yorkville would be grandfathered into the old Q7,10 number. If the IEPA decides to periodically update the Q7,10 numbers in the

future and the United City of Yorkville is not grandfathered into the older numbers, they will have to abide by the more stringent future streamflows. All of this being considered, it would seem the sooner a withdrawal permit is secured, the better off the City would be in the long-term.

Table No. 5-4: Fox River Low Flow Scenarios for Yorkville Withdrawal Location

United City of Yorkville, IL

Year	CT Q7,10 Values CFS	LRI Q7,10 Values CFS	April Lowest 10% CFS	July Lowest 10% CFS
2007	187	187	928	349
2030	221	204	978	395
2040	229	207	993	408
2050	240	211	1012	423

5.4 Lake Michigan Interconnection

Lake Michigan is currently the primary source of water for much of the population within the Chicago/Northeastern Illinois area. Confronted with diminishing groundwater resources, many communities in Northeastern Illinois joined together and formed unique intergovernmental cooperatives that own and operate independent Water Systems using Lake Michigan water as the source. Many of these cooperatives, under Illinois State Statute, have formed into a joint action water agency (JAWA) and are responsible for managing the delivery and pricing of the water supply to their charter communities.

There is an amount of Lake Michigan water usage allotted to the State of Illinois that limits the quantity used, and indirectly the area and population that can be served, by this resource. In the report *Water 2050: Northeastern Illinois Regional Water Supply/Demand Plan (CMAP)*, March 2010, it was estimated that 50 to 75 MGD in domestic water supply allocation may be available to new areas. This estimate takes into account a number of variables that could greatly affect this allocation including diversion of stormwater runoff, Lake Michigan water levels (which affects volume of water required to work the locks and leakage through the locks), discretionary diversions required to maintain water quality in the Chicago Sanitary and Ship Canal and accounting issues (a running average is used to evaluate the diversion). Also, as the population that currently uses Lake Michigan water continues to develop water conservation practices, water loss will be reduced and more water may become available to those communities seeking to use Lake Michigan water. Maximizing the Lake Michigan allocation to Northeastern Illinois communities will help preserve the groundwater resources in the region. With this guiding principle, the project team explored opportunities for a Lake Michigan water interconnection.

Appendix E schematically displays all major pipelines that distribute Lake Michigan water in Northeastern Illinois. The Illinois American pipeline is closest to the United City of Yorkville's Planning Area, so Illinois American was approached to determine the feasibility of connecting to their transmission system.

Illinois American evaluated three different routes for supplying the United City of Yorkville with potable water. The shortest route was approximately 105,000 LF (19.9 miles long) and had a connection point at Schmidt Rd & I55; the main then travelled southwest along I-55 to IL 126 and then continued along IL 126 into Yorkville. The longest route was approximately 114,000 LF (21.6 miles) long and also assumed a connection point at Schmidt Rd & I55. The main traveled southwest along I-55 to 127th St, then headed west along 127th St and Simons Rd, then ran south along Schlapp Rd, finally, it ran west along IL 126 into Yorkville. The mid-length route was 112,000 LF (21.2 miles) long and also connected at Schmidt and I-55. The main then ran southwest along I-55 to 135th St then travelled west along 135th St, then south along IL Rte 30, finally running west along IL126 into Yorkville. Exhibit 5-11 displays the potential connection point within the Yorkville System.

All three routes were evaluated using both 24" and 30" water main for the years 2015, 2030 and 2040. The ability to supply current demand was evaluated using the MDD from 2014. The 2030 and 2040 values were evaluated using the MDD, CT values. The modeling for the three different routes, evaluated using two different pipe sizes, for three different years can be found in Appendix F. All 18 scenarios show a drop in pressure below 20 PSI, which is a regulatory minimum. A potential intermediate pump station would have to be included with the pump. Additionally, a ground storage tank would have to be included in the cost analysis.

While a detailed cost analysis was not conducted, it is clear that the cost of the needed water transmission main extension, the needed pressure boosting station and the needed groundwater storage tank that is large enough to hold two days of Lake Michigan water, as well as the cost of the actual water, makes the Lake Michigan interconnection cost prohibitive for the United City of Yorkville at this time.

Exhibit 5-11: Potential Illinois American Water Deliver Location

United City of Yorkville, IL



SECTION 6: WATER SUPPLY AND TREATMENT EVALUATION

Previous sections of this report summarize the Water Works System components, provide a needs assessment analysis and provide a sustainable source water assessment for continued and future water supply for the City. This section will determine the required supply and treatment improvements to expand the system to meet the 2050 CT and LRI water demand projections for the United City of Yorkville. Section 7 will summarize the water distribution system and storage evaluation and plan for expansion. Section 8 will provide a review of a Sub-Regional water supply and treatment system to serve the United City of Yorkville, Village of Montgomery and Village of Oswego. A review of the cost of the improvements and a phasing and implementation program will be summarized for both the CT and LRI water demand scenarios in Section 9. Finally, a cost comparison of the CT and LRI recommendations will be presented in Section 9.5.3 to demonstrate the anticipated financial benefit to the City if the LRI goals outlined in Section 3 are reached.

The sustainable source water assessment in Section 5 concluded the continued use of the deep sandstone aquifer to meet future demands might sustain the United City of Yorkville until 2050, but would likely dewater the aquifer to the point that it would be unusable within a few decades after 2050. On the other hand, Section 5 also concluded the Fox River would be a sustainable water supply source for the City and the Sub-Region. While it is a sustainable source for the long-term supply, Section 5 also demonstrated there will be periods of time when a backup supply source will be needed. The backup supply source could undoubtedly be the deep sandstone aquifer as long as there is a sufficient quantity of water remaining in it.

This section, Section 6, outlines a plan for both surface water use and well water use for CT and LRI usage rates (a total of four scenarios) where the United City of Yorkville remains independent in their water supply and treatment approach. The scenario where well water is used is referred to as Alternate 1 and the scenario where surface water is used is referred to as Alternate 2. The alternates are divided into two categories, 'A' designates a "business as usual" or CT scenario and 'B' designates a LRI scenario. Section 8 outlines Alternate 3, a scenario where the United City of Yorkville joins with the Village of Montgomery and the Village of Oswego in order to build a surface water treatment plant which serves all three communities. Alternate 3 outlines both CT (A) and LRI (B) scenarios by combining the CT and LRI usage rates from each of the communities.

The following is a list of alternate water supply and treatment options that will be evaluated in this report:

- Alternative 1A (1A-CT) – The City's 2050 CT water demand is met entirely by collecting groundwater from deep sandstone wells.
- Alternative 1B (1B-LRI) - The City's 2050 LRI demand is met entirely by collecting groundwater from deep sandstone wells.
- Alternative 2A (2A-CT) – The City's 2050 CT water demand is met by using surface water from the Fox River and from one additional deep sandstone well. All current wells will be used as backup.

- Alternative 2B (2B-LRI) – The City's 2050 LRI water demand is met entirely by using surface water from the Fox River. All current wells will be used as backup.
- Alternative 3A (3A-CT) – The United City of Yorkville's, the Village of Oswego's, and the Village of Montgomery's 2050 CT water demands are met entirely by constructing a surface water treatment plant near the Fox River/Orchard Road intersection that is capable of providing water for all three communities. Select current wells will be used as backup.
- Alternative 3B (3B-LRI) – The United City of Yorkville's, the Village of Oswego's and the Village of Montgomery's 2050 LRI water demands are met entirely by constructing a surface water treatment plant near the Fox River/Orchard Road intersection that is capable of providing water for all three communities. Select current wells will be used as backup.

When reviewing the infrastructure mapping exhibits, it's important to note that existing infrastructure symbols are color-coded blue and future infrastructure is color coded in red. The exhibits also include 'potential future' items; potential future items are items which may be implemented after the 2050 timeline. The potential future items are color coded grey. These 'potential future' items are not included in the cost estimates for any of the scenarios.

6.1 CT Water Supply & Treatment Evaluation

As discussed in Section 3, the average per capita water usage for the City over the last five years is 88 gpcd. In order to provide a factor of safety and use a uniform value with the other communities in the area, a value of 90 gpcd was used for all future predicted CT calculations.

As seen in Table No. 3-9, a deficit of just over 3,500 GPM for the ultimate source capacity and just over 6,000 GPM for the reliable source capacity was predicted in the year 2050 for the current trends. These numbers assume that all current wells (Wells No. 3, 4, 7, 8 and 9), are in service. Well No. 3 has several performance issues related to sand production and it's planned that Well No. 3 will be abandoned prior to the end of the planning period. The abandonment of Well No. 3 would push the deficit of the water supply up 600 GPM or 576,000 gallons per day assuming a 16-hr pumping day. If Well No. 3 were abandoned prior to additional water sources coming online, the CT deficit would occur around 3,000 PE sooner than if Well No. 3 were to remain in service.

6.1.1 CT Water Supply Expansion

6.1.1.1 Water Wells – Alternate 1A evaluates the possibility of Yorkville obtaining all potable water from deep sandstone wells. Of the five wells that the city currently uses, two wells (Wells No. 3 and 4) are open to both the St. Peter (Ancell) aquifer and the Ironton-Galesville aquifer and three wells (Wells No. 7, 8 and 9) are open to only the Ironton-Galesville aquifer. As one can see from the raw water quality data discussed in Section 2, the water quality from wells open to the St. Peter and the Ironton-Galesville aquifer and the water

quality from wells open to only the Ironton-Galesville aquifer is very similar; therefore, there is no need to have different water treatment processes for Wells No. 3 and 4 than those that exist for Wells No. 7, 8 and 9.

The typical target production rate for an Ironton-Galesville well is 1,000 GPM. Assuming Well No. 3 is abandoned, the reliable source capacity has a deficit of 6,668 GPM and the ultimate source capacity has a deficit of 4,146 GPM. According to these numbers, seven 1,000 GPM wells will need to be added to Yorkville's current system for Alternate 1A.

When water wells are pumped, the water levels in the aquifer decline in a radial direction. While the deep sandstone formations are not purely homogenous, the characteristics of the aquifer are fairly consistent. In an effort to reduce hydraulic interference between deep sandstone wells, a typical minimum well spacing is one mile. By separating the wells by at least one mile, the drawdown in one deep sandstone well will be minimal at the edge of the drawdown from another one.

Of Yorkville's five existing wells, only Well No. 7 is treated by its own WTP. Wells No. 3 and 4 are treated by the same WTP and Wells No. 8 and 9 also share a WTP. It's often more cost-effective to position two wells one mile away (typical deep well offset zone) from each other and have one WTP treat both wells by transporting one well's water to the WTP by a raw water main than to have two smaller WTPs at each well. Therefore, when it was feasible, the plan allowed two wells to be treated by one WTP.

A summary of the wells needed to fulfil the 2050 CT requirements can be found below. The WTP information needed for these wells can be found in Section 6.1.2.1. The placement of wells, WTPs and other infrastructure can be found in Exhibit 6-1.

- Well No. 6 would be located on the northeast side of the City. The 1,000 GPM Ironton-Galesville Well No. 6 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be near the current North EWST. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 10 would be located on the west side of the City. The 1,000 GPM Ironton-Galesville Well No. 10 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be near the Pavillion Rd. and Hillview Ct. intersection. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 11 would be located near the center of town about one mile west of current Well No. 3. The 1,000 GPM well would be treated by the current water treatment plant located at Well No. 4. A raw water main would travel east along the railroad tracks from Well No. 11 to the existing Well No. 3 and would use the current raw water main that runs across the Fox River from Well No. 3 to the WTP at Well No. 4. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant (WTP)
- Elevated Water Storeage Tank (EWST)
- Future WTP
- Future Deep Well
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future Raw Water Main

1.0 MG NORTH EWST

WELL NO. 6 WTP

1.5 MG NORTHEAST EWST, WELL NO. 8, WELLS NO. 8 & 9 WATER TREATMENT PLANT

WELL NO. 14 WTP

WELL NO. 9

WELL NO. 12 WTP

NORTH CENTRAL PRV STATION

NORTH BP/PRV STATION

300,000 GAL NORTH CENTRAL EWST, WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT

WELL NO. 11

WELL NO. 3

SOUTH CENTRAL BP/PRV STATION

WELL NO. 10 WTP

500,000 GAL SOUTH CENTRAL EWST

SOUTH BP/PRV STATION

SOUTH CENTRAL PRV STATION

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

WELL NO. 15 WTP

WELL NO. 13 WTP

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
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United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

DATE:	MARCH, 2017
PROJECT NO.:	YO1437-P
BY:	CLV
PATH:	H:\GIS\PUBLIC\YORKVILLE\2014\YO1437
FILE:	YO1437_EXH6-1ALT1.1 CLV.4.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 6-1 ALTERNATE 1A WATER SUPPLY AND TREATMENT PLAN - CT

NORTH

- Well No. 12 would be located at the northwest side of town south of future Well No. 10. The 1,000 GPM Ironton-Galesville Well No. 12 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be along Beecher Rd, near the electrical substation. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 13 would be located south of the Sandwich fault. As stated in Section 5, directly southwest of the Sandwich Fault the aquifers and subsequent water levels are higher than directly northeast of the fault. The 1,000 GPM Ironton-Galesville Well No. 13 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be northeast of Highway 47 and W Helmar Rd. intersection. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 14 would be located in the northwest corner of the City. The 1,000 GPM Ironton-Galesville Well No. 14 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be south of Galena Rd. and west of W Beecher Rd. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 15 would also be located south of the Sandwich Fault. As a reminder, directly south of the Sandwich Fault the water level is higher that directly north of the Sandwich Fault. The 1,000 GPM Ironton-Galesville Well No. 15 and its corresponding WTP (discussed in Section 6.1.2.1) are proposed to be near the Lisbon Rd. and Walker Rd. intersection. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.

6.1.1.2 Fox River Intake & Water Wells – Alternate 2A involves Yorkville primarily obtaining potable water from the Fox River and using deep wells as a backup water source. The proposed intake station and WTP would be slightly northeast of the intersection of Rt. 34 and Tuma Rd. Section 6.1.2.2 discusses the treatment of surface water. Well No. 10, which would be drilled at the WTP site under this alternate, would be added in order to ensure enough backup supply. Like the other Ironton-Galesville wells, Well No. 10 would have an assumed capacity of 1,000 GPM. Exhibit 6-2 displays the proposed WTP, wells and other infrastructure for Alternate 2A.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

1.0 MG NORTH EWST

POTENTIAL FUTURE WELL NO. 6

POTENTIAL FUTURE RAW WATER MAIN

1.5 MG NORTHEAST EWST, WELL NO. 8, WELLS NO. 8 & 9 WATER TREATMENT PLANT

NORTH CENTRAL PRV STATION

NORTH BP/PRV STATION

WELL NO. 9

WELL NO. 10, FOX RIVER INTAKE, 12 MGD LIME SOFTENING WATER TREATMENT PLANT, AND 1.0 MG GST

300,000 GAL NORTH CENTRAL EWST, WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT

WELL NO. 3

SOUTH CENTRAL BP/PRV STATION

500,000 GAL SOUTH CENTRAL EWST

SOUTH BP/PRV STATION

SOUTH CENTRAL PRV STATION

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant
- Elevated Water Storeage Tank (EWST)
- Future Deep Well
- Proposed WTP Site
- Ground Storage Tanks
- Potential Future Deep Well
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future Raw Water Main
- Potential Future Raw Water Main

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

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DATE:	MARCH, 2017
PROJECT NO.:	YO1437-P
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WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 6-2 ALTERNATE 2A WATER SUPPLY AND TREATMENT PLAN-CT

NORTH

6.1.2 CT Water Treatment Expansion

6.1.2.1 Well Treatment Systems – As stated in Section 6.1.1.1, a total of six new WTPs for Wells No. 6, 10, 12, 13, 14 and 15 would need to be added to the system in Alternate 1A. Well No. 11 would be treated by the WTP currently serving Wells No. 3 and 4. Each other new WTP would be located onsite with the well it is serving. The design basis for each of the new WTPs was based off of the water quality of the existing wells. Future Wells No. 6, 12 and 14 were designed based on the water quality found in Wells No. 8 and 9. Future Wells No. 10, 13 and 15 were designed based on the water quality found in Well No. 7.

Because the water from the deep sandstone aquifer is assumed to be very similar for the future wells to the current wells, the same method of treatment will be used. The current wells use cation exchange water treatment plants (CEWTPs) to treat the water. These cation exchange units remove the two major contaminates which are an issue in the deep aquifer, radium and hardness. The CEWTPs also chlorinate the water for disinfection and add fluoride for dental health.

6.1.2.2 Fox River Intake & Water Wells – Groundwater and surface water typically have different contaminants and therefore are typically treated differently. Deep wells, such as the ones used by Yorkville, are generally not affected by surface water contamination caused by road salt, organics, fertilization runoff, or other agricultural runoff. While the main concerns for the Ironton-Galesville aquifer water are hardness and radium, surface water from the Fox River is likely to include hardness, organic contaminates and other contaminates.

The neighboring communities of Elgin and Aurora, which both currently use the Fox River as a potable water source, provided Fox River raw water quality information for this project. Due to the proximity of these communities to Yorkville, the water quality was assumed to be identical for the proposed Yorkville WTP. The water quality summary can be found in Table No. 6-1, values from Elgin and Aurora were averaged and divided out based on the seasons. Total hardness, total organic carbon, total alkalinity and turbidity are all constituents which require the concentration to be lowered by more than 50% from the average influent values. TDS, chloride and nitrate all require a reduction in concentration by less than 50%.

Based on the available land area, cost and constituents, lime softening has been selected as the best surface water treatment plan. Two lime softening treatment systems were considered. The first system, which is depicted in Exhibit 6-3, is the split treatment lime softening process. In this system, which is similar to the City of Elgin's LSWTP, the softening process is accomplished in three separate basins. The basins are the pre-sedimentation, primary softening and recarbonation/secondary clarification basins. All three would be constructed outside of a building. Following the softening process, the water would be filtered with the use of membranes installed inside a building. Break point chlorination would be achieved following chlorine addition and detention time in the finished ground storage reservoirs. Two high service pump galleries, one that would pump to meet the North Pressure Zone Hydraulic Grade Line (HGL) and one that would target

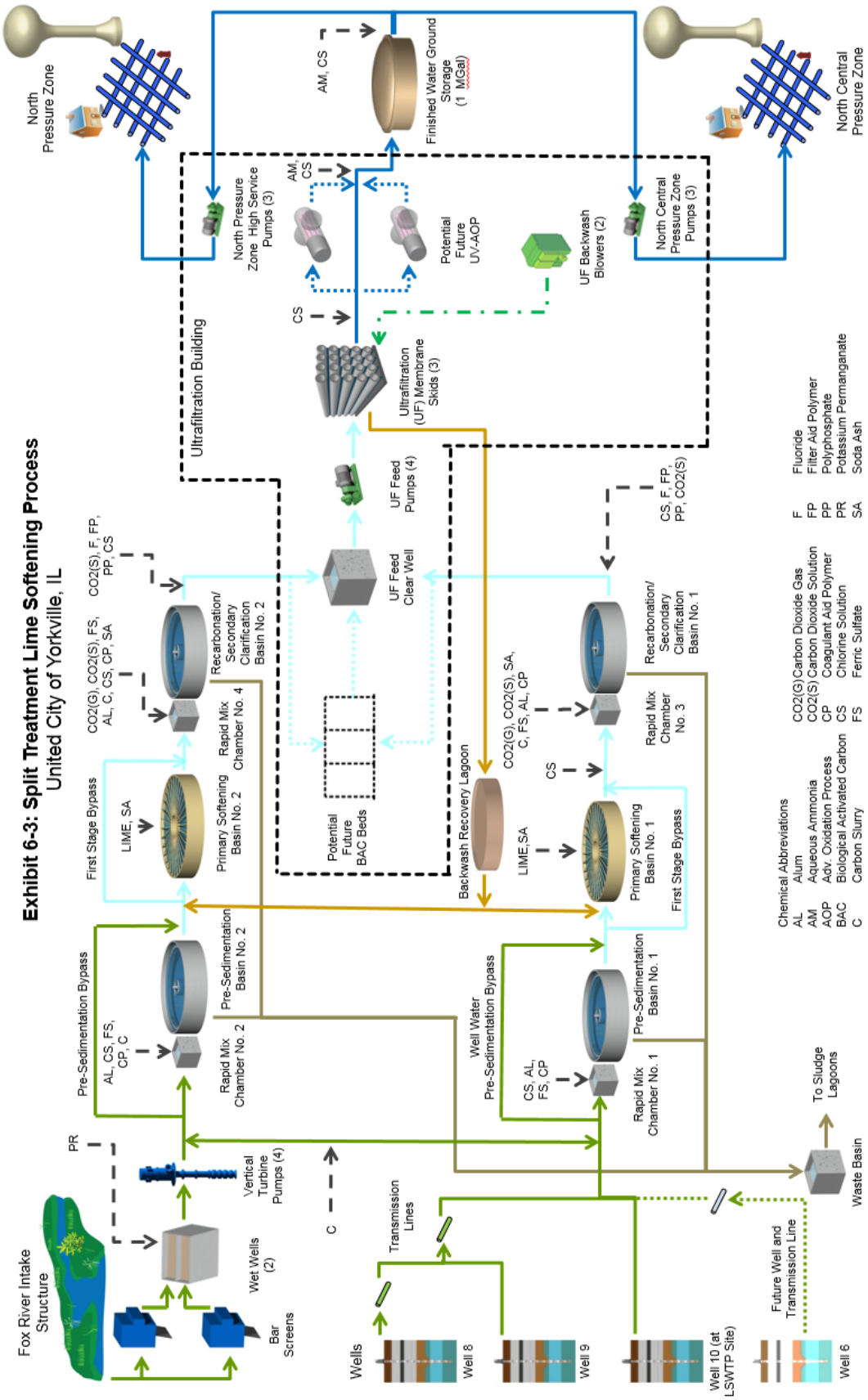
Table No. 6-1: Fox River Water Quality Summary

United City of Yorkville, IL

Parameter	Units	Quantity	Typical Spring Season Water Quality	Typical Summer Season Water Quality	Typical Fall Season Water Quality	Typical Winter Season Water Quality	National Primary Drinking Water Standard	National Secondary Drinking Water Standard	Target Effluent Water Quality
pH	(su)	Minimum	8.02	7.85	8.12	7.68	--	6.5 to 8.5	7.65
		Average	8.26	8.25	8.27	8.15			8.73
		Maximum	8.64	9.00	8.99	8.45			9.97
Temperature	(°C)	Minimum	14.6	21.0	12.8	4.7	--	--	
		Average	18.0	25.0	19.9	5.1			
		Maximum	20.2	29.4	20.8	17.8			
Alkalinity	(mg/l) (as $CaCO_3$)	Minimum	204	136	159	240	--	--	41
		Average	254	242	261	309			82
		Maximum	290	292	290	350			175
TDS	(mg/l)	Minimum	4.1			576.4	--	500	0.0
		Average	5.9			579.1			258
		Maximum	8.1			581.8			456
Total Hardness	(mg/l) (as $CaCO_3$)	Minimum	270	210	216	288	--	--	80.0
		Average	322	301	323	398			132
		Maximum	374	364	358	458			214
Calcium Hardness	(mg/l)	Minimum	118	81	111	158	--	--	
		Average	168	154	165	232			
		Maximum	206	187	192	297			
Magnesium Hardness	(mg/l)	Minimum	102	94	93	108	--	--	
		Average	154	147	158	166			
		Maximum	194	208	190	214			
Non-Carbonaceous Hardness	(mg/l)	Minimum	48	13	35	28	--	--	
		Average	68	60	62	89			
		Maximum	110	164	104	147			
Total Organic Carbon	(mg/l)	Minimum		8.83	7.55	7.11	--	--	1.20
		Average	6.50	10.92	8.53	7.86			2.86
		Maximum		13.00	9.50	8.61			4.47
Fluoride	(mg/l)	Minimum	0.166	0.297	0.184	0.120	4	2	0.23
		Average	0.181	0.385	0.307	0.196			1.07
		Maximum	0.208	0.899	0.351	0.420			1.53
Chloride	(mg/l)	Minimum	141.96	137.19	139.78	116	--	250	56.4
		Average	156.75	162.15	153.96	128			136.9
		Maximum	169.69	208.94	238.93	233			220.5
Sulfate (SO_4^{2-})	(mg/l)	Minimum				43.2	--	250	31.4
		Average				46.1			61.0
		Maximum				51.1			106.4
Nitrate (NO_3^-)	(mg/l)	Minimum				8.41	10	--	1.17
		Average				10.60			7.16
		Maximum				12.48			18.57
Nitrite (NO_2^-)	(mg/l)	Minimum				0.07	1	--	0.00
		Average				0.08			0.08
		Maximum				0.08			0.30
Ammonia	(mg/l)	Minimum				0.10	--	--	
		Average				0.12			
		Maximum				0.13			
Turbidity	(NTU)	Minimum	4.96	11.00	8.00	1.20	Maximum of 1 and < 0.3 in 95% of Samples	--	0.04
		Average	11.77	19.36	10.88	2.05			0.10
		Maximum	25.00	38.00	28.60	8.10			0.28
Total Chlorine	(mg/l)	Minimum					4	--	1.75
		Average							2.85
		Maximum							4.20
Dissolved Oxygen	(mg/l)	Minimum	4.10	6.05	7.6	10.23	--	--	
		Average	7.84	7.78	9.21	12.5			
		Maximum	8.33	10.20	11.1	13.3			
Odor	(su)	Minimum	22.00	17.83	5.30	2.70	--	--	
		Average	43.89	71.69	42.65	26.25			
		Maximum	110.20	104.7	75.30	77.30			
Color	(su)	Minimum	24	32	22	16	--	--	
		Average	28	34	29	19			
		Maximum	40	39	49	27			
Conductivity	(umhos)	Minimum	808	800	808	932	--	--	
		Average	1012	968	960	1183			
		Maximum	1129	1054	1172	1348			
Absorbance (Filtered)	(254 nm)	Minimum	0.167	0.079	0.146	0.121	--	--	
		Average	0.205	0.203	0.197	0.153			
		Maximum	0.281	0.258	0.217	0.217			
Coliforms	(cfu)	Minimum				258	<5% of Samples Positive[2]	--	0
		Average				623			0
		Maximum				1200			0

Notes:

1. National Primary Drinking Water Standards are either Maximum Contaminant Levels or Treatment Technique (for Turbidity only).
2. No more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli if two consecutive TC-positive samples, and one is also positive for E.coli fecal coliforms, system has an acute MCL violation.


Exhibit 6-3: Split Treatment Lime Softening Process
United City of Yorkville, IL
North Pressure Zone
North Central Pressure Zone
Finished Water Ground Storage (1 MGal)
AM, CS
North Pressure Zone High Service Pumps (3)
North Central Pressure Zone Pumps (3)
Potential Future UV-AOP
UF Backwash Blowers (2)
Ultrafiltration Building
Ultrafiltration (UF) Membrane Skids (3)
UF Feed Pumps (4)
UF Feed Clear Well
Potential Future BAC Beds
Backwash Recovery Lagoon
Recarbonation/ Secondary Clarification Basin No. 2
Recarbonation/ Secondary Clarification Basin No. 1
Rapid Mix Chamber No. 4
Rapid Mix Chamber No. 3
Primary Softening Basin No. 2
Primary Softening Basin No. 1
First Stage Bypass
LIME, SA
Pre-Sedimentation Basin No. 2
Pre-Sedimentation Basin No. 1
Rapid Mix Chamber No. 2
Rapid Mix Chamber No. 1
Pre-Sedimentation Bypass
Well Water Pre-Sedimentation Bypass
CO2(G), CO2(S), FS, AL, C, CS, CP, SA
CO2(G), CO2(S), SA, C, FS, AL, CP
CO2(S), F, FP, PP, CS
CS, F, FP, PP, CO2(S)
AL, CS, FS, CP, C
CS, AL, FS, CP
CS
C
PR
Vertical Turbine Pumps (4)
Transmission Lines
Wet Wells (2)
Bar Screens
Fox River Intake Structure
Wells
Well 8
Well 9
Well 10 (at LSWTP Site)
Future Well and Transmission Line
Well 6
To Sludge Lagoons
Waste Basin
Chemical Abbreviations
AL Alum
AM Aqueous Ammonia
AOP Adv. Oxidation Process
BAC Biological Activated Carbon
C Carbon Slurry
CO2(G) Carbon Dioxide Gas
CO2(S) Carbon Dioxide Solution
CP Coagulant Aid Polymer
CS Chlorine Solution
FS Ferric Sulfate
F Fluoride
FP Filter Aid Polymer
PP Polyphosphate
PR Potassium Permanganate
SA Soda Ash

the South Central Pressure Zone HGL, would transfer the water from the ground storage reservoirs into the distribution system.

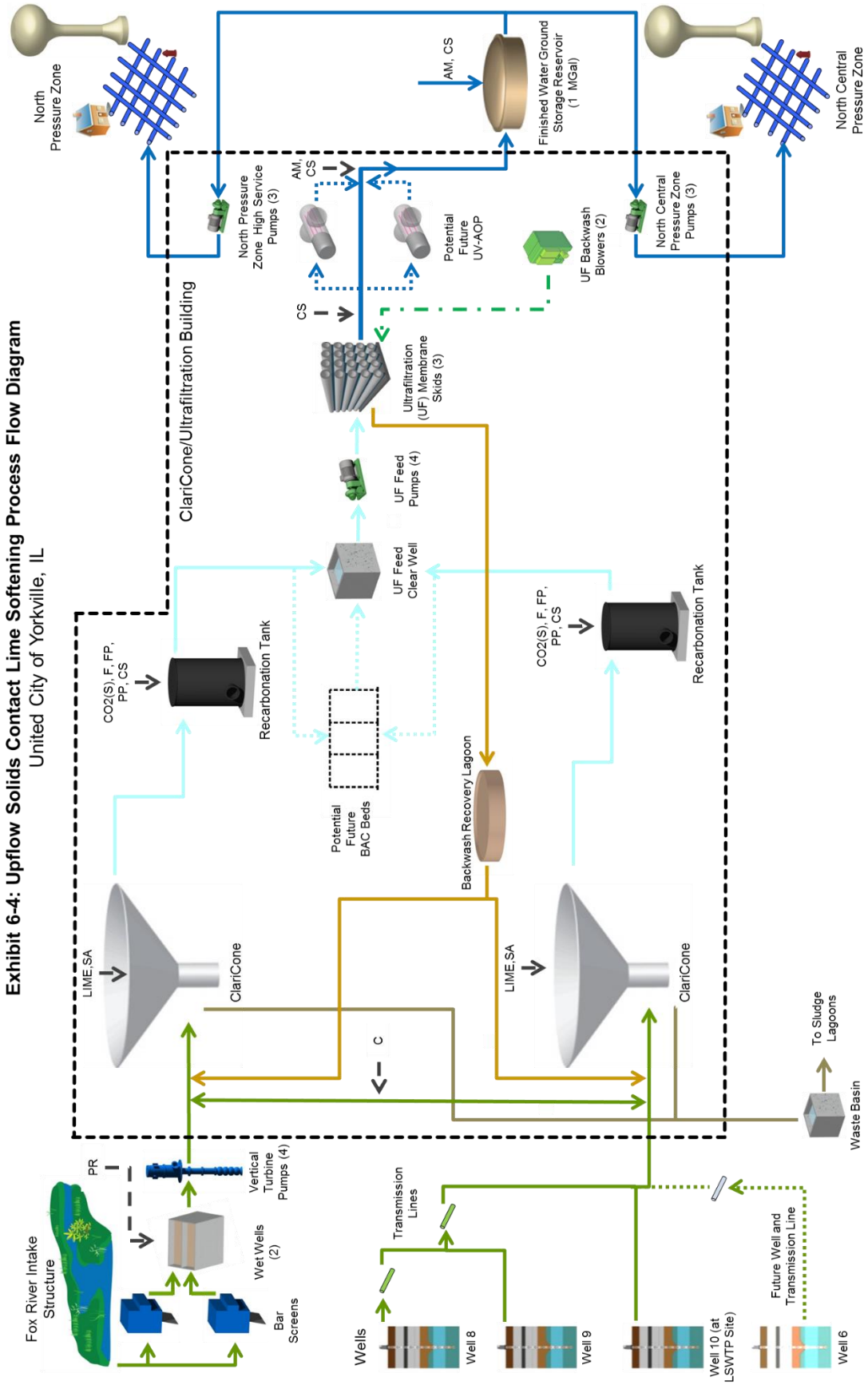
Ammonia would be added to the water within the ground stage reservoir and pump station, so chloraminated water is distributed throughout the system. Additional chemical feed systems for carbon dioxide (injected prior to the recarbonation/secondary clarification tank), alum, powdered active carbon, coagulant polymer, ferric sulfate, polyphosphate and potassium permanganate would also be installed, too. The chemical injection points are identified on Exhibit 6-3.

It is also important to note the process flow diagram references two potential future treatment unit process – biologically activated carbon beds and ultraviolet advanced oxidation process systems. Both processes would provide a higher level of surface water treatment, especially for taste and odor constituents. Neither Elgin's or Aurora's WTPs currently contain these unit processes. However, if there continue to be harmful algae bloom outbreaks in the river, the addition of one or both of these treatment systems may be appropriate to meet a higher level of treatment. At a minimum, both unit processes should be considered for future hydraulic profile renovations in the future.

The second lime softening water treatment process considered was the upflow solids contact clarifier (or single stage) system. Chicago Bridge and Iron (Claricone) and Westech (Solids Contact Clarifier) provide clarifiers for this type of system. In this system, all three of the sedimentation and softening basins within the split treatment system are combined into the clarifier. The solids upflow contactor(s) are then installed inside of a building. The City of Aurora utilizes this type of softening process to treat the Fox River Water. Exhibit 6-4 depicts the process flow diagram for this type of treatment system. Other than the front end softening and clarification process being different, the back end treatment unit, storage and pumping system would be exactly the same as the split treatment system. The potential other treatment processes also would be considered for this treatment system.

A cost-analysis was completed for both systems to determine which system was more cost-effective for the City. The cost of the two systems were found to be very similar (within 7% of each other), but the upflow solids contactor system was found to be slightly cheaper. In addition, the operational challenges of the split treatment system in a Midwest climate makes that system less attractive. Therefore, all LSWTP system cost estimates presented form this point forward will be based off the single stage Claricone process.

Lime softening would not only remove the unwanted constituents found in the Fox River, it would be able to effectively treat the problem constituents found in the deep wells. This versatility would allow the United City of Yorkville to procure and treat well water in the event that they were not able to use surface water in the event of a drought or other emergency event. The proposed WTP location on the East end of the City would also allow for the cost-effective connection of Wells No. 8 and 9. The connection to these wells would all the LSWTP to treat the water from these wells and the existing CEWTP facility would be repurposed for another


Exhibit 6-4: Upflow Solids Contact Lime Softening Process Flow Diagram
United City of Yorkville, IL
North Pressure Zone
North Central Pressure Zone
AM, CS
Finished Water Ground Storage Reservoir (1 MGal)
ClariCone/Ultrafiltration Building
North Pressure Zone High Service Pumps (3)
Potential Future UV-AOP
UF Backwash Blowers (2)
North Central Pressure Zone Pumps (3)
CS
Ultrafiltration (UF) Membrane Skids (3)
UF Feed Pumps (4)
UF Feed Clear Well
CO2(S), F, FP, PP, CS
Recarbonation Tank
Potential Future BAC Beds
Backwash Recovery Lagoon
LIME,SA
ClariCone
C
To Sludge Lagoons
Waste Basin
PR
Vertical Turbine Pumps (4)
Wet Wells (2)
Bar Screens
Fox River Intake Structure
Transmission Lines
Wells
Well 8
Well 9
Well 10 (at LSWTP Site)
Future Well and Transmission Line
Well 6

City use. Well No. 6 would still be near the current North EWST and would be connected to the Wells No. 8 and 9 raw water main, and thus the proposed LSWTP, by its own potential future raw water main. Well No. 10 would be located at the LSWTP and would not need significant infrastructure in order to be treated by the plant. In this alternate, it is assumed the existing CEWTPs that treat groundwater will remain in service with very limited use (a couple hours per week), so they are available to pump into the system during emergencies.

6.2 LRI Water Supply & Treatment Evaluation

The predicted per capita water usage if the United City of Yorkville were to implement conservation efforts is 80 gpcd (comparable to the 90 gpcd under the CT values). Additionally, the MDD:ADD ratio dropped from 2.0 in the CT scenario to 1.75 in the LRI scenario. As seen in Table No. 3-16, when the LRI values are implemented a deficit of nearly 2,000 GPM for the ultimate source capacity and a deficit of over 3,500 GPM for the reliable source capacity was determined for 2050. These numbers assume all current wells are in service. As stated before, Well No. 3 will likely be abandoned before the end of the planning period. If Well No. 3 is abandoned, the LRI deficit would occur about 5,000 PE sooner than if Well No. 3 remained.

6.2.1 LRI Water Supply Expansion

6.2.1.1 Water Wells – If Yorkville were to use the Ironton-Galesville aquifer to obtain the LRI amounts of their water, they would follow the same pattern as setting up wells as found in the CT section. Once again, Well No. 3 would be assumed to be abandoned; when Well No. 3 is abandoned, the 2050 supply deficit would increase to just under 2,500 GPM for the Ultimate Source Capacity test and just under 4,200 GPM for the Reliable Source Capacity. Because the deficit for the Ultimate Source Capacity number wouldn't be far above the 4,000 GPM threshold, the number of needed wells would be rounded down to four wells (Wells No. 6, 10, 11 and 12). The position of the wells, WTPs and other proposed Alternate 1B infrastructure can be found in Exhibit 6-5. The position of the wells, WTPs and other infrastructure for the LRI scenario would follow the pattern used for the CT scenario.

- Well No. 6 would be located on the northeast side of the City. The 1,000 GPM Ironton-Galesville Well No. 6 and its corresponding WTP (discussed in Section 6.1.2) are proposed to be near the current North EWST. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 10 would be located on the west side of the City. The 1,000 GPM Ironton-Galesville Well No. 10 and its corresponding WTP (discussed in Section 6.1.2) are proposed to be near the Pavillion Rd. and Hillview Ct. intersection. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

1.0 MG NORTH EWST

WELL NO. 6 WTP

1.5 MG NORTHEAST EWST, WELL NO. 8, AND WELLS NO. 8 & 9 WATER TREATMENT PLANT

WELL NO. 9

WELL NO. 12 WTP

NORTH BP/PRV STATION

NORTH CENTRAL PRV STATION

300,000 GAL NORTH CENTRAL EWST

WELL NO. 4

WELLS NO. 4 & 11 WATER TREATMENT PLANT

WELL NO. 11

WELL NO. 3

SOUTH BP/PRV STATION

SOUTH CENTRAL BP/PRV STATION

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

WELL NO. 10 WTP

500,000 GAL SOUTH CENTRAL EWST

SOUTH CENTRAL PRV STATION

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant (WTP)
- Elevated Water Storage Tank (EWST)
- Future Deep Well
- Future WTP
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future Raw Water Main

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

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(630) 466-6700
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WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 6-5 ALTERNATE 1B WATER SUPPLY AND TREATMENT PLAN - LRI

NORTH

- Well No. 11 would be located near the center of town about one mile west of current Well No. 3. The 1,000 GPM well would be treated by the current water treatment plant located at Well No. 4. A raw water main would travel east along the railroad tracks from Well No. 11 to the current Well No. 3 and would use the current raw water main that runs across the Fox River from Well No. 3 to the WTP at Well No. 4. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.
- Well No. 12 would be located at the northwest side of town south of future Well No. 10. The 1,000 GPM Ironton-Galesville Well No. 12 and its corresponding WTP (discussed in Section 6.1.2) are proposed to be along Beecher Rd., near the electrical substation. The well would be constructed with a 24-inch surface casing and an 18-inch long string casing.

6.2.1.2 Fox River Intake & Water Wells – As mentioned in Section 5.2.4, the LSWTP for both the CT and LRI scenarios would be located along the river on the East part of the City. The design of the intake would be similar to the CT scenario; however, in the LRI scenario the size of the intake would have a capacity of 9 MGD instead of 12 MGD. Alternate 2B, similarly to Alternate 2A, assumes the existing CEWTPs used to treat groundwater will remain in service with very limited use (a couple hours per week), so they are available to pump into the system during emergencies.

Two potential future wells, Wells No. 6 and 10, would be considered for future addition within Alternate 2B. Well No. 6 would still be near the current North EWST and would be connected to the Wells No. 8 and 9 raw water main, and thus the proposed LSWTP, by its own potential future raw water main. Well No. 10 would still be located at the LSWTP and would not need significant infrastructure in order to be treated by the plant. Exhibit 6-6 displays the locations of the wells, WTPs and other infrastructure.

6.2.2 LRI Water Treatment Expansion

6.2.2.1 Well Treatment Systems – If the City were to use the Ironton-Galesville aquifer to meet the LRI water use demands, the City would follow the same pattern as setting up wells as found in the CT section, but they would only add four additional wells (Wells No. 6, 10, 11 and 12). Once again, Well No. 3 would be assumed to be abandoned and Well No. 11 would connect to the Well No. 4 WTP. CEWTPs would be used to treat the water for radium and hardness for Wells No. 6, 10 and 12.

6.2.2.2 Fox River & Water Well Treatment System – If the Fox River is chosen to supply water for the LRI scenario, the treatment plant would be designed using the same major functions as the CT plant. The plant would still be a single state LSWTP and would still include filtration along with typical re-carbonation and disinfection treatment processes. The plant would be designed to treat 9 MGD using 3 ClariCones instead of the 12 MGD with 4 ClariCones needed for the CT scenario.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

POTENTIAL FUTURE WELL NO. 6

1.0 MG NORTH EWST

POTENTIAL FUTURE RAW WATER MAIN

1.5 MG NORTHEAST EWST, WELL NO. 8, AND WELLS NO. 8 & 9 WATER TREATMENT PLANT

WELL NO. 9

NORTH CENTRAL PRV STATION

NORTH BP/PRV STATION

WELL NO. 8 & 9 RAW WATER MAIN

FOX RIVER INTAKE, 9 MGD LIME SOFTENING WATER TREATMENT PLANT, AND 1.0 MG GST

300,000 GAL NORTH CENTRAL EWST, WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT

POTENTIAL FUTURE WELL NO. 10

WELL NO. 3

SOUTH BP/PRV STATION

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

SOUTH CENTRAL BP/PRV STATION

500,000 GAL SOUTH CENTRAL EWST

SOUTH CENTRAL PRV STATION

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant (WTP)
- Elevated Water Storage Tank (EWST)
- Proposed WTP Site
- Ground Storage Tanks
- Potential Future Deep Well
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future Raw Water Main
- Potential Future Raw Water Main

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

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WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 6-6 ALTERNATE 2B WATER SUPPLY AND TREATMENT PLAN - LRI

NORTH

6.3 Water Supply and Treatment Improvements Cost Estimates

Detailed cost estimates for the proposed improvements under each scenario are provided in Appendix G. Below is a summary of the capital costs for the improvements under the CT and LRI water demand scenarios for both Alternates 1 and 2 as described above.

6.3.1 Alternate 1A: CT Water Supply & Treatment Cost Estimates

- Well No. 6 and Well No. 6 CEWTP $6,839,000
- Well No. 10 and Well No. 10 CEWTP $6,839,000
- Well No. 11 $2,419,000
- Well No. 11 Raw Water Main (to Wells 3 & 4 CEWTP) $1,188,000
- Well No. 12 and Well No. 12 CEWTP $6,839,000
- Well No. 13 and Well No. 13 CEWTP $6,839,000
- Well No. 14 and Well No. 14 CEWTP $6,839,000
- Well No. 15 and Well No. 15 CEWTP $6,839,000

6.3.2 Alternate 1B: LRI Water Supply & Treatment Cost Estimates

- Well No. 6 and Well No. 6 CEWTP $6,839,000
- Well No. 10 and Well No. 10 CEWTP $6,839,000
- Well No. 11 $2,419,000
- Well No. 11 Raw Water Main (to Wells 3 & 4 CEWTP) $1,188,000
- Well No. 12 and Well No. 12 CEWTP $6,839,000

6.3.3 Alternate 2A: CT Water Supply & Treatment Cost Estimates

- 12 MGD Fox Fiver Intake Pump Station $5,217,000
- 12 MGD Single State (Claricone) LSWTP $35,088,000
- Wells No. 8 & 9 Raw Water Main $3,267,000
- Well No. 10 $2,419,000

6.3.4 Alternate 2B: LRI Water Supply & Treatment Cost Estimates

- 9 MGD Fox Fiver Intake Pump Station $4,828,000
- 9 MGD Single State (Claricone) LSWTP $29,572,000
- Wells No. 8 & 9 Raw Water Main $3,267,000

As stated, Section 7 will discuss the water storage and distribution system improvements and Section 8 will discuss Alternate 3 for the Sub-Regional approach. Section 9 will provide an overview for the recommended alternative based on the City's preference, including an overview of the phasing and implementation plan that will be used by the United City of Yorkville for the recommended improvements.

SECTION 7: WATER STORAGE AND DISTRIBUTION SYSTEM EVALUATION

Water storage and the distribution system are critical components of the United City of Yorkville's overall Water Works System. Adequate storage and a well-maintained distribution system are essential to efficiently convey adequate water capacity to the City's residents and commercial/industrial users, both during normal periods of relatively lower water demands and also during critical periods of high water demand such as fires and other emergencies that rely on available water supply. A water distribution system is the infrastructure that delivers pressurized, potable water from the treatment plants to the customer. The water distribution system model of the United City of Yorkville is comprised of 1) potable water main, 2) fire hydrants, 3) valves, 4) storage tanks, 5) high service pumps and 6) pressure reducing valves. These various components operate dynamically within the various pressure zones. In Section 2, the various components were inventoried and discussed briefly. Exhibit 2-1 depicts the existing Water Works System. The following section will first evaluate the condition of the existing water storage and distribution system infrastructure and will then provide recommendations for these existing components.

This section will then determine the required improvements to expand the system to meet the 2050 CT water storage required for each water demand scenario. The different alternatives that were evaluated will be reviewed for each scenario where applicable. The cost of the CT improvements will also be reviewed in this section. As previously noted in Section 6, Section 8 will then summarize a phasing and implementation program for both the CT and LRI water demand scenarios, that will include the recommended water storage and distribution improvements as well as the recommended supply and treatment improvements identified in Section 6.

7.1 Model Development

The water distribution system of the United City of Yorkville was evaluated using a computer model of the water system developed within Bentley WaterCAD hydraulic modeling software. Over the last few years, the City has converted their electronic water atlas maps from AutoCad to a geographical information system (GIS) database which was used as the basis of the model. The hydraulic model development and verification process was completed with the intent to determine deficiencies in the existing system and to make recommendations to the City for master planning to meet their 2050 projected needs. The model was created to accommodate a steady-state analysis only.

7.1.1 Information Gathering – As indicated above, the hydraulic model developed is primarily based on the water infrastructure contained within the City's GIS database. Shapefiles for the water main network, valves, WTPs and tanks were obtained on December 22, 2015, and imported into WaterCAD via the Model Builder. During data transfer from the City's GIS database to WaterCAD model, maintaining naming convention consistency was a priority.

In addition to the GIS database, the following resources were used to further refine the model: 1) Record drawings from various facilities, 2) pump curves, 3) SCADA set points and 4) data collected in the field by both City staff and representatives from Engineering Enterprises, Inc.

The water use demands for the calendar year of 2014 were placed on the system and then elevations were applied by interpolating the contours from Kendall County. This section of the report documents the development of the model.

7.1.1.1 Pipe Network – The pipe network is primarily comprised of pipes and junctions. Junctions are not valves, but rather the intersection between two pipes. Gate valves are typically not modeled, they were imported into the model for this project as junctions such that consistency with GIS naming conventions for the pipes could be maintained where feasible.

Connectivity is essential to developing a hydraulic model, and junctions allow for the connectivity between pipes basically by joining two pipes together. WaterCAD's Model Builder has an option to automatically generate junctions at the intersection of two pipes within a specified tolerance of existing nodes or junctions which is how much of the connectivity was achieved. However, given that this is an automated process that is governed by tolerances, the water main connectivity assumptions are not always made correctly. Manual review and revisions to the model were required accordingly.

Similar to gate valves, fire hydrants (and the fire hydrant laterals) are also not commonly modeled unless the intent of the water model is to prepare hydrant flushing sequences (i.e. a uni-directional hydrant flushing program). The fire hydrants and laterals provide another level of complexity to the model and calculations during the analysis otherwise.

7.1.1.2 Pressure Zones – Pressure zone boundaries were defined in the model consistent with those identified in Exhibit 2-1. Locations of the known closed valve locations were implemented in efforts to define the exact pressure zone boundaries within the model. These closed boundary valves were modeled as closed pipes adjacent to the closed valve location. In addition, three booster pump and pressure reducing valve stations and two pressure reducing valve stations were modeled between the various pressure zones as shown on Exhibit 2-1 and outlined previously in Table No. 2-9. Minimal data regarding sizes, set points and operation was able to be retrieved for these PRVs. It was assumed that they operate based on local pressure and set points were based on field data collected.

7.1.1.3 Water Storage Tanks – Five elevated water storage tanks were included in the model zones as shown on Exhibit 2-1 and outlined in Table No. 2-6. Record drawing information, when available, was utilized to obtain the elevation, head range and site layout information.

7.1.1.4 Water Treatment Plants – Wells and water treatment plants as shown in Exhibit No. 2-1 were input into the model only with respect to the high service pumps and well pumps that pump directly into the system. Record drawing information and operations and maintenance manuals were used to enter them into the model.

7.1.1.5 Booster Pump Stations (BPSs) – The high service pumps at three booster pump stations (BPSs) were input into the model primarily with respect to the high service pumps. Record drawings, engineering drawings, operations and maintenance manuals and pump manufacturers were utilized to obtain info regarding the BPSs.

7.1.1.6 Ground Elevations – Ground elevations are a critical component to the success of model verification. Initially, ground elevations within the GIS shapefiles were imported into the water model based on the Kendall County contours. Node elevations within the water model were applied by interpolating Kendall County contours using a module within WaterCAD called TRex. Record and engineering drawings were utilized for the water treatment plants, storage tanks and booster pump stations when available. Record drawings for some subdivisions were used to verify certain locations randomly as well.

7.1.1.7 Water Use Demands – To remain consistent with the supply and treatment analysis included in this report, water use demands from calendar year 2014 were placed in the model. It shall be noted that the treated water amount, not the billed amount of water was distributed throughout the system for analysis purposes.

7.1.2 Field Reconnaissance– The field reconnaissance consisted of a site visit to key water facilities and performing fire flow testing on two different occasions.

7.1.2.1 Site Visit to Key Water Facilities – August 25, 2015, Jeff Freeman, Michele Piotrowski and Christa Van't Hul of EEI visited all water treatment plants, water storage facilities, booster pump stations and pressure reducing valve stations to gather any additional information.

7.1.2.2 Fire Flow Testing – A fire flow test provides actual pressures and flow data at specific locations within the distribution system. For this project, fire flow testing was completed on two separate occasions as follows:

1. December 15, 2015
2. November 22, 2016

The fire flow test procedure requires at least two hydrants (a residual and a flow hydrant), ideally on the same section of main. Static pressures are first recorded at the residual hydrant. Then, the flow hydrant is opened. At that time, pressures on both the residual and flow hydrants are recorded. The Water Works System conditions (i.e. tank levels and pumps running), typically obtained from the SCADA system, at the time of the

flow test are recorded. Flow calculations based on the formulas provided in AWWA's Manual of Water Supply Practices M17 – Installation, Field Testing and Maintenance of Fire Hydrants are then performed.

A total of twenty-one locations were identified to be tested and evenly spread across the Water Works System. The locations of these tests are depicted in Exhibit 7-1. Some of the flow tests were not completed due to concerns for potential water main breaks.

7.1.2.3 Static Pressures – The pressure reducing valve stations are connected to the central SCADA system, but it is challenging for the operators to determine which valves are open at any given point in time. Based on discussions with the operators, these valves operate based on local pressure and the set points are not known. To obtain a better understanding of how these valves are operating, City staff obtained pressure readings from SCADA for both upstream and downstream of the pressure reducing for comparison with water model results.

7.1.3 Model Verification – Verification of the updated model was completed to establish confidence in the accuracy of its representation of the physical water system. Verification was achieved by comparing data collected during field testing to results obtained from the updated water distribution system hydraulic model. In addition, head and flow rates of all high service pumps were reviewed to confirm they are consistent with their curve data and any field data we collected.

During verification of the water model, the following primary adjustments/considerations can be made to align the field data with the mode data:

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

LOCATION NO. 1
BRISTOL BAY DRIVE
DEC. 2015
STATIC PRESSURE = 67 psi
AVAILABLE FIRE FLOW = 3,543 gpm
NOV. 2016
STATIC PRESSURE = 64 psi
AVAILABLE FIRE FLOW = 3,996 gpm

LOCATION NO. 2
BRIDGE STREET
DEC. 2015
STATIC PRESSURE = 66 psi
AVAILABLE FIRE FLOW = 3,670 gpm
NOV. 2016
STATIC PRESSURE = 65 psi
AVAILABLE FIRE FLOW = 3,896 gpm

LOCATION NO. 3
BOOMBAH BOULEVARD
DEC. 2015
STATIC PRESSURE = 70 psi
AVAILABLE FIRE FLOW = 2,608 gpm

LOCATION NO. 4
TUSCANY TRAIL
DEC. 2015
STATIC PRESSURE = 63 psi
AVAILABLE FIRE FLOW = 1,840 gpm

LOCATION NO. 5
KENNEDY ROAD
DEC. 2015
STATIC PRESSURE = 66 psi
AVAILABLE FIRE FLOW = 2,681 gpm

LOCATION NO. 6
IROQUOIS LANE
DEC. 2015
STATIC PRESSURE = 73 psi
AVAILABLE FIRE FLOW = 1,751 gpm
NOV. 2016
STATIC PRESSURE = 67 psi
AVAILABLE FIRE FLOW = 2,482 gpm

LOCATION NO. 7
FAIRHAVEN DRIVE
DEC. 2015
STATIC PRESSURE = 72 psi
AVAILABLE FIRE FLOW = 1,275 gpm

LOCATION NO. 8
AUTUMN CREEK BOULEVARD
DEC. 2015
STATIC PRESSURE = 67 psi
AVAILABLE FIRE FLOW = 2,179 gpm
NOV. 2016
STATIC PRESSURE = 70 psi
AVAILABLE FIRE FLOW = 3,313 gpm

LOCATION NO. 9 (TEST NOT PERFORMED)
WEST KENDALL DRIVE
NOV. 2016
STATIC PRESSURE = 52 psi
AVAILABLE FIRE FLOW = 3,532 gpm

LOCATION NO. 10
GAME FARM ROAD
DEC. 2015
STATIC PRESSURE = 55 psi
AVAILABLE FIRE FLOW = 3,877 gpm
NOV. 2016
STATIC PRESSURE = 51 psi
AVAILABLE FIRE FLOW = 4,357 gpm

LOCATION NO. 11 (TEST NOT PERFORMED)
SPRING STREET

Note: Available Flow is at a Residual Pressure of 20 PSI

LOCATION NO. 12 (TEST NOT PERFORMED)
HYDRAULIC AVENUE

LOCATION NO. 13
KELLY AVENUE
DEC. 2015
STATIC PRESSURE = 47 psi
AVAILABLE FIRE FLOW = 1,679 gpm

LOCATION NO. 14 (TEST NOT PERFORMED)
BLAINE STREET

LOCATION NO. 15 (TEST NOT PERFORMED)
DEER STREET

LOCATION NO. 16
GREEN BRIAR ROAD
DEC. 2015
STATIC PRESSURE = 65 psi
AVAILABLE FIRE FLOW = 2,444 gpm
NOV. 2016
STATIC PRESSURE = 67 psi
AVAILABLE FIRE FLOW = 3,751 gpm

LOCATION NO. 17
WALSH DRIVE
DEC. 2015
STATIC PRESSURE = 55 psi
AVAILABLE FIRE FLOW = 2,643 gpm

LOCATION NO. 18
WINDETT RIDGE ROAD
DEC. 2015
STATIC PRESSURE = 72 psi
AVAILABLE FIRE FLOW = 2,839 gpm
NOV. 2016
STATIC PRESSURE = 70 psi
AVAILABLE FIRE FLOW = 4,356 gpm

LOCATION NO. 19
HAMPTON LANE
DEC. 2015
STATIC PRESSURE = 67 psi
AVAILABLE FIRE FLOW = 3,183 gpm
NOV. 2016
STATIC PRESSURE = 63 psi
AVAILABLE FIRE FLOW = 3,653 gpm

LOCATION NO. 20
CALLANDER TRAIL
DEC. 2015
STATIC PRESSURE = 82 psi
AVAILABLE FIRE FLOW = 1,816 gpm
NOV. 2016
STATIC PRESSURE = 80 psi
AVAILABLE FIRE FLOW = 2,205 gpm

LOCATION NO. 21
BARBERRY CIRCLE
NOV. 2016
STATIC PRESSURE = 70 psi
AVAILABLE FIRE FLOW = 2,837 gpm

Legend

- Fire Hydrant
- Residual Fire Hydrant
- 1st Flow Fire Hydrant
- 2nd Flow Fire Hydrant
- Elevated Water Storage Tank (EWST)
- Water Treatment Plant
- BP/PRV Station
- PRV Station
- Well
- Study Area Boundary
- Yorkville Corporate Limits
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main

0 750 1,500 3,000 4,500 Feet

NORTH

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www.eeiweb.com

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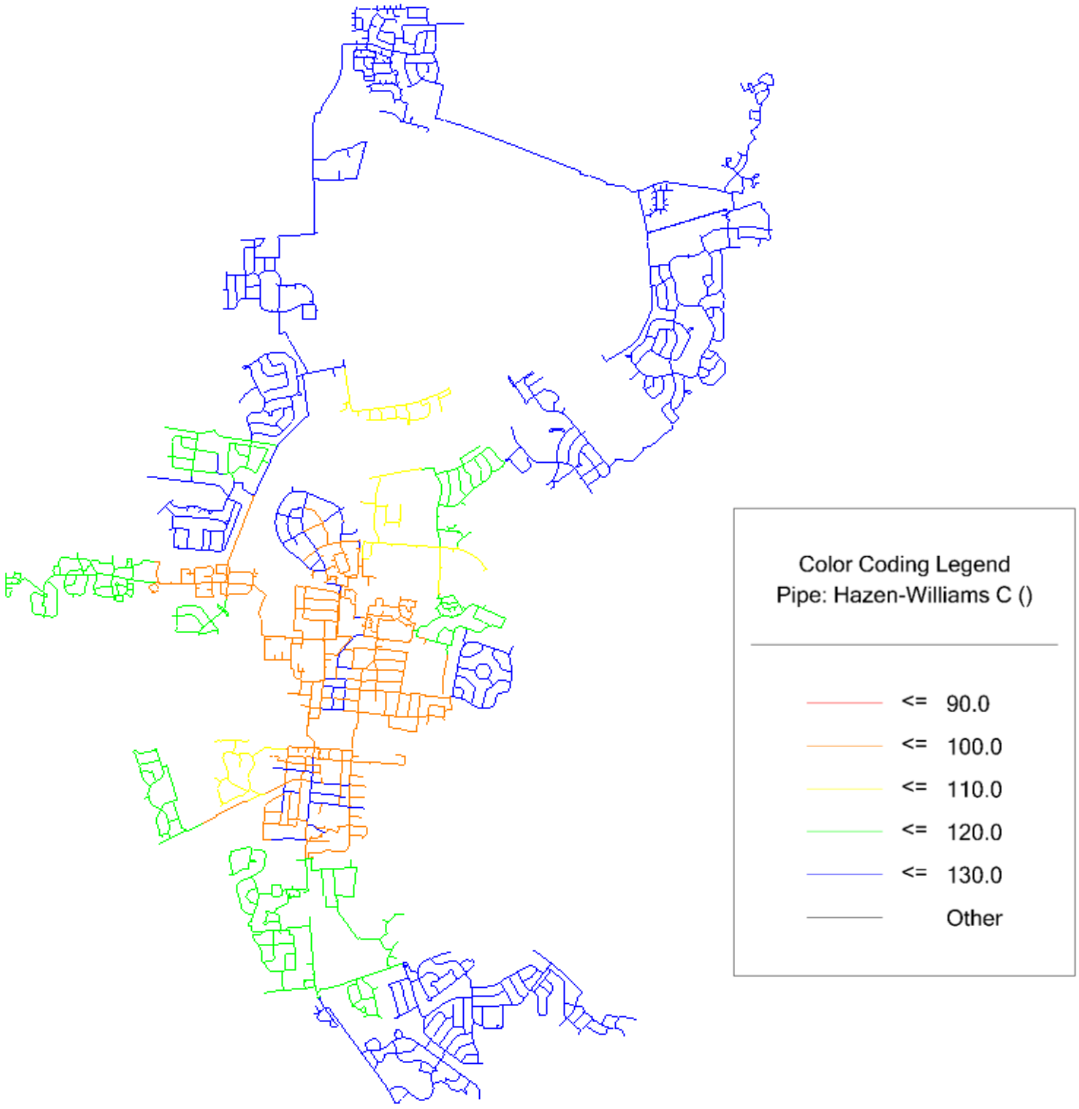
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FILE:	YO1437_EXH7-2 COMPARISON.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-1
FIRE FLOW TEST RESULTS

1. *Modify water use demands.* – When comparing the fire flow, demands were modified based on the pumped water use the days that the flow testing was completed. Without more accurate information, the demands were distributed evenly throughout the system.
2. *Modify Hazen Williams pipe roughness coefficient (C-factor) of the water main.* – The C-factor, also known as the friction factor, is primarily adjusted based on the material and age of the pipe. When cement-lined ductile iron is new, the C-factor is approximately 130. As the pipe ages, the C-factor can reduce (indicating the friction increases and part of the flow through the pipe will decrease). Several iterations of modeling various C-factors were completed in the model. The C-factor has been adjusted for best-fit of the flows, and Exhibit 7-2 reflects the C-factors that were utilized for the verified model:

Exhibit 7-2: Hazen Williams C-Factor – Verified Water Model
United City of Yorkville, IL



3. *Modify elevations of the junctions and tank elevations.* – As indicated previously, the two-foot Kendall County contours were primarily utilized to develop the elevations of the junctions within the model. Furthermore, the base elevations of the tanks were obtained from engineering drawings and the tank levels were recorded at the time of the time of flow testing so that they could be mimicked identically within the model.
4. *Confirm the pump curves and which pumps are running.* – Pump curves were entered per the shop drawings that were obtained. It shall also be noted that no pumps were running during flow testing except during Flow Tests No. 2 and 10 on December 15, 2015.
5. *Confirm operations/settings of the PRVs.* – Both the booster pump stations and the pressure reducing valve only stations have two to three valves of different sizes within each station. These PRVs can have a major impact on the pressures and available flow at various points within the system. Minimal information regarding set points was provided or available for the pressure reducing valve stations. However, pressures upstream and downstream of the PRVs were provided during the flow testing on November 22, 2016 which allowed us another opportunity to verify model results were aligning with field results.
6. *Valves may be closed or partially closed within the system.* – After performing the flow testing on December 15, 2015, the City staff performed some valve verification at a few locations. Some valves were identified as being partially closed. Therefore, additional flow testing was completed on November 22, 2016. Based on our analysis, some of the lows are still significantly higher in the model than the field. We, subsequently, recommend that the City implement a valve exercising program across the City. Given the amount of development and construction that has occurred over the last several years, it is not uncommon for valves to be closed or partially closed where they are not intended to be.

As indicated in the previous section, fire flow (FF) tests were performed at twenty-one locations within the water distribution system. These locations are previously illustrated on Exhibit 7-1, and a model to field comparison is provided in Table No. 7-1.

Table No. 7-1: Flow and Pressure Comparison (Model vs Field Data)

United City of Yorkville, IL

Test No.	Test Location	Flow Field Data			Simulated Available Flow @ 20 psi (gpm)	Difference Available Fire Flow @ 20 psi (gpm)	Model Simulated Static Pressure (psi)	Difference Static Pressure (psi)
		Test Date	Available Fire Flow @ 20 psi (gpm)	Static Pressure (psi)				
1	Bristol Bay Dr	11/22/2016	3,996	64	5,559	1,563	63.2	-0.8
1	Bristol Bay Dr	12/15/2015	3,543	67	5,568	2,025	63.0	-4
2	Bridge St	11/22/2016	3,896	65	7,749	3,853	65.1	0.1
2	Bridge St	12/15/2015	3,670	66	7,805	4,135	66.3	0.3
3	Boombah Blvd	11/22/2016	NA	NA	NA	NA	NA	NA
4	Tuscany Trail	NA	NA	NA	NA	NA	NA	NA
5	Kennedy Rd	NA	NA	NA	NA	NA	NA	NA
3	Boombah Blvd	12/15/2015	2,608	70	4,305	1,697	68.1	-1.9
4	Tuscany Trail	12/15/2015	1,840	63	2,468	628	62.0	-1
5	Kennedy Rd	12/15/2015	2,681	66	2,654	-27	66.5	0.5
6	Iroquois Ln	11/22/2016	2,482	67	2,832	350	64.1	-2.9
7	Fairhaven Dr	NA	NA	NA	NA	NA	NA	NA
6	Iroquois Ln	12/15/2015	1,751	73	2,840	1,089	67.3	-5.7
7	Fairhaven Dr	12/15/2015	1,275	72	2,101	826	70.1	-1.9
8	Autumn Creek Blvd	11/22/2016	3,313	70	4,026	713	67.2	-2.8
8	Autumn Creek Blvd	12/15/2015	2,179	67	4,066	1,887	68.2	1.2
9 or 22	West Kendall St	11/22/2016	3,532	52	3,717	185	49.1	-2.9
10	Game Farm Rd	11/22/2016	4,357	51	6,911	2,554	49.2	-1.8
10	Game Farm Rd	12/15/2015	3,877	55	7,464	3,587	53.6	-1.4
13	Kelly Ave	12/15/2015	1,679	47	1,692	13	47.7	0.7
13	Kelly Ave	NA	NA	NA	NA	NA	NA	NA
16	Green Briar Rd	11/22/2016	3,751	67	6,621	2,870	74.3	7.3
16	Green Briar Rd	12/15/2015	2,444	65	3,442	998	67.1	2.1
17	Walsh Dr	NA	NA	NA		NA		NA
17	Walsh Dr	12/15/2015	2,634	55	3,301	667	52.6	-2.4
18	Windett Ridge Rd	11/22/2016	4,356	70	13,236	8,880	69.7	-0.3
18	Windett Ridge Rd	12/15/2015	2,839	72	13,808	10,969	73.5	1.5
19	Hampton Ln	11/22/2016	3,563	63	5,599	2,036	58.5	-4.5
19	Hampton Ln	12/15/2015	3,183	67	5,855	2,672	61.8	-5.2
20	Callander Trail	11/22/2016	2,205	80	2,101	-104	79.8	-0.2
20	Callander Trail	12/15/2015	1,816	82	2,186	370	83.9	1.9
21	East Barberry Circle	11/22/2016	2,837	70	3,874	1,037	75.4	5.4

7.1.3.1 North Pressure Zone (Orange) – Static pressures generally align between model and field data. However, the available fire flow at a residual pressure of 20 psi appears to be higher in the water model than the field, particularly on the west side of the City along Route 47 (Flow Tests No. 1, 2, 3, 6 and 7). Based on engineering judgment, the field flows appear low, particularly at Test Location No. 2. Closing valves throughout the pressure zone can result in similar results between the model and fire flow test data. However, if we closed valves at such locations, these locations would be purely conjecture. Therefore, no valves were modeled as closed. The model still demonstrates relative strengths and weaknesses of the distribution system. Therefore, we proceeded with model based on these values, but recommend the status of valves be verified in the field, possibly through a valve exercising program. The tests on the east side of the City within this pressure zone (Flow Tests No. 4, 5 and 8) Flow and pressures generally aligned at Flow Tests No. 4 and 5. Regarding Test No. 8, a partially closed valve was found along the 16" main on along Veterans Parkway which allowed for results to better match in 2016.

7.1.3.2 North Central Pressure Zone (Purple) – Static pressures generally align between model and field data. Similarly, the available fire flow at a residual pressure of 20 psi also is within reason between the model and field data, except at Test No. 10 (Game Farm Road). The flow in the model at this location is much higher than in the field. This is a location that has been under construction in recent years. It is possible that a valve may be closed or possibly closed in this general vicinity. Verifying valves in this vicinity is recommended, and is another location which may benefit from a valve exercise program. Closing valves throughout the pressure zone can result in similar results between the model and fire flow test data. However, if we closed valves at such locations, these locations would be purely conjecture. Therefore, no valves were modeled as closed. The model still demonstrates relative strengths and weaknesses of the distribution system.

7.1.3.3 South Pressure Zone (Green) – Static pressures obtained in the field mirror those in the model generally. However, the available flows at a residual pressure of 20 psi align at Test No. 20, but are significantly higher at Tests No. 18 and 19. City staff has noted several known valves to be intentionally closed due to the minimal demand resulting from several undeveloped lots. These known closed valves are reflected in the model, but flows are still higher. Closing valves throughout the pressure zone can result in similar results between the model and fire flow test data. However, if we closed valves at such locations, these locations would be purely conjecture. Therefore, no valves were modeled as closed.

7.1.3.4 South Central Pressure Zone (Yellow) – Static pressures and available flows align between model and field data at Test No. 17. However, available fire flows varied between the model and fire flow test data on Tests No. 16 and 21. The status of the PRVs are unknown at these locations. Pressure settings at the South Central (Route 47/71) PRV Station could be impacting static pressures and flows. By closing the PRVs at this location for Tests No. 16 and 21, the pressures and available flows have similar results between the field and the model. We recommend the City be aware of the impact of the PRVs on their Water Distribution System and track their set points for future model verification.

7.1.3.5 Summary and Observations – The analysis verifies that the City's water system is represented in the model within reason and that the hydraulic model is appropriate for the analysis of bulk water movement from supply points throughout the distribution system.

Some limitations on the model verification that may be considered as the need for more detailed analysis arises include the following:

1. Detailed verification of local distribution main through flow testing and/or C-Factor testing was not completed and may limit the accuracy of the analysis of localized distribution issues. Additional testing in various areas within the distribution system would allow for a more accurate model in those localized areas.
2. Data over a 24-hour period was not obtained and extended period simulations were not established or verified.
3. Some localized variations between modeled and observed pressure and flow data and unusual modeled results suggest that some system conditions (i.e. pipe diameter, valve position, connectivity assumptions) may not be accurately represented in the model. These discrepancies do not impact the analysis completed as part of this report, however, they may be resolved to increase the accuracy of the model.
4. All high service pumps did not run during flow testing. Therefore, the discharge flow and pressure modeled at each of the supply facilities and booster pump stations could not be verified for all pumps.
5. The demand distribution was based on the water usage the specific day of the flow tests and distributed evenly within the pressure zones and may not directly reflect typical average system demands. For analysis of the existing system, 2014 average and maximum day data was used. Maximum hour demands for all users were based on a factor of 2 of the 2014 maximum day demand. The demand distribution for current maximum day and maximum hour analysis may be modified as more detailed data becomes available to increase the reliability of analysis for localized distribution issues.
6. The pressure reducing valve stations play a critical role within the distribution system. They transfer water from higher pressure zones to lower pressure zones and can significantly impact the available flow during maximum demands and fire flow scenarios.
7. Given some differences in the available flow between the water model and field data at various locations within the system, it is possible that some valves are possibly partially closed or fully closed. We recommend the City begin a valve exercising program in accordance with AWWA recommendations and guidelines while refining the procedures to ensure all valves are open except for those that are intended to isolate a portion of the system or separate pressure zones. Water main sizes should be confirmed and documented during valve exercising as well. In addition, we recommend City staff verify and document PRV settings for future analysis. At the time of the next

Comprehensive Master Plan Update (in approximately 5 years), we recommend the model be updated and verified in more depth by obtaining additional flow testing at that time.

7.2 Existing Distribution System Evaluation

The strength and capacity of the existing water distribution system of the United City of Yorkville was evaluated in regard to service pressure, pipeline head loss rates and fire flow capacity. Service pressure, pipe velocities and system headloss were analyzed under two scenarios: 1) Maximum hour demand, and 2) Available fire flow under MDD conditions.

7.2.1 Evaluation Scenario Development – The MHD and MDD scenarios developed for evaluation are comprised of specific demand and supply conditions described in the following sections.

7.2.1.1 Demands – The system's existing capacity was analyzed under average day, maximum day and maximum hour demand conditions based on the 2014 pumpage. The MDD:ADD ratio utilized is 2.0 based on current trends. Similarly, the MHD:MDD ratio used is 2. The calculated MDD of 2.76 MGD (based on MDD:ADD of 2.0) is greater than the observed 2014 MDD of 2.17 MGD (based on the actual MDD:ADD of 1.57) resulting in a conservative model analysis. Demands were distributed evenly throughout the Water Distribution System.

7.2.1.2 High Service Pumps – Distribution system high service statuses at treatment plants and pump stations were assigned to reflect actual system operation to provide adequate water supply to each zone. The operation status of each water supply facility and booster pump station pump for maximum day and maximum hour demands are shown in Table No. 7-2.

Table No. 7-2: Summary of High Service Pump Summary In the Water Model
United City of Yorkville, IL

Facility	Pressure Zone Pump Services	Pump No.	Design		Status in the Model	
			Flow (Total) (gpm)	Pump Head (ft)	Maximum Day Demand	Peak Hour Demand
Supply - High Service Pumps						
Well 3	North Central	1	700	550	Off	Off
Well 4	North Central	1	1200	655	Off	Off
Well 7	South	1	1200	1270	On	On
Well 8	North	1	1200	900	Off	Off
Well 9	North	1	1200	1000	On	On
Booster Pump Stations - High Service Pumps						
North BPS	North	1	800	135	Off	Off
	North	2	800	135	Off	Off
South Central BPS	South Central	1	700	115	Off	Off
	South Central	2	700	115	Off	Off
South BPS	South	1	1000	125	Off	Off
	South	2	1000	125	Off	Off

While the system has the theoretical pumping capacity to achieve average day, maximum day and maximum hour demand utilizing pumping only, typical demands are met by a combination of supply from high service pumps and elevated tanks. To establish initial tank levels for each demand condition, tank data and SCADA information provided by the City were reviewed to determine a typical operating range of each tank. Evaluations of the model under maximum day demand and maximum hour demand conditions were completed at both high tank levels and low tank levels (i.e. just before high service pumps would typically turn on). These levels are outlined in Table No. 7-3.

Table No. 7-3: Summary of Water Storage Tank Levels in the Water Model
United City of Yorkville, IL

Water Storage Tank	Minimum Tank Level	Water Model		Maximum Tank Level
		Low Tank Level	High Tank Level	
North East EWST (Grand Reserve)	764	789	809	810
North Central EWST (Tower Lane)	730.5	734.5	762	763
South EWST (Raintree)	875	895	919	920
South Central EWST (South)	812.5	822.5	849	850
North EWST	770	785	809	810

7.2.1.3 Goals – The system's existing capacity was analyzed under average day, maximum day and maximum hour demand conditions based on the 2014 pumpage. The MDD:ADD ratio utilized is 2.0 under current trends. Similarly, the MHD:MDD ratio used is 2.

Per AWWA Manual M32 Computer Modeling of Water Distribution Systems, in general, the water distribution system and or pipe network is considered to be deficient if any of the following occurs at any location or under any condition:

1. Pressures during maximum day demand and fire flow conditions fall below 20 psi,
2. Pressures during maximum hour demand conditions fall below 30 to 40 psi,
3. Pressures rise above 90 to 110 psi (understanding that the Illinois Plumbing Code (Section 890.1210) requires a maximum of 80 psi for internal plumbing),
4. Velocities exceed 5 feet per second (fps),
5. Headlosses exceed 6 feet per 1,000 feet (ft) for pipes less than 16" in diameter, and
6. Headlosses exceed 2 feet per 1,000 feet (ft) for pipes 16" in diameter and greater.

The low pressure constraint under maximum day demand and fire flow conditions is critical and has been recommended by the National Fire Protection Association (NFPA). However, there is some engineering judgment required for the other pressure recommendations. With respect to the velocity and headloss constraints, the general parameters above are used to design new piping system and are general guidelines. Understanding that portions of the City are not a new design, but rather an existing distribution system, some latitude and engineering judgment should be used while evaluating the distribution system with the water model. To illustrate, having pipe velocities greater than 5 fps may result in wasted energy, requiring additional pumping costs; but, it may not be cost effective to replace the existing water main with a larger main. However, as velocities approach 10 fps, other issues commonly occur such as water hammer; and, these are more of the major concerns that we aim to identify.

These parameters are primarily tested under two scenarios:

1. Maximum Day Demand + Fire Flow Conditions, and
2. Maximum Hour Demand Conditions

Our analysis of these two scenarios is discussed in the next few sections.

7.2.2 Maximum Day Demand – The system pressures and available fire flow were analyzed under maximum day demand conditions to understand the system response under a typical 'maximum day demand' scenario.

System pressures were reviewed first to determine locations where there are pressures less than 40 psi under maximum day demand locations. Under this condition, the tank levels were set at the low operating levels (i.e. just prior to the low level alarms). No pumps were running under this scenario. Exhibit 7-3 depicts the locations where the static pressures are generally below 40 psi. The primary area where pressures were less than 40 psi is at the south end of the North Central Pressure Zone. However, the pressures were still over 35 psi at this location. Therefore, given this is a very rare occurrence with tanks low and pressures are still above 35 psi, this is not an area of concern. Under normal daily operations, the pressures are 40 psi or greater.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Note: Available Fire Flow is at a Residual Pressure of 20 PSI

Legend

Static Pressure

- < 25 PSI
- < 30 PSI
- < 35 PSI
- < 40 PSI

- Elevated Water Storage Tank (EWST)
- Water Treatment Plant
- BP/PRV Station
- PRV Station
- Well
- Study Area Boundary
- Yorkville Corporate Limits
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main

0 750 1,500 3,000 4,500 Feet

NORTH

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United City of Yorkville
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DATE:	JANUARY 2017
PROJECT NO.:	YO1437-P
BY:	JPS
PATH:	H:\GIS\PUBLIC\YORKVILLE\2014\YO1437
FILE:	YO1437_EXH7-4.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-3
EXISTING STATIC PRESSURES < 40 PSI CONDITIONS- TANKS AT LOW LEVELS

A similar analysis was performed to determine locations of system pressures greater than 80 psi. This analysis was performed while tanks are full and no pumps are running. Exhibit 7-4 depicts the areas where the pressures are greater than 80 psi. Although there are a few areas are greater than 80 psi, these findings were acceptable. The locations within the South Central Pressure Zone only rose to 82 psi. The locations identified within the South Pressure Zone ranged over 90 psi, but the City is aware of these pressures and planned for them by requiring individual pressure reducing valve within the internal plumbing of the homes.

7.2.3 Fire Flow Analysis – Once system pressures were reviewed, a fire flow simulation was performed based on 2014 maximum day demand conditions. To perform such an analysis, the Zoning Map was reviewed and integrated into the model by placing required fire flows of 1,500 gpm at model nodes in all residential areas and 3,500 gpm at model nodes in all other areas. It shall be noted that fire hydrants and leads were not explicitly included in the model. The 3,500 gpm fire flow demand is driven by the Insurance Service Offices' (ISO's) Public Protection Classification (PPC) grading. For purposes of calculating a community's PPC, ISO only includes buildings with a needed fire flow less than 3,500 gpm. ISO individually grades the protection of buildings with a needed fire flow in excess of 3,500 gpm, and their PPC can differ from that of the community or district that provides their fire protection. Also, a constraint was placed on the system for available fire flow without the velocity in any given pipe exceeding a velocity of 10 fps given this a recommended for good design.

Available fire flow was calculated at each modeled node to approximate flow available throughout the system. While typical fire flow standards call for a minimum residual pressure of 20 psi in the system, the analysis was run with a residual pressure requirement of 25 psi to account for minor losses from the modeled node to actual hydrant locations, through the hydrant lead and the hydrant itself. Similar to the system pressure analysis, the available fire flow analysis was calculated under the typical conditions (tanks are at 80% volume and pressure reducing valves are active). Exhibit 7-5 depicts the areas where the available fire flow does not meet the general needed fire flow of 1,500 gpm in residential areas and 3,500 gpm in all other locations.

Upon review of Exhibit 7-5, recommended fire flow needs are generally being met in the South, South Central and most of the North Pressure Zone. Within the North Pressure Zone, the Grande Reserve located at the northeast corner of the zone shows that additional flow is recommended. However, the available fire flow at this location is generally over 1,200 gpm at this location, and the primary reason for the minimal flow is because the main is not looped. In addition, the area at the southwest corner of this pressure zone, northeast of Beecher Road and Veterans Parkway (Kendall Market Place) has less than the desired 3,500 gpm. However, the available flow is generally over 3,000 gpm at this location per the model. Fire flow needs can vary from building to building. Therefore, 3,000 gpm may be adequate for the facilities at this location. To EEI's understanding, there have been no reports of inadequate fire flow. In addition, within the North Pressure Zone, the City shall continue to connect dead-end water mains as land is developed.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Note: Available Fire Flow is at a Residual Pressure of 20 PSI

Legend

Static Pressure

- > 80 PSI
- > 90 PSI
- > 100 PSI

- Elevated Water Storage Tank (EWST)
- Water Treatment Plant
- BP/PRV Station
- PRV Station
- Well
- Study Area Boundary
- Yorkville Corporate Limits
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main

0 750 1,500 3,000 4,500 Feet

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DATE:	JANUARY 2017
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FILE:	YO1437_Exh7-5.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-4
EXISTING STATIC PRESSURE > 80 PSI CONDITIONS - TANKS FULL

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Note: Available Fire Flow is at a Residual Pressure of 20 PSI and maximum pipe velocity of 10 fps.

Legend

- Elevated Water Storage Tank (EWST)
- Water Treatment Plant
- BP/PRV Station
- PRV Station
- Well
- Study Area Boundary
- Yorkville Corporate Limits
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main

Available Fire Flows at a Residual Pressure of 25 PSI

- FF Deficiency < 250 GPM
- 251 < FF Deficiency < 500 GPM
- 501 < FF Deficiency < 750 GPM
- 751 < FF Deficiency < 1000 GPM
- FF Deficiency > 1,001 GPM

0 750 1,500 3,000 4,500 Feet

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FILE:	YO1437_EXH7-5_DEFICIENCY.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-5
FIRE FLOW DEFICIENCIES PER THE MODEL

The North Central Pressure Zone presents the most challenges with respect to fire flow needs. This pressure zone includes the center of the City which has some of the oldest, smallest water mains along with businesses which is associated with higher fire flow demands. We recommend the City continue to increase smaller diameter mains to a minimum of 8" when replacement is possible. Where feasible, we recommend increasing some of the mains to 12" or 16" to further reinforce a larger diameter network within the critical downtown area.

7.2.4 Maximum Hour Demand Analysis – The system pressure, pipe velocities and headlosses were analyzed under maximum hour demand conditions to understand the system response under a typical 'worst case' scenario. No additional areas of concern were identified during this analysis.

7.2.5 Capital Improvement Plan – The City routinely reviews water main breaks and pipe conditions to identify targeted water main replacement. As part of the water model development, the 5-year Capital Improvement Plan (CIP) and integrated the program into the model under future scenarios.

7.2.6 Existing Distribution System Recommended Improvements – The available distribution system is generally strong; however, there are some areas of the City that would benefit from upgrades.

The model is very useful in reviewing velocity, headloss and pressure constraints within the water distribution system. However, engineering judgment shall always be applied to both the model analysis as well as the overall distribution system analysis. A distribution system can be evaluated by not only the parameters mentioned in the previous sections, but also by redundancy within the system. Water main breaks and regular maintenance of water distribution system facilities are a reality. If a tank is taken out of service to be rehabilitated, the City still must continue to supply all residents in the same capacity as if the tank is on line. Similarly, if pump(s) are being serviced or a water treatment plant is taken out of service for whatever reason, another supply source is required to fill the tanks in the pressure zone. Therefore, the pipe network and pumps should be such that they can overcome the headloss and fill the tanks regardless of conditions. Therefore, each pressure zone was reviewed to determine if it could operate if a major transmission line had a water main break or a pump was out of service. The following sub-sections outline observations and major concerns for each pressure zone accordingly.

7.2.6.1 North Pressure Zone – Within North Pressure Zone, the fire flow demand is primarily met by the North EWST and Northeast EWST and could be supplemented by the North BP/PRV Station when necessary. As shown on Exhibit 7-5 and discussed previously, there are a few locations where the available fire flow in the model is less than the needed fire flow. As development occurs, the City should continue with implementing a larger diameter looped network identified in this report, and the majority of these deficiencies will be addressed accordingly. These noted deficiencies per the model are primarily a result of dead-end mains and limited larger diameter network resulting from a growing community. The backbone of the larger diameter network has been integrated in the system, and it will strengthen as development occurs.

Two tanks within this pressure zone allow for redundancy for tank maintenance when necessary. In addition, two wells (Wells No. 8 and 9) provide redundancy in the supply to this pressure zone.

No specific improvements are being recommended for the North Pressure Zone at this time.

7.2.6.2 North Central Pressure Zone – The North Central Pressure Zone has one elevated water storage tank (North Central EWST) that maintains the hydraulic grade line within the zone. In addition, the North BP/PRV Station, North Central PRV Station, South Central BP/PRV Station provide another source for maintaining the hydraulic grade line by transferring water from the higher North and South Central Pressure Zones. The PRVs are critical to maximizing the fire flow availability within this pressure zone. Inventorying and reviewing the settings of the PRVs is recommended accordingly. In terms of fire flow availability, there are various locations on Exhibit 7-5 which are identified as having less than the desired fire flow. To increase the fire flow within this pressure zone, we recommend the City continue to increase smaller diameter mains to a minimum of 8" when replacement is possible. Where feasible, we recommend increasing some of the mains to 12" or 16" to further reinforce a larger diameter network within the critical downtown area. The City's current 5-year CIP program to replace and/or increase the water main includes the following:

- Appletree Court Watermain Replacement
- Center Street and Main Street Watermain Replacement
- W. Washington Street Watermain Replacement
- Elizabeth Street Watermain Replacement
- Main Street Watermain Replacement
- Orange/Olsen Watermain Looping
- Morgan Street Watermain Replacement
- E. Fox Street Watermain Replacement
- East Washington Watermain Replacement
- Orange Street Watermain Replacement

These are identified on the plan exhibits (Exhibits 7-6, 7-7 and 7-8) found later in Section 7.

From a supply perspective, Well No. 4 is located in this pressure zone. However, given this is the lowest pressure zone in the system, it reaps the benefit of water being transferred from the higher North and South Central Pressure Zones via PRVs which ultimately act as another source of supply for the zone in terms of evaluating redundant supply.

7.2.6.3 South Pressure Zone – The South Pressure Zone is the highest pressure zone within the City's distribution system and is served by the South EWST and Well No. 7 along with the South Central BP/PRV Station. The South EWST is how the fire flow demands are primarily met. In terms of supply redundancy, the South BP/PRV Station can be used when Well No. 7 requires maintenance. The only specific improvement

identified for this pressure zone is the Route 71 Water Main Replacement identified. The detailed cost estimate can be found in Appendix G. These are identified on the plan exhibits (Exhibits 7-6, 7-7 and 7-8) found later in Section 7.

7.2.6.4 South Central Pressure Zone – The South Central EWST maintains the hydraulic gradeline within this pressure zone along the South BP/PRV Station and the South Central PRV Station. There are no wells located with this pressure zone, and currently it is primarily fed from the higher South Pressure Zone through the PRVs. In addition, this pressure zone can also be served by pumping it from the lower North Central Station by way of the South Central BP/PRV Station.

No specific improvements are being recommended for the South Central Pressure Zone.

7.2.6.5 Overall System General Observations – When reviewing the overall distribution system, the following general observations were made:

1. Various dead-end water mains exist throughout the system. When feasible (as funds become available or development occurs), these dead-ends should be eliminated and looped.
2. The PRVs play a critical role within the distribution system. We recommend City staff collect and review the current PRV settings in efforts to maximize the available fire flow throughout the system.
3. Given the anticipated life span for water main is anywhere from 50 to 100 years and some of the water main is in excess of 50 years old, we recommend the City continue to implement a water main replacement program. The following items shall be considered as part of the replacement program:
    a. Aligning water main replacement with the reconstruction of any roadways to minimize design and construction costs as well as disturbance to the water customers.
    b. When routinely replacing water main in residential areas, the smallest diameter main should be 8", but confirmed by modeling analysis. For commercial and industrial areas, consideration shall be given to larger pipe. To service commercial//industrial areas at 3,500 gpm during a fire and not have the velocity exceed 10 fps, a minimum of 10" or 12" water main is required. Depending on looping of the pipe, a main larger than 12" is sometimes required.
    c. Water rates should be reviewed to confirm money is adequately reserved for such improvements.
4. The operations of the valves and hydrants play a significant role in how much fire flow is available in the system. If a valve is partially closed, it is the difference in meeting fire flow requirements in an area or not meeting fire flow requirements. We recommend implementing a valve exercise program.
5. As information is collected in the field, the water distribution system information within GIS should continue to be refined.

7.3 System Expansion Evaluation

The expansion of the United City of Yorkville's water system will require future water storage and transmission capacity to provide water to currently undeveloped areas of the City. As part of this study, the future water distribution system was reviewed under the following three scenarios:

1. Alternate 1A – Supply By Wells - CT
2. Alternate 2A – Supply By Fox River Intake (Yorkville Only) and Wells - CT
3. Alternate 3A – Supply By Fox River Intake (Sub-Regional) and Wells - CT

The following evaluation provides the required pipe diameters and recommended improvements to meet the future demands of the City's water system under all three scenarios.

7.3.1 Water Storage Evaluation – In Section 3, the Water Works Evaluation for the projected CT and LRI water use scenarios were completed.

7.3.1.1 Water Storage Evaluation - CT – In Section 3, the Water Works Evaluation for the projected CT water use scenario indicated that the City has adequate storage currently. However, a Maximum Hour Storage Capacity deficit of approximately 1.62 million gallons was identified by the end of the planning period, year 2050 with an additional 41,687 PE. Based on the CT analysis, the existing storage is adequate for approximately an additional 20,000 PE. Storage options include ground storage tanks, standpipes and EWSTs. The City Water Works System currently utilizes primarily spheroid type EWSTs. An EWST provides a benefit over ground storage tanks and standpipes from the perspective that the water does not need to be re-pumped from an EWST in order to provide adequate pressures. Pumping improvements require additional capital expense, consume energy to operate and require maintenance and replacement expense. Therefore, this evaluation will consider the implementation of a spheroid type EWST to provide the necessary storage capacity. For the CT water use scenario, a 2.0 MG spheroid EWST located in the South Pressure Zone is recommended. The cost estimate to construct a 2.0 MG is $4,870,000.

7.3.1.2 Water Storage Evaluation - LRI – In Section 3, the water works evaluation for the projected LRI water use scenario identified a Maximum Hour Storage Capacity deficit of approximately 630,000 million gallons by the end of the planning period, year 2050 with an additional 41,687 PE. To close the deficit, additional storage will need to be integrated into the Water Works System. Given our planning period is only 35 years, but water storage tanks have a typical lifespan of 100 years or greater, we recommend placing a 2.0 million gallon tank. Constructing a larger tank for future growth is more cost effective than building multiple smaller tanks as growth occurs, even beyond 2050. By building a larger tank, the capital cost per gallon of water storage will be less. In addition, long term maintenance cost will also decrease given the City will need to rehabilitate a less number of tanks. Building on the same concepts as described in the CT water use scenario, a 2.0 MG spheroid EWST located in the South Pressure Zone is recommended for the LRI water use scenario. The cost estimate to construct a 2.0 MG is $4,870,000.

7.3.2 Water Distribution System Assumptions – To properly size the expansion of the City's water distribution system, assumptions related to future conditions including the location of proposed mains, pressure zone boundaries, demands, facility operations and storage capacity were necessary.

7.3.2.1 Transmission Main Layout – The geographic placement of the proposed transmission mains was driven by the previously prepared Water Works System Needs Assessment and Project Plan dated July 2000, anticipated future land use and the proposed arterial streets within the area. Transmission mains were generally laid out to follow the alignment of the proposed arterial roads creating an approximately 1-mile grid. Additional mains were placed to avoid dead-end mains along the perimeter of the system.

7.3.2.2 Pressure Zone Boundaries – The pressure zone boundaries remained consistent with those outlined in the Water Works System Needs Assessment and Project Plan dated July 2000.

7.3.2.3 Demands – Demands for the existing distribution system were based on 2014 pumped water use area for the existing demands. For water demands in undeveloped areas, a density of 3.1 PE per acre was assumed with an average day demand of 90 gpd per PE. Utilizing the City's ultimate service area with an assumed population density of 3.1 P.E. per acre, total demand for each zone was calculated based on its geographic area as shown in Table No. 7-4.

Table No. 7-4: Future Demand Summary for Undeveloped Land

United City of Yorkville, IL

Future Demand for Future Areas	North	North Central	South	South Central	South East	Total
Area (acres)	8,375	3,178	10,988	10,988	8,682	42,211
Density (3.1 PE per Acre)	25,909	9,832	4,041	33,993	26,859	100,633
Water Use - ADD (90 GPD per PE) GPD	2,331,812	884,836	363,690	3,059,338	2,417,289	9,056,964
Water Use - MDD (2 * ADD) GPD	4,663,624	1,769,671	727,380	6,118,675	4,834,577	18,113,928
Water Use - PHD (2 * MDD) GPD	9,327,249	3,539,343	1,454,760	12,237,350	9,669,155	36,227,857

The transmission mains are sized for beyond 2050 because they have an estimated life of 75 to 100 years resulting in additional growth. In addition, it is unknown where development will occur, but the mains should be adequate to serve the density for any given area.

7.3.3 Booster Pump Facilities – The pump station capacities shall be monitored as growth occurs. Under Alternate 1A (Supply By Wells – CT), no modifications to the existing facilities are anticipated. Under Alternate 2A and 3A, the capacity of pumping facilities shall be monitored. Depending on where growth occurs through 2050, it is possible, although unlikely, that modifications to the existing booster pump stations may be necessary. This should be evaluated once more in the next water system planning update which is recommended to be completed approximately every five years.

7.3.4 Pressure Reducing Valve Facilities – Pressure reducing valves will need to be constructed as appropriate depending on where development occurs. We recommend the number of pressure reducing valves be minimized and be placed only on larger diameter main at strategic locations within the distribution system. The recommended locations are shown on Exhibits 7-6 (Alternate 1A), 7-7 (Alternate 2A) and 7-8 ((Alternate 3A) later in Section 7.

7.3.5 Water Storage Facilities – Under all three scenarios, a storage tank with a capacity of 2,000,000 gallons is warranted and is anticipated to be placed in the highest pressure zone, the South Pressure Zone. Additional potential storage locations were also identified. Storage in the distribution system will be needed in the future to provide supply during peak demands, fire flow and pressure equalization. The locations of the future tanks modeled are shown on Exhibits 7-6 (Alternate 1A), 7-7 (Alternate 2A) and 7-8 (Alternate 3A) later in Section 7.

7.3.6 Distribution System Expansion Analysis Results – Proposed water mains were assigned an initial assumed diameter and a series of model analyses were performed. Utilizing the model results to review the velocity and headloss through the pipes in the model as well as the available pressures during fire flow scenarios, pipe diameters were adjusted to meet fire flow, pressure, velocity and headloss criteria per the recommendations outlined in the AWWA Manual M32 Computer Modeling of Water Distribution Systems. These parameters, consistent with those outlined in Section 4, are as follows:

1. Pressures during maximum day demand and fire flow conditions fall below 20 psi,
2. Pressures during maximum hour demand conditions fall below 30 to 40 psi,
3. Pressures rise above 90 to 110 psi (understanding that the Illinois Plumbing Code (Section 890.1210) requires a maximum of 80 psi for internal plumbing),
4. Velocities exceed 5 feet per second (fps),
5. Headlosses exceed 6 feet per 1,000 feet (ft) for pipes less than 16” in diameter, and
6. Headlosses exceed 2 feet per 1,000 feet (ft) for pipes 16” in diameter and greater.

To systematically approach the sizing of pipes within the system, the analysis began at supply points where the largest water main diameters would be required. Working outward from each supply point, initial main sizes were adjusted to generally achieve less than a velocity of 5 fps in each future pipe and 10 fps in each existing pipe during maximum hour flow conditions. With each change in pipe diameter, the model results were reviewed to determine its effect on the proposed system and iterations were performed until headloss and velocity criteria were met.

Subsequently, fire flow analyses were performed on the proposed system. Areas where this flow and pressure could not be met often required an increase in the diameter of mains in the area to meet these fire flow criteria. Based on a transmission grid of approximately one square mile and typical headloss and velocity through future distribution mains, it was determined that adequate flow and pressure at each modeled

node on the proposed transmission mains should be 3,500 gpm at 25 psi to meet the typical fire flow requirements within the grid at 20 psi. This relatively conservative fire flow requirement was established because of the uncertainty of the specific fire flow needs of future development in the area.

After the system sizing was adjusted for fire flow, further iterations were completed running both maximum hour demand scenarios and maximum day with fire flow demand scenarios throughout the system to determine optimal sizing for the proposed piping. This included looking at the velocity and headloss across the entire proposed network; the flow from the existing and proposed elevated tanks; and the discharge pressure required at the existing and proposed facilities to meet system demands.

Under the Fox River scenarios (Alternates 2A and 3A), a review of the existing system also had to be completed given that there will only be one supply point (to the North Pressure Zone) initially to feed the entire water distribution system via the Fox River water source. Under Alternate 3A (Supply By Fox River Intake (Sub-Regional)), a second supply point is planned as the funding and demand dictates. An analysis was completed to ensure that all tanks could be filled and that water could be adequately distributed based on Maximum Day Demand (Fire Flow Analysis) and Maximum Hour Demand scenarios. This analysis was also an iterative process to size additional transmission mains as necessary to support the bulk transfer of water across the various zones while maintaining acceptable system pressures, velocities and headlosses.

The results of the analyses are discussed in the following sections.

7.4 Water Storage and Distribution Improvements Cost Estimates

The proposed transmission main network for the undeveloped areas as well as recommended existing system improvements for the three scenarios are summarized in the following sub-sections:

1. Alternate 1 – Supply By Wells
2. Alternate 2 – Supply By Fox River Intake (Yorkville Only) and Wells
3. Alternate 3 – Supply By Fox River Intake (Sub-Regional) and Wells

7.4.1 Alternate 1 – Supply By Wells – Under Alternate 1, the projects included in the Capital Improvement Plan improvements are the only identified distribution system projects to be completed in the near future. These projects are identified in Table No. 7-5.

Table No. 7-5: CIP - Summary of Conceptual Cost Estimates
United City of Yorkville, IL

ITEM	PROJECT	Estimated Cost
9a	Route 71 Watermain Replacement	$ 968,000
9b	Appletree Court Watermain Replacement (RTBR)	$ 149,000
9c	W. Washington Street Watermain Replacement (RTBR) - To be Constructed in 2017	$ 188,000
10	Elizabeth Street Watermain Replacement (RTBR)	$ 512,000
11	Main Street Watermain Replacement (RTBR)	$ 714,000
12	Orange/Olsen Watermain Looping (RTBR)	$ 168,000
13	Morgan Street Watermain Replacement (RTBR)	$ 376,000
14	E. Fox Street Watermain Replacement (RTBR)	$ 306,000
15	East Washington Watermain Replacement (RTBR)	$ 465,000
16	Orange Street Watermain Replacement (RTBR)	$ 660,000
	TOTAL - SUMMARY OF CONCEPTUAL COST ESTIMATES:	**$ 4,506,000**

The costs noted "RTBR" are part of the Roads-To-Better-Roads Program. All of the above costs were obtained from the CIP and therefore detailed cost estimates for these projects are not included with this report.

To summarize, the proposed Water Works System Improvements for Alternate 1A - CT are illustrated on Exhibit 7-6. In addition, an outline of all estimated costs of the recommended improvements for the 2050 planning period (including the water supply, treatment, storage and transmission improvements outlined in Sections 6 and 7) can be found in Table No. 7-6 for both the CT and LRI scenarios for Alternate 1.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant
- Elevated Water Storeage Tank (EWST)
- Future BP/PRV
- Future PRV
- Future Deep Well
- Proposed WTP Site
- Ground Storage Tanks
- Potential EWST Site
- Alternate EWST Site
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future 8" Water Main
- Future 12" Water Main
- Future 16" Water Main
- Future 24" Water Main
- Future Raw Water Main

1.0 MG NORTH EWST

WELL NO.6 WTP

1.5 MG NORTHEAST EWST, WELL NO. 8.

WELL NO.14 WTP

WELL NO. 9

WELL NO.12 WTP

NORTH CENTRAL PRV STATION

NORTH BP/PRV STATION

300,000 GAL NORTH CENTRAL EWST, WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT

WELL NO. 11

WELL NO. 3

SOUTH CENTRAL BP/PRV STATION

WELL NO.10 WTP

500,000 GAL SOUTH CENTRAL EWST

SOUTH BP/PRV STATION

9a. ROUTE 71 WM REPLACEMENT

2.0 MG EWST

SOUTH CENTRAL PRV STATION

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

WELL NO.15 WTP

9b. APPLETREE COURT WM REPLACEMENT

11. MAIN STREET WM REPLACEMENT

14. EAST FOX STREET WM REPLACEMENT

9c. WEST WASHINGTON STREET WM REPLACEMENT

15. EAST WASHINGTON WM REPLACEMENT

16. ORANGE STREET WM REPLACEMENT

12. ORANGE / OLSEN WM LOOPING

13. MORGAN STREET WM REPLACEMENT

10. ELIZABETH STREET WM REPLACEMENT

WELL NO.13 WTP

NOTE:
DUE TO THE VARYING TERRAIN AND ELEVATION WITHIN THE PLANNING AREA, EFFORTS WERE MADE TO MINIMIZE THE NUMBER OF PRESSURE ZONES. AS DEVELOPMENT OCCURS, THE ELEVATIONS WITHIN EACH DEVELOPMENT SHALL BE REVIEWED AT THAT TIME. INDIVIDUAL PRESSURE REDUCING VALVES WITHIN BUILDING/HOMES MAY BE REQURED IN CERTAIN AREAS.

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

Engineering Enterprises, Inc.
52 Wheeler Road
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(630) 466-6700
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United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

DATE:	MARCH, 2017
PROJECT NO.:	YO1437-P
BY:	CLV
PATH:	H:\GIS\PUBLIC\YORKVILLE\2014\YO1437
FILE:	YO1437_EXH7-6ALT1-CT NEW .MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-6 ALTERNATE 1A
WATER WORKS SYSTEM PLAN - CT

NORTH

Table No. 7-6: Water Works System Master Plan Alternates 1A and1B Cost Estimate Summary
United City of Yorkville, IL

Impr. No.	Improvement	Capital Cost	Annual O&M		Total 20-Year Present Worth
			Annual Cost	20-Year Present Worth	
Alternate No. 1A: DSS Water Wells with CEWTPs - CT					
1A-CT-1	Well No. 6 and Well No. 6 CEWTP	$6,839,000	$287,001	$3,292,000	$10,131,000
1A-CT-2	Well No. 10 and Well No. 10 CEWTP	$6,839,000	$282,077	$3,235,000	$10,074,000
1A-CT-3	Well No. 11	$2,419,000	$112,885	$1,295,000	$3,714,000
1A-CT-4	Well No. 11 Raw Water Main (to Wells 3 & 4 CEWTP)	$1,188,000			$1,188,000
1A-CT-5	Well No. 12 and Well No. 12 CEWTP	$6,839,000	$287,001	$3,292,000	$10,131,000
1A-CT-6	Well No. 13 and Well No. 13 CEWTP	$6,839,000	$282,077	$3,235,000	$10,074,000
1A-CT-7	Well No. 14 and Well No. 14 CEWTP	$6,839,000	$287,001	$3,292,000	$10,131,000
1A-CT-8	Well No. 15 and Well No. 15 CEWTP	$6,839,000	$282,077	$3,235,000	$10,074,000
1A-CT-EX1	Existing Wells No. 3 & 4 CEWTP		$309,217	$3,547,000	$3,547,000
1A-CT-EX2	Existing Well No. 7 CEWTP		$282,077	$3,235,000	$3,235,000
1A-CT-EX3	Existing Wells No. 8 & 9 CEWTP		$309,217	$3,547,000	$3,547,000
		$44,641,000	$2,720,630	$31,205,000	$75,846,000
1A-CT-9	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
1A-CT-10	Water Distribution System Improvements	$4,506,000			$4,506,000
		$9,376,000	$50,000	$573,000	$9,949,000
		$54,017,000	**$2,770,630**	**$31,778,000**	**$85,795,000**
Alternate No. 1B: DSS Water Wells with CEWTPs - LRI					
1B-LRI-1	Well No. 6 and Well No. 6 WTP	$6,839,000	$318,287	$3,651,000	$10,490,000
1B-LRI-2	Well No. 10 and Well No. 10 CEWTP	$6,839,000	$312,282	$3,582,000	$10,421,000
1B-LRI-3	Well No. 11	$2,419,000	$130,039	$1,492,000	$3,911,000
1B-LRI-4	Well No. 11 Raw Water Main (to Wells 3 & 4 CEWTP)	$1,188,000			$1,188,000
1B-LRI-5	Well No. 12 and Well No. 12 CEWTP	$6,839,000	$318,287	$3,651,000	$10,490,000
1B-LRI-EX1	Existing Wells No. 3 & 4 CEWTP		$340,390	$3,904,000	$3,904,000
1B-LRI-EX2	Existing Well No. 7 CEWTP		$312,282	$3,582,000	$3,582,000
1B-LRI-EX3	Existing Wells No. 8 & 9 CEWTP		$340,390	$3,904,000	$3,904,000
		$24,124,000	$2,071,957	$23,766,000	$47,890,000
1B-LRI-6	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
1B-LRI-7	Water Distribution System Improvements	$4,506,000			$4,506,000
		$9,376,000	$50,000	$573,000	$9,949,000
		$33,500,000	**$2,121,957**	**$24,339,000**	**$57,839,000**

Notes:
All values based on 2016 construction costs

As noted previously, all transmission main planning is based on current trends. So, the water distribution system improvement costs in in Alternates 1A and 1B are the same. In addition, the CIP improvements are recommendations made prior to this study and are included as recommendations under all of the scenarios.

7.4.2 Alternate 2 – Supply By Fox River Intake (Yorkville Only) and Wells – Under Alternate 2, various water distribution system improvements are recommended in addition to the CIP improvements identified in Alternate 1. These projects are identified in Table No. 7-7.

Table No. 7-7: Alternate 2 - Water Distribution System Recommended Improvements
Summary of Conceptual Cost Estimates
United City of Yorkville, IL

ITEM	PROJECT	Estimated Cost
1	20" & 16" Water Main North West of Water Treatment Plant	$ 829,000
2	16" Tie Into Crimson Lane	$ 233,000
3	24" Water Main from Water Treatment Plan to Van Emmon	$ 9,597,000
4	16" Water Main along Center Street and Main Street	$ 869,000
5a	20" Water main on Van Emmon	$ 1,071,000
5b	20" Water main on Van Emmon	$ 473,000
6	20" Water Main from Mill Street to South Central EWST	$ 3,155,000
7	20" Water Main from South Central EWST to South BP/PRV	$ 1,450,000
8	PRV Station - North Pressure Zone to North Central Pressure Zone	Not. Incl. in Alt. 2
9a	Route 71 Watermain Replacement	$ 968,000
9b	Appletree Court Watermain Replacement (RTBR)	$ 149,000
9c	W. Washington Street Watermain Replacement (RTBR) - To be Constructed in 2017	$ 188,000
10	Elizabeth Street Watermain Replacement (RTBR)	$ 512,000
11	Main Street Watermain Replacement (RTBR)	$ 714,000
12	Orange/Olsen Watermain Looping (RTBR)	$ 168,000
13	Morgan Street Watermain Replacement (RTBR)	$ 376,000
14	E. Fox Street Watermain Replacement (RTBR)	$ 306,000
15	East Washington Watermain Replacement (RTBR)	$ 465,000
16	Orange Street Watermain Replacement (RTBR)	$ 660,000
	TOTAL - SUMMARY OF CONCEPTUAL COST ESTIMATES:	**$ 22,183,000**

The costs noted "RTBR" are part of the Roads-To-Better-Roads Program. Items No. 9a – 16 were obtained from the CIP and therefore detailed cost estimates for these projects are not included with this report. Detailed cost estimates for Items No. 1-8 can be found in Appendix G.

To summarize, the proposed Water Works System Improvements for Alternate 2A are illustrated on Exhibit 7-7. In addition, an outline of all estimated costs of the recommended improvements for the 2050 planning period (including the water supply, treatment, storage and transmission improvements outlined in Sections 6 and 7) can be found in Table No. 7-8.

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant
- Elevated Water Storeage Tank (EWST)
- Future BP/PRV
- Future PRV
- Future Deep Well
- Proposed WTP Site
- Ground Storage Tanks
- Potential EWST Site
- Alternate EWST Site
- Potential Future Deep Well
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future 8" Water Main
- Future 12" Water Main
- Future 16" Water Main
- Future 20" Water Main
- Future 24" Water Main
- Future Raw Water Main
- Potential Future Water Main

1.0 MG NORTH EWST

POTENTIAL FUTURE WELL NO. 6

POTENTIAL FUTURE RAW WATER MAIN

1.5 MG NORTHEAST EWST, WELL NO. 8.

WELL NO. 9

1. 20" AND 16" WM NORTH WEST OF WATER TREATMENT PLANT

NORTH CENTRAL PRV STATION

NORTH BP/PRV STATION

2. 16" WM TIE INTO CRIMSON LANE

WELL NO. 8 & 9 RAW WATER MAIN

WELL NO. 10, FOX RIVER INTAKE, 12 MGD LIME SOFTENING WATER TREATMENT PLANT, AND 1.0 MG GST

3. 24" WM FROM WATER TREATMENT PLANT TO VAN EMMON

300,000 GAL NORTH CENTRAL EWST, WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT

WELL NO. 3

4. 16" WM ALONG CENTER STREET AND MAIN STREET

SOUTH CENTRAL BP/PRV STATION

5a & 5b. 20" WM ON VAN EMMON

6. 20" WM FROM MILL STREET TO SOUTH CENTRAL EWST

500,000 GAL SOUTH CENTRAL EWST

SOUTH BP/PRV STATION

2.0 MG EWST

SOUTH CENTRAL PRV STATION

9a. ROUTE 71 WM REPLACEMENT

1.25 MG SOUTH EWST, WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT

7. 20" WM FROM SOUTH CENTRAL EWST TO SOUTH BP/PRV

9b. APPLETREE COURT WM REPLACEMENT

11. MAIN STREET WM REPLACEMENT

14. EAST FOX STREET WM REPLACEMENT

9c. WEST WASHINGTON STREET WM REPLACEMENT

15. EAST WASHINGTON STREET WM REPLACEMENT

16. ORANGE STREET WM REPLACEMENT

12. ORANGE / OLSEN WM LOOPING

13. MORGAN STREET WM REPLACEMENT

10. ELIZABETH STREET WM REPLACEMENT

NOTE:
DUE TO THE VARYING TERRAIN AND ELEVATION WITHIN THE PLANNING AREA, EFFORTS WERE MADE TO MINIMIZE THE NUMBER OF PRESSURE ZONES. AS DEVELOPMENT OCCURS, THE ELEVATIONS WITHIN EACH DEVELOPMENT SHALL BE REVIEWED AT THAT TIME. INDIVIDUAL PRESSURE REDUCING VALVES WITHIN BUILDING/HOMES MAY BE REQURED IN CERTAIN AREAS.

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

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WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-7 ALTERNATE 2A
WATER WORKS SYSTEM PLAN - CT

NORTH

Table No. 7-8: Water Works System Master Plan Alternates 2A and 2B Cost Estimate Summary
United City of Yorkville, IL

Impr. No.	Improvement	Capital Cost	Annual O&M		Total 20-Year Present Worth
			Annual Cost	20-Year Present Worth	
Alternate No. 2A: Fox River Intake with Single Stage (ClariCone) LSWTP - CT					
2A-CT-1	12 MGD Fox River Intake Pump Station	$5,217,000	$218,063	$2,501,000	$7,718,000
2A-CT-2	12 MGD Single Stage (ClariCone) LSWTP	$35,088,000	$1,965,251	$22,541,000	$57,629,000
2A-CT-3	Wells No. 8 & 9 Raw Water Main	$3,267,000			$3,267,000
2A-CT-4	Well No. 10	$2,419,000	$53,950	$619,000	$3,038,000
2A-CT-EX1	Existing Wells No. 3 & 4 CEWTP		$108,634	$1,246,000	$1,246,000
2A-CT-EX2	Existing Well No. 7 CEWTP		$108,634	$1,246,000	$1,246,000
		$45,991,000	$2,454,532	$28,153,000	$74,144,000
2A-CT-5	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
2A-CT-6	Water Distribution System Improvements	$22,183,000			$22,183,000
		$27,053,000	$50,000	$573,000	$27,626,000
		$73,044,000	**$2,504,532**	**$28,726,000**	**$101,770,000**
Alternate No. 2B: Fox River Intake with Single Stage ClariCone LSWTP - LRI					
2B-LRI-1	9 MGD Fox River Intake Pump Station	$4,828,000	$204,703	$2,348,000	$7,176,000
2B-LRI-2	9 MGD Single Stage (ClariCone) LSWTP	$29,572,000	$1,726,058	$19,798,000	$49,370,000
2B-LRI-3	Wells No. 8 & 9 Raw Water Main	$3,267,000			$3,267,000
2B-LRI-EX1	Existing Wells No. 3 & 4 CEWTP		$102,719	$1,178,000	$1,178,000
2B-LRI-EX2	Existing Well No. 7 CEWTP		$102,719	$1,178,000	$1,178,000
		$37,667,000	$2,136,199	$24,502,000	$62,169,000
2B-LRI-4	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
2B-LRI-5	Water Distribution System Improvements	$22,183,000			$22,183,000
		$27,053,000	$50,000	$573,000	$27,626,000
		$64,720,000	**$2,186,199**	**$25,075,000**	**$89,795,000**

Notes:
All values based on 2016 construction costs

As noted previously, all transmission main planning is based on current trends. So, the water distribution system improvement costs in in Alternates 2A and 2B are the same. In addition, the CIP improvements identified in Alternate 1 are included in the Water Distribution System Improvements identified in Table No. 7-8 above.

7.4.3 Alternate 3 – Supply By Fox River Intake (Sub-Regional) and Wells – Under Alternate 3, various water distribution system improvements are recommended in addition to the CIP improvements identified in Alternate 1. These projects are outlined in Table No. 7-9.

Table No. 7-9: Alternate 3 - Water Distribution System Recommended Improvements
Summary of Conceptual Cost Estimates
United City of Yorkville, IL

ITEM	PROJECT	Estimated Cost
1	20" & 16" Water Main North West of Water Treatment Plant	$ 829,000
2	16" Tie Into Crimson Lane	$ 233,000
3	24" Water Main from Water Treatment Plan to Van Emmon	$ 9,597,000
4	16" Water Main along Center Street and Main Street	$ 869,000
5a	20" Water main on Van Emmon	$ 1,071,000
5b	20" Water main on Van Emmon	$ 473,000
6	20" Water Main from Mill Street to South Central EWST	$ 3,155,000
7	20" Water Main from South Central EWST to South BP/PRV	$ 1,450,000
8	PRV Station - North Pressure Zone to North Central Pressure Zone	$ 378,000
9a	Route 71 Watermain Replacement	$ 968,000
9b	Appletree Court Watermain Replacement (RTBR)	$ 149,000
9c	W. Washington Street Watermain Replacement (RTBR) - To be Constructed in 2017	$ 188,000
10	Elizabeth Street Watermain Replacement (RTBR)	$ 512,000
11	Main Street Watermain Replacement (RTBR)	$ 714,000
12	Orange/Olsen Watermain Looping (RTBR)	$ 168,000
13	Morgan Street Watermain Replacement (RTBR)	$ 376,000
14	E. Fox Street Watermain Replacement (RTBR)	$ 306,000
15	East Washington Watermain Replacement (RTBR)	$ 465,000
16	Orange Street Watermain Replacement (RTBR)	$ 660,000
	TOTAL - SUMMARY OF CONCEPTUAL COST ESTIMATES:	**$ 22,561,000**

The costs noted "RTBR" are part of the Roads-To-Better-Roads Program. Items No. 9a – 16 were obtained from the CIP and therefore detailed cost estimates for these projects are not included with this report. Detailed cost estimates for Items No. 1-8 can be found in Appendix G. These improvements are illustrated on Exhibit 7-8 which is the Water Works System Master Plan for Alternate 3A - CT. Consistent with the water distribution system planning for Alternates 1 and 2, all transmission main planning is based on current trends. Also, the CIP improvements identified in Alternate 1 included in the cost estimates above.

Given the same supply source connection point near the Fox River was considered under both Alternates 2 and 3, the recommended water distribution system improvements are nearly identical. The only difference between these two alternates is the PRV in the vicinity of the Fox River connection point. Under Alternate 2, the water treatment plant would have different pumps that could pump to both the North Pressure Zone

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

1.0 MG NORTH EWST
WELL NO. 6
1.5 MG NORTHEAST EWST, WELL NO. 8.
WELL NO. 8 AND 9 WTP
WELL NO. 9
1. 20" AND 16" WM NORTH WEST OF WATER TREATMENT PLANT
NORTH CENTRAL PRV STATION
NORTH BP/PRV STATION
2. 16" WM TIE INTO CRIMSON LANE
SUB REGIONAL CONNECTION
8. PRV STATION - NORTH PRESSURE ZONE TO NORTH CENTRAL PRESSURE ZONE
3. 24" WM FROM WATER TREATMENT PLANT TO VAN EMMON
300,000 GAL NORTH CENTRAL EWST
WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT
WELL NO. 3
FUTURE SUB REGIONAL CONNECTION
4. 16" WM ALONG CENTER STREET AND MAIN STREET
SOUTH CENTRAL BP/PRV STATION
5a & 5b. 20" WM ON VAN EMMON
6. 20" WM FROM MILL STREET TO SOUTH CENTRAL EWST
500,000 GAL SOUTH CENTRAL EWST
SOUTH BP/PRV STATION
2.0 MG EWST
SOUTH CENTRAL PRV STATION
9a. ROUTE 71 WM REPLACEMENT
1.25 MG SOUTH EWST
WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT
7. 20" WM FROM SOUTH CENTRAL EWST TO SOUTH BP/PRV
9b. APPLETREE COURT WM REPLACEMENT
11. MAIN STREET WM REPLACEMENT
9c. WEST WASHINGTON STREET WM REPLACEMENT
14. EAST FOX STREET WM REPLACEMENT
15. EAST WASHINGTON STREET WM REPLACEMENT
16. ORANGE STREET WM REPLACEMENT
12. ORANGE / OLSEN WM LOOPING
13. MORGAN STREET WM REPLACEMENT
10. ELIZABETH STREET WM REPLACEMENT

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant
- Elevated Water Storeage Tank (EWST)
- Future PRV
- Future BP/PRV
- Future Deep Well
- Ground Storage Tanks
- Potential EWST Site
- Alternate EWST Site
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future 8" Water Main
- Future 12" Water Main
- Future 16" Water Main
- Future 20" Water Main
- Future 24" Water Main
- Future Raw Water Main

NOTE:
DUE TO THE VARYING TERRAIN AND ELEVATION WITHIN THE PLANNING AREA, EFFORTS WERE MADE TO MINIMIZE THE NUMBER OF PRESSURE ZONES. AS DEVELOPMENT OCCURS, THE ELEVATIONS WITHIN EACH DEVELOPMENT SHALL BE REVIEWED AT THAT TIME. INDIVIDUAL PRESSURE REDUCING VALVES WITHIN BUILDING/HOMES MAY BE REQURED IN CERTAIN AREAS.

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

NORTH

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WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 7-8 ALTERNATE 3A
WATER WORKS SYSTEM PLAN - CT

and the North Central Pressure Zone. Under Alternate 3 (Sub-Regional), the supply would only serve the North Pressure Zone. Therefore, a PRV station is required to reduce the pressure to accommodate the North Central Pressure Zone. In Section 8, the supply, treatment and distribution will be discussed and a summary of the recommended Water Works System Improvements will be provided accordingly.

7.4.4 General Considerations For Water Distribution System Planning - Alternates 1, 2 and 3 – Within the Exhibits 7-6, 7-7 and 7-8, "Future Pipe" diameter indicates the required equivalent diameter for adequate capacity in the area. This capacity can potentially be obtained by installing a parallel pipe with the existing pipe remaining or by abandoning the existing pipe remaining or by abandoning the existing pipe with new water main. A general route for proposed piping has been provided for planning purposes, but there may be a better route to achieve the required capacity depending on the circumstances and other projects the City is undergoing at the time of the improvements. The maximum day demand with fire flow condition was the primary criteria for the majority of the transmission main sizes, particularly when far from supply points, with larger mains needed to maintain pressure at high elevations during fire flows. Maximum Hour flows tended to govern the size of mains that were closer to supply points.

Ground elevation plays a large factor in the availability of adequate fire flow to an area and the resulting water main size necessary to support the flow. Final layout of mains along the pressure zone boundaries should be studied as developments are proposed and water mains are designed to ensure that local high or low ridges fall on the appropriate side of the pressure zone boundaries. Fire flow availability along the pressure zone boundary depends in areas on the inclusion of PRVs and BPSs.

SECTION 8: SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS

Section 6 of this report evaluated two different options for the United City of Yorkville's future water source: 1) continuing to obtain water using wells and deep aquifers and 2) treating surface water from the Fox River with a WTP that is only meant to serve the United City of Yorkville. This section evaluates a third option – 3) treating surface water from the Fox River within a sub-regional WTP and transmitting the treating water to the Village of Montgomery, United City of Yorkville and Village of Oswego.

8.1 Sub-Regional Planning Area

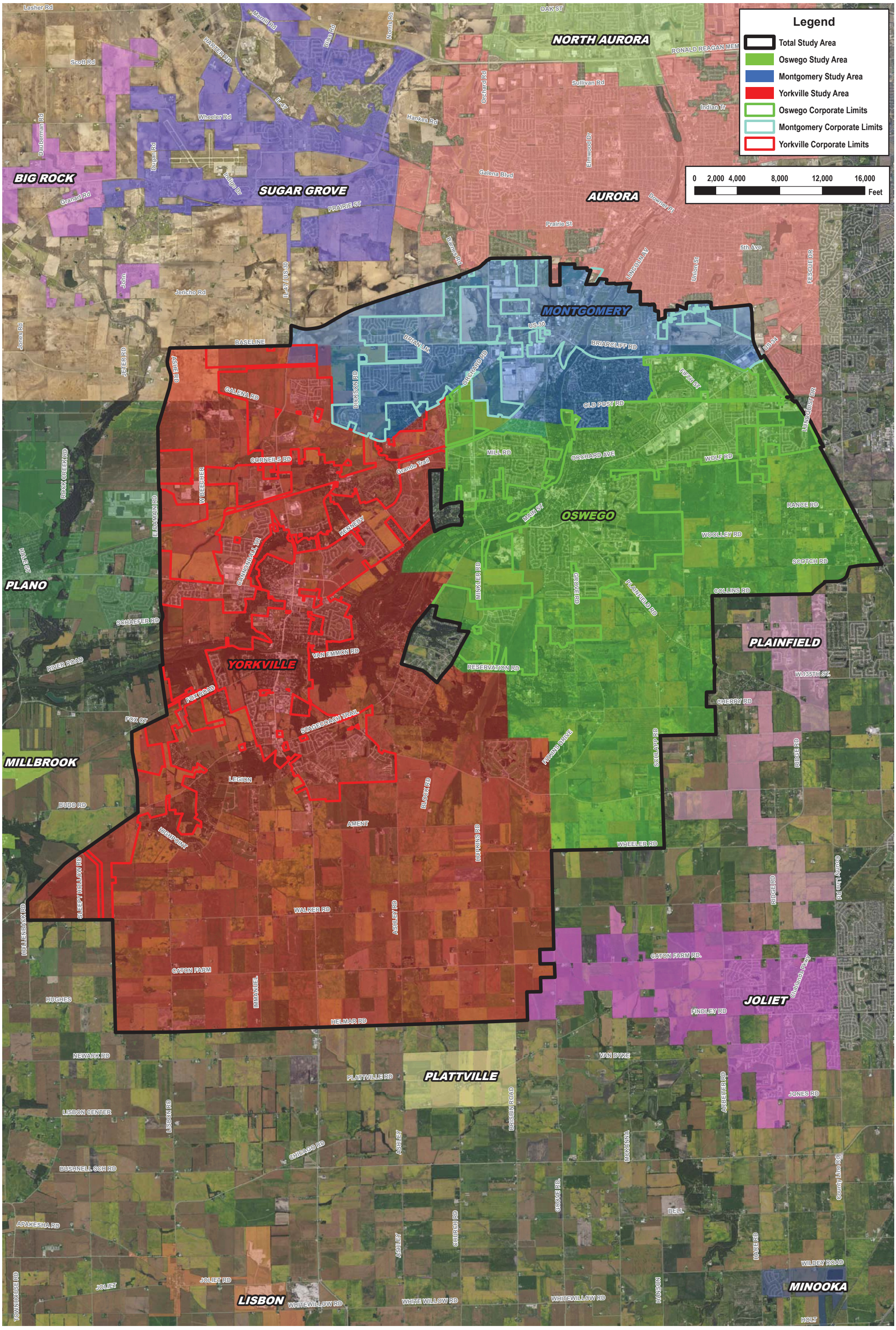
Exhibit 8-1 depicts the planning areas for the Village of Montgomery, United City of Yorkville and Village of Oswego. The sizes of the planning areas are as follows:

- Montgomery – 9.3 square miles of corporate limits and 15.6 square miles of other planning area.
- Yorkville – 20.2 square miles of corporate limits and 72.9 square miles of other planning area.
- Oswego – 15.1 square miles of corporate limits and 40.2 square miles of other planning area.

Within the combined 173.3 square mile planning area of all three communities, there currently are 44.6 square miles within corporate limits. There are 128.7 square miles of land area (74% of total area) within the total planning area that currently are not within one of the corporate boundaries. The Fox River flows through all three communities running from northeast to southwest.

8.2 Sub-Regional Historical & Projected Population

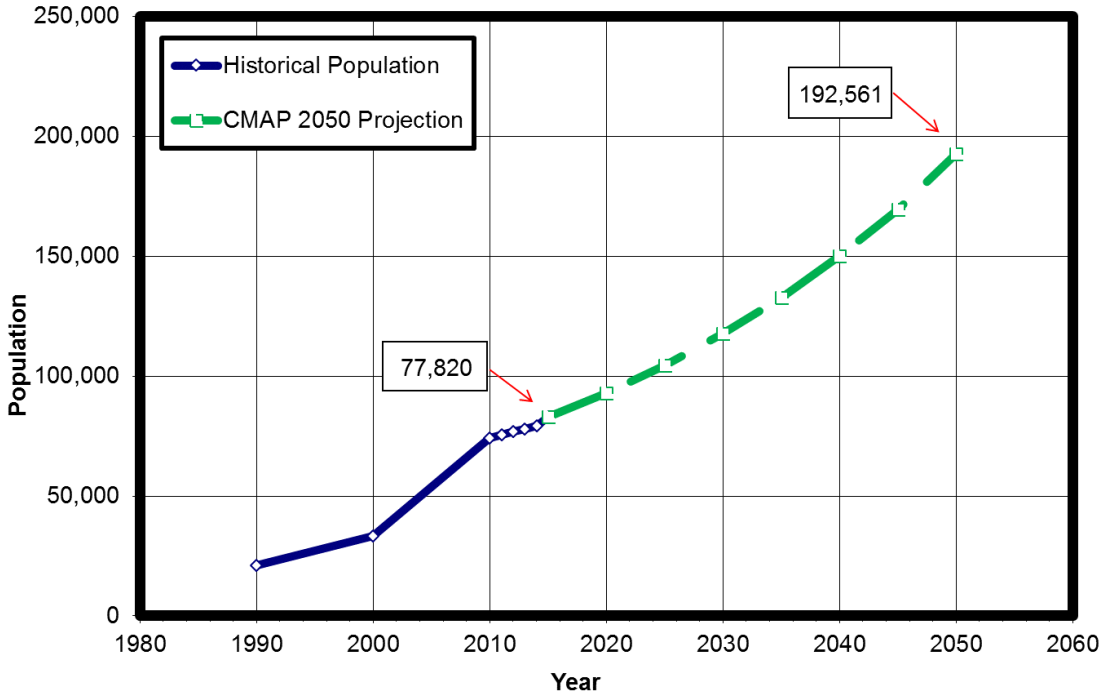
The total populations served by the Village of Montgomery, United City of Yorkville and Village of Oswego Water Works Systems in 2014 were 27,488, 17,878 and 32,454 respectively. The combined population served in 2014 was 77,820. The 2050 population projection for Yorkville was determined in the same manner that it was for Oswego. That is, the annual growth rate for CMAP's 2040 projection was compounded another ten years to determine 2050's value. When the same method was used for Montgomery, it became apparent that it would be an over estimate for their Village due to the fact the Village has a limited amount of undeveloped property within their planning area. Therefore, community development utilized the Village's comprehensive plan to estimate population growth in the undeveloped areas. The existing population served plus the additional build-out population then became the 2050 total population served estimate for the Village of Montgomery.



Engineering Enterprises, Inc. 52 Wheeler Road Sugar Grove, Illinois 60554 (630) 466-6700 *www.eeiweb.com*	**United City of Yorkville** 800 Game Farm Road Yorkville, IL 60560	DATE: JANUARY 2017 PROJECT NO.: YO1438 BY: MJT PATH: H:\GIS\PUBLIC\YORKVILLE\2014\ FILE: YO1438_EXH8-1 OSG,YORK,MON	**SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS** VILLAGE OF MONTGOMERY, ILLINOIS UNITED CITY OF YORKVILLE, ILLINOIS AND VILLAGE OF OSWEGO, ILLINOIS	**EXHIBIT 8-1** **SUB-REGIONAL STUDY AREA** NORTH

Exhibit 8-2 outlines the combined historical population as far back as 1990 as well as the predicted future population through 2050. The total combined population for the sub-region for 2014 was 77,820; at a growth rate of 1.10 % for the Village of Montgomery, 3.20% for the United City of Yorkville and 2.78% for Village of Oswego the 2050 population is projected to be 192,561 people for all three communities.

Exhibit 8-2: Sub-Regional Historical and Projected Population Summary
Village of Montgomery, United City of Yorkville, Village of Oswego



8.3 Sub-Regional Historical & Projected Water Use

To determine the Sub-Region water needs, the water needs of each community were determined and added together to find the total projected water demand. A summary of each community's historical water use, predicted future water use under a CT scenario and predicted future water use under the LRI scenario, can be found in Table No. 8-1.

A WTP is typically designed to produce enough water to meet the MDD of a Water Works System(s). In order to determine the maximum day demand, the ADD is multiplied by the MDD:ADD ratio that has been determined based on historical data. In the CT scenario, while all of the communities are assumed to have the same average day demand per capita, the MDD:ADD ratio was different for each community. When determining the total ADD and MDD demand, each community was evaluated separately and then added together to find the total.

Table No. 8-1: Community Water Use Characteristics

Village of Montgomery, United City of Yorkville, Village of Oswego

Parameter	Village of Montgomery	United City of Yorkville	Village of Oswego
2014 Population	27,488	17,878	32,454
Historical Water Use			
Average Daily Pumpage (2014)	2.44 MGD	1.38 MGD	2.50 MGD
Annual Minimum of Average Daily Pumpage Per Capita (2010 - 2014)	87.0 gpcd	77.3 gpcd	77.1 gpcd
Annual Average of Average Daily Pumpage Per Capita (2010 - 2014)	90.7 gpcd	88.0 gpcd	80.3 gpcd
Annual Maximum of Average Daily Pumpage Per Capita (2010 - 2014)	96.4 gpcd	99.5 gpcd	84.4 gpcd
Maximum Daily Pumpage (2014)	3.42 MGD	2.17 MGD	4.17 MGD
Minimum Maximum Day To Average Day Ratio (2010 - 2014)	1.40	1.57	1.67
Average Maximum Day To Average Day Ratio (2010 - 2014)	1.53	1.91	1.80
Maximum Maximum Day To Average Day Ratio (2010 - 2014)	1.66	2.06	1.90
Historical Water Use Additional Breakdown			
% of 2014 Water Use That Was For Residential Use	75.3 %	81.6 %	82.3 %
% of 2014 Water Use That Was For Non-Residential Use	24.7 %	18.4 %	17.7 %
Average Daily Residential Water Use Per Capita (2014)	51.7 gpcd	55.6 gpcd	55.3 gpcd
Average % of Water Supply For Outdoor Water Use	3.7 %	12.9 %	--
2014 Water Losses and Unbilled Authorized Consumption	22.7 %	11.8 %	--
Average % Water Distribution System Losses	20.8 %	8.0 %	--
% of Households Pre-1994	49.5 %	27.0 %	--
Water Use Projections - Current Trends (CT)			
2050 Population Projection	42,000	59,565	90,996
CT Average Daily Water Use Per Capita	90 gpcd	90 gpcd	90 gpcd
CT Maximum Day To Average Day Ratio	1.75	2.00	1.90
CT 2050 Average Daily Water Use	3.78 MGD	5.36 MGD	8.19 MGD
CT 2050 Maximum Daily Water Use	6.62 MGD	10.72 MGD	15.56 MGD
Water Use Projections - Less Resource Intenstive (LRI)			
Projected Water Use Savings For LRI Water Demand Projection	20 %	11 %	--
> Projected Distribution System Losses With 50% Reduction	10.4 %	4.0 %	--
> Projected Outdoor Water Use With 25% Reduction	2.8 %	9.7 %	--
> Projected Indoor Water Use Reduction For Fixture & Appliance Changes	6.4 %	2.6 %	--
LRI Average Daily Water Use Per Capita	72 gpcd	80 gpcd	75 gpcd
LRI Maximum Day To Average Day Ratio	1.50	1.75	1.75
LRI 2050 Average Daily Water Use	3.02 MGD	4.77 MGD	6.82 MGD
LRI 2050 Maximum Daily Water Use	4.54 MGD	8.34 MGD	11.94 MGD

Notes:

- A detailed water use evaluation was not completed for the Village of Oswego. It was not part of the scope of services for the project.
- The water losses and unbilled authorized consumption for the Village of Oswego is estimated to be 12.9% (same as Yorkville) for the average daily residential water use per capita calculation.

Exhibit 8-3 depicts the combined water usage projections. As expected, they generally follow the same exponential pattern seen in the population projections in Exhibit 8-2. For the CT scenario, a total maximum day demand of 32.9 MGD is projected for all three communities in 2050. As outlined below, Oswego is projecting the highest population and is therefore projected to be using the largest amount of water. Yorkville is projected to have the second highest water demand, and Montgomery is projected to have the smallest water demand in 2050.

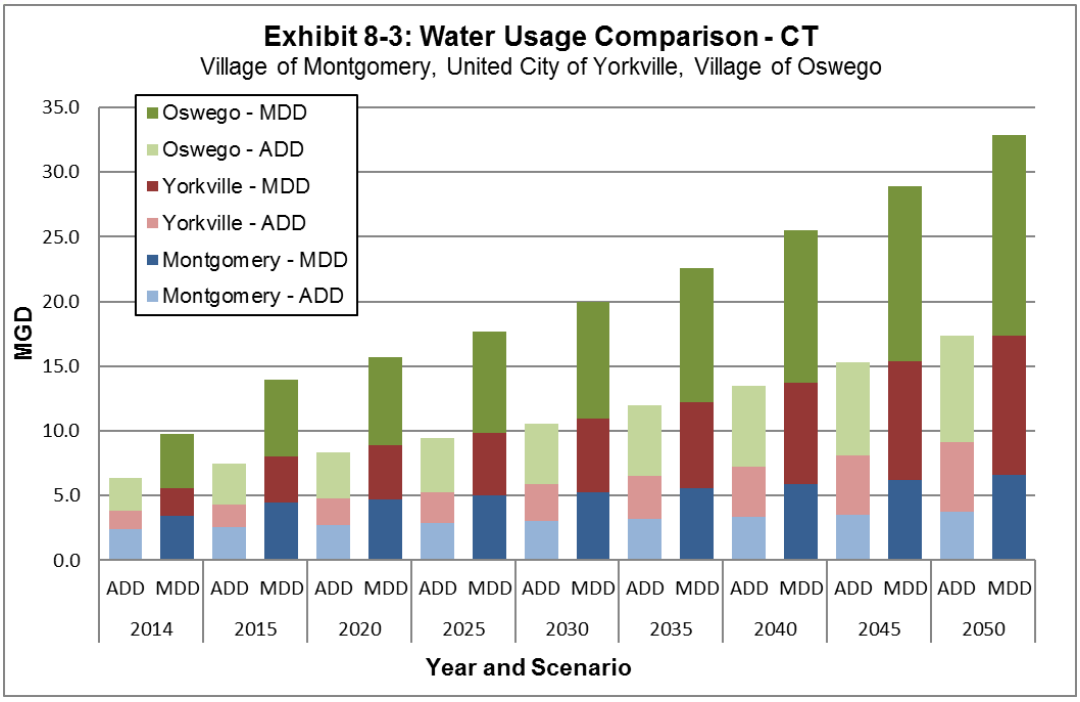


Exhibit 8-4 summarizes how water conservation efforts contributing to the LRI scenario would affect each of the communities' demands through the year 2050. If all three communities where to make a moderately higher commitment to conserve water, the combined 2050 average day demand drops from 17.3 MGD to 14.6 MGD and the 2050 maximum day demand drops from 32.9 MGD to 24.8 MGD.

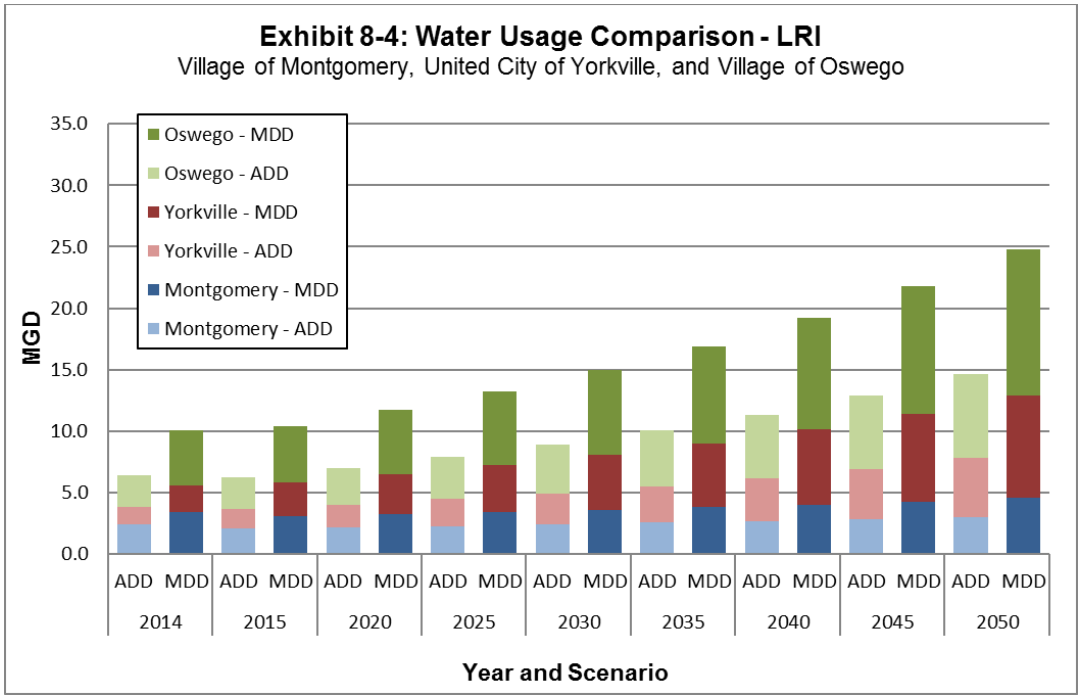


Table No. 8-2 below outlines the percent distribution of the ADD and MDD that is projected for each community. The percentage of usage between the communities does not differ significantly for any community between either the ADD or MDD or the CT and LRI values.

Table No. 8-2: Sub-Regional 2050 Water Use Projection Distribution

Village of Montgomery, United City of Yorkville, and Village of Oswego

Parameter	Water Works System			Total
	Montgomery	Yorkville	Oswego	
2050 CT WATER USE PROJECTION				
Average Day Demand				
Value (MGD)	3.78	5.36	8.19	17.33
% of Total	21.8%	30.9%	47.3%	--
Maximum Day Demand				
Value (MGD)	6.62	10.72	15.56	32.90
% of Total	20.1%	32.6%	47.3%	--
2050 LRI WATER USE PROJECTION				
Average Day Demand				
Value (MGD)	3.02	4.77	6.82	14.61
% of Total	20.7%	32.6%	46.7%	--
Maximum Day Demand				
Value (MGD)	4.54	8.34	11.94	24.82
% of Total	18.3%	33.6%	48.1%	--

8.4 Sub-Regional Existing Water Supply and Treatment Systems

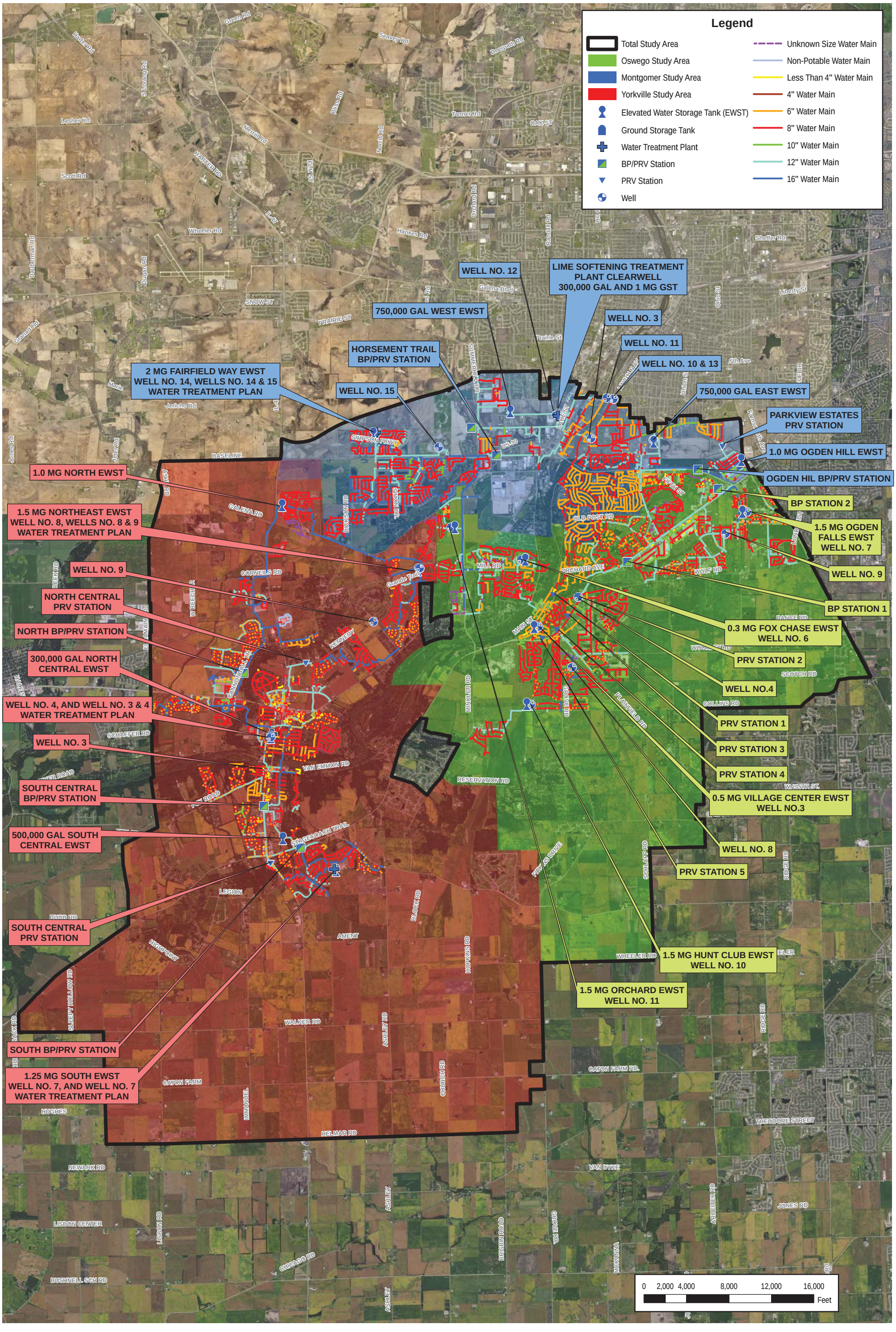
At the time of this study, the Village of Montgomery, United City of Yorkville and Village of Oswego all have supply and treatment systems that are adequate for their current needs. Exhibit 8-5 displays all existing water supply and treatment system infrastructure within the combined planning area. Sections 8.4.1, 8.4.2 and 8.4.3 outline the current sources, treatment and water quality within the sub-region.

8.4.1 Sub-Regional Supply Sources– The communities all currently use groundwater to meet their potable water needs.

A summary of each communities' water wells is as follows:

- Montgomery: two shallow sand and gravel wells, two shallow limestone wells and five deep sandstone Cambrian Ordovician wells
- Yorkville: five deep sandstone wells
- Oswego: eight deep sandstone wells

8.4.2 Sub-Regional Treatment Systems – As stated in the previous section, all of the communities currently obtain their drinking water from groundwater. The following list outlines the different water treatment systems that are used by the Village of Montgomery, United City of Yorkville and Village of Oswego.



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FILE:	YO1437_EXH8-5 OSG,YORK,MON.MXD

SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS
VILLAGE OF MONTGOMERY, ILLINOIS
UNITED CITY OF YORKVILLE, ILLINOIS
AND VILLAGE OF OSWEGO, ILLINOIS

EXHIBIT 8-5
EXISTING WATER WORKS SYSTEMS WITHIN THE SUB-REGION

NORTH

- Montgomery has three WTPs
    - One CEWTP treats Wells No. 14 and 15 primarily for softening and radium removal
    - One CEWTP treats Well No. 8 primarily for softening and radium removal
    - One LSWTP treats Wells No. 3, 4, 10, 11, 12 and 13 primarily for softening and radium removal
- Yorkville has three WTPs
    - One CEWTP treats Wells No. 3 and 4 primarily for softening and radium removal
    - One CEWTP treats Well No. 7 primarily for softening and radium removal
    - One CEWTP treats Wells No. 8 and 9 primarily for softening and radium removal
- Oswego has eight WTPs
    - Eight radium selective ion exchange WTPs (leased from WRT) provide radium removal

8.4.3 Sub-Regional Existing Water Quality Summary – As stated in the previous section, all three communities withdraw water from deep sandstone wells; Montgomery also withdraws water from shallow sand and gravel wells and shallow limestone wells. Both the Village of Montgomery and United City of Yorkville take steps to remove radium and soften their water, but the Village of Oswego only removes the radium from the water and does not soften the water. Due to the relative proximity of the communities and the consistency of the deep aquifers, all the deep sandstone wells experience similar water quality.

8.5 Sub-Regional Fox River Withdrawal Considerations

The decision to have one Sub-Regional Fox River intake and water treatment plant used jointly by the Village of Montgomery, United City of Yorkville and Village of Oswego has several benefits and several challenges. One benefit of creating a Sub-Regional plant is that the communities would be able to save money on the operations and maintenance of the plant. A potential downside of creating a Sub-Regional plant would be the increased water transmission costs due to the need to build the plant in a convenient location for all three communities. This location may mean that the treated water would need to be pumped further than if each community built its own surface water treatment plant. However, a cost-effective Sub-Regional plan could only withstand one intake and WTP. The following sections identify the needed capacity and potential location for the Sub-Regional withdrawal.

8.5.1 Fox River Withdrawal Capacity – WTPs are sized to treat their maximum daily demand. As seen in Table No. 8-1, usage calculations for the communities determined that the sub-regional water demand for a current trends scenario would require a 32 MGD plant and a less resource intensive scenario would require a 25 MGD plant. The Fox River is capable of handling either withdrawal rate during normal flows. They have concluded the Fox River is a sustainable source of water for the Sub-Region. However, there will be times when the river baseflow drops below the permitted protected low flow (most likely would be set at the Q7,10 level at the withdrawal location). Sections 8.5.3 will address the backup water supply needs for the Sub-Regional System.

8.5.2 Potential Withdrawal Locations – Several locations were considered for the placement of the proposed Fox River Intake and Sub-Regional water treatment plant. Placing the WTP as close to equidistant from the main lines of each community's main distribution mains is important in order to 1) avoid placing an unfair burden on one community to provide a larger ratio of the raw and treated water transmission mains, and 2) ensure that the water age is not a factor for just one community. The location that meets this goal the best is in the Fox River/Orchard Road Intersection Corridor.

8.5.3 Backup Water Supply – As discussed, the risk of the Fox River flow dropping below the permitted protected low flow continues to reduce into the future, but there undoubtedly will be times when it will go below the permitted protected low flow. When those conditions exist, a backup water supply will be needed for the sub-region. The three communities have significant investment in water wells throughout the sub-region. Assuming the three communities limit their use of the deep aquifer to meet a minimum amount of their annual water demand and assuming Joliet switches to an alternate water supply source, the deep sandstone aquifer could be a reliable backup water source for the sub-region.

While the Fox River withdrawal and WTP will be sized to meet the maximum day demand, it would take a very large investment to set up the backup water supply network to meet the maximum day demand, too. Through discussions with each of the three communities' staff, it was decided the backup supply system would be sized to meet the 2050 Average Day Demand with the largest well being out of service. While it is understood the backup supply may be needed in times of higher demand (i.e. low flow conditions in the river likely will occur during a drought), the three communities would work to manage the water demands to fall inline with average day water uses so the costs for backup supply are more reasonable. With this target in mind, the target total flow rate of the wells that would be connected to the Sub-Regional WTP would be the CT and LRI ADD plus 1,200 gpm (the flow rate of the largest well that could be cost-effectively connected to the Sub-Regional WTP would be 400 gpm divided amongst each of the three communities). In the circumstance where the river withdrawal was limited or fully banned, the wells would pump to the Sub-Regional WTP. The WTP would distribute treated water of the same water quality as it would distribute when treating Fox River water.

When considering a Sub-Regional WTP near the Fox River/Orchard Road corridor, some of the three communities' wells can be cost-effectively pumped to that location while others are simply too expensive to connect. In an effort to balance an equitable distribution of a backup well network to the three communities, considering existing and potential additional wells, Tables No. 8-3 and 8-4 were created. Tables No. 8-3 and 8-4 summarize the CT and LRI backup water supply approaches, respectively. For both the CT and LRI scenarios, the existing wells which will not be connected to the Sub-Regional LSWTP will be abandoned in the far-future.

Under the CT scenario, two of the Village of Montgomery's existing wells and one new well would be connected. Two of the United City of Yorkville's existing wells and one additional new well would be connected in the CT scenario, as well. The Village of Oswego would connect four of their existing wells and add two new wells. One more additional well would be needed and the cost and utilization is 'split' between the Village of Montgomery and United City of Yorkville based on usage. This makes for a total of eight existing wells and five additional wells under the CT scenario.

Table No. 8-3: Backup Well Water Supply To Meet 2050 Average Day Demand - CT

Village of Montgomery, United City of Yorkville, Village of Oswego

Parameter	Water Works System						Total
	Montgomery		Yorkville		Oswego		
2050 CT WATER USE PROJECTION							
Average Day Demand (MGD)	3.78		5.36		8.19		17.33
Average Day Demand (gpm)	2,625		3,723		5,687		12,035
Average Day Demand With 400 gpm extra (gpm)	3,025		4,123		6,087		13,235
Wells To Be Connected To WTP							
	Well No.	Rate (gpm)	Well No.	Rate (gpm)	Well No.	Rate (gpm)	
	14	1,000	6	1,000	6	1,000	
	15	1,000	8	1,200	8	1,000	
	17	1,000	9	1,200	10	1,200	
	SR-1*	25	SR-1*	723	11	1,200	
	Total:	3,025	Total:	4,123	12	1,000	
					13	1,000	
					Total:	6,400	

Notes:
*Portion of new well SR-1; 96.7% for Yorkville & 3.3% for Montgomery

For the LRI scenario, the Village of Montgomery and United City of Yorkville would connect two existing wells and add one additional well, each. Oswego would connect the same four existing wells that were utilized under the CT scenario, but would not need to drill another one independently. Finally, a Sub-Regional well is once again added but this time its usage is split between the communities of Yorkville and Oswego.

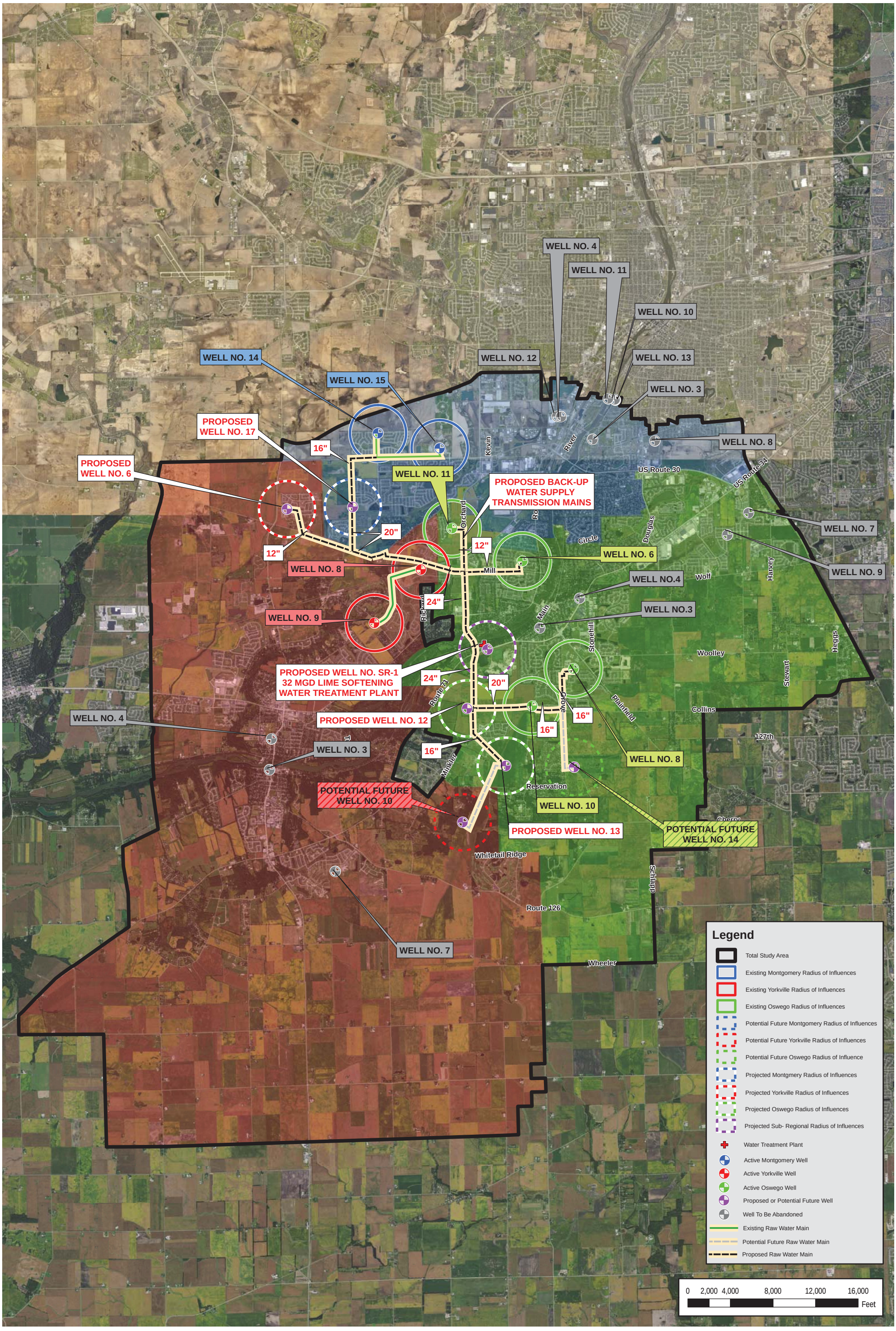
Table No. 8-4: Backup Well Water Supply To Meet 2050 Average Day Demand - LRI

Village of Montgomery, United City of Yorkville, Village of Oswego

Parameter	Water Works System						Total
	Montgomery		Yorkville		Oswego		
2050 LRI WATER USE PROJECTION							
Average Day Demand (MGD)	3.02		4.77		6.82		14.61
Average Day Demand (gpm)	2,100		3,309		4,739		10,149
Average Day Demand With 400 gpm extra (gpm)	2,500		3,709		5,139		11,349
Wells To Be Connected To WTP							
	Well No.	Rate (gpm)	Well No.	Rate (gpm)	Well No.	Rate (gpm)	
	14	1,000	6	1,000	6	1,000	
	15	1,000	8	1,200	8	1,000	
	17	1,000	9	1,200	10	1,200	
	Total:	3,000	SR-1*	309	11	1,200	
			Total:	3,709	SR-1*	739	
					Total:	5,139	

Notes:
*Portion of new well SR-1; 29.5% for Yorkville & 70.5% for Oswego

Exhibit 8-6 displays the proposed transmission main network for the backup water wells for the CT water use scenario. Exhibit 8-7 summarizes the backup transmission network for the LRI water use scenario. Both exhibits also display the Sub-Regional WTP, existing and proposed wells, and other infrastructure associated with each scenario.



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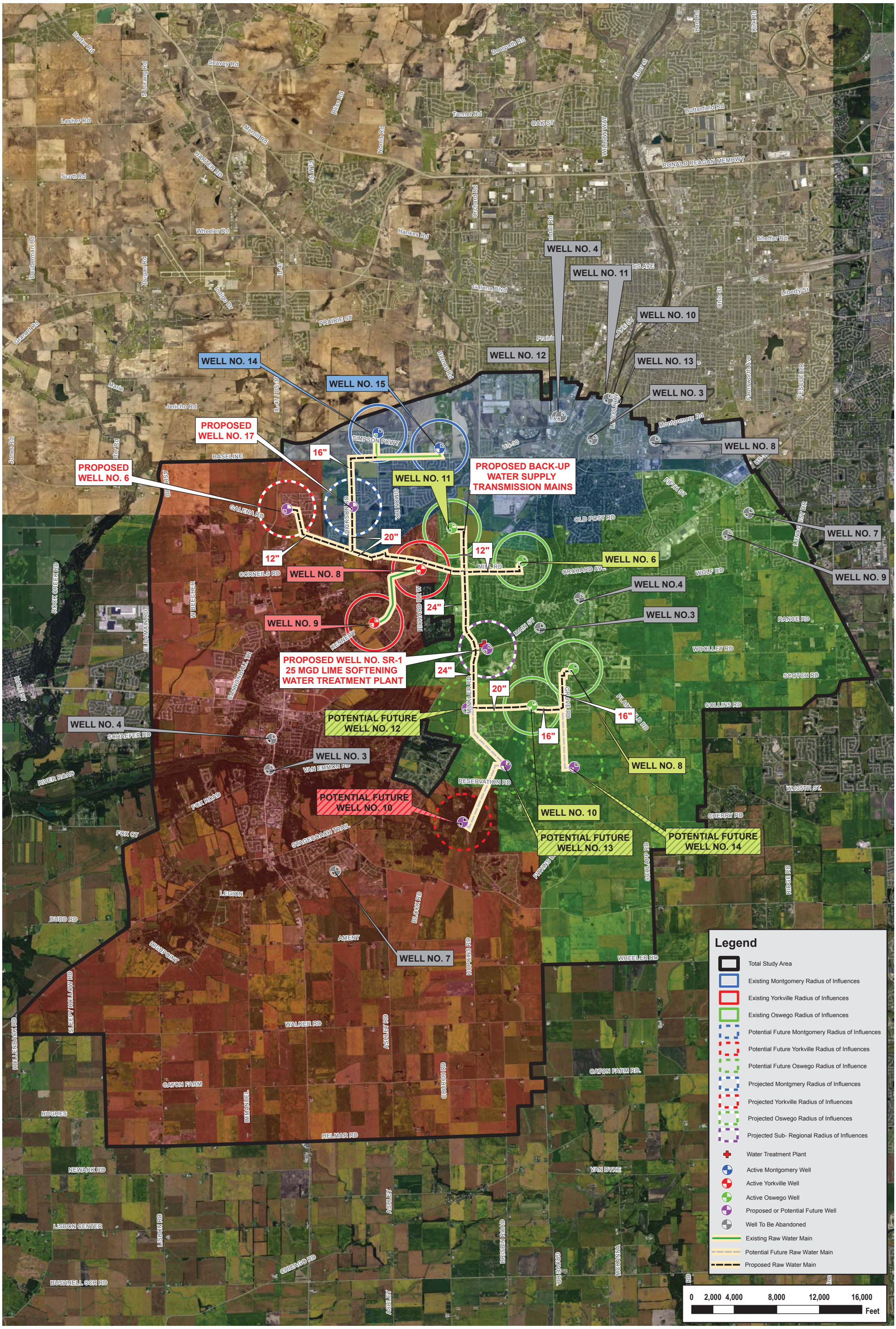
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SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS
VILLAGE OF MONTGOMERY, ILLINOIS
UNITED CITY OF YORKVILLE, ILLINOIS
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EXHIBIT 8-6
SUB-REGIONAL BACKUP WATER SUPPLY TRANSMISSION NETWORK - CT

NORTH



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SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS
VILLAGE OF MONTGOMERY, ILLINOIS
UNITED CITY OF YORKVILLE, ILLINOIS
AND VILLAGE OF OSWEGO, ILLINOIS

EXHIBIT 8-7
SUB-REGIONAL BACKUP WATER SUPPLY TRANSMISSION NETWORK - LRI

8.6 Fox River Treatment Options

Fox River water quality data from both Elgin and Aurora were reviewed to determine the design constraints for the Sub-Regional surface water treatment plant. The hardness as averaged between all four seasons is 336 mg/L as $CaCO_3$ which is considered to be 'very hard'. Very hard water can diminish the effectiveness of detergents, stain surfaces and have other bothersome characteristics. The target hardness for the WTP effluent is 100-130 mg/L as $CaCO_3$, which is considered to be on the borderline of moderate to hard water, and which is consistent with the current finished water hardness within the Village of Montgomery and United City of Yorkville Water Works Systems.

8.6.1 Conventional Lime Softening – Lime softening is a common and cost effective way to treat both surface water and groundwater. Lime softening not only removes hardness, it can remove microorganisms and dissolved organic matter. When hydrated lime [Ca(OH)2] or quicklime (CaO) is added to raw water, the lime reacts with the calcium and magnesium particles. Due to the larger size of the particles and the increased pH of the water, the particles settle out taking the cations causing hardness with them.

Single-stage and two-stage lime softening is often considered to treat hard or very hard water. In single-stage treatment, lime is added to raise the pH above 10.3 and remove calcium. Two-stage treatment removes both calcium and magnesium by raising the pH to about 11-11.3 in the first stage to remove magnesium, then lowering the pH in the second stage to remove calcium. While two-stage processes often produce a better finished water quality than single stage and generally cost less to operate, they are typically more expensive to build. Because the magnesium hardness does not prove to be a large amount of the Fox River water hardness, single stage lime softening would be sufficient.

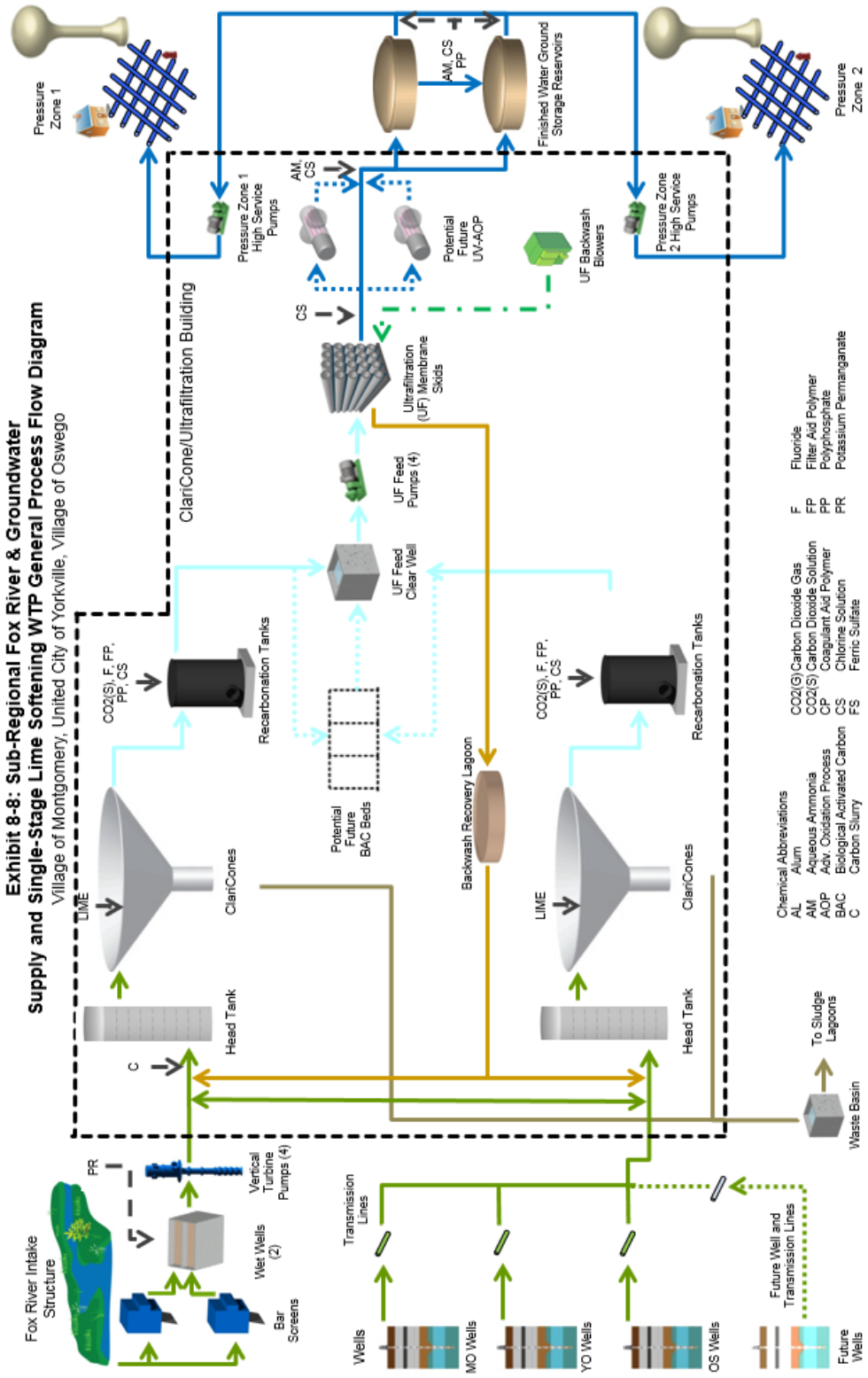
As discussed in Section 6, it was determined a single stage upflow clarifier, such as a Claricone, would be the most cost effective treatment option for the Sub-Regional WTP.

8.6.2 Membrane Treatment – Membrane treatment is the filtration of water by passing (in some cases with the help of gravity and in some cases with the help of a pump) water through a membrane which has very small pores. Any contaminants which do not fit through the pores will be prevented from passing through the membrane; thus, the effluent leaving the membrane will theoretically be free of all contaminants which are too large to pass through the pores. Membranes are often used later in the treatment train as a polishing step.

When using membrane technology, it can be useful to install the membranes using 'skids'. Skids allow for the membranes to take up a relatively small amount of square footage in the treatment areas. Additionally, skids allow the membranes to be installed quickly and cost effectively.

8.6.3 Lime Softening & Membrane Treatment – A combination of lime softening and membrane treatment has been selected for the Sub-Regional WTP. Although the ClariCones would theoretically remove many of the contaminants, the ultrafiltration membranes would catch many of the particles that wouldn't be removed by the lime softening process. Powder activated carbon would be added to the treatment process to further removal unwanted contaminants. Exhibit 8-8 displays the proposed general process flow diagram for both the CT and LRI water use scenarios.

EPA regulations regarding drinking water can change based on discovery of the effects contaminants can have on human health as well as pollution concentration levels water systems can attain by using the best available technology. While some 'near-future' regulations are well known, the EPA will likely continue to update regulations up to and through 2050. It is vital to consider potential future regulations in the design and layout of the WTP to avoid costly modifications in the future. For this reason, the design of the WTP should consider the addition of both biologically activated carbon (BAC) beds and ultra violet-advanced oxidation process (UV-AOP) treatment.


Exhibit 8-8: Sub-Regional Fox River & Groundwater
Supply and Single-Stage Lime Softening WTP General Process Flow Diagram
Village of Montgomery, United City of Yorkville, Village of Oswego
ClariCone/Ultrafiltration Building
Pressure Zone 1
Pressure Zone 2
Finished Water Ground Storage Reservoirs
AM, CS
PP
Pressure Zone 1 High Service Pumps
Pressure Zone 2 High Service Pumps
Potential Future UV-AOP
UF Backwash Blowers
CS
Ultrafiltration (UF) Membrane Skids
UF Feed Pumps (4)
UF Feed Clear Well
CO2(S), F, FP, PP, CS
Recarbonation Tanks
Potential Future BAC Beds
Backwash Recovery Lagoon
LIME
ClariCones
Head Tank
C
To Sludge Lagoons
Waste Basin
Chemical Abbreviations
AL Alum
AM Aqueous Ammonia
AOP Adv. Oxidation Process
BAC Biological Activated Carbon
C Carbon Slurry
CO2(G) Carbon Dioxide Gas
CO2(S) Carbon Dioxide Solution
CP Coagulant Aid Polymer
CS Chlorine Solution
FS Ferric Sulfate
F Fluoride
FP Filter Aid Polymer
PP Polyphosphate
PR Potassium Permanganate
PR
Vertical Turbine Pumps (4)
Wet Wells (2)
Bar Screens
Fox River Intake Structure
Transmission Lines
Wells
MO Wells
YO Wells
OS Wells
Future Well and Transmission Lines
Future Wells

8.7 Sub-Regional Water Distribution Evaluation

As stated previously in section 8, the proposed location for the Sub-Regional Water Treatment Plant is near the intersection of the Fox River and Orchard Rd. This area is centrally located between all three communities, which will allow for cost savings related to the transmission mains.

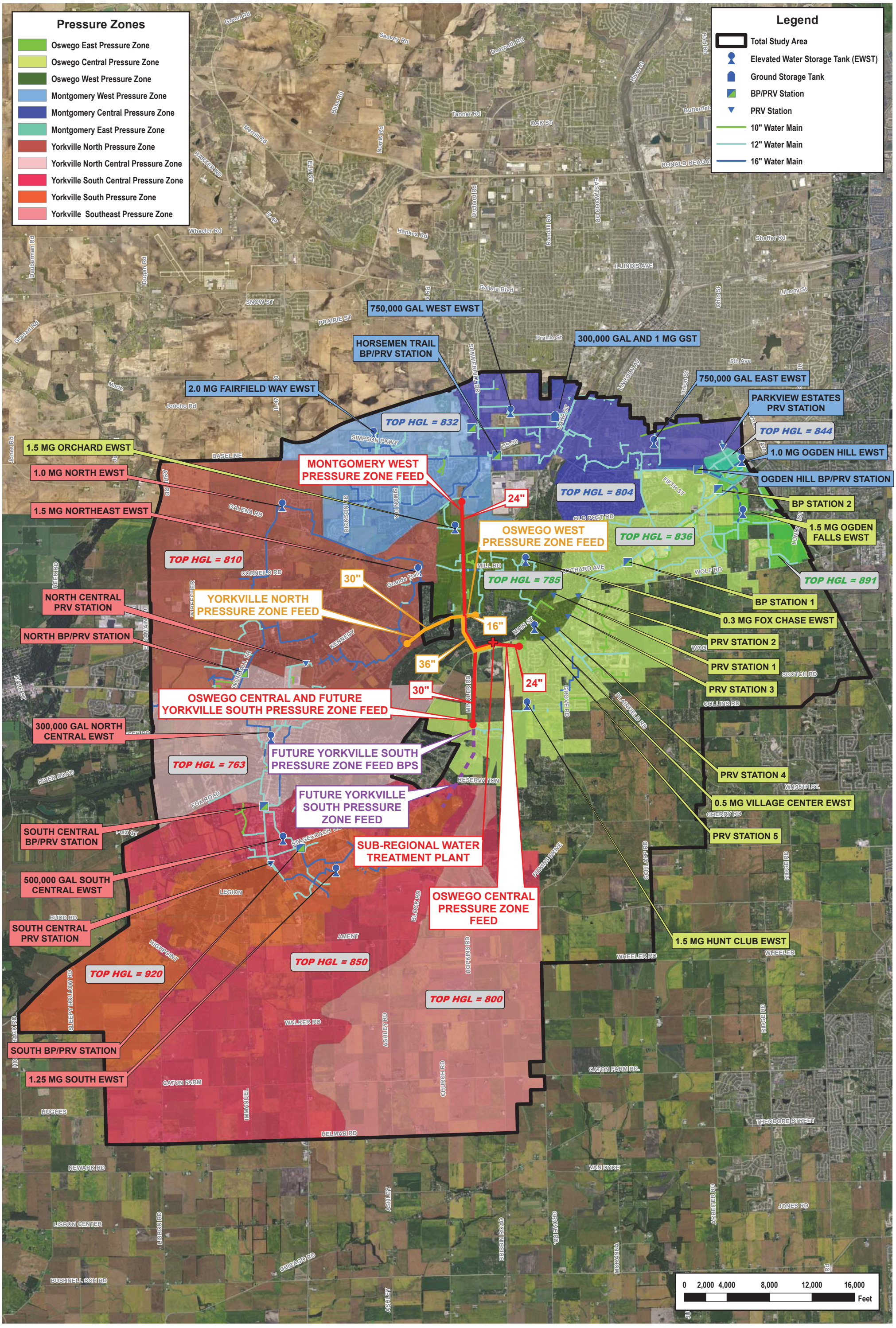
8.7.1 Transmission Mains – Exhibit 8-9 summarizes the proposed layout of the surface water transmission system for both the CT and LRI scenarios. The goals for locating and sizing the treated water transmission lines were as follows:

- Meet the HGL of as many of each of the communities' pressure zones with a minimal number of pump galleries needed at the WTP
- Minimize the length of pipe
- Provide redundancy (i.e. multiple connections) to each of the systems where cost-effectively feasible
- Size the pipes to meet the maximum day demand in 2050 with reasonable velocity and head loss

When evaluating the hydraulic grade lines of each community, it became apparent that the Village of Montgomery's West Pressure Zone Top HGL (Elevation = 832) and the Village of Oswego's Central Pressure Zone Top HGL (Elevation = 836) were very similar. It also became apparent that the United City of Yorkville's North Pressure Zone HGL (Elevation of 810) and the Village of Oswego's West Pressure Zone HGL (Elevation of 785) were similar, too. Therefore, the transmission main network would be set up with two pumping galleries that pump into two separate transmission main networks.

The High Transmission Main Network, the red pipeline on Exhibit 8-9 would transmit water to the Village of Montgomery through a route along Orchard Road. The High Transmission Main Network also would transmit water to the Village of Oswego's Middle Pressure Zone at the two proposed connection points on Exhibit 8-9. The Low Transmission Main Network, the orange pipeline on Exhibit 8-9, would transmit water to the United City of Yorkville through a connection along Route 34. It also would connect to the Village of Oswego's West Pressure Zone through a connection near Route 34. Finally, a future connection to the south side of the United City of Yorkville's system is planned through an extension of the High Transmission Main down Minkler Road. Given the higher HGL of the United City of Yorkville's South Pressure Zone, a booster pump station also will need to be added along that line.

Based on the initial plan, there are three transmission main connection points identified for the Village of Oswego and then one for both for the United City of Yorkville and Village of Montgomery. A second connection is planned for the United City of Yorkville at an appropriate time in the future. Unfortunately, there is no cost-effective route to provide a second connection to the Village of Montgomery. In lieu of constructing a very expensive second connection, it would be much better if the Village of Montgomery and Village of Oswego work on setting up additional interconnects within their distribution systems. For that matter, it would seem beneficial for all three communities to work together on interconnects, just in case issues arise within the transmission network.



Engineering Enterprises, Inc. 52 Wheeler Road Sugar Grove, Illinois 60554 (630) 466-6700 *www.eeiweb.com*	**United City of Yorkville** 800 Game Farm Road Yorkville, IL 60560	DATE: JANUARY 2017 PROJECT NO.: YO1437 BY: MJT PATH: H:\GIS\PUBLIC\YORKVILLE\2014\ FILE: YO1437_EXH8-9 OSG,YORK,MON	**SUB-REGIONAL WATER SUPPLY AND TREATMENT ANALYSIS** VILLAGE OF MONTGOMERY, ILLINOIS UNITED CITY OF YORKVILLE, ILLINOIS AND VILLAGE OF OSWEGO, ILLINOIS	**EXHIBIT 8-9** **WATER DISTRIBUTION PLANNING** **EXHIBIT - CT AND LRI** NORTH

8.7.2 United City of Yorkville Distribution Upgrades – The United City of Yorkville currently distributes their water using a 'decentralized system' due to the fact that each of the WTPs is producing water and adding the water to the distribution system at their respective locations in the City. In the proposed Sub-Regional scenario, the Sub-Regional treated water would be transmitted into the system on the northeast side of the system. All of the distribution upgrade information to be able to effectively distribute the water throughout the system to meet peak demands was summarized in Section 6.

8.8 Sub-Regional Costs

Cost estimates were developed for the water supply, treatment and transmission of the water. A summary of the CT and LRI cost estimates for the Alternate 3 scenario can be found in Table 8-5. The detailed Sub-Regional cost estimates are included in Appendix G.

The Sub-Regional costs were split several different ways in the cost scenarios based off the design parameter of the specific improvement. Because the capacity of the LSWTP is sized to meet the maximum day demand scenario, the costs were split based on the ratio of each community's MDD to the Sub-Regional MDD. The capacities of the backup raw water wells and raw water transmission mains were designed to meet the average day demand and therefore the costs were split based on the ratio of each community's ADD to the Sub-Regional ADD. Costs specific to each community were paid for by each community and if there was an odd ratio, such as with the Sub-Regional Well, the ratio was split based on usage. Finally, costs that were not capacity dependent, such as pilot testing, were split equally. When applicable, the cost tables, exhibits and appendices make note of how the costs are split using the superscripts A, M, R and E to show costs split by ADD ratios, MDD ratios, ratios based on use and evenly split costs, respectively.

Table No.8-5: Water Works System Master Plan Cost Estimate Summary

United City of Yorkville, IL

Impr. No.	Improvement	Capital Cost	Annual O&M		Total 20-Year Present Worth
			Annual Cost	20-Year Present Worth	
Alternate No. 3A: Sub-Regional Fox River Intake with ClariCone LSWTP & Existing DSS Water Wells - CT					
3A-CT-1	Well No. 6	$2,419,000	$73,832	$847,000	$3,266,000
3A-CT-2	Well No. SR-1[r]	$2,339,000	$71,396	$819,000	$3,158,000
3A-CT-3	32 MGD Fox River Intake Pump Station[m]	$2,389,000	$92,727	$1,064,000	$3,453,000
3A-CT-4	32 MGD Single Stage (ClariCone) LSWTP[m]	$24,290,000	$1,362,227	$15,625,000	$39,915,000
3A-CT-5	Well Transmission Mains[a]	$9,616,000			$9,616,000
3A-CT-6	Treated Water Transmission Mains	$12,990,000			$12,990,000
		$54,043,000	$1,600,181	$18,355,000	$72,398,000
3A-CT-7	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
3A-CT-8	Water Distribution System Improvements	$22,561,000			$22,561,000
		$27,431,000	$50,000	$573,000	$28,004,000
		$81,474,000	**$1,650,181**	**$18,928,000**	**$100,402,000**
Alternate No. 3B: Sub-Regional Fox River Intake with ClariCone LSWTP & Existing DSS Water Wells - LRI					
3B-LRI-1	Well No. 6	$2,419,000	$70,813	$812,000	$3,231,000
3B-LRI-2	Well No. SR-1[r]	$714,000	$20,890	$240,000	$954,000
3B-LRI-3	25 MGD Fox River Intake Pump Station[m]	$2,161,000	$85,088	$976,000	$3,137,000
3B-LRI-4	25 MGD Single Stage (ClariCone) LSWTP[m]	$21,886,000	$1,258,998	$14,441,000	$36,327,000
3B-LRI-5	Well Transmission Mains[a]	$9,298,000			$9,298,000
3B-LRI-6	Treated Water Transmission Mains	$12,990,000			$12,990,000
		$49,468,000	$1,435,789	$16,469,000	$65,937,000
3B-LRI-7	2.0 MG EWST	$4,870,000	$50,000	$573,000	$5,443,000
3B-LRI-8	Water Distribution System Improvements	$22,561,000			$22,561,000
		$27,431,000	$50,000	$573,000	$28,004,000
		$76,899,000	**$1,485,789**	**$17,042,000**	**$93,941,000**

Notes:

All values based on 2016 construction costs

a. Cost shown is portion of total cost based off of Average Daily Demand (CT: 21.8% for Montgomery, 30.9% for Yorkville, 47.3% for Oswego; LRI: 20.7% for Montgomery, 32.6% for Yorkville; 46.7% for Oswego).

m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).

r. Cost shown is portion of total cost based off of ratio of usage - For the SR-1 well, the ratios are as follows: (CT: 3.3% for Montgomery, 96.7% for Yorkville, 0% for Oswego; LRI: 0% for Montgomery, 29.5% for Yorkville; 70.5% for Oswego).

8.8.1 Sub-Regional Current Trends Water Use Scenario Costs– Table No. 8-5 displays the summary of the cost estimate for the CT scenario. The detailed cost estimates for the CT Water Use Scenario can be found in Appendix G.

The CT scenario includes the addition of two backup wells along with their transmission mains, the Sub-Regional intake station and LSWTP and the treated water transmission mains. As documented in Table No. 8-2, the United City of Yorkville is projected to account for 30.9% of the total Sub-Regional water demand under the ADD CT scenario and 32.6% of the total Sub-Regional water demand under the MDD CT scenario. The United City of Yorkville would need to fund 96.7% of the flow from the Sub-Regional well in this scenario.

The costs shown in Table No. 8-5 represent the estimated total which includes the engineering, legal and contingency costs. The capital costs for the CT scenario are approximately $81.5 million. Approximately 33% of the capital cost, $26.7 million, is the cost for the intake pump station and the 32 MGD LSWTP. Approximately 18% of the total cost, $14.4 million, consists of the two new wells and the well transmission

mains. The treated water transmission mains, distribution improvements and storage additions make up approximately the last 49% of the current trends capital cost at a cost of $40.4.

8.8.2 Sub-Regional Less Resource Intensive Water Use Scenario Costs – Table No. 8-5 displays the summary of the cost estimate for the LRI scenario. The detailed cost estimates for the LRI Water Use Scenario can be found in Appendix G.

The LRI scenario includes the addition of one backup well for the United City of Yorkville and one Sub-Regional backup well, which is also added to meet the Village of Oswego demands, the Sub-Regional Fox River intake, the LSWTP and the treated water transmission and distribution mains. As documented in Table No. 8-2, the United City of Yorkville is projected to account for 32.6% of the total Sub-Regional water demand under the ADD LRI scenario and 33.6% of the total Sub-Regional water demand under the MDD LRI scenario. In the LRI scenario, the United City of Yorkville also is projected to account for 29.5% of the output from the Sub-Regional backup well. The Village of Oswego would account for the other 70.5% of the output from the well.

The capital costs for the less resource intensive scenario are around $76.9 million. Approximately 31% of the capital cost, $24.0 million, is the cost for the intake pump station and the 25 MGD LSWTP. 16% percent of the total cost, $12.4 million, consists of the backup infrastructure of the two new wells and the well transmission mains. The treated water transmission mains, storage additions, and water distribution system improvements make up approximately the last 53%, $40.4 million, of the less resource intensive capital cost.

8.8.3 Sub-Regional Transmission Main Costs – The transmission main costs above can be found in Table No. 8-5 and the transmission main routes can be seen in Exhibit 8-9. The cost for the well transmission mains varies between the CT and LRI scenario due to the raw water main that would need to be constructed if the Village of Oswego Well No. 13 is connected to the LSWTP. The treated water transmission mains are identical in both scenarios. The detailed cost estimates for the transmission mains can be found in Appendix G.

The internal distribution improvements required under the Sub-Regional approach, and the costs for them, were presented in Section 7. The costs are added to the other system implementation costs below.

8.8.4 United City of Yorkville Sub-Regional Improvement Costs Summary – The capital cost difference between the current trends scenario and less resource intensive scenario for the United City of Yorkville is $4,575,000, so the City would be able to save over $4.5 million in capital costs by reducing their water usage. Recurring operations and maintenance costs would also contribute to a monetary difference between the CT and LRI scenarios.

8.8.5 Sub-Regional LRI Improvement Costs Summary – Table No. 8-6 outlines the capital cost distribution for the Sub-Regional water supply, treatment and distribution assuming all three communities follow the less resource intensive scenario. This table combines the LRI values for each community for the Sub-Regional W TP. The minimum internal distribution system improvements that would also be needed in order to incorporate the WTP are outlined for Montgomery and Yorkville. It should be noted the minimum internal distribution improvements for the Village of Oswego were not analyzed as part of the scope of this project. It is assumed the Village of Oswego will complete that analysis in the near future.

Table No. 8-6: Sub-Regional Capital Cost Distribution - LRI

Village of Montgomery, United City of Yorkville, Village of Oswego

Parameter	Water Works System			Total
	Montgomery	Yorkville	Oswego	
Additional Wells[r]	$2,419,000	$3,133,000	$1,705,000	$7,257,000
Well Transmission Main Network[a]	$5,904,000	$9,298,000	$13,319,000	$28,521,000
Fox River Intake & LSWTP[m]	$13,097,000	$24,047,000	$34,424,000	$71,568,000
Treated Water Transmission Main Network	$10,219,000	$12,990,000	$6,966,000	$30,175,000
Supply & Treatment Subtotal:	$31,639,000	$49,468,000	$56,414,000	$137,521,000
Minimum Internal Distribution System Impr.	$13,565,000	$18,055,000	*	
Total:	**$45,204,000**	**$67,523,000**		

Notes:
*Detailed modeling has not been completed to define the necessary distribution system improvements for the Village of Oswego WWS.
a. Cost shown is portion of total cost based off of Average Daily Demand (CT: 21.8% for Montgomery, 30.9% for Yorkville, 47.3% for Oswego; LRI: 20.7% for Montgomery, 32.6% for Yorkville; 46.7% for Oswego).
m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).
r. Cost shown is portion of total cost based off of ratio of usage - For the SR-1 well, the ratios are as follows: (CT: 3.3% for Montgomery, 96.7% for Yorkville, 0% for Oswego; LRI: 0% for Montgomery, 29.5% for Yorkville; 70.5% for Oswego).

8.9 Sub-Regional Cost Analysis

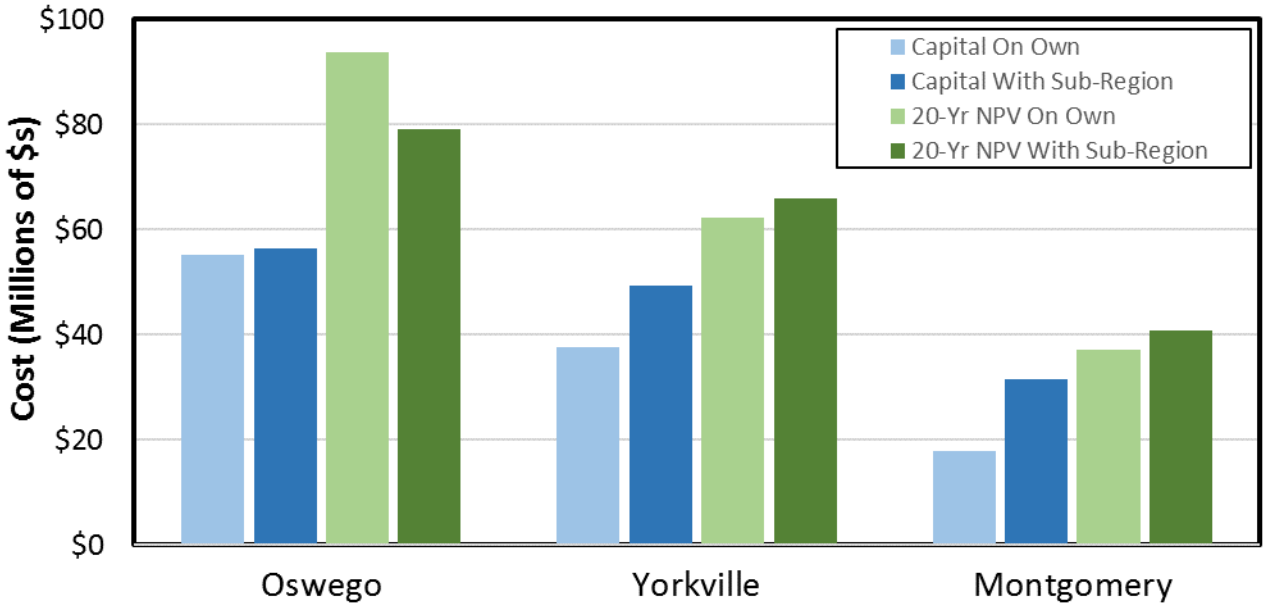
Subsection 8.9.1 compares the cost of the Sub-Regional WTP for each community as compared to the cost each community utilizing their own WTP system. Subsection 8.9.2 compares the projected water bills for Montgomery, Yorkville and Oswego to other local communities which utilize surface water treatment systems.

8.9.1 Fox River Alternatives Comparison – Exhibit 8-10 outlines the comparative costs for each of the communities to construct their own WTP, which withdraws water from the Fox River, as compared to the cost of each community constructing their own WTP for the Fox River. This exhibit takes into account the

recurring operations and maintenance costs as part of a net present value (NPV). The capital cost to implement their own system is lower for each community than to implement the Sub-Regional WTP. The 20-year NPV cost between the two options is very close for both Montgomery and Yorkville. The NPV difference beyond 20 years will continue to decrease over time, and there will be a cost savings for Montgomery and Yorkville participating in a Sub-Regional solution shortly after the 20-year time period. For Oswego, however, the 20-year NPV to implement their own WTP is much higher than utilizing a Sub-Regional WTP.

Exhibit 8-10: Capital & Net Present Value Cost Comparison - Supply, Treatment and Transmission - LRI

Village of Montgomery, United City of Yorkville, Village of Oswego



8.9.2 Projected Water Supply & Treatment Water Bill Comparison – In order to compare the projected cost of water under the scenario where Montgomery, Yorkville and Oswego would utilize a Sub-Regional WTP, a sample water bill that represents the usage of an average house was created for each community. Table No. 8-7 below outlines the sample monthly water bills for both the present and projected cost for each of the communities. This water bill assumes 7,000 gallons of billed water, which would be the equivalent of a 2.9-person household using 80 gpcd. Additionally, the sample water bill assumed a 40-year bond was used to pay for the capital costs for the Sub-Regional WTP upgrades and the bond was issued at a 4.0% interest rate.

Under the 2025 projected costs, the time period when the Sub-Regional improvements could be completed, the sample water bill for a typical 2.9-person household would be $37.40 for Montgomery, $50.51 for Yorkville and $41.36 for Oswego. The rates were calculated by assuming that the monthly base rate would be utilized only to cover the bond payment and the cost based on volume of water used would be charged based on the operations and maintenance costs.

Table No. 8-7: Water Works System Master Plan Water Rates Analysis - LRI

Village of Montgomery, United City of Yorkville, Village of Oswego

	Montgomery		Yorkville		Oswego	
	2015	2025	2015	2025	2015	2025
Population & Historical & Projected Water Billing Metrics						
Population	28,346	31,623	19,804	27,126	34,820	45,817
No. of Water Bills	9,175	10,236	6,400	8,766	11,100	14,606
Ratio of Population to No. of Bills	3.09	3.09	3.09	3.09	3.14	3.14
Calculated Average Daily Water Use (MGD)[ζ]	2.551	2.530	1.782	2.170	3.134	3.665
Annual Water Billed (MG)	624.68	619.46	421.37	513.03	766.82	896.89
Avg. Annual Water Billed (MGD)	1.711	1.697	1.154	1.406	2.101	2.457
Ratio of Water Use to Water Billed	1.491	1.491	1.544	1.544	1.492	1.492
2015 Total Water Billings ($)[τ]	$3,432,154.25		$2,150,311.65		$3,520,196.80	
2015 Normalized Water Rate ($/1000 Gal)[ψ]	$5.49		$5.10		$4.59	
2015 Base Water Rate ($16 for 350 CF)	--		$16.00		--	
2015 Actual Water Rate ($/1000 Gal)[π]	$5.30		$4.88		$4.04	
2015 Service Charge	$4.00		--		$6.34	
2015 Monthly Water Cost For Typical Residential User[θ]	$39.10	$52.55	$37.38	$50.24	$31.45	$42.27
Alternate No. 3B: Sub-Regional Fox River Intake with ClariCone LSWTP & Existing DSS Water Wells - LRI Cost Summary						
Sub-Regional Capital Cost[α]	$31,639,000	$38,911,979	$49,468,000	$60,839,400	$56,414,000	$69,382,104
Sub-Regional Annual O&M[κ]		$1,903,453		$1,576,412		$2,755,907
Capital Cost Debt Service Calculation						
No. of Payments (40-Yr Bond)		480		480		480
Annual Interest Rate		4.0%		4.0%		4.0%
Monthly Payment[μ]		$162,628		$254,271		$289,975
Potential Service Charge Options						
Monthly Debt Service Charge per User		$15.89		$29.01		$19.85
Water Rate ($/1000 Gal) To Cover Annual O&M Cost		$3.07		$3.07		$3.07
Estimated 2025 Monthly Water Supply & Treatment Cost[θ]		$37.40		$50.51		$41.36

Notes:

[ζ] 2015 Averge Daily Water Use computed with 2015 population X 90 gpcd; 2025 Average Daily Water Use computed with 2025 population X 80 gpcd

[τ] Montgomery and Yorkville are total revenue amounts; Total revenue for Oswego is calculated based on billed units and a bimonthly service charge of $6.34 per water bill

[ψ] Total revenue divided by number of units sold; Does not account for any base charges

[π] Actual water rate in 2015; Does not include service charge(s)

[θ] Based on 7,000 gallons of monthly water use; 2025 estimated water bill based on 3% inflation for 10 years

[α] Combined water supply, treatment, treated water transmission main; 2016 costs inflated 3% for 7 years for 2025 final costs (bid project in 2023)

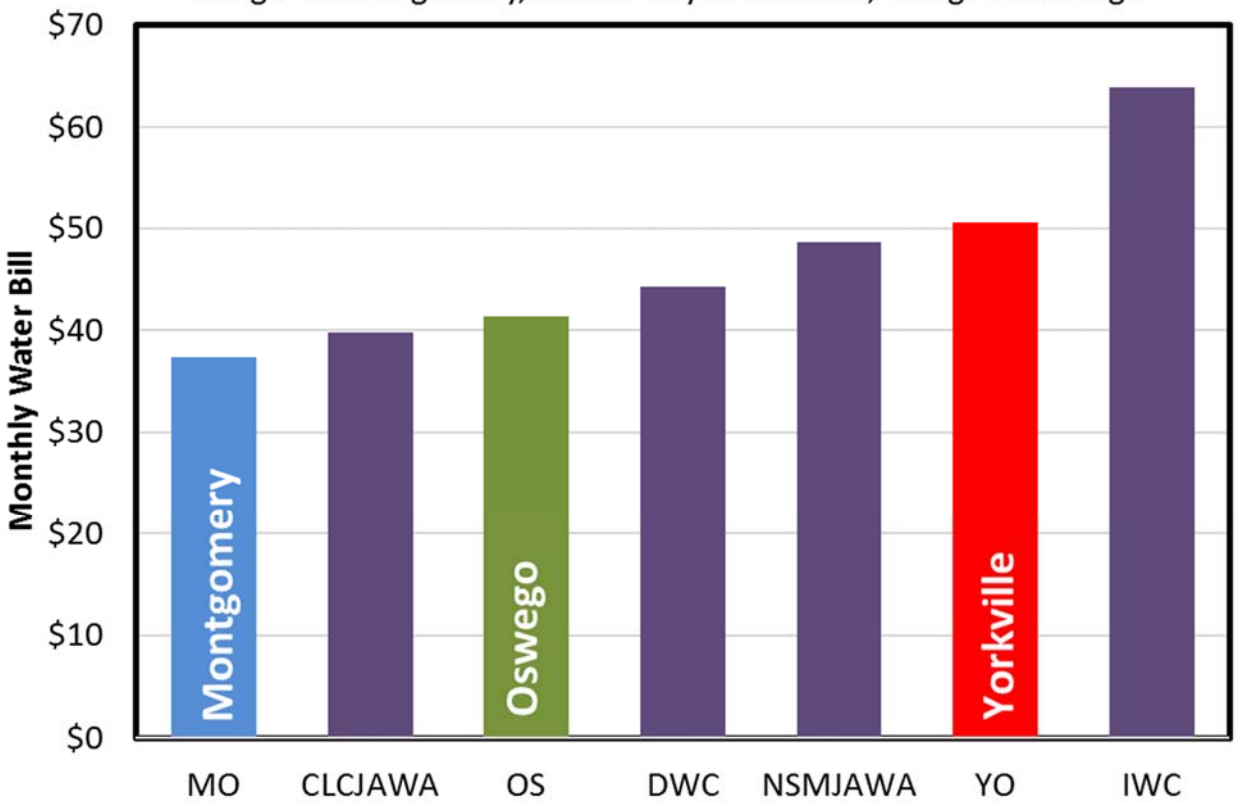
[κ] Annual 2015 O&M cost is $0.25 M for Pump Station, $3.75 M for WTP and $0.78 M total for all backup wells. Costs distributed based on portion of 2025 water use.

[μ] Capital Cost Only

Exhibit 8-11 outlines the projected typical residential water bill for each of the three communities as compared to local communities that use Lake Michigan water. Many communities who jointly use surface water do so through a JAWA. As Exhibit 8-11 shows, the projected monthly water costs for all three communities are less than those of the Illinois Water Company (IWC). The costs of the Northwest Suburban Municipal Joint Action Water Agency (NSMJAWA), the Central Lake County Joint Action Water Agency (CLCJAWA) and the DuPage Water Commission (DWC) are all similar to the costs of Oswego and Yorkville. Although the cost to build and utilize the Sub-Regional WTP is higher than the current cost of utilizing deep wells, the cost is still lower than other communities who utilize surface water. It should be noted the projected water bills for the Lake Michigan suppliers only includes their wholesale rate. If any of the Sub-Regional communities were to connect to a Lake Michigan supplier, the additional costs for extending water service from the Lake Michigan system and any connection fees would have to be factored in.

Exhibit 8-11: Projected 2025 Typical Residential Water Bill

Village of Montgomery, United City of Yorkville, Village of Oswego



8.10 Sub-Regional Water Supply & Treatment Additional Considerations

Exhibit 8-12 outlines a general implementation plan for the Sub-Regional system. Overall, it is projected to take a minimum of nine years to implement the system. The communities' current wells within the deep sandstone aquifer (Cambrian Ordovician system) likely could continue to be the communities' main source of water for longer than nine years without major short and long term consequence. However, the sooner the communities can switch to the Fox River as the main supply source, the sooner water levels will recover in the Cambrian Ordovician aquifer.

The recommended first general work item for the sub-region would be to determine which form of governance that is most appropriate for the sub-regional system. One option would be forming a JAWA. A couple other governance options would be a Water Commission or Water District. It is recommended the three communities evaluate 3 – 5 forms of governance, define the one that is most appropriate for the sub-region and then work through the formation of the agency as early in the implementation timeframe as possible.

Exhibit 8-12: Potential Sub-Regional Phasing and Implementation Plan

Village of Montgomery, United City of Yorkville, Village of Oswego

WORK ITEM	YEAR								
	1	2	3	4	5	6	7	8	9
Governance Review									
Land Acquisition									
Fox River Water Quality Testing									
Water Treatment Plant Component Pilot Testing									
Design Engineering									
Project Financing									
Permitting & Bidding									
Construction									

Another early work item will be land acquisition for the intake and WTP. The three communities should identify potential properties in the Orchard Road/Fox River corridor that meet the size requirements and be prepared to move forward on property acquisition when the time is right. The recommended minimum property size is 20 acres.

Once the property for the facility is identified, then the next step will be to conduct Fox River water quality testing at the future intake location. It is recommended sampling occur over multiple years and through all four seasons to capture as many water quality variations as cost-effectively feasible.

Once the Fox River water quality at the intake is characterized, the design of the WTP could be initiated. As part of the design process, it is assumed pilot testing of some of the treatment processes may be required.

As the design progresses and the costs for the improvements are better defined, evaluation of project financing options would be the next step. Potential financing options to consider would be the IEPA Low Interest Loan Program, municipal bonds (presumably with a maturity greater than 20 years) and the Water Infrastructure Finance and Innovation Act (WIFIA) program.

Following design and permitting, and after the project financing plan is defined, the projects can be bid. It is presumed the construction of the improvements would be phased over multiple years.

SECTION 9: WATER WORKS SYSTEM EVALUATION & RECOMMENDATIONS

Previous sections of this report summarize the Water Works System components, provide a needs assessment analysis and provide a sustainable source water assessment for continued and future water supply for the City. Throughout this report, three different options were evaluated under two different usage scenarios. This section will summarize the selected improvements approach to expand the system to meet the 2050 CT and LRI water demand projections for the United City of Yorkville. Following a review of the cost of the improvements, a detailed phasing and implementation plan will be summarized for both the CT and LRI water demand scenarios. Finally, a cost comparison of the CT and LRI recommendations will be presented to demonstrate the anticipated financial benefit to the City if the LRI goals outlined in Section 3.2 are reached.

9.1 Water Supply and Treatment Evaluation & Recommendations

As stated previously in this report, Yorkville currently obtains their water from the Ironton-Galesville and St. Peter (Ancell) aquifers (collectively part of the Cambrian Ordovician Aquifer System). Analysis of the aquifers in the Yorkville region showed that they cannot sustainably meet the future water demands of the City and the Sub-Region. While there is no immediate threat of the dewatering of the aquifers to the point that they can no longer be pumped, the sooner the City can switch to a sustainable source the better off it will be. Because sub-regional systems can take up to 10 years to implement, it is vital to ensure existing water supplies can last the duration of construction. Additionally, when using surface water it is considered prudent to have backup water sources in the event that a drought or other event renders surface water unusable for any reason. Finally, for purposes of uncertainty in modeling it is wise to leave some room for error in predicting the amount of water in the aquifers.

In order to decrease the associated cost and risk of developing infrastructure to obtain and treat surface water from the Fox River, Yorkville's partnership with the neighboring communities of Montgomery and Oswego will be vital. Each community would benefit from a regional lime softening water treatment plant in the Long-Term. Cost, sustainability and reliability are all good reasons to pursue the Sub-Regional lime softening water treatment plant as opposed to each community building and maintaining a water treatment plant for their own use.

9.1.1 CT Water Supply and Treatment Evaluation & Recommendations – As discussed in Section 8, the construction of the LSWTP to serve Montgomery, Yorkville and Oswego would be designed in such a way to provide the projected maximum daily pumpage (or max. day demand) for all communities through the year 2050. The infrastructure for procuring, treating and transporting the water would need to be sized to treat 32 MGD for the CT scenario.

The Fox River is expected to be able to supply enough water for all three communities during the typical flows throughout all parts of the year. However, during periods of significant drought or poor water quality, the

communities would all need to rely on water produced from the existing or future wells to meet their daily water needs. As discussed in section 8, in order to provide enough 'backup' water from the wells, one additional well would need to be built that would supply the deficit for Yorkville and one well would be jointly utilized by Yorkville and Montgomery. Additional wells would be needed to serve Montgomery and Oswego, too. All future wells are assumed to be operated at a 1,000 gpm rate. The existing wells which are not part of the Sub-Regional backup plan would then be abandoned with the abandonment cost based on the well depth. Because Yorkville Well No. 3 is in the process of being abandoned at the time of this report, the costs for that well are not part of the Sub-Regional implementation cost. The potential salvage or demolition value of the WTPs was not evaluated because this cost will vary depending on the condition of the equipment at the time of abandonment. Similarly, while there is the potential for the WTP buildings to have a beneficial reuse as storage or other use, the potential salvage value was not calculated, because the value will depend highly on the condition of the building at the time of abandonment. A summary of the proposed CT water supply, treatment and transmission system is as follows:

- Well No. 6: the 1,000 gpm Ironton-Galesville Well No. 6 is proposed to be next to the existing North EWST off Bertram Dr in the north part of the City. This site had been designated as a potential area for the well historically, and the location next to current infrastructure is also notably advantageous.
- Well No. SR-1: the 1,000 gpm Ironton-Galesville Well No. SR-1 is proposed to be next to the future Sub-Regional Water Treatment Plant. A location next to the WTP would decrease the amount of raw water main that would be needed to pump the water from the well to the plant. Yorkville would need to plan to fund 96.7% of the production from this well.
- Well Transmission Mains: Well transmission mains are needed to transport water from the backup wells to the LSWTP. The two existing wells and two proposed wells would utilize the transmission mains, along with a total of nine other backup wells.
- 32 MGD Fox River Intake Pump Station: The 32 MGD Intake Pump Station is planned to be near the intersection of Orchard Rd and the Fox River.
- 32 MGD Single Stage (ClariCone®) LSWTP: The 32 MGD LSWTP is planned to be near the intersection of Orchard Rd and the Fox River.
- Treated Water Transmission Mains: The Treated water transmission mains would convey the treated water to the Montgomery, Yorkville and Oswego water distribution systems

9.1.2 LRI Water Supply and Treatment Evaluation & Recommendations – The Less Resource Intensive scenario projects that less water will be needed not only by Yorkville, but by all three communities combined. For the supply and treatment evaluation, this means that the three communities will need a smaller intake and treatment plant and less investment in the backup supply system. The unused wells would still need to be abandoned per comments in the CT scenario. A summary of the proposed LRI water supply, treatment and transmission system is as follows:

- Well No. 6: the 1,000 gpm Ironton-Galesville Well No. 6 is proposed to be next to the existing North EWST off Bertram Dr in the north part of the City. This site had been designated as a potential area for the well historically, and the location next to current infrastructure is also notably advantageous.
- Well No. SR-1: the 1,000 gpm Ironton-Galesville Well No. SR-1 is proposed to be next to the future Sub-Regional Water Treatment Plant. A location next to the WTP would decrease the amount of raw water main that would be needed to pump the water from the well to the plant. Yorkville would need to plan to fund 29.5% of the production from this well.
- Well Transmission Mains: Well transmission mains are needed to transport water from the backup wells to the LSWTP. The two existing wells and the two proposed Wells would utilize the transmission mains, along with a total of seven other backup wells.
- 25 MGD Fox River Intake Pump Station: the location for the Fox River Intake Pump Station would be the same as the locations considered for the CT scenario.
- 25 MGD Single Stage (ClariCone®) LSWTP: the location for the Fox River LSWTP would be the same as the locations considered for the CT scenario.
- Treated Water Transmission Mains: The Treated water transmission mains would convey the treated water to the Montgomery, Yorkville and Oswego water distribution systems.

9.2 Water Storage Evaluation & Recommendations

As water demands rise, the City will need to expand the amount of water storage within the Water Works System, so peak hour demands can be met. The storage expansion should be accomplished with the construction of EWSTs, ground storage tanks (GSTs), or a combination of the two. The benefit provided by EWSTs is that once the water has been pumped up to the tank, it can flow down by gravity. GSTs, however, require a pump to convey the water across the system. Given the constantly changing demands in the Water Works System, the seamless release of water from an EWST far exceeds the need to modify the pumping rate to meet the changed demand. The cost to construct and operate a 2.0 MG EWST or smaller is typically comparable to the cost of a similarly sized GST and pumping station. Based on the fact that GSTs and EWSTs are cost comparable, coupled with the fact that EWSTs are more simple to operate, it is recommended that water storage expansion take place in the form of EWSTs.

Placement and size of an EWST depend on the size of the pipes conveying the water from the EWST along with the needs of the area the EWST is serving. How the pressures around the area are affected when the EWST is full, partially full, or empty is another item of consideration. A description of the recommended water storage additions to meeting future CT and LRI water demand scenarios is as follows.

9.2.1 CT Water Storage Evaluation & Recommendations – Under the forecasted CT values, the United City of Yorkville would need one additional EWST as outlined below.

- EWST No. 6: It is recommended EWST No. 6 have a capacity of 2.0 MG and be located on the southwest portion of the City off of Highway 71 between the intersections of W High Point Rd and Legion Rd. The EWST would be in the City's highest pressure zone which would allow water from this EWST to flow down to the other pressure zones.

9.2.2 LRI Water Storage Evaluation & Recommendations – The calculations completed in Section 3 of this report show a peak hour storage deficit of just over 500,000 gallons by the year 2050. The location and information is identical to the EWST proposed for the CT scenario.

9.3 Water Distribution and Pressure Zone Evaluation & Recommendations

The water distribution system was summarized within Section 2. Based on a review of the hydraulic grade line of the Water Works System and the topography within the City's planning area, it would appear that continual growth of the City would mean more pressure zones south of the currently populated area. Additionally, the coordination with other communities pressure zones will attribute to the relative complexity of the pumping plan. The list below outlines all distribution changes that will be need for both the CT and LRI scenarios for the Sub-Regional Water supply plan.

CT and LRI Distribution System Recommendations

20" and 16" Water Main North West of Water Treatment Plant	$ 829,000
16" Tie Into Crimson Lane	$ 233,000
24" Water Main from Water Treatment Plan to Van Emmon	$ 9,597,000
16" Water Main along Center Street and Main Street	$ 869,000
(a) 20" Water main on Van Emmon	$1,071,000
(b) 20" Water main on Van Emmon	$ 473,000
20" Water Main from Mill Street to South Central EWST	$ 3,155,000
20" Water Main from South Central EWST to South BP/PRV	$ 1,450,000
PRV Station - North Pressure Zone to North Central Pressure Zone	$ 378,000
Route 71 Watermain Replacement	$ 968,000
Appletree Court Watermain Replacement (Roads to Better Roads - RTBR)	$ 149,000
W. Washington Street Watermain Replacement (RTBR) – To be Constructed in 2017	$ 188,000
Elizabeth Street Watermain Replacement (RTBR)	$ 512,000
Main Street Watermain Replacement (RTBR)	$ 714,000
Orange/Olsen Watermain Looping (RTBR)	$ 168,000
Morgan Street Watermain Replacement (RTBR)	$ 376,000
E. Fox Street Watermain Replacement (RTBR)	$ 306,000
East Washington Watermain Replacement (RTBR)	$ 465,000
Orange Street Watermain Replacement (RTBR)	$ 660,000

The Road to Better Roads (RTBR) program is a long-term plan designed to increase diameters and improve transmission in the heart of the City. While RTBR upgrades are not necessary for the implementation of the Sub-Regional WTP distribution system, they are recommended to be replaced on a higher priority scale than other mains. As it becomes reasonable for the City to replace the mains, such as during roadwork projects or as the main nears its useful life, the RTBR projects will occur. The total capital cost of all distribution recommendations is $22,561,000. The capital cost of only the necessary distribution costs that will set the system up to effectively transfer water across the system in the Sub-Regional plan, which does not include RTBR upgrades, is $18,055,000.

9.4 Recommended Improvements Summary

The improvements presented in this report will allow for water transfer with minimal headloss, appropriate water storage volume and the required water supply and treatment to continue to provide safe and adequate water to the United City of Yorkville given both CT and LRI demand scenarios. The recommendations are broken down into Supply, Treatment, Storage and Distribution. The recommended improvements will be presented in this Section, but the actual phasing and implementation of these improvements will be further discussed in Section 9.5.

9.4.1 CT Water Works System Master Plan – Detailed cost estimates for the proposed improvements described in Section 9.1 and 9.2 are provided in Appendix G. A summary of the capital costs for the United City of Yorkville can be found below. Under the CT demand scenario, the following improvements are recommended:

- *General*
  - Governance $20,000
- *Supply & Treatment:*
  - Fox River Water Quality Testing $45,000
  - Land Acquisition $400,000
  - WTP Component Pilot Testing $33,000
  - Well No. 6 $2,419,000
  - Well No. SR-1 $2,339,000
  - Abandon Unused Wells (Yorkville No. 4 and 7) $120,000
  - 32 MGD Fox River Intake Pump Station $2,389,000
  - 32 MGD Single Stage Claricone® $24,290,000
  - Well Transmission Mains $9,616,000
  - Treated Water Transmission Mains $12,990,000
- *Storage & Distribution:*
  - EWST No. 6 (2.0 MG) $4,870,000
  - Water Distribution System Improvements $22,561,000

The location of all the recommended improvements for the CT demand scenario, including the future large diameter water main network, are depicted in section 8.

9.4.2 LRI Water Works System Master Plan – Detailed cost estimates for the proposed improvements described in Section 9.1 and 9.2 are provided in Appendix G. All costs below are shown in capital cost. Under the LRI demand scenario, the following improvements are recommended:

- *General*
  - Governance $20,000
- *Supply & Treatment:*
  - Fox River Water Quality Testing $45,000
  - Land Acquisition $400,000
  - WTP Component Pilot Testing $33,000
  - Well No. 6 $2,419,000
  - Well No. SR-1 $714,000
  - Abandon Unused Wells (Yorkville No. 4 and 7) $120,000
  - 25 MGD Fox River Intake Pump Station $2,161,000
  - 25 MGD Single Stage (ClariCone® LSWTP) $21,886,000
  - Well Transmission Main $9,298,000
  - Treated Water Transmission Mains $12,990,000
- *Storage & Distribution:*
  - EWST No. 6 (2.0 MG) $4,870,000
  - Water Distribution System Improvements $22,561,000

The locations of all the recommended improvements for the LRI demand scenario are depicted in section 8.

9.5 Water Works System Phasing and Implementation Plan

In order to provide an organized logical phasing and implementation plan that also recognizes population projections for a 35-year period are less than exact, the recommendations have been prioritized and grouped into three categories: 1) Immediate Improvements, 2) Near-Future Improvements and 3) Long-Term Improvements.

The immediate improvements are the minimum improvements necessary to meet the City's demands for the next five years (2017-2021), as well as the improvements required to prepare the City to have the sub-regional WTP online in the next ten years. The Near-Future Improvements are the necessary improvements that will need to be made in the ten years following the immediate improvements (2022-2031). The Long-

Term Improvements are the improvements for the nineteen years following the Long-Term Improvements (2032 -2050).

9.5.1 CT Implementation Plan – Table No. 9-1 presents the recommended Phasing and Implementation Plan for the proposed improvements under the CT demand scenario along with the summary of costs for each of the five categories. The costs have been summarized for the total sub-regional, as well as Yorkville's portion of the cost.

As shown on the Phasing and Implementation Plan, the total cost of recommended Immediate, Near-Future and Long-Term Water Works System improvements is approximately $82.1 million, which includes $498,000 for the City's Immediate Needs, $79.1 million for Near-Future Improvements and $2.5 million for Long-Term Improvements. These improvements include a new surface water treatment facility (along with the appropriate appurtenances), additional backup water supply, backup water supply piping and finished water piping. The WTP would be jointed funded and used by the neighboring communities of Montgomery and Oswego.

9.5.2 LRI Implementation Plan – Table No. 9-2 presents the recommended Phasing and Implementation Plan for the proposed improvements under the LRI demand scenario along with the summary of costs for each of the five categories. The costs have been summarized for the total sub-regional, as well as Yorkville's portion of the cost. Exhibit 9-1 displays the buildout of the LRI Sub-Regional plan.

As shown on the Phasing and Implementation Plan, the total cost of recommended Immediate, Near-Future and Long-Term Water Works System improvements is approximately $77.5 million, which includes $498,000 for the City's Immediate Needs, $74.5 million for Near-Future Improvements and $2.5 million for Long-Term Improvements. These improvements include a new surface water treatment facility (along with the appropriate appurtenances), additional backup water supply, backup water supply piping and finished water piping. The WTP would be jointly funded and used by the neighboring communities of Montgomery and Oswego.

9.5.3 Capital Cost Savings With LRI Water Use Commitment – The major differences in the recommended improvements for the CT and LRI have been identified. In Tables No. 9-1 and 9-2, the Phasing and Implementation Plan for the recommended improvements under both the CT and LRI demand scenarios is provided along with cost estimate summaries for each phase and the total combined. Table No. 9-3 summarizes the potential financial benefit if the City meets their water conservation goals and is able to implement the improvements based on the LRI demand scenario.

Table No. 9-1: Water Works System Phasing & Implementation Plan - CT

United City of Yorkville, IL

Water Works System Component	Immediate (0 - 5 Years) 2017 - 2021 Sub-Regional Population: 0 - 8,400 Population Equivalents Addition Montgomery Population: 0 - 1,300 Population Equivalents Addition Yorkville Population: 0 - 2,800 Population Equivalents Addition Oswego Population: 0 - 4,300 Population Equivalents Addition		Near-Future (6 - 15 Years) 2022 - 2031 8,403 - 33,700 Population Equivalents Addition 1,301 - 4,800 Population Equivalents Addition 2,801 - 11,700 Population Equivalents Addition 4,301 - 17,200 Population Equivalents Addition		Long Term (16 - 34 Years) 2032 - 2050 33,703 - 105,983 Population Equivalent Additions 4,801 - 13,027 Population Equivalent Additions 11,701 - 38,745 Population Equivalent Additions 17,201 - 54,211 Population Equivalent Additions		Total
	Description	Cost[θ]	Description	Cost[θ]	Description	Cost[θ]	
General	Governance[e]	$ 60,000					
Yorkville General Subtotal:		**$ 20,000**		**$ -**		**$ -**	**$ 20,000**
Sub-Regional General Subtotal:		**$ 60,000**		**$ -**		**$ -**	**$ 60,000**
Supply	Fox River Water Quality Testing[b,e]	$ 135,000	Raw Water Network[a]	$ 31,120,000	Montgomery Well No. 17	$ 2,419,000	
			Sub-Regional Well No. 1[r]	$ 2,419,000	Yorkville Well No. 6	$ 2,419,000	
					Oswego Well No. 12	$ 2,419,000	
					Oswego Well No. 13	$ 2,419,000	
					Abandon Unused Wells[c]	$ 700,000	
Yorkville Supply Subtotal:		**$ 45,000**		**$ 11,955,000**		**$ 2,539,000**	**$ 14,539,000**
Sub-Regional Supply Subtotal:		**$ 135,000**		**$ 33,539,000**		**$ 10,376,000**	**$ 44,050,000**
Treatment	Land Acquisition[e]	$ 1,200,000	32 MGD Intake Pump Station[m]	$ 7,327,000			
	WTP Component Pilot Testing[m]	$ 100,000	32 MGD LSWTP[m]	$ 74,508,000			
			Treated Water Transmission Network	$ 30,175,000			
Yorkville Treatment Subtotal:		**$ 433,000**		**$ 39,669,000**			**$ 40,102,000**
Sub-Regional Treatment Subtotal:		**$ 1,300,000**		**$ 112,011,000**		**$ -**	**$ 113,311,000**
Storage			Yorkville 2.0 MG EWST	$ 4,870,000			
Yorkville Storage Subtotal:		**$ -**		**$ 4,870,000**		**$ -**	**$ 4,870,000**
Sub-Regional Storage Subtotal:		**$ -**		**$ 4,870,000**		**$ -**	**$ 4,870,000**
Distribution			Montgomery Distribution System Improvements	$ 13,565,000			
			Yorkville Distribution System Improvements	$ 22,561,000			
			Oswego Distribution System Improvements	TBD			
Yorkville Distribution Subtotal:		**$ -**		**$ 22,561,000**		**$ -**	**$ 22,561,000**
Sub-Regional Distribution Subtotal:		**$ -**		**$ 36,126,000**		**$ -**	**$ 36,126,000**
YORKVILLE TOTAL:		**$ 498,000**		**$ 79,055,000**		**$ 2,539,000**	**$ 82,092,000**
SUB-REGIONAL TOTAL:		**$ 1,495,000**		**$186,546,000**		**$ 10,376,000**	**$198,417,000**

Notes:
Based on 2016 dollars and 2016 construction costs; includes engineering and contingency costs
a. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of Average Daily Demand (CT: 21.8% for Montgomery, 30.9% for Yorkville, 47.3% for Oswego; LRI: 20.7% for Montgomery, 32.6% for Yorkville; 46.7% for Oswego).
b. Assumes 3 years of testing
c. Assumes abandonment of Montgomery Wells No. 3, 4, 8, 10, 11, 12; Yorkville Wells No. 4, 7; and Oswego Wells No. 3, 4, 7, and 9; at a cost of $40,000 per shallow well (Montgomery Wells Nos. 10, 11, 12 and 13) $60,000 per deep well (all others)
e. Cost shown is split evenly between communities.
m. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).
r. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of ratio of usage - For the SR-1 well, the ratios are as follows: (CT: 3.3% for Montgomery, 96.7% for Yorkville, 0% for Oswego; LRI: 0% for Montgomery, 29.5% for Yorkville; 70.5% for
Not evaluated

Table No. 9-2: Water Works System Phasing & Implementation Plan - LRI

United City of Yorkville, IL

Water Works System Component	Immediate (0 - 5 Years) 2017 - 2021		Near-Future (6 - 11 Years) 2022 - 2031		Long Term (12 - 34 Years) 2032 - 2050		Total
Sub-Regional Population	0 - 8,400 Population Equivalents Addition		8,403 - 33,700 Population Equivalents Addition		33,703 - 105,983 Population Equivalent Additions		
Montgomery Population	0 - 1,300 Population Equivalents Addition		1,301 - 4,800 Population Equivalents Addition		4,801 - 13,027 Population Equivalent Additions		
Yorkville Population	0 - 2,800 Population Equivalents Addition		2,801 - 11,700 Population Equivalents Addition		11,701 - 38,745 Population Equivalent Additions		
Oswego Population	0 - 4,300 Population Equivalents Addition		4,301 - 17,200 Population Equivalents Addition		17,201 - 54,211 Population Equivalent Additions		
	Description	Cost[e]	Description	Cost[e]	Description	Cost[e]	
General	Governance[e]	$ 60,000					
Yorkville General Subtotal:		**$ 20,000**		**$ -**		**$ -**	**$ 20,000**
Sub-Regional General Subtotal:		**$ 60,000**		**$ -**		**$ -**	**$ 60,000**
Supply	Fox River Water Quality Testing[b,e]	$ 135,000	Raw Water Network[a]	$ 28,521,000	Montgomery Well No. 17	$ 2,419,000	
			Sub-Regional Well No. 1[r]	$ 2,419,000	Yorkville Well No. 6	$ 2,419,000	
					Abandon Unused Wells[c]	$ 700,000	
Yorkville Supply Subtotal:		**$ 45,000**		**$ 10,012,000**		**$ 2,539,000**	**$ 12,596,000**
Sub-Regional Supply Subtotal:		**$ 135,000**		**$ 28,521,000**		**$ 5,538,000**	**$ 34,194,000**
Treatment	Land Acquisition[e]	$ 1,200,000	25 MGD Intake Pump Station[m]	$ 6,431,000			
	WTP Component Pilot Testing[m]	$ 100,000	25 MGD LSWTP[m]	$ 65,137,000			
			Treated Water Transmission Network	$ 30,175,000			
Yorkville Treatment Subtotal:		**$ 433,000**		**$ 37,037,000**		**$ -**	**$ 37,470,000**
Sub-Regional Treatment Subtotal:		**$ 1,300,000**		**$ 101,743,000**		**$ -**	**$ 103,043,000**
Storage			Yorkville 2.0 MG EWST	$ 4,870,000			
Yorkville Storage Subtotal:		**$ -**		**$ 4,870,000**		**$ -**	**$ 4,870,000**
Sub-Regional Storage Subtotal:		**$ -**		**$ 4,870,000**		**$ -**	**$ 4,870,000**
Distribution			Montgomery Distribution System Improvements	$ 13,565,000			
			Yorkville Distribution System Improvements	$ 22,561,000			
			Oswego Distribution System Improvements	TBD			
Yorkville Distribution Subtotal:		**$ -**		**$ 22,561,000**		**$ -**	**$ 22,561,000**
Sub-Regional Distribution Subtotal:		**$ -**		**$ 36,126,000**		**$ -**	**$ 36,126,000**
YORKVILLE TOTAL:		**$ 498,000**		**$ 74,480,000**		**$ 2,539,000**	**$ 77,517,000**
SUB-REGIONAL TOTAL:		**$ 1,495,000**		**$171,260,000**		**$ 5,538,000**	**$178,293,000**

Notes:
Based on 2016 dollars and 2016 construction costs; includes engineering and contingency costs
a. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of Average Daily Demand (CT: 21.8% for Montgomery, 30.9% for Yorkville, 47.3% for Oswego; LRI: 20.7% for Montgomery, 32.6% for Yorkville; 46.7% for Oswego).
b. Assumes 3 years of testing
c. Assumes abandonment of Montgomery Wells No. 3, 4, 8, 10, 11, 12; Yorkville Wells No. 4, 7; and Oswego Wells No. 3, 4, 7, and 9; at a cost of $40,000 per shallow well (Montgomery Wells Nos. 10, 11, 12 and 13) $60,000 per deep well (all others)
e. Cost shown is split evenly between communities.
m. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).
r. Cost shown is total cost of improvement. Cost included in Village subtotal is portion of total cost based off of ratio of usage - For the SR-1 well, the ratios are as follows: (CT: 3.3% for Montgomery, 96.7% for Yorkville, 0% for Oswego; LRI: 0% for Montgomery, 29.5% for Yorkville; 70.5% for
Not evaluated

	Elevation Range	TCL
North Pressure Zone	625-690	810
North Central Pressure Zone	580-660	763
South Central Pressure Zone	660-715	850
South Pressure Zone	715-790	920
Southeast Pressure Zone	615-665	800

Legend

- Study Area Boundary
- Yorkville Corporate Limits
- BP/PRV Station
- PRV Station
- Well
- Water Treatment Plant
- Elevated Water Storeage Tank (EWST)
- Future PRV
- Future BP/PRV
- Ground Storage Tanks
- Potential EWST Site
- Alternate EWST Site
- Potential Future Deep Well
- WTP To Be Abandoned
- Well To Be Abandoned
- Unknown Size Water Main
- Non-Potable Water Main
- Less Than 4" Water Main
- 4" Water Main
- 6" Water Main
- 8" Water Main
- 10" Water Main
- 12" Water Main
- 16" Water Main
- Existing Raw Water Main
- Future Raw Water Main
- Future 8" Water Main
- Future 12" Water Main
- Future 16" Water Main
- Future 20" Water Main
- Future 24" Water Main

1.0 MG NORTH EWST
WELL NO. 6
1.5 MG NORTHEAST EWST, WELL NO. 8.
WELL NO. 8 AND 9 WTP
WELL NO. 9
1. 20" AND 16" WM NORTH WEST OF WATER TREATMENT PLANT
NORTH CENTRAL PRV STATION
NORTH BP/PRV STATION
2. 16" TIE INTO CRIMSON LANE
SUB REGIONAL CONNECTION
8. PRV STATION - NORTH PRESSURE ZONE TO NORTH CENTRAL PRESSURE ZONE
3. 24" WM FROM WATER TREATMENT PLANT TO VAN EMMON
300,000 GAL NORTH CENTRAL EWST
WELL NO. 4, AND WELL NO. 4 WATER TREATMENT PLANT
WELL NO. 3
4. 16" WM ALONG CENTER STREET AND MAIN STREET
FUTURE SUB REGIONAL CONNECTION
SOUTH CENTRAL BP/PRV STATION
5a. & 5b. 20" WM ON VAN EMMON
6. 20" WM FROM MILL STREET TO SOUTH CENTRAL EWST
500,000 GAL SOUTH CENTRAL EWST
SOUTH BP/PRV STATION
9a. ROUTE 71 WM REPLACEMENT
2.0 MG EWST
SOUTH CENTRAL PRV STATION
1.25 MG SOUTH EWST
WELL NO. 7, AND WELL NO. 7 WATER TREATMENT PLANT
7. 20" WM FROM SOUTH CENTRAL EWST TO SOUTH BP/PRV
9b. APPLETREE COURT WM REPLACEMENT
11. MAIN STREET WM REPLACEMENT
9c. WEST WASHINGTON STREET WM REPLACEMENT
14. EAST FOX STREET WM REPLACEMENT
15. EAST WASHINGTON STREET WM REPLACEMENT
16. ORANGE STREET WM REPLACEMENT
12. ORANGE / OLSEN WM LOOPING
13. MORGAN STREET WM REPLACEMENT
10. ELIZABETH STREET WM REPLACEMENT

NOTE:
DUE TO THE VARYING TERRAIN AND ELEVATION WITHIN THE PLANNING AREA, EFFORTS WERE MADE TO MINIMIZE THE NUMBER OF PRESSURE ZONES. AS DEVELOPMENT OCCURS, THE ELEVATIONS WITHIN EACH DEVELOPMENT SHALL BE REVIEWED AT THAT TIME. INDIVIDUAL PRESSURE REDUCING VALVES WITHIN BUILDING/HOMES MAY BE REQURED IN CERTAIN AREAS.

0 1,250 2,500 5,000 7,500 10,000 12,500 Feet

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

DATE:	MARCH, 2017
PROJECT NO.:	YO1437-P
BY:	CLV
PATH:	H:\GIS\PUBLIC\YORKVILLE\2014\YO1437
FILE:	YO1437_EXH9-1 ALT3B.MXD

WATER WORKS SYSTEM MASTER PLAN
UNITED CITY OF YORKVILLE, ILLINOIS

EXHIBIT 9-1 ALTERNATE 3B
WATER WORKS SYSTEM PLAN - LRI

NORTH

Table No. 9-3: Capital Cost Savings With LRI Water Use Commitment

United City of Yorkville, IL

Water Works System Component	Present Worth Capital Cost		
	Current Trends (CT)	Less Resource Intensive (LRI)	Savings
General	$ 20,000	$ 20,000	$ -
Supply	$ 14,539,000	$ 12,596,000	$ (1,943,000)
Treatment	$ 40,102,000	$ 37,470,000	$ (2,632,000)
Storage	$ 4,870,000	$ 4,870,000	$ -
Distribution	$ 22,561,000	$ 22,561,000	$ -
TOTAL:	**$ 82,092,000**	**$ 77,517,000**	**$ (4,575,000)**

9.6 Water Works System Connection Fee Analysis

As development continues, the United City of Yorkville will need to continue to collect connection fees for the new developments purchase of capacity within the Water Works System. The calculated connection fee for Yorkville's share of the Sub-Regional system is included within Table No. 9-4. It is recommended the City adjust their connection fee as soon as possible, charge the revised fee and begin to save collected fees for investment in the future Sub-Regional system.

Table 9-4: Water Works System Improvements Connection Fee Analysis
United City of Yorkville, Illinois

WATER PROCUREMENT AND TREATMENT COST PER PE				
	Capacity (GPM)	PE Served	Total Project Cost	Cost Per PE
Additional Wells	1,295	15,540	$3,133,000	$202
Well Transmission Main Network[a]	4,695	59,565	$9,298,000	$157
Fox River Intake & LSWTP (25 MGD)[m]	5,791	59,565	$24,047,000	$404
Total Supply and Treatment			**$36,478,000**	**$763**

WATER TRANSMISSION, DISTRIBUTION MAIN AND DISTRIBUTION STORAGE COST PER PE				
	Size	PE Served	Total Project Cost	Cost Per PE
Treated Water Transmission Main Network	Varies	59,565	$12,990,000	$218
Elevated Water Storage Tank	2.0 MG	21,429	$4,870,000	$227
Distribution System Improvements	Varies	59,565	$22,561,000	$379
Total Water Transmission and Distribution			**$40,421,000**	**$824**
New Growth Pro Rata Water Transmission/Distribution/Storage Cost[c]			**$28,601,000**	**$824**

FEE SUMMARY		
	FEE PER PE	FEE PER SINGLE FAMILY UNIT (3.5 PE/SFU)
Water Supply and Treatment	$763	$2,671
Water Transmission and Distribution	$824	$2,884
Total Cost	**$1,587**	**$5,555**

Notes:
a. Cost shown is portion of total cost based off of Average Daily Demand (CT: 21.8% for Montgomery, 30.9% for Yorkville, 47.3% for Oswego; LRI: 20.7% for Montgomery, 32.6% for Yorkville; 46.7% for Oswego).
m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).
Max:Avg Day Ratio = 1.75
1 PE = 80 gpd (for all supply, treatment, storage, transmission, and distribution improvements)
c. Based on 2015 population of 19,804 PE and 2050 projected population of 59,565 PE

SECTION 10: SUSTAINABLE WATER WORKS SYSTEM PLANNING

Although both population and approximate timeframes for improvements have been provided in the previous sub-sections as part of the Phasing and Implementation plans, it is ultimately the water demands on the systems that dictate when and what improvements will need to be constructed. As the City continues to mature, expand and implement water conservation strategies, the water demands will evolve. It is recommended the City continuously monitor and evaluate its Water Works System as the City develops. The Phasing and Implementation Plan must continually be reviewed and should be modified based on the rate of development and where the development is actually occurring.

As emphasized in section 9.5.3 with the cost comparison of recommended Water Works System improvements between the CT and LRI scenarios, the financial benefits of minimal levels of water conservation can be huge for the City. To that end, this Comprehensive Water Works Master Plan is a valuable planning tool and stepping stone for the City's Water Works System. The recommended next steps for the City are as follows:

- Review current policies, consider revising existing policies and then enforce adopted policies regarding water conservation strategies and goals and develop financing alternatives for the identified improvements. By evaluating water conservation opportunities, the City will not only show how they continue to be good stewards of our limited resource of water, but the City also has the potential to significantly reduce the required capital investment in the system.
- Review the water rates to determine how revenue will be impacted by a significant decrease in water consumption resulting from water conservation measures. This will allow the City's water conservation efforts to be successful from a financial perspective.

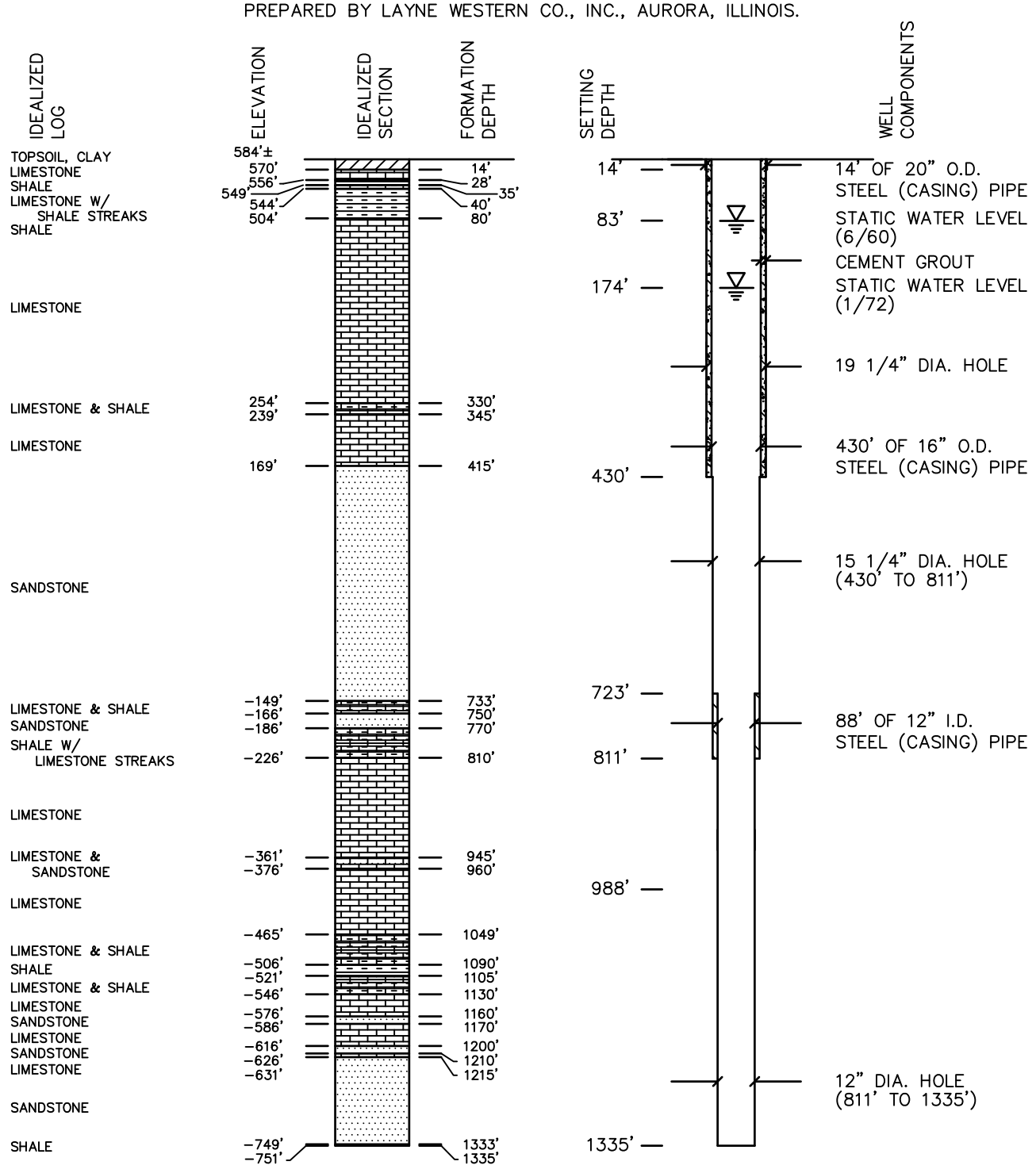
This Master Plan advocates similar goals to those of the regional water supply planning efforts. The water supply sources of Northeastern Illinois, namely Lake Michigan, the Fox River, shallow groundwater and deep groundwater, know no political boundaries. Their geographic extent is such that their availabilities are dependent on everyone's wise use of the resource. Therefore, we also recommend the City continue to build strong, collaborative relationships regionally for sustainable water use so the region and the United City of Yorkville can extend the capacity of the local water resources for an economically and environmentally sustainable region.

Appendix A

Well Schematics

SCHEMATIC OF EXISTING WATER WELL No. 3 (DEEP CONSOLIDATED AQUIFER) CITY OF YORKVILLE KENDALL COUNTY, ILLINOIS

DATA TAKEN FROM WELL CONSTRUCTION REPORT
PREPARED BY LAYNE WESTERN CO., INC., AURORA, ILLINOIS.

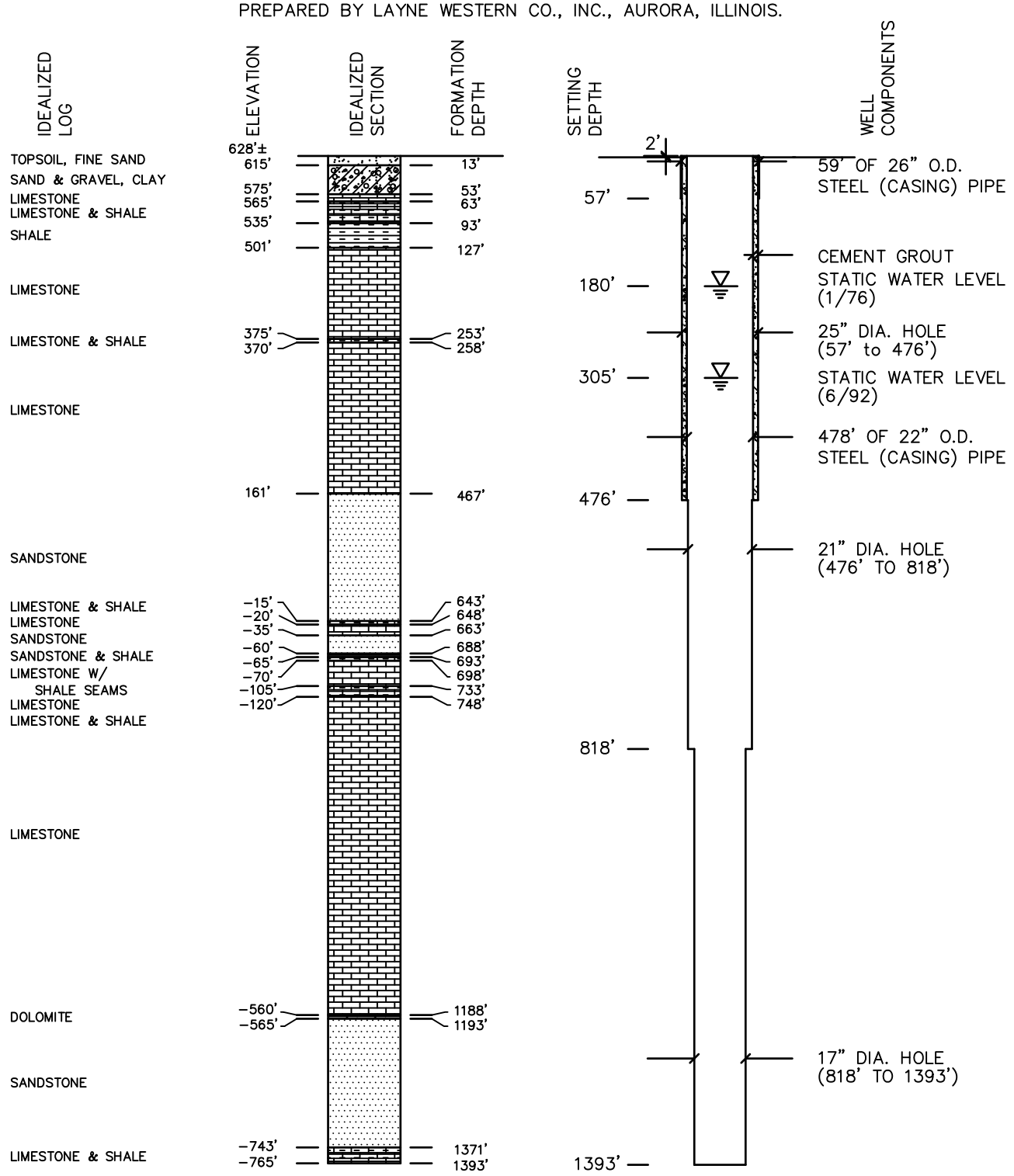


ENGINEERING ENTERPRISES, INC., SUGAR GROVE, ILLINOIS

Y0990105
JUNE 2000

SCHEMATIC OF EXISTING WATER WELL No. 4 (DEEP CONSOLIDATED AQUIFER) CITY OF YORKVILLE KENDALL COUNTY, ILLINOIS

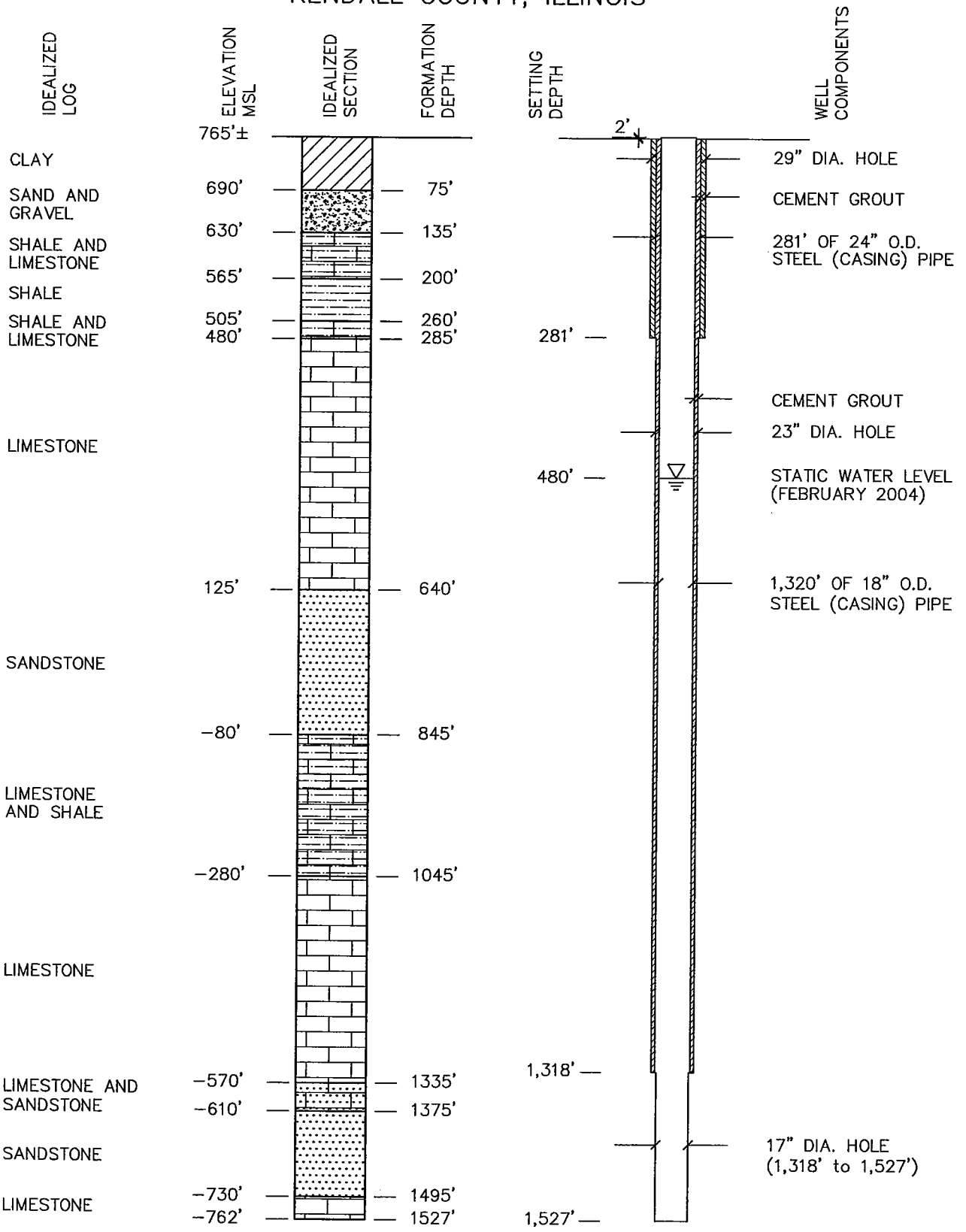
DATA TAKEN FROM WELL CONSTRUCTION REPORT
PREPARED BY LAYNE WESTERN CO., INC., AURORA, ILLINOIS.



ENGINEERING ENTERPRISES, INC., SUGAR GROVE, ILLINOIS

YO990106
JUNE 2000

SCHEMATIC OF EXISTING WATER WELL No. 7 (DEEP CONSOLIDATED AQUIFER) UNITED CITY OF YORKVILLE KENDALL COUNTY, ILLINOIS

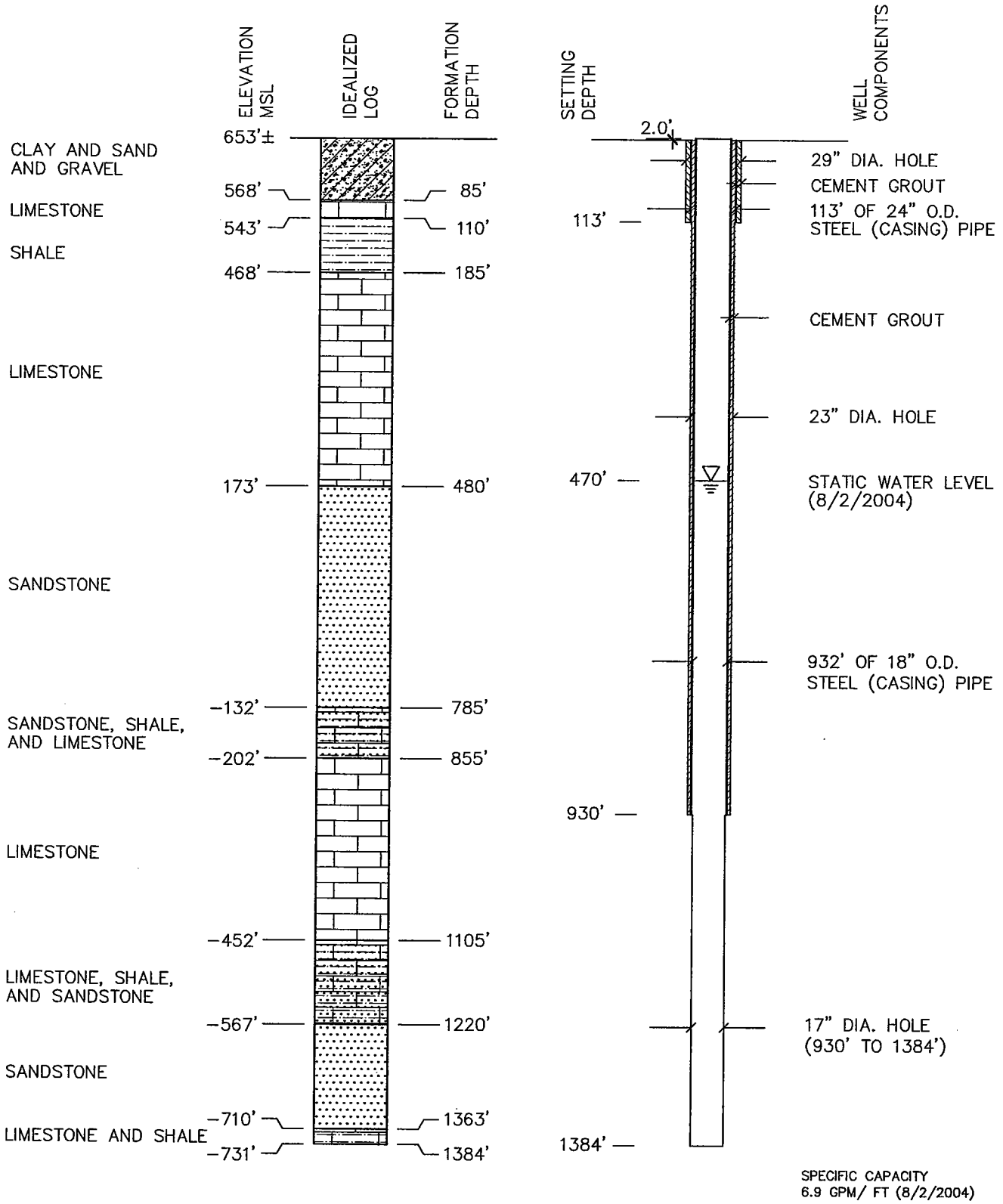


ENGINEERING ENTERPRISES, INC., CONSULTING ENGINEERS, SUGAR GROVE, ILLINOIS

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JUNE 2004

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SCHEMATIC OF EXISTING WATER WELL No. 8 (DEEP CONSOLIDATED AQUIFER) UNITED CITY OF YORKVILLE KENDALL COUNTY, ILLINOIS



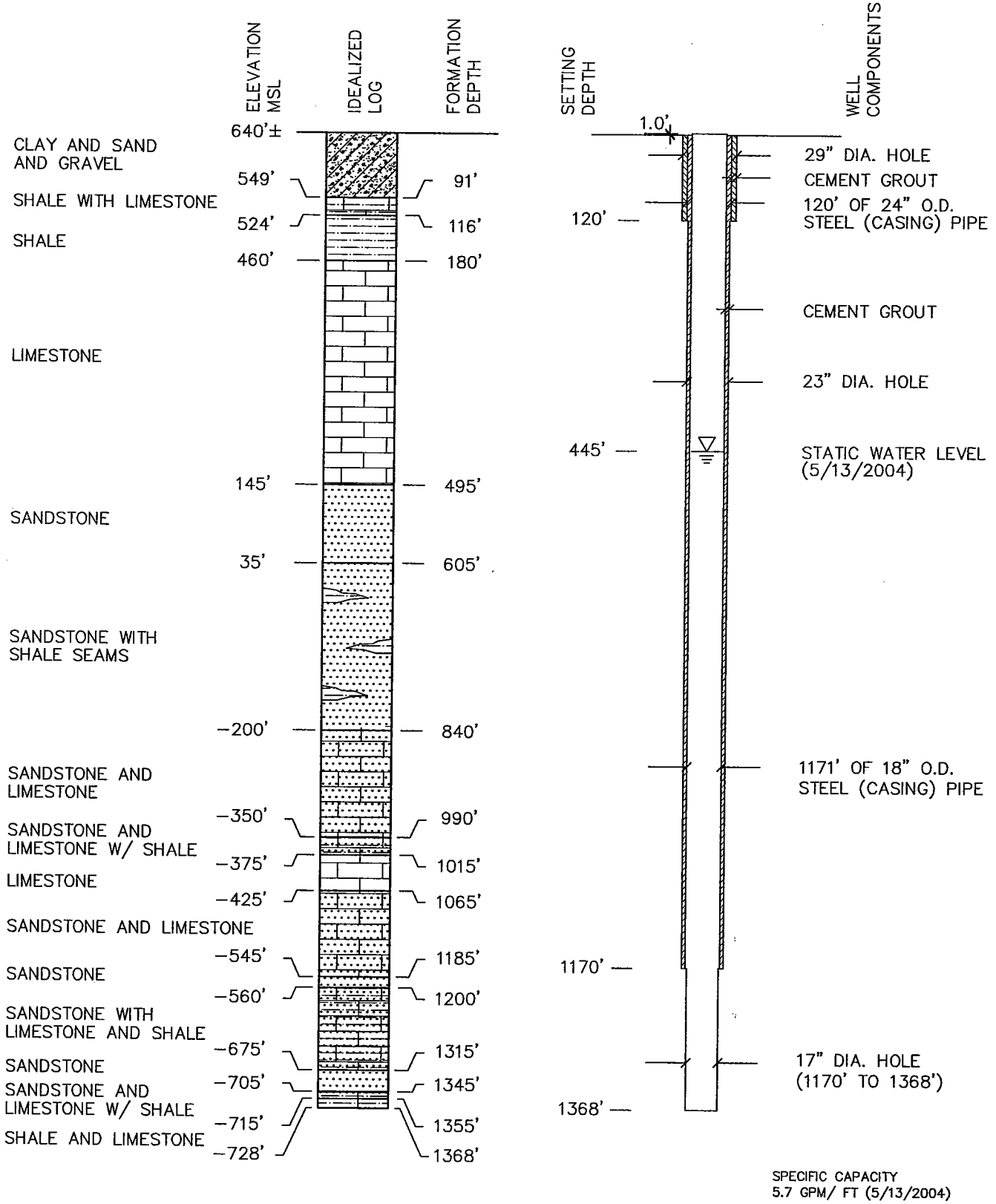
SPECIFIC CAPACITY
6.9 GPM/ FT (8/2/2004)

ENGINEERING ENTERPRISES, INC., CONSULTING ENGINEERS, SUGAR GROVE, ILLINOIS

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SCHEMATIC OF EXISTING WATER WELL No. 9 (DEEP CONSOLIDATED AQUIFER) UNITED CITY OF YORKVILLE KENDALL COUNTY, ILLINOIS



SPECIFIC CAPACITY
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ENGINEERING ENTERPRISES, INC., CONSULTING ENGINEERS, SUGAR GROVE, ILLINOIS

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Appendix B

Potential Water Savings From Water Conservation and Efficiency

POTENTIAL ESTIMATED WATER SAVINGS
FROM WATER CONSERVATION AND EFFICIENCY

United City of Yorkville, IL

	United City of Yorkville 2050 CT Water Demand Estimate	**1,957**	**MG**	
(a)	2050 Daily CT Water Demand Estimate	5.36	MGD	
	Outdoor Water Use			
(b)	Water Supply Spent on Outdoor Use	12.9%		
(c)	Outdoor Water Wasted	50%		**%**
(d)	Assumed Reduction of Outdoor Waste	50%		**Reduction**
(e)	New Landscape Water Waste Reduction	5%		**of Total**
	All Customers - Water Saved (a x b x c x d) =	**0.172**	**MGD**	29.8%
	New Landscape - Water Saved (a x b x c x e) =	**0.017**	**MGD**	3.0%
	Utility Water (System Loses)			
(f)	Water Supply Loss from Unidentified Losses	8.0%		
(g)	Assumed Reduction of Unidentified Losses	50%		
	System Losses - Water Saved (a x f x g) =	**0.214**	**MGD**	37.1%
	Indoor Residential			
(h)	Population (1994)	4,831		
(i)	Assumed People per Household (1994)	3		
(j)	No. of Households (1994)	1,610		
(k)	Assumed pre-1994 Flush Rate	3.5	gal/flush	
(l)	Assumed HET Flush Rate	1.28	gal/flush	
(m)	Assumed Flushes per Person per Day	5.1		
(n)	Assumed Percent Household Upgrade by 2050 for HET	90%		
(o)	Water Savings per Household per Year for HEWM	4,200	gal	
(p)	Assumed Percent Household Upgrade by 2050 for HEWM	100%		
(q)	Water Savings per Household per Day for 4 Retrofits	22	gal	
(r)	Assumed Percent household upgrade by 2050 for HET	90%		
	HET - Water Saved ((k - l) x m x h x n) =	**0.049**	**MGD**	8.5%
	HEWM - Water Saved (o x j x p) =	**0.019**	**MGD**	3.2%
	Retrofits - Water Saved (j x q x r) =	**0.032**	**MGD**	5.5%
	Commercial, Industrial, and Institutional			
(s)	Portion of CII That Is Nonprocess Related Water Use	15.0%		
(t)	Percent of Daily Demand (Non-Residential)	18.4%		
(u)	Assumed Percent Employee Participation	50.0%		
	CII - Water Saved (a x s x t x u) =	**0.074**	**MGD**	12.8%
	TOTAL ESTIMATED SAVINGS =	**0.578**	**MGD**	100.0%
	LESS RESOURCE INTENSIVE DEMAND (2040) =	**4.783**	**MGD**	
	PERCENT REDUCTION =	**11.0%**		

Notes:

Values calculated from City Data

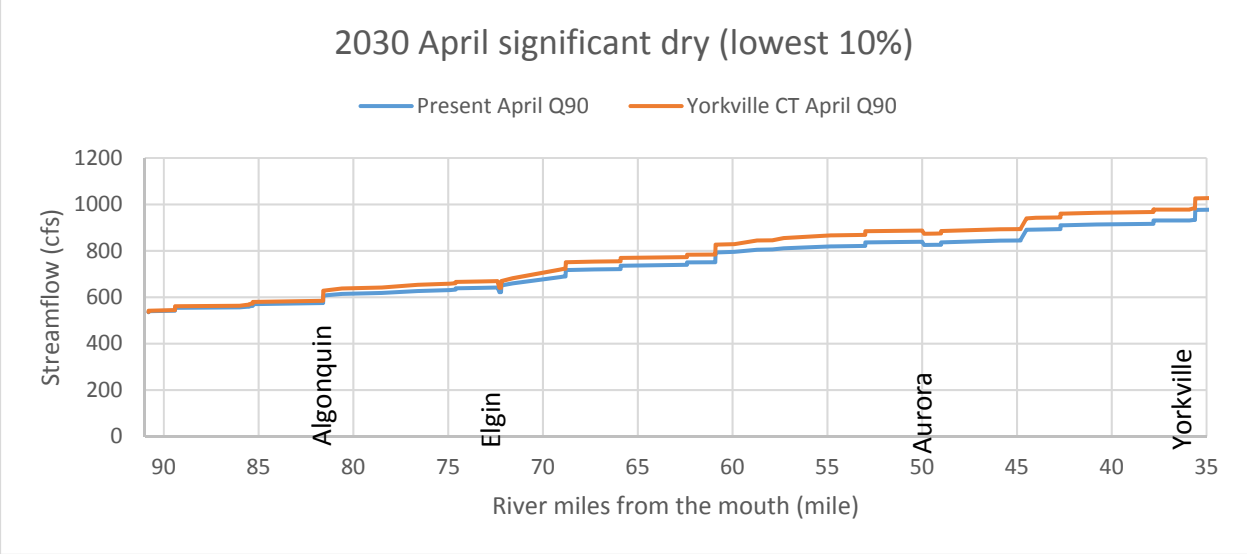
(c) Per EPA

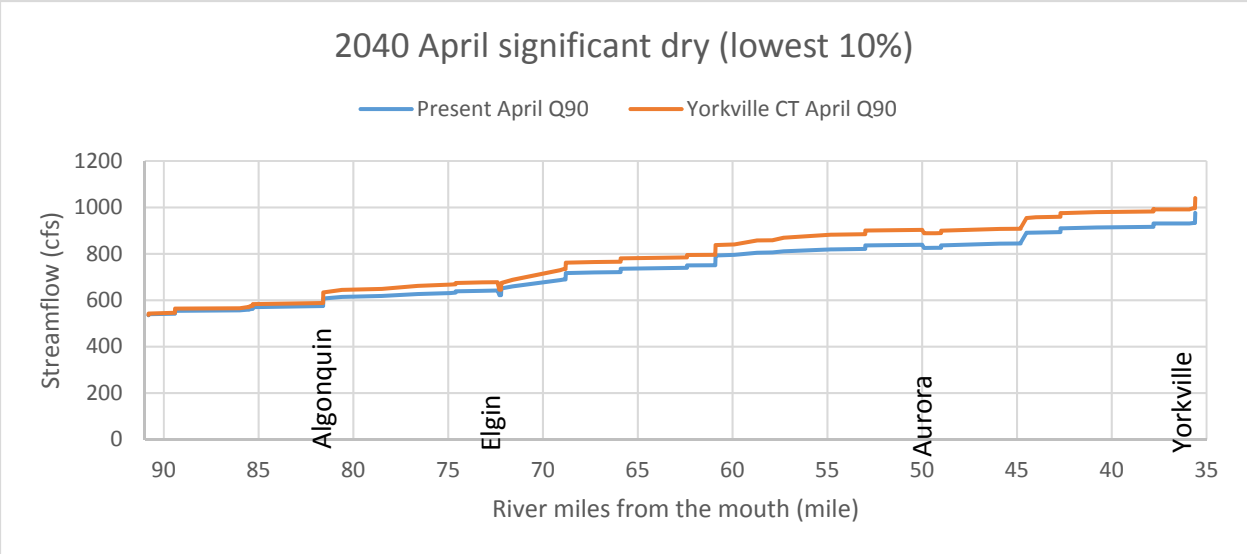
(o) From California Memorandum of Understanding

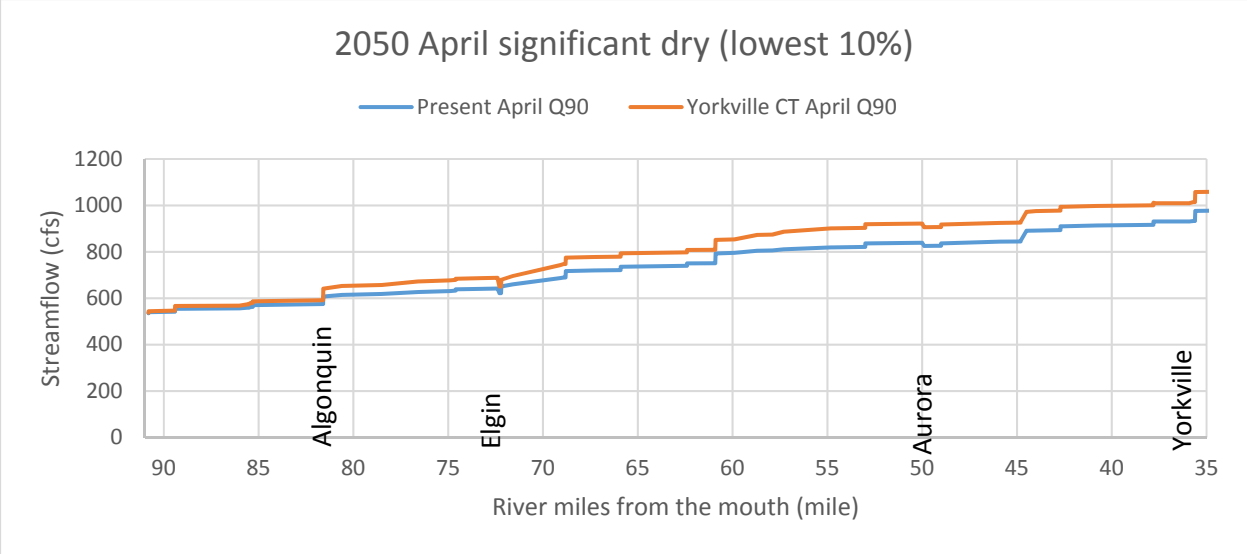
HET = High Efficiency Toilets; HEWM = High Efficiency Washing Machines

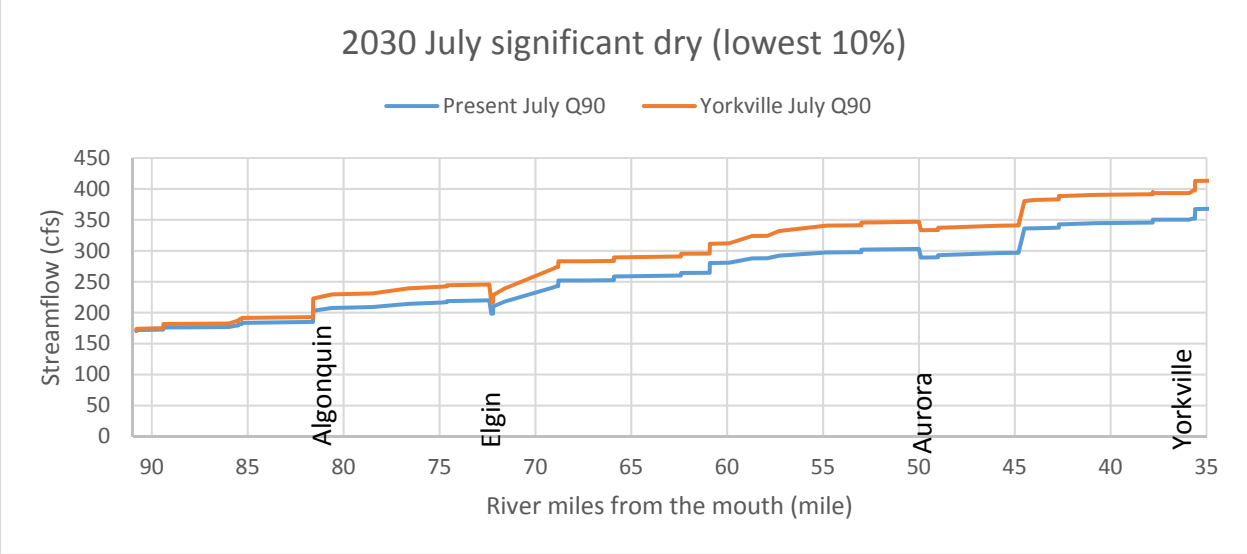
Appendix C

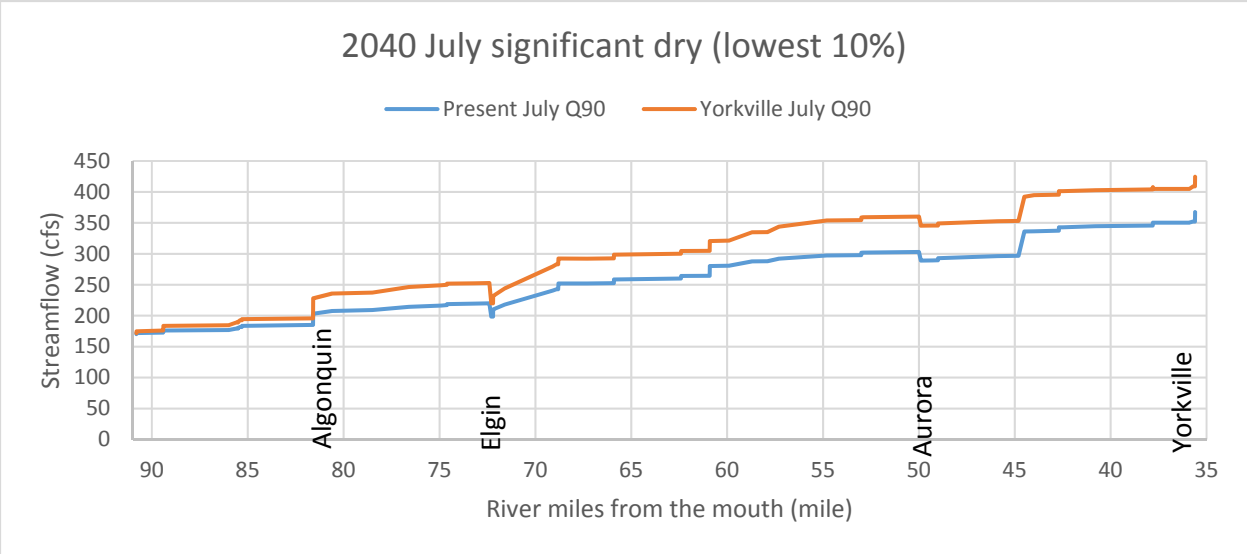
Yorkville Location Fox River Streamflow as Compared to Length of River

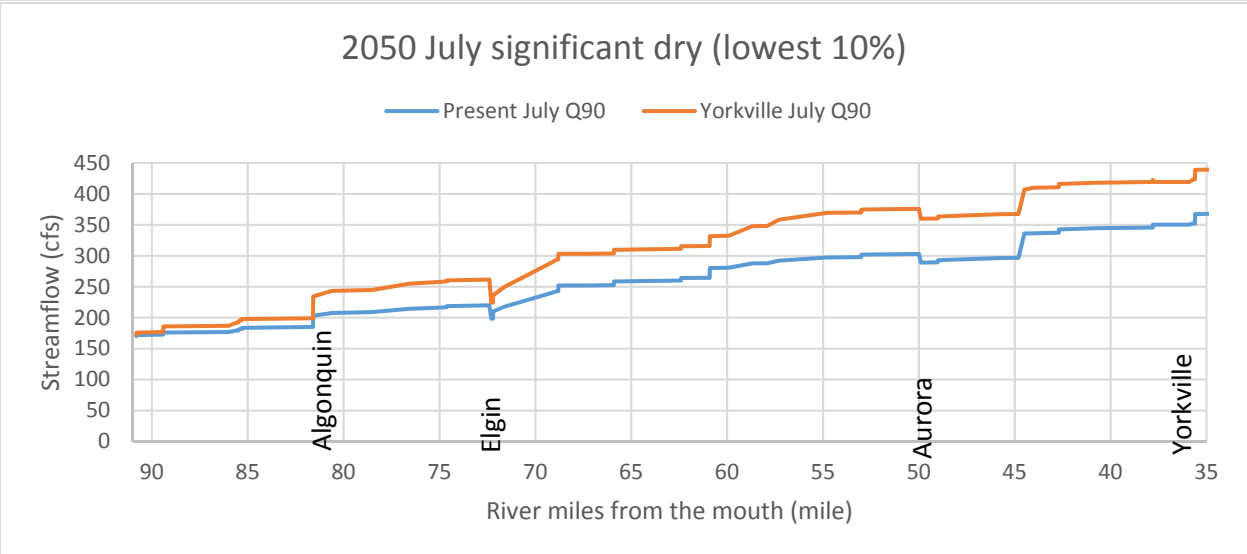

2030 April significant dry (lowest 10%)
Present April Q90
Yorkville CT April Q90
Streamflow (cfs)
1200
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200
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Algonquin
Elgin
Aurora
Yorkville
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35
River miles from the mouth (mile)

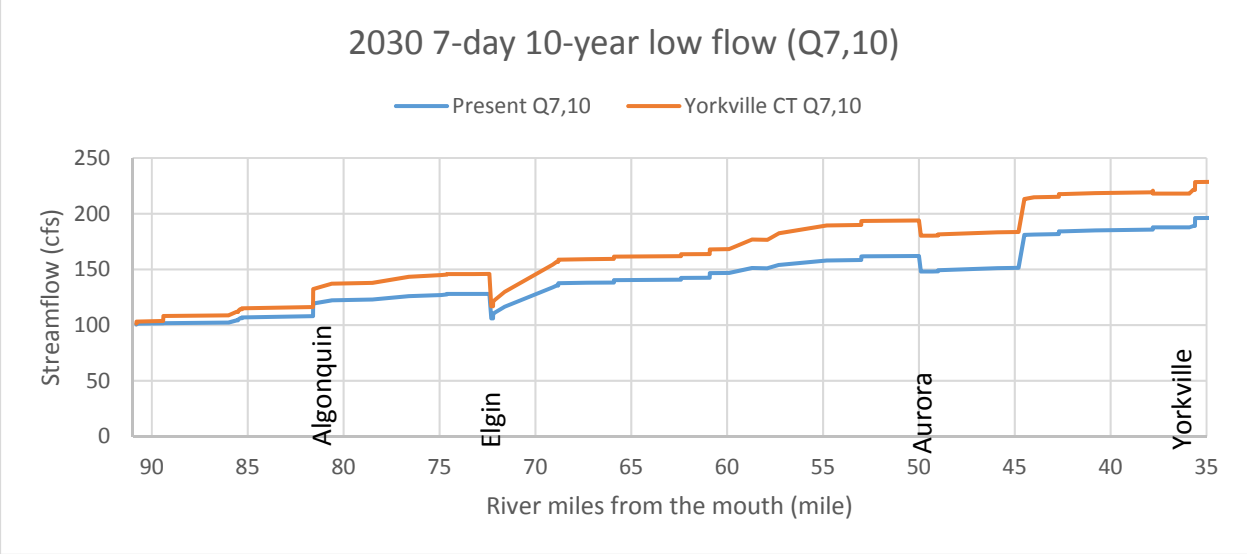

2040 April significant dry (lowest 10%)
Present April Q90
Yorkville CT April Q90
Streamflow (cfs)
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Algonquin
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Yorkville
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River miles from the mouth (mile)

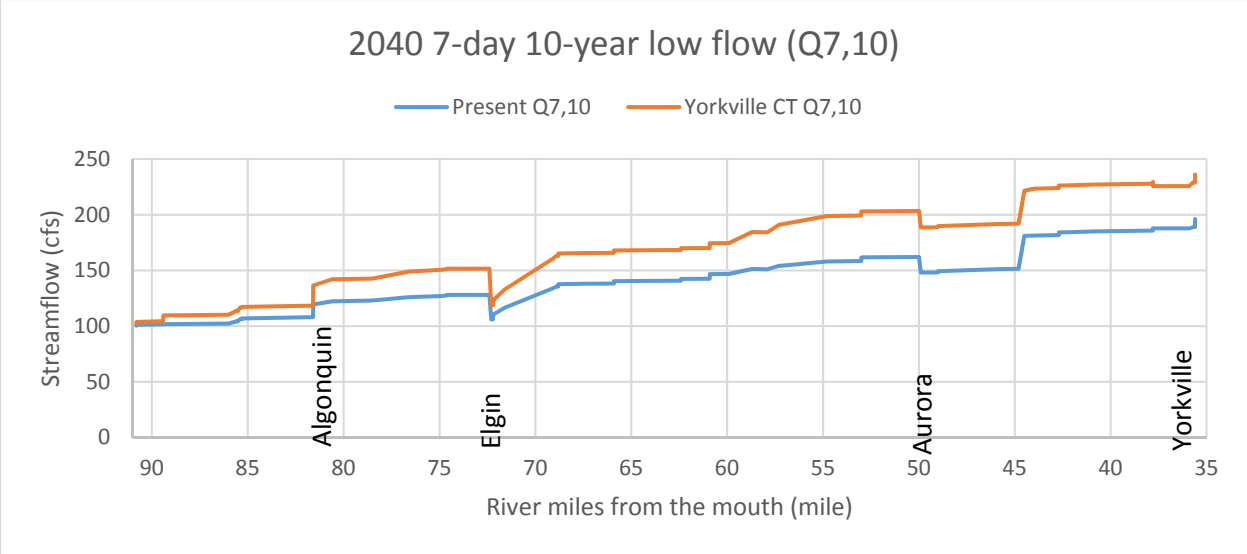

2050 April significant dry (lowest 10%)
Present April Q90
Yorkville CT April Q90
Streamflow (cfs)
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River miles from the mouth (mile)

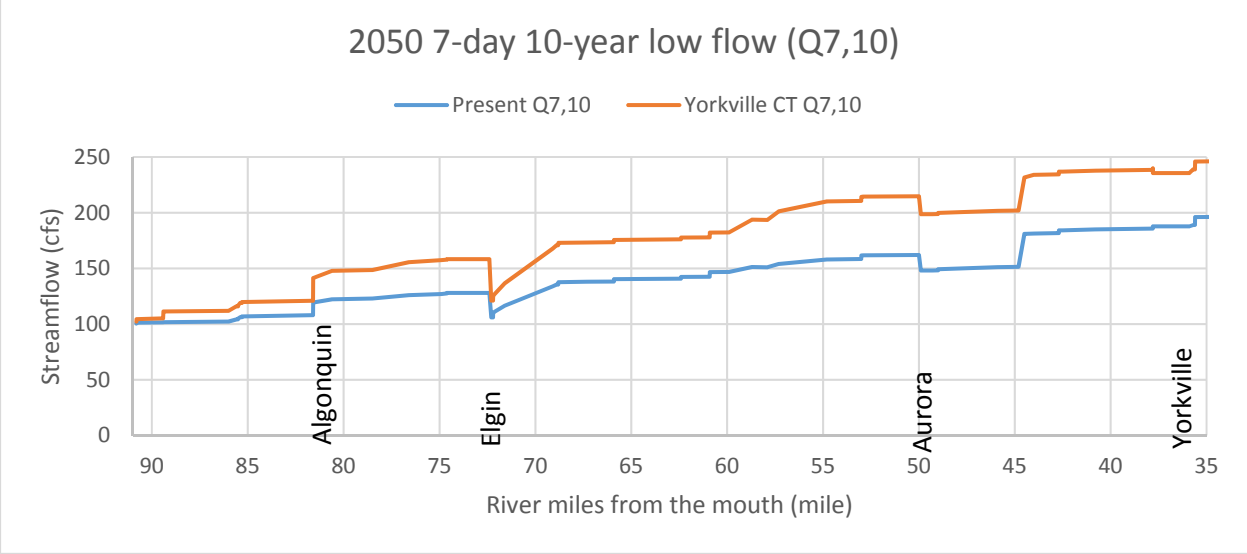

2030 July significant dry (lowest 10%)
Present July Q90
Yorkville July Q90
Streamflow (cfs)
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Elgin
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Yorkville
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River miles from the mouth (mile)

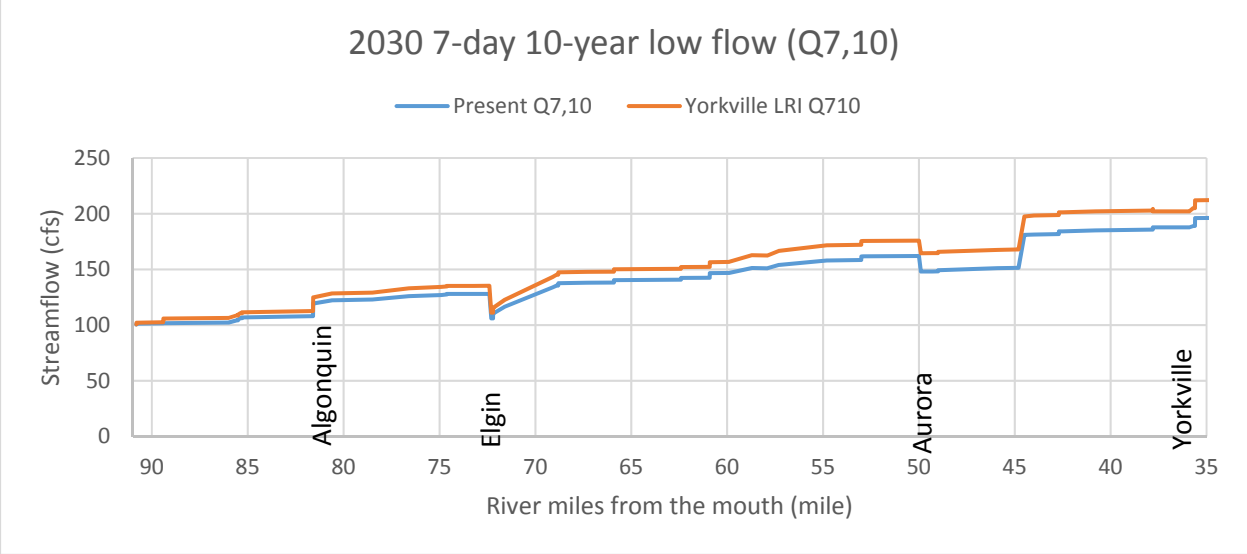

2040 July significant dry (lowest 10%)
Present July Q90
Yorkville July Q90
Streamflow (cfs)
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Algonquin
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Yorkville
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River miles from the mouth (mile)

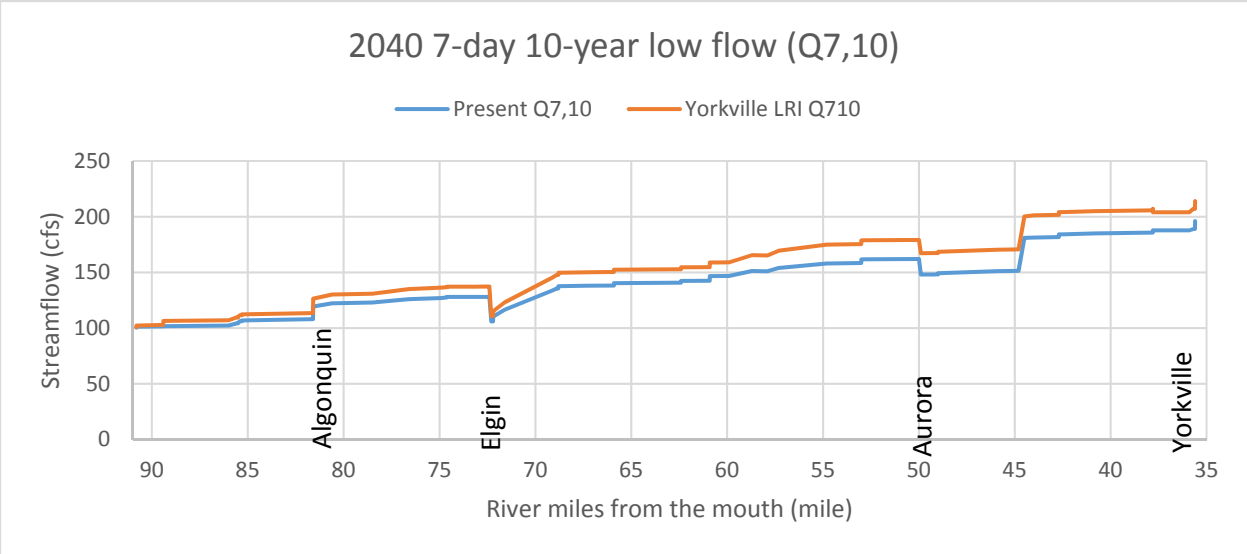

2050 July significant dry (lowest 10%)
Present July Q90
Yorkville July Q90
Streamflow (cfs)
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Algonquin
Elgin
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Yorkville
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River miles from the mouth (mile)

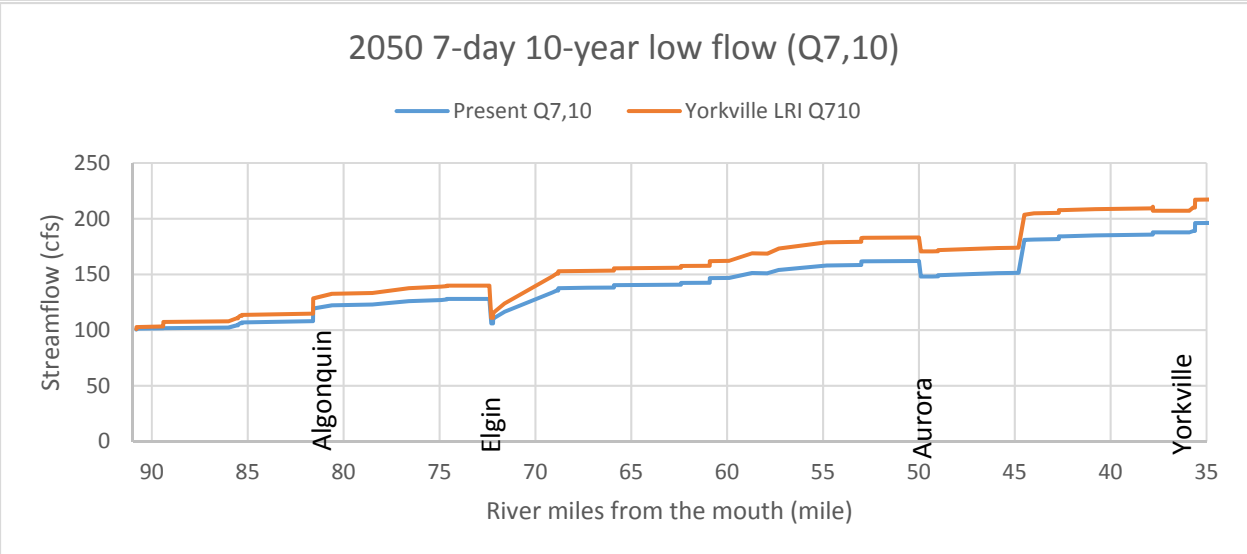

2030 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville CT Q7,10
Streamflow (cfs)
250
200
150
100
50
0
90
85
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75
70
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60
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40
35
Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)


2040 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville CT Q7,10
Streamflow (cfs)
250
200
150
100
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90
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75
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)


2050 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville CT Q7,10
Streamflow (cfs)
250
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

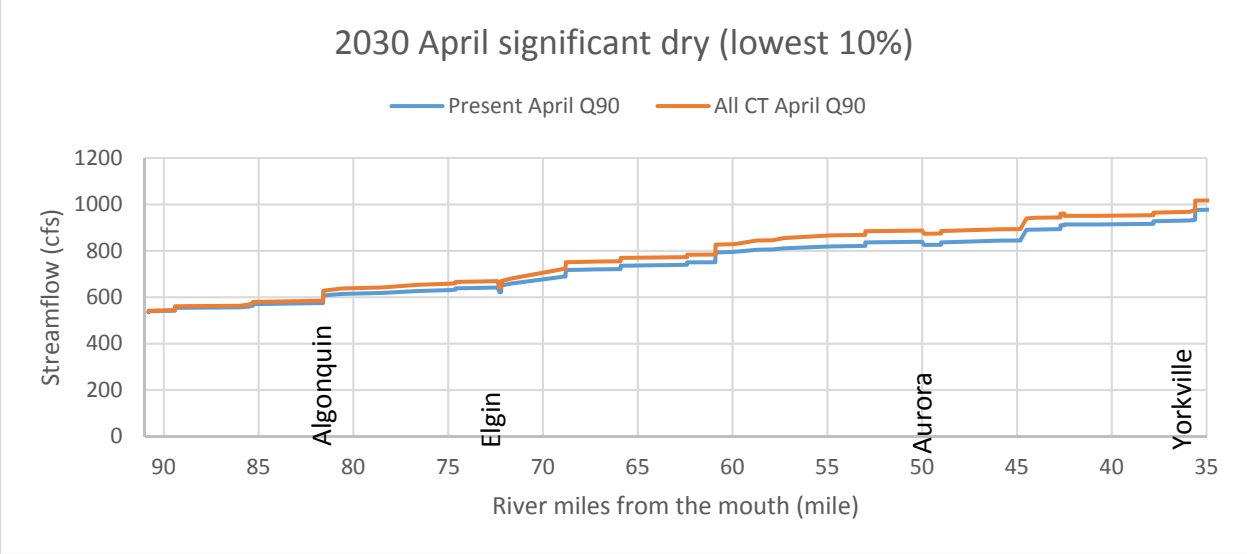

2030 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville LRI Q710
Streamflow (cfs)
250
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150
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

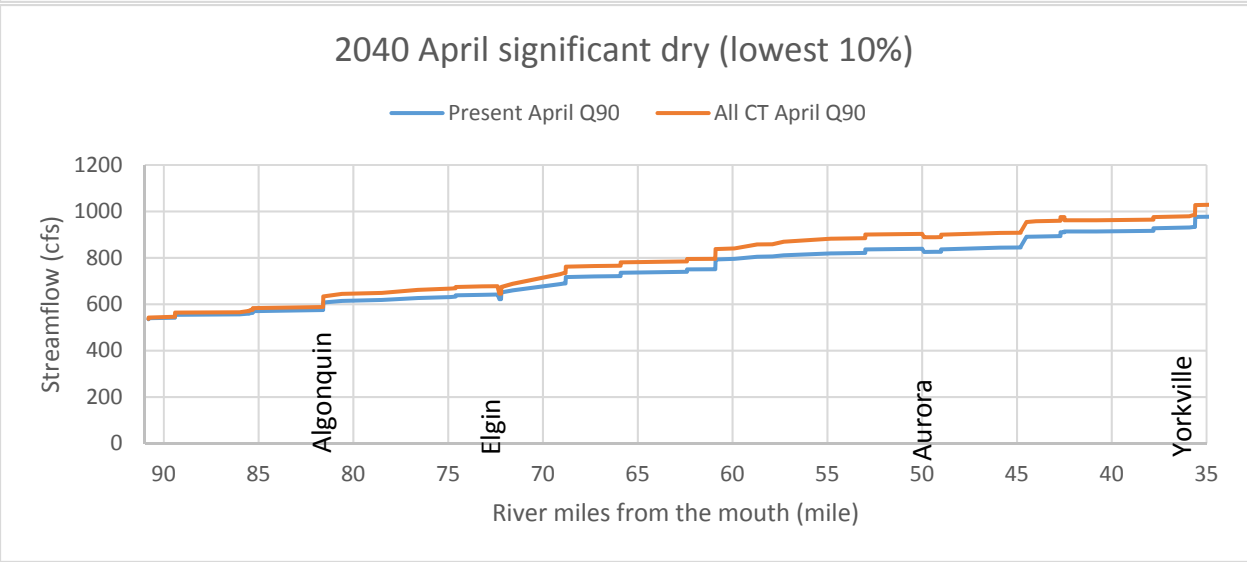

2040 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville LRI Q710
Streamflow (cfs)
250
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

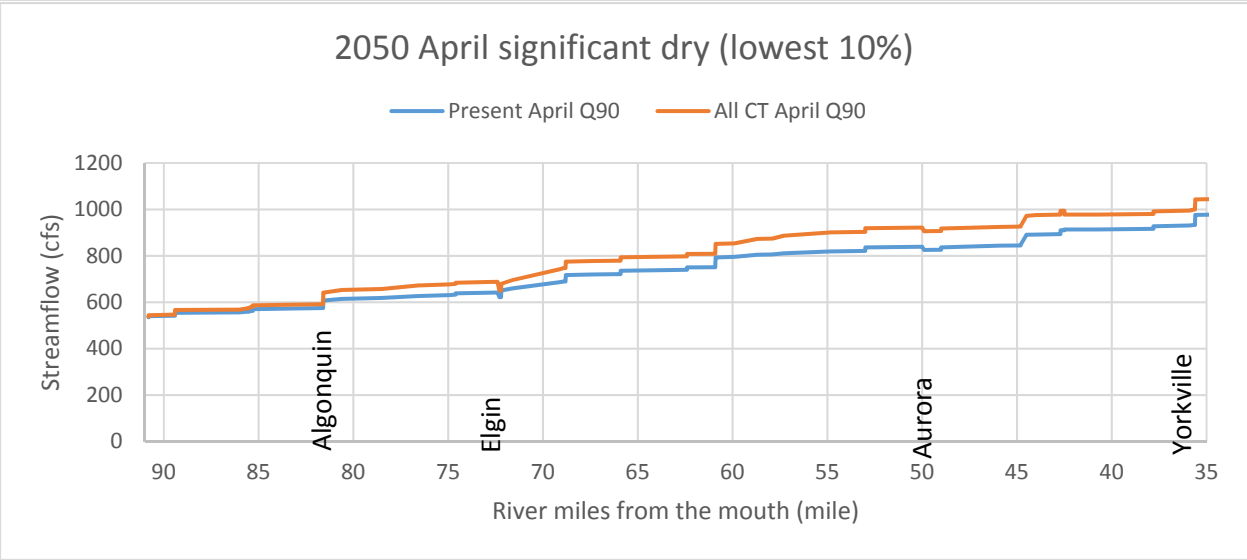

2050 7-day 10-year low flow (Q7,10)
Present Q7,10
Yorkville LRI Q710
Streamflow (cfs)
250
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

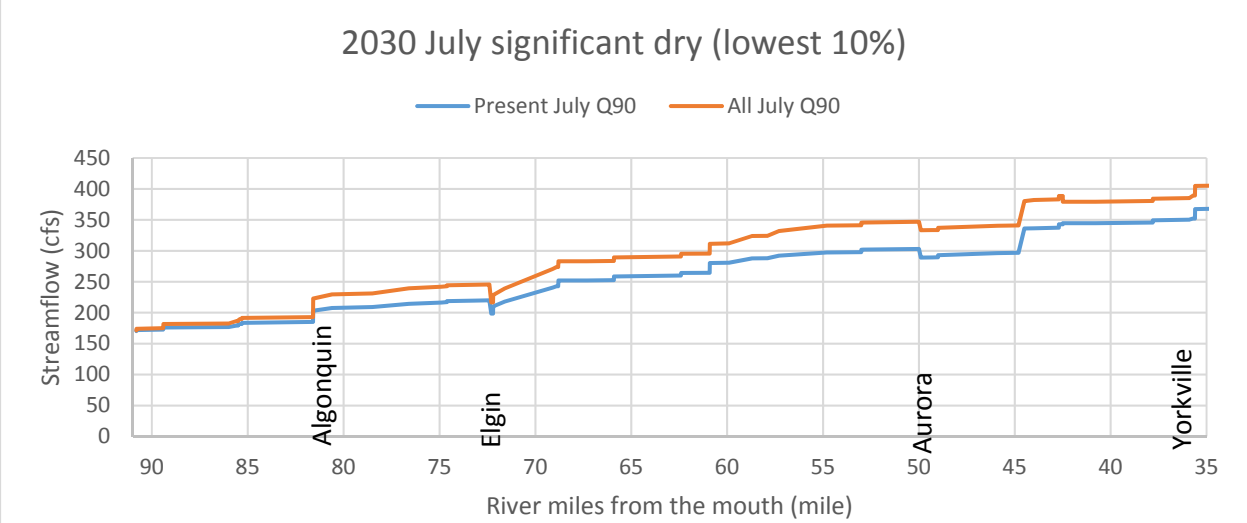
Appendix D

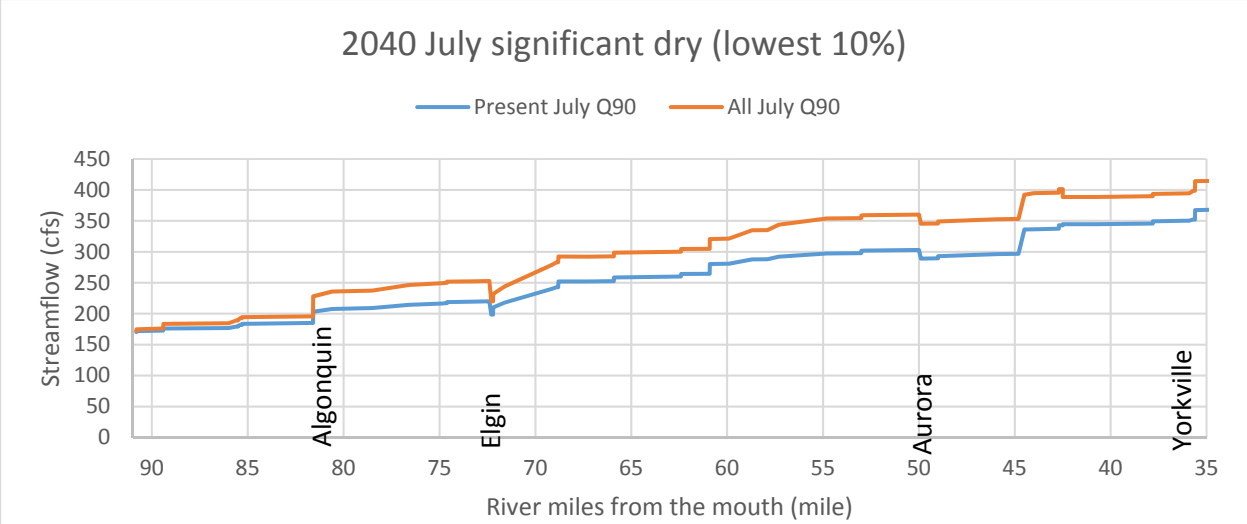
Sub-Regional Location Fox River Streamflow as Compared to Length of River

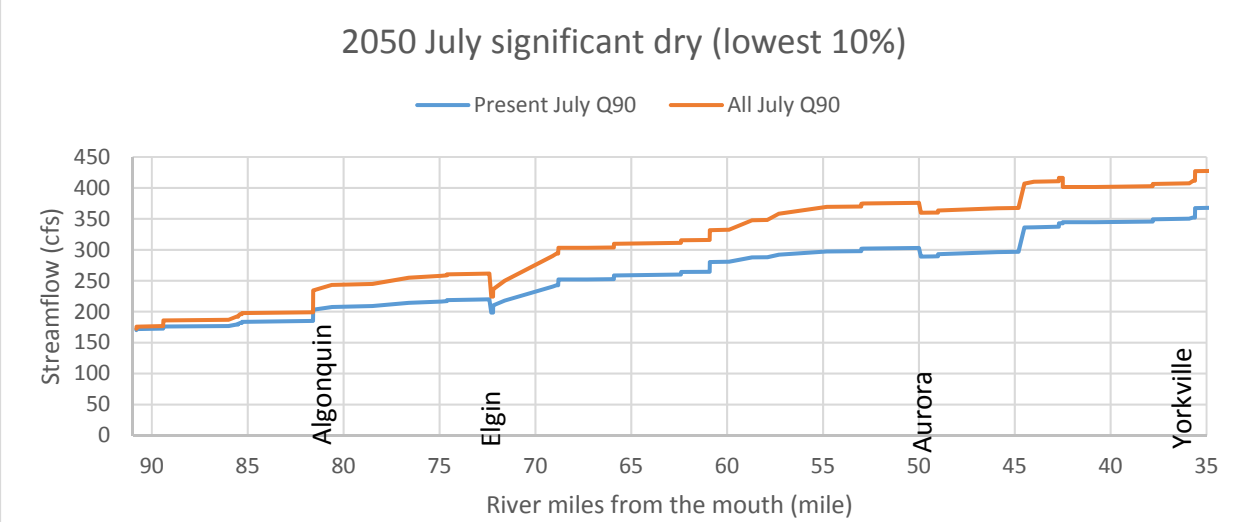

2030 April significant dry (lowest 10%)
Present April Q90
All CT April Q90
Streamflow (cfs)
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Algonquin
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Aurora
Yorkville
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River miles from the mouth (mile)

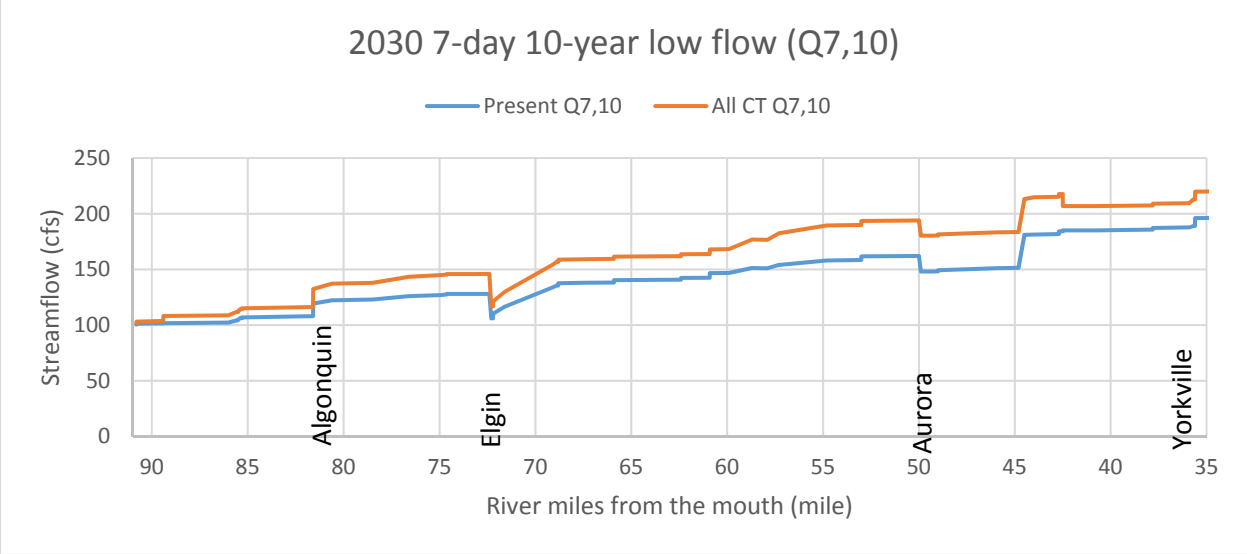

2040 April significant dry (lowest 10%)
Present April Q90
All CT April Q90
Streamflow (cfs)
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Yorkville
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River miles from the mouth (mile)

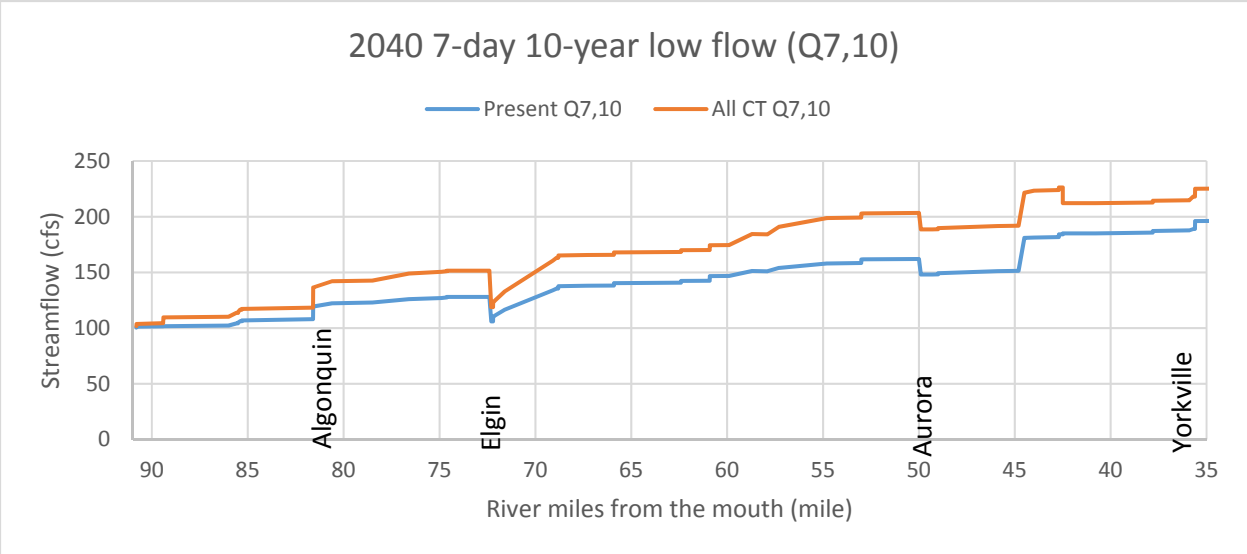

2050 April significant dry (lowest 10%)
Present April Q90
All CT April Q90
Streamflow (cfs)
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Algonquin
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Yorkville
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River miles from the mouth (mile)

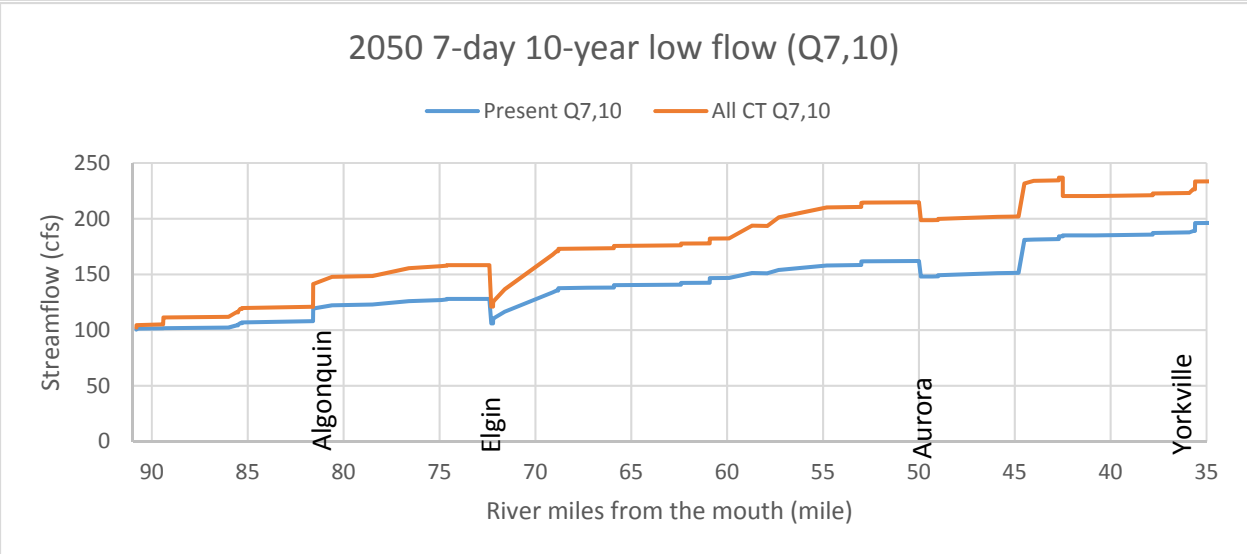

2030 July significant dry (lowest 10%)
Present July Q90
All July Q90
Streamflow (cfs)
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Algonquin
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Aurora
Yorkville
River miles from the mouth (mile)

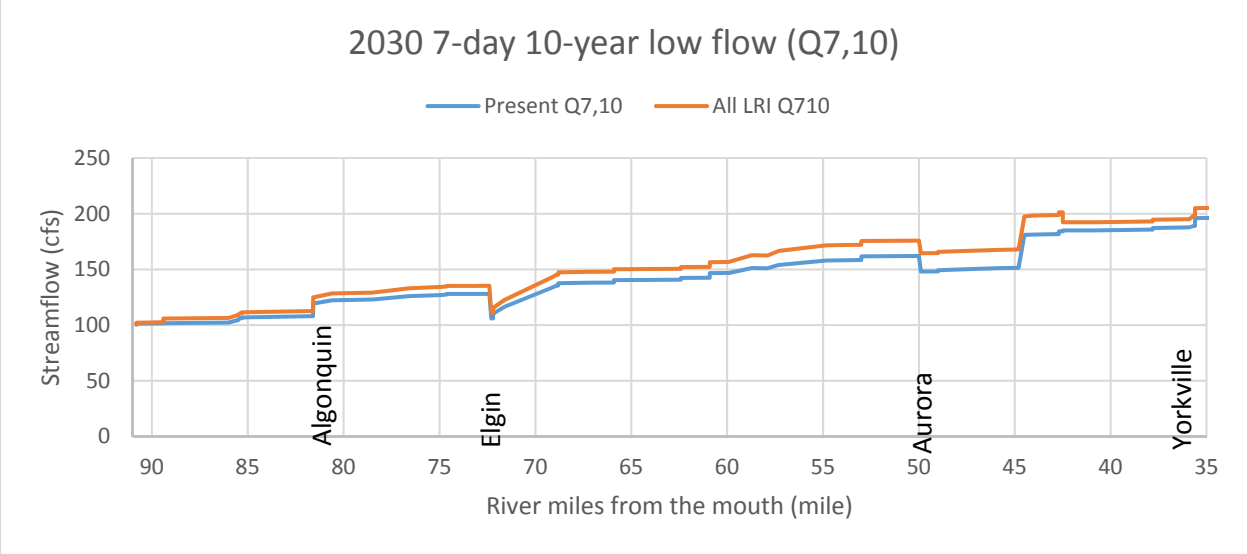

2040 July significant dry (lowest 10%)
Present July Q90
All July Q90
Streamflow (cfs)
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

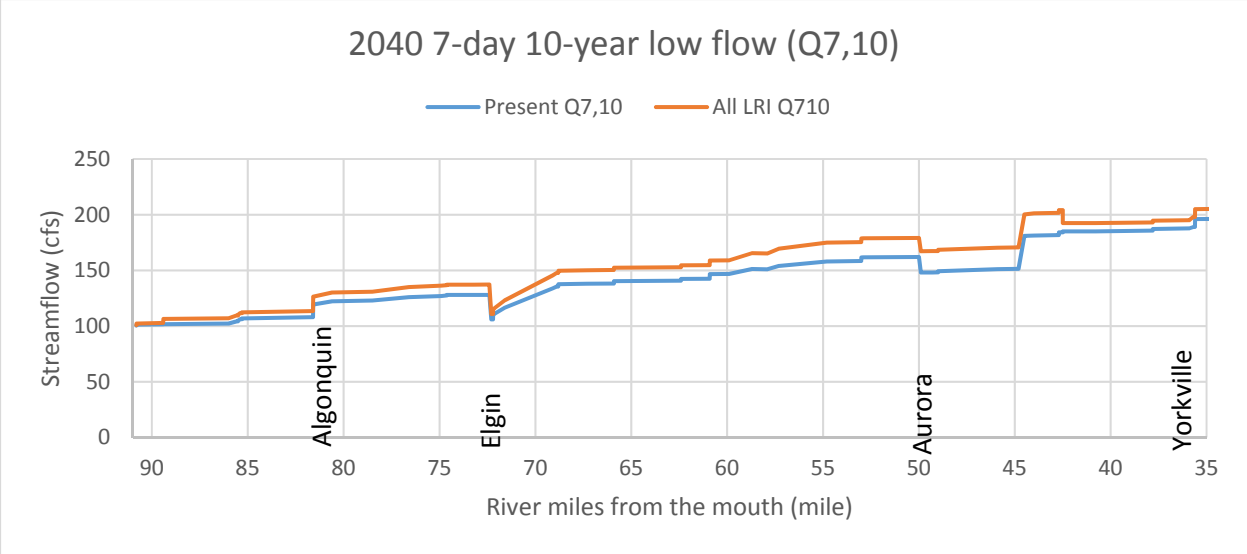

2050 July significant dry (lowest 10%)
Present July Q90
All July Q90
Streamflow (cfs)
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Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

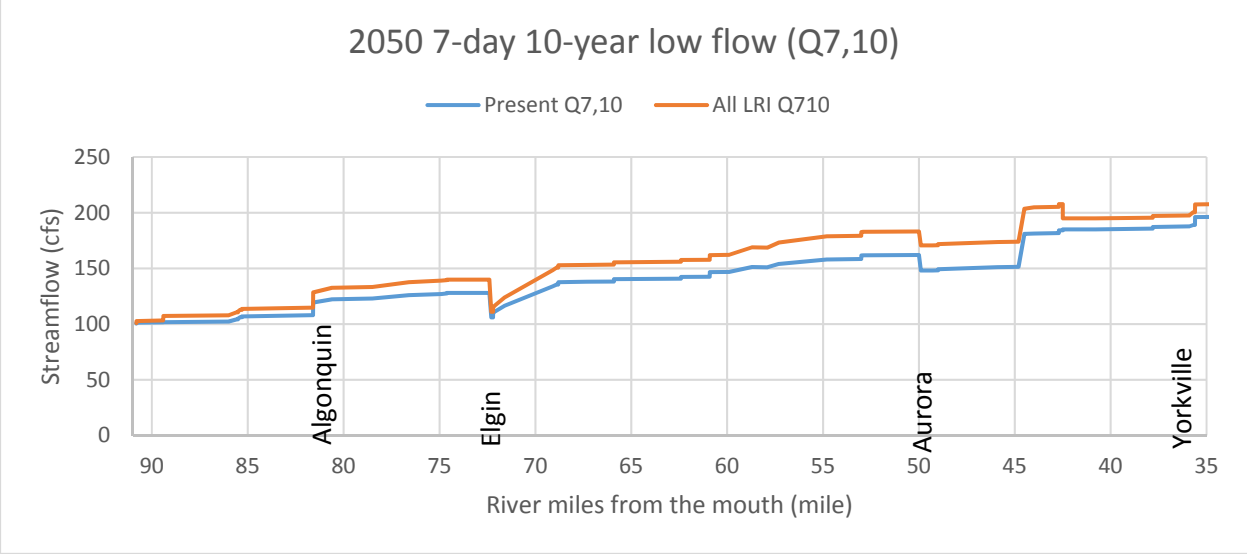

2030 7-day 10-year low flow (Q7,10)
Present Q7,10
All CT Q7,10
Streamflow (cfs)
250
200
150
100
50
0
Algonquin
Elgin
Aurora
Yorkville
90
85
80
75
70
65
60
55
50
45
40
35
River miles from the mouth (mile)


2040 7-day 10-year low flow (Q7,10)
Present Q7,10
All CT Q7,10
Streamflow (cfs)
250
200
150
100
50
0
Algonquin
Elgin
Aurora
Yorkville
90
85
80
75
70
65
60
55
50
45
40
35
River miles from the mouth (mile)


2050 7-day 10-year low flow (Q7,10)
Present Q7,10
All CT Q7,10
Streamflow (cfs)
250
200
150
100
50
0
Algonquin
Elgin
Aurora
Yorkville
90
85
80
75
70
65
60
55
50
45
40
35
River miles from the mouth (mile)

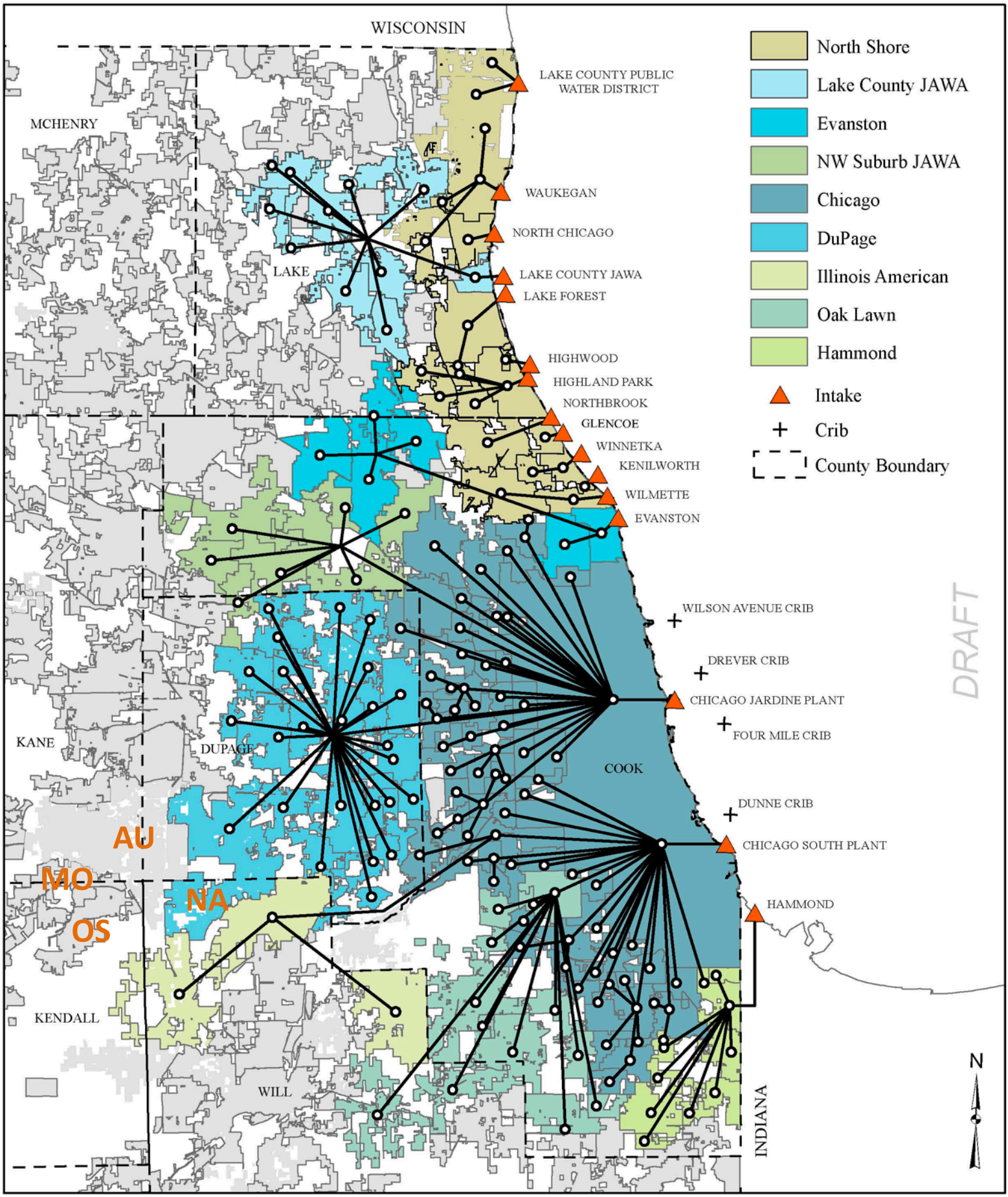

2030 7-day 10-year low flow (Q7,10)
Present Q7,10
All LRI Q710
Streamflow (cfs)
250
200
150
100
50
0
90
85
80
75
70
65
60
55
50
45
40
35
Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)


2040 7-day 10-year low flow (Q7,10)
Present Q7,10
All LRI Q710
Streamflow (cfs)
250
200
150
100
50
0
90
85
80
75
70
65
60
55
50
45
40
35
Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)


2050 7-day 10-year low flow (Q7,10)
Present Q7,10
All LRI Q710
Streamflow (cfs)
250
200
150
100
50
0
90
85
80
75
70
65
60
55
50
45
40
35
Algonquin
Elgin
Aurora
Yorkville
River miles from the mouth (mile)

Appendix E

Lake Michigan Allocation Network 2012



DISTRIBUTION NETWORK OF LAKE MICHIGAN WATER IN 2012

Prepared by:
Daniel R. Hadley and George S. Roadcap

0 5 10 20 Miles

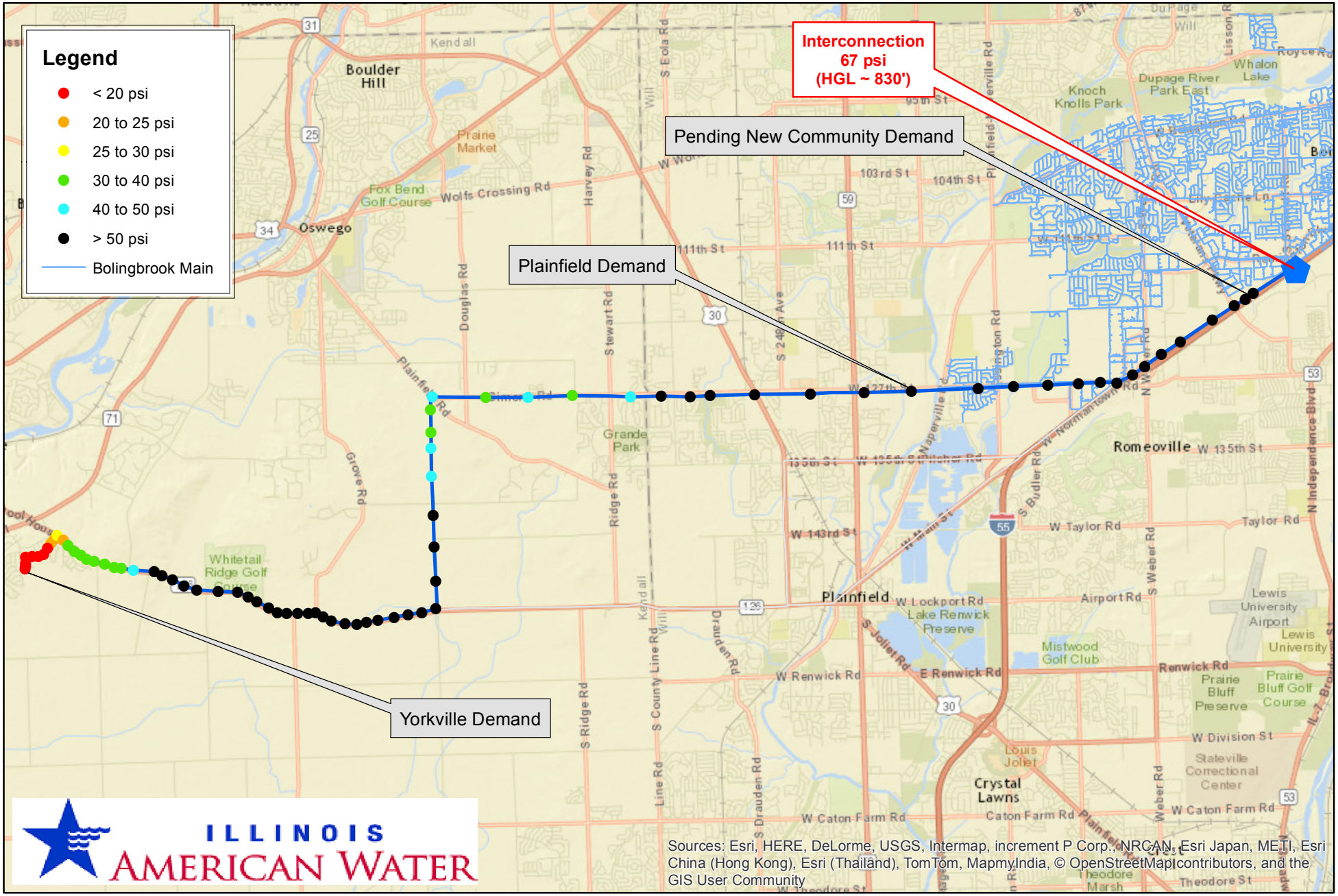
ILLINOIS STATE WATER SURVEY
PRAIRIE RESEARCH INSTITUTE

ILLINOIS

Appendix F

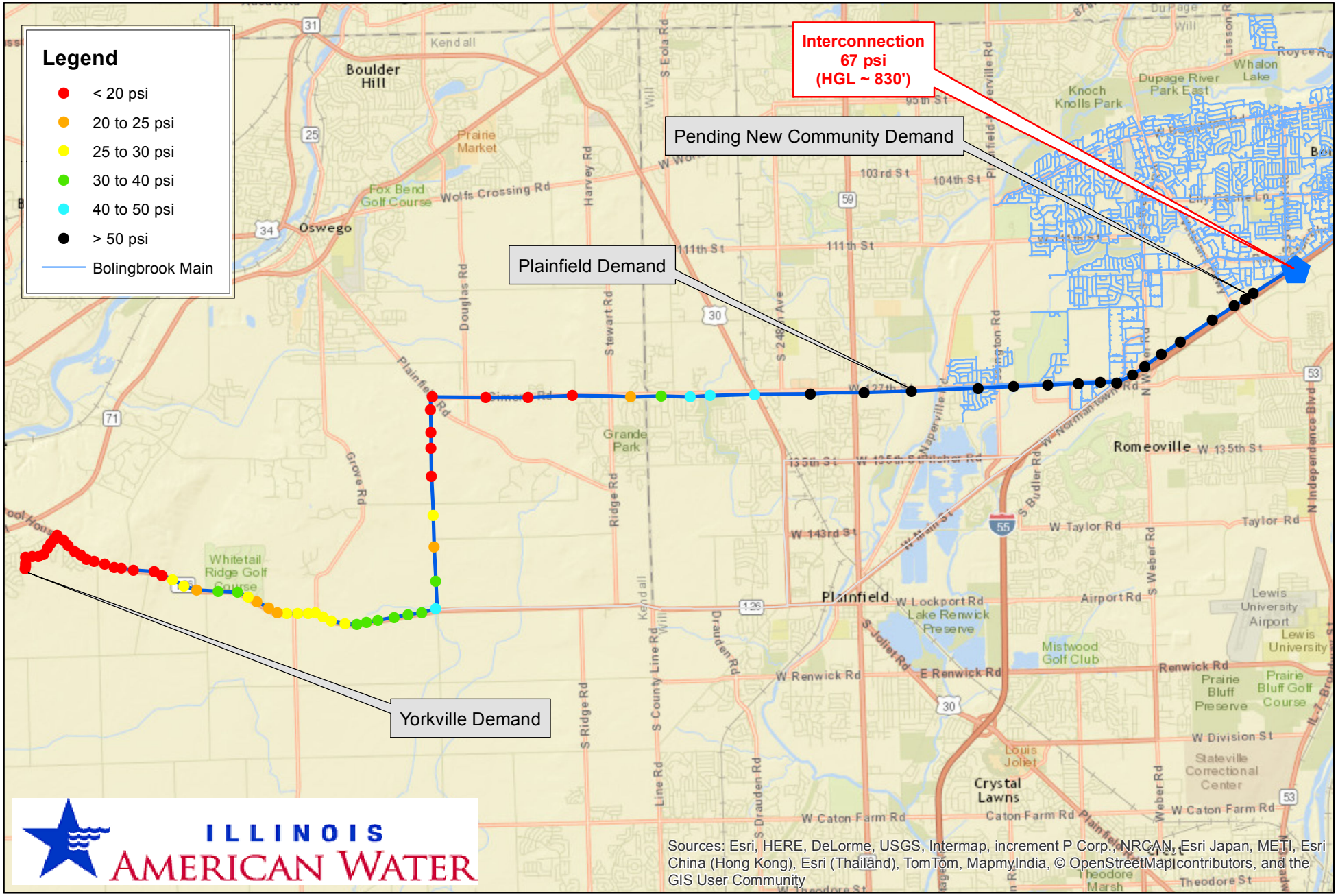
Illinois American Water Delivery Modeling

Route 1 - 24"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd

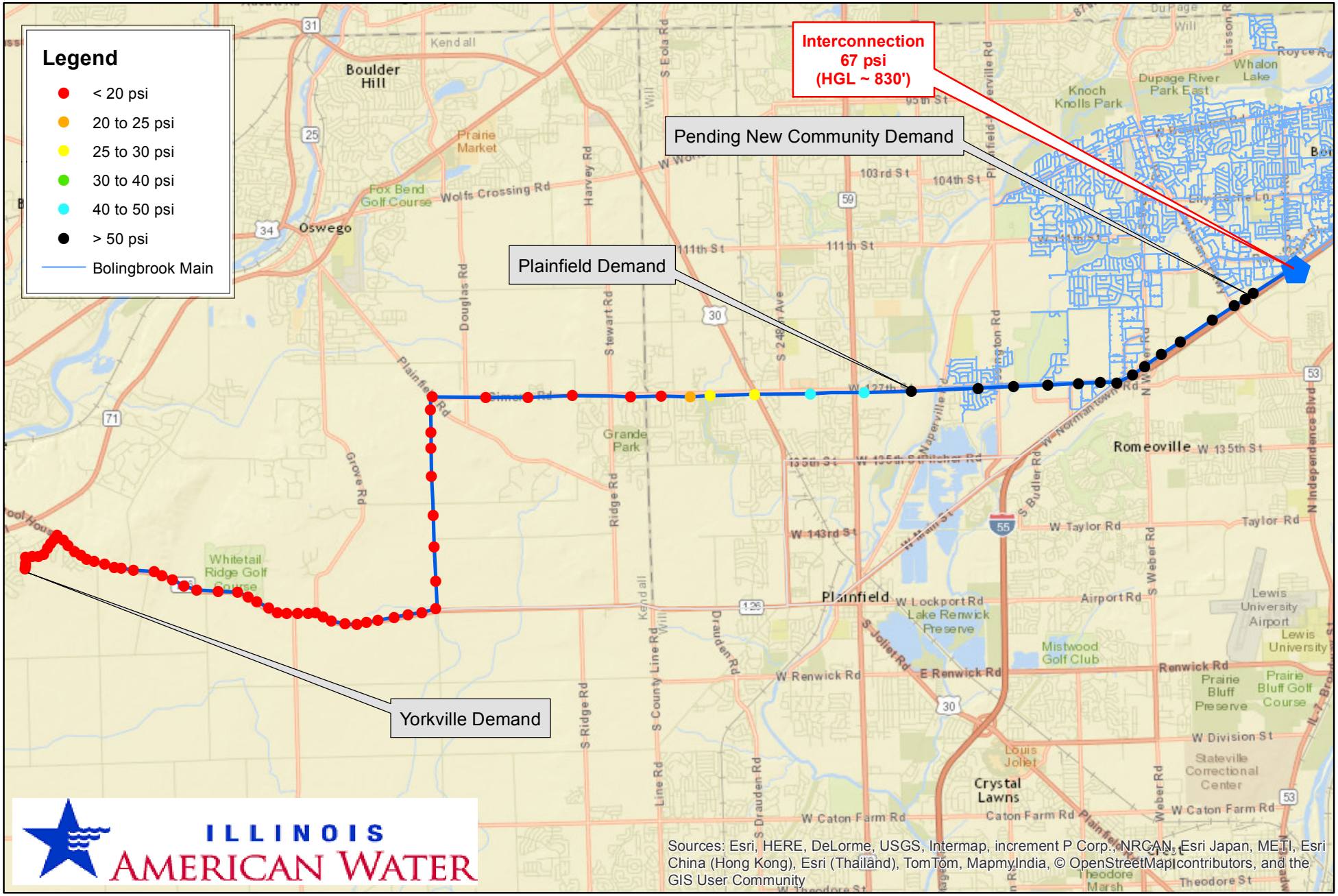


ILLINOIS AMERICAN WATER

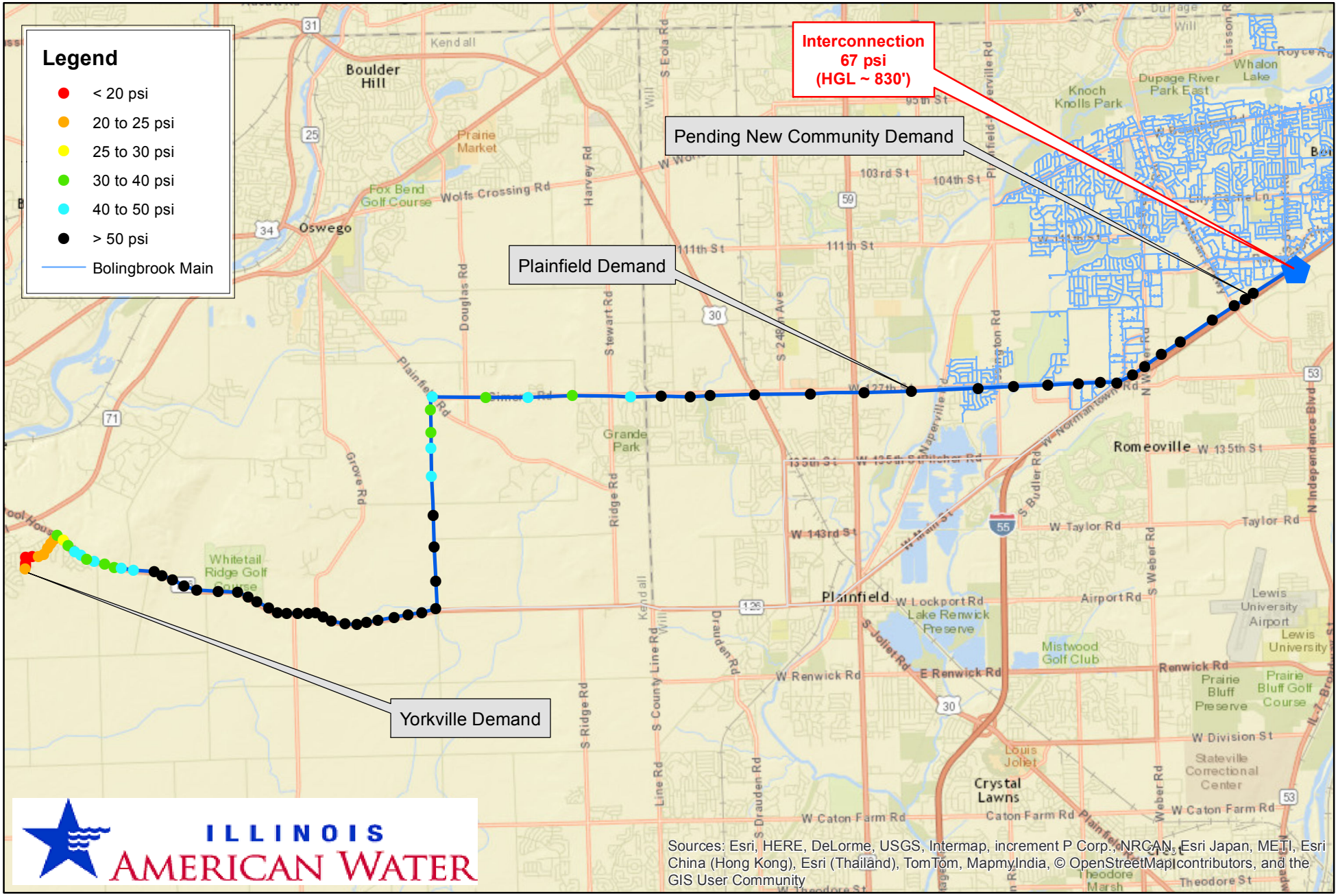
Route 1 - 24"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd



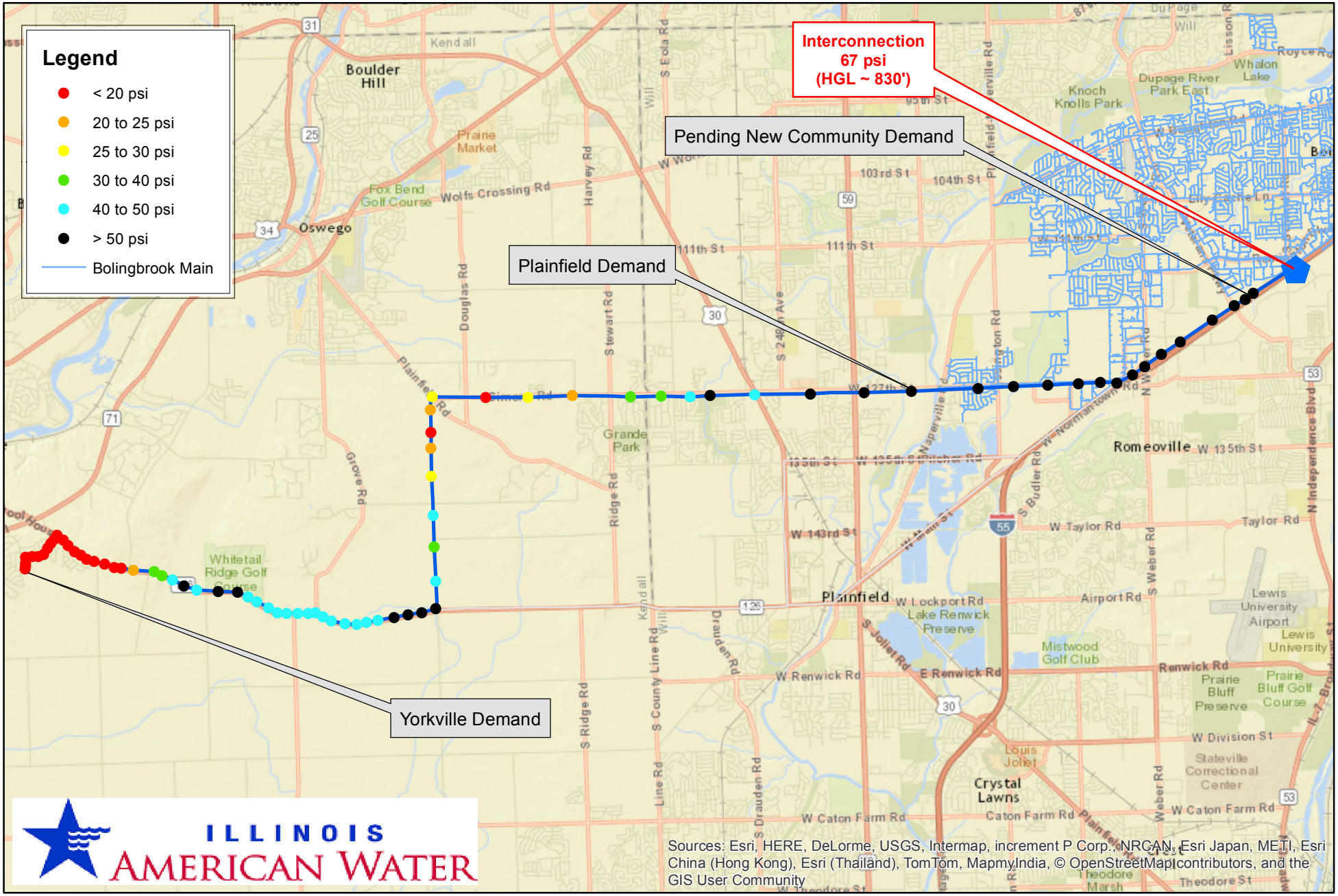
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2040 ALW Pipeline Demands
Yorkville 7.83 mgd



Route 1 - 30"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd



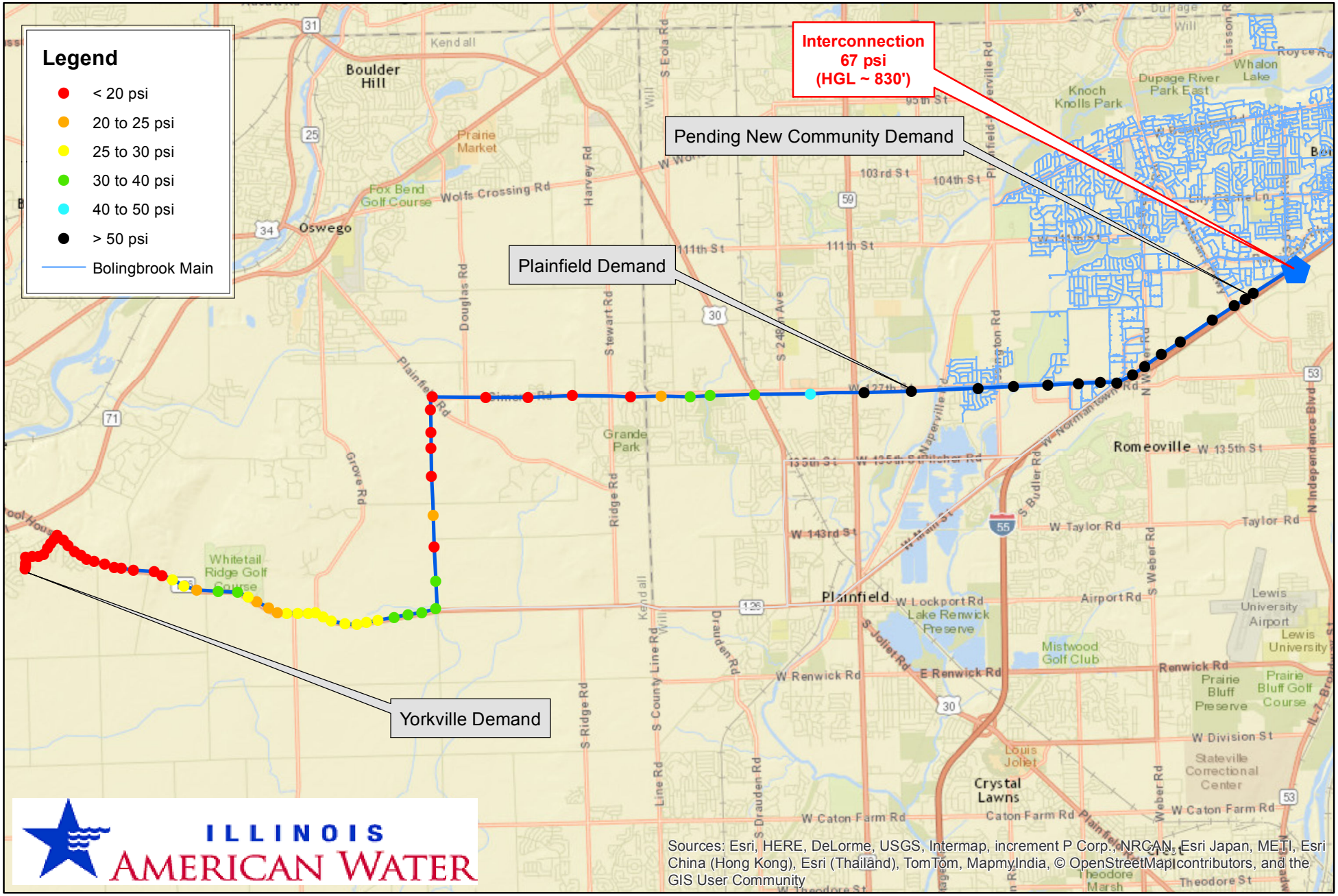
Route 1 - 30"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd



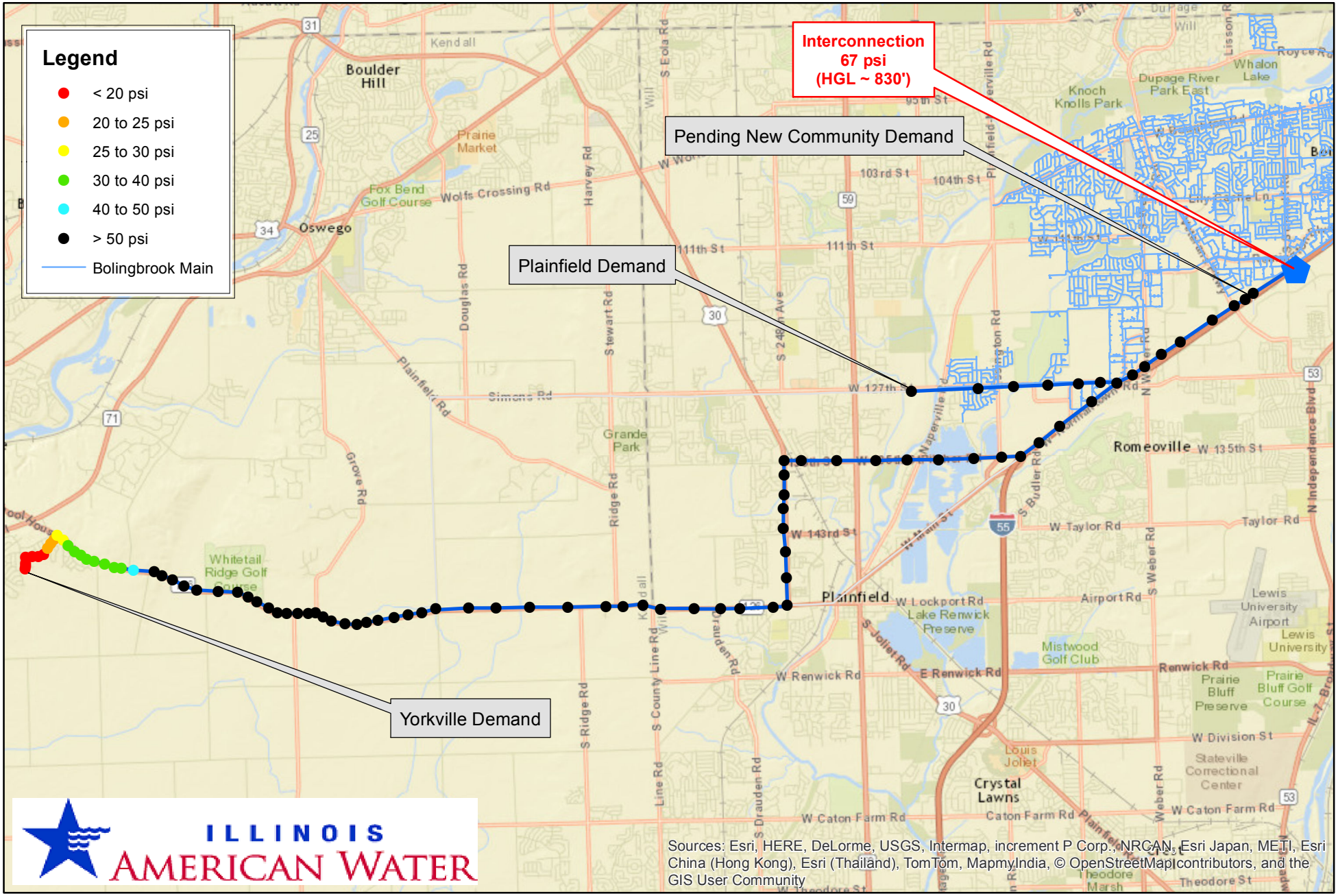
ILLINOIS AMERICAN WATER

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMapcontributors, and the GIS User Community

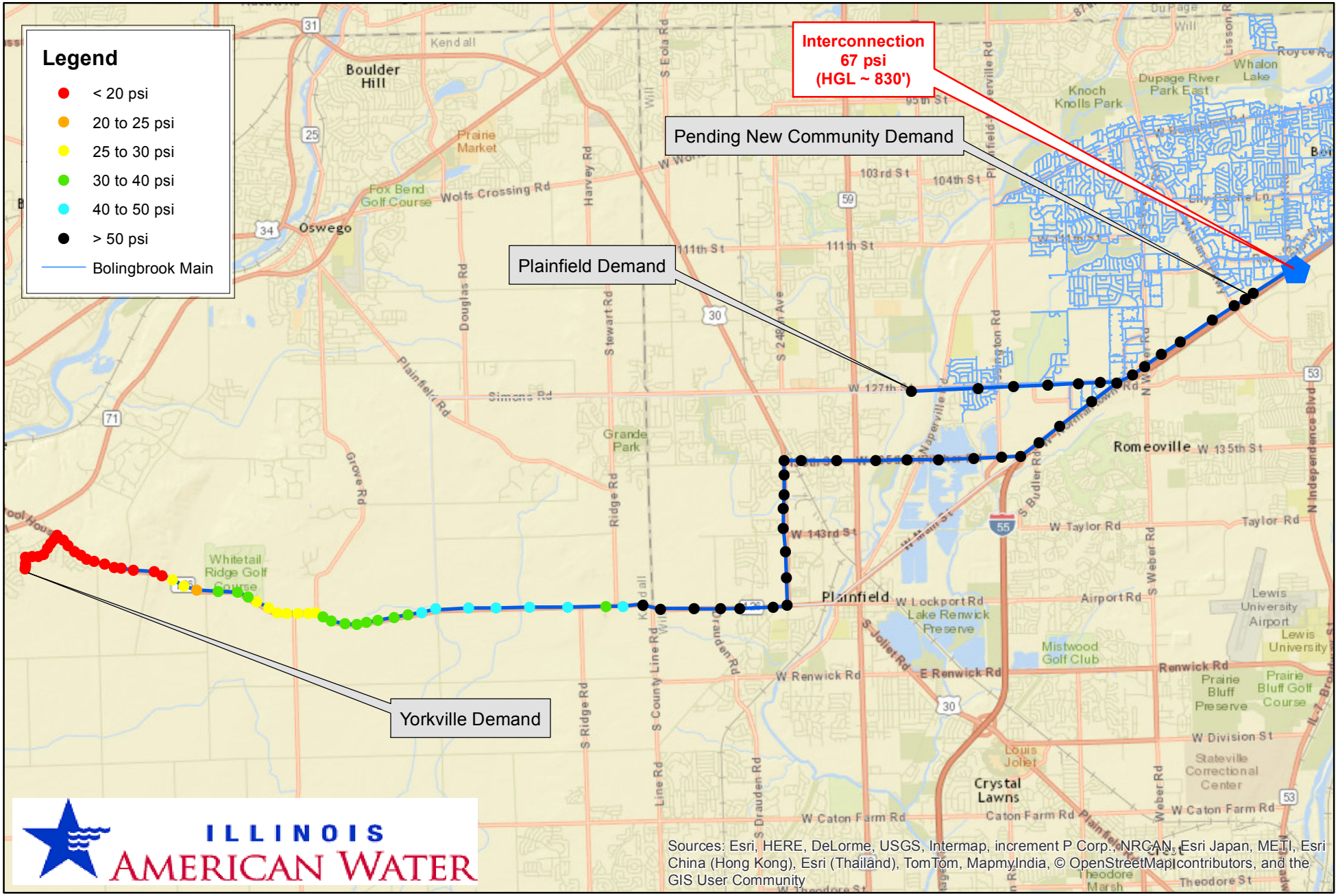
Route 1 - 30"
2040 ALW Pipeline Demands
Yorkville 7.83 mgd



Route 2 - 24"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd

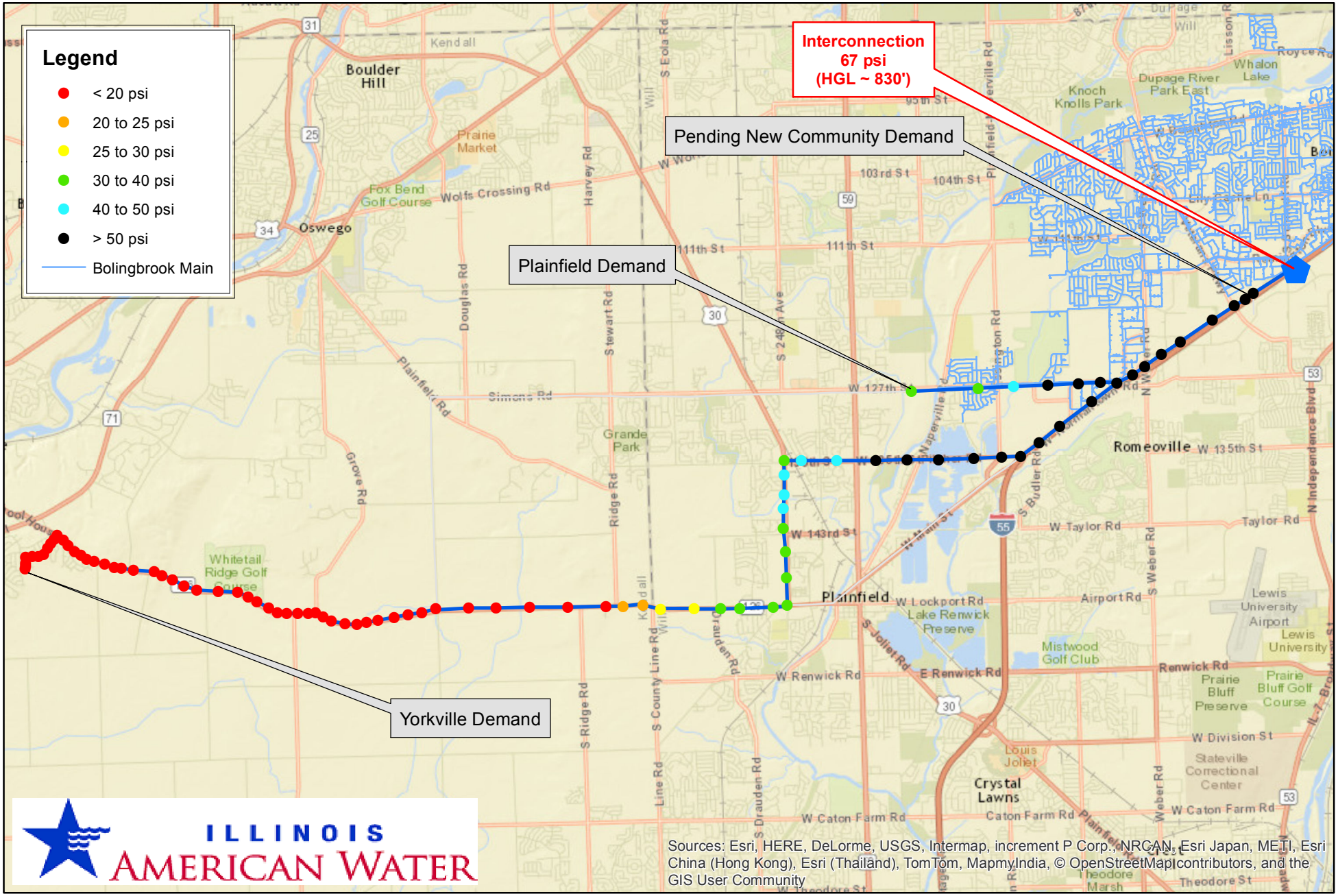


Route 2 - 24"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd



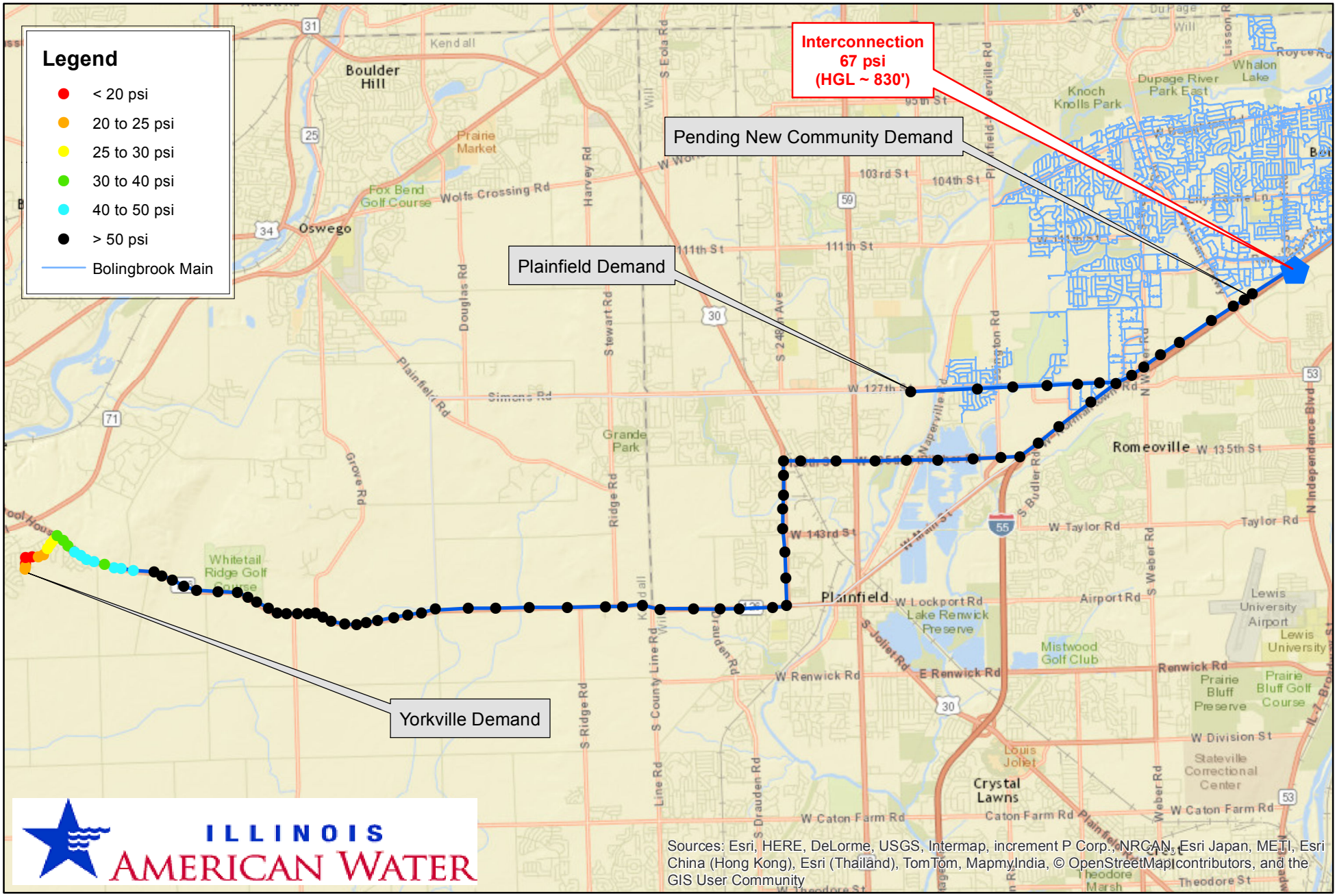
ILLINOIS AMERICAN WATER

Route 2 - 24"
2040 ALW Pipeline Demands
Yorkville 7.83 mgd



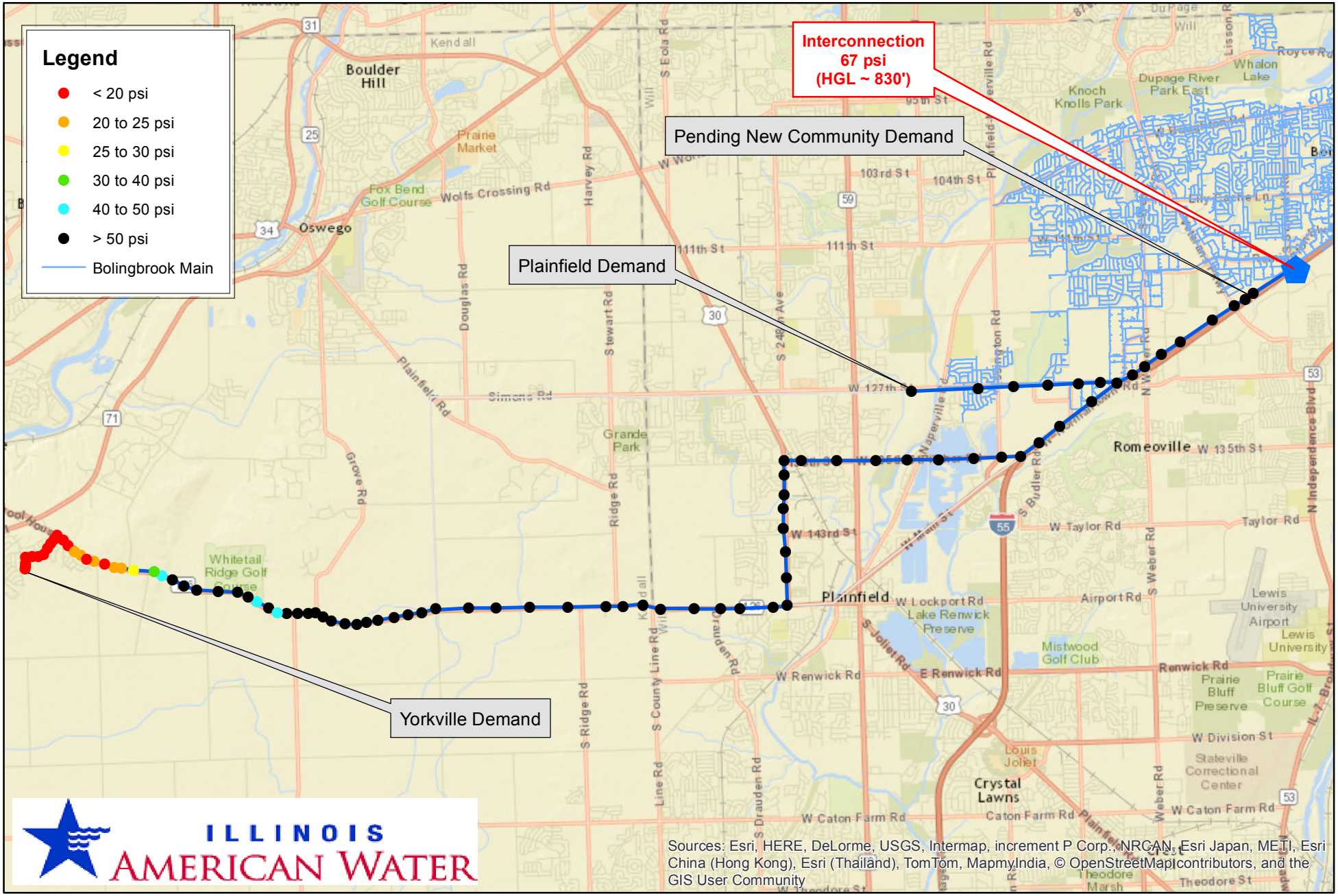
ILLINOIS AMERICAN WATER

Route 2 - 30"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd

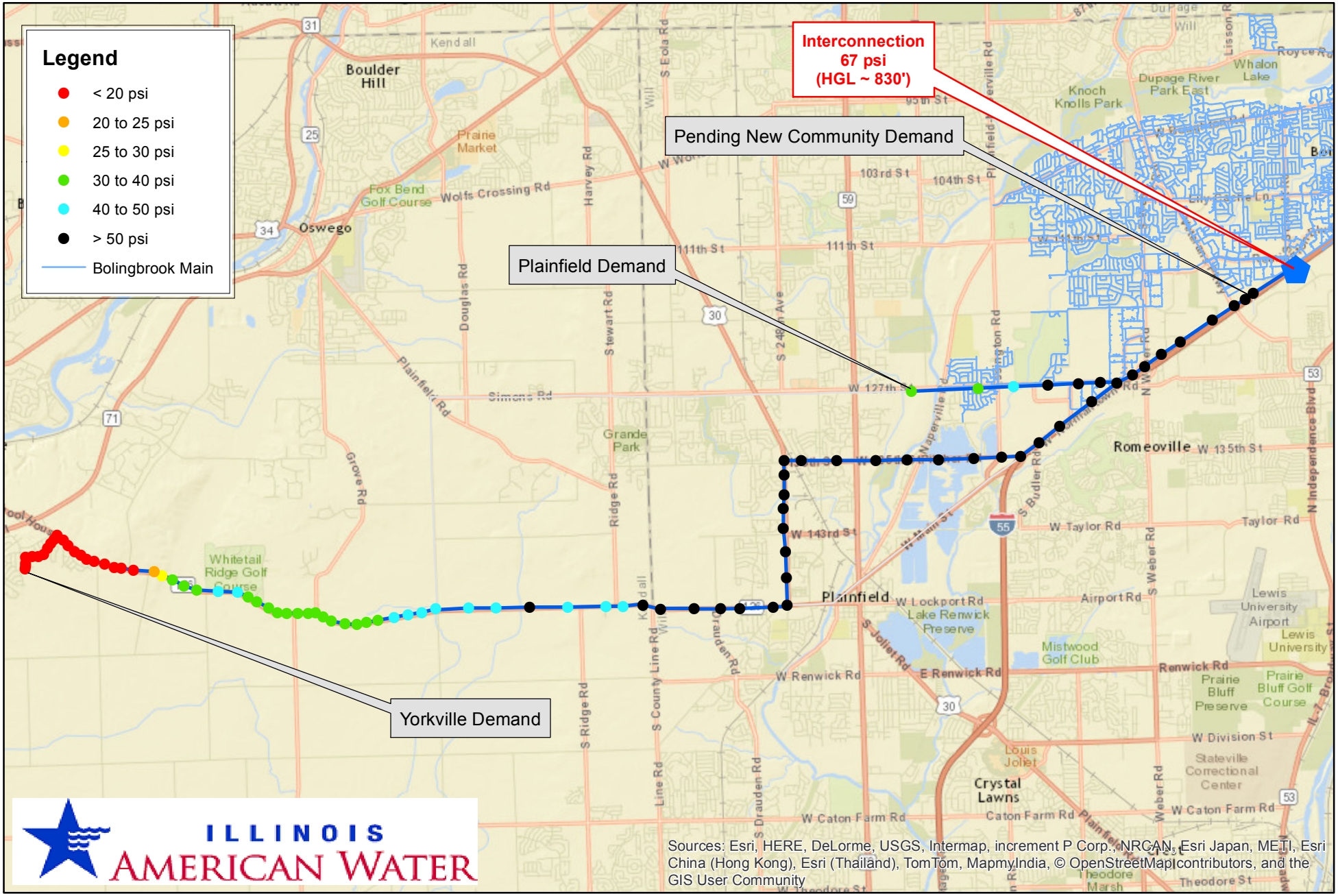


ILLINOIS AMERICAN WATER

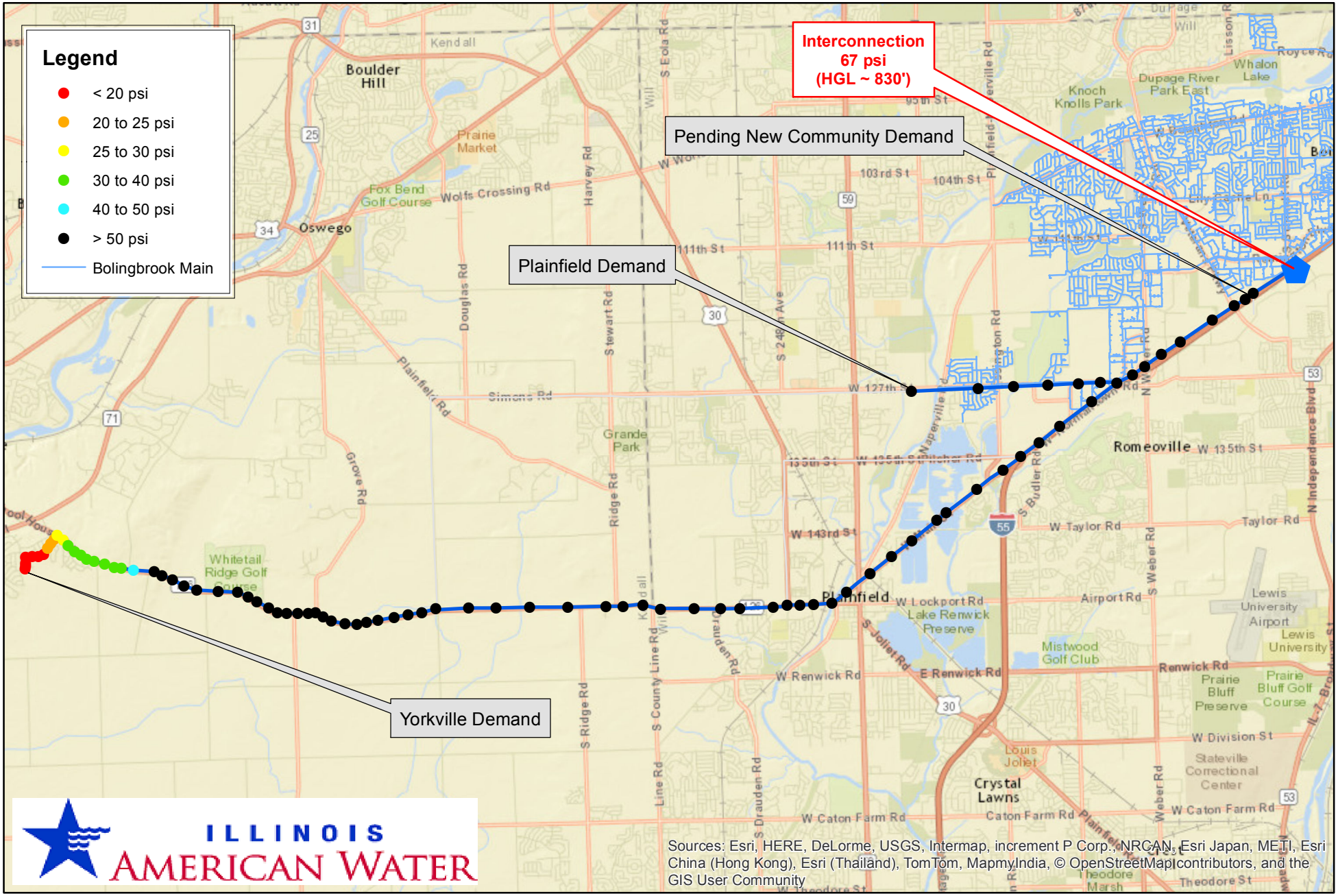
Route 2 - 30"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd



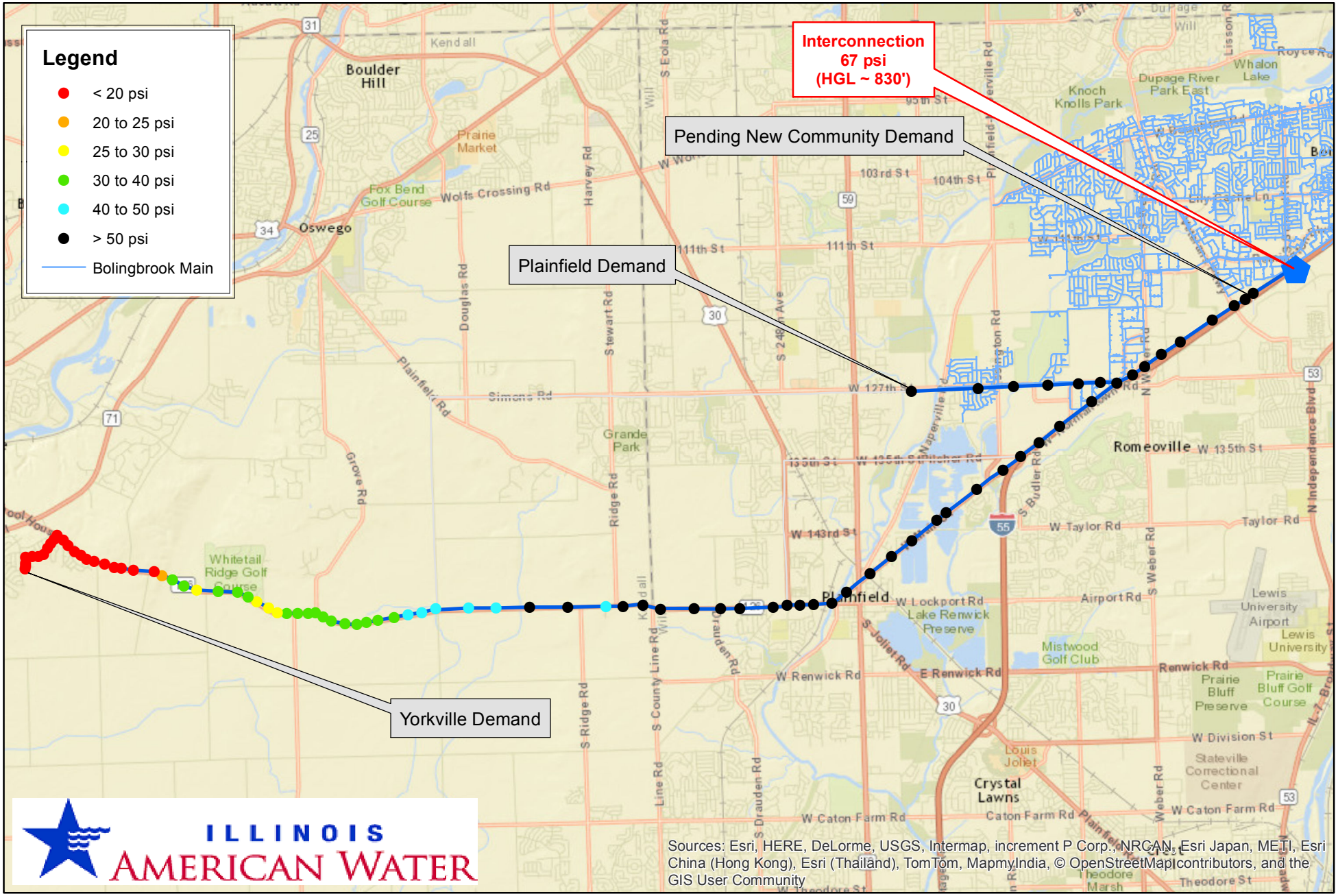
Route 2 - 30"
2040 ALW Pipeline Demands
Yorkville 7.83 mgd



Route 3 - 24"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd

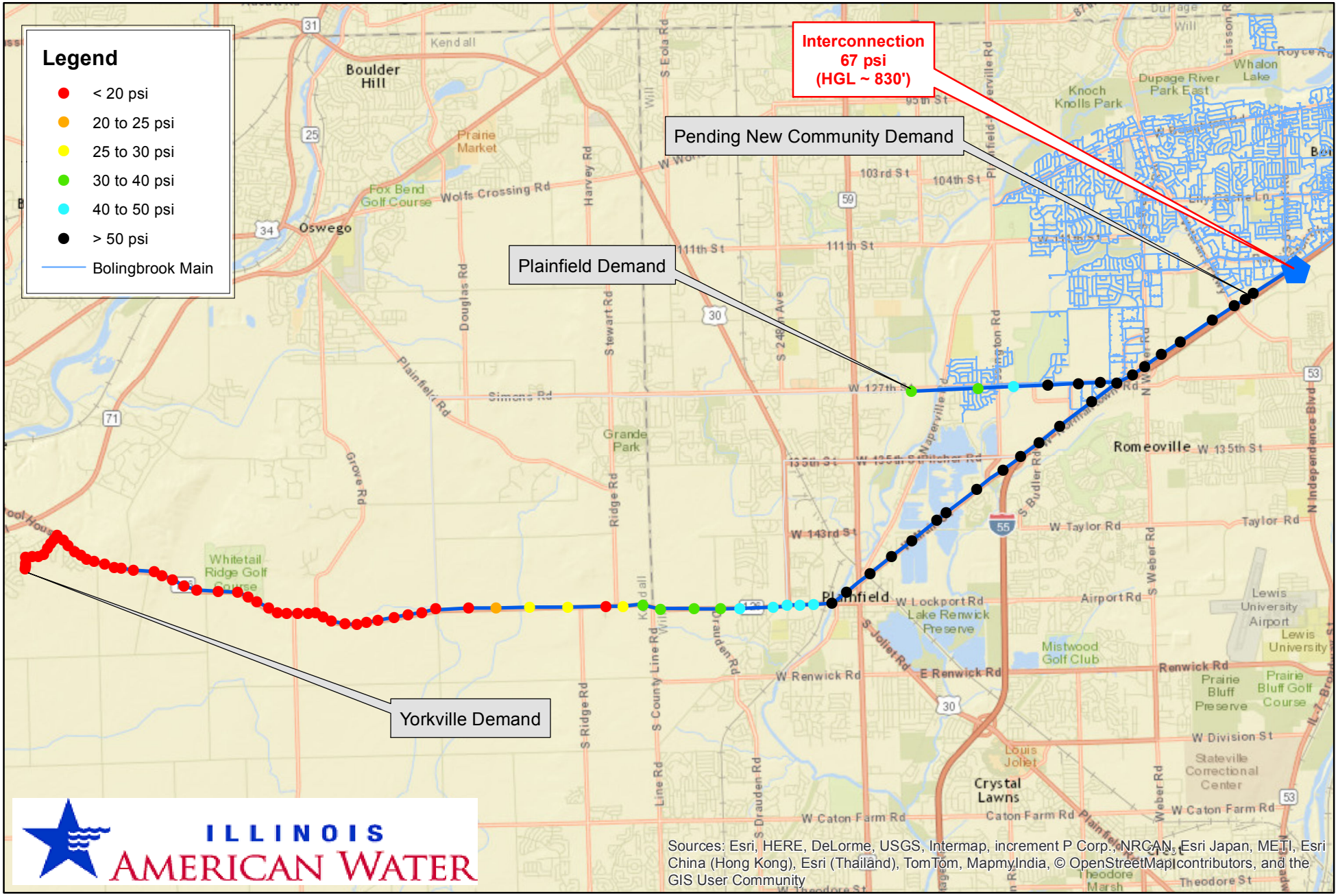


Route 3 - 24"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd

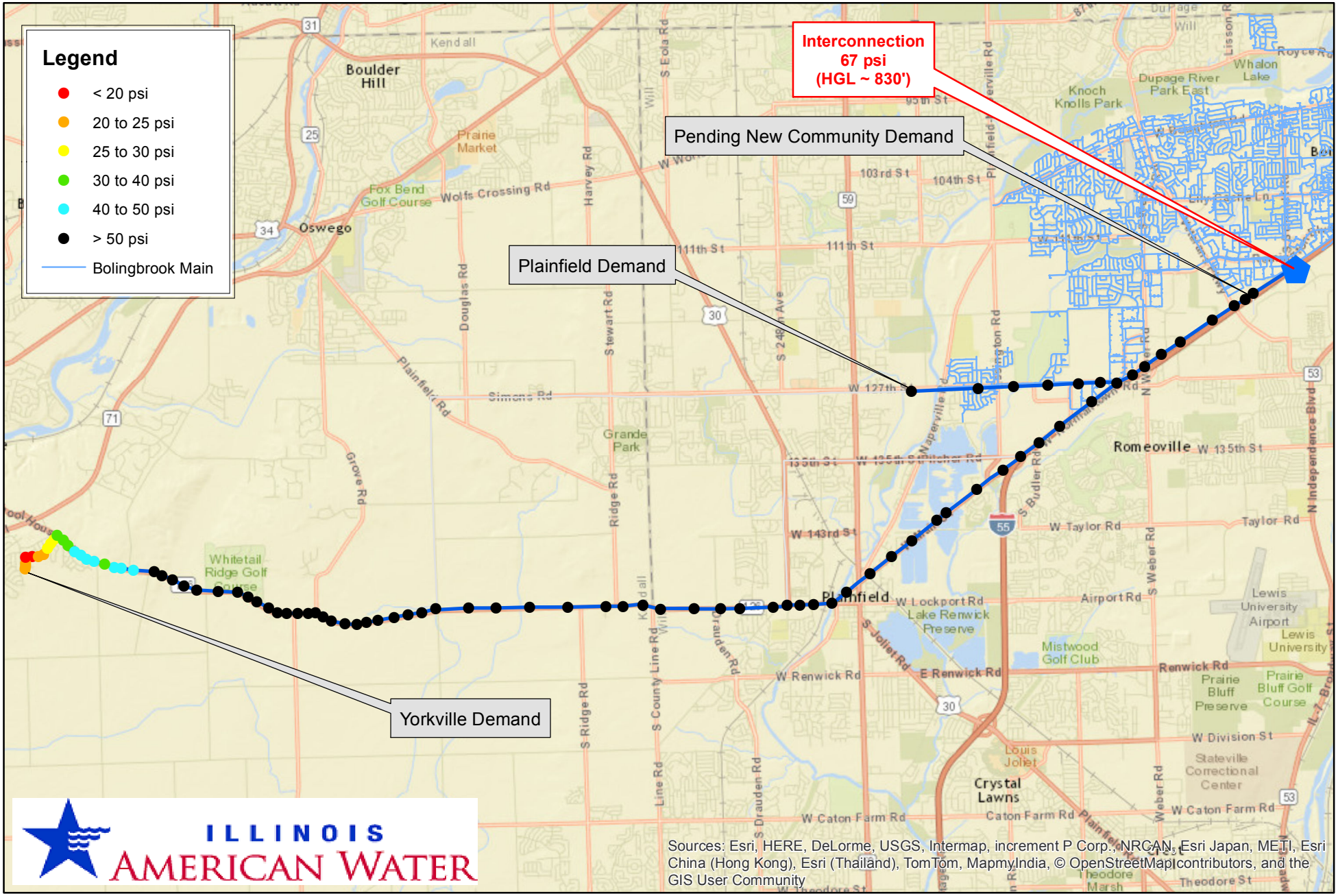


ILLINOIS AMERICAN WATER

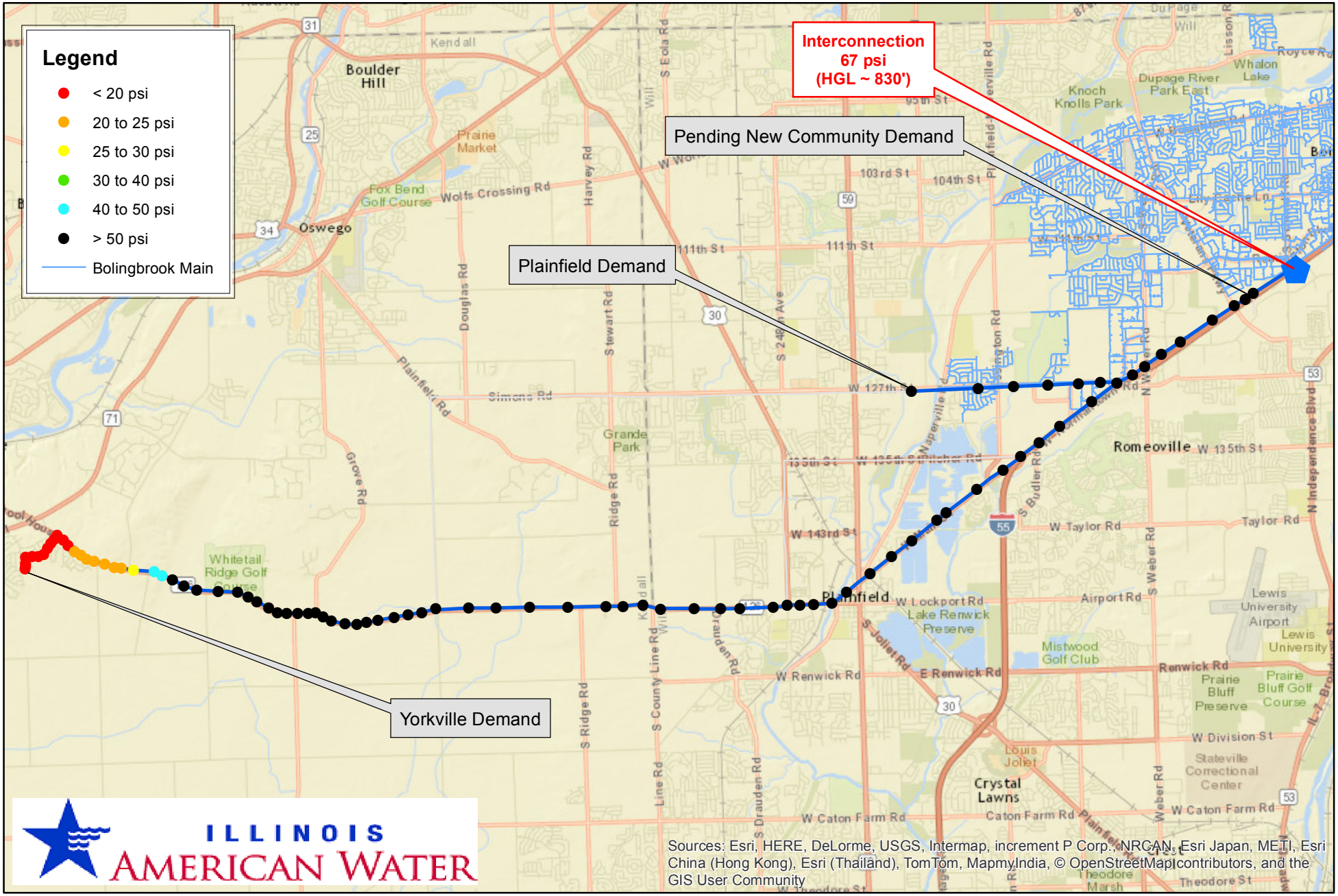
Route 3 - 24"
2040 ALW Pipeline Demands
Yorkville 7.83 mgd



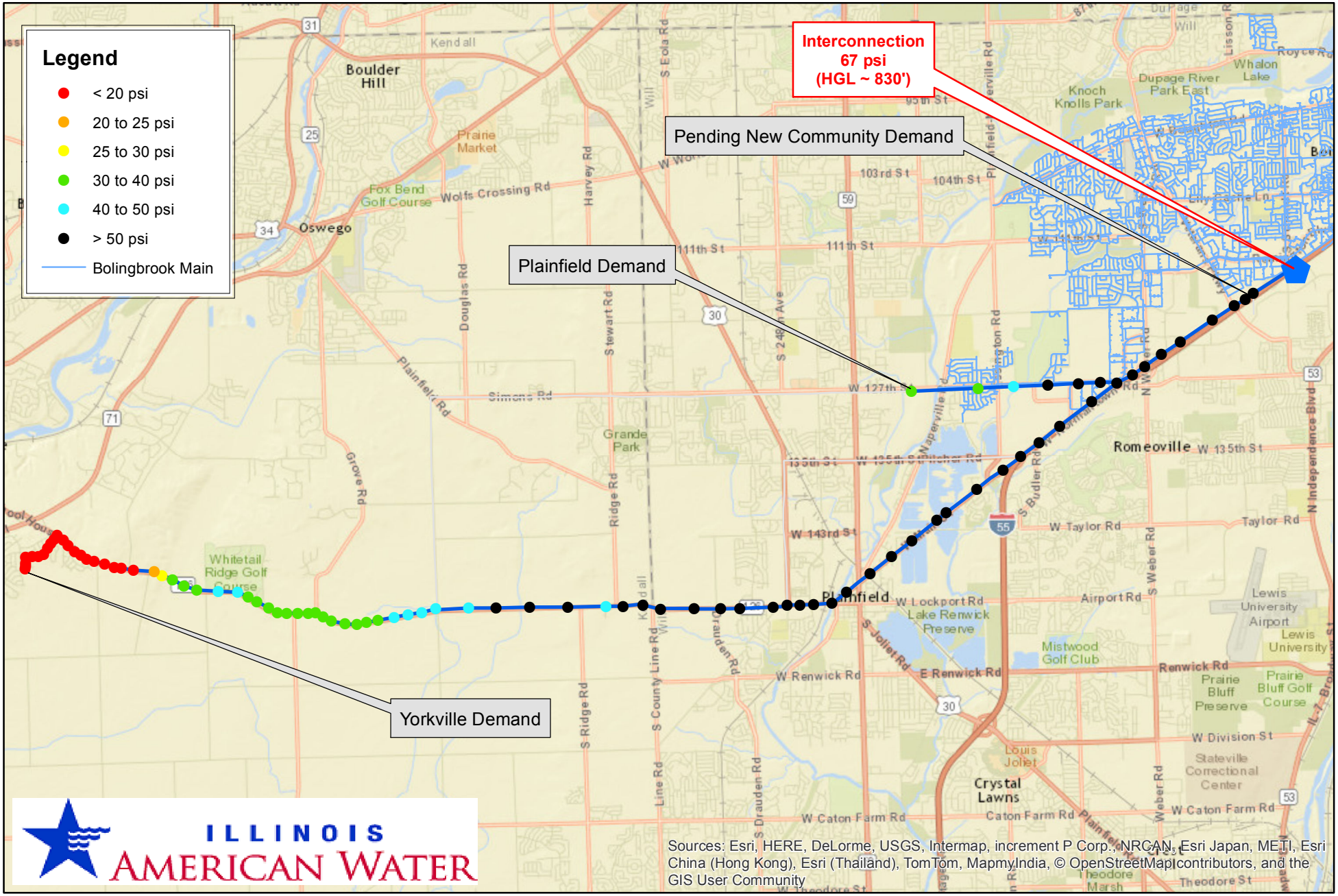
Route 3 - 30"
2015 ALW Pipeline Demands
Yorkville 2.17 mgd



Route 3 - 30"
2030 ALW Pipeline Demands
Yorkville 5.71 mgd



Route 3 - 30"
2040 ALW Pipeline Demands
Yorkville 7.83 mgd



Appendix G

Detailed Cost Estimates

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 1A

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 1A (CT)
Well and Cation Exchange Water Treatment Plant
Wells/WTP 6, 10, 12, 13, 14, and 15
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (Approximately 3,500 SF)	$1,133,000
	Cation Exchange Treatment Equipment (3 - 8 FT Diameter Units)	$927,000
	Brine Pump & Piping	$30,000
	Brine Tank	$144,000
	Miscellaneous Piping and Meters	$125,000
	Chemical Feed Equipment	$125,000
	Power Distribution	$475,000
	Controls and Instrumentation	$84,000
	SCADA Integration	$35,000
	Emergency Generator	$250,000
3	SITE WORK	
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$150,000
	Paving	$30,000
	Fencing	$40,000
	Restoration & Landscaping	$50,000
	SUB-TOTAL	$5,223,000
	CONTINGENCY (10%)	$522,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$5,745,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$1,034,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$6,839,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 1A Well 6 & Well 6 CEWTP

Notes:

1. All values are based on 2016 construction costs.
2. Assumes well constructed at WTP site.
3. Estimate does not include air scrubbing equipment for aerator exhaust.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 1A (CT)
Well No. 11
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 1A Well 11

Notes:

1. All values are based on 2016 construction costs.
2. Assumes Well No. 11 Raw WM connects to Existing Well No. 3 Raw WM (Well No. 3 to be abandoned).
3. Assumes Wells No. 3 & 4 WTP will become Wells No. 4 & 11 WTP
4. Does not include cost to abandon Well No. 3

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 1B

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 1B (LRI)
Well and Cation Exchange Water Treatment Plant
Wells/WTP 6, 10, and 12
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (Approximately 3,500 SF)	$1,133,000
	Cation Exchange Treatment Equipment (3 - 8 FT Diameter Units)	$927,000
	Brine Pump & Piping	$30,000
	Brine Tank	$144,000
	Miscellaneous Piping and Meters	$125,000
	Chemical Feed Equipment	$125,000
	Power Distribution	$475,000
	Controls and Instrumentation	$84,000
	SCADA Integration	$35,000
	Emergency Generator	$250,000
3	SITE WORK	
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$150,000
	Paving	$30,000
	Fencing	$40,000
	Restoration & Landscaping	$50,000
	SUB-TOTAL	$5,223,000
	CONTINGENCY (10%)	$522,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$5,745,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$1,034,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$6,839,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 1B Well 6 & Well 6 CEWT

Notes:

1. All values are based on 2016 construction costs.
2. Assumes well constructed at WTP site.
3. Estimate does not include air scrubbing equipment for aerator exhaust.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 1B (LRI)
Well No. 11
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 1B Well 11

Notes:

1. All values are based on 2016 construction costs.
2. Assumes Well No. 11 Raw WM connects to Existing Well No. 3 Raw WM (Well No. 3 to be abandoned).
3. Assumes Wells No. 3 & 4 WTP will become Wells No. 4 & 11 WTP
4. Does not include cost to abandon Well No. 3

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 2A

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2A (CT)
Well No. 10
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 2A Well 10

Notes:

1. All values are based on 2016 construction costs.
2. Assumes Well construct at WTP Site.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2A (CT)
12 MGD Fox River Intake Pump Station
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	FOX RIVER INTAKE PUMP STATION	
	Structures (4,200 SF)	$2,750,000
	Equipment (Screen Eqpt., Pumps/Motors, Etc.)	$625,000
	Power Distribution (Including New Electrical Gear & VFDs)	$425,000
	Emergency Generator	$150,000
2	SITE WORK	
	Electrical	$15,000
	Paving	$20,000
	Fencing	$10,000
	Restoration & Landscaping	$5,000
	SUB-TOTAL	$4,000,000
	CONTINGENCY (10%)	$400,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$4,400,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$792,000
	3 PHASE, 480V ELECTRIC SERVICE UPGRADE	$20,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$5,000
	TOTAL ESTIMATED COST OF PROJECT	**$5,217,000**

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Notes:

1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2A (CT)
12 MGD Single Stage (ClariCone) LSWTP
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (with Clearwell) (Structures) (25,000 SF)	$5,000,000
	Head Tank (for Deep Well Influent)	$250,000
	Aerator (for Deep Well Influent)	$125,000
	Head Tank (for Fox River Influent)	$300,000
	ClariCones (x4, 48' diam. each)	$4,000,000
	Recarbonation Tanks (x2)	$600,000
	Ultrafiltration Membrane System	$3,220,000
	Low & High Service & Backwash Pumps	$650,000
	Low & High Service Pump Gallery Piping	$200,000
	PAC System	$450,000
	Lime Feed System	$1,250,000
	Carbon Dioxide Feed System	$600,000
	Anionic and Cationic Feed Systems	$300,000
	Ferric Chloride Feed System	$125,000
	Chlorine Feed System	$175,000
	Miscellaneous Piping and Meters	$750,000
	Backwash Recovery Lagoon	$350,000
	Power Distribution (Including New Electrical Gear & VFDs)	$2,000,000
	Controls and Instrumentation & SCADA Integration	$750,000
	Emergency Generator	$300,000
	HVAC Equipment	$300,000
2	SITE WORK	
	Ground Storage Tank (1 MG)	$1,000,000
	Sludge Lagoons	$2,500,000
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$750,000
	Electrical	$150,000
	Paving & Sidewalks	$200,000
	Fencing	$75,000
	Restoration & Landscaping	$100,000
	SUB-TOTAL	$26,470,000
	CONTINGENCY (10%)	$2,647,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$29,117,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$5,241,000
	3 PHASE, 480V ELECTRIC SERVICE	$100,000
	LAND ACQUISITION (15 Acres @ $40,000 / Acre)	$600,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$35,088,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 2A Single Stage LSWTP

Notes:
1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 2B

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2B (LRI)
Well No. 10
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 2B Well 10

Notes:

1. All values are based on 2016 construction costs.
2. Assumes Well construct at WTP Site.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2B (LRI)
9 MGD Fox River Intake Pump Station
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	FOX RIVER INTAKE PUMP STATION	
	Structures (3,600 SF)	$2,600,000
	Equipment (Screen Eqpt., Pumps/Motors, Etc.)	$550,000
	Power Distribution (Including New Electrical Gear & VFDs)	$350,000
	Emergency Generator	$150,000
2	SITE WORK	
	Electrical	$15,000
	Paving	$20,000
	Fencing	$10,000
	Restoration & Landscaping	$5,000
	SUB-TOTAL	$3,700,000
	CONTINGENCY (10%)	$370,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$4,070,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$733,000
	3 PHASE, 480V ELECTRIC SERVICE UPGRADE	$20,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$5,000
	TOTAL ESTIMATED COST OF PROJECT	**$4,828,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 2B 9MGD Fox R. Intake

Notes:

1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 2B (LRI)
9 MGD Single Stage (ClariCone) LSWTP
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (with Clearwell) (Structures) (20,000 SF)	$4,000,000
	Head Tank (for Deep Well Influent)	$250,000
	Aerator (for Deep Well Influent)	$125,000
	Head Tank (for Fox River Influent)	$250,000
	ClariCones	$3,000,000
	Recarbonation Tanks (x2)	$500,000
	Ultrafiltration Membrane System	$2,920,000
	Low & High Service & Backwash Pumps	$500,000
	Low & High Service Pump Gallery Piping	$175,000
	PAC System	$450,000
	Lime Feed System	$1,250,000
	Carbon Dioxide Feed System	$500,000
	Anionic and Cationic Feed Systems	$250,000
	Ferric Chloride Feed System	$100,000
	Chlorine Feed System	$175,000
	Miscellaneous Piping and Meters	$550,000
	Backwash Recovery Lagoon	$250,000
	Power Distribution (Including New Electrical Gear & VFDs)	$1,500,000
	Controls and Instrumentation & SCADA Integration	$600,000
	Emergency Generator	$300,000
	HVAC Equipment	$300,000
2	SITE WORK	
	Ground Storage Tank (1 MG)	$1,000,000
	Sludge Lagoons	$2,000,000
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$750,000
	Electrical	$150,000
	Paving & Sidewalks	$200,000
	Fencing	$75,000
	Restoration & Landscaping	$100,000
	SUB-TOTAL	$22,220,000
	CONTINGENCY (10%)	$2,222,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$24,442,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$4,400,000
	3 PHASE, 480V ELECTRIC SERVICE	$100,000
	LAND ACQUISITION (15 Acres @ $40,000 / Acre)	$600,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$29,572,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 2B Single Stage LSWTP

Notes:
1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 3A

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3A (CT)
Well No. 6
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 3A Well 6

Notes:

1. All values are based on 2016 construction costs.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3A (CT)
Well No. SR-1
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**
	Total Estimated Cost of Project, Village of Montgomery[r]	$80,000
	Total Estimated Cost of Project, United City of Yorkville[r]	**$2,339,000**
	Total Estimated Cost of Project, Village of Oswego[r]	$0

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Notes:

1. All values are based on 2016 construction costs.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3A (CT)
32 MGD Sub-Regional Fox River Intake Pump Station
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	FOX RIVER INTAKE PUMP STATION	
	Structures (7,200 SF)	$4,000,000
	Equipment (Screen Eqpt., Pumps/Motors, Etc.)	$750,000
	Power Distribution (Including New Electrical Gear & VFDs)	$600,000
	Emergency Generator	$200,000
2	SITE WORK	
	Electrical	$20,000
	Paving	$25,000
	Fencing	$20,000
	Restoration & Landscaping	$10,000
	SUB-TOTAL	$5,625,000
	CONTINGENCY (10%)	$563,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$6,188,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$1,114,000
	3 PHASE, 480V ELECTRIC SERVICE UPGRADE	$20,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$5,000
	TOTAL ESTIMATED COST OF PROJECT	**$7,327,000**
	Total Estimated Cost of Project, Village of Montgomery[m]	$1,473,000
	Total Estimated Cost of Project, United City of Yorkville[m]	**$2,389,000**
	Total Estimated Cost of Project, Village of Oswego[m]	$3,466,000

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 3A 32MGD Sub-Reg Fox R. PS

Notes:

1. All values are based on 2016 construction costs.
2. Fox River Intake Pump Station assumed to be constructed at same site as LSWTP.

m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3A (CT)
32 MGD Single Stage (ClariCone) Sub-Regional LSWTP
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (with Clearwell) (Structures) (100,000 SF)	$19,000,000
	Aerators	$284,000
	Head Tanks (x4, 8' diam. each)	$1,642,000
	ClariCones (x4, 66.5' diam. each)	$6,683,000
	Recarbonation Tanks (x4, 18.75' bottom diam. each)	$721,000
	Ultrafiltration Membrane System	$6,325,000
	Low & High Service & Backwash Pumps	$700,000
	Low & High Service Pump Gallery Piping	$250,000
	PAC System	$600,000
	Lime Feed System	$3,000,000
	Carbon Dioxide Feed System	$730,000
	Anionic and Cationic Feed Systems	$350,000
	Ferric Chloride Feed System	$250,000
	Chlorine Feed System	$275,000
	Miscellaneous Piping and Meters	$750,000
	Backwash Recovery Lagoon	$350,000
	Power Distribution (Including New Electrical Gear & VFDs)	$3,000,000
	Controls and Instrumentation & SCADA Integration	$900,000
	Emergency Generator	$400,000
	HVAC Equipment	$750,000
2	SITE WORK	
	Ground Storage Tank (x2, 3.0 MG each)	$5,000,000
	Sludge Lagoons	$2,750,000
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$1,000,000
	Electrical	$300,000
	Paving & Sidewalks	$300,000
	Fencing	$175,000
	Restoration & Landscaping	$200,000
	SUB-TOTAL	$56,685,000
	CONTINGENCY (10%)	$5,669,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$62,354,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$11,224,000
	3 PHASE, 480V ELECTRIC SERVICE	$100,000
	LAND ACQUISITION (20 Acres @ $40,000 / Acre)	$800,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$74,508,000**
	Total Estimated Cost of Project, Village of Montgomery[m]	$14,976,000
	Total Estimated Cost of Project, United City of Yorkville[m]	**$24,290,000**
	Total Estimated Cost of Project, Village of Oswego[m]	$35,242,000

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 3A 32 MGD SingleStage LSWTP

Notes:

1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).

Appendix G

Detailed Cost Estimates – Supply and Treatment - Alternate 3B

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3B (LRI)
Well No. 6
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**

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Notes:

1. All values are based on 2016 construction costs.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3B (LRI)
Well No. SR-1
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	1,000 GPM IRONTON GALESVILLE WELL (24X18)	
	Construction (Casing, Hole, Grout, Etc.)	$1,000,000
	Development (Disinfection, Testing, Etc.)	$225,000
	Equipment (Pump/Motor, Pitless Adapter, Etc.)	$400,000
2	ADDITIONAL PIPING AND ELECTRICAL	
	Miscellaneous Piping and Meters	$50,000
	Controls and Instrumentation	$15,000
	SCADA Integration	$20,000
3	SITE WORK	
	Paving	$15,000
	Fencing	$15,000
	Restoration & Landscaping	$20,000
	SUB-TOTAL	$1,760,000
	CONTINGENCY (10%)	$176,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$1,936,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$348,000
	3 PHASE, 480 V ELECTRIC SERVICE TO SITE	$30,000
	LAND ACQUISITION (10,000 SF)	$75,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$2,419,000**
	Total Estimated Cost of Project, Village of Montgomery[r]	$0
	Total Estimated Cost of Project, United City of Yorkville[r]	**$714,000**
	Total Estimated Cost of Project, Village of Oswego[r]	$503,000

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Notes:

1. All values are based on 2016 construction costs.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
Alternate No. 3B (LRI)
25 MGD Sub-Regional Fox River Intake Pump Station
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	FOX RIVER INTAKE PUMP STATION	
	Structures (6,200 SF)	$3,500,000
	Equipment (Screen Eqpt., Pumps/Motors, Etc.)	$675,000
	Power Distribution (Including New Electrical Gear & VFDs)	$500,000
	Emergency Generator	$200,000
2	SITE WORK	
	Electrical	$15,000
	Paving	$20,000
	Fencing	$15,000
	Restoration & Landscaping	$10,000
	SUB-TOTAL	$4,935,000
	CONTINGENCY (10%)	$494,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$5,429,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$977,000
	3 PHASE, 480V ELECTRIC SERVICE UPGRADE	$20,000
	LAND ACQUISITION (Assumed Portion of Village's Property)	$0
	SOIL & MATERIAL TESTING	$5,000
	TOTAL ESTIMATED COST OF PROJECT	**$6,431,000**
	Total Estimated Cost of Project, Village of Montgomery[m]	$1,177,000
	Total Estimated Cost of Project, United City of Yorkville[m]	**$2,161,000**
	Total Estimated Cost of Project, Village of Oswego[m]	$3,093,000

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 3B 25MGD Sub-Reg Fox R. PS

Notes:

1. All values are based on 2016 construction costs.
2. Fox River Intake Pump Station assumed to be constructed at same site as LSWTP.

m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
25 MGD Single Stage (ClariCone) Sub-Regional LSWTP
United City of Yorkville, Kendall Co., IL

ITEM NO.	ITEM	AMOUNT
1	TREATMENT BUILDING, EQUIPMENT AND ELECTRICAL	
	Water Treatment Plant Building (with Clearwell) (Structures) (90,000 SF)	$17,400,000
	Aerators	$190,000
	Head Tanks (x4, 8' diam. each)	$1,214,000
	ClariCones (x4, 66.5' diam. each)	$5,087,000
	Recarbonation Tanks (x4, 18.75' bottom diam. each)	$550,000
	Ultrafiltration Membrane System	$5,635,000
	Low & High Service & Backwash Pumps	$600,000
	Low & High Service Pump Gallery Piping	$215,000
	PAC System	$575,000
	Lime Feed System	$3,000,000
	Carbon Dioxide Feed System	$625,000
	Anionic and Cationic Feed Systems	$325,000
	Ferric Chloride Feed System	$225,000
	Chlorine Feed System	$250,000
	Miscellaneous Piping and Meters	$625,000
	Backwash Recovery Lagoon	$300,000
	Power Distribution (Including New Electrical Gear & VFDs)	$2,500,000
	Controls and Instrumentation & SCADA Integration	$800,000
	Emergency Generator	$400,000
	HVAC Equipment	$675,000
2	SITE WORK	
	Ground Storage Tank (x2, 2.0 MG each)	$4,000,000
	Sludge Lagoons	$2,500,000
	Yard Piping (Water Main & Sanitary and Storm Sewer)	$850,000
	Electrical	$300,000
	Paving & Sidewalks	$275,000
	Fencing	$150,000
	Restoration & Landscaping	$200,000
	SUB-TOTAL	$49,466,000
	CONTINGENCY (10%)	$4,947,000
	TOTAL ESTIMATED COST OF CONSTRUCTION	**$54,413,000**
	DESIGN AND CONSTRUCTION ENGINEERING (18%)	$9,794,000
	3 PHASE, 480V ELECTRIC SERVICE	$100,000
	LAND ACQUISITION (20 Acres @ $40,000 / Acre)	$800,000
	SOIL & MATERIAL TESTING	$30,000
	TOTAL ESTIMATED COST OF PROJECT	**$65,137,000**
	Total Estimated Cost of Project, Village of Montgomery[m]	$11,920,000
	Total Estimated Cost of Project, United City of Yorkville[m]	**$21,886,000**
	Total Estimated Cost of Project, Village of Oswego[m]	$31,331,000

G:\Public\Yorkville\2014\YO1437-P Water Works System Master Plan\Eng\Cost Estimates\[Supply & Treatment Cost Estimates - YO.xlsx]Alt 3B 25 MGD SingleStage LSWTP

Notes:

1. All values are based on 2016 construction costs.
2. Estimate does not include Fox River Intake Raw Water Main to the LSWTP (estimated separately).

m. Cost shown is portion of total cost based off of Maximum Daily Demand (CT: 20.1% for Montgomery, 32.6% for Yorkville, 47.3% for Oswego; LRI: 18.3% for Montgomery, 33.6% for Yorkville; 48.1% for Oswego).

Appendix G

Detailed Cost Estimates – Storage – All Scenarios

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	MLP
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
ALTERNATES 1A, 1B, 2A, 2B, 3A, AND 3B
2.0 MG ELEVATED WATER STORAGE TANK

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	ELEVATED WATER STORAGE TANK (2.0 MILLION GALLONS)* (ASSUMES 100' T	LS	1	$ 3,825,000.00	$ 3,825,000.00
2	FRESH MIX SYSTEM	LS	1	$ 35,000.00	$ 35,000.00
3	CONTAINMENT	LF	1	$ 180,000.00	$ 180,000.00
4	YARD PIPING AND SITE WORK	LF	1	$ 150,000.00	$ 150,000.00
5	SCADA IMPLEMENTATION	EACH	1	$ 25,000.00	$ 25,000.00
6	ELECTRICAL SERVICE	EACH	1	$ 35,000.00	$ 35,000.00
7					
8					
10					
11					
12					
13					
14					
15					
15					
16					
16					
17					
18					

SUBTOTAL	$	4,250,000.00
CONTINGENCY (10%)	$	425,000.00
TOTAL	$	4,675,000.00
DESIGN ENGINEERING (1.5%)	$	70,200.00
CONSTRUCTION ENGINEERING (1.75%)	$	81,900.00
LEGAL FEES	$	3,000.00
LAND ACQUISITION	$	40,000.00
TOTAL PRELIMINARY COST ESTIMATE	**$**	**4,870,000.00**

Notes:

Stub left for proposed 24" WM along Rt 34

Stub left for proposed 16" WM connecting to Crimson Ln

Appendix G

Detailed Cost Estimates – Distribution – All Scenarios

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH/MWS/MLP
DATE:	March 10, 2017
PROJECT TITLE:	**Water Systems Master Plan**

Summary of Conceptual Cost Estimates

ITEM NO.	ITEM	ALTERNATE 1A/1B AMOUNT	ALTERNATE 2A/2B AMOUNT	ALTERNATE 3A/3B AMOUNT
1	20" & 16" Water Main North West of Water Treatment Plant		$ 829,000	$ 829,000
2	16" Tie Into Crimson Lane		$ 233,000	$ 233,000
3	24" Water Main from Water Treatment Plant to Van Emmon		$ 9,597,000	$ 9,597,000
4	16" Water Main along Center Street and Main Street		$ 869,000	$ 869,000
5a	20" Water main on Van Emmon		$ 1,071,000	$ 1,071,000
5b	20" Water main on Van Emmon		$ 473,000	$ 473,000
6	20" Water Main from Mill Street to South Central EWST		$ 3,155,000	$ 3,155,000
7	20" Water Main from South Central EWST to South BP/PRV		$ 1,450,000	$ 1,450,000
8	PRV Station - North Pressure Zone to North Central Pressure Zone		Not. Incl. in Alt. 2	$ 378,000
9a	Route 71 Watermain Replacement	$ 968,000	$ 968,000	$ 968,000
9b	Appletree Court Watermain Replacement (RTBR)	$ 149,000	$ 149,000	$ 149,000
9c	W. Washington Street Watermain Replacement (RTBR) - To be Constructed in 2017	$ 188,000	$ 188,000	$ 188,000
10	Elizabeth Street Watermain Replacement (RTBR)	$ 512,000	$ 512,000	$ 512,000
11	Main Street Watermain Replacement (RTBR)	$ 714,000	$ 714,000	$ 714,000
12	Orange/Olsen Watermain Looping (RTBR)	$ 168,000	$ 168,000	$ 168,000
13	Morgan Street Watermain Replacement (RTBR)	$ 376,000	$ 376,000	$ 376,000
14	E. Fox Street Watermain Replacement (RTBR)	$ 306,000	$ 306,000	$ 306,000
15	East Washington Watermain Replacement (RTBR)	$ 465,000	$ 465,000	$ 465,000
16	Orange Street Watermain Replacement (RTBR)	$ 660,000	$ 660,000	$ 660,000
17				
18				
19				
20				
21				
22				
23				
	TOTAL - SUMMARY OF CONCEPTUAL COST ESTIMATES:	**$ 4,506,000**	**$ 22,183,000**	**$ 22,561,000**

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	January 16, 2017
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
1. 20" and 16" Water Main North West of Water Treatment Plant

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 2,500.00	$ 2,500.00
2	TOPSOIL STRIPPING, PILING AND REPLACING	LS	1	$ 10,000.00	$ 10,000.00
3	WATER MAIN, 16-INCH D.I.P, CLASS 52	LF	1,400	$ 115.00	$ 161,000.00
4	WATER MAIN, 20-INCH D.I.P, CLASS 52	LF	1,400	$ 150.00	$ 210,000.00
5	PRESSURE CONNECTION, 16" TAPPING VALVE IN 60" VAULT	EACH	1	$ 9,000.00	$ 9,000.00
5	GATE VALVE, 16-INCH IN 60-INCH VALVE VAULT	EACH	1	$ 8,000.00	$ 8,000.00
6	GATE VALVE, 20-INCH IN 60-INCH VALVE VAULT	EACH	2	$ 25,000.00	$ 50,000.00
7	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	4	$ 20,000.00	$ 80,000.00
8	DUCTILE IRON FITTINGS	LB	3,000	$ 8.00	$ 24,000.00
9	SELECT GRANULAR BACKFILL	CY	50	$ 35.00	$ 1,750.00
10	FOUNDATION MATERIAL	CY	45	$ 35.00	$ 1,575.00
11	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 9,000.00	$ 9,000.00
12	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	45	$ 75.00	$ 3,375.00
13	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	LF	10	$ 50.00	$ 500.00
14	SIDEWALK REMOVAL AND REPLACEMENT	SF	50	$ 10.00	$ 500.00
15	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	10	$ 60.00	$ 600.00
16	RESTORATION	LS	1	$ 20,000.00	$ 20,000.00
17	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 10,000.00	$ 10,000.00
				SUBTOTAL	$ 602,000.00
				CONTINGENCY (10%)	$ 61,000.00
				TOTAL	$ 663,000.00
				DESIGN ENGINEERING (10%)	$ 66,300.00
				CONSTRUCTION ENGINEERING (10%)	$ 66,300.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ 30,000.00
				TOTAL PRELIMINARY COST ESTIMATE	**$ 828,600.00**

Notes:

assumes fire hydrants every 1000'

Stub left for proposed 24" WM along Rt 34

Stub left for proposed 16" WM connecting to Crimson Ln

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 17, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
2. 16" Tie Into Crimson Lane

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 1,000.00	$ 1,000.00
2	WATER MAIN, 16-INCH D.I.P, CLASS 52	LF	745	$ 115.00	$ 85,675.00
3	GATE VALVE, 16-INCH IN 60-INCH VALVE VAULT	EACH	2	$ 8,000.00	$ 16,000.00
4	CONNECTION TO EXISTING 16" WATERMAIN	EACH	1	$ 6,000.00	$ 6,000.00
5	CONNECTION TO EXISTING 20" WATERMAIN	EACH	1	$ 7,500.00	$ 7,500.00
6	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	2	$ 15,000.00	$ 30,000.00
7	DUCTILE IRON FITTINGS	LB	800	$ 8.00	$ 6,400.00
8	FIRE HYDRANT REMOVAL	EACH	1	$ 800.00	$ 800.00
9	VALVE ABANDONMENT	EACH	1	$ 500.00	$ 500.00
10	SELECT GRANULAR BACKFILL	CY	40	$ 35.00	$ 1,400.00
11	FOUNDATION MATERIAL	CY	15	$ 35.00	$ 525.00
12	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 2,500.00	$ 2,500.00
13	HMA PAVEMENT REMOVAL AND REPLACEMENT, 8"	SY	45	$ 80.00	$ 3,600.00
14	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	10	$ 60.00	$ 600.00
15	RESTORATION	LS	1	$ 1,000.00	$ 1,000.00
16	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 5,000.00	$ 5,000.00
				SUBTOTAL	$ 169,000.00
				CONTINGENCY (10%)	$ 17,000.00
				TOTAL	$ 186,000.00
				DESIGN ENGINEERING (10%)	$ 18,600.00
				CONSTRUCTION ENGINEERING (10%)	$ 18,600.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ 7,000.00
				TOTAL PRELIMINARY COST ESTIMATE	**$ 233,200.00**

Notes:

Assume in pavement

assumes 8" existing HMA thickness

Assuming Valve @ End of 16" Crimson WM (Tie into 16")
Added Valve on Yorkville-1 Cost Estimate (Tie into 20")

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
3. 24" Water Main from Water Treatment Plan to Van Emmon

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 50,000.00	$ 50,000.00
2	BORE AND JACK 30" STEEL CASING PIPE	LF	140	$ 650.00	$ 91,000.00
2	WATER MAIN, 24-INCH D.I.P, CLASS 52	LF	13,000	$ 250.00	$ 3,250,000.00
3	WATER MAIN, 24-INCH FUSIBLE PVC, DR-18, C905 WITH HORIZONTAL DIRECTIONAL DRILL	LF	650	$ 1,000.00	$ 650,000.00
4	PRESSURE CONNECTION, 8" TAPPING VALVE IN 60" VAULT	EACH	12	$ 7,000.00	$ 84,000.00
5	PRESSURE CONNECTION, 10" TAPPING VALVE IN 60" VAULT	EACH	1	$ 7,500.00	$ 7,500.00
6	PRESSURE CONNECTION, 12" TAPPING VALVE IN 60" VAULT	EACH	3	$ 8,000.00	$ 24,000.00
7	PRESSURE CONNECTION, 16" TAPPING VALVE IN 60" VAULT	EACH	1	$ 8,500.00	$ 8,500.00
8	BUTTERFLY VALVE, 24-INCH IN 72-INCH VALVE VAULT	EACH	10	$ 20,000.00	$ 200,000.00
9	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	35	$ 4,800.00	$ 168,000.00
10	DUCTILE IRON FITTINGS	LB	75,000	$ 8.00	$ 600,000.00
11	FIRE HYDRANT REMOVAL	EACH	13	$ 800.00	$ 10,400.00
12	WATER SERVICE CONNECTION, 1"	EACH	37	$ 1,100.00	$ 40,700.00
13	WATER SERVICE - TYPE K COPPER, 1"	LF	1,300	$ 30.00	$ 39,000.00
14	VALVE ABANDONMENT	EACH	12	$ 500.00	$ 6,000.00
15	SELECT GRANULAR BACKFILL	CY	8,400	$ 35.00	$ 294,000.00
16	FOUNDATION MATERIAL	CY	195	$ 35.00	$ 6,825.00
17	DISCONNECT AND ABANDON EXISTING WATER MAIN - 6"	EACH	2	$ 1,250.00	$ 2,500.00
18	DISCONNECT AND ABANDON EXISTING WATER MAIN - 8"	EACH	8	$ 1,500.00	$ 12,000.00
19	DISCONNECT AND ABANDON EXISTING WATER MAIN - 12"	EACH	6	$ 2,250.00	$ 13,500.00
20	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 40,000.00	$ 40,000.00
21	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	11,000	$ 40.00	$ 440,000.00
22	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	LF	1,000	$ 40.00	$ 40,000.00
23	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	14,500	$ 60.00	$ 870,000.00
24	RESTORATION	LS	1	$ 120,000.00	$ 120,000.00
25	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 200,000.00	$ 200,000.00
				SUBTOTAL	$ 7,268,000.00
				CONTINGENCY (10%)	$ 727,000.00
				TOTAL	$ 7,995,000.00
				DESIGN ENGINEERING (10%)	$ 799,500.00
				CONSTRUCTION ENGINEERING (10%)	$ 799,500.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ -
				TOTAL PRELIMINARY COST ESTIMATE	**$ 9,597,000.00**

Notes:
assumes fire hydrants every 300'

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
4. 16" Water Main along Center Street and Main Street

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 10,000.00	$ 10,000.00
3	WATER MAIN, 8-INCH D.I.P., CLASS 52	LF	30	$ 60.00	$ 1,800.00
4	WATER MAIN, 16-INCH D.I.P, CLASS 52	LF	1,800	$ 115.00	$ 207,000.00
5	BORE AND JACK 30" STEEL CASING PIPE	LF	120	$ 650.00	$ 78,000.00
5	PRESSURE CONNECTION, 16" TAPPING VALVE IN 60" VAULT	EACH	2	$ 9,000.00	$ 18,000.00
6	GATE VALVE, 8-INCH IN 48-INCH VALVE VAULT	EACH	3	$ 4,000.00	$ 12,000.00
7	GATE VALVE, 16-INCH IN 60-INCH VALVE VAULT	EACH	5	$ 7,000.00	$ 35,000.00
8	CONNECT TO EXISTING 16" WATERMAIN	EACH	2	$ 6,000.00	$ 12,000.00
10	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	7	$ 4,800.00	$ 33,600.00
11	DUCTILE IRON FITTINGS	LB	4,700	$ 8.00	$ 37,600.00
12	FIRE HYDRANT REMOVAL	EACH	4	$ 800.00	$ 3,200.00
13	VALVE ABANDONMENT	EACH	7	$ 500.00	$ 3,500.00
14	WATER SERVICE CONNECTION, 1"	EACH	22	$ 1,100.00	$ 24,200.00
15	WATER SERVICE - TYPE K COPPER, 1"	LF	726	$ 30.00	$ 21,780.00
16	SELECT GRANULAR BACKFILL	CY	1,250	$ 35.00	$ 43,750.00
17	FOUNDATION MATERIAL	CY	30	$ 35.00	$ 1,050.00
18	DISCONNECT AND ABANDON EXISTING WATER MAIN - 6"	EACH	2	$ 1,250.00	$ 2,500.00
19	DISCONNECT AND ABANDON EXISTING WATER MAIN - 8"	EACH	2	$ 1,500.00	$ 3,000.00
20	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 6,000.00	$ 6,000.00
21	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	1,500	$ 45.00	$ 67,500.00
22	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	LF	290	$ 40.00	$ 2,000.00
23	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	200	$ 60.00	$ 12,000.00
24	RESTORATION	LS	1	$ 5,000.00	$ 5,000.00
25	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 15,000.00	$ 15,000.00
				SUBTOTAL	$ 656,000.00
				CONTINGENCY (10%)	$ 66,000.00
				TOTAL	$ 722,000.00
				DESIGN ENGINEERING (10%)	$ 72,200.00
				CONSTRUCTION ENGINEERING (10%)	$ 72,200.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ -
				TOTAL PRELIMINARY COST ESTIMATE	**$ 869,400.00**

Notes:
assumes fire hydrants every 300'
assumes no water main replacement on Church Street

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
5a. 20" Water Main on Van Emmon

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 5,000.00	$ 5,000.00
2	WATER MAIN, 20-INCH D.I.P, CLASS 52	LF	2,200	$ 150.00	$ 330,000.00
3	PRESSURE CONNECTION, 16" TAPPING VALVE IN 60" VAULT	EACH	1	$ 9,000.00	$ 9,000.00
4	GATE VALVE, 20-INCH IN 60-INCH VALVE VAULT	EACH	2	$ 25,000.00	$ 50,000.00
5	CONNECTION TO EXISTING 24" WATER MAIN	EACH	1	$ 10,000.00	$ 10,000.00
6	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	7	$ 20,000.00	$ 140,000.00
7	DUCTILE IRON FITTINGS	LB	5,000	$ 8.00	$ 40,000.00
8	FIRE HYDRANT REMOVAL	EACH	4	$ 800.00	$ 3,200.00
9	VALVE ABANDONMENT	EACH	3	$ 500.00	$ 1,500.00
10	WATER SERVICE CONNECTION, 1"	EACH	15	$ 1,100.00	$ 16,500.00
11	WATER SERVICE - TYPE K COPPER, 1"	LF	495	$ 30.00	$ 14,850.00
12	SELECT GRANULAR BACKFILL	CY	1,600	$ 35.00	$ 56,000.00
13	FOUNDATION MATERIAL	CY	40	$ 35.00	$ 1,400.00
14	DISCONNECT AND ABANDON EXISTING WATER MAIN - 16"	EACH	2	$ 2,500.00	$ 5,000.00
15	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 7,000.00	$ 7,000.00
16	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	1,750	$ 45.00	$ 78,750.00
17	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	250	$ 60.00	$ 15,000.00
18	RESTORATION	LS	1	$ 15,000.00	$ 15,000.00
19	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 10,000.00	$ 10,000.00
				SUBTOTAL	$ 809,000.00
				CONTINGENCY (10%)	$ 81,000.00
				TOTAL	$ 890,000.00
				DESIGN ENGINEERING (10%)	$ 89,000.00
				CONSTRUCTION ENGINEERING (10%)	$ 89,000.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ -
				TOTAL PRELIMINARY COST ESTIMATE	**$ 1,071,000.00**

Notes:
assumes fire hydrants every 300'

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
5b. 20" Water Main on Van Emmon

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 2,000.00	$ 2,000.00
2	WATER MAIN, 20-INCH D.I.P, CLASS 52	LF	700	$ 150.00	$ 105,000.00
4	GATE VALVE, 20-INCH IN 60-INCH VALVE VAULT	EACH	3	$ 25,000.00	$ 75,000.00
5	CONNECTION TO EXISTING 24" WATER MAIN	EACH	1	$ 10,000.00	$ 10,000.00
6	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	3	$ 20,000.00	$ 60,000.00
7	DUCTILE IRON FITTINGS	LB	3,700	$ 8.00	$ 29,600.00
8	SELECT GRANULAR BACKFILL	CY	500	$ 35.00	$ 17,500.00
9	FOUNDATION MATERIAL	CY	20	$ 35.00	$ 700.00
12	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 2,500.00	$ 2,500.00
13	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	550	$ 45.00	$ 24,750.00
14	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	100	$ 60.00	$ 6,000.00
15	RESTORATION	LS	1	$ 15,000.00	$ 15,000.00
16	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 7,500.00	$ 7,500.00
				SUBTOTAL	$ 356,000.00
				CONTINGENCY (10%)	$ 36,000.00
				TOTAL	$ 392,000.00
				DESIGN ENGINEERING (10%)	$ 39,200.00
				CONSTRUCTION ENGINEERING (10%)	$ 39,200.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ -
				TOTAL PRELIMINARY COST ESTIMATE	**$ 473,400.00**

Notes:

assumes fire hydrants every 300'

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	MO1438-V
DESIGNED:	KDW
DATE:	February 17, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
6. 20" Water Main from Mill Street to South Central EWST

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	WATER MAIN, 20-INCH D.I.P, CLASS 52	LF	5,550	$ 150.00	$ 832,500.00
2	GATE VALVE, 20-INCH IN 60-INCH VALVE VAULT	EACH	4	$ 25,000.00	$ 100,000.00
3	PRESSURE CONNECTION, 8" TAPPING VALVE IN 60" VAULT	EACH	5	$ 7,000.00	$ 35,000.00
4	PRESSURE CONNECTION, 12" TAPPING VALVE IN 60" VAULT	EACH	2	$ 8,000.00	$ 16,000.00
5	GATE VALVE, 8-INCH IN 60-INCH VALVE VAULT	EACH	2	$ 4,000.00	$ 8,000.00
6	GATE VALVE, 12-INCH IN 60-INCH VALVE VAULT	EACH	2	$ 6,500.00	$ 13,000.00
7	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	12	$ 20,000.00	$ 240,000.00
8	BP/PRV STATION, COMPLETE	EACH	1	$ 543,000.00	$ 543,000.00
9	DUCTILE IRON FITTINGS	LB	18,000	$ 8.00	$ 144,000.00
10	FIRE HYDRANT REMOVAL	EACH	10	$ 800.00	$ 8,000.00
11	WATER SERVICE CONNECTION, 1"	EACH	15	$ 1,100.00	$ 16,500.00
12	WATER SERVICE - TYPE K COPPER, 1"	LF	500	$ 30.00	$ 15,000.00
13	VALVE ABANDONMENT	EACH	8	$ 500.00	$ 4,000.00
14	SELECT GRANULAR BACKFILL	CY	3,600	$ 35.00	$ 126,000.00
15	FOUNDATION MATERIAL	CY	100	$ 35.00	$ 3,500.00
16	DISCONNECT AND ABANDON EXISTING WATER MAIN - 6"	EACH	2	$ 1,250.00	$ 2,500.00
17	DISCONNECT AND ABANDON EXISTING WATER MAIN - 8"	EACH	3	$ 1,500.00	$ 4,500.00
18	DISCONNECT AND ABANDON EXISTING WATER MAIN - 12"	EACH	2	$ 2,250.00	$ 4,500.00
19	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 17,000.00	$ 17,000.00
20	HMA PAVEMENT REMOVAL AND REPLACEMENT, 4"	SY	3,375	$ 45.00	$ 151,875.00
21	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	LF	100	$ 40.00	$ 4,000.00
22	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	540	$ 60.00	$ 32,400.00
23	RESTORATION	LS	1	$ 15,000.00	$ 15,000.00
24	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 20,000.00	$ 20,000.00
				SUBTOTAL	$ 2,357,000.00
				CONTINGENCY (10%)	$ 236,000.00
				TOTAL	$ 2,593,000.00
				DESIGN ENGINEERING (10%)	$ 259,300.00
				CONSTRUCTION ENGINEERING (10%)	$ 259,300.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ 40,000.00
				TOTAL PRELIMINARY COST ESTIMATE	**$ 3,154,600.00**

Notes:
assumes fire hydrants everY 300'

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-P
DESIGNED:	JDH
DATE:	February 17, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
7. 20" Water Main from South Central EWST to South BP/PRV

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	TREE REMOVAL, ROOT PRUNING, TREE REPLACEMENT	LS	1	$ 20,000.00	$ 20,000.00
2	TOPSOIL STRIPPING, PILING AND REPLACING	LS	1	$ 5,000.00	$ 5,000.00
3	BORE AND JACK 30" STEEL CASING PIPE	LF	160	$ 650.00	$ 104,000.00
3	WATER MAIN, 12-INCH D.I.P, CLASS 52	LF	200	$ 90.00	$ 18,000.00
4	WATER MAIN, 16-INCH D.I.P, CLASS 52	LF	100	$ 115.00	$ 11,500.00
5	WATER MAIN, 20-INCH D.I.P, CLASS 52	LF	2,600	$ 150.00	$ 390,000.00
6	PRESSURE CONNECTION, 12" TAPPING VALVE IN 60" VAULT	EACH	2	$ 8,000.00	$ 16,000.00
7	PRESSURE CONNECTION, 16" TAPPING VALVE IN 60" VAULT	EACH	1	$ 9,000.00	$ 9,000.00
8	GATE VALVE, 20-INCH IN 60-INCH VALVE VAULT	EACH	3	$ 25,000.00	$ 75,000.00
9	FIRE HYDRANT ASSEMBLY, WITH AUXILIARY VALVE, 6-INCH MJ	EACH	7	$ 20,000.00	$ 140,000.00
10	DUCTILE IRON FITTINGS	LB	11,000	$ 8.00	$ 88,000.00
11	FIRE HYDRANT REMOVAL	EACH	4	$ 800.00	$ 3,200.00
12	VALVE ABANDONMENT	EACH	2	$ 500.00	$ 1,000.00
13	WATER SERVICE CONNECTION, 1"	EACH	2	$ 1,100.00	$ 2,200.00
14	WATER SERVICE CONNECTION - TYPE K COPPER, 1"	LF	110	$ 30.00	$ 3,300.00
15	SELECT GRANULAR BACKFILL	CY	1,200	$ 35.00	$ 42,000.00
16	FOUNDATION MATERIAL	CY	50	$ 35.00	$ 1,750.00
17	DISCONNECT AND ABANDON EXISTING WATER MAIN - 12"	EACH	2	$ 2,250.00	$ 4,500.00
18	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LS	1	$ 10,000.00	$ 10,000.00
19	HMA PAVEMENT REMOVAL AND REPLACEMENT - 4"	SY	1,250	$ 45.00	$ 56,250.00
20	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	LF	25	$ 40.00	$ 1,000.00
21	NON-SPECIAL NON-HAZARDOUS WASTE REMOVAL	TON	200	$ 60.00	$ 12,000.00
22	RESTORATION	LS	1	$ 40,000.00	$ 40,000.00
23	TRAFFIC CONTROL AND PROTECTION	LS	1	$ 30,000.00	$ 30,000.00
				SUBTOTAL	$ 1,084,000.00
				CONTINGENCY (10%)	$ 109,000.00
				TOTAL	$ 1,193,000.00
				DESIGN ENGINEERING (10%)	$ 119,300.00
				CONSTRUCTION ENGINEERING (10%)	$ 119,300.00
				LEGAL FEES	$ 3,000.00
				LAND ACQUISITION	$ 15,000.00
				TOTAL PRELIMINARY COST ESTIMATE	**$ 1,449,600.00**

Notes:
assumes fire hydrants every 300'

no air release valves were included

Engineering Enterprises, Inc.
52 Wheeler Road, Sugar Grove, IL 60554

JOB NO:	YO1437-V
DESIGNED:	MLP
DATE:	February 16, 2016
PROJECT TITLE:	**Water Systems Master Plan**

Preliminary Cost Estimate
8. PRV Station - North Pressure Zone to North Central Pressure Zone

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	FURNISH FACTORY BUILTBELOW GROUND PACKAGED PRV STATION WITH ALL NECESSARY PIPING, CONTROLS AND APPURTENANCES (INCLUDING CONNECTION FITTINGS AND PIPING)	L SUM	1	$ 75,000.00	$ 70,000.00
2	INSTALLATION OF FACTORY BUILT BELOW GROUND PACKAGE PRV STATION (INCLUDES CONNECTION TO 16" W.M. AND CONNECTION TO 4" DIA, PVC SUMP DISCHARGE PIPING)	L SUM	1	$ 35,000.00	$ 30,000.00
3	REINFORCED CONCRETE BASE PAD INCLUDING ANCHOR BOLTS AND ALL REQUIRED EXCAVTION, AGGREGRATE BASE, AND TRENCH BACKFILL.	L SUM	1	$ 15,000.00	$ 15,000.00
4	ELECTRICAL PRV INSTALLATION, PROVIDE SERVICE FROM EXISTING WELL HOUSE TO THE VALVE STATION	L SUM	1	$ 20,000.00	$ 20,000.00
5	DISINFECTION, SAMPLING AND BACTERIALOLOGICAL TESTING-BP/PRV STATION AND NEW FIRE HYDRANT	L SUM	1	$ 1,500.00	$ 1,500.00
6	CONNECTION TO WATER MAIN	EACH	2	$ 2,000.00	$ 4,000.00
7	DUCTILE IRON WATER MAIN, CL 52, 1"	FOOT	100	$ 125.00	$ 12,500.00
8	VALVE IN VAULT (BUTTERFLY), 16"	EACH	3	$ 15,000.00	$ 45,000.00
9	FIRE HYDRANT W/AUXILIARY VALVE (INCLUDING THE 12" X 6" TEE AND 6" LEAD)	EACH	1	$ 4,500.00	$ 4,500.00
10	FOUNDATION MATERIAL	CU YD	30	35.00	$ 1,050.00
11	SPECIAL WASTE DISPOSAL	TON	70	60.00	$ 4,200.00
12	RESTORATION	LS	1	25,000.00	$ 25,000.00
13	SCADA	LS	1	$ 25,000.00	$ 20,000.00
14					
15					
16					
17					$ -
18					$ -
19					$ -
				SUBTOTAL	$ 253,000.00
				CONTINGENCY (10%)	$ 26,000.00
				TOTAL	$ 279,000.00
				DESIGN ENGINEERING (10%)	$ 27,900.00
				CONSTRUCTION ENGINEERING (10%)	$ 27,900.00
				LAND ACQUISITION	$ 40,000.00
				LEGAL FEES	$ 3,000.00
				COMED - ELECTRICAL SERVICE	$ -
				TOTAL PRELIMINARY COST ESTIMATE	**$ 377,800.00**

Notes:

Reviewed By:	
Legal	☐
Finance	■
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #15

Tracking Number

ADM 2017-35

Agenda Item Summary Memo

Title: Monthly Treasurer's Report for March 2017

Meeting and Date: City Council – April 25, 2017

Synopsis:

Council Action Previously Taken:

Date of Action: ADM – 04/19/17 Action Taken: Moved forward to CC consent agenda.

Item Number: ADM 2017-35

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Rob Fredrickson (Name) Finance (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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UNITED CITY OF YORKVILLE

TREASURER'S REPORT - for the month ending March 31, 2017

Cash Basis

	Beginning Fund Balance	March Revenues	YTD Revenues	Revenue Budget	% of Budget	March Expenses	YTD Expenses	Expense Budget	% of Budget	Projected Ending Fund Balance
General Fund										
01 - General	5,691,706	1,093,430	14,022,193	14,516,822	97%	968,577	12,808,320	14,995,054	85%	6,905,579
Special Revenue Funds										
15 - Motor Fuel Tax	883,223	36,836	481,632	512,577	94%	16,111	576,128	740,580	78%	788,728
79 - Parks and Recreation	500,762	111,647	1,677,197	1,654,988	101%	107,143	1,589,752	1,796,995	88%	588,206
72 - Land Cash	212,318	2,013	109,827	489,000	22%	283	80,280	453,855	18%	241,865
87 - Countryside TIF	(549,946)	-	215,360	200,000	108%	195	160,407	162,759	99%	(494,993)
88 - Downtown TIF	253,703	-	68,707	70,050	98%	7,562	192,964	478,530	40%	129,446
11 - Fox Hill SSA	(3,780)	-	7,263	7,073	103%	-	10,388	11,333	92%	(6,905)
12 - Sunflower SSA	(31,175)	-	20,456	20,392	100%	-	4,332	17,534	25%	(15,050)
Debt Service Fund										
42 - Debt Service	-	22,673	298,590	320,675	93%	-	320,963	320,675	100%	(22,372)
Capital Project Funds										
25 - Vehicle & Equipment	1,841	30,931	574,278	314,883	182%	21,112	298,729	347,617	86%	277,390
23 - City-Wide Capital	3,003,908	316,111	1,273,078	1,823,662	70%	38,447	3,057,064	3,796,671	81%	1,219,922
Enterprise Funds										
* 51 - Water	5,196,289	31,964	9,947,456	3,794,908	262%	160,997	12,533,346	6,631,429	189%	2,610,400
* 52 - Sewer	1,570,874	115,991	2,220,903	2,534,994	88%	97,245	2,675,101	2,965,298	90%	1,116,676
Library Funds										
82 - Library Operations	499,355	3,891	692,506	731,887	95%	51,446	641,999	756,943	85%	549,862
83 - Library Debt Service	-	0	746,548	752,771	99%	-	752,770	752,771	100%	(6,222)
84 - Library Capital	14,807	5,801	50,361	20,010	252%	9,220	41,056	11,895	345%	24,112
Total Funds	**17,243,885**	**1,771,289**	**32,406,356**	**27,764,692**	**117%**	**1,478,337**	**35,743,598**	**34,239,939**	**104%**	**13,906,643**

* Fund Balance Equivalency

As Deputy Treasurer of the United City of Yorkville, I hereby attest, to the best of my knowledge, that the information contained in this Treasurer's Report is accurate as of the date detailed herein. Further information is available in the Finance Department.

Rob Fredrickson, Finance Director/Deputy Treasurer

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Consent Agenda #16

Tracking Number

ADM 2017-40

Agenda Item Summary Memo

Title: Repealing Licensing Requirements for Taxicab Companies, Taxicabs and Taxicab Drivers

Meeting and Date: City Council – April 25, 2017

Synopsis: Consideration of an ordinance repealing the licensing requirements of Taxicab Companies, Taxicabs, and Taxicab Drivers

Council Action Previously Taken:

Date of Action: ADM – 4/19/17 Action Taken: Moved forward to CC consent agenda.

Item Number: ADM 2017-40

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Erin Willrett (Name) Administration Department (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: City Council
From: Erin Willrett, Assistant City Administrator
CC:
Date: April 19, 2017
Subject: Repealing Licensing Requirements for Taxicab Companies, Taxicabs and Taxicabs Drivers

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Summary
Consideration of an ordinance repealing licensing requirements for Taxicab Companies, Taxicabs and Taxicab Drivers.

Background
On August 29, 2011, the City Council approved regulations for taxicab companies, taxicabs and taxicab drivers. At this time, the City had an inquiry from one taxicab companies within the City. That one company chose not to pursue a taxicab license at that time, and no companies have since sought licensing. With the increase of Uber and Lyft, City staff feels that the requirements for the taxicab companies, taxicabs and taxicab drivers were onerous. Until the time when taxicab companies come back to the City, staff is comfortable with the repeal of the regulations.

Recommendation
Staff recommends repealing the licensing requirements for taxicab companies, taxicabs and taxicab drivers.

Ordinance No. 2017-____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, REPEALING LICENSING REQUIREMENTS FOR TAXICAB COMPANIES, TAXICABS AND TAXICAB DRIVERS

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Mayor and City Council desire to amend the Yorkville City Code by removing the regulations set forth by Ordinance No. 2011-44 relating to taxicab companies, taxicabs and taxicab drivers.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That Title 3, Chapter 12 of the Yorkville City Code is hereby deleted in its entirety.

Section 2. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this ____ day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	☐
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Minutes #1

Tracking Number

Agenda Item Summary Memo

Title: Minutes of the Regular City Council – March 28, 2017

Meeting and Date: City Council – April 25, 2017

Synopsis: Approval of Minutes

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Beth Warren (Name) City Clerk (Department)

Agenda Item Notes:

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MINUTES OF THE REGULAR MEETING OF THE CITY COUNCIL OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, HELD IN THE CITY COUNCIL CHAMBERS, 800 GAME FARM ROAD ON TUESDAY, MARCH 28, 2017

Mayor Golinski called the meeting to order at 7:00 p.m. and led the Council in the Pledge of Allegiance.

City Clerk Warren called the roll.

Ward I	Koch	Present
	Colosimo	Present
Ward II	Milschewski	Present
Ward III	Frieders	Present
	Funkhouser	Present
Ward IV	Tarulis	Present
	Teeling	Present

Also present: City Clerk Warren, City Attorney Orr, City Administrator Olson, Deputy Chief of Police Klingel, Public Works Director Dhuse, EEI Engineer Morrison, Community Development Director Barksdale-Noble, Director of Parks and Recreation Evans, Assistant City Administrator Willrett, Purchasing Manager Callahan

QUORUM
A quorum was established**.**

AMENDMENTS TO THE AGENDA
Alderman Funkhouser requested that Item #6 on the Consent Agenda, Information Technology Services (ADM 2017-33), be moved to the regular agenda under Administration Committee Report.

Amendment approved unanimously by a viva voce vote.

PRESENTATIONS
None.

PUBLIC HEARINGS
None.

CITIZEN COMMENTS ON AGENDA ITEMS
None.

CONSENT AGENDA
1. Monthly Treasurer's Report for February 2017 (ADM 2017-24)
2. EEI Hourly Rates for FY 18 – *approve Engineering Enterprises, Inc. Hourly Rates as specified in the 2017 Standard Schedule of Charges, effective as of May 1, 2017* (ADM 2017-28)
3. **Ordinance 2017-13** Providing for New Garbage Service Rates – *authorize the Mayor and City Clerk to execute* (ADM 2017-29)
4. **Resolution 2017-16** Approving a Reciprocal Agreement on Exchange of Information between the City and the Illinois Department of Revenue – *authorize the Mayor and City Clerk to execute* (ADM 2017-30)
5. FY 18 Insurance Renewals – *approve a contract for the renewal of existing HMO and PPO plans with Blue Cross Blue Shield; approve a contract with SunLife for a dental plan; approve a contract with Dearborn National for a vision plan; approve a contract with Dearborn National for life insurance; to approve employee HRA card amounts in the same amount as FY 2017 and to authorize non-union employee contribution percentages as outlined in the memo included with this packet item from City Administrator Olson, dated March 22, 2017 and with union employee contribution rates in the amounts as authorized by the Police Department and Public Works union contracts* (ADM 2017-31)

Mayor Golinski entertained a motion to approve the consent agenda as amended. So moved by Alderman Koch; seconded by Alderman Milschewski.

Motion approved by a roll call vote. Ayes-7 Nays-0
Colosimo-aye, Milschewski-aye, Tarulis-aye, Frieders-aye,
Funkhouser-aye, Koch-aye, Teeling-aye

MINUTES FOR APPROVAL
1. Minutes of the Regular City Council – February 28, 2017

Mayor Golinski entertained a motion to approve the minutes of the regular City Council meeting of February 28, 2017 as presented. So moved by Alderman Milschewski; seconded by Alderman Koch.

Minutes approved unanimously by a viva voce vote.

BILLS FOR PAYMENT

Mayor Golinski stated that the bills were $774,389.50.

REPORTS

MAYOR'S REPORT

Proclamation for Poppy Days
(CC 2017-07)

Mayor Golinski called two ladies from the Legion to the front. He read the proclamation for Poppy Days.

Proclamation for National Service Day Recognition
(CC 2017-08)

Mayor Golinski read the proclamation for National Service Day Recognition.

2017 Road to Better Roads Program – Contract Award
(CC 2017-09)

Mayor Golinski entertained a motion to accept the bid and award contract to D. Construction Co., for the 2017 Road to Better Roads Program in an amount not to exceed $607,981.72. So moved by Alderman Funkhouser; seconded by Alderman Milschewski.

Alderman Funkhouser noted that this estimate is below the current budgeted amount. Alderman Frieders asked if future savings could be put toward the Whispering Meadows Subdivision resurfacing project. Alderman Koch asked if Walsh Drive could be added to this program. City Administrator Olson stated two roads that have deteriorated, Teri and Walsh Drive. He is waiting for current bids to come in.

Motion approved by a roll call vote. Ayes-7 Nays-0
Teeling-aye, Koch-aye, Frieders-aye, Tarulis-aye,
Colosimo-aye, Funkhouser-aye, Milschewski-aye

2017 Sanitary Sewer Lining Program – Contract Award
(CC 2017-10)

Mayor Golinski entertained a motion to accept the bid and award contract to Visu-Sewer of Illinois, LLC for the 2017 Sanitary Sewer Lining Program in an amount not to exceed $113,260.90. So moved by Alderman Tarulis; seconded by Alderman Funkhouser.

Alderman Frieders inquired if this is the same contractor that bid a project last year and subsequently came back asking for additional funding. Public Works Director Dhuse said no. Alderman Funkhouser and City Administrator Olson discussed matters relating to this issue.

Motion approved by a roll call vote. Ayes-7 Nays-0
Koch-aye, Frieders-aye, Tarulis-aye, Colosimo-aye
Funkhouser-aye, Milschewski-aye, Teeling-aye

West Washington Street Water Main Replacement – Contract Award
(CC 2017-11)

Mayor Golinski entertained a motion to accept the bid and award contract to Superior Excavating for the West Washington Street Water Main replacement in an amount not to exceed $243,331.50. So moved by Alderman Funkhouser; seconded by Alderman Milschewski.

Alderman Funkhouser noted that this is a very favorable bid showing substantial savings.

Motion approved by a roll call vote. Ayes-7 Nays-0
Frieders-aye, Tarulis-aye, Colosimo-aye,
Funkhouser-aye, Milschewski-aye, Teeling-aye, Koch-aye

Resolution 2017-17 MFT Supplemental for FY 2018 General Maintenance Appropriation
(CC 2017-12)

Mayor Golinski entertained a motion to approve a supplemental MFT resolution for FY 2018 General maintenance appropriation and authorize the City Clerk to execute. So moved by Alderman Funkhouser; seconded by Alderman Tarulis.

Motion approved by a roll call vote. Ayes-7 Nays-0
Frieders-aye Tarulis-aye, Colosimo-aye, Funkhouser-aye,

Milschewski-aye, Teeling-aye, Koch-aye

Fox Hill and Sunflower Estates SSA Mowing and Maintenance – Contract Award
(CC 2017-13)

Mayor Golinski entertained a motion to accept the bid and award contract to Cox Landscaping, LLC as presented in the memo from Public Works Director Dhuse dated March 13, 2017. So moved by Alderman Funkhouser; seconded by Alderman Frieders.

Alderman Funkhouser stated this new contractor addresses the issues the City had with the previous contractor for the SSA maintenance.

Motion approved by a roll call vote. Ayes-7 Nays-0
Tarulis-aye, Colosimo-aye, Funkhouser-aye,
Milschewski-aye, Teeling-aye, Koch-aye, Frieders-aye

Downtown Sidewalk and Fencing Replacement RFP Results – Rejection of Submittals and Request for New RFP
(CC 2017-14)

Mayor Golinski made a motion to reject the submitted proposal and to authorize staff to issue a new request for proposals for the downtown sidewalk and fencing replacement. So moved by Alderman Tarulis; seconded by Alderman Milschewski.

Alderman Funkhouser recommends that the City be more specific in the requirements of the project so to provide a more accurate bid. Alderman Frieders, Alderman Colosimo, and Alderman Funkhouser discussed the requirements an adequate railing. City Administrator Olson addressed the public safety issue mentioned by Alderman Colosimo. Mayor Golinski asked if the City is writing a new RFP. City Administrator Olson explained details of the RFP. Mayor Golinski introduced the new Purchasing Manager Annie Callahan, who is an employee of Oswego. There is an intergovernmental agreement to utilize her services.

Alderman Funkhouser made a motion to amend to remove the reissuance and bring it back to a later City Council meeting but to reject the submitted proposals; seconded by Alderman Colosimo.

Motion approved by a roll call vote. Ayes-7 Nays-0
Colosimo-aye, Funkhouser-aye, Milschewski-aye,
Teeling-aye, Koch-aye, Frieders-aye, Tarulis-aye

Purchase of 102 E. Van Emmon – First Reading
(CC 2017-15)

a. Resolution Approving the Purchase of 102 E. Van Emmon
b. Ordinance Approving the Seventh Amendment to the Annual Budget for the Fiscal Year Commencing on May 1, 2016 and Ending on April 30, 2017

Mayor Golinski discussed this purchase and the possible long term usage for the property. He went over both pros and cons of the purchase, and feels it is a good opportunity for the City. Alderman Colosimo is a proponent for this purchase. He feels it would be a cost effective way to address the needed space for City administrative staff and the Police Department. Alderman Teeling agrees with Alderman Colosimo, and feels this would be a great location for City Hall. Alderman Tarulis supports this purchase proposal. Alderman Funkhouser expressed concerns for the project questioning the intended use and the cost for renovation. He expressed many concerns for the current City Hall being used as a Police Department. Alderman Funkhouser discussed the downtown building in regards to the TIF. Alderman Teeling spoke about the two uses that this one purchase could provide. Alderman Teeling asked Alderman Funkhouser what his solutions are for Yorkville's Police Department. Alderman Funkhouser answered to step back and make a plan. Mayor Golinski mentioned that the person selling the building is one of Alderman Funkhouser's former employers. Mayor Golinski opened the floor to audience members for discussion on this issue. Robert Gryder, downtown, spoke. Amy Cesich, Raintree, spoke. Alderman Milschewski stated this space could be used for different purposes, which she believes would bring residents to Yorkville's downtown area. Alderman Koch believes the building is a good fit for Yorkville. City Administrator Olson described the potential financing costs for the property, and the implications regarding the TIF district. City Attorney Orr expounded on City Administrator Olson's statements. Alderman Funkhouser addressed the issue that the seller of the building was his past employer. He is not opposed to the City purchasing this property, but wanted to bring issues to light. Alderman Colosimo sees the value of land acquisition for the City, but concedes the negative impact concerning the TIF. Mayor Golinski stated that the Council will see this again in two weeks.

Appointment to the Library Board
(CC 2017-17)

Mayor Golinski entertained a motion to approve the Mayor's appointment of Jason Hedman to the Library Board to a term ending May 2018. So moved by Alderman Colosimo; seconded by Alderman Teeling.

Mayor Golinski stated this gentleman will be a great fit for the Library Board.

Motion approved by a roll call vote. Ayes-7 Nays-0
Teeling-aye, Koch-aye, Frieders-aye, Tarulis-aye,
Colosimo-aye, Funkhouser-aye, Milschewski-aye

PUBLIC WORKS COMMITTEE REPORT
No report.

ECONOMIC DEVELOPMENT COMMITTEE REPORT
No report.

PUBLIC SAFETY COMMITTEE REPORT
No report.

ADMINISTRATION COMMITTEE REPORT

Building Conditions Survey – RFQ Results – Contract Award
(ADM 2017-32)

Alderman Milschewski made a motion to accept a proposal and award contract to EMG to do the building condition survey in an amount not to exceed $102,890.00; seconded by Alderman Teeling.

Andy Hupp, from EMG, walked the Council through the presentation. He told about EMG. Mr. Hupp asked the Council if there were any questions. Alderman Frieders asked several questions. Mr. Hupp, and City Administrator Olson answered Alderman Frieders questions. More discussion took place among Mr. Hupp, City Administrator Olson, and Alderman Frieders. Alderman Tarulis discussed elements of the software used by EMG, as it relates to the City's work order system. Mr. Hupp responded that the software downloads to excel should be able to be used by most work order systems. City Administrator Olson believes that the City's current system would not be able to utilize the data from this software. He anticipates that the new ERP and accounting software the City may acquire in the next couple of years would be able to utilize the data. Alderman Tarulis expressed concerns about the adaptability of the system. Alderman Funkhouser and Alderman Tarulis discussed their thoughts on EMG.

Motion approved by a roll call vote. Ayes-7 Nays-0
Koch-aye, Frieders-aye, Tarulis-aye, Colosimo-aye
Funkhouser-aye, Milschewski-aye, Teeling-aye

Information Technology Services
(ADM 2017-33)

a. **Resolution 2017-18** Approving an Intergovernmental Agreement for the Sharing of Information Technology Services between the Village of Oswego and the United City of Yorkville

Alderman Milschewski made a motion to approve a resolution approving an intergovernmental agreement for the sharing of information technology services between the village of Oswego and the United City of Yorkville and authorize the Mayor and City Clerk to execute; seconded by Alderman Tarulis.

Alderman Funkhouser proposed questions concerning the details of the contract. City Administrator Olson responded to Alderman Funkhouser. City Administrator Olson believes this agreement will be of great benefit to the City. Alderman Frieders is excited about the multiple benefits this agreement will bring. He supports adopting this agreement.

Motion approved by a roll call vote. Ayes-7 Nays-0
Tarulis-aye, Colosimo-aye, Funkhouser-aye,
Milschewski-aye, Teeling-aye, Koch-aye, Frieders-aye

b. **Resolution 2017-19** Approving an Intergovernmental Agreement for Membership in a Government Information Technology Consortium

Alderman Milschewski made a motion to approve a resolution approving an intergovernmental agreement for Membership in a government information technology consortium and authorize the Mayor and City Clerk to execute; seconded by Alderman Frieders.

Motion approved by a roll call vote. Ayes-7 Nays-0
Frieders-aye Tarulis-aye, Colosimo-aye, Funkhouser-aye,
Milschewski-aye, Teeling-aye, Koch-aye

c. **Resolution 2017-20** Approving a Professional Services Agreement for Information Technology Services

Alderman Milschewski made a motion to approve a resolution approving a professional services agreement for information technology services and authorize the Mayor and City Clerk to execute; seconded by Alderman Tarulis.

Motion approved by a roll call vote. Ayes-7 Nays-0
Colosimo-aye, Funkhouser-aye, Milschewski-aye,
Teeling-aye, Koch-aye, Frieders-aye, Tarulis-aye

PARK BOARD

Ordinance 2017-14 **Approving a License Agreement by and between the City and The Yak Shack**
(CC 2017-16)

Mayor Golinski entertained a motion to approve an ordinance approving a license agreement by and between the City and the Yak Shack and authorize the Mayor and City Clerk to execute. So moved by Alderman Frieders; seconded by Alderman Milschewski.

Alderman Frieders is in support of this license agreement.

Motion approved by a roll call vote. Ayes-7 Nays-0
Funkhouser-aye, Milschewski-aye, Teeling-aye,
Koch-aye, Frieders-aye, Tarulis-aye, Colosimo-aye

PLANNING AND ZONING COMMISSION

DKR Group, Inc. – 1 ½ Mile Review (Special Use) – Withdrawn
(PZC 2017-03)

Mayor Golinski stated this has been withdrawn.

CITY COUNCIL REPORT

No report.

CITY CLERK'S REPORT

No report.

COMMUNITY & LIAISON REPORT

AACVB Event

Alderman Funkhouser stated that the AACVB is sponsoring an event on April 3, 2017, to display the Chicago Cubs World Series Championship Trophy.

STAFF REPORT

No report.

MAYOR'S REPORT (cont'd)

Ordinance Approving 2017-2018 Fiscal Budget
(CC 2017-06)

Mayor Golinski stated the 2017-2018 fiscal budget is on the agenda tonight. He asked the Council how to proceed. The Council agreed to have the budget come back on the City Council agenda in two weeks.

ADDITIONAL BUSINESS

None.

EXECUTIVE SESSION

None.

CITIZEN COMMENTS

None.

ADJOURNMENT

Mayor Golinski stated meeting adjourned.

Meeting adjourned at 8:36 p.m.

Minutes submitted by:

Beth Warren,
City Clerk, City of Yorkville, Illinois

Reviewed By:	
Legal	☐
Finance	■
Engineer	☐
City Administrator	☐
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Bills for Payment

Tracking Number

Agenda Item Summary Memo

Title: Bills for Payment (Informational): $710,343.73

Meeting and Date: City Council – April 25, 2017

Synopsis:

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: None – Informational

Council Action Requested:

Submitted by: Amy Simmons (Name) Finance (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

UNITED CITY OF YORKVILLE
CHECK REGISTER

CHECK DATE: 04/12/17

CHECK #	VENDOR #	INVOICE NUMBER	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	ITEM AMT	
523145	R0001830	WILLIAM & VANESSA KLOSKA						
	20160841-BUILD		04/07/17	01	892 N CARLY CR BUILD PROGRAM	25-000-24-21-2445	680.00	
				02	892 N CARLY CR BUILD PROGRAM	51-000-24-00-2445	5,320.00	
				03	892 N CARLY CR BUILD PROGRAM	52-000-24-00-2445	4,000.00	
						INVOICE TOTAL:	10,000.00 *	
						CHECK TOTAL:		10,000.00
523146	R0001831	KIMBERLY WAIGLAND STOLPESTAD						
	20160851-BUILD		04/07/17	01	2689 LILAC WAY BUILD PROGRAM	23-000-24-00-2445	300.00	
				02	2689 LILAC WAY BUILD PROGRAM	25-000-24-21-2445	380.00	
				03	2689 LILAC WAY BUILD PROGRAM	51-000-24-00-2445	5,320.00	
				04	2689 LILAC WAY BUILD PROGRAM	52-000-24-00-2445	4,000.00	
						INVOICE TOTAL:	10,000.00 *	
						CHECK TOTAL:		10,000.00
						TOTAL AMOUNT PAID:		20,000.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

CHECK DATE: 04/18/17

CHECK #	VENDOR #	INVOICE NUMBER	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	ITEM AMT	
523148	GOVIT	GOVERNMENT IT CONSORTIUM						
	2017-008		03/29/17	01	MEMBERSHIP INITIATION FEE	01-640-54-00-5450	3,000.00	
						INVOICE TOTAL:	3,000.00 *	
						CHECK TOTAL:		3,000.00
523149	GOVIT	GOVERNMENT IT CONSORTIUM						
	2017-009		03/29/17	01	RESERVE ACCOUNT	01-640-54-00-5450	1,000.00	
						INVOICE TOTAL:	1,000.00 *	
						CHECK TOTAL:		1,000.00
						TOTAL AMOUNT PAID:		4,000.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	CHECK DATE	ACCOUNT #	ITEM AMT
900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-A.HERNANDEZ	03/31/17	01	HOMEDEPO-PAINT		79-790-56-00-5640	63.96
						INVOICE TOTAL:	63.96 *
	042517-A.SIMMONS	03/31/17	01	UNDERGROUND PIPE-DUAL VALVE		51-510-56-00-5638	3,850.00
			02	FOR TREATMENT PLANT		** COMMENT **	
			03	ARAMARK#1590836857-UNIFORMS		01-410-56-00-5600	53.98
			04	ARAMARK#1590836857-UNIFORMS		51-510-56-00-5600	53.98
			05	ARAMARK#1590836857-UNIFORMS		52-520-56-00-5600	27.00
			06	ARAMARK#1590845413-UNIFORMS		01-410-56-00-5600	53.54
			07	ARAMARK#1590845413-UNIFORMS		51-510-56-00-5600	53.54
			08	ARAMARK#1590845413-UNIFORMS		52-520-56-00-5600	26.77
			09	ADS ANNUAL MAINTENANCE CHARGE		82-820-54-00-5462	299.40
			10	KONICA-COPIER CHARGES		82-820-54-00-5462	7.78
			11	VERIZON-FEB 2017 MOBILE PHONES		01-220-54-00-5440	163.53
			12	VERIZON-FEB 2017 MOBILE PHONES		01-210-54-00-5440	540.18
			13	VERIZON-FEB 2017 MOBILE PHONES		79-795-54-00-5440	72.98
			14	VERIZON-FEB 2017 MOBILE PHONES		51-510-54-00-5440	224.96
			15	VERIZON-FEB 2017 MOBILE PHONES		01-410-54-00-5440	68.16
			16	VERIZON-FEB 2017 MOBILE PHONES		52-520-54-00-5440	44.00
			17	WATER SERVICES-LEAK DETECTION		51-510-54-00-5462	315.00
			18	EMERGENCY CALL OUT @ WATER		** COMMENT **	
			19	PARK ON RT47		** COMMENT **	
			20	ARAMARK#1590856877-UNIFORMS		01-410-56-00-5600	53.98
			21	ARAMARK#1590856877-UNIFORMS		51-510-56-00-5600	53.98
			22	ARAMARK#1590856877-UNIFORMS		52-520-56-00-5600	27.00
			23	ARAMARK#11590865525-UNIFORMS		01-410-56-00-5600	53.98
			24	ARAMARK#11590865525-UNIFORMS		51-510-56-00-5600	53.98
			25	ARAMARK#11590865525-UNIFORMS		52-520-56-00-5600	27.00
			26	ARAMARK#1590874296-UNIFORMS		01-410-56-00-5600	53.98
			27	ARAMARK#1590874296-UNIFORMS		51-510-56-00-5600	53.98
			28	ARAMARK#1590874296-UNIFORMS		52-520-56-00-5600	27.00
			29	KONICA-2/10-3/9 COPIER CHARGES		01-110-54-00-5430	141.99
			30	KONICA-2/10-3/9 COPIER CHARGES		01-120-54-00-5430	47.33
			31	KONICA-2/10-3/9 COPIER CHARGES		01-220-54-00-5430	113.56
			32	KONICA-2/10-3/9 COPIER CHARGES		01-210-54-00-5430	252.14
			33	KONICA-2/10-3/9 COPIER CHARGES		01-410-54-00-5462	2.03
			34	KONICA-2/10-3/9 COPIER CHARGES		51-510-54-00-5430	2.03
			35	KONICA-2/10-3/9 COPIER CHARGES		52-520-54-00-5430	2.03
			36	KONICA-2/10-3/9 COPIER CHARGES		79-790-54-00-5462	22.26
			37	KONICA-2/10-3/9 COPIER CHARGES		79-795-54-00-5462	22.26
			38	ADS-APR 2017 MONITORING		01-110-54-00-5462	168.11
			39	ADS-MAY-JUN 2017 MONITORING		01-000-14-00-1400	336.22
						INVOICE TOTAL:	7,369.64 *
	042517-B.BEHRENS	03/31/17	01	LOCAL 150 TRAINING MEALS FOR 3		51-510-54-00-5415	42.00
						INVOICE TOTAL:	42.00 *

CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	CHECK DATE	ACCOUNT #	ITEM AMT
900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-B.OLSEM	03/31/17	01	WAREHOUSE DIRECT-PAPER, PAPER		01-110-56-00-5610	185.16
			02	CLIPS, HIGHLIGHTERS		** COMMENT **	
			03	YORKVILLE CHAMBER 2017 ANNUAL		01-110-54-00-5415	100.00
			04	DINNER FOR 2		** COMMENT **	
			05	QUILL-POST-IT NOTES, BATTERIES		01-110-56-00-5610	45.96
						INVOICE TOTAL:	331.12 *
	042517-B.OLSON	03/31/17	01	IML JOB POSTING		01-110-54-00-5426	35.00
			02	SPRINGFIELD DRIVE DOWN LODGING		01-110-54-00-5415	492.68
			03	FOR 4 PEOPLE		** COMMENT **	
						INVOICE TOTAL:	527.68 *
	042517-B.REISINGER	03/31/17	01	4 IMPRINT-500 WOLVERINE PENS,		79-795-56-00-5606	513.29
			02	110 USB CAR CHARGERS		** COMMENT **	
			03	AT&T U-VERSE-2/24-3/23 TOWN		79-795-54-00-5440	55.00
			04	SQUARE PARK SIGN		** COMMENT **	
			05	PARADISE-CAR WASHES		79-795-54-00-5495	24.00
			06	PARADISE-CAR WASHES		79-790-54-00-5495	24.00
			07	IPASS REPLENISHMENT		79-790-54-00-5415	40.00
			08	NEOPOST-APRIL POSTAGE MACHINE		79-795-54-00-5485	30.95
			09	LEASE		** COMMENT **	
			10	NEOPOST-MAY-JUNE POSTAGE		79-000-14-00-1400	61.90
			11	MACHINE LEASE		** COMMENT **	
			12	GRAINCO-LP GAS		79-790-56-00-5695	93.97
			13	ARAMARK #1590856879-UNIFORMS		79-790-56-00-5600	56.99
			14	ARAMARK #11590865527-UNIFORMS		79-790-56-00-5600	56.13
			15	COMCAST-3/1-3/28 INTERNET		01-110-54-00-5440	5.33
			16	COMCAST-3/1-3/28 INTERNET		01-220-54-00-5440	4.00
			17	COMCAST-3/1-3/28 INTERNET		01-120-54-00-5440	5.33
			18	COMCAST-3/1-3/28 INTERNET		79-790-54-00-5440	7.32
			19	COMCAST-3/1-3/28 INTERNET		01-210-54-00-5440	34.62
			20	COMCAST-3/1-3/28 INTERNET		79-795-54-00-5440	7.32
			21	COMCAST-3/1-3/28 INTERNET		52-520-54-00-5440	4.00
			22	COMCAST-3/1-3/28 INTERNET		01-410-54-00-5440	5.33
			23	COMCAST-3/1-3/28 INTERNET		51-510-54-00-5440	6.65
			24	COMCAST-3/1-3/28 CABLE & VOICE		79-790-54-00-5440	77.65
			25	ARAMARK#1590874298-UNIFORMS		79-790-56-00-5600	56.13
			26	SOURCE ONE-BINDERS, PAPER		79-795-56-00-5610	34.49
						INVOICE TOTAL:	1,204.40 *
	042517-B.WEBER	03/31/17	01	LOCAL 150 TRAINING MEALS		01-410-54-00-5415	28.25
						INVOICE TOTAL:	28.25 *
	042517-D.BEHRENS	03/31/17	01	RURAL KING-TRUCK TOOL BOX		52-520-56-00-5628	215.98
						INVOICE TOTAL:	215.98 *

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900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-D.HENNE	03/31/17	01	RED WING-BOOTS		01-410-56-00-5600	224.99
						INVOICE TOTAL:	224.99 *
	042517-E.DHUSE	03/31/17	01	NAPA#163761-FUSE HOLDER, WIRE		52-520-56-00-5628	24.60
			02	WATER SERVICES-LEAK REPAIR		51-510-54-00-5445	1,218.50
			03	APWA NATIONAL SHOW AIRFAIR		01-410-54-00-5415	106.47
			04	APWA NATIONAL SHOW AIRFAIR		51-510-54-00-5415	106.47
			05	APWA NATIONAL SHOW AIRFAIR		52-520-54-00-5415	106.46
			06	APWA NATIONAL SHOW AIRFAIR		01-410-54-00-5415	20.13
			07	INSURANCE		** COMMENT **	
			08	NAPA#164057-FILTERS		01-410-56-00-5628	220.80
			09	NAPA#164486-BULB		01-410-56-00-5628	3.77
			10	NAPA#164534-CIRCUIT TESTER		79-790-56-00-5630	5.49
			11	APWA CONFERENCE REGISTRATION		01-410-54-00-5412	266.33
			12	APWA CONFERENCE REGISTRATION		51-510-54-00-5412	266.33
			13	APWA CONFERENCE REGISTRATION		52-520-54-00-5412	266.34
						INVOICE TOTAL:	2,611.69 *
	042517-G.GOLINSKI	03/31/17	01	METRO WEST LEGISLATIVE DRIVE-		01-110-54-00-5415	9.00
			02	DOWN PARKING		** COMMENT **	
			03	DUNKIN-DONUTS FOR COFFEE WITH		01-110-56-00-5610	36.72
			04	THE MAYOR		** COMMENT **	
						INVOICE TOTAL:	45.72 *
	042517-J.BAUER	03/31/17	01	LOCAL 150 TRAINING MEAL		51-510-54-00-5412	35.00
						INVOICE TOTAL:	35.00 *
	042517-J.DYON	03/31/17	01	SAMS-SPOONS, NAPKINS, KLEENEX		01-110-56-00-5610	43.38
			02	SAMS-PAPER TOWELS		01-110-56-00-5610	31.95
			03	TARGET-CLEANER		01-110-56-00-5610	10.76
						INVOICE TOTAL:	86.09 *
	042517-J.WEISS	03/31/17	01	DOLLAR TREE-PINWHEELS, FORKS,		82-820-56-00-5671	24.00
			02	PLATES, TABLE COVERS, CAKE		** COMMENT **	
			03	SERVER SETS, BASKETS		** COMMENT **	
			04	JEWEL-GIFT CARDS		82-820-56-00-5671	45.00
						INVOICE TOTAL:	69.00 *
	042517-K.BARKSDALE	03/31/17	01	KONE-APR ELEVATOR MAINTENANCE		23-216-54-00-5446	150.15
			02	ADOBE MAR 2017 MONTHLY LICENSE		01-220-56-00-5635	49.99
			03	CNU ANNUAL MEMBERSHIP RENEWAL		01-220-54-00-5460	125.00
						INVOICE TOTAL:	325.14 *
	042517-K.LAWRENTZ	03/31/17	01	FARM&FLEET-STEEL TOE BOOTS		51-510-56-00-5600	139.99
						INVOICE TOTAL:	139.99 *

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900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-L.HILT	03/31/17	01	DAVE AUTO#25096-OIL CHANGE		01-210-54-00-5495	60.00
			02	DAVE AUTO#25097-REPAIR BROKEN		01-210-54-00-5495	410.00
			03	WIRE IN DOOR JAMB AND BALL		** COMMENT **	
			04	JOINT		** COMMENT **	
			05	DAVE AUTO#25101-REPLACE BAD		01-210-54-00-5495	220.00
			06	EVAP VENT VALVE		** COMMENT **	
			07	DAVE AUTO#25115-OIL CHANGE		01-210-54-00-5495	95.00
			08	DAVE AUTO#25119-REPLACE OIL		01-210-54-00-5495	248.00
			09	PRESSURE SENDING UNIT		** COMMENT **	
			10	DAVE AUTO#25118-REPLACE FAN		01-210-54-00-5495	598.00
			11	ASSEMBLY		** COMMENT **	
			12	DAVE AUTO#25124-REPLACE FUSE		01-210-54-00-5495	45.00
			13	DAVE AUTO#25122-OIL CHANGE		01-210-54-00-5495	75.00
			14	DAVE AUTO#25125-OIL CHANGE		01-210-54-00-5495	145.00
			15	AND TIRE REPAIR		** COMMENT **	
			16	DAVE AUTO#25132-OIL CHANGE		01-210-54-00-5495	150.00
			17	VERIZON-3/2-4/1 IN CAR UNITS		01-210-54-00-5440	532.28
			18	STREICHERS-BOOTS		01-210-56-00-5600	189.98
			19	DAVE AUTO#25171-DIAGNOSTIC		01-210-54-00-5495	65.00
						INVOICE TOTAL:	2,833.26 *
	042517-L.PICKERING	03/31/17	01	QUILL-HANGING BINDERS, POST-IT		01-110-56-00-5610	204.53
			02	NOTES		** COMMENT **	
			03	VESCO-TAPE FOR LABLE MAKER		01-110-56-00-5610	83.61
						INVOICE TOTAL:	288.14 *
	042517-M.EBERHARDT	03/31/17	01	JEWEL-STORYTIME REFRESHMENTS		82-820-56-00-5671	88.01
						INVOICE TOTAL:	88.01 *
	042517-M.PFISTER	03/31/17	01	AMAZON-PRINTER CARTRIDGES		82-820-56-00-5610	408.43
			02	AMAZON-TONER CARTRIDGES, GAMES		82-820-56-00-5610	244.99
			03	AMAZON-BUTTON MACHINE		82-000-24-00-2480	378.99
			04	BEST BUY-2 IPADS		82-000-24-00-2480	1,199.98
			05	AMAZON-2 WALL CLOCKS		82-000-24-00-2480	94.98
						INVOICE TOTAL:	2,327.37 *
	042517-N.DECKER	03/31/17	01	KEN PRINT#2368-NOTARY STAMP		01-210-54-00-5430	31.90
			02	KEN PRINT#2372-NOTARY STAMP		01-210-54-00-5430	31.90
			03	AMAZON-DVDS FOR EVIDENCE		01-210-56-00-5610	77.56
			04	AMSTERDAM-144 MUGS		01-210-56-00-5650	734.67
			05	MINER#262639-CAMERA REPAIR		01-210-54-00-5495	95.00
			06	LEADS ON LINE SERVICE RENEWAL		01-210-54-00-5462	2,238.00
			07	AMAZON-GLUE STICKS, DRY ERASE		01-210-56-00-5610	36.18
			08	BOARD, SHARPIES		** COMMENT **	
			09	SHRED IT-2/15/17 ON SITE		01-210-54-00-5462	142.95

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900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-N.DECKER	03/31/17	10	SHREDDING		** COMMENT **	
			11	KEN PRINT#2345-2 NOTARY STAMPS		01-210-54-00-5430	63.80
			12	KEN PRINT#2351-500 NOTICE OF		01-210-54-00-5430	390.50
			13	VEHICLE SEIZURES, 500 ADMIN		** COMMENT **	
			14	ORDINANCE NOTICES		** COMMENT **	
			15	SHRED IT-03/15/17 ON SITE		01-210-54-00-5462	142.29
			16	SHREDDING		** COMMENT **	
			17	AT&T-2/25-3/24 SERVICE		01-210-54-00-5440	123.83
			18	COMCAST-3/8-4/7 CABLE		01-210-54-00-5440	4.23
			19	CONVERTING TO NIBRS WEBINAR		01-210-54-00-5412	158.00
			20	ACCURINT-FEB 2017 SEARCHES		01-210-54-00-5462	50.00
						INVOICE TOTAL:	4,320.81 *
	042517-P.RATOS	03/31/17	01	AMAZON-MOISTURE METER		01-220-56-00-5620	47.02
			02	WALL BRACING IN THE IRC CLASS		01-220-54-00-5412	195.00
			03	REGISTRATION FOR CREADEUR		** COMMENT **	
			04	LICENSED PLUMBER RENEWAL FEE		01-220-54-00-5460	153.53
						INVOICE TOTAL:	395.55 *
	042517-P.SCODRO	03/31/17	01	LOCAL 150 TRAINING MEALS		51-510-54-00-5415	22.75
						INVOICE TOTAL:	22.75 *
	042517-R.FREDRICKSON	03/31/17	01	IGFOAPUBLIC PENSION INSTITUTE		01-120-54-00-5412	190.00
			02	2017 IAMMA LUNCHEON		01-110-54-00-5412	20.00
			03	BARRACUDA EMAIL SECURITY		01-640-54-00-5450	799.00
			04	IGFOA PREPARING PAFR SEMINAR		01-120-54-00-5412	15.00
			05	NEWTEK-3/11-4/11 WEB UPKEEP		01-640-54-00-5450	15.95
			06	COMCAST-2/24-3/23 INTERNET		01-110-54-00-5440	45.52
			07	COMCAST-2/24-3/23 INTERNET		01-220-54-00-5440	34.14
			08	COMCAST-2/24-3/23 INTERNET		01-120-54-00-5440	45.52
			09	COMCAST-2/24-3/23 INTERNET		79-790-54-00-5440	62.58
			10	COMCAST-2/24-3/23 INTERNET		01-210-54-00-5440	295.85
			11	COMCAST-2/24-3/23 INTERNET		79-795-54-00-5440	62.58
			12	COMCAST-2/24-3/23 INTERNET		52-520-54-00-5440	34.14
			13	COMCAST-2/24-3/23 INTERNET		01-410-54-00-5440	45.52
			14	COMCAST-2/24-3/23 INTERNET		51-510-54-00-5440	161.73
						INVOICE TOTAL:	1,827.53 *
	042517-R.HARMON	03/31/17	02	AMAZON-CARDS, GLUE STICKS,		79-795-56-00-5606	741.84
			03	ENVELOPES, TAPE, CARDSTOCK,		** COMMENT **	
			04	CLAY, CLOROX WIPES, CUPCAKE		** COMMENT **	
			05	TOPPERS		** COMMENT **	
			06	MICHAELS-MARCH PRESCHOOL CRAFT		79-795-56-00-5606	52.34
			07	SUPPLIES		** COMMENT **	
			08	WALMART-MARCH PRESCHOOL		79-795-56-00-5606	68.73

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900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17		
	042517-R.HARMON	03/31/17	09	SUPPLIES		** COMMENT **	
			10	LAKESHORE-PRESCHOOL LEARNING		79-795-56-00-5606	227.56
			11	AIDS		** COMMENT **	
			12	AMAZON-GAS DUSTER		79-795-56-00-5610	33.44
			13	TARGET-COOKIES, CONTAINER		79-795-56-00-5610	20.36
			14	PHOTO PRINTS		79-795-56-00-5606	32.68
			15	DISCOUNT SCHOOL-PAINT,		79-795-56-00-5606	104.56
			16	CONSTRUCTION PAPER, GLUE		** COMMENT **	
			17	MICHAELS-APRIL PRESCHOOL CRAFT		79-795-56-00-5606	39.20
			18	SUPPLIES		** COMMENT **	
			19	WALMART-APRIL PRESCHOOL		79-795-56-00-5606	92.40
			20	SUPPLIES		** COMMENT **	
			21	CARSON DELLOSA-BOOKS		79-795-56-00-5606	51.39
						INVOICE TOTAL:	1,464.50 *
	042517-R.WRIGHT	03/31/17	01	MARCH 2017 IAMMA LUNCHEON		01-110-54-00-5412	15.00
			02	CRAIG'S LIST ADMIN ASSISTANT		01-110-54-00-5426	45.00
			03	JOB POSTING		** COMMENT **	
						INVOICE TOTAL:	60.00 *
	042517-S.AUGUSTINE	03/31/17	01	CONSTANT CONTACT-EMAIL		82-000-24-00-2480	378.00
			02	NEWSLETTER		** COMMENT **	
						INVOICE TOTAL:	378.00 *
	042517-S.REDMON	03/31/17	01	WALGREENS-PHOTO PROCESSING		79-795-56-00-5606	34.86
			02	DICKS-GIFT CARD		79-795-56-00-5606	25.00
			03	IL FOOD HANDLER CARD TRAINING		79-795-56-00-5607	110.00
			04	EASTER EGGS		79-795-56-00-5606	40.00
						INVOICE TOTAL:	209.86 *
	042517-S.REMUS	03/31/17	01	TOP GOLF GOLF OUTING		79-795-56-00-5606	1,554.90
						INVOICE TOTAL:	1,554.90 *
	042517-S.SLEEZER	03/31/17	01	VINTAGE CLASSIC PERGOLA		88-880-60-00-6000	5,229.00
			02	CANOECOPIA GASOLINE		88-880-60-00-6000	27.00
			03	CANOECOPIA EVENT LODGING		88-880-60-00-6000	349.58
			04	RURAL KING-CABLE TIES		79-790-56-00-5640	139.90
						INVOICE TOTAL:	5,745.48 *
	042517-T.HOULE	03/31/17	01	PESTICIDE TRAINING-BROWN		51-510-54-00-5412	50.00
			02	PESTICIDE TRAINING-KLEEFISCH		79-790-54-00-5412	50.00
			03	PESTICIDE TRAINING-SMITH		79-790-54-00-5412	50.00
			04	PESTICIDE TRAINING-CLEVER		79-790-54-00-5412	50.00
			05	PESTICIDE TRAINING-HORNER		79-790-54-00-5412	50.00
			06	PESTICIDE TRAINING-HERNANDEZ		79-790-54-00-5412	50.00

CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	CHECK DATE	ACCOUNT #	ITEM AMT	
900042	FNBO FIRST NATIONAL BANK OMAHA				04/25/17			
	042517-T.HOULE	03/31/17	07	PESTICIDE TRAINING-HOULE		79-790-54-00-5412	50.00	
			08	PESTICIDE TRAINING-SCOTT		79-790-54-00-5412	50.00	
			09	AUTO ZONE-BELT TENSIONER		79-790-56-00-5640	35.99	
			10	GASOLINE		79-790-56-00-5695	37.59	
						INVOICE TOTAL:	473.58 *	
	042517-T.KLINGEL	03/31/17	01	ILEAS CONFERENCE REGISTRATION		01-210-54-00-5412	115.00	
			02	ILEAS CONFERENCE LODGING		01-210-54-00-5415	158.20	
						INVOICE TOTAL:	273.20 *	
	042517-T.KONEN	03/31/17	01	SAFELITE-WINDSHIELD REPAIR		51-510-54-00-5490	197.60	
			02	AMAZON-SOIL METER TESTER		51-510-56-00-5630	39.95	
			03	HACH#10351358-TESTING SUPPLIES		51-510-56-00-5638	485.19	
			04	HOMEDEPO-STRAPS, PLIERS		51-510-56-00-5630	44.92	
			05	TAYLOR TECH-CHEMICALS		51-510-56-00-5638	76.52	
			06	SPRINGFIELD TRAINING MEAL		51-510-54-00-5415	16.00	
			07	SPRINGFIELD TRAINING LODGING		51-510-54-00-5415	395.34	
			08	HOMEDEPO-BATTERIES, DRAIN		51-510-56-00-5638	11.47	
			09	COVER		** COMMENT **		
						INVOICE TOTAL:	1,266.99 *	
	042517-UCOY	03/31/17	01	ADVANCED DISPOSAL FEB 2017		01-540-54-00-5442	105,590.18	
			02	REFUSE SERVICE		** COMMENT **		
			03	ADVANCED DISPOSAL FEB 2017		01-540-54-00-5441	2,768.15	
			04	SENIOR REFUSE SERVICE		** COMMENT **		
			05	ADVANCED DISPOSAL FEB 2017		01-540-54-00-5441	153.92	
			06	SENIOR CIRCUIT BREAKER		** COMMENT **		
						INVOICE TOTAL:	108,512.25 *	
						CHECK TOTAL:		145,362.83
						TOTAL AMOUNT PAID:		145,362.83

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524635	ADVAAUTO	ADVANCED AUTOMATION & CONTROLS							
	17-2629		03/30/17	01	TROUBLESHOOT RADIO ISSUES	51-510-54-00-5445		600.00	
						INVOICE TOTAL:		600.00	*
						CHECK TOTAL:			600.00
524636	ALLSTAR	ALL STAR SPORTS INSTRUCTION							
	172073		03/21/17	01	WINTER II SPORTS INSTRUCTION	79-795-54-00-5462		418.00	
						INVOICE TOTAL:		418.00	*
						CHECK TOTAL:			418.00
524637	AMPERAGE	AMPERAGE ELECTRICAL SUPPLY INC							
	0690689-IN		03/23/17	01	SPLICE KITS	15-155-56-00-5642		107.60	
						INVOICE TOTAL:		107.60	*
	0690690-IN		03/23/17	01	CONNECTORS, COUPLING, NUTS,	15-155-56-00-5642		36.21	
				02	MOUNTING LUGS, EXTENSION RING,	** COMMENT **			
				03	BLANK COVER	** COMMENT **			
						INVOICE TOTAL:		36.21	*
	0691387-IN		03/21/17	01	RECEPTACLE	15-155-56-00-5642		154.31	
						INVOICE TOTAL:		154.31	*
						CHECK TOTAL:			298.12
524638	AMPERAGE	AMPERAGE ELECTRICAL SUPPLY INC							
	0691909-IN		03/30/17	01	PHOTOCONTROLS, LAMPS	15-155-56-00-5642		348.24	
						INVOICE TOTAL:		348.24	*
						CHECK TOTAL:			348.24
524639	ARNESON	ARNESON OIL COMPANY							

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524639	ARNESON	ARNESON OIL COMPANY							
	186592		03/27/17	01	DIESEL FUEL	01-410-56-00-5695		126.96	
				02	DIESEL FUEL	51-510-56-00-5695		126.96	
				03	DIESEL FUEL	52-520-56-00-5695		126.97	
						INVOICE TOTAL:		380.89	*
						CHECK TOTAL:			380.89
524640	ATT	AT&T							
	6305536805-0317		03/25/17	01	3/25-4/24 SERVICES	51-510-54-00-5440		208.72	
						INVOICE TOTAL:		208.72	*
						CHECK TOTAL:			208.72
524641	B&WCONTR	B&W CONTROL SYSTEM INTEGRATION							
	0191686		03/28/17	01	DELL PC LATITUDES AND SUPPLIES	01-640-54-00-5450		6,946.46	
						INVOICE TOTAL:		6,946.46	*
	0191737		04/07/17	01	02/13/17-03/17/17 IT SUPPORT	01-640-54-00-5450		14,717.67	
						INVOICE TOTAL:		14,717.67	*
						CHECK TOTAL:			21,664.13
524642	BATTERYS	BATTERY SERVICE CORPORATION							
	0022073		03/31/17	01	LIGHTNING ARRESTOR BATTERY	23-216-56-00-5656		111.95	
						INVOICE TOTAL:		111.95	*
	0022171		03/29/17	01	LIGHTENING DETECTOR	23-216-56-00-5656		111.95	
						INVOICE TOTAL:		111.95	*
						CHECK TOTAL:			223.90
524643	BCBS	BLUE CROSS BLUE SHIELD							

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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524643	BCBS	BLUE CROSS BLUE SHIELD							
	040717		04/07/17	01	MAY 2017 HEALTH INS	01-000-14-00-1400		6,264.11	
				02	MAY 2017 HEALTH INS-FINANCE	01-000-14-00-1400		2,028.31	
				03	MAY 2017 HEALTH INS-POLICE	01-000-14-00-1400		52,406.14	
				04	MAY 2017 HEALTH INS-COM/DEV	01-000-14-00-1400		5,325.68	
				05	MAY 2017 HEALTH INS-STREETS	01-000-14-00-1400		11,016.32	
				06	MAY 2017 HEALTH INS-RETIREES	01-000-14-00-1400		7,681.76	
				07	MAY 2017 HEALTH INS-PARKS	79-000-14-00-1400		11,427.77	
				08	MAY 2017 HEALTH INS-RECREATION	79-000-14-00-1400		8,449.37	
				09	MAY 2017 HEALTH INS	51-000-14-00-1400		11,129.29	
				10	MAY 2017 HEALTH INS	52-000-14-00-1400		4,032.08	
				11	MAY 2017 HEALTH INS	82-000-14-00-1400		6,061.56	
							INVOICE TOTAL:	125,822.39	*
						CHECK TOTAL:		125,822.39	
D000473	BEHRD	DAVID BEHRENS							
	040617-CDL		04/06/17	01	REIMBURSEMENT FOR CDL LICENSE	52-520-54-00-5462		61.41	
							INVOICE TOTAL:	61.41	*
						DIRECT DEPOSIT TOTAL:		61.41	
524644	BSNSPORT	BSN/PASSON'S/GSC/CONLIN SPORTS							
	98898468		03/30/17	01	BASEBALLS, SCOREBOOKS	79-795-56-00-5606		832.35	
							INVOICE TOTAL:	832.35	*
						CHECK TOTAL:		832.35	
524645	CALLONE	UNITED COMMUNICATION SYSTEMS							
	1010-7980-0000-0417		04/15/17	01	MAR 2017 ADMIN LINES	01-110-54-00-5440		387.85	
				02	MAR 2017 CITY HALL NORTEL	01-110-54-00-5440		146.37	
				03	MAR 2017 CITY HALL NORTEL	01-210-54-00-5440		146.37	

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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524645	CALLONE UNITED COMMUNICATION SYSTEMS							
	1010-7980-0000-0417	04/15/17	04	MAR 2017 CITY HALL NORTEL	51-510-54-00-5440		146.37	
			05	MAR 2017 POLICE LINES	01-210-54-00-5440		898.33	
			06	MAR 2017 CITY HALL FIRE	01-210-54-00-5440		165.08	
			07	MAR 2017 CITY HALL FIRE	01-110-54-00-5440		165.08	
			08	MAR 2017 PW LINES	51-510-54-00-5440		1,758.42	
			09	MAR 2017 TRAFFIC SIGNAL	01-410-54-00-5435		50.04	
			10	MAINTENANCE	** COMMENT **			
			11	MAR 2017 PARKS LINES	79-790-54-00-5440		53.21	
			12	MAR 2017 RECREATION LINES	79-795-54-00-5440		186.92	
					INVOICE TOTAL:		4,104.04	*
					CHECK TOTAL:			4,104.04
524646	CAMBRIA CAMBRIA SALES COMPANY INC.							
	38634	04/05/17	01	SOAP, TOILET TISSUE, PAPER	01-110-56-00-5610		236.20	
			02	TOWEL	** COMMENT **			
					INVOICE TOTAL:		236.20	*
	38647	04/10/17	01	PAPER TOWEL	52-520-56-00-5620		62.34	
					INVOICE TOTAL:		62.34	*
					CHECK TOTAL:			298.54
524647	CHITRIB CHICAGO TRIBUNE							
	003190345	04/01/17	01	FY18 BUDGET HEARING	01-110-54-00-5426		86.76	
			02	LIBRARY EXTERIOR RFP	82-820-54-00-5426		146.34	
			03	KENNEDY ROAD RESURFACING	23-230-60-00-6086		200.03	
			04	COUNTRYSIDE PKWY/CENTER PKWY	23-230-60-00-6025		212.08	
			05	RESURFACING	** COMMENT **			
					INVOICE TOTAL:		645.21	*
					CHECK TOTAL:			645.21

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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524648	CNASURET	CNA SURETY							
	61690733N-051717		04/12/17	01	NOTARY PUBLIC RENEWAL-NELSON	01-210-54-00-5462		30.00	
						INVOICE TOTAL:		30.00	*
						CHECK TOTAL:		30.00	
524649	COLLEPRO	COLLECTION PROFESSIONALS INC.							
	214830-J-033117		03/31/17	01	COMMISSION ON COLLECTIONS	51-510-54-00-5462		107.03	
						INVOICE TOTAL:		107.03	*
						CHECK TOTAL:		107.03	
524650	COMED	COMMONWEALTH EDISON							
	0185079109-0317		03/30/17	01	3/3-3/30 420 FAIRHAVEN	52-520-54-00-5480		130.44	
						INVOICE TOTAL:		130.44	*
						CHECK TOTAL:		130.44	
524651	COMED	COMMONWEALTH EDISON							
	0435113116-0317		04/06/17	01	3/6-4/5 RT25 & BEECHER	15-155-54-00-5482		72.01	
						INVOICE TOTAL:		72.01	*
						CHECK TOTAL:		72.01	
524652	COMED	COMMONWEALTH EDISON							
	0663112230-0316		03/29/17	01	3/2-3/29 103 1/2 BEAVER ST	51-510-54-00-5480		187.12	
						INVOICE TOTAL:		187.12	*
						CHECK TOTAL:		187.12	
524653	COMED	COMMONWEALTH EDISON							

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524653	COMED COMMONWEALTH EDISON						
	0903040077-0217	03/30/17	01	2/14-3/27 MISC STREET LIGHTS	15-155-54-00-5482		2,801.09
					INVOICE TOTAL:		2,801.09 *
					CHECK TOTAL:		2,801.09
524654	COMED COMMONWEALTH EDISON						
	090801404-0317	03/31/17	01	3/7-3/31 6780 RT47	51-510-54-00-5480		89.54
					INVOICE TOTAL:		89.54 *
	0966038077-0317	03/29/17	01	3/1-3/29 456 KENNEDY	15-155-54-00-5482		193.81
			02	3/1-3/29 456 KENNEDY	01-410-54-00-5482		11.04
					INVOICE TOTAL:		204.85 *
	1183088101-0317	03/28/17	01	2/27-3/28 1107 PRAIRIE CROSS	52-520-54-00-5480		127.47
					INVOICE TOTAL:		127.47 *
	1407125045-0316	04/04/17	01	3/6-4/4 1299 CAROLYN CT	52-520-54-00-5480		111.77
					INVOICE TOTAL:		111.77 *
					CHECK TOTAL:		533.63
524655	COMED COMMONWEALTH EDISON						
	1613010022-0217	03/17/17	01	2/15-3/16 BALLFIELDS	79-795-54-00-5480		888.52
					INVOICE TOTAL:		888.52 *
					CHECK TOTAL:		888.52
524656	COMED COMMONWEALTH EDISON						
	1718099052-0317	03/28/17	01	2/28-3/28 872 PRAIRIE CROSS	52-520-54-00-5480		71.05
					INVOICE TOTAL:		71.05 *
	2019099044-0317	04/06/17	01	2/15-3/17 BRIDGE ST TANK	51-510-54-00-5480		83.76
					INVOICE TOTAL:		83.76 *

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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524656	COMED COMMONWEALTH EDISON						
	2668047007-0317	03/28/17	01	2/28-3/28 1908 RAINTREE RD	51-510-54-00-5480		246.81
					INVOICE TOTAL:		246.81 *
					CHECK TOTAL:		401.62
524657	COMED COMMONWEALTH EDISON						
	2947052031-0317	03/31/17	01	3/3-3/31 RIVER & RT47	15-155-54-00-5482		339.27
					INVOICE TOTAL:		339.27 *
					CHECK TOTAL:		339.27
524658	COMED COMMONWEALTH EDISON						
	2961017043-0317	03/29/17	01	2/28-3/29 PRESTWICK LIFT	52-520-54-00-5480		111.86
					INVOICE TOTAL:		111.86 *
	3119142025-0317	03/29/17	01	3/2-3/29 VAN EMMON PRKNG LOT	01-410-54-00-5482		17.07
					INVOICE TOTAL:		17.07 *
	4085080033-0317	03/30/17	01	3/3-3/30 1991 CANNONBALL TR	51-510-54-00-5480		266.56
					INVOICE TOTAL:		266.56 *
	4449087016-0317	04/06/17	01	3/1-3/31 LIFT STATIONS	52-520-54-00-5480		1,042.15
					INVOICE TOTAL:		1,042.15 *
	4475093053-0317	03/30/17	01	3/3-3/30 610 TOWER LN	51-510-54-00-5480		344.52
					INVOICE TOTAL:		344.52 *
					CHECK TOTAL:		1,782.16
524659	COMED COMMONWEALTH EDISON						
	6819027011-0317	04/05/17	01	3/2-3/31 PR BUILDINGS	79-795-54-00-5480		358.85
					INVOICE TOTAL:		358.85 *
					CHECK TOTAL:		358.85

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524660	COMED	COMMONWEALTH EDISON							
	7982120022-0317		03/30/17	01	3/1-3/30 609 N BRIDGE ST	01-110-54-00-5480		29.29	
						INVOICE TOTAL:		29.29	*
						CHECK TOTAL:		29.29	
524661	CONSTELL	CONSTELLATION NEW ENERGY							
	0037145510		01/05/17	01	11/30-1/2 2224 TREMONT	51-510-54-00-5480		5,175.18	
						INVOICE TOTAL:		5,175.18	*
	0038733808		04/01/17	01	3/1-3/29 610 TOWER WELLS	51-510-54-00-5480		3,658.64	
						INVOICE TOTAL:		3,658.64	*
	0038763681		04/04/17	01	03/07-03/30 1 W ALLY	51-510-54-00-5480		67.72	
						INVOICE TOTAL:		67.72	*
	0038778684		04/05/17	01	03/03-03/28 2921 BRISTOL RDG	51-510-54-00-5480		5,009.05	
						INVOICE TOTAL:		5,009.05	*
	0038778710		04/05/17	01	03/02-03/28 2224 TREMONT	51-510-54-00-5480		4,425.33	
						INVOICE TOTAL:		4,425.33	*
						CHECK TOTAL:		18,335.92	
524662	DEARNATI	DEARBORN NATIONAL							
	040717		04/07/17	01	MAY 2017 LIFE INS	01-000-14-00-1400		80.32	
				02	MAY 2017 LIFE INS-EO	01-000-14-00-1400		9.28	
				03	MAY 2017 LIFE INS-FINANCE	01-000-14-00-1400		27.84	
				04	MAY 2017 LIFE INS-POLICE	01-000-14-00-1400		579.00	
				05	MAY 2017 LIFE INS-COMM/DEV	01-000-14-00-1400		34.66	
				06	MAY 2017 LIFE INS-STREETS	01-000-14-00-1400		135.90	
				07	MAY 2017 LIFE INS-PARKS	79-000-14-00-1400		78.17	
				08	MAY 2017 LIFE INS-RECREATION	79-000-14-00-1400		74.12	

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524662	DEARNATI	DEARBORN NATIONAL							
	040717		04/07/17	09	MAY 2017 LIFE INS-WATER	51-000-14-00-1400		79.29	
				10	MAY 2017 LIFE INS-SEWER	52-000-14-00-1400		74.13	
				11	MAY 2017 LIFE INS	82-000-14-00-1400		33.60	
						INVOICE TOTAL:		1,206.31	*
						CHECK TOTAL:		1,206.31	
524663	DRHORTON	DR HORTON CAMBRIDGE HOMES							
	2991 ELLSWORTH		04/11/17	01	REFUND PARKWAY TREE SECURITY	01-000-24-00-2415		600.00	
				02	DEPOSIT	** COMMENT **			
						INVOICE TOTAL:		600.00	*
						CHECK TOTAL:		600.00	
524664	DUTEK	THOMAS & JULIE FLETCHER							
	1001649		04/05/17	01	HOSE ASSEMBLY	01-410-56-00-5628		29.50	
						INVOICE TOTAL:		29.50	*
	1001687		04/11/17	01	PIPE	01-410-56-00-5628		8.50	
						INVOICE TOTAL:		8.50	*
						CHECK TOTAL:		38.00	
524665	DYNEGY	DYNEGY ENERGY SERVICES							
	102389317031		03/27/17	01	2/22-3/22 421 POPLAR	15-155-54-00-5482		4,300.58	
						INVOICE TOTAL:		4,300.58	*
	102389417041		04/03/17	01	03/02-03/29 1 COUNTRYSIDE PKWY	01-410-54-00-5482		12.54	
				02	03/02-03/29 1 COUNTRYSIDE PKWY	15-155-54-00-5482		120.23	
						INVOICE TOTAL:		132.77	*
						CHECK TOTAL:		4,433.35	

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524666	ELEVATOR	ELEVATOR INSPECTION SERVICE							
	67275		03/24/17	01	1/31/17 ELEVATOR INSPECTION	23-216-54-00-5446		75.00	
						INVOICE TOTAL:		75.00	*
						CHECK TOTAL:			75.00
524667	FIRST	FIRST PLACE RENTAL							
	281245-1		03/31/17	01	MARKING PAINT	51-510-56-00-5665		88.56	
						INVOICE TOTAL:		88.56	*
						CHECK TOTAL:			88.56
524668	FLATSOS	RAQUEL HERRERA							
	4209		03/22/17	01	NEW TIRE	79-790-54-00-5495		119.95	
						INVOICE TOTAL:		119.95	*
						CHECK TOTAL:			119.95
524669	FOXVALLE	FOX VALLEY TROPHY & AWARDS							
	34018		03/22/17	01	BASKETBALL TROPHY	79-795-56-00-5606		6.60	
						INVOICE TOTAL:		6.60	*
						CHECK TOTAL:			6.60
524670	FVFS	FOX VALLEY FIRE & SAFETY							
	48956		12/07/16	01	BEECHER CENTER ANNUAL	23-216-54-00-5446		341.00	
				02	INSPECTION	** COMMENT **			
						INVOICE TOTAL:		341.00	*
						CHECK TOTAL:			341.00
524671	HARRIS	HARRIS COMPUTER SYSTEMS							

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524671	HARRIS	HARRIS COMPUTER SYSTEMS							
	XT00005996		03/28/17	01	MAR 2017 MYGOVHUB FEES	01-120-54-00-5462		144.12	
				02	MAR 2017 MYGOVHUB FEES	51-510-54-00-5462		184.52	
				03	MAR 2017 MYGOVHUB FEES	52-520-54-00-5462		93.13	
						INVOICE TOTAL:		421.77	*
						CHECK TOTAL:			421.77
524672	HINCKLEY	G.C. NEHRING							
	18358		03/29/17	01	2 MANHOLES	01-410-56-00-5640		759.04	
						INVOICE TOTAL:		759.04	*
						CHECK TOTAL:			759.04
D000474	HORNERR	RYAN HORNER							
	032217		03/22/17	01	BURKE PLAYGROUND TRAINING	79-790-54-00-5415		23.21	
				02	MEAL REIMBURSEMENT	** COMMENT **			
						INVOICE TOTAL:		23.21	*
	040417		04/04/17	01	USDA TRAINING MEAL	79-790-54-00-5415		11.71	
				02	REIMBURSEMENT	** COMMENT **			
						INVOICE TOTAL:		11.71	*
						DIRECT DEPOSIT TOTAL:			34.92
524673	HRGREEN	HR GREEN							
	110679		03/24/17	01	2/11/17-3/17/17 CRB-WRIGLEY	23-230-60-00-6009		6,891.04	
				02	EXPANSION - CONSTRUCTION	** COMMENT **			
				03	INSPECTION SERVICES	** COMMENT **			
						INVOICE TOTAL:		6,891.04	*
						CHECK TOTAL:			6,891.04

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524674	ILLCO	ILLCO, INC.							
	1312199-C		02/10/17	01	CREDIT FOR INVOICE PAID TWICE	52-520-56-00-5620		-148.51	
						INVOICE TOTAL:		-148.51	*
	1315433		03/20/17	01	PVC PIPE, BALL VALVES, COUPLIN	51-510-56-00-5638		226.24	
						INVOICE TOTAL:		226.24	*
						CHECK TOTAL:			77.73
524675	IMPERINV	IMPERIAL INVESTMENTS							
	FEB 2017-REBATE		04/07/17	01	FEB 2017 BUSINESS DIST REBATE	01-000-24-00-2488		1,886.90	
						INVOICE TOTAL:		1,886.90	*
						CHECK TOTAL:			1,886.90
524676	INGEMUNS	INGEMUNSON LAW OFFICES LTD							
	4099		04/03/17	01	MARCH 2017 ADMIN HEARINGS	01-210-54-00-5467		450.00	
						INVOICE TOTAL:		450.00	*
						CHECK TOTAL:			450.00
524677	JIMSTRCK	JIM'S TRUCK INSPECTION LLC							
	165996		03/29/17	01	TRUCK INSPECTION	01-410-54-00-5490		30.00	
						INVOICE TOTAL:		30.00	*
	166193		04/11/17	01	TRUCK INSPECTION	01-410-54-00-5490		29.00	
						INVOICE TOTAL:		29.00	*
						CHECK TOTAL:			59.00
524678	KCSHERIF	KENDALL CO. SHERIFF'S OFFICE							
	FEB2017-WILL		04/03/17	01	WILL CO. FTA BOND FEE	01-000-24-00-2412		70.00	

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524678	KCSHERIF	KENDALL CO. SHERIFF'S OFFICE							
	FEB2017-WILL		04/03/17	02	REIMBURSEMENT	** COMMENT **			
							INVOICE TOTAL:	70.00	*
						CHECK TOTAL:			70.00
524679	KENDCROS	KENDALL CROSSING, LLC							
	AMU REBATE 03/17		04/18/17	01	NCG MAR 2017 AMUSEMENT TAX	01-640-54-00-5439		6,849.44	
				02	REBATE	** COMMENT **			
							INVOICE TOTAL:	6,849.44	*
	BD REBATE 02/17		04/07/17	01	FEB 2017 BUISINESS DIST REBATE	01-000-24-00-2487		924.27	
							INVOICE TOTAL:	924.27	*
						CHECK TOTAL:			7,773.71
D000475	KLEEFISG	GLENN KLEEFISCH							
	021517		02/15/17	01	CDL LICENSE REIMBURSEMENT	79-790-54-00-5412		50.00	
							INVOICE TOTAL:	50.00	*
						DIRECT DEPOSIT TOTAL:			50.00
524680	KONICA	KONICA MINOLTA							
	30116449		04/11/17	01	4/1/17-5/1/17 COPIER LEASE	01-110-54-00-5485		175.19	
				02	4/1/17-5/1/17 COPIER LEASE	01-120-54-00-5485		140.15	
				03	4/1/17-5/1/17 COPIER LEASE	01-220-54-00-5485		260.98	
				04	4/1/17-5/1/17 COPIER LEASE	01-210-54-00-5485		366.84	
				05	4/1/17-5/1/17 COPIER LEASE	01-410-54-00-5485		35.29	
				06	4/1/17-5/1/17 COPIER LEASE	51-510-54-00-5485		35.29	
				07	4/1/17-5/1/17 COPIER LEASE	52-520-54-00-5485		35.29	
				08	4/1/17-5/1/17 COPIER LEASE	79-790-54-00-5485		130.49	
				09	4/1/17-5/1/17 COPIER LEASE	79-795-54-00-5485		130.48	
							INVOICE TOTAL:	1,310.00	*
						CHECK TOTAL:			1,310.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT
524681	LANEMUCH	LANER, MUCHIN, DOMBROW, BECKER					
	513261	03/01/17	01	2017 HANDBOOK REVIEW AND	01-640-54-00-5463		270.00
			02	GENERAL COUNSELING	** COMMENT **		
					INVOICE TOTAL:		270.00 *
	513906	04/01/17	01	HANDBOOK REVIEW AND GENERAL	01-640-54-00-5463		1,350.00
			02	COUNSELING	** COMMENT **		
					INVOICE TOTAL:		1,350.00 *
					CHECK TOTAL:		1,620.00
524682	LAWLESSM	MATTHEW J. LAWLESS					
	040817	04/08/17	01	REFEREE	79-795-54-00-5462		70.00
					INVOICE TOTAL:		70.00 *
					CHECK TOTAL:		70.00
524683	LOCALGOV	TIM SCHLONEGER					
	4272017	03/04/17	01	MEMBERSHIP RENEWAL	01-000-14-00-1400		840.00
					INVOICE TOTAL:		840.00 *
					CHECK TOTAL:		840.00
524684	MARTIMPL	MARTIN IMPLEMENT SALES, INC.					
	R13455	03/24/17	01	MOWER & SKIDSTEER RENTAL FOR	01-410-54-00-5485		3,000.00
			02	BRISTOL 65 STORM WATER	** COMMENT **		
			03	MAINTENANCE	** COMMENT **		
					INVOICE TOTAL:		3,000.00 *
					CHECK TOTAL:		3,000.00
524685	MENLAND	MENARDS - YORKVILLE					

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524685	MENLAND	MENARDS - YORKVILLE							
	74312		03/21/17	01	STRAINER	79-790-56-00-5620		5.96	
						INVOICE TOTAL:		5.96	*
	74315		03/21/17	01	CONCRETE EPOXY	79-790-56-00-5620		19.96	
						INVOICE TOTAL:		19.96	*
	74346		03/21/17	01	TOW SMART LED REAR LIGHT	79-790-56-00-5640		37.94	
						INVOICE TOTAL:		37.94	*
	74503		03/23/17	01	BOLTS	01-410-56-00-5620		45.52	
						INVOICE TOTAL:		45.52	*
	74615-17		03/24/17	01	WRENCHES, SOCKET	51-510-56-00-5630		52.37	
						INVOICE TOTAL:		52.37	*
	74833		03/27/17	01	ANTIFREEZE	01-410-56-00-5620		14.88	
						INVOICE TOTAL:		14.88	*
	74837		03/27/17	01	CLOSURE PLUG, SIDE ENTRY BOX	51-510-56-00-5638		6.55	
						INVOICE TOTAL:		6.55	*
	74850		03/27/17	01	RESPIRATOR	51-510-56-00-5600		4.39	
				02	CUTTING WHEEL	51-510-56-00-5620		7.20	
						INVOICE TOTAL:		11.59	*
	74857		03/27/17	01	DRILL BIT, ANCHORS	01-410-56-00-5630		4.68	
						INVOICE TOTAL:		4.68	*
	74912		03/28/17	01	BLADES, CLEANER, OAKRIDGE,	79-790-56-00-5640		425.36	
				02	BOARDS, ROOF EDGE	** COMMENT **			
						INVOICE TOTAL:		425.36	*
	74932		03/28/17	01	RETURNED OAKRIDGE CREDIT	79-790-56-00-5640		-45.30	
						INVOICE TOTAL:		-45.30	*

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524685	MENLAND	MENARDS - YORKVILLE							
	74934		03/28/17	01	OAKRIDGE	79-790-56-00-5640		45.30	
						INVOICE TOTAL:		45.30	*
						CHECK TOTAL:		624.81	
524686	MENLAND	MENARDS - YORKVILLE							
	74948		03/28/17	01	OAKRIDGE	79-790-56-00-5640		22.65	
						INVOICE TOTAL:		22.65	*
						CHECK TOTAL:		22.65	
524687	MENLAND	MENARDS - YORKVILLE							
	75103		03/30/17	01	PVC PIPE, FIBRE GLASS, ELBOWS,	79-790-56-00-5620		108.60	
				02	PVC TEES, SCREWDRIVERS, CEMENT	** COMMENT **			
				03	CLEANER	** COMMENT **			
						INVOICE TOTAL:		108.60	*
	75108-17		03/30/17	01	OUTLET, BLANK PLATE, COVER	51-510-56-00-5638		39.11	
						INVOICE TOTAL:		39.11	*
						CHECK TOTAL:		147.71	
524688	MENLAND	MENARDS - YORKVILLE							
	75182		03/31/17	01	CARPET ADHESIVE, TROWEL,	79-790-56-00-5620		50.86	
				02	SPREADER	** COMMENT **			
						INVOICE TOTAL:		50.86	*
						CHECK TOTAL:		50.86	
524689	MENLAND	MENARDS - YORKVILLE							
	75208		03/31/17	01	ODOR ELIMINATORS	51-510-56-00-5638		7.47	
						INVOICE TOTAL:		7.47	*

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CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524689	MENLAND	MENARDS - YORKVILLE							
	75219		03/31/17	01	SHOPLIGHT, SELF BRACKETS	51-510-56-00-5638		35.51	
						INVOICE TOTAL:		35.51	*
	75226		03/31/17	01	BATTERIES	51-510-56-00-5665		3.77	
						INVOICE TOTAL:		3.77	*
						CHECK TOTAL:			46.75
524690	MERLIN	DEYCO, INC.							
	45771		03/28/17	01	TIRE PLUG	01-210-54-00-5495		22.95	
						INVOICE TOTAL:		22.95	*
	45803		03/30/17	01	TIRE PATCH	01-210-54-00-5495		46.79	
						INVOICE TOTAL:		46.79	*
						CHECK TOTAL:			69.74
524691	METROWES	METRO WEST COG							
	2972		04/10/17	01	5/1/17-4/30/18 RENEWAL DUES	01-000-14-00-1400		6,333.66	
						INVOICE TOTAL:		6,333.66	*
						CHECK TOTAL:			6,333.66
524692	MIDAM	MID AMERICAN WATER							
	134568A		03/24/17	01	COUPLING, MANHOLE HOOK	52-520-56-00-5620		175.02	
						INVOICE TOTAL:		175.02	*
						CHECK TOTAL:			175.02
524693	MIDWSALT	MIDWEST SALT							
	P436887		03/31/17	01	BULK ROCK SALT	51-510-56-00-5638		2,371.30	
						INVOICE TOTAL:		2,371.30	*

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CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524693	MIDWSALT MIDWEST SALT							
	P436900	04/04/17	01	BULK SALT	51-510-56-00-5638		2,341.40	
					INVOICE TOTAL:		2,341.40	*
					CHECK TOTAL:		4,712.70	
524694	NICOR NICOR GAS							
	00-41-22-8748 4-0317	04/03/17	01	3/3-4/3 1107 PRIAIRIE LN	01-110-54-00-5480		35.34	
					INVOICE TOTAL:		35.34	*
	12-43-53-5625 3-0317	04/05/17	01	2/27-4/4 609 N BRIDGE ST	01-110-54-00-5480		79.07	
					INVOICE TOTAL:		79.07	*
	15-41-50-1000 6-0317	04/05/17	01	3/3-3/31 804 GAME FARM RD	01-110-54-00-5480		118.26	
					INVOICE TOTAL:		118.26	*
	15-64-61-3532 5-0317	04/05/17	01	3/6-4/4 1991 CANNONBALL TR	01-110-54-00-5480		28.19	
					INVOICE TOTAL:		28.19	*
	20-52-56-2042 1-0317	03/30/17	01	3/1-3/30 420 FIAIRHAVEN	01-110-54-00-5480		83.70	
					INVOICE TOTAL:		83.70	*
	23-45-91-4862 5-0317	04/04/17	01	3/6-4/4 101 BRUELL ST	01-110-54-00-5480		88.17	
					INVOICE TOTAL:		88.17	*
	46-69-47-6727 1-0317	04/07/17	01	03/09-04/06 1975 BRIDGE ST	01-110-54-00-5480		81.78	
					INVOICE TOTAL:		81.78	*
	61-60-41-1000 9-0317	04/06/17	01	3/6-4/4 610 TOWER	01-110-54-00-5480		310.52	
					INVOICE TOTAL:		310.52	*
	62-37-86-4779 6-0317	04/07/17	01	03/09-04/06 185 WOLF ST	01-110-54-00-5480		277.45	
					INVOICE TOTAL:		277.45	*
	66-70-44-6942 9-0317	04/07/17	01	02/07-04/07 1908 RAINTREE RD	01-110-54-00-5480		77.80	
					INVOICE TOTAL:		77.80	*

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524694	NICOR	NICOR GAS							
	83-80-00-1000 7-0317		04/06/17	01	3/6-4/4 610 TOWER UNIT B	01-110-54-00-5480		140.25	
						INVOICE TOTAL:		140.25	*
	91-852-68-4012 8-031		04/05/17	01	3/3-4/3 902 GAME FARM RD	82-820-54-00-5480		1,408.77	
						INVOICE TOTAL:		1,408.77	*
						CHECK TOTAL:		2,729.30	
524695	NIUGRANT	NORTHERN ILLINOIS UNIVERSITY							
	327		03/30/17	01	FEB 2017 MANAGEMENT INTERN	01-110-54-00-5462		1,300.00	
						INVOICE TOTAL:		1,300.00	*
	337		03/30/17	01	MAR 2017 MANAGEMENT INTERN	01-110-54-00-5462		1,300.00	
						INVOICE TOTAL:		1,300.00	*
	437		03/30/17	01	APR 2017 MANAGEMENT INTERN	01-110-54-00-5462		1,300.00	
						INVOICE TOTAL:		1,300.00	*
						CHECK TOTAL:		3,900.00	
524696	OHERRONO	RAY O'HERRON COMPANY							
	1717565-IN		03/30/17	01	AMMUNITION	01-210-56-00-5696		7,662.00	
						INVOICE TOTAL:		7,662.00	*
						CHECK TOTAL:		7,662.00	
D000476	ORRK	KATHLEEN FIELD ORR & ASSOC.							
	15240		04/04/17	01	MISC CITY LEGAL MATTERS	01-640-54-00-5456		6,961.50	
				02	DOWNTOWN TIF LEGAL MATTERS	88-880-54-00-5466		2,476.50	
				03	MEETINGS	01-640-54-00-5456		500.00	
						INVOICE TOTAL:		9,938.00	*
						DIRECT DEPOSIT TOTAL:		9,938.00	

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT
524697	OSWEGOPK	OSWEGOLAND PARK DISTRICT						
	2017 SOCCER		03/22/17	01	2017 SPRING SOCCER TEAM FEE	79-795-56-00-5606		2,750.00
						INVOICE TOTAL:		2,750.00 *
						CHECK TOTAL:		2,750.00
524698	OSWPRINT	JAMES A AGEMA						
	73698		04/04/17	01	2,500 BUILDING INSPECTION	01-220-56-00-5620		211.20
				02	FORMS	** COMMENT **		
						INVOICE TOTAL:		211.20 *
						CHECK TOTAL:		211.20
524699	PEPSI	PEPSI-COLA GENERAL BOTTLE						
	08542660		04/07/17	01	BRIDGE PARK POP, WATER AND	79-795-56-00-5607		1,085.93
				02	GATORADE	** COMMENT **		
						INVOICE TOTAL:		1,085.93 *
						CHECK TOTAL:		1,085.93
524700	R0001468	JUDY SKOGSBERG						
	032517		03/31/17	01	BEECHER DEPOSIT REFUND	01-000-24-00-2410		50.00
						INVOICE TOTAL:		50.00 *
						CHECK TOTAL:		50.00
524701	R0001832	CARRINGTON						
	040317		04/03/17	01	REFUND OVERPAYMENT ON UTILITY	01-000-13-00-1371		104.79
				02	ACCT #0208079330-02	** COMMENT **		
						INVOICE TOTAL:		104.79 *
						CHECK TOTAL:		104.79

UNITED CITY OF YORKVILLE
CHECK REGISTER

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524702	R0001833	MATT KOTESKI							
	158491		03/22/17	01	REFUND DUE TO CANCELLATION	79-000-44-00-4402		200.00	
						INVOICE TOTAL:		200.00	*
						CHECK TOTAL:		200.00	
524703	R0001834	MARK BURGOS							
	158721		04/05/17	01	REFUND DUE TO CUSTOMER	79-000-44-00-4404		75.00	
				02	CONFLICT	** COMMENT **			
						INVOICE TOTAL:		75.00	*
						CHECK TOTAL:		75.00	
524704	RESPONSE	RESPONSIVE NETWORKS SERVICES							
	18486		04/04/17	01	JAN-MARCH LICENSE RENEWAL	01-210-56-00-5635		147.00	
						INVOICE TOTAL:		147.00	*
						CHECK TOTAL:		147.00	
524705	RIVRVIEW	RIVERVIEW FORD							
	124337		03/23/17	01	CABLE ASSEMBLY	79-790-56-00-5640		92.50	
						INVOICE TOTAL:		92.50	*
						CHECK TOTAL:		92.50	
524706	SENIOR	SENIOR SERVICES ASSOCIATES,INC							
	041017-BUNNY		04/10/17	01	BUNNY BREAKFAST AND EGG HUNT	79-795-56-00-5606		551.50	
				02	REIMBURSEMENT	** COMMENT **			
						INVOICE TOTAL:		551.50	*
						CHECK TOTAL:		551.50	

UNITED CITY OF YORKVILLE
CHECK REGISTER

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524707	SPEEDWAY	SPEEDWAY							
	1001542438-0417		04/11/17	01	MARCH 2017 GASOLINE	79-790-56-00-5695		532.27	
				02	MARCH 2017 GASOLINE	79-795-56-00-5695		49.26	
				03	MARCH 2017 GASOLINE	01-210-56-00-5695		3,775.10	
				04	MARCH 2017 GASOLINE	51-510-56-00-5695		530.80	
				05	MARCH 2017 GASOLINE	52-520-56-00-5695		530.79	
				06	MARCH 2017 GASOLINE	01-410-56-00-5695		530.80	
				07	MARCH 2017 GASOLINE	01-220-56-00-5695		216.71	
						INVOICE TOTAL:		6,165.73	*
						CHECK TOTAL:			6,165.73
524708	STANDARD	STANDARD & ASSOCIATES, INC.							
	SA000033865		03/29/17	01	PERSONALITY EVALUATION	01-210-54-00-5411		395.00	
						INVOICE TOTAL:		395.00	*
						CHECK TOTAL:			395.00
524709	SUBURLAB	SUBURBAN LABORATORIES INC.							
	143673		03/31/17	01	COLIFORM	51-510-54-00-5429		575.00	
						INVOICE TOTAL:		575.00	*
						CHECK TOTAL:			575.00
524710	UPS5361	DDEDC #3, INC							
	040617		04/06/17	01	1 PKG TO KFO	01-110-54-00-5452		34.19	
						INVOICE TOTAL:		34.19	*
						CHECK TOTAL:			34.19
524711	VITOSH	CHRISTINE M. VITOSH							
	CMV 1845-1848		03/31/17	01	MARCH 2017 ADMIN HEARINGS	01-210-54-00-5467		400.00	
						INVOICE TOTAL:		400.00	*
						CHECK TOTAL:			400.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524712	WAREHOUS	WAREHOUSE DIRECT							
	3426891-0		03/29/17	01	SHEET PROTECTORS	01-220-56-00-5610		28.88	
						INVOICE TOTAL:		28.88	*
	3433947-0		04/04/17	01	PENS, RULED PADS	01-220-56-00-5610		48.33	
						INVOICE TOTAL:		48.33	*
						CHECK TOTAL:			77.21
524713	WELDSTAR	WELDSTAR							
	01582810		03/24/17	01	STEEL CYLYNDER	01-410-54-00-5485		7.00	
						INVOICE TOTAL:		7.00	*
						CHECK TOTAL:			7.00
524714	WERDERW	WALLY WERDERICH							
	040317-FEB		04/03/17	01	FEB 13 & 27 ADMIN HEARINGS	01-210-54-00-5467		300.00	
						INVOICE TOTAL:		300.00	*
	040317-MAR		04/03/16	01	MAR 13 ADMIN HEARING	01-210-54-00-5467		150.00	
						INVOICE TOTAL:		150.00	*
						CHECK TOTAL:			450.00
524715	YBSD	YORKVILLE BRISTOL							
	0551-013380565		03/31/17	01	MAR 2017 TRANSPORT & TIPPING	51-510-54-00-5445		10,029.60	
						INVOICE TOTAL:		10,029.60	*
						CHECK TOTAL:			10,029.60
524716	YORKACE	YORKVILLE ACE & RADIO SHACK							
	162490		04/03/17	01	FILES	79-790-56-00-5620		8.99	
						INVOICE TOTAL:		8.99	*

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524716	YORKACE	YORKVILLE ACE & RADIO SHACK							
	162496		04/03/17	01	NUTS, DIE	01-410-56-00-5628		16.08	
						INVOICE TOTAL:		16.08	*
	162518		04/06/17	01	WASHERS, HEX NUTS, WRENCH	01-410-56-00-5628		35.97	
						INVOICE TOTAL:		35.97	*
	162519		04/06/17	01	WASHER	01-410-56-00-5620		11.99	
						INVOICE TOTAL:		11.99	*
	192518		04/06/17	01	WRENCH COMBO	01-410-56-00-5630		15.99	
				02	FLAT WASHERS, HEX NUTS	01-410-56-00-5620		19.98	
						INVOICE TOTAL:		35.97	*
						CHECK TOTAL:			109.00
524717	YORKGFPC	PETTY CASH							
	041317		04/13/17	01	KC WATER ASSOCIATION MEETING	51-510-54-00-5412		20.00	
						INVOICE TOTAL:		20.00	*
						CHECK TOTAL:			20.00
524718	YORKSELF	YORKVILLE SELF STORAGE, INC							
	032617-45		03/26/17	01	MAR 2017 STORAGE RENTAL	01-210-54-00-5485		80.00	
						INVOICE TOTAL:		80.00	*
						CHECK TOTAL:			80.00
524719	YOUNGM	MARLYS J. YOUNG							
	030817		04/04/17	01	3/8/17 PLANNING & ZONING	01-110-54-00-5462		41.75	
				02	MEETING MINUTES	** COMMENT **			
						INVOICE TOTAL:		41.75	*

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

INVOICES DUE ON/BEFORE 04/25/2017

CHECK #	VENDOR # / INVOICE #		INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	PROJECT CODE	ITEM AMT	
524719	YOUNGM	MARLYS J. YOUNG							
	031517		04/06/17	01	3/15/17 ADMIN MEETING MINUTES	01-110-54-00-5462		43.00	
						INVOICE TOTAL:		43.00	*
						CHECK TOTAL:		84.75	

TOTAL CHECKS PAID: 264,150.04

TOTAL DIRECT DEPOSITS PAID: 10,084.33

TOTAL AMOUNT PAID: 274,234.37

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	CHECK DATE	ACCOUNT #	ITEM AMT	
131100	KCR KENDALL COUNTY RECORDER'S				02/21/17			
	196538	02/21/17	01	SATISFACTION OF TAX LIEN FOR		01-000-24-00-2440	49.00	
			02	612 SUTTON STREET		** COMMENT **		
			03	RELEASE 1 UTILITY LIEN		51-510-54-00-5448	49.00	
			04	FILE 9 NEW UTILITY LIENS		51-510-54-00-5448	441.00	
						INVOICE TOTAL:	539.00 *	
						CHECK TOTAL:		539.00
						TOTAL AMOUNT PAID:		539.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

CHECK #	VENDOR # / INVOICE #	INVOICE DATE	ITEM #	DESCRIPTION	CHECK DATE	ACCOUNT #	ITEM AMT	
131101	KCR KENDALL COUNTY RECORDER'S				04/07/17			
	197538	04/07/17	01	RELEASE 4 UTILITY LIENS, FILE		51-510-54-00-5448	343.00	
			02	3 NEW UTILITY LIENS		** COMMENT **		
						INVOICE TOTAL:	343.00 *	
						CHECK TOTAL:		343.00
						TOTAL AMOUNT PAID:		343.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
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01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

CHECK DATE: 04/13/17

CHECK #	VENDOR #	INVOICE NUMBER	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	ITEM AMT	
523147	COMMAFF	COMMERCIAL AFFILIATED						
	041217		04/12/17	01	EARNEST MONEY	88-880-60-00-6011	10,000.00	
						INVOICE TOTAL:	10,000.00 *	
						CHECK TOTAL:		10,000.00
						TOTAL AMOUNT PAID:		10,000.00

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
01-220 COMMUNITY DEVELOPMENT	23-230 CITY-WIDE CAPITAL	72-720 LAND CASH	88-880 DOWNTOWN TIF
01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
CHECK REGISTER

CHECK DATE: 04/19/17

CHECK #	VENDOR #	INVOICE NUMBER	INVOICE DATE	ITEM #	DESCRIPTION	ACCOUNT #	ITEM AMT	
523150	R0001835	BRITTNIE & PAUL BREEN						
	20160821-BUILD		04/18/17	01	2722 PHELPS CT BUILD PROGRAM	23-000-24-00-2445	3,034.80	
				02	2722 PHELPS CT BUILD PROGRAM	25-000-24-20-2445	300.00	
				03	2722 PHELPS CT BUILD PROGRAM	25-000-24-21-2445	900.00	
				04	2722 PHELPS CT BUILD PROGRAM	42-000-24-00-2445	50.00	
				05	2722 PHELPS CT BUILD PROGRAM	51-000-24-00-2445	2,470.00	
						INVOICE TOTAL:	6,754.80 *	
						CHECK TOTAL:		6,754.80
						TOTAL AMOUNT PAID:		6,754.80

01-110 ADMINISTRATION	12-112 SUNFLOWER SSA	42-420 DEBT SERVICE	83-830 LIBRARY DEBT SERVICE
01-120 FINANCE	15-155 MOTOR FUEL TAX (MFT)	51-510 WATER OPERATIONS	84-840 LIBRARY CAPITAL
01-210 POLICE	23-216 MUNICIPAL BUILDING	52-520 SEWER OPERATIONS	87-870 COUNTRYSIDE TIF
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01-410 STREET OPERATIONS	25-205 POLICE CAPITAL	79-790 PARKS DEPARTMENT	90-XXX DEVELOPER ESCROW
01-640 ADMINSTRATIVE SERVICES	25-215 PUBLIC WORKS CAPITAL	79-795 RECREATION DEPT	95-XXX ESCROW DEPOSIT
11-111 FOX HILL SSA	25-225 PARKS & RECREATION CAPITAL	82-820 LIBRARY OPERATIONS	

UNITED CITY OF YORKVILLE
PAYROLL SUMMARY
April 7, 2017

	REGULAR	OVERTIME	TOTAL	IMRF	FICA	TOTALS
ADMINISTRATION	$ 15,968.35	$ -	15,968.35	$ 1,693.80	$ 1,177.64	$ 18,839.79
FINANCE	8,864.97	-	8,864.97	987.98	684.30	$ 10,537.25
POLICE	97,152.23	3,302.39	100,454.62	642.39	7,436.21	$ 108,533.22
COMMUNITY DEV.	14,768.71	-	14,768.71	1,389.77	1,096.51	$ 17,254.99
STREETS	12,901.28	83.61	12,984.89	1,399.76	955.70	$ 15,340.35
WATER	14,012.61	279.91	14,292.52	1,540.73	1,038.08	$ 16,871.33
SEWER	8,020.18	-	8,020.18	880.75	608.15	$ 9,509.08
PARKS	16,852.23	-	16,852.23	1,816.67	1,245.16	$ 19,914.06
RECREATION	12,579.93	-	12,579.93	1,161.67	925.88	$ 14,667.48
LIBRARY	15,612.18	-	15,612.18	867.62	1,162.38	$ 17,642.18
TOTALS	$ 216,732.67	$ 3,665.91	$ 220,398.58	$ 12,381.14	$ 16,330.01	$ 249,109.73

TOTAL PAYROLL **$ 249,109.73**

UNITED CITY OF YORKVILLE

BILL LIST SUMMARY

Tuesday, April 25, 2017

ACCOUNTS PAYABLE		**DATE**	
Manual Check Register *(Page 1)*		04/12/2017	20,000.00
Manual Check Register *(Page 2)*		04/18/2017	4,000.00
City MasterCard Bill Register *(Pages 3 - 9)*		04/25/2017	145,362.83
City Check Register *(Pages 10 - 34)*		04/25/2017	274,234.37
	SUB-TOTAL:		**$443,597.20**
OTHER PAYABLES			
Clerk's Check #13110- Kendall County Recorder *(Page 35)*		02/21/2017	539.00
Clerk's Check #131101- Kendall County Recorder *(Page 36)*		04/07/2017	343.00
Manual Check #523147 - Commercial Affiliated Real Estate *(Page 37)*		04/13/2017	10,000.00
Maual Check #523150 - Breen BUILD Check *(Page 38)*		04/19/2017	6,754.80
	SUB-TOTAL:		**$17,636.80**
PAYROLL			
Bi - Weekly *(Page 39)*		04/07/2017	249,109.73
	SUB-TOTAL:		**$249,109.73**
	TOTAL DISBURSEMENTS:		**$710,343.73**

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	☐
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Mayor #1

Tracking Number

CC 2017-21

Agenda Item Summary Memo

Title: Proclamation for Rain Barrel Month

Meeting and Date: City Council – April 25, 2017

Synopsis:

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: None

Council Action Requested:

Submitted by: Mayor Gary J. Golinski

Name Department

Agenda Item Notes:

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UNITED CITY OF YORKVILLE

Rain Barrel Month Proclamation

WHEREAS, water is a valuable, limited natural resource; and

WHEREAS, municipal and rural residents in Yorkville, Illinois depend on water for numerous home and commercial uses; and

WHEREAS, conserving and protecting water supplies is of benefit to all residents of Yorkville, Illinois; and

WHEREAS, for every 100 square foot of roof area, one inch of rain generates approximately 60 gallons of rainwater runoff; and

WHEREAS, wasteful runoff of rainwater from homes and other buildings into storm sewers or other drainageways can add to the damaging and overwhelming stormwater volumes in our natural waterways; and

WHEREAS, collecting rainwater is one type of best management practice to reduce stormwater runoff; and by redirecting and collecting rainwater runoff from buildings, it can be available for more productive, cost-efficient uses; and

WHEREAS, rain barrels are an economical, convenient method of collecting rainwater runoff for future uses; and

WHEREAS, The Conservation Foundation (TCF), in cooperation with local communities, such as Yorkville, promotes the reduction of off-site stormwater runoff and best management practices to redirect and conserve rainwater; and

WHEREAS, TCF and the United City of Yorkville encourage homeowners and businesses to implement methods such as rain barrels to capture and efficiently use rainwater; and

WHEREAS, the United City of Yorkville endorses such best management practices to help protect our local water resources and wishes to promote the use of such practices to its residents.

NOW, THEREFORE, I, Gary J. Golinski, Mayor of the United City of Yorkville, do hereby proclaim the Month of May 2017 as Rain Barrel Promotion Month in the United City of Yorkville.

Dated this 25th day of April, 2017, A.D.

_____

Gary J. Golinski, Mayor

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	☐
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Mayor #2

Tracking Number

CC 2017-22

Agenda Item Summary Memo

Title: Appointments to Library Board – Krista Danis and Theron Garcia

Meeting and Date: City Council – April 25, 2017

Synopsis: _____

_____

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: _____

Council Action Requested: _____

_____

Submitted by: Mayor Gary J. Golinski

Name Department

Agenda Item Notes:

_____

_____

_____

_____

_____

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United City of Yorkville
800 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-4350
www.yorkville.il.us

United City of Yorkville Board & Commission Application

To be considered for a board or commission, please complete this application and return to the attention of Lisa Pickering, Deputy Clerk at the address listed above or by email to lpickering@yorkville.il.us.

Name Krista Danis

Address [redacted]

Phone: Home Work [redacted] Cell [redacted]

Email [redacted] Subdivision Bristol Bay

Please indicate the Board/Commission(s) that you would like to participate on:

- ☐ Fire and Police Commission
- ☐ Planning and Zoning Commission
- ☑ Library Board
- ☐ Police Pension Fund Board
- ☐ Park Board

The following questions help in selection of board/commission members.

1. Indicate your experience (personal and/or work) that will help you in serving the residents of the United City of Yorkville.

   I graduated with my MLIS from University of Illinois in May 2016 and currently work as Children's Librarian and Volunteer Coordinator at the Aurora Public Library, Eola Road Branch.

2. Why do you want to serve on a Board/Commission for the United City of Yorkville?

   I hope to serve my community on the Library Board because I believe in the value of public libraries, democracy, and the free, open exchange of ideas and opinions. I stand firmly against censorship and support intellectual freedom.

Thank you for your interest in being a part of the development of the United City of Yorkville!

It is the policy of the United City of Yorkville to promote nondiscriminatory practices in its hiring, and its contractual undertakings. It is the policy of the City to conform with all aspects of Federal Civil Rights legislation including the Equal Employment Opportunity Act and all State Civil Rights Legislation.

****

I understand that as part of the process of being considered, it is the City's policy to perform a cursory background investigation on anyone being considered for appointment to one of the boards or commissions.

Krista Danis Digitally signed by Krista Danis Date: 2017.04.03 16:51:01 -05'00' 4/3/2017

Signature of Applicant *Date*

For office use only: Date Received 4/3/17 *Initials*_____

United City of Yorkville
800 Game Farm Road
Yorkville, Illinois 60560
Telephone: 630-553-4350
www.yorkville.il.us

United City of Yorkville Board & Commission Application

To be considered for a board or commission, please complete this application and return to the attention of Lisa Pickering, Deputy Clerk at the address listed above or by email to lpickering@yorkville.il.us

Name Theron Garcia, SHRM-CP

Address [redacted]

Phone: Home [redacted] Work _____ Cell [redacted]

Email [redacted] Subdivision Grande Reserve

Please indicate the Board/Commission(s) that you would like to participate on:

- ☐ Fire and Police Commission
- ☑ Library Board
- ☐ Park Board
- ☐ Planning and Zoning Commission
- ☐ Police Pension Fund Board

The following questions help in selection of board/commission members.

1. Indicate your experience (personal and/or work) that will help you in serving the residents of the United City of Yorkville. I am a SHRM Certified Professional which signifies the highest standards expected and needed in HR today around the world. My background includes over 10 yrs. of HR management, management & coordination of programs, marketing, and learning & development. I have experience with developing, recommending, and implementing policies & procedures that support corporate strategic initiatives. In addition, I have the ability to collaborate with team members in delivering business and people growth objectives.
2. Why do you want to serve on a Board/Commission for the United City of Yorkville?
I wish to serve on the Board because I recognize the effectiveness that the Library has on our community. I also understand the impact that its resources provide to our youth, which will be the future of our community. Lastly, I would like to be a part of advocating for the library audits services while meeting the needs of our community.

Thank you for your interest in being a part of the development of the United City of Yorkville!

It is the policy of the United City of Yorkville to promote nondiscriminatory practices in its hiring, and its contractual undertakings. It is the policy of the City to conform with all aspects of Federal Civil Rights legislation including the Equal Employment Opportunity Act and all State Civil Rights Legislation.

****

I understand that as part of the process of being considered, it is the City's policy to perform a cursory background investigation on anyone being considered for appointment to one of the boards or commissions.

Theron Garcia, SHRM-CP
Signature of Applicant

4/4/17
Date

For office use only: Date Received 4/10/17 Initials_____

Reviewed By:	
Legal	☐
Finance	■
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Mayor #3

Tracking Number

CC 2017-23

Agenda Item Summary Memo

Title: Budget Amendment for Library Operations

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached.

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Rob Fredrickson (Name) Finance (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: City Council
From: Rob Fredrickson, Finance Director
Date: April 13, 2017
Subject: Fiscal Year 2018 Budget Amendment – Library Operations

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Summary

Amend the Fiscal Year 2018 (82) Library Operations Fund budget to include the revisions made by the Library Board.

Background

The Library Finance Committee has made several changes to line items contained in the salary, benefit and supply cost centers contained within the Library Operations Fund. Overall budgeted expenditures have been reduced by $29,431, which would yield an estimated deficit of $84,097 for the Fiscal Year Ended April 30, 2018. The amended projected ending fund balance for FY 2018 is approximately $400,000, which is equal to 49% of total budgeted expenditures. These amendments to the Library Operations Fund were adopted by the Library Board on April 10, 2017.

Recommendation

Staff recommends approval of the attached ordinance.

Ordinance No. 2017-____

AN ORDINANCE AUTHORIZING THE FIRST AMENDMENT TO THE ANNUAL BUDGET OF THE UNITED CITY OF YORKVILLE, FOR THE FISCAL YEAR COMMENCING ON MAY 1, 2017 AND ENDING ON APRIL 30, 2018

WHEREAS, the United City of Yorkville (the "City") is a duly organized and validly existing non-home rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, pursuant to 65 ILCS 5/8-2-9.4, the City adopted Ordinance No. 2017-16 on April 11, 2017 adopting an annual budget for the fiscal year commencing on May 1, 2017 and ending on April 30, 2018; and,

WHEREAS, pursuant to 65 ILCS 5/8-2-9.6, by a vote of two-thirds of the members of the corporate authorities then holding office, the annual budget of the United City of Yorkville may be revised by deleting, adding to, changing or creating sub-classes within object classes and object classes themselves. No revision of the budget shall be made increasing the budget in the event funds are not available to effectuate the purpose of the revision; and,

WHEREAS, funds are available to effectuate the purpose of this revision.

NOW THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1: That the amounts shown in Schedule A, attached hereto and made a part hereof by reference, increasing and/or decreasing certain object classes and decreasing certain fund balances in the Library Operations fund with respect to the United City of Yorkville's 2017-2018 Budget are hereby approved.

Section 2: This ordinance shall be in full force and effect from and after its passage and approval according to law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this ____ day of _____, 2017.

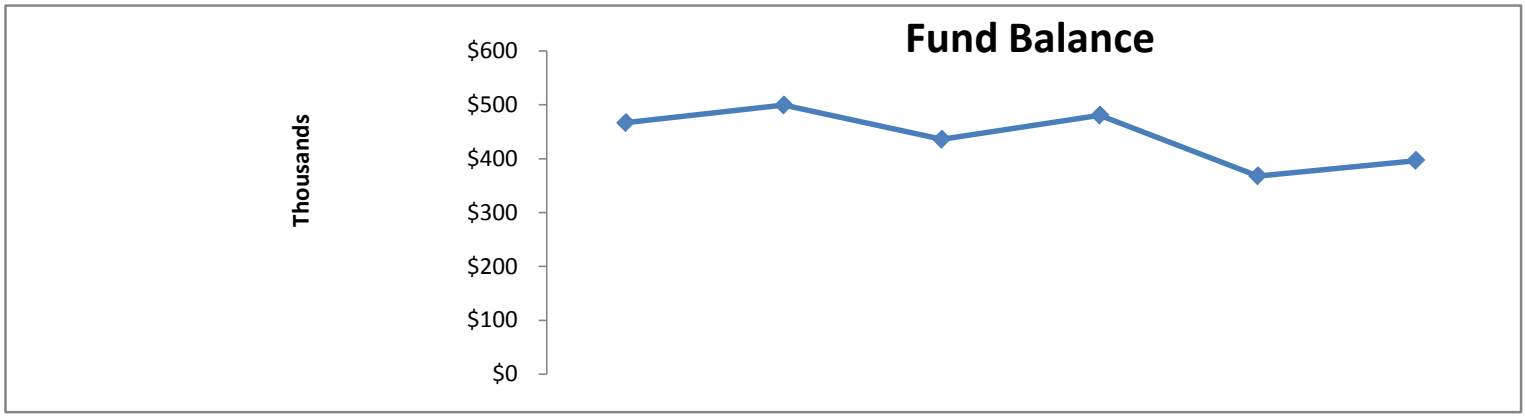
_____
MAYOR

Schedule A

LIBRARY OPERATIONS FUND (82)

The Yorkville Public Library provides the people of the community, from pre-school through maturity, with access to a collection of books and other materials which will serve their educational, cultural and recreational needs. The Library Board and staff strive to provide the community an environment that promotes the love of reading.

	FY 2015 Actual	FY 2016 Actual	FY 2017 Budget	FY 2017 Projected	FY 2018 Adopted Budget	FY 2018 Amended Budget
Revenue						
Taxes	626,950	622,529	644,719	626,183	645,867	645,867
Intergovernmental	26,934	26,475	22,450	18,294	22,450	22,450
Fines & Forfeits	8,356	8,081	9,300	7,620	8,000	8,000
Charges for Service	10,841	9,191	11,500	10,008	10,000	10,000
Investment Earnings	1,279	436	350	924	800	800
Reimbursements	13,174	-	-	2,141	-	-
Miscellaneous	6,762	5,240	7,500	6,692	5,500	5,500
Other Financing Sources	25,189	25,928	36,068	25,225	27,236	26,440
Total Revenue	**719,485**	**697,880**	**731,887**	**697,087**	**719,853**	**719,057**
Expenditures						
Salaries	400,069	391,904	419,134	411,500	473,828	456,517
Benefits	157,525	151,698	181,638	161,483	182,877	180,757
Contractual Services	145,651	94,596	129,171	109,389	141,880	141,880
Supplies	17,144	23,907	24,000	26,849	31,000	21,000
Other Financing Uses	3,487	3,102	3,000	6,652	3,000	3,000
Total Expenditures	**723,876**	**665,207**	**756,943**	**715,873**	**832,585**	**803,154**
Surplus (Deficit)	(4,391)	32,673	(25,056)	(18,786)	(112,732)	(84,097)
Ending Fund Balance	**466,683**	**499,355**	**435,726**	**480,569**	**367,837**	**396,472**
	64.5%	*75.1%*	*57.6%*	*67.1%*	*44.2%*	*49.4%*



United City of Yorkville

Library Operations Fund

82

LIBRARY OPERATIONS FUND REVENUE

Account	Description	FY 2015 Actual	FY 2016 Actual	FY 2017 Budget	FY 2017 Projected	FY 2018 Adopted	FY 2018 Amended
Taxes							
82-000-40-00-4000	PROPERTY TAXES	626,950	622,529	644,719	626,183	645,867	645,867
	Total: Taxes	**$626,950**	**$622,529**	**$644,719**	**$626,183**	**$645,867**	**$645,867**
Intergovernmental							
82-000-41-00-4120	PERSONAL PROPERTY TAX	5,783	5,324	5,250	5,250	5,250	5,250
	Library Share is 24.89%						
82-000-41-00-4170	STATE GRANTS	21,151	21,151	17,200	13,044	17,200	17,200
	Library per Capita Grant						
	Total: Intergovernmental	**$26,934**	**$26,475**	**$22,450**	**$18,294**	**$22,450**	**$22,450**
Fines & Forfeits							
82-000-43-00-4330	LIBRARY FINES	8,356	8,081	9,300	7,620	8,000	8,000
	Total: Fines & Forfeits	**$8,356**	**$8,081**	**$9,300**	**$7,620**	**$8,000**	**$8,000**
Charges for Services							
82-000-44-00-4401	LIBRARY SUBSCRIPTION CARDS	6,647	6,038	7,500	6,588	6,500	6,500
82-000-44-00-4422	COPY FEES	3,095	2,283	3,000	2,484	2,500	2,500
82-000-44-00-4439	PROGRAM FEES	1,099	870	1,000	936	1,000	1,000
	Total: Charges for Services	**$10,841**	**$9,191**	**$11,500**	**$10,008**	**$10,000**	**$10,000**
Investment Earnings							
82-000-45-00-4500	INVESTMENT EARNINGS	816	436	350	924	800	800
82-000-45-00-4550	GAIN ON INVESTMENT	463	-	-	-	-	-
	Total: Investment Earnings	**$1,279**	**$436**	**$350**	**$924**	**$800**	**$800**
Reimbursements							
82-000-46-00-4690	REIMB - MISCELLANEOUS	13,174	-	-	2,141	-	-
	Total: Reimbursements	**$13,174**	**$0**	**$0**	**$2,141**	**$0**	**$0**
Miscellaneous							
82-000-48-00-4820	RENTAL INCOME	1,851	1,942	2,000	2,328	2,000	2,000
82-000-48-00-4824	DVD RENTAL INCOME	3,923	2,454	5,000	2,364	2,500	2,500
82-000-48-00-4850	MISCELLANEOUS INCOME	988	844	500	2,000	1,000	1,000
	Total: Miscellaneous	**$6,762**	**$5,240**	**$7,500**	**$6,692**	**$5,500**	**$5,500**
Other Financing Sources							
82-000-49-00-4901	TRANSFER FROM GENERAL	25,189	25,928	36,068	25,225	27,236	26,440
	For Liability/Unemployment Insurance						
	Total: Other Financing Sources	**$25,189**	**$25,928**	**$36,068**	**$25,225**	**$27,236**	**$26,440**
	Total: LIBRARY OPS REVENUE	**$719,485**	**$697,880**	**$731,887**	**$697,087**	**$719,853**	**$719,057**

United City of Yorkville

Library Operations Fund

820

LIBRARY OPERATIONS FUND EXPENDITURES

Account	Description	FY 2015 Actual	FY 2016 Actual	FY 2017 Budget	FY 2017 Projected	FY 2018 Adopted	FY 2018 Amended
Salaries							
82-820-50-00-5010	SALARIES & WAGES	210,198	201,312	217,309	213,500	223,828	223,828
82-820-50-00-5015	PART-TIME SALARIES	189,871	190,592	201,825	198,000	250,000	232,689
	Total: Salaries	**$400,069**	**$391,904**	**$419,134**	**$411,500**	**$473,828**	**$456,517**
Benefits							
82-820-52-00-5212	RETIREMENT PLAN CONTRIBUTION	23,897	21,767	23,470	23,470	24,435	24,435
82-820-52-00-5214	FICA CONTRIBUTION	29,991	29,361	31,448	31,448	35,587	34,263
82-820-52-00-5216	GROUP HEALTH INSURANCE	72,838	68,514	83,960	75,000	88,996	88,996
82-820-52-00-5222	GROUP LIFE INSURANCE	427	443	403	403	403	403
82-820-52-00-5223	DENTAL INSURANCE	4,728	5,034	5,638	5,286	5,550	5,550
82-820-52-00-5224	VISION INSURANCE	455	651	651	651	670	670
82-820-52-00-5230	UNEMPLOYMENT INSURANCE	-	420	2,500	474	1,000	1,000
	Canceled out by General Fund Transfer						
82-820-52-00-5231	LIABILITY INSURANCE	25,189	25,508	33,568	24,751	26,236	25,440
	Canceled out by General Fund Transfer						
	Total: Benefits	**$157,525**	**$151,698**	**$181,638**	**$161,483**	**$182,877**	**$180,757**
Contractual Services							
82-820-54-00-5412	TRAINING & CONFERENCES	133	249	500	500	500	500
82-820-54-00-5415	TRAVEL & LODGING	514	262	600	600	600	600
82-820-54-00-5421`	PPRT TAX REBATE	-	678	-	-	-	-
82-820-54-00-5426	PUBLISHING & ADVERTISING	47	23	100	100	100	100
82-820-54-00-5440	TELECOMMUNICATIONS	11,468	6,007	6,000	6,000	6,000	6,000
82-820-54-00-5452	POSTAGE & SHIPPING	455	494	500	500	500	500
82-820-54-00-5460	DUES & SUBSCRIPTIONS	9,934	9,560	12,000	12,000	12,000	12,000
	Database & Subscriptions						
82-820-54-00-5462	PROFESSIONAL SERVICES	28,610	31,278	29,000	29,000	40,000	40,000
82-820-54-00-5466	LEGAL SERVICES	975	-	2,000	1,000	2,000	2,000
82-820-54-00-5468	AUTOMATION	24,923	17,890	35,000	20,000	20,000	20,000
82-820-54-00-5480	UTILITIES	11,518	6,504	16,281	8,000	8,480	8,480
82-820-54-00-5489	LOSS ON INVESTMENT	9,300	-	-	-	-	-
82-820-54-00-5495	OUTSIDE REPAIR & MAINTENANCE	46,085	19,962	25,000	30,000	50,000	50,000
82-820-54-00-5498	PAYING AGENT FEES	1,689	1,689	2,190	1,689	1,700	1,700
	Total: Contractual Services	**$145,651**	**$94,596**	**$129,171**	**$109,389**	**$141,880**	**$141,880**
Supplies							
82-820-56-00-5610	OFFICE SUPPLIES	5,257	9,240	8,000	8,000	8,000	8,000
82-820-56-00-5620	OPERATING SUPPLES	9,338	11,210	8,000	10,000	10,000	10,000
	Custodial Supplies						
82-820-56-00-5635	COMPUTER EQUIPMENT & SOFTWARE	-	-	-	-	-	-
82-820-56-00-5671	LIBRARY PROGRAMMING	1,209	1,030	1,000	1,000	1,000	1,000
	Ties to Program Fee Revenue						

United City of Yorkville

Library Operations Fund

820

LIBRARY OPERATIONS FUND EXPENDITURES

Account	Description	FY 2015 Actual	FY 2016 Actual	FY 2017 Budget	FY 2017 Projected	FY 2018 Adopted	FY 2018 Amended
82-820-56-00-5685	DVD'S	1,340	2,427	2,000	2,000	2,000	500
82-820-56-00-5686	BOOKS	-	-	5,000	5,849	10,000	1,500
Total:	**Supplies**	**$17,144**	**$23,907**	**$24,000**	**$26,849**	**$31,000**	**$21,000**
Other Financing Uses							
82-820-99-00-9983	TRANSFER TO LIBRARY DEBT SERVICE	3,487	3,102	3,000	6,652	3,000	3,000
	To Eliminate Deficit Fund Balance Position						
Total:	**Other Financing Uses**	**$3,487**	**$3,102**	**$3,000**	**$6,652**	**$3,000**	**$3,000**
	Total: LIBRARY EXPENDITURES	**$723,876**	**$665,207**	**$756,943**	**$715,873**	**$832,585**	**$803,154**

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Mayor #4

Tracking Number

CC 2017-24

Agenda Item Summary Memo

Title: Resolution Approving Assignment of Contract to Anthony Place Yorkville

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached.

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

LAW OFFICE
KATHLEEN FIELD ORR & ASSOCIATES
53 West Jackson Blvd., Suite 935
Chicago, Illinois 60604
(312)382-2113
(312)382-2127 facsimile

KATHLEEN FIELD ORR
kfo@kfoassoc.com

M E M O R A N D U M

To: Mayor Golinski and City Council of the United City of Yorkville

From: Kathleen Field Orr, City Attorney

Date: April 18, 2017

Subject: Development Agreement between the United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois limited liability company, dated November 8, 2016

Development Agreement between the United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois limited liability company, Providing for a Housing Assistance Program, dated November 22, 2016

We have been advised that the major investor in Anthony Place is requiring the managing general partner to be a newly created single asset entity not the GC Housing Development, LLC which is the general development entity for Jeff Crane and Jeff Grande.

Pursuant to the terms of the referenced agreements, any assignment of these agreements must be approved by the City Council. The new entity shall be Anthony Place Yorkville, L.P., an Illinois limited partnership to own the project and GC Housing Development Yorkville, LLC shall serve as the managing general partner. In the end, however, Jeff Crane and Jeff Grande shall manage and operate each of these entities.

The City Council is hereby requested to approve the Assignment of Contract as attached hereto in order to permit the project to proceed. In the event you have any questions, I shall do my best to answer.

Resolution No. 2017-_____

A RESOLUTION OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, APPROVING AN ASSIGNMENT OF CONTRACT TO ANTHONY PLACE YORKVILLE, L.P.

WHEREAS, the United City of Yorkville, Kendall County, Illinois ("*Yorkville*") are duly organized and validly existing non home-rule municipalities created in accordance with the Constitution of the State of Illinois of 1970 and the laws of this State; and,

WHEREAS, in order to proceed with the financing for the senior housing development to be known as "Anthony's Place" the City has received a request to approve the assignment to Anthony Place Yorkville, L.P., an Illinois Limited Partnership of the following agreements:

1. Development Agreement between the United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois limited liability company, dated November 8, 2016; and,

2. Development Agreement between the United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois limited liability company, Providing for a Housing Assistance Program, dated November 22, 2016.

WHEREAS, the City Council is prepared to approve said Assignment of Contract due to the fact that the managing partners of Anthony Place Yorkville, L.P. are the same as the managing partners of GC Housing Development, LLC.

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That the Assignment of Contract, attached hereto and made a part hereof, is hereby approved.

Section 2. This Resolution shall be in full force and effect from and after its passage and approval as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____ day of _____, 2017.

_____
City Clerk

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____ day of _____, 2017.

_____
Mayor

Attest:

_____
City Clerk

ASSIGNMENT OF CONTRACT

This Assignment is made and entered into this ___ day of April, 2017, by GC HOUSING DEVELOPMENT, LLC, an Illinois limited partnership ("Assignor"), unto ANTHONY PLACE YORKVILLE, LP, an Illinois limited partnership ("Assignee").

WHEREAS, Assignor has entered into the following two (2) development agreements with the United Town of Yorkville, with respect to the development of certain real property to be known as Anthony Place Apartments, Yorkville, Illinois (collectively, the "Contracts"):

(1) Development Agreement between The United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois Limited Liability Company, Dated November 8, 2016; and

(2) Development Agreement between The United City of Yorkville, Kendall County, Illinois, and GC Housing Development, LLC, an Illinois Limited Liability Company, Providing for a Housing Assistance Program, Dated November 22, 2016.

WHEREAS, Assignor desires to assign the Contracts to Assignee, and Assignee desires to accept such assignment from Assignor.

NOW, THEREFORE, for good and valuable consideration, the sufficiency and adequacy of which is hereby acknowledged, Assignor hereby assigns and sets unto Assignee, all right, title, and interest in the Contracts.

GC HOUSING DEVELOPMENT, LLC, an Illinois limited liability company

By _____
Jeffrey D. Crane, Manager

ACCEPTANCE OF ASSIGNMENT

The undersigned hereby accepts the foregoing Assignment.

ANTHONY PLACE YORKVILLE, LP, an Illinois limited partnership

By GC Housing Development Yorkville LLC, an Illinois limited liability company, its managing general partner

By_____
Jeffrey D. Crane, Manager

CONSENT TO ASSIGNMENT

The undersigned hereby consents to the foregoing Assignment.

UNITED CITY OF YORKVILLE, an Illinois municipal corporation

By_____
Its _____

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Mayor #5

Tracking Number

CC 2017-25

Agenda Item Summary Memo

Title: Lease Agreement for Special Census Space

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached memo.

Council Action Previously Taken:

Date of Action: N/A Action Taken:

Item Number:

Type of Vote Required: Superrmajority

Council Action Requested: Approval

Submitted by: Nicole Kathman (Name) Administration (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: City Council
From: Nicole Kathman, Administrative Intern
CC: Bart Olson, City Administrator
Date: April 19, 2017
Subject: Lease Agreement for Special Census Space

Summary

Lease agreement and information about renting space for the 2017 Partial Special Census.

Background

In order to conduct the Partial Special Census, we need to have a space available for the employees to work. One of the requirements is that the space must not be located in the same building with any type of law enforcement; therefore City Hall was not an option. After consulting with Lynn Dubajic, she suggested we reach out to Joel Ottosen, the owner of the gray brick building located at 215 Hillcrest Ave.

As outlined in the attached agreement, we are seeking to rent out a space of 850 square feet in this building for $600 a month for three months (May, June, and July). Currently, the market rate for a space that size in Yorkville is around $850 a month so this is a very reasonable price. In addition to the space itself, we will be able to use two filing cabinets and tables and chairs that are on site. This will save us money as we will not have to purchase these.

Due to timing with drafting the agreement and needing to have it approved before May 1, staff did not take it to Administration Committee.

Recommendation

Staff recommends approval of the lease agreement.

Ordinance No. 2017-_____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, APPROVING A LEASE AGREEMENT BETWEEN THE UNITED CITY OF YORKVILLE AND 215 HILLCREST LLC

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Mayor and City Council of the City have directed a special census of the population be undertaken in accordance with all applicable federal laws; and,

WHEREAS, the special census requires use of an office space while data is being collected and compiled; and,

WHEREAS, the City desires to rent office space in order to provide the United States Census Bureau with the office space necessary to conduct the special census without interrupting the operations of the City; and,

WHEREAS, Section 11-76.1-1 of the Illinois Municipal Code authorizes the City to lease real property for public purposes; and,

WHEREAS, 215 Hillcrest, LLC is the fee owner of certain real property being, lying and situated in Kendall County, Illinois, such real property having a street address of 215 Hillcrest Avenue, Yorkville, Illinois and is desirous of leasing to the City the Community Room consisting of approximately 850 sq. feet located in the lower level thereof (the "*Premises*"); and,

WHEREAS, the City believes it to be in the best interests of its citizens to lease the Premises pursuant to terms and conditions contained in a lease agreement.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That the Lease Agreement between 215 Hillcrest, LLC and the United City of Yorkville, attached hereto and made a part hereof, is hereby approved and the Mayor and City Clerk are directed to execute said Agreement and undertake any and all actions as may be required to implement its terms on behalf of the City.

Section 2. This Ordinance shall be in full force and effect upon its passage and approval according to law by a two-thirds vote of the City Council.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____ day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk

THIS LEASE AGREEMENT (hereinafter referred to as the "Lease") made and entered into this _____ day of April, 2017, by and between 215 Hillcrest, LLC, an Illinois Limited Liability Company, (hereinafter referred to as "Lessor") and the United City of Yorkville, an Illinois Municipal Corporation (hereinafter referred to as "Lessee").

W I T N E S S E T H :

WHEREAS, the Mayor and City Council of the United City of Yorkville have directed a special census of the population be undertaken in accordance with all applicable federal laws; and,

WHEREAS, the special census requires use of an office space while data is being collected and compiled; and,

WHEREAS, Lessee desires to rent office space in order to provide the United States Census Bureau with the office space necessary to conduct the special census without interrupting the operations of the Lessee; and,

WHEREAS, Lessor is the fee owner of certain real property being, lying and situated in Kendall County, Illinois, such real property having a street address of 215 Hillcrest Avenue, Yorkville, Illinois (hereinafter referred to as “the Property”).

WHEREAS, Lessor is desirous of leasing the Community Room consisting of approximately 850 sq. feet located in the lower level of the Property (hereinafter referred to as “the Premises”) to Lessee upon the terms and conditions as contained herein; and

WHEREAS, Lessee is desirous of leasing the Premises from Lessor on the terms and conditions as contained herein;

NOW, THEREFORE, for and in consideration of the sum of $10.00, the covenants and obligations contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. **TERM**. Lessor leases to Lessee and Lessee leases from Lessor the above described Premises together with any and all appurtenances thereto, for a term of three months such term beginning on May 1, 2017, and ending on July 31, 2017.
2. **RENT**. The total rent for the term hereof is the sum of $1,800.00 payable on the 1st day of each month of the term, in equal installments of $600.00. All such payments shall be made to Lessor at 42 Maple Ridge Ct., Yorkville, Illinois 60560 on or before the due date and without demand.
3. **KEYS.** On or before the commencement of the Lease term, Lessor shall provide to Lessee keys to the Property and Premises. Lessee shall make no copies of any keys provided by Lessor. If additional keys are required by Lessee, a request must be made to Lessor. Lessee shall provide Lessor with a signed receipt for all keys received by Lessee. Upon surrender of the Premises as provided for in Paragraph 15 hereof, all keys received by Lessee for the Property and Premises shall be returned to Lessor. Lessee agrees that a fee of $25.00 will be due to Lessor for any key not returned to Lessor as provided herein.

4. **USE OF PREMISES/PROPERTY**. The Premises shall be used by Lessee and any authorized United States Census Bureau staff working on the Special Census that will be conducted in the United City of Yorkville during the term of this Lease. Lessee shall have non-exclusive access and use of the parking lot located on the Property and any common areas located on the Property, including but not limited to, the kitchen, storage room, common garbage area, and restroom facilities. Personal property located within the Premises, including any furniture, may be used by Lessee during the term of this Lease. Lessee shall comply with any and all laws, ordinances, rules and orders of any and all governmental or quasi-governmental authorities affecting the cleanliness, use, occupancy and preservation of the Premises.

5. **CONDITION OF PREMISES**. Lessee stipulates, represents and warrants that Lessee has examined the Premises, and that, at the time of this Lease, it is in good order, repair, and in a safe, clean and tenantable condition.

6. **ASSIGNMENT AND SUB-LETTING**. Lessee shall not assign this Lease, or sub-let or grant any license to use the Premises or any part thereof without the prior written consent of Lessor. A consent by Lessor to one such assignment, sub-letting or license shall not be deemed to be a consent to any subsequent assignment, sub-letting or license. An assignment, sub-letting or license without the prior written consent of Lessor or an assignment or sub-letting by operation of law shall be absolutely null and void and shall, at Lessor's option, terminate this Lease.

7. **ALTERATIONS AND IMPROVEMENTS**. Lessee shall have the right to furnish the Premises with additional telephone, cable, internet, or similar lines and to secure the Premises from a pass through to the kitchen but shall make no other alterations to the Premises or the buildings or improvements on the Property or construct any building or make any other improvements on the Property without the prior written consent of Lessor. Lessee, at Lessee's sole expense, shall return the pass through to the kitchen to its condition at the time of this Lease and remove any other alterations such that the Premises is returned to its condition as of the time of this Lease, ordinary wear and tear excepted.

8. **NON-DELIVERY OF POSSESSION**. In the event Lessor cannot deliver possession of the Premises to Lessee upon the commencement of the Lease term, through no fault of Lessor or its agents, then Lessor or its agents shall have no liability, but the rental herein provided shall abate until possession is given. Lessor or its agents shall have thirty (30) days in which to give possession, and if possession is tendered within such time, Lessee agrees to accept the demised Premises and pay the rental herein provided from that date. In the event possession cannot be delivered within such time, through no fault of Lessor or its agents, then this Lease and all rights hereunder shall terminate.

9. **HAZARDOUS MATERIALS**. Lessee shall not keep on the Property any item of a dangerous, flammable or explosive character that might unreasonably increase the danger of fire or explosion on the Property or that might be considered hazardous or extra hazardous by any responsible insurance company.

Initials: _____ _____
Lessor Lessee

10. **UTILITIES**. Lessor shall be responsible for arranging for and paying for all utility services required on the Premises.

11. **MAINTENANCE AND REPAIR**. Lessor will, at its sole expense, keep and maintain the Premises and the Property and appurtenances in good and sanitary condition and repair during the term of this Lease and any renewal thereof such that the Premises and Property remain in the same condition as of the time this Lease is executed, ordinary wear and tear excepted. Notwithstanding Lessor's obligations under this Paragraph 11, Lessee shall be responsible for all cleaning and janitorial services required for the Premises during the term of this lease.

12. **DAMAGE TO PREMISES**. In the event the Premises are destroyed or rendered wholly untenantable by fire, storm, earthquake, or other casualty not caused by the negligence of Lessee, this Lease shall terminate from such time except for the purpose of enforcing rights that may have then accrued hereunder. The rental provided for herein shall then be accounted for by and between Lessor and Lessee up to the time of such injury or destruction of the Premises, Lessee paying rentals up to such date and Lessor refunding rentals collected beyond such date. Should a portion of the Premises thereby be rendered untenantable, the Lessor shall have the option of either repairing such injured or damaged portion or terminating this Lease. In the event that Lessor exercises its right to repair such untenantable portion, the rental shall abate in the proportion that the injured parts bears to the whole Premises, and such part so injured shall be restored by Lessor as speedily as practicable, after which the full rent shall recommence and the Lease continue according to its terms.

13. **SUBORDINATION OF LEASE**. This Lease and Lessee's interest hereunder are and shall be subordinate, junior and inferior to any and all mortgages, liens or encumbrances now or hereafter placed on the Premises by Lessor, all advances made under any such mortgages, liens or encumbrances (including, but not limited to, future advances), the interest payable on such mortgages, liens or encumbrances and any and all renewals, extensions or modifications of such mortgages, liens or encumbrances.

14. **LESSEE'S HOLD OVER**. If Lessee remains in possession of the Premises with the consent of Lessor after the natural expiration of this Lease, a new tenancy from month-to-month shall be created between Lessor and Lessee which shall be subject to all of the terms and conditions hereof except that such tenancy shall be terminable upon fifteen (15) days written notice served by either party.

15. **SURRENDER OF PREMISES**. Upon the expiration of the term hereof, Lessee shall surrender the Premises in as good a state and condition as they were at the commencement of this Lease, reasonable use and wear and tear thereof and damages by the elements excepted.

16. **QUIET ENJOYMENT**. Lessee, upon payment of all of the sums referred to herein as being payable by Lessee and Lessee's performance of all Lessee's agreements contained herein and Lessee's observance of all rules and regulations, shall and may peacefully and quietly have, hold and enjoy said Premises for the term hereof.

Initials: _____ _____
Lessor Lessee

17. **DEFAULT**. If Lessee fails to comply with any of the material provisions of this Lease, other than the covenant to pay rent, or of any present rules and regulations or any that may be hereafter prescribed by Lessor, or materially fails to comply with any duties imposed on Lessee by statute, within seven (7) days after delivery of written notice by Lessor specifying the non-compliance and indicating the intention of Lessor to terminate the Lease by reason thereof, Lessor may terminate this Lease. If Lessee fails to pay rent when due and the default continues for seven (7) days thereafter, Lessor may, at Lessor's option, declare the entire balance of rent payable hereunder to be immediately due and payable and may exercise any and all rights and remedies available to Lessor at law or in equity or may immediately terminate this Lease.

18. **GOVERNING LAW**. This Lease shall be governed, construed and interpreted by, through and under the Laws of the State of Illinois.

19. **SEVERABILITY**. If any provision of this Lease or the application thereof shall, for any reason and to any extent, be invalid or unenforceable, neither the remainder of this Lease nor the application of the provision to other persons, entities or circumstances shall be affected thereby, but instead shall be enforced to the maximum extent permitted by law.

20. **BINDING EFFECT**. The covenants, obligations and conditions herein contained shall be binding on and inure to the benefit of the heirs, legal representatives, and assigns of the parties hereto.

21. **DESCRIPTIVE HEADINGS**. The descriptive headings used herein are for convenience of reference only and they are not intended to have any effect whatsoever in determining the rights or obligations of the Lessor or Lessee.

22. **CONSTRUCTION**. The pronouns used herein shall include, where appropriate, either gender or both, singular and plural.

23. **NON-WAIVER**. No indulgence, waiver, election or non-election by Lessor under this Lease shall affect Lessee's duties and liabilities hereunder.

24. **MODIFICATION**. The parties hereby agree that this document contains the entire agreement between the parties and this Lease shall not be modified, changed, altered or amended in any way except through a written amendment signed by all of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Lease on the date first written above.

Lessee: The United City of Yorkville

By: _____
Mayor

Lessor: 215 Hillcrest, LLC

By: _____
Joel Ottosen, member

Initials: _____ _____
Lessor Lessee

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	■
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Public Safety #1

Tracking Number

PS 2017-10

Agenda Item Summary Memo

Title: Local Prosecution

Meeting and Date: City Council – April 25, 2017

Synopsis: See attached memo.

Council Action Previously Taken:

Date of Action: PS – 4/6/17 Action Taken: Moved forward to City Council agenda.

Item Number: PS 2017-10

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Chief of Police Rich Hart Police

Name Department

Agenda Item Notes:

The Yorkville Anticrime Task Force Commission will be used under state law for the depositing of fines from plea agreements from traffic/criminal offenses from local prosecution. The funds will be used to fund equipment, activities, and programs designed to prevent crimes involving drugs and alcohol.

The minimum fines attached will be used in local prosecution.

Memorandum

To: Public Safety Committee
From: Rich Hart, Police Chief
CC:
Date: March 30, 2017
Subject: Local prosecution

Summary

Review of two ordinances setting up the Yorkville Police Anticrime Task Force Commission and setting minimum fines for local prosecution.

Background

The Kendall County State's Attorney currently prosecutes all vehicle code violations issued by the City of Yorkville. As a result of this arrangement, the City of Yorkville receives a minor percentage of DUI fines and other moving code violations. Other municipalities have gone the route of taking over prosecution of moving violations which then allows the City to receive a major percentage of the fine amounts. I have spoken with an area attorney currently doing this in Dixon, to good success.

One of the benefits of this arrangement is that the City has more control over the prosecution strategy for moving violations. Sometimes the Yorkville Police Department will have a different experience with a defendant than the County, and the City may want to handle a case differently that the County. Additionally, the strategy by the prosecutor allows the City to negotiate voluntary donations from defendants to the City for anti-crime purposes. These voluntary, negotiated donations can be a minor source of revenue for new anti-crime programs.

The act of using a local prosecutor instead of the State's Attorney is currently allowed within the City Code. The Mayor has the authority to appoint a prosecutor, similar to how the administrative adjudication hearing officers are chosen. So, neither of the two attached ordinances deal with the selection of the local prosecutor, but the decision to use a local prosecutor results in the need to amend the City Code in two areas.

The first ordinance sets the minimum fines for local prosecution. The fine amounts for moving violations at the circuit court level are currently set by state statute. The attached ordinance makes it clear that the City will prosecute these violations with a minimum fine and a potentially larger fine, at the local prosecutor's discretion.

The second ordinance creates the Yorkville Police Anticrime Task Force. This is a local commission of five individuals appointed by the Mayor that would have spending authority for any funds generated as a result of voluntarily negotiated donations with defendants as a result of the prosecution of moving violations. In Dixon, this amount is usually $20,000 to $80,000 per year, depending on case load and case type. The anticrime task force will then review programs, policies, and equipment that the City can use for new anticrime initiatives. According to the Dixon prosecutor, these funds cannot be used for general police and/or City purposes, and the funds cannot be simply deposited into the Police Capital fund to use for general capital purchases like squad cars.

Finally, the decision to use a local prosecutor will have no impact on other state-level cases including assault, battery, theft, etc. The local prosecutor will only focus on moving violations under the Illinois Vehicle Code.

Recommendation

Staff recommends approval of the ordinance creating the Yorkville Police Anticrime Task Force Commission and setting minimum fines for local prosecution.

Ordinance No. 2017-_____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, AMENDING THE YORKVILLE CITY CODE TO CREATE THE ANTICRIME TASK FORCE COMMISSION

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Mayor and City Council desire to amend the Yorkville City Code to create the Anticrime Task Force Commission.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That Title 2 of the Yorkville City Code is hereby amended by adding the following Chapter 10:

Chapter 10
ANTICRIME TASK FORCE COMMISSION

2-10-1: ESTABLISHMENT; PURPOSE:

There is hereby established the Anticrime Task Force Commission pursuant to authority granted under section 7 of the Anti-Crime Advisory Council Act and the commission shall constitute a "local anti-crime program" as defined therein. 20 ILCS 3910/0.01 *et seq.* The purpose of the commission shall be to provide funds to local law enforcement agencies for activities and programs designed to prevent crimes.

2-10-2: MEMBERSHIP; APPOINTMENT; TERM OF OFFICE:

The Anticrime Task Force Commission shall be composed of five (5) members. The commission members shall be appointed by the mayor with the advice and consent of the city council. The mayor shall designate a chairperson, secretary, and treasurer. In the performance of its duties, the commission may incur such expenditures as shall be authorized by the corporate authorities. Each member of the commission shall serve a term of four (4) years and until his/her respective successor is appointed and qualified. Vacancies on the commission shall be filled for the unexpired term of the member whose place has become vacant in the same manner as providing for the appointment of new members. The mayor shall have the power to remove any member of the commission for cause after a public hearing.

2-10-3: RULES AND PROCEDURES; MEETINGS; DUTIES:

Meetings of the commission shall be held at the call of the chairperson and at such other times as the commission may determine. The presence of at least three (3) members of the commission shall be necessary to constitute a quorum. The affirmative vote of at least four (4) members shall be required to approve or recommend any action to the mayor and city council. The chairperson shall preside at all meetings of the commission. The secretary shall record the minutes and proceedings of each meeting of the commission and provide the city clerk with a copy of the same within thirty (30) days of each meeting. The treasurer shall collect and keep an accurate record of all financial transactions and shall arrange with the city's finance director to disburse and give receipts for all monies handled. No member of the commission shall hold more than one office at the same time. The commission shall adopts such other rules and procedures as may be desirable to carry out the provisions of this chapter.

2-10-4: FUNDING:

Funding for the commission shall come primarily from fines levied against persons who commit violations of city ordinances.

2-10-5: REPORTS:

The commission shall submit an annual report to the mayor and city council. The report shall review the activities of the commission and shall also contain recommendations for further action to accomplish its purposes.

Section 2. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____ day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk

Ordinance No. 2017-_____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, AMENDING THE YORKVILLE CITY CODE PROVIDE MINIMUM AND MAXIMUM FINES FOR CERTAIN VIOLATIONS OF THE ILLINOIS VEHICLE CODE AS ADOPTED BY THE UNITED CITY OF YORKVILLE

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Mayor and City Council desire to amend the Yorkville City Code to provide minimum and maximum fines for certain violations of the Illinois Vehicle Code which has been adopted by the City .

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That Chapter 4 of Title 1 of the Yorkville City Code is hereby amended by adding the following to the minimum and maximum penalty schedule provided at Section 1-4-1B.:

Code Section/Statute	Description of Violation	Penalty
625 ILCS 5/11-501	Driving under the influence	$1,500.00-$2,500.00
625 ILCS 5/6-303	Suspended or revoked driver's license	$500.00-$2,500.00
625 ILCS 5/6-101	Driving without a valid driver's license	$400.00-$1,500.00

Section 2. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this _____day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this _____day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk

Reviewed By:	
Legal	■
Finance	☐
Engineer	☐
City Administrator	■
Human Resources	☐
Community Development	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Administration #1

Tracking Number

ADM 2017-39

Agenda Item Summary Memo

Title: Repealing Regulation of Farmer's Markets

Meeting and Date: City Council – April 25, 2017

Synopsis: Ordinance repealing the Code of Ordinance Providing for Regulation of Farmer's Markets

Council Action Previously Taken:

Date of Action: ADM – 4/19/17 Action Taken: Moved forward to City Council agenda.

Item Number: ADM 2017-39

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Erin Willrett (Name) Administration Department (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: City Council
From: Erin Willrett, Assistant City Administrator
CC:
Date: April 19, 2017
Subject: Repealing Regulation of Farmer's Markets

Summary

Consideration of an ordinance repealing the Code of Ordinance Providing for Regulation of Farmer's Markets

Background

On May 22, 1997 the City Council approved an Ordinance amending the Code to allow regulations for Farmer's Markets. An application is required, permits are processed and a fee is collected (one space $10 or $50 for seasonal permits for businesses within the City limits). While the process that the Ordinance sets forth is logical, the City staff does find it cumbersome to collect application, issue permits and collect fees through the Administration Office.

The Parks and Recreation Department proposes to conduct the Farmer's Market as a vendor event, similar to how vendors are processed at other City events like Hometown Days. They are receiving assistance through Andie Groff of Valley Fresh Market. The event will take place at Town Square Park (301 N. Bridge Street) on the first and third Saturday of the month starting Saturday, May 20th and runs through October 7th. Feature vendors include: A Pinch of Happiness, Artisan Harvest Farm, Ginger & Soul, Gomoll Farm, Heritage Baked Goods, Knutson's Country Harvest, Sweet Seeds Organics, The Popcorn Store, Toft Touch Soaps, Upriser Coffee, Valley Fresh Market and The Chocolate Shoppe, and Windy City Mustards. At this time only food service establishments, farm businesses, and registered Cottage Food Vendors will be allowed. An IL Tax ID number is required and only one business per category will be permitted. The application that the Parks and Recreation Department is using is attached.

Recommendation

Staff recommends repealing the Code of Ordinance Providing for Regulation of Farmer's Markets and would like to continue handling the Farmers Market as a vendor event.

YORKVILLE FARMERS MARKET APPLICATION

Business Name: _____ IL Tax ID#: _____

Contact Person: _____ Phone: _____

Address: _____

E-Mail: _____ Website: _____

Vendor Information

At this time, only food service establishments, farm businesses, and registered Cottage Food Vendors will be allowed. IL Tax ID# is required. Only one business per category will be permitted (i.e. coffee vendor, popcorn vendor, bakery, meat or egg producer, honey producer, etc.) Vendors must provide tables, chairs and tents. Electricity is not available.

- **Product(s) to sell:** _____

  _____

- **Certificate of Liability Insurance:** All vendors are required to have a certificate of liability insurance naming the United City of Yorkville as additionally insured. Please contact your insurance agent to request this certificate.

- **Dates/Locations:** The Yorkville Farmers Market will be held the 1st and 3rd Saturday of the month in Yorkville Town Square (301 N Bridge St) from 8:00 AM to Noon. Setup may begin at 7:00 AM, and tear down must be completed by 1:00 PM. There will not be a market held on 09/02/17 due to Yorkville Hometown Days. Please select your participation dates below, or check here to select all dates _____

_____ May 20, 2017	_____ June 3, 2017	_____ June 17, 2017
_____ July 1, 2017	_____ July 15, 2017	_____ August 5, 2017
_____ August 19, 2017	_____ September 16, 2017	_____ October 7, 2017

- **Pricing:**

Day Permit	_____ $15
Season Permit	_____ $90 (Only $10 per Event)

Please make checks payable to Yorkville Parks & Recreation Dept and return your payment, application, and a copy of your Certificate of Liability Insurance by Monday, May 1, 2017 to The Yorkville Parks & Recreation Dept, Attn: Shay Remus, 201 W Hydraulic St, Yorkville, IL 60560. The Yorkville Parks & Recreation Dept reserves the right to refuse applications and will contact the vendor directly if necessary.

Hold Harmless and Indemnification

Vendor agrees that neither the United City of Yorkville nor any public or private property owner whose property is utilized for the Market shall be liable for injury to the Vendor's business or any loss of income there from, or for personal injury or damage to the property of the Vendor, its employees, invitees, customers or any other person in or around the Vendor's booth, regardless of whether the injury or damage results from conditions arising from other sources or places (including, but not limited to, weather conditions, power outages or other similar occurrences) and regardless of whether the cause or means of repairing the conditions are inaccessible to the Vendor. Vendor further agrees that neither the United City of Yorkville nor any other public or private owner, whose property is utilized for the event, shall be liable for any damages arising directly or indirectly from any act or omission of event sponsors or any customer at the event.

To the fullest extend permit by law, the Vendor shall indemnify, keep safe and hold harmless the United City of Yorkville and its agents, officers and employees and any other public or private property owner whose property is utilized for the event, against all injuries, deaths, losses, damages, claims, suits, liabilities, judgment, costs, and expenses, which may arise directly or indirectly from any negligence or reckless or willful misconduct of the Vendor, its employees or agents. The Vendor shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising there from or incurred in connection they're with. If any judgment shall be rendered against the United City of Yorkville or any other property owner in any such action, the Vendor shall, at its own expense, satisfy and discharge the same.

I hereby affirm that I have read and understand the Hold Harmless and Indemnification and I agree to the terms expressed therein.

_____ _____

Signature of Applicant or Applicant's Legal Agent Date

Ordinance No. 2017-____

AN ORDINANCE OF THE UNITED CITY OF YORKVILLE, KENDALL COUNTY, ILLINOIS, REPEALING THE CODE OF ORDINANCES PROVIDING FOR REGULATION OF FARMER'S MARKETS

WHEREAS, the United City of Yorkville, Kendall County, Illinois (the "*City*") is a duly organized and validly existing non home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Mayor and City Council desire to amend the Yorkville City Code by removing the regulations set forth by Ordinance No. 97-12 relating to Farmer's Markets in Title 3.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the United City of Yorkville, Kendall County, Illinois, as follows:

Section 1. That Title 3, Chapter 5, Article A of the Yorkville City Code is hereby deleted in its entirety.

Section 2. This Ordinance shall be in full force and effect upon its passage, approval, and publication as provided by law.

Passed by the City Council of the United City of Yorkville, Kendall County, Illinois this ____ day of _____, 2017.

_____
CITY CLERK

CARLO COLOSIMO	_____	KEN KOCH	_____
JACKIE MILSCHEWSKI	_____	ARDEN JOE PLOCHER	_____
CHRIS FUNKHOUSER	_____	JOEL FRIEDERS	_____
SEAVER TARULIS	_____	DIANE TEELING	_____

Approved by me, as Mayor of the United City of Yorkville, Kendall County, Illinois, this ____ day of _____, 2017.

_____
MAYOR

Attest:

_____
City Clerk