Emails regarding any agenda item are welcomed. Please email contactcouncil@winnetka.org, and your email will be relayed to the Council members. Emails for the Tuesday Council meeting must be received by Monday at 4 p.m. Any email may be subject to disclosure under the Freedom of Information Act.

Winnetka Village Council
RESCHEDULED REGULAR MEETING
Village Hall
510 Green Bay Road
Tuesday, June 24, 2014
7:00 p.m.

AGENDA

1) Call to Order
2) Pledge of Allegiance
3) Quorum
   a) July 1, 2014 Regular Meeting
   b) July 8, 2014 Study Session
   c) July 15, 2014 Regular Meeting
4) Approval of Agenda
5) Consent Agenda
   a) Approval of Village Council Minutes
      i) June 3, 2014 Regular Meeting 3
   b) Approval of Warrant List dated 5/30/14 to 6/12/2014 8
   c) Resolution R-17-2014: Authorizing the Third Amendment to the Verizon Wireless Cell Site Agreement – Adoption 9
   d) Change Order for Primary Cable, The Okonite Company 25
   e) Change Order for Secondary Cable, Wesco 27
   f) Request for Proposal #014-003, Transformer Yard Fire Protection 29
   g) Request for Proposal #014-005, Fire Protection for Generation Plant 39
   h) Village Hall Interior Construction Contract Change Order 42
   i) Resolution R-23-2014: Amendment No. 1 to the 2007 IGA – Joint Police CAD System – Adoption 45

6) Ordinances and Resolutions

a) Ordinance M-5-2014: Annual Equipment Disposal – Introduction 60

b) Ordinance M-6-2014: 925-931 Green Bay Road – Request to Extend Special Use and Variation – Waiver of Introduction & Adoption 67

c) Resolution R-20-2014: Attorney Janega Commendation – Adoption.....87

d) Resolution R-21-2014: Appointing New Village Attorney – Adoption.....89

7) Stormwater Report

a) Willow Road Stormwater Tunnel Engineering Review Point #1: Concept Review and Permitting Plan.....91

8) Public Comment

9) Old Business

10) New Business

11) Appointments

12) Reports

13) Executive Session

14) Adjournment

NOTICE

All agenda materials are available at villageofwinnetka.org (Government > Council Information > Agenda Packets & Minutes); the Reference Desk at the Winnetka Library; or in the Manager's Office at Village Hall (2nd floor).

Broadcasts of the Village Council meetings are televised on Channel 10 and AT&T Uverse Channel 99 every night at 7 PM**.** Webcasts of the meeting may also be viewed on the Internet via a link on the Village's web site: http://winn-media.com/videos/

The Village of Winnetka, in compliance with the Americans with Disabilities Act, requests that all persons with disabilities who require certain accommodations to allow them to observe and/or participate in this meeting or have questions about the accessibility of the meeting or facilities, contact the Village ADA Coordinator – Megan Pierce, at 510 Green Bay Road, Winnetka, Illinois 60093, 847-716-3543; T.D.D. 847-501-6041.

MINUTES
WINNETKA VILLAGE COUNCIL
REGULAR MEETING
June 3, 2014

(Approved: xx)

A record of a legally convened meeting of the Council of the Village of Winnetka, which was held in the Village Hall Council Chambers on Tuesday, June 3, 2014, at 7:00 p.m.

1) Call to Order. President Greable called the meeting to order at 7:01 p.m. Present: Trustees Arthur Braun, Carol Fessler, Richard Kates, William Krucks, Stuart McCrary and Marilyn Prodromos. Absent: None. Also present: Village Manager Robert Bahan, Assistant to the Village Manager Megan Pierce, Village Attorney Katherine Janega, Community Development Director Mike D'Onofrio, Public Works Director Steve Saunders, Fire Chief Alan Berkowsky, Deputy Fire Chief John Ripka, and approximately 33 persons in the audience.

2) Pledge of Allegiance. President Greable led the group in the Pledge of Allegiance.

3) Quorum.

   a) June 10, 2014 Study Session. All of the Council members present indicated that they expected to attend.

   b) June 17, 2014 Regular Meeting. President Greable announced that this meeting would be rescheduled for June 24. All of the Council members present, with the possible exception of Trustee Braun, indicated that they expected to attend.

   c) July 1, 2014 Regular Meeting. All of the Council members present indicated that they expected to attend.

4) Approval of the Agenda. Trustee Fessler, seconded by Trustee McCrary, moved to approve the Agenda. By roll call vote the motion carried. Ayes: Trustees Braun, Fessler, Kates, Krucks, McCrary and Prodromos. Nays: None. Absent: None.

5) Consent Agenda

   a) Village Council Minutes.

      i) May 20, 2014 Regular Meeting.

   b) Warrant List. Approving the Warrant List for the period ending May 29, 2014, in the amount of $636,686.22.

   c) Resolution R-19-2014: Prevailing Wage Resolution – Adopt. An annual Resolution establishing the prevailing wage rates for the Village of Winnetka public works and maintenance projects, as required by the Prevailing Wage Act.

   d) Traffic Signal Modernization at Green Bay Road and Oak Street. Awarding the contract for the traffic signal modernization project at Green Bay Road at Oak Street to Home Towne Electric, Inc. in the amount of $208,745.86.

e) Outdoor Seating Permit for Trifecta Grill. Approving an outdoor seating permit for Trifecta Grill, effective immediately, subject to Village approval of the table layout.

f) Village Hall Standby Generator, Equipment Purchase Bid #014-007. An authorization for the Village Manager to award a purchase order to Zonatherm Products LLC, in the amount of $43,850 in accordance with the terms of Bid #014-007.

g) Bid Award – 2004 Street Rehabilitation Program. Awarding a contract for the 2014 Street Rehabilitation to A Lamp Concrete Contractors, in the total amount of $776,252.38.

Trustee McCrary, seconded by Trustee Fessler, moved to approve the foregoing items on the Consent Agenda by omnibus vote. By roll call vote, the motion carried. Ayes: Trustees Braun, Fessler, Kates, Krucks, McCrary and Prodromos. Nays: None. Absent: None.

6) Stormwater Monthly Summary Report. Mr. Saunders reviewed this monthly report from the Village's Stormwater Project Manager on status, cost and schedule information for each of the Village's stormwater projects. The Spruce Outlet project is a little behind schedule due to wet weather in May, but is scheduled for completion by June 30. The Lloyd Outlet project was completed under budget, and performed as expected during recent heavy rain storms. The Winnetka Avenue Pump Station project is also scheduled for completion by the end of June, and the new trash rack system operated as designed during those same storms.

Mr. Saunders explained that work on the Northwest Winnetka project will proceed once the final permit is issued by the Cook County Forest Preserve District (CCFPD), and Governor Quinn signs a bill approving grant funding for the project. The CCFPD referred the permit approval to the Real Estate Committee in May, and Staff intends to schedule a meeting with Commissioner Suffredin before the Board's June 17 meeting.

Finally, Mr. Saunders said the concept review report for the Willow Road Tunnel project will be presented by MWH at the Council's rescheduled June 24 meeting.

Mr. Saunders answered a few questions from the Council pertaining the CCFPD permit and the IKE Grant projects. He noted that the Northwest Winnetka project will likely be constructed over two phases, fall of 2014 and spring of 2015, due to the delays in permit and grant funding approvals.

Kim Knaus, 905 Greenwood, asked if constituents who are in favor of the Northwest Winnetka project should contact Commissioner Suffredin, since it seems that he is entertaining concerns from residents who oppose the project. Mr. Saunders replied in the affirmative.

7) Ordinances and Resolutions. None.

8) Public Comment. None.

9) Old Business. None.

10) New Business.

a) Proclamation: Thomas Fritts Day. Manager Bahan explained that Mr. Fritts is approaching his 50th year with the Boy Scouts, and this is an opportunity to honor his many years of service to the Scouts and Winnetka community.

President Greable read a proclamation honoring Thomas Fritts for his 50 years of service as Scoutmaster to Winnetka Boy Scout Troop 20.

Trustee Fessler, seconded by Trustee Braun, moved to proclaim June 8, 2014, Thomas Fritts Day. By voice vote, the motion carried.

b) Proclamation: Presence St. Francis Hospital Medical Services Day. Fire Chief Alan Berkowsky said St. Francis Hospital has taught the majority of paramedics in the area, and also provides monthly continuing education. He thanked the organization for providing 40 years of training expertise in emergency medical services.

President Greable read a proclamation recognizing the 40th anniversary of Presence St. Francis Hospital Emergency Medical Services System.

Trustee Braun, seconded by Trustee McCrary, moved to proclaim June 3, 2014, Presence St. Francis Hospital Emergency Medical Services Day. By voice vote, the motion carried.

c) 925-931 Green Bay Road – Request to Extend Special Use & Variation. Mr. D'Onofrio reviewed the request from the owners of the Subject Property to extend the date of construction associated with the special use permit and variation that was granted when the Council approved Ordinance M-7-2013 on June 18, 2013. The permit requires construction to commence within one year of the passage of the Ordinance. The applicant is requesting an extension to April 30, 2015, to enable more time to negotiate with the prospective tenant.

Mr. D'Onofrio explained that the originally approved plan has not changed, and the applicant is working closely with the prospective tenant. He said he could not recall the Village previously receiving a request for an extension, but noted that the situation is unique, and the applicant is working to get a tenant that will be an asset to the community.

Hal Francke, attorney for the applicant, Packer Associates, LLC (Packer). Mr. Francke explained that the Subject Property has been owned by his client for over 20 years, and Packer wants to do the right thing with the property. The prospective tenant is the same user that was discussed last year at the Plan Commission meetings, and has signed a fully negotiated letter of intent. He explained that the delay is being caused by some changes in management at the prospective tenant's corporate offices, and extra time is needed to finish the deal. He noted that, regardless of who ultimately signs a lease for the building, the construction of the parking lot according to the original plan will go forward.

The Council was in full agreement that the extension should be granted, given the importance of the site in the Hubbard Woods business district, and the fact that the plan for the property has not changed. Trustee Krucks cautioned that he would not be comfortable granting a second extension in ten months, but would recommend sending the applicant back before the Plan Commission.

Trustee Kates, seconded by Trustee Braun, moved to direct the Village Attorney to prepare an ordinance to extend the Special Use Permit and variation granted in Ordinance M-7-2013, until April 15, 2015. By roll call vote, the motion carried. Ayes: Trustees Braun, Fessler, Kates, Krucks, McCrary and Prodromos. Nays: None. Absent: None.

11) Appointments.

a) President Greable announced the appointment of Jon Talty as Chair of the Business Community Development Commission for a full term, effective immediately. Trustee Fessler, seconded by Trustee Braun, moved to approve the appointment. By voice vote, the motion carried.

b) President Greable announced the re-appointment of Susan Curry to a full term on the Landmark Preservation Commission, effective immediately. Trustee McCrary, seconded by Trustee Fessler, moved to approve the appointment. By voice vote, the motion carried.

c) President Greable announced the appointment of Christopher Enck to a full term on the Landmark Preservation Commission, effective immediately. Trustee Fessler, seconded by Trustee Krucks, moved to approve the appointment. By voice vote, the motion carried.

12) Reports.

a) Village President. No report.

b) Trustees.

i) Trustee Krucks reported on the June 2 Landmark Preservation Commission meeting, and announced that the 2014 Landmark Preservation Awards would be presented on June 22.

ii) Trustee Kates reported on the May 28 Plan Commission meeting, and announced that a special meeting was being held on Wednesday, June 4, to garner community input about business district revitalization.

iii) Trustee Prodromos said the Chair of the Business Community Development Commission, Jason Harris, had resigned and she was looking forward to working with new Chair Jon Talty.

iv) Trustee McCrary reported that the Environmental & Forestry Commission convened a special meeting to discuss coal tar sealants, and would continue the discussion at its next meeting, to formulate its recommendation to the Council.

v) Trustee Fessler said she was part of an evaluation team, along with Trustee McCrary, Manager Bahan, Finance Director McKee and two representatives of the Bogdahn Group, the Village's investment consultant, that met to interview prospective bond managers. The results of the interviews will be discussed at next week's Study Session.

c) Attorney. Attorney Janega announced that the lawsuit filed by Farmers Insurance against 104 local government entities has been dropped by the plaintiff.

d) Manager. After congratulating Tom Fritts, Manager Bahan said the legislative session in Springfield has ended, and local governments were successful in holding off some key legislation, including minimum staffing of fire departments. Local revenues were also preserved, but not much was done with respect to budget.

13) Executive Session. Trustee Krucks moved to adjourn into Executive Session to discuss Pending and Probable Litigation, pursuant to Section 2(c)11, of the Illinois Open Meetings Act. Trustee Fessler seconded the motion. By roll call vote, the motion carried. Ayes: Trustees Braun, Fessler, Kates, Krucks, McCrary and Prodromos. Nays: None. Absent: None.

President Greable announced that the Council would not return to the open meeting after Executive Session. The Council retired to Executive Session at 8:16 p.m.

14) Adjournment. Trustee Fessler, seconded by Trustee Braun, moved to adjourn the meeting. By voice vote, the motion carried. The meeting adjourned at 8:51 p.m.

_____

Deputy Clerk

Agenda Item Executive Summary

Title: Warrant List

Presenter: Robert M. Bahan, Village Manager

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☐ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☑ Informational Only

Item History:

None.

Executive Summary:

The Warrant List dated 5/30/14 to 6/12/14 was emailed to each Village Council member.

Recommendation:

Consider approving the Warrant List dated 5/30/14 to 6/12/14.

Attachments:

None.

Agenda Item Executive Summary

Title: Resolution R-17-2014 - Authorizing the Third Amendment to the Verizon Wireless Cell Site Agreement

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☑ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

In December 2010, the Village Council adopted Resolution R-41-2010, amending the license agreement and granting Verzion's request to upgrade Verizon's equipment at the Water & Electric Plant by installing new coaxial cable and replacement antennas. This was followed by a second amendment in 2011. In June 2011, the Village Council adopted Resolution R-24-2011, amending the license agreement and granting Verizon's request to install conduit and fiber optic cable to connect Verizon's facilities on the Village property to telecommunications facilities in the right-of-way.

Executive Summary:

Verizon is now requesting approval to make additional equipment changes at the site. Consistent with the original lease agreement, the Village needs to approve the addition of new equipment at the site. The proposed modifications include replacement of three antennas and installation of equipment and cables. The new equipment includes three surge protectors, three Bias-T's (position control devices), and cabling. Verizon has completed a structural analysis for the added weight of the new equipment. Similar to the existing antennas, the proposed antennas will be painted to match the Electric Plant stack. The total number of antennas will not be increasing.

Village staff and Verizon have tentatively agreed to the terms for the installation of the new equipment and replacement antennas (reference Exhibit A). This includes a $3,000 increase in the annual lease payment. The initial payment will be prorated based on the installation date through the next license term of November 1, 2014. The original license agreement and amendments were authorized by resolution. As such, the approval must also be done by resolution. Resolution R-17-2014 authorizes the Third Amendment to the 2007 Cellular Antenna License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless.

Recommendation:

Consider adopting Resolution R-17-2014, approving the Third Amendment to the 2007 Cellular Antenna License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership, d/b/a Verizon Wireless, substantially in the form presented in Exhibit A.

Attachments:

- Agenda Report dated June 17, 2014
- Resolution R-17-2014, A Resolution Authorizing the Third Amendment to the 2007 Cellular Site License Agreement with Verizon Wireless for a Cellular Antenna Site at the Water & Electric Plant
- Exhibit A - Third Amendment to the 2007 Cellular Site License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless
- Exhibit A-1 Description of Land
- Exhibit A-2 Drawing
- Exhibit A-3 Scope of Work
- Exhibit B Photo simulation of proposed facilities

AGENDA REPORT

SUBJECT: **Resolution R-17-2014 – Authorizing the Third Amendment to the Verizon Wireless Cell Site Agreement**

PREPARED BY: Katherine Janega, Village Attorney
Brian Keys, Director Water & Electric

REF: June 21, 2011 Council Meeting, pp. 21-35
December 14, 2010 Council Meeting, pp. 2-15

DATE: June 17, 2014

On November 20, 2007, the Village entered into a license agreement with Chicago SMSA Limited Partnership d/b/a Verizon Wireless, which allowed certain wireless communication antennas and equipment to remain on the smokestack and within the Electric Plant for operation of Verizon's consumer wireless telecommunications system. The equipment and antennas were originally installed pursuant to a 1990 license agreement between the Village and Verizon Wireless.

In December 2010, the Village Council adopted Resolution R-41-2010, amending the license agreement and granting Verzion's request to upgrade Verizon's equipment at the Water & Electric Plant by installing new coaxial cable and replacement antennas. This was followed by a second amendment in 2011. In June 2011, the Village Council adopted Resolution R-24-2011, amending the license agreement and granting Verizon's request to install conduit and fiber optic cable to connect Verizon's facilities on the Village property to telecommunications facilities in the right-of-way.

Verizon is now requesting approval to make additional equipment changes at the site. Consistent with the original lease agreement, the Village needs to approve the addition of new equipment at the site. The proposed modifications include replacement of three antennas and installation of equipment and cables. The new equipment includes three surge protectors, three Bias-T's (used to provide dc power and RF), and cabling. Verizon has completed a structural analysis for the added weight of the new equipment. Similar to the existing antennas, the proposed antennas will be painted to match the Electric Plant stack. The total number of antennas will not be increasing. Verizon is requesting a change in the antenna size. The existing antennas are 72"x 12.5"x7.1". The new antennas are 78.7"x 14.8"x 9.4". From ground level, it is not expected that the change in size will be discernible. Verizon has submitted a photo simulation (reference Exhibit B).

Village staff and Verizon have tentatively agreed to the terms for the installation of the new equipment and replacement antennas (reference Exhibit A). This includes a $3,000

increase in the annual lease payment. The initial payment will be prorated based on the installation date through the next license term of November 1, 2014. The original license agreement and amendments were authorized by resolution. As such, the approval must also be done by resolution. Resolution R-17-2014 authorizes the Third Amendment to the 2007 Cellular Antenna License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless.

Recommendation:
Consider adopting Resolution R-17-2014, approving the Third Amendment to the 2007 Cellular Antenna License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership, d/b/a Verizon Wireless, substantially in the form presented in Exhibit A.

RESOLUTION NO. R-17-2014

A RESOLUTION
AUTHORIZING THE THIRD AMENDMENT
TO THE 2007 LICENSE AGREEMENT WITH VERIZON WIRELESS
FOR A CELLULAR ANTENNA SITE AT THE WATER & ELECTRIC PLANT

WHEREAS, the Village of Winnetka, Cook County, Illinois (the "Village") is a home rule municipal corporation as provided in Article VII, Section 6 of the 1970 Constitution of the State of Illinois and, pursuant to said constitutional authority, may exercise any power and perform any function pertaining to its government and affairs for the protection of the public health, safety, morals and welfare; and

WHEREAS, on November 20, 2007, the Council of the Village of Winnetka ("Village Council") adopted Resolution R-45-2007, authorizing a license agreement ("License Agreement") with Chicago SMSA Limited Partnership, d/b/a Verizon Wireless, an Illinois limited partnership, to permit the use of certain portions of the Water and Electric Plant located at the shore of Lake Michigan at Tower Road, including the smokestack, as a site for the installation, and operation of certain cellular telecommunications antennas and related structures, said equipment and structures having been located at that site pursuant to a December 20, 1990, license agreement between the Village and Chicago SMSA Limited Partnership; and

WHEREAS, on December 14, 2010, the Village Council adopted Resolution R-41-2010, authorizing an amendment to the License Agreement to allow the installation of new coaxial cable and replacement antennas to upgrade Verizon's equipment at the Water and Electric Plant ("First License Amendment"); and

WHEREAS, on June 21, 2011, the Village Council adopted Resolution R-24-2011, authorizing a second amendment to the License Agreement to allow the installation of new conduit and fiber optic cable along the outside of the Water and Electric Plant building to connect their leased facilities to telecommunications facilities in the right-of-way ("Second License Amendment"); and

WHEREAS, Verizon Wireless is now requesting approval to replace three of its nine existing antennas with new, upgraded antennas and additional, related equipment to improve reception, increase Internet speeds on mobile devices and enable new internet access alternatives, and to thereby provide faster and more effective 4G service within the Village; and

WHEREAS, Village staff has prepared a draft amendment to the License Agreement, titled "Third Amendment to the 2007 Cellular Antenna Site License Agreement Between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless" ("Third License Amendment"), a copy of which is attached hereto as Exhibit A and incorporated herein by reference, as if set fully set forth; and

WHEREAS, Verizon Wireless has agreed to the terms of the proposed Third License Amendment, and

WHEREAS, the Village Council have determined that further amending the License Agreement with Verizon Wireless, substantially in the form set forth in the attached Third License Amendment, is in the best interests of the Village's health, safety and general welfare.

NOW, THEREFORE, be it resolved by the Council of the Village of Winnetka as follows:

SECTION 1: The Village Council hereby adopts by reference the foregoing recitals as its findings of fact as if fully set forth herein.

SECTION 2: The Village Council hereby approves the "Third Amendment to the 2007 Cellular Antenna Site License Agreement Between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless" ("Third License Amendment"), substantially in the form attached hereto as Exhibit A.

SECTION 3: Subject to approval of the final form of the Third Amendment by the Village Attorney, the Village President and the Village Clerk are hereby authorized and directed to execute and seal the Third License Amendment, and to take all such other actions as may be necessary to execute the agreement and effectuate its terms.

SECTION 4: This Resolution is adopted by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 5: This resolution shall be in full force and effect immediately upon its adoption.

ADOPTED this 24th day of June, 2014, pursuant to the following roll call vote:

AYES: _____

NAYS: _____

ABSENT: _____

Signed:

_____
Village President

Countersigned:

_____
Village Clerk

THIRD AMENDMENT
TO THE 2007 CELLULAR ANTENNA SITE LICENSE AGREEMENT
BETWEEN THE VILLAGE OF WINNETKA AND CHICAGO SMSA LIMITED
PARTNERSHIP d/b/a VERIZON WIRELESS

This Third Amendment to the 2007 Cellular Antenna Site License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless ("**Third License Amendment**"), dated as of the latter of the signature dates below, is by and between the Village of Winnetka, an Illinois home rule municipality ("**Licensor**") and Chicago SMSA Limited Partnership d/b/a Verizon Wireless having its principal office at One Verizon Way, Mail Stop 4AW100, in Basking Ridge, New Jersey 07920 ("**Licensee**").

WHEREAS, Licensor owns and operates a water and electric utility at a plant located along the shore of Lake Michigan at Tower Road, on property having a street address of 725 and 735 Tower Road, Winnetka, Illinois ("Water and Electric Plant"); and

WHEREAS, pursuant to a December 20, 1990, license agreement between the Village of Winnetka ("Licensor") and Chicago SMSA Limited Partnership, d/b/a Verizon Wireless, an Illinois limited partnership ("Licensee"), Licensee has used certain portions of the Water and Electric Plant, including the smokestack, as a site for the installation and operation of certain cellular telecommunications antennas and related structures; and

WHEREAS, on November 20, 2007, the Council of the Village of Winnetka ("Village Council") adopted Resolution R-45-2007, authorizing a new license agreement ("License Agreement") with Licensee to permit the continued use of certain portions of the Water and Electric Plant as a site for the installation and operation of Licensee's cellular telecommunications antennas, equipment and related structures; and

WHEREAS, pursuant to Resolution R-45-2007, Licensor and Licensee entered into an agreement titled "License Agreement Permitting a Cellular Antenna Site at the Water & Electric Plant," dated as of November 1, 2007, whereby Licensor granted a license to permit Licensee to use and occupy certain Licensed Premises, therein described, that are a portion of the Land located at 725 and 735 Tower Road, Winnetka, Illinois 60093 (**"License Agreement"**); and

WHEREAS, on December 14, 2010, and June 21, 2011, Licensor adopted Resolution R-41-2010 and Resolution R-24-2011, respectively, authorizing two subsequent amendments to the License Agreement for modifications of new coaxial cable and replacement antennas to the Leased Premises and the installation of conduit and fiber optic cables to connect to Licensee's telecommunication facilities and accordingly requested the License Agreement be amended; and

WHEREAS, Licensee has requested approval of the removal of three antennas and replacement of three new antennas, and the addition of three surge protectors, one hybrid cable and three bias-t units to the Licensed Premises; and

WHEREAS, Licensor and Licensee have agreed to further amend the License Agreement as set forth in this Third License Amendment.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Licensor and Licensee agree as follows:

Section 1: <u>Definitions</u>.

A. Except as provided in Section 1(B), below, all terms defined in Section 1 of the License Agreement, as amended by the First License Amendment, shall have the same meaning as they are given therein when used in this Third License Amendment.

B. The term "Licensee Facilities" is hereby amended to provide:

"Licensee Facilities" means the radio communications equipment owned and placed by the Licensee on the Property as of November 1, 2007, pursuant to the terms and conditions of the Original License Agreement and any amendments and extensions thereto, which equipment includes the Shelter, utility lines, electronic equipment, transmission lines, coaxial cables, radio transmitting and receiving antennas, and supporting structures thereto, all as depicted on Licensee's drawing that were attached as Exhibit C to the Original License Agreement, and amended by the Exhibits attached to the First and Second License Amendments, and as further amended by the attached Exhibits A-2 and A-3 to this Third amendment, which are incorporated herein by reference.

C. Section 1 of the License Agreement is further amended by adding the following definition:

"License Fee" means the license fee established in Section 6 of the License Agreement, as amended by the First License Amendment and Second License Amendment.

"Third Amendment Fee" means the base fee to be paid to Licensor in consideration for the Third License Amendment, which fee shall initially be in the amount of Three Thousand Dollars ($3,000.00) for the Term ending October 31, 2014, and which shall be added to the License Fee and shall be adjusted and become due and payable as provided in Section 6 of the Amended License Agreement.

"Third Installation Date" means the Installation Date for the work and equipment authorized by the Third License Amendment.

"Third License Amendment" means that certain agreement between the Village of Winnetka and Licensee authorized on June 24, 2014, pursuant to Village of Winnetka Resolution R-17-2014, captioned "Third Amendment to the 2007 Cellular Antenna Site License Agreement between the Village of Winnetka and Chicago SMSA Limited Partnership d/b/a Verizon Wireless," including the exhibits thereto.

D. In all other respects, the terms used in this Third License Amendment shall have the same definitions as in the License Agreement, as amended by the First License Amendment and Second License Amendment (hereinafter, collectively, the "Amended License Agreement").

Section 2: **Grant of Rights to Licensee.** Section 2 of the Amended License Agreement, "Grant of Rights to Licensee," is hereby further amended by adding the following paragraphs:

Replacement of Three Antennas. Licensor agrees to permit Licensee to replace three (3) existing antennas with three (3) new antennas as depicted and defined in Exhibits A-2 and A-3 of this Third License Amendment.

Addition of Cable and Ancillary Equipment. Licensor hereby grants Licensee the right to install three (3) new surge protectors, one (1) additional hybrid fee cable and three (3) bias-t units to the Licensed Premises, as depicted and defined in Exhibits A-2 and A-3 of this Third License Amendment.

Section 3: **License Fee.**

A. Section 6 of the Amended License Agreement, "License Fee," is hereby amended by adding new Section 6(h), which shall provide as follows:

(h) The License Fee for the term year beginning November 1, 2014, shall be increased by adding the Third Amendment Fee to the then current Licensee Fee, the sum of which shall be increased for the Term year beginning on November 1, 2014 and every Term year thereafter, as provided in Section6(c) of the License Agreement.

B. Section 6(g) of the Amended License Agreement, "License Fee," is hereby amended by adding new paragraph (iii), which shall provide as follows:

(iii) A payment equal to the Third Amendment Fee, prorated from the Third Installation Date to November 1, 2014 ("2014 Supplemental Fee"). Licensor shall issue an invoice for the 2014 Supplemental Fee, which invoice shall include confirmation of the Third Installation Date. The invoice for the 2014 Supplemental Fee shall be due and payable in full no more than thirty (30) days from the date of the invoice or from the Third Installation Date, whichever is later. In the event Licensee fails to pay the 2014 Supplemental Fee when due, Licensor shall be entitled to stop all work by Licensee, its employees and agents, and to deny Licensee, its employees and agents access to the Lease Premises until such time as the Supplemental Fee shall be paid in full.

[Remainder of this page intentionally left blank.]

Section 4: **Effect of Amendments.** Except as specifically provided in this Third Amendment, the terms of the Agreement, as amended by the First License Amendment and the Second License Amendment, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this First Amendment on the dates set forth below.

Date: _____

LICENSOR:

VILLAGE OF WINNETKA,
an Illinois Home Rule Municipality

By: _____
E. Gene Greable
Village President

ATTEST:

[SEAL]

By: _____
Robert M. Bahan
Village Clerk

Date: _____

LICENSEE:

Chicago SMSA Limited Partnership
d/b/a Verizon Wireless
an Illinois limited partnership

By: Cellco Partnership
Its: General Partner

By: _____
Lynn Ramsey
Area Vice President Network

LICENSEE ACKNOWLEDGEMENT

STATE OF ILLINOIS)
) ss:
COUNTY OF COOK)

The undersigned, a Notary Public in and for said State, do hereby certify that on the _____ day of _____, 2014, there appeared before me in person **Lynn Ramsey**, personally known to me to be, or who proved to me on the basis of satisfactory evidence that she is, **Area Vice-President – Network** and that she acknowledged to me that she executed the foregoing instrument in such capacity, and that by her signature on said instrument pursuant to authority given her by Chicago SMSA Limited Partnership d/b/a Verizon Wireless, as their free and voluntary act, for the uses and purposes therein set forth.

Witness my hand and official seal
this ____ of _____, 2014.

_____
Notary Public
My commission expires _____, 20__.

EXHIBIT A-1

DESCRIPTION OF LAND

The Land defined in Section 1 of the foregoing Agreement is legally described as follows:

> Lots 1, 2 and 3 is Chandler's Subdivision, being a subdivision of Bloc 15 of Hubbard Estate Subdivision, in the northeast Fractional ¼ of Section 17, Township 42 North, Range 13, cast of the third principal meridian, as per plat thereof recorded as document number 5849036 (except from said Lots 1, 2 and 3 that part bounded and described as follows, to-wit: beginning at a point in the easterly line of Sheridan Road (being the westerly line of said Chandler's Subdivision 30 feet southerly from (measured at right angles to) the northerly line of said Chandler's Subdivision; running thence northeasterly in a straight line to a point 36 feet southeasterly from (measured at right angles to) the said northerly line of said Chandler's Subdivision at a point 180 feet (as measured along said northerly line of said Chandler's Subdivision) from the easterly line of Sheridan Road; thence northeasterly in a straight line to a point 31 feet from (measured at right angles to) the said northerly line of said Chandler's Subdivision, at a point 233 feet (as measured along said northerly line of said Chandler's Subdivision) from the easterly line of Sheridan Road; thence northeasterly in a straight line to a point 55 feet from (measured at right angles to) the said northerly line of said Chandler's Subdivision, at a point 357.5 feet (measured along said northerly line of said Sheridan Road; thence southeasterly in a straight line to a point 3 feet due north of a point in the north line of North Avenue (being the south line of said Chandler's Subdivision) said point in North Avenue being 468 feet east (measured along the north line of said North Avenue) of the northeast corner of Sheridan Road and North Avenue; thence south in a straight line a distance of 3 feet to the north line of North Avenue a distance of 468 feet to the point of intersection of the north line of North Avenue with the northeasterly line of Sheridan Road; thence northwesterly along the northeasterly line of Sheridan Road to the place of beginning) all in Cook County, Illinois,

and is otherwise commonly known as 725 and 735 Tower Road, Winnetka, Illinois.

PINs: 05-17-203-007
05-17-203-011

EXHIBIT A-2

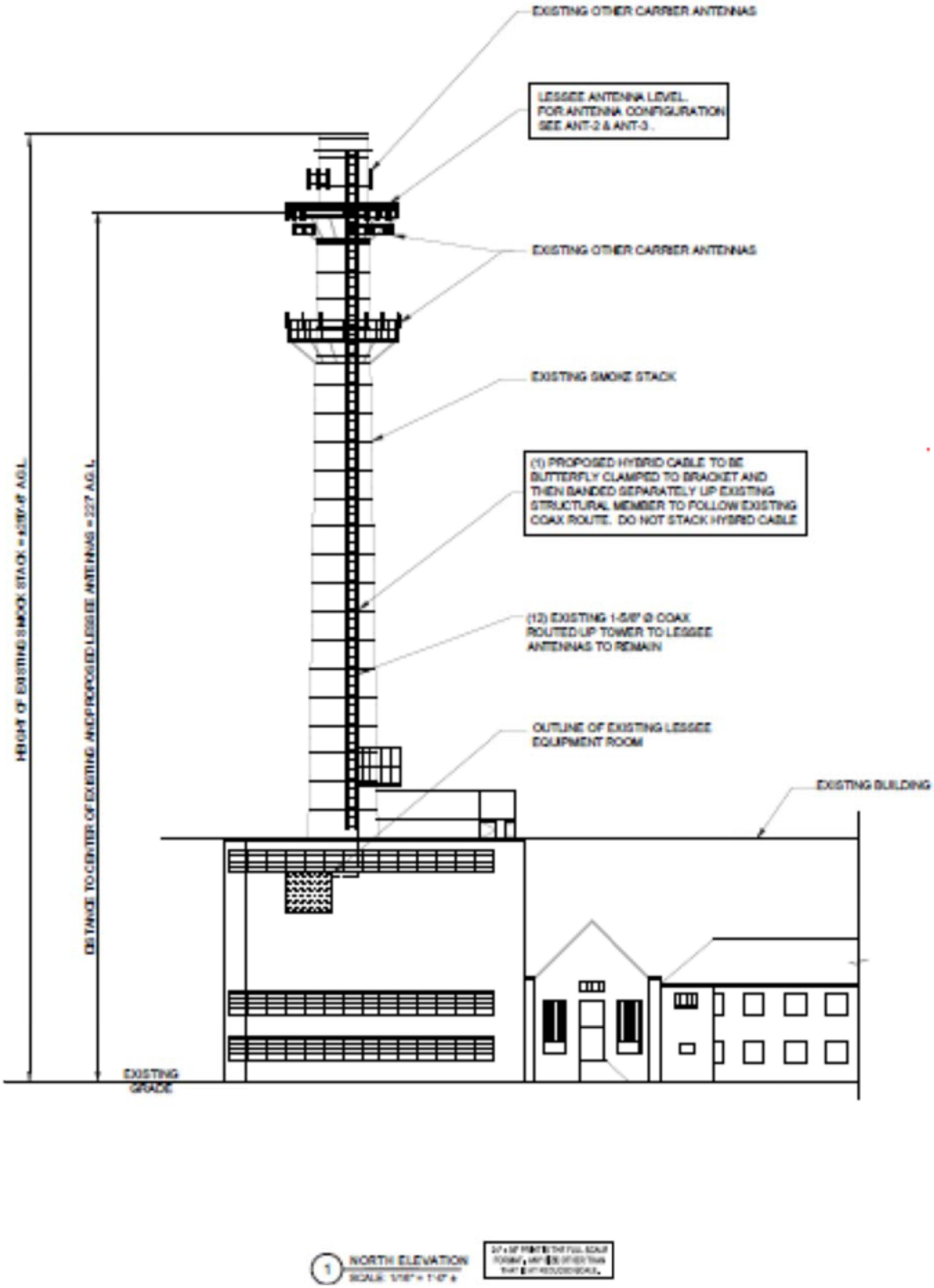

EXISTING OTHER CARRIER ANTENNAS
LESSEE ANTENNA LEVEL. FOR ANTENNA CONFIGURATION SEE ANT-2 & ANT-3.
EXISTING OTHER CARRIER ANTENNAS
EXISTING SMOKE STACK
(1) PROPOSED HYBRID CABLE TO BE BUTTERFLY CLAMPED TO BRACKET AND THEN BANDED SEPARATELY UP EXISTING STRUCTURAL MEMBER TO FOLLOW EXISTING COAX ROUTE. DO NOT STACK HYBRID CABLE
(12) EXISTING 1-5/8" Ø COAX ROUTED UP TOWER TO LESSEE ANTENNAS TO REMAIN
OUTLINE OF EXISTING LESSEE EQUIPMENT ROOM
EXISTING BUILDING
HEIGHT OF EXISTING SMOKE STACK = 4[illegible]' A.G.L.
DISTANCE TO CENTER OF EXISTING AND PROPOSED LESSEE ANTENNAS = 227' A.G.L.
EXISTING GRADE
1 NORTH ELEVATION

EXHIBIT A-3

Scope of Work

Scope of Work

Verizon Wireless is replacing (3) CSS X7C-665-6 antennas with (3) Ericsson KRC 118056/1 antennas. The final antenna configuration on the smokestack will be (3) Ericsson KRC 118056/1, (3) CSS X7C-665-6, and (3) Antel PCSX065-18-2H antennas. The final antenna count is (9), which is the same as the existing count. Verizon will also be installing tower mounted equipment to go behind the existing and proposed antennas. These include: (3) Raycap surge protectors (two different models), (3) Andrew Bias-Ts, and (1) Commscope Hybrid feed line.

Existing Antennas Specifications (Dimensions are LxWxH)

- **CSS X7C-665-6:** Dimensions are 72"x 12.5"x7.1" and weighs 30 pounds. (3) of the existing (6) antennas are to be removed.
- **Antel PCSX065-18-2H:** Dimensions are 72.4"x 6.3"x 3.5" and weighs 15 pounds. (3) existing antennas are to remain.

Proposed Antenna and TME Specifications

- **Ericsson KRC 118056/1**: Dimensions are 78.7"x 14.8"x 9.4" and weighs 125.7 pounds. Total equipment quantity to be added is (3).
- **Raycap RCMDC-3315-PF-48 Surge Protector:** Dimensions are 25.6"x 17.3"x 10.2" and weighs 21 pounds. Total Equipment quantity to be added is (1).
- **Raycap RCMDC-1064-PF-48 Surge Protector:** Dimensions are 28.7"x 11.7"x 10.3" and weighs 32 pounds. Total equipment quantity to be added is (2).
- **Andrew ATSBT-Top-MF-Bias T:** Dimensions are 5.6"x 3.7"x 2" and weighs 2 pounds. The total equipment quantity to be added is (3).
- **Commscope Hybrid Feed line:** The hybrid cable is to be plugged into the Raycap surge protector(3315 model). The cable is 1-1/4" thick. The total equipment quantity to be added is (1).

The proposed antennas are to be painted the same color as the smokestack.

BEFORE

AFTER

Winnetka HD

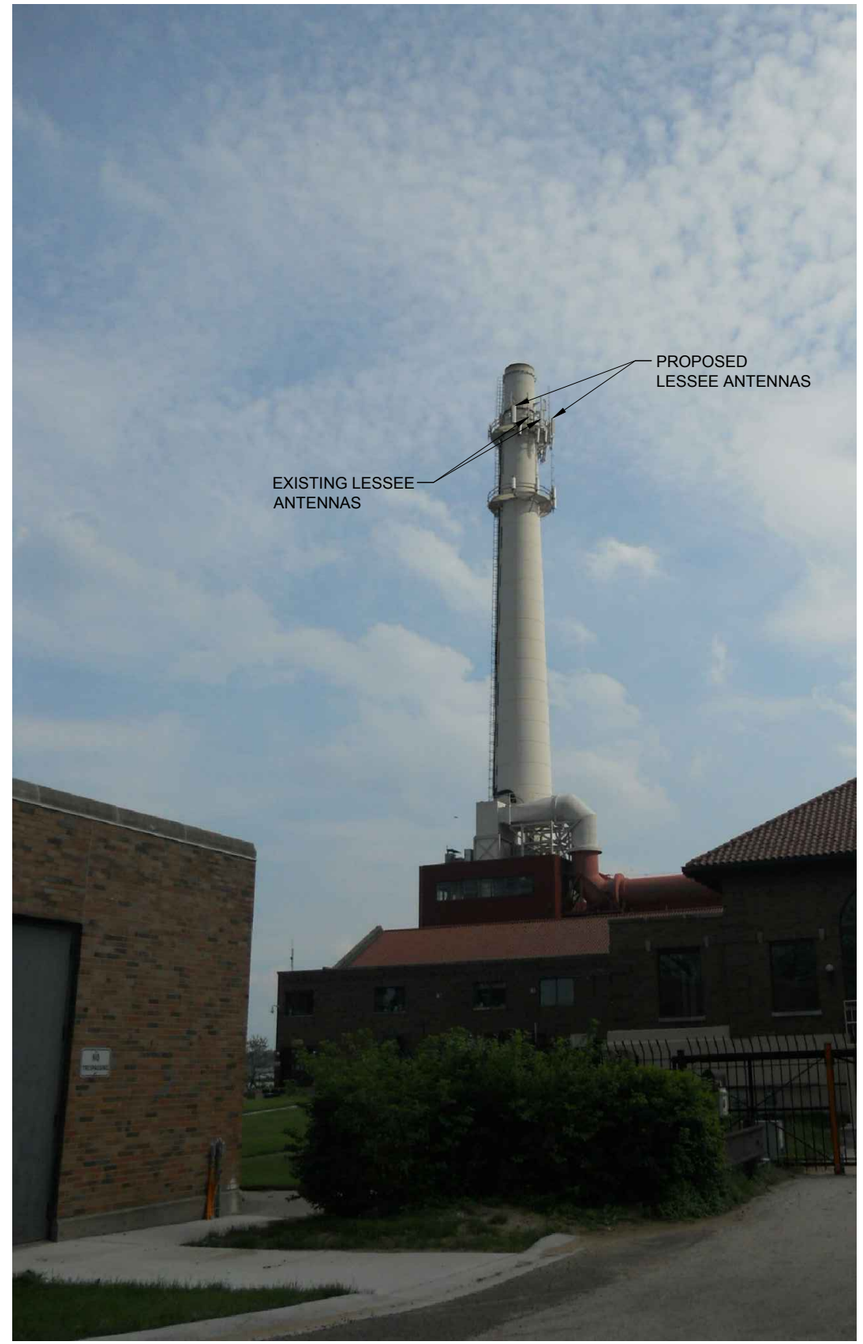
View Looking South
(Close)

TERRA
CONSULTING GROUP, LTD.
600 Busse Highway, Park Ridge, IL 60068
Phone: 847.698.6400 Fax: 847.698.6401

verizon wireless

Exhibit B

BEFORE



AFTER

verizonwireless

Winnetka HD

View Looking South
(Far)

TERRA
CONSULTING GROUP, LTD.
600 Busse Highway, Park Ridge, IL 60068
Phone: 847.698.6400 Fax: 847.698.6401

Exhibit B

BEFORE

AFTER

verizonwireless

Winnetka HD

View Looking Northeast

TERRA
CONSULTING GROUP, LTD.
600 Busse Highway, Park Ridge, IL 60068
Phone: 847.698.6400 Fax: 847.698.6401

Exhibit B

Agenda Item Executive Summary

Title: Change Order for Primary Cable, The Okonite Company

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☐ Resolution
☑ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

The Water & Electric Department issued Bid Number #13-008 for the purchase of cable during the timeframe of April 1, 2013 through March 31, 2014. The bid covered both secondary cable (600V) and medium voltage (15kV) power cable. At the March 20, 2014, Council Meeting, the Village Manager was authorized to extend the purchase order for 15kV primary cable with the Okonite Company through December 31, 2014.

Executive Summary:

Staff is requesting authorization to purchase 4,000 feet of 15kV 1/c 1/0 copper cable and 4,000 feet of 15kV 3-1/c 1/0 copper cable. This cable is typically used in applications to connect pad mount transformers with the overhead system or between pad mount transformers. Manufacturing lead time for this cable is 12-14 weeks. The requested change order amount is $82,421.

Recommendation:

Consider authorizing the Village Manager to award a change order to the Okonite Company in the amount of $82,421 for the purchase of 15kV 1/0 copper cable at the unit prices bid, subject to the contract conditions.

Attachments:

Agenda Report dated June 16, 2014

AGENDA REPORT

SUBJECT: **Change Order for Primary Cable, The Okonite Company**

PREPARED BY: Brian Keys, Director Water & Electric

REF: October 14, 2013 Budget Presentation
March 20, 2014 Village Council Meeting, pp. 24-27

DATE: June 16, 2014

The Water & Electric Department issued Bid Number #13-008 for the purchase of cable during the timeframe of April 1, 2013 through March 31, 2014. The bid covered both secondary cable (600V) and medium voltage (15kV) power cable. At the March 20, 2014, Council Meeting, the Village Manager was authorized to extend the purchase order for 15kV primary cable with the Okonite Company and the purchase order for 600V secondary cable with Wesco through December 31, 2014.

Staff is requesting authorization to purchase 4,000 feet of 15kV 1/c 1/0 copper cable and 4,000 feet of 15kV 3-1/c 1/0 copper cable. This cable is typically used in applications to connect pad mount transformers with the overhead system or between pad mount transformers. Manufacturing lead time for this cable is 12-14 weeks. The requested change order amount is $82,421. The change order amount includes additional funds for manufacturing length tolerances as noted below.

15kV Cable

Quantity 3-1/c 1/0: 4,000 ft. 1/c 1/0: 4,000 ft.	Metals Escalation	Shipping Length Tolerance (5%) & Packaging	Requested Amount
$78,496.00	$0	$3,924.80	$82,420.80

↓

$82,421

The Electric Fund FY 2014 Budget contains $495,500 (account #500.42.31-660) for the purchase of cable. Prior to this request, the Village Council has previously approved $181,200 of cable purchases from the 2014 budget.

Recommendation:

Consider authorizing the Village Manager to award a change order to the Okonite Company in the amount of $82,421 for the purchase of 15kV 1/0 copper cable at the unit prices bid, subject to the contract conditions.

Agenda Item Executive Summary

Title: Change Order for Secondary Cable, Wesco

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☐ Resolution
☑ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

The Water & Electric Department issued Bid Number #13-008 for the purchase of cable during the timeframe of April 1, 2013 through March 31, 2014. The bid covered both secondary cable (600V) and medium voltage (15kV) power cable. At the March 20, 2014, Council Meeting, the Village Manager was authorized to extend the purchase order for 600V secondary cable with Wesco through December 31, 2014.

Executive Summary:

Staff is requesting authorization to purchase additional quantities of secondary cable. This cable is used for connections between transformers and underground splice boxes and/or customer meter pedestals. The requested change order amount is $83,344.

The Electric Fund FY 2014 Budget contains $495,500 (account #500.42.31-660) for the purchase of cable. Prior to this request, the Village Council has previously approved $181,200 of cable purchases from the 2014 budget.

Recommendation:

Consider authorizing the Village Manager to award a change order to the Wesco in the amount of $83,344 for the purchase of 600 volt secondary cable at the unit prices bid, subject to the contract conditions.

Attachments:

Agenda Report dated June 16, 2014

AGENDA REPORT

SUBJECT: **Change Order for Secondary Cable, Wesco**

PREPARED BY: Brian Keys, Director Water & Electric

REF: October 14, 2013 Budget Presentation
March 20, 2014 Village Council Meeting, pp. 20-23

DATE: June 16, 2014

The Water & Electric Department issued Bid Number #13-008 for the purchase of cable during the timeframe of April 1, 2013 through March 31, 2014. The bid covered both secondary cable (600V) and medium voltage (15kV) power cable. At the March 20, 2014, Council Meeting, the Village Manager was authorized to extend the purchase order for 15kV primary cable with the Okonite Company and the purchase order for 600V secondary cable with Wesco through December 31, 2014.

Staff is requesting authorization to purchase additional quantities of secondary cable. This cable is used for connections between transformers and underground splice boxes and/or customer meter pedestals. The requested change order amount is $83,344. The change order amount includes additional funds for manufacturing length tolerances as noted below.

600V Secondary Cable

Quantity **3-1/c 350 kcmil: 2,000 ft.** **3-1/c 4/0: 2,000 ft.** **4-1/c 350 kcmil: 1,000 ft.** **4-1/c 500 kcmil: 500 ft.**	**Metals Escalation**	**Shipping Length Tolerance (5%) & Packaging**	**Requested Amount**
$79,375.00	$0	$3,968.75	$83,343.75

↓

$83,344

The Electric Fund FY 2014 Budget contains $495,500 (account #500.42.31-660) for the purchase of cable. Prior to this request, the Village Council has previously approved $181,200 of cable purchases from the 2014 budget.

Recommendation:
Consider authorizing the Village Manager to award a change order to the Wesco in the amount of $83,344 for the purchase of 600 volt secondary cable at the unit prices bid, subject to the contract conditions.

Agenda Item Executive Summary

Title: Request for Proposal #014-003, Transformer Yard Fire Protection

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☐ Resolution
☑ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

The Water & Electric Department's fiscal year 2014 budget contains funding for professional services to evaluate fire protection alternatives for the transformer yard located at the Electric Plant. The transformer yard has four power transformers, one voltage regulator and one metal enclosed capacitor bank located in outdoor substation area of the plant load center. The existing facility does not include, nor was there provisions made for, fire protection or fire suppression of the power transformers.

Executive Summary:

Request for Proposal (RFP) #014-003 was issued for professional services required to identify and evaluate industry standard practices for fire protection and fire suppression, determine the infrastructure changes required to install the equipment and/or upgrade, and prepare a technical report with recommendations and estimated costs. The consultant will also provide preliminary drawings and specifications for infrastructure changes and the installation of protection equipment.

Based on the proposals and responses, staff is recommending Strand Associates as the preferred vendor for this project and a related fire protection project for the Electric Plant generators (Reference separate Agenda Report). A proposed contract document which covers both projects is attached.

The Electric Fund FY2014 Budget contains $84,000 (account #500.40.01-551) for consulting services associated with the fire protection projects. The budget allocation was $30,000 for the transformer yard and $54,000 for the Electric Plant generators. The total cost of the consulting services for both fire protection projects will be within the budgeted amount.

Recommendation:

Consider authorizing the Village Manager to award a contract for professional services for fire protection of the Electric Plant transformer yard to Strand Associates in an amount not to exceed $35,800.

Attachments:

1) Agenda Report dated June 18, 2014
2) Strand Associates, Agreement for General Services

AGENDA REPORT

SUBJECT: **Request for Proposal #014-003, Transformer Yard Fire Protection**

PREPARED BY: Brian Keys, Director Water & Electric

REF: October 14, 2013 Budget Presentation

DATE: June 18, 2014

The Water & Electric Department's fiscal year 2014 budget contains funding for professional services to evaluate fire protection alternatives for the transformer yard located at the Electric Plant. The transformer yard has four mineral oil-filled power transformers, one mineral oil-filled voltage regulator and one metal enclosed capacitor bank located in outdoor substation area of the plant load center. The power transformers are generator step-up transformers that connect the 4,160 Volt generators to 12,470 Volt power system. The existing facility does not include, nor was there provisions made for, fire protection or fire suppression of the power transformers.

Request for Proposal (RFP) #014-003 was issued for professional services required to identify and evaluate industry standard practices for fire protection and fire suppression, determine the infrastructure changes required to install the equipment and/or upgrade, and prepare a technical report with recommendations and estimated costs. The RFP also requires the consultant meet with the Village's insurance carrier as part of the design review. The insurance company has recommended fire protection be installed. The consultant will also provide preliminary drawings and specifications for infrastructure changes and the installation of protection equipment.

The RFP was published in the Pioneer Press. Nine firms attended a mandatory pre-proposal meeting held on March 6, 2014. Three firms submitted proposals. Staff evaluated the proposals based on the relevant company experience, personnel experience, qualifications, and others factors such as office location, proposed project time, and references. After evaluating the technical merits, the fee proposals were opened.

Firm	Project Fee
Strand Associates Inc.	$35,800
Hughes Associates	$47,950
Sega Inc.	$48,140

Proposals submitted by Hughes and Strand were scored equivalent. The proposal submitted by Sega was ranked significantly lower than the others and deemed not acceptable. The

Village has prior experience with Strand at the water and electric plants. The Village has not previously utilized Hughes or Sega.

Concurrent with the RFP for transformer yard fire protection, staff issued an RFP for generator fire protection at the Electric Plant. Staff's recommendation for award of this RFP is covered by a separate Agenda Report. Similar to this RFP, both Hughes and Strand were ranked favorably. As a result, both companies were asked to examine their proposals and identify any cost savings that could be achieved by awarding both projects to the same firm. Strand identified $10,600 and Hughes Associates identified $11,238.

The total estimated costs of both project for each firm is shown below.

Firm	Initial Project Fee (both projects)	Potential Savings for Award of Both Projects
Strand Associates	$75,600	$10,600
Hughes Associates	$95,016	$11,238

Based on the proposals and responses, staff is recommending Strand Associates as the preferred vendor for both projects. A proposed contract document which covers both projects has been attached. The total award referenced in the contract is the sum of both projects prior to any potential savings for award of both projects. Staff is requesting approval to proceed with a contract award of $75,600 for both projects with this project costing $35,800. Staff will endeavor to coordinate meetings, field engineering, design reviews, and final reports for both projects to capture the proposed savings.

The Electric Fund FY2014 Budget contains $84,000 (account #500.40.01-551) for consulting services associated with the fire protection projects. The budget allocation was $30,000 for the transformer yard and $54,000 for the Electric Plant generators. The total cost of the consulting services for both fire protection projects will be within the budgeted amount.

Recommendation:
Consider authorizing the Village Manager to award a contract for professional services for fire protection of the Electric Plant transformer yard to Strand Associates in an amount not to exceed $35,800.

STRAND ASSOCIATES®

Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608-251-4843
(F) 608-251-8655

June 19, 2014

Village of Winnetka
510 Green Bay Road
Winnetka, IL 60093

Attention: Mr. Brian Keys, Director of Water and Electric Department

Re: Agreement for General Services
Transformer Yard and Electric Plant Fire Protection Assessment

This is an Agreement between the Village of Winnetka, Illinois, hereinafter referred to as OWNER, and Strand Associates, Inc.®, hereinafter referred to as ENGINEER, to provide engineering services (Services) for the Transformer Yard and Generation Plant Fire Protection Assessment project. This Agreement shall be in accordance with the following elements.

Scope of Services

ENGINEER will provide the following Services to OWNER.

1. Attend one two-day project kickoff meeting and data collection site visit at OWNER's facility for both the Electric Plant and Transformer Yard portions of the project. Review project time lines, milestones, project reviews, and deliverables.

2. Review applicable codes and standards.

3. Review property insurance carrier requirements for both the Transformer Yard and Electric Plant with OWNER and insurance representative.

4. Review suppression, detection, barrier, oil containment, and replacement of mineral oil with ester-based dielectric coolant fluid options and costs for the Transformer Yard.

5. Prepare decision matrix for containment and protection options for the Transformer Yard.

6. Participate in a teleconference review with OWNER for the Transformer Yard decision matrix.

7. Formalize the basis of design for the Transformer Yard.

8. Participate in a teleconference review with OWNER for review of basis of design documents.

9. Develop a scope of work for the necessary infrastructure changes for both portions of the project.

10. Prepare preliminary drawings of the recommended protection and containment alternative for the Transformer Yard.

11. Develop suppression, detection, and infrastructure recommendations for the Electric Plant turbines and diesel generator system.

12. Formalize the basis of design for the Electric Plant generating equipment fire protection system.

13. Develop an opinion of probable cost and phasing/implementation plan for both portions of the project.

14. Participate in a teleconference review with OWNER for the fire protection of the generating systems.

15. Attend a one-day site visit to review recommended improvements, phasing/implementation plans, and opinion of probable costs at OWNER's facility.

16. Prepare preliminary drawings of the recommended protection for the Electric Plant turbines and diesel generator systems.

17. Prepare a final report.

18. Attend a one-day site visit to review final report with OWNER. Revise report based on OWNER comments as appropriate.

19. Attend a one-day site visit to review final report with OWNER's property insurance carrier. Revise report based on OWNER's property insurance carrier comments as appropriate.

20. Issue final reports to OWNER.

Service Elements Not Included

The following services are not included in this Agreement. If such services are required, they will be provided as noted.

1. Additional and Extended Services during construction made necessary by:

    a. Work damaged by fire or other cause during construction.
    b. A significant amount of defective or neglected work of any contractor.
    c. Prolongation of the time of the construction contract.
    d. Default by contractor under the construction contract.

    Any services of this type will be provided through an amendment to this Agreement.

2. Archaeological or Botanical Investigations: ENGINEER will assist OWNER in engaging the services of an archaeologist or botanist, if required, to perform the field investigations necessary for agency review through a separate agreement with OWNER.

3. Bidding- and Construction-Related Services: Bidding- and construction-related services for the project will require a separate agreement with OWNER.

4. Flood Studies: Any services involved in performing flood and floodway studies, if required, will be provided through an amendment to this Agreement or through a separate agreement with OWNER.

5. Geotechnical Engineering: Geotechnical engineering information will be required and provided through OWNER and OWNER's geotechnical consultant. ENGINEER will assist OWNER with defining initial scope of geotechnical information that is required to allow OWNER to procure geotechnical engineering services.

6. Land and Easement Surveys/Procurement: Any services of this type including, but not limited to, a record search, field work, preparation of legal descriptions, or assistance to OWNER for securing land rights necessary for siting sanitary sewer, tanks, and appurtenances will be provided through a separate agreement with OWNER.

7. Permit and Plan Review Fees: All permit and plan review fees payable to regulatory agencies shall be paid for by OWNER.

8. Preparation for and/or Appearance in Litigation on Behalf of OWNER: This type of service by ENGINEER will be provided through a separate agreement with OWNER.

9. Review of Product Substitutions or Means, Method, Technique, Sequence, or Procedure Substitutions Proposed by Contractor: The terms of the construction Contract (GC 6.05B and GC 6.05E) call for the construction contractor to reimburse OWNER for ENGINEER's cost for evaluating substitute products, means, method, technique, sequence, or procedure of construction. ENGINEER's cost for such evaluations is not included in the scope of this Agreement. Services of this type by ENGINEER will be provided through an amendment to this Agreement.

10. Revising Designs, Drawings, Specifications, and Documents: Any services required after these items have been previously approved by state or federal regulatory agencies, because of a change in project scope or where such revisions are necessary to comply with changed state and federal regulations that are put in force after Services have been partially completed, will be provided through an amendment to this Agreement.

11. Services Furnished During Readvertisement for Bids, if Ordered by OWNER: If a Contract is not awarded pursuant to the original bids, any services of this type will be provided through an amendment to this Agreement.

12. Services Related to Buried Wastes and Contamination: Should buried solid, liquid, or potentially hazardous wastes or subsurface or soil contamination be uncovered at the site, follow-up investigations may be required to identify the nature and extent of such wastes or subsurface soil or groundwater contamination and to determine appropriate methods for managing of such wastes or contamination and for follow-up monitoring. Investigation, design, or construction-related services related to buried solid, liquid, or potentially hazardous wastes or soil or groundwater contamination will be provided through a separate agreement with OWNER.

Staffing

ENGINEER will provide the services using the personnel whose qualifications were presented in the qualification statements and proposals submitted by ENGINEER in the Response to RFP-014-003 and RFP-014-005 (collectively "Proposal").

Compensation

OWNER shall compensate ENGINEER for Services on an hourly rate basis plus expenses at the rates specified in the fee schedule submitted with ENGINEER's Proposal in reference to Section IV-Submittal Requirements, Paragraph 4-Budget of RFP 014-003 RFP 014-003 and RFP 014-005. See Attachment A to this Agreement for a copy of the fee schedule. Total Compensation, including expenses, shall not exceed $75,600.

Expenses incurred such as those for travel, meals, printing, postage, copies, computer, electronic communication, and long distance telephone calls will be billed at actual cost plus 10 percent.

Only sales taxes or other taxes on Services that are in effect at the time this Agreement is executed are included in the Compensation. If the tax laws are subsequently changed by legislation during the life of this Agreement, this Agreement will be adjusted to reflect the net change.

The estimated fee for the Services is based on the wage scale/hourly billing rates as stated in the Hourly Rates Section of ENGINEER's proposal. Although ENGINEER's fees are adjusted annually on July 1, ENGINEER agrees not to increase any charges billed for the Services and related costs prior to October 1, 2014, based on the assumption that the Services will be completed as indicated. Should the completion time be extended, it may be cause for an adjustment in the wage scale/hourly billing rates charged and the estimated fee that reflects any wage scale adjustments made.

The estimated fee will not be exceeded without prior notice to and agreement by OWNER but may be adjusted for time delays, time extensions, amendments, or changes in the **Scope of Services**. Any adjustment will be negotiated based on ENGINEER's increase in costs caused by delays, extensions, amendments, or changes.

Schedule

Services will begin upon execution of this Agreement, which is anticipated on June 25, 2014. Services are scheduled for completion on September 15, 2014.

Standard of Care

The Standard of Care for all Services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's Services.

OWNER's Responsibilities

1. Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to this project including previous reports, previous drawings and specifications, and any other data relative to the scope of this project.

2. Furnish to ENGINEER, as required by ENGINEER for performance of Services as part of this Agreement, data prepared by or services of others obtained or prepared by OWNER relative to the scope of this project, such as soil borings, probings and subsurface explorations, and laboratory tests and inspections of samples, all of which ENGINEER may rely upon in performing Services under this Agreement.

3. Provide access to the site as required for ENGINEER to perform Services under this Agreement.

4. Guarantee access to and make all provisions for ENGINEER to enter upon public and private lands as required for ENGINEER to perform Services under this Agreement.

5. Examine all reports, sketches, estimates, special provisions, drawings, and other documents presented by ENGINEER and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the performance of ENGINEER.

6. Provide all legal services as may be required for the development of this project.

7. Retain the services of a soils consultant to provide any necessary geotechnical evaluation and recommendations.

Opinion of Probable Cost

Any opinions of probable cost prepared by ENGINEER are supplied for general guidance of OWNER only. ENGINEER has no control over competitive bidding or market conditions and cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to OWNER.

Observation Services

In furnishing observation services, ENGINEER's efforts will be directed toward determining for OWNER that the completed project will, in general, conform to the Contract Documents; but ENGINEER will not supervise, direct, or have control over the contractor's work and will not be responsible for the contractor's construction means, methods, techniques, sequences, procedures, or health and safety precautions or programs, or for the contractor's failure to perform the construction work in accordance with the Contract Documents.

Payment Requests

ENGINEER's review of Payment Requests from contractor(s) will not impose responsibility to determine that title to any of the work has passed to OWNER free and clear of any liens, claims, or other encumbrances. Any such service by ENGINEER will be provided through an amendment to this Agreement.

Changes

1. OWNER may make changes within the general scope of this Agreement in the Services to be performed. If such changes cause an increase or decrease in ENGINEER's cost or time required for performance of any Services under this Agreement, an equitable adjustment will be made and this Agreement will be modified in writing accordingly.

2. No services for which additional compensation will be charged by ENGINEER will be furnished without the written authorization of OWNER. The fee established herein will not be exceeded without agreement by OWNER but may be adjusted for time delays, time extensions, amendments, or changes in the **Scope of Services**.

3. If there is a modification of Agency requirements relating to the Services to be performed under this Agreement subsequent to the date of execution of this Agreement, the increased or decreased cost of performance of the Services provided for in this Agreement will be reflected in an appropriate modification of this Agreement.

Additional Services

This Agreement may be extended for Additional Services upon OWNER's written authorization. Additional Services will be provided for a lump sum or an hourly rate plus expenses at the wage scale/hourly billing rates then in effect.

Payment

OWNER shall make monthly payments to ENGINEER for Services performed in the preceding month based upon monthly invoices. Nonpayment 45 days after the date of receipt of invoice may, at ENGINEER's option, result in assessment of a 1 percent per month carrying charge on the unpaid balance.

Nonpayment 45 days after the date of receipt of invoice may, at ENGINEER's option, result in suspension of Services upon five calendar days' notice to OWNER. ENGINEER will have no liability to OWNER, and OWNER agrees to make no claim for any delay or damage as a result of such suspension caused by any breach of this Agreement by OWNER. Upon receipt of payment in full of all outstanding sums due from OWNER, or curing of such other breach which caused ENGINEER to suspend Services, ENGINEER will resume Services and there will be an equitable adjustment to the remaining project schedule and compensation as a result of the suspension.

Data Provided by Others

ENGINEER is not responsible for the quality or accuracy of data nor for the methods used in the acquisition or development of any such data where such data is provided by or through OWNER, contractor, or others to ENGINEER and where ENGINEER's Services are to be based upon such data. Such data includes, but is not limited to, soil borings, groundwater data, chemical analyses, geotechnical testing, reports, calculations, designs, drawings, specifications, record drawings, contractor's marked-up drawings, and topographical surveys.

Termination

This Agreement may be terminated with cause in whole or in part in writing by either party subject to a two-week notice and the right of the party being terminated to meet and discuss the termination before the termination takes place. ENGINEER will be paid for all completed or obligated Services up to the date of termination.

Third-Party Beneficiaries

Nothing contained in this Agreement creates a contractual relationship with or a cause of action in favor of a third party against either OWNER or ENGINEER. ENGINEER's Services under this Agreement are being performed solely for OWNER's benefit, and no other party or entity shall have any claim against ENGINEER because of this Agreement or the performance or nonperformance of Services hereunder. OWNER and ENGINEER agree to require a similar provision in all contracts with contractors, subcontractors, subconsultants, vendors, and other entities involved in this project to carry out the intent of this provision.

Dispute Resolution

Except as may be otherwise provided in this Agreement, all claims, counterclaims, disputes, and other matters in question between OWNER and ENGINEER arising out of or relating to this Agreement or the breach thereof will be decided first by mediation, if the parties mutually agree, or with a bench trial in a court of competent jurisdiction within the State of Illinois.

Entire Agreement

The written Proposal submitted by ENGINEER on March 21, 2014, as defined above, is incorporated into this letter of agreement by reference, and this letter of agreement, including ENGINEER'S Proposal, shall constitute the full and entire Agreement between the OWNER and ENGINEER. In the event of a conflict between the terms stated in this letter and the terms stated in the Proposal or the Village's Purchase Order, the provisions of this letter agreement shall prevail.

IN WITNESS WHEREOF the parties hereto have made and executed this Agreement.

ENGINEER:		OWNER:	
STRAND ASSOCIATES, INC.®		VILLAGE OF WINNETKA	
Matthew S. Richards Corporate Secretary	Date	Robert Bahan Village Manager	Date

NOT FOR SIGNATURE

Agenda Item Executive Summary

Title: Request for Proposal #014-005, Fire Protection for Generation Plant

Presenter: Brian Keys, Director of Water & Electric

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☐ Resolution
☑ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

The Water & Electric Department's fiscal year 2014 budget contains funding for professional services to evaluate fire protection alternatives for the diesel engines, turbines, and turbine oil lubricating systems located at the Electric Plant. The Electric Plant operates and maintains five generating units to support the Village's electric system. The generation fleet consists of three steam turbines and two reciprocating engines that use diesel fuel for the internal combustion process. The units do not currently contain systems for the detection and suppression of fire.

Executive Summary:

Request for Proposal (RFP) #014-005 was issued for professional services required to identify and evaluate industry standard practices for fire protection and fire suppression, determine the infrastructure changes required to install the equipment and/or upgrade, and prepare a technical report with recommendations and estimated costs. The consultant will also provide preliminary drawings and specifications for infrastructure changes and the installation of protection equipment.

Based on the proposals and responses, staff is recommending Strand Associates as the preferred vendor for this project and a related fire protection project for the transformer yard fire protection (Reference separate Agenda Report). A proposed contract document which covers both projects has been submitted with the Agenda Report for the transformer yard fire protection.

The Electric Fund FY2014 Budget contains $84,000 (account #500.40.01-551) for consulting services associated with the fire protection projects. The budget allocation was $30,000 for the transformer yard and $54,000 for the Electric Plant generators. The total cost of the consulting services for both fire protection projects will be within the budgeted amount.

Recommendation:

Consider authorizing the Village Manager to award a contract for professional services for fire protection of the Electric Plant generators to Strand Associates in an amount not to exceed $39,800.

Attachments:

1) Agenda Report dated June 18, 2014

AGENDA REPORT

SUBJECT: **Request for Proposal #014-005, Fire Protection for Generation Plant**

PREPARED BY: Brian Keys, Director Water & Electric

REF: October 14, 2013 Budget Presentation

DATE: June 18, 2014

The Water & Electric Department's fiscal year 2014 budget contains funding for professional services to evaluate fire protection alternatives for the diesel engines, turbines, and turbine oil lubricating systems located at the Electric Plant. The Electric Plant operates and maintains five generating units to support the Village's electric system. The generation fleet consists of three steam turbines and two reciprocating engines that use diesel fuel for the internal combustion process. The units do not currently contain systems for the detection and suppression of fire.

Request for Proposal (RFP) #014-005 was issued for professional services required to identify and evaluate industry standard practices for fire protection and fire suppression, determine the infrastructure changes required to install the equipment and/or upgrade, and prepare a technical report with recommendations and estimated costs. The RFP also requires the consultant meet with the Village's insurance carrier as part of the design review. The insurance company has recommended fire protection be installed. The consultant will also provide preliminary drawings and specifications for infrastructure changes and the installation of protection equipment.

The RFP was published in the Pioneer Press. Seven firms attended a mandatory pre-proposal meeting held on March 6, 2014. Four firms submitted proposals. Staff evaluated the proposals based on the relevant company experience, personnel experience, qualifications, and others factors such as office location, proposed project time, and references. After evaluating the technical merits, the fee proposals were opened.

Firm	Project Fee
Hughes Associates	$47,066
Strand Associates Inc.	$39,800
Sega Inc.	$34,604
Clark Dietz	$8,900

Proposals submitted by Hughes and Strand were scored nearly equivalent. The proposals submitted by Sega and Clark Dietz were evaluated lower than the others and deemed not acceptable. Staff is concerned that Clark Dietz's proposal doesn't include the required level

of analysis and design that are required. The Village has not previously utilized Hughes or Sega.

Concurrent with the RFP for generator fire protection, staff issued an RFP for transformer yard fire protection. Staff's recommendation for award of this RFP is covered by a separate Agenda Report. Similar to this RFP, both Hughes and Strand were ranked favorably. As a result, both companies were asked to examine their proposals and identify any cost savings that could be achieved by awarding both projects to the same firm. Strand identified $10,600 and Hughes Associates identified $11,238.

The total estimated costs of both project for each firm is shown below.

Firm	Initial Project Fee (both projects)	Potential Savings for Award of Both Projects
Strand Associates	$75,600	$10,600
Hughes Associates	$95,016	$11,238

Based on the proposals and responses, staff is recommending Strand Associates as the preferred vendor for both projects. A proposed contract document which covers both projects has been drafted (Reference Agenda Report for Transformer Yard Fire Protection). The total award referenced in the contract is the sum of both projects prior to any potential savings for award of both projects. Staff is requesting approval to proceed with a contract award of $75,600 for both projects with this project costing $39,800. Staff will endeavor to coordinate meetings, field engineering, design reviews, insurance company review, and the final reports for both projects to capture the proposed savings.

The Electric Fund FY2014 Budget contains $84,000 (account #500.40.01-551) for consulting services associated with the fire protection projects. The budget allocation was $30,000 for the transformer yard and $54,000 for the Electric Plant generators. The total cost of the consulting services will be within the budgeted amount for both projects.

Recommendation:
Consider authorizing the Village Manager to award a contract for professional services for fire protection of the Electric Plant generators to Strand Associates in an amount not to exceed $39,800.

Agenda Item Executive Summary

Title: Village Hall Interior Construction Contract Change Order

Presenter: Steven M. Saunders, Director of Public Works/Village Engineer

Agenda Date: 06/24/2014

Consent: ✔ YES ☐ NO

☐ Ordinance
☐ Resolution
✔ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

Executive Summary:

Interior construction on the Village Hall project commenced in June, 2011 and was substantially complete in fall, 2012. However, two issues arose during construction that required additional time and material expenditures on the part of the contractor beyond what was reasonably foreseeable from the bidding documents. The first issue relates to delays resulting from a significant redesign of the mechanical systems during Phase I of the construction. Holabird & Root, the project architect, took an extensive amount of time to resolve this, resulting in approximately 70 days of delay on the project. The second issue resulted from the discovery of a large structural beam in the first floor north end ceiling during Phase II, and required structural, plumbing, and HVAC alterations. This beam was concealed above the ceiling, in a location that differed from the original building construction plans. The delay incurred by Simpson Construction from the time this condition was discovered until construction could continue was approximately 50 days.

After discussions over the past several months with representatives of Simpson Construction Company and Holabird & Root, I have come to the conclusion that the delays associated with Phase I were avoidable design issues, and that the Village has no responsibility for these costs and that responsibility for Phase 1 costs should lie with Holabird & Root. I've also concluded that the Phase II delay was the result of a concealed building condition that the contractor could not reasonably foresee, and that the additional $35,618.38 in fees associated with the Phase II delay should be a reasonable obligation of the Village.

Simpson Construction has agreed to accept a payment of $35,000 as satisfying all of the Village's obligations under their contract. This change will result in a final project cost of $4,277,522, which is $20,269 (0.47%) above the project budget, which will require Council approval of a change order.

Recommendation:

Consider authorization of Change Order #1, increasing the project budget by $20,269, from $4,257,253 to $4,277,522.

Attachments:

Agenda Report

Agenda Report

Subject: **Village Hall Interior Construction Contract Change Order**

Prepared By: Steven M. Saunders, Director of Public Works/Village Engineer

Date: June 16, 2014

Background

Interior construction on the Village Hall project commenced in June, 2011 and was substantially complete in fall, 2012. However, two issues arose during construction that required additional time and material expenditures on the part of the contractor beyond what was reasonably foreseeable from the bidding documents.

Phase I Delays – Mechanical System Redesign

The first issue, or actually set of issues, relates to delays resulting from a significant redesign of the mechanical systems during Phase I of the construction. The redesign included specifying an alternate product for the baseboard fin-tube heating system, because the specified equipment could not be installed due to improper dimensioning in the construction documents. More significantly, the ductwork as designed could not be installed due to the presence of ***observable*** structural elements that precluded placing the ductwork in the proposed locations. Holabird & Root, the project architect, took an extensive amount of time to resolve these two issues, resulting in approximately 70 days of delay on the project.

Phase II Delays – Existing Building Conditions

The second issue resulted from the discovery of a large structural beam in the first floor north end ceiling, and required structural, plumbing, and HVAC alterations. This beam was concealed above the ceiling, in a location that differed from the original building construction plans. Holabird & Root completed the necessary structural and mechanical redesign at no additional expense to the Village; however, the delay incurred by Simpson Construction from the time the condition was discovered until construction could continue was approximately 50 days.

Allocation of Additional Costs

These two delays total 120 days and resulted in additional costs incurred by Simpson Construction Company. Simpson Construction's original bid included costs to be incurred for project management and supervision based on their project schedule, anticipating completion in January, 2012.

The additional supervision and project management time associated with these two delays is as follows:

	Delay	Costs
Phase I	70 days	$49,865.73
Phase II	50 days	$35,618.38
Total Additional Cost		$85,484.11

After discussions over the past several months with representatives of Simpson Construction Company and Holabird & Root, I have come to the conclusion that the delays associated with Phase I were avoidable design issues, and that the Village has no responsibility for these costs and that responsibility for Phase 1 costs should lie with Holabird & Root. Holabird & Root appears to agree with this conclusion, as it did not charge the Village for the necessary extensive redesign ***and also credited the Village*** for the material costs associated with purchasing the alternate fin-tube, via a reduction of architectural fees due for the project.

However, I've also concluded that the Phase II delay was the result of a concealed building condition that the contractor could not reasonably foresee, and that the additional $35,618.38 in fees associated with the Phase II delay should be a reasonable obligation of the Village.

Simpson Construction has agreed to accept a payment of $35,000 as satisfying all of the Village's obligations under their contract. This change will result in a final project cost of $4,277,522, which is $20,269 (0.47%) above the project budget, which will require Council approval of a change order. Details are shown in the following table:

Item	**Estimated Cost April 26, 2011**	**Estimated Final Cost**	**Amount Over or (Under) Budget**
Roof Replacement	$632,654	$643,864	
Masonry Restoration	$347,800	$299,660	
Interior Construction (incl. alternate bids and construction contingency	$2,639,855	$2,684,780	
Additional Items (incl. furniture, temporary office space, and commissioning	$336,944	$285,218	
Total Const. Cost	**$3,957,253**	**$3,913,522**	**($43,731)**
Architect Fees	$300,000	$364,000	$64,000
Total Project Cost	***$4,257,253***	***$4,277,522***	***$20,269***

<u>Recommendation:</u>
Consider authorization of Change Order #1, increasing the project budget by $20,269, from $4,257,253 to $4,277,522.

Agenda Item Executive Summary

Title: R-23-2014 Amendment No. 1 to the 2007 IGA - Joint Police CAD System

Presenter: Patrick Kreis, Chief of Police

Agenda Date: 06/24/2014

Consent: ☑ YES ☐ NO

☐ Ordinance
☑ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

Resolution R-15-2007, adopted March 6, 2007: Authorizing an IGA with the Village of Wilmette for the Joint Purchase and Operation of a Computer Aided Police Dispatch System.

Agenda Report, Regular Council Meeting, December 17, 2013: Police Computer Aided Dispatch Software Maintenance Renewal.

Executive Summary:

In March 2007, the Winnetka Village Council adopted R-17-2007, authorizing a 10-year Intergovernmental Agreement (IGA) between the Village of Winnetka and Village of Wilmette for the joint purchase and ongoing operation of a Computer Aided Dispatch (CAD), Records Management Systems (RMS), and Mobile squad car reporting system from New World Systems. The Resolution also authorized the purchase of the associated software license and services agreement from New World Systems.

In December 2013, the Village Council authorized a new five-year agreement with New World Systems and the Village of Wilmette for a five-year Standard Software Maintenance Agreement.

This resolution approves an amendment to the original IGA adding Kenilworth as a party and defining how costs are shared going forward by the three towns.

The Kenilworth Village Board authorized Kenilworth Police to purchase the necessary CAD components in March, 2014 and subsequently authorized the execution of the attached IGA to join the existing CAD system.

Recommendation:

Consider adoption of Resolution R-23-2014 approving Amendment No.1 substantially in the form attached.

Attachments:

1) Memo, re: Amendment to IGA, adding Kenilworth to Police CAD system
2) Resolution R-23-2014 Approving Amendment No. 1 to the existing 2007 Police CAD IGA
3) Amendment No.1 to the existing Police CAD IGA between Wilmette and Winnetka
4) Village of Kenilworth Agenda and Staff Report from June 16, 2014
5) Village of Wilmette Staff Report for June 24, 2014

VILLAGE OF WINNETKA
INTEROFFICE MEMORANDUM

TO: Rob Bahan, Village Manager

FROM: Patrick Kreis, Chief of Police

RE: Amendment to an Existing IGA with Wilmette adding the Village of Kenilworth to the New World Computer System

DATE: June 19, 2014

The Winnetka and Wilmette Police Departments jointly purchased a Computer Aided Dispatch system (CAD), Records Management System (RMS) and a Mobile Squad car reporting system in 2007. The system, commonly referred to as CAD, integrates data from the 9-1-1 phone system, dispatches and monitors police calls for service and provides a mobile computer reporting platform. The CAD system is capable of serving more than two agencies if other area agencies elect to join.

The Kenilworth Police Department has studied joining the existing Winnetka/Wilmette CAD since 2012, as they do not operate a CAD system. Joining our existing CAD offers considerable costs savings for Kenilworth and provides operational advantages of sharing information with two adjoining towns. Police Staff in Winnetka and Wilmette recognize the same operational advantages and have readily worked with Kenilworth in their evaluation.

Kenilworth Police received Village Board approval earlier this year to spend approximately $80,000 for the installation costs of joining our CAD system. Those costs are largely for equipment, software, installation and connectivity to our system.

Because Winnetka operates the CAD system in partnership with Wilmette, an Intergovernmental Agreement was executed which specifies the manner in which the system maintenance and system installation costs are allocated. That agreement has been in place since 2007. The participation of the Kenilworth Police Department requires an Amendment to the original agreement identifying the manner in which the system maintenance costs and system installation costs are allocated. The addition of Kenilworth to the CAD system will result in an increase to the total system maintenance costs paid to the vendor, New World Systems, however adding another partner to the CAD reduces Winnetka's portion of hardware costs. Kenilworth maintenance costs are based on population; Wilmette and Winnetka maintenance costs are allocated on an average of the last four years of system usage. System Installations Costs, mostly server replacements, will be split evenly by each of the three parties.

The offsetting maintenance and hardware expenses have a negligible budgetary impact to Winnetka, expected to be less than $1,000 over the next five years. However, the additional partner provides long-term cost saving opportunities and several operational advantages to all of the communities.

The following table presents only the software maintenance costs sharing. Winnetka's percentage of maintenance costs has been reduced from 40% to 37%. Winnetka is expected to spend $10,000 less than anticipated in 2014 on server replacement due to Kenilworth's addition, not reflected below.

Period Covered	**Annual**	**Wilmette (57%)**	**Winnetka (37%)**	**Kenilworth (6%)**
11/1/13- 10/31/14	$73,454	$41,869	$27,178	$4,407
11/1/14- 10/31/15	$75,348	$42,948	$27,879	$4,521
11/1/15-10/31/16	$77,298	$44,060	$28,600	$4,638
11/1/16-10/31/17	$79,306	$45,204	$29,343	$4,758
11/1/17-10/31/18	$81,375	$46,384	$30,109	$4,883
Total	$386,781	$220,465	$143,109	$23,207

RESOLUTION NO. R-23-2014

A RESOLUTION
APPROVING AMENDMENT NO. 1
TO THE 2007 INTERGOVERNMENTAL AGREEMENT
WITH THE VILLAGE OF WILMETTE
FOR THE JOINT PURCHASE AND OPERATION OF A
COMPUTER AIDED POLICE DISPATCH SYSTEM

WHEREAS, the Village of Winnetka, Cook County, Illinois (the "Village") is a home rule municipal corporation as provided in Article VII, Section 6 of the 1970 Constitution of the State of Illinois and, pursuant to said constitutional authority, may exercise any power and perform any function pertaining to its government and affairs for the protection of the public health, safety, morals and welfare; and

WHEREAS, at the regular meeting of the Winnetka Village Council ("Village Council") on March 6, 2007, the Village Council adopted Resolution R-15-2007, which authorized an intergovernmental agreement with the Village of Wilmette for the joint purchase and operation of a Computer Aided Police Dispatch System ("2007 Intergovernmental Agreement"); and

WHEREAS, at its March 6, 2007, regular meeting, the Village Council also approved a joint software purchase agreement for the computer aided police dispatch system; and

WHEREAS, the Village of Wilmette is a home rule municipal corporation as provided in Article VII, Section 6 of the 1970 Constitution of the State of Illinois; and

WHEREAS, the Village of Winnetka and the Village of Wilmette ("Parties") entered into the 2007 Intergovernmental Agreement pursuant to their home rule authority, as well as pursuant to Section 10 of the 1970 Constitution of the State of Illinois and to the Illinois Intergovernmental Cooperation Act, 5 ILCS 220/1, *et seq*.; and

WHEREAS, the Village of Kenilworth, an Illinois non-home rule municipal corporation, desires to become a party to the 2007 Intergovernmental Agreement; and

WHEREAS, the Village of Kenilworth is authorized to enter into intergovernmental agreements pursuant to Section 10 of the 1970 Constitution of the State of Illinois and to the Illinois Intergovernmental Cooperation Act, 5 ILCS 220/1, *et seq*.; and

WHEREAS, Section 14(g) of the 2007 Intergovernmental Agreement allows amendments to the Intergovernmental Agreement at any time pursuant to mutual agreement of the Parties; and

WHEREAS, representatives of the Parties have negotiated mutually agreeable terms to amend the 2007 Intergovernmental Agreement to address the replacement and upgrade of certain equipment related to the System and to add the Village of Kenilworth as a party; and

WHEREAS, the Parties have determined that it is in their respective best interest to amend the 2007 Intergovernmental Agreement in certain other respects, pursuant to the terms and subject to the conditions set forth in "Amendment No. 1 to the 2007 Intergovernmental Agreement with the Village of Wilmette for the Joint Purchase and Operation of a Computer Aided Police Dispatch System," a copy of which is attached hereto as Exhibit A (Amendment No. 1); and

WHEREAS, the corporate authorities of the Village of Kenilworth and the Village of Wilmette have approved the terms and conditions of Amendment No. 1; and

WHEREAS, the Village Council finds and determines that adding the Village of Kenilworth as a party to the 2007 Intergovernmental Agreement, as provided in Amendment No. 1, is for the benefit of the public health, safety, morals and welfare of the Village of Winnetka and is therefore a proper exercise of its home rule powers.

NOW, THEREFORE, be it resolved by the Council of the Village of Winnetka, Cook County, Illinois, as follows:

SECTION 1: The Village Council hereby adopts by reference the foregoing recitals as its findings of fact as if fully set forth herein.

SECTION 2: The Village Council hereby authorizes and approves "Amendment No. 1 to the 2007 Intergovernmental Agreement with the Village of Wilmette for the Joint Purchase and Operation of a Computer Aided Police Dispatch System," substantially in the form attached hereto as Exhibit A (Amendment No. 1), and the addition of the Village of Kenilworth to the 2007 Intergovernmental Agreement, as provided in said Amendment No. 1.

SECTION 3: Subject to approval of the final form of the Third Amendment by the Village Attorney, the Village President and the Village Clerk are hereby authorized and directed to execute and seal Amendment No. 1, and to take all such other actions as may be necessary to execute the agreement and effectuate its terms.

SECTION 4: This Resolution is adopted by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 5: This resolution shall be in full force and effect immediately upon its adoption.

ADOPTED this 24th day of June, 2014, pursuant to the following roll call vote:

AYES: _____

NAYS: _____

ABSENT: _____

Signed:

_____
Village President

Countersigned:

_____
Village Clerk

AMENDMENT NO. 1 TO INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLAGE OF WILMETTE AND THE VILLAGE OF WINNETKA FOR THE JOINT ACQUISITION, OPERATION AND MAINTENANCE OF COMPUTER HARDWARE AND SOFTWARE FOR A COMPUTER ASSISTED DISPATCH SYSTEM

This Amendment No. 1 ("Amendment") is made and entered into this ___ day of _____, 2014, by and between the Village of Wilmette, an Illinois home rule municipal corporation ("Wilmette"), the Village of Winnetka, an Illinois home rule municipal corporation ("Winnetka"), and Village of Kenilworth ("Kenilworth") and amends, in certain respects, that certain Intergovernmental Agreement Between the Village of Wilmette and the Village of Winnetka for the Joint Acquisition, Operation and Maintenance of Computer Hardware and Software for a Computer Assisted Dispatch System dated _____, 2007 ("Intergovernmental Agreement"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Intergovernmental Agreement.

RECITALS

WHEREAS, Wilmette and Winnetka are Parties to an Intergovernmental Agreement regarding the joint acquisition, operation, and maintenance of computer hardware and software for a computer assisted dispatch system; and

WHEREAS, the Village of Kenilworth, an Illinois non-home rule municipal corporation, desires to become a party to the Intergovernmental Agreement; and

WHEREAS, Section 14(g) of the Intergovernmental Agreement allows amendments to the Intergovernmental Agreement at any time pursuant to mutual agreement of the Parties; and

WHEREAS, the Parties wish to amend the Intergovernmental Agreement to address the replacement and upgrade of certain equipment related to the System and to add the Village of Kenilworth as a party; and

WHEREAS, the Parties have determined that it is in their respective best interest to amend the Intergovernmental Agreement in certain other respects, pursuant to the terms and subject to the conditions set forth herein; and

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree to the following:

1. Incorporation of Recitals. The foregoing recitals are incorporated herein by reference as though fully set forth in this Section 1.

2. Amendment to Preamble. The preamble of the Intergovernmental Agreement shall be stricken in its entirety and replaced with the following:

This Intergovernmental Agreement ("Agreement") is entered into this __day of March, 2007 between the **VILLAGE OF WILMETTE,** an Illinois home rule municipal corporation ("Wilmette"); the **VILLAGE OF WINNETKA,** an Illinois home rule municipal corporation ("Winnetka"); and the **VILLAGE OF KENILWORTH,** an Illinois non-home rule municipal corporation. (Hereinafter, Wilmette, Winnetka, and Kenilworth may be individually referred to as a "Party" and may be collectively referred to as the "Parties"). In consideration of the mutual promises of the Parties and other good and valuable consideration, the Parties hereby agree as follows:

3. Addition of Village of Kenilworth. Effective on the last date this Amendment has been fully executed by the Parties, as indicated by their respective signatures below, Kenilworth shall be added as a party to the Intergovernmental Agreement and agrees to be bound, in all respects, to the terms and conditions of the Intergovernmental Agreement. Unless the context requires otherwise, and to the greatest extent practicable to carry out the spirit and intent of the Intergovernmental Agreement, references to "Parties" shall include Kenilworth, and references to the duties and obligations of Winnetka shall be read to include, and shall be applicable to, Kenilworth.

4. Initial Connection Costs/Maintenance of Kenilworth's connection.. Notwithstanding anything to the contrary in this Amendment No. 1, Kenilworth shall be responsible for all initial hardware and service installation costs necessary to allow Kenilworth to connect to the System. This includes any hardware housed at Kenilworth's facilities and implementation of a data connection o the system. Kenilworth shall maintain its connection to the System at its cost for as long as it is a party to this Agreement.

5. Section 9. Apportionment of Costs. Section 9 shall be stricken in its entirety and replaced with the following:

Section 9. Apportionment of Costs.

(a) System Installation costs ("SIC"). It is the intention of the Parties that the total costs of System Installation be divided equally between the Parties, such that each Party pays one-third (1/3) of the total cost. The apportionment of SIC is set forth in further detail Amended Exhibit B.I. The Parties acknowledge that the SIC from the original agreement have been paid. The SIC contemplated in this Amendment relate to system upgrades incurred in anticipation of or pursuant to this Amendment.

(b) System Maintenance costs ("SMC"). It is the intention of the Parties that after completion of the System Installation, the on-going costs of System Maintenance shall be apportioned between the Parties as follows: (i) Wilmette – fifty-seven percent (57%); (ii)

Winnetka – thirty-seven percent (37%); and (iii) Kenilworth - six percent (6%). The apportionment of SMC is set forth in further detail in Amended Exhibit B.II.

6. Exhibit B – Apportionment of Contract Costs Between Parties. Exhibit B shall be stricken in its entirety and replaced with Amended Exhibit B attached hereto and incorporated herein by reference.

7. Counterparts. This Amendment may be executed in counterparts, each of which shall be an original but all of which taken together shall constitute but one and the same instrument. In the event any signature is delivered by facsimile or by e-mail delivery of a scanned .pdf file, such signature shall create a valid and binding obligation of the party with the same force and effect as if the facsimile or scanned .pdf signature page were an original thereof.

8. Authorization. Each Party hereby represents and warrants to the others that it is duly authorized to enter into and to carry out the terms of this Amendment.

9. Entire Agreement; Modification. All other terms and conditions contained in the Intergovernmental Agreement remain unchanged. The Intergovernmental Agreement and this Amendment No. 1 contain all of the terms and conditions agreed on by the Parties with respect to the subject matter hereof, and no other alleged communications or agreements between the Parties, written or otherwise, shall vary the terms hereof. Any modification of the Intergovernmental Agreement or this Amendment No. 1 must be in writing and signed by all Parties.

IN WITNESS WHEREOF, the Parties have executed this Amendment No. 1 as of the dates set forth below.

VILLAGE OF WILMETTE, ILLINOIS,
an Illinois home rule municipal corporation,

By:_____
Village President

Attest:_____
Village Clerk

Date:_____

VILLAGE OF WINNETKA, ILLINOIS,
an Illinois home rule municipal corporation,

By:_____
Village President

Attest:_____
Village Clerk

Date:_____

VILLAGE OF KENILWORTH, ILLINOIS,
an Illinois non-home rule municipal
corporation,

By:_____
Village President

Attest:_____
Village Clerk

Date:_____

Village of

Village Board of Trustees

Meeting Agenda

June 16, 2014 at 7:30 p.m.

I. Call to Order / Roll Call

II. Approval of Minutes

A. Regular Meeting – May 19, 2014

B. Special Meeting – May 28, 2014

III. Village President's Report

IV. Business from the Public Related to Items Not on the Agenda

V. Approval of the Warrant List

VI. Regular Scheduled Business

A. Items for Consideration by Omnibus Vote

1. Adoption of an Ordinance Designating the Amalgamated Bank of Chicago as the Bond Paying Agent for Village Bonds

2. Adoption of a Resolution Authorizing Execution of a Law Enforcement Mutual Aid Agreement

3. Adoption of an Ordinance Determining the Prevailing Rate of Wages in the Village for the Period June 1, 2014 through May 31, 2015

B. Items for Consideration by Individual Vote

4. Receipt of the Annual Financial Report for the Period January 1, 2013 through December 31, 2013

5. Authorization to Execute the Following Documents Pertaining to the Planned 2016 Resurfacing of Kenilworth Avenue between Ridge Road and Green Bay Road:
   a) Local Agency Agreement for Federal Participation
   b) Preliminary Engineering Services Agreement with Baxter & Woodman in the Amount of $45,000

6. Authorization to Execute an Intergovernmental Agreement and First Amendment to the Intergovernmental Agreement with the Villages of Wilmette

and Winnetka for the Joint Acquisition, Operation, and Maintenance of a Computer Aided Dispatch System to Add Kenilworth as one of the Parties to the Agreement

VII. Report of Committees

A. Building, Planning and Zoning, Chairman Potter
B. Finance, Chairman Hughes
C. Public Safety, Chairman McClamroch
D. Public Works, Chairman Lien

VIII. Report from Staff

A. Community Development
B. Finance
C. Police
D. Public Works
E. Legal Counsel
F. Village Manager

IX. Adjourn

Village of

Kenilworth

Request for Board Action

Agenda Item: 06

Considered By: Village Board

Date: 06/16/14

Staff Contact: Chief David Miller, Police Department

Subject: Authorization to Execute an Intergovernmental Agreement and First Amendment to the Intergovernmental Agreement with the Villages of Wilmette and Winnetka for the Joint Acquisition, Operation, and Maintenance of a Computer Aided Dispatch System to Add Kenilworth as one of the Parties to the Agreement

Summary: The Village Board authorized the Police Chief to execute a purchase agreement with New World Systems for a CAD/RMS system at the March Village Board Meeting and Wilmette and Winnetka were notified of Kenilworth's intent to join in their CAD system. On June 5th an intergovernmental agreement from Wilmette and Winnetka was provided to Kenilworth to partner with their villages to share the CAD/RMS system data and operations. A review of the IGA confirms that the agreed upon and anticipated division of costs is accurately reflected in the agreement. On the agenda for the June Village Board Meeting is a request for board action for the Village President to execute the IGA.

Background of Matter: In November 2007, the Wilmette Police Department and the Village of Winnetka Police Department launched a joint computer system that incorporated a Computer Aided Dispatch system (CAD), Records Management System (RMS) and a Mobile Squad car reporting system. New World integrates data from the 9-1-1 phone system, dispatches and monitors police calls for service and provides a mobile computer reporting platform.

The Amendment to the existing IGA between Wilmette and Winnetka would allow the Village of Kenilworth Police Department to participate in the New World Computer System.

The participation of the Kenilworth Police Department requires an Amendment to the original agreement between Wilmette and Winnetka and identifies the manner in which the system maintenance costs and system installation costs are allocated. Kenilworth maintenance costs are based on population; Wilmette and Winnetka maintenance costs are allocated on an average of the last four years of system usage. System Installation Costs, mostly server replacements, will be split evenly by each of the parties.

Financial Impact: At the March Village Board meeting, an Ordinance was approved amending the E-911 Special Revenue Fund of the FY2014 Village Budget to include an $80,000 expenditure for CAD. The cost breakdown detailed in the IGA is consistent with the funds budgeted for this purpose.

Recommendation: The Chief of Police recommends that the Village Board authorize the Village President and Village Clerk to execute the documents necessary to include the Village as one of the parties to the Intergovernmental Agreement for the Joint Acquisition, Operation, and Maintenance of a Computer Aided Dispatch System

Attachments:

- Service maintenance cost by Village for the length of the five year contract
- Copy of the original intergovernmental agreement between Wilmette and Winnetka

- Copy of the amendment to the intergovernmental agreement which includes Kenilworth as a party to the intergovernmental agreement

DATE: June 5, 2014

TO: Timothy J. Frenzer, Village Manager

FROM: Brian King, Chief of Police

SUBJECT: Approval of an Amendment to an Existing Intergovernmental Agreement with Winnetka adding the Village of Kenilworth to the New World Computer System

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Recommendation

Village Board approval of an Amendment to an existing Intergovernmental Agreement (IGA) with the Village of Winnetka allowing the participation of the Village of Kenilworth to the New World Computer System.

Background

In November 2007, the Wilmette Police Department and the Village of Winnetka Police Department launched a joint computer system that incorporated a Computer Aided Dispatch system (CAD), Records Management System (RMS) and a Mobile Squad car reporting system. New World integrates data from the 9-1-1 phone system, dispatches and monitors police calls for service and provides a mobile computer reporting platform.

The Amendment to the existing IGA would allow the Village of Kenilworth Police Department to participate in the New World Computer System, thereby reducing capital expenditures for the participating municipalities.

Discussion

Because the Village purchased and operates the CAD system in partnership with Winnetka, an Intergovernmental Agreement was executed which specifies the manner in which the system maintenance costs and system installation costs are allocated.

The participation of the Kenilworth Police Department requires an Amendment to the original agreement identifying the manner in which the system costs are allocated. Because there is no baseline for Kenilworth's calls for service, their maintenance costs will be based on population. Maintenance costs for Wilmette and Winnetka will be allocated on an average of the last four years of system usage (calls for service).

The Villages of Kenilworth and Winnetka have already approved the attached IGA.

Budget Impact

While the addition of Kenilworth will have a negligible impact on annual recurring expenses, it will provide relief in terms of capital expenditures. Every five to six years, the CAD server must be replaced and Wilmette and Winnetka have historically split that cost (approximately $60,000 total). Such replacements will now be evenly divided among the three municipalities.

Documents Attached

1. Proposed IGA

Agenda Item Executive Summary

Title: M-5-2014 - Annual Equipment Disposal - Introduction

Presenter: Katherine S. Janega, Village Attorney

Agenda Date: 06/24/2014

Consent: ☐ YES ☑ NO

☑ Ordinance
☐ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

None.

Executive Summary:

From time to time, it is necessary to dispose of vehicles, equipment and other machinery that are no longer used in the Village's operations due to scheduled retirement, replacement or obsolescence. Consistent with procedures set by Illinois statutes, the Village's established practice is to pass an ordinance authorizing the Village Manager to determine the value and the appropriate method for disposing of such items.

Ordinance M-5-2014 authorizes the disposition of specialty firearms that fire rubber bullets, and a Water & Electric line truck that will be retired from the fleet when its replacement is delivered in the fall. The ordinance also contains the annual authorization for the Manager to dispose of other Water & Electric Department equipment as necessary in the course of the current fiscal year.

Because some Water & Electric equipment contains PCBs, the ordinance requires that the disposal of any such surplus property also complies with applicable environmental regulations, and that the disposal is properly documented.

Recommendation:

Consider introduction of Ordinance M-5-2014, titled "An Ordinance Authorizing the Sale or Other Disposition of Surplus Equipment, Machinery and Property."

Attachments:

Agenda Report
Ordinance M-5-2014 - "An Ordinance Authorizing the Sale or Other Disposition of Surplus Equipment, Machinery and Property."

AGENDA REPORT

SUBJECT: **Ordinance M-5-2014 - Authorizing the Sale or Other Disposition of Surplus Equipment, Machinery and Property**

PREPARED BY: Katherine S. Janega, Village Attorney

DATE: June 18, 2014

Background

From time to time, the Village's operating departments retire or replace machinery, equipment and vehicles, due to age, obsolescence, condition or scheduled retirement.

The Village adheres to the statutory process of requiring an ordinance to authorize the destruction or disposal of such surplus Village property. Ordinances are generally presented for consideration when the Northwest Municipal Conference conducts a vehicle auction, when major equipment is ready to be retired, or when the opportunity arises for the Village to donate vehicles or equipment that are no longer suitable for Village use to intergovernmental agencies or to other municipalities. It has also become customary for the Village to explore transferring surplus equipment and machinery to other municipalities, intergovernmental agencies or municipal utilities in the State.

Ordinance M-5-2014 reflects the Village's practice and authorizes the disposal of one vehicle and certain other equipment that has been, or is about to be, retired by the Police Department and the Water & Electric Department.

Surplus Water & Electric Property

Ordinance M-5-2014 authorizes the disposal of Line Truck No. 64, a 2000 Ford F-550 truck with 100,098 miles and 12,044 hours of service. The Village Council has previously authorized the purchase of a replacement vehicle, and delivery is expected this fall. When the new vehicle is delivered, Truck No. 64 will be retired from service.

In addition, the Water & Electric Department routinely monitors the condition of its equipment, and retires such equipment as transformers, meters or switchgear as they become obsolete or too costly to repair, or when they become unsuitable for further use due to size, mechanical damage, or electrical failure. To avoid having either to seek repeated authorizations as equipment is retired or to accumulate and store large quantities or surplus equipment and machinery, it's become the established practice to request a single, annual authorization to dispose of Water & Electric Department equipment and machinery as it is removed from service.

Ordinance M-5-2014 provides that continuing authorization for the remainder of this fiscal year. Because some of the equipment used by the Water & Electric Department contains Polychlorinated Biphenyls (PCBs), Section 7 of Ordinance M-5-2014 requires any person or

entity that handles the disposition of equipment with PCBs to provide a sworn statement certifying that the disposal or destruction complies with all environmental regulations.

Surplus Police Property

The Police Department has requested authority to dispose of some non-lethal firearms. These firearms, which shoot rubber projectiles and are used to incapacitate a person engaged in life-threatening behavior, were purchased in 1999 and are no longer useful to the Department.

The original retail purchase price of the three weapons and associated gear (carrying cases and ammunition) was approximately $9,100. The Department reports that an active attempt to competitively resell the equipment would result in considerable staff work and would produce and estimated net of less than $2,500 for the entire lot. However, the Police Department has determined that the weapons and gear may be of use to the Northern Illinois Police Alarm System (NIPAS) in providing mutual aid.

Recommendation:

Consider introduction of Ordinance M-5-2014, titled "An Ordinance Authorizing the Sale or Other Disposition of Surplus Equipment, Machinery and Property."

ORDINANCE NO. M-5-2014

AN ORDINANCE
AUTHORIZING THE SALE OR OTHER DISPOSITION
OF SURPLUS EQUIPMENT, MACHINERY AND PROPERTY

WHEREAS, from time to time, the operating departments of the Village of Winnetka ("Village") request authorization to dispose of equipment, machinery and other property that is no longer used or useful to the Village because it has been retired from service, been replaced or become obsolete; and

WHEREAS, the Village of Winnetka Police Department has requested authorization to dispose of the following specialty firearms that were purchased, maintained, used in training and deployed by the Police Department from 1999 to 2013 ("Retired Equipment"),

Serial Number	Year	Make / Model	Comments	Minimum Price
M0722	N/A	Sage Model SL6	37mm; specialty firearm (fires rubber projectile)	Salvage
M650329	N/A	Sage Model SL6	37mm; specialty firearm (fires rubber projectile)	Salvage
91025	N/A	Sage Model Deuce	37mm; specialty firearm (fires rubber projectile)	Salvage
N/A	N/A	N/A	Miscellaneous accessories, carrying cases and ammunition	Salvage

but which is no longer useful in the Police Department's operations and/or has been scheduled for replacement; and

WHEREAS, the Police Department has also reported that the Retired Equipment has a minimal cash value on an individual basis and an estimated combined value of less than $2,500.00, and may be of greater use if donated to the Northern Illinois Police Alarm System (NIPAS) for use by that agency in providing mutual aid; and

WHEREAS, the Water and Electric Department has requested authorization to dispose of the following vehicle ("Retired Vehicle"),

Serial Number	Year	Make / Model	Comments	Minimum Price
1FDAF56F7YEC84944	2000	Ford F-550	Line Truck No. 64, with 100,098 miles and 12,044 hours of service	$5,000.00

which will be retired from service and no longer useful when the new truck is delivered in the fall of 2014; and

WHEREAS, the Water and Electric Department has also reported to the Village Council that from time to time in the course of the year, certain electrical transformers and other equipment are also expected to be retired from service and will no longer be necessary or useful to the Village of Winnetka ("Additional Retired Equipment"); and

WHEREAS, the Village Manager has requested that the Council of the Village of Winnetka ("Village Council") (i) determine that the Retired Equipment and Retired Vehicle are no longer necessary or useful to the Village of Winnetka, and (ii) authorize the Village Manager to dispose of the Retired Equipment, Retired Vehicle and Additional Retired Equipment (collectively, the "Surplus Property"); and

WHEREAS, the Village of Winnetka is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970 and has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village, including, but not limited to, the powers to regulate for the protection of the public health, safety, morals and welfare; and

WHEREAS, the Village Council finds that the disposal of surplus property owned by the Village, such as the Surplus Property described in this Ordinance, is a matter pertaining to the affairs of the Village and to the public health, safety and general welfare; and

WHEREAS, the Village Council has determined that disposal of the Surplus Property as provided in this Ordinance is necessary and proper so as to avoid incurring unnecessary additional costs and unnecessary exposure to liability related to storing or disposing of the Surplus Property; and

WHEREAS, the Village Council, in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970, has determined that it is in the best interests of the Village and its citizens to dispose of the Surplus Property in a manner consistent with the provisions of Section 11-76-4 of the Illinois Municipal Code (65 ILCS 5/11-76-4), as more fully set forth in this Ordinance; and

WHEREAS, this Ordinance has been placed on the Village Council's agenda and made available for public inspection at Village Hall and on the Village's web site, in accordance with Sections 2.04.040 and 2.16.040 of the Winnetka Village Code and applicable law.

NOW THEREFORE, the Council of the Village of Winnetka do ordain as follows:

SECTION 1: The foregoing recitals are hereby incorporated as the findings of the Council of the Village of Winnetka ("Village Council"), as if fully set forth herein.

SECTION 2: The Village Council finds: (a) that the Retired Property and Retired Vehicle described in the preamble to this Ordinance are no longer necessary or useful to the Village of Winnetka; (b) that, in the event the Water and Electric Department retires any of the Additional Retired Equipment, as defined in the preamble to this Ordinance, between the date this Ordinance is passed and the end of the 2014 fiscal year, such Additional Retired Equipment shall be determined to no longer be necessary or useful to the Village, provided that the Director of Water and Electric, with the approval of the Village Manager, determines that the Additional Retired Equipment cannot reasonably be reused either in the Village's electric distribution system or by another operating department of the Village; and (c) that the best interests of the Village of Winnetka will be served by the sale or other disposition of the Retired Equipment,

Retired Vehicle and Additional Retired Equipment (collectively, the "Surplus Property") as provided in this Ordinance.

SECTION 3: The Village Council further finds that, based on prior experience in disposing of similar items of property, the cost of conducting a public sale of the Surplus Property, which includes the costs of advertising and publishing, as well as personnel costs for maintaining security and conducting the public sale, exceed the value of such items.

SECTION 4: The Village Manager is hereby authorized and directed to determine the value and to dispose of the Surplus Property in the manner provided in Sections 5 and 6 of this Ordinance.

SECTION 5: If the Surplus Property does not contain polychlorinated biphenyls (PCBs), the Village Manager, in the exercise of his discretion, may dispose of the Surplus Property in any of the following ways:

A. by selling the Surplus Property to the highest bidder after competitive bidding, as provided in Section 6 of this Ordinance; and

B. in furtherance of intergovernmental cooperation as provided in Article VII, Section 10 of the Illinois Constitution of 1970, and in the Intergovernmental Cooperation Act, 5 ILCS 220/1, *et seq.*, by transferring title of the Surplus Property, as follows:

1. in the case of the Surplus Vehicle, by transferring title to any Illinois municipality or municipal electric utility, with or without competitive bidding, as provided in Section 6 of this Ordinance; and

2. in the case of the Additional Surplus Property, by transferring title to any Illinois municipal electric utility, with or without competitive bidding, as provided in Section 6 of this Ordinance; and

3. in the case of the Surplus Police Equipment, by transferring title to NIPAS or any other Illinois intergovernmental mutual aid agency, with or without competitive bidding, as provided in Section 6 of this Ordinance.

SECTION 6: Competitive bids may be obtained with or without advertising. The terms and conditions of any transfer of title without competitive bidding shall be established by the Village Manager on a case by case basis, after considering such factors as the estimated value of the Surplus Property and the technical needs and financial capabilities of the municipality, municipal electric system or intergovernmental agency to which the property is transferred.

SECTION 7: All Surplus Property that contains or is contaminated by PCBs shall be disposed of at the lowest cost to the Village, which cost may be determined with or without advertising; provided, that any person or entity that disposes of or destroys any part of such Surplus Property shall provide a sworn statement to the Village certifying that such disposal or destruction complies with all applicable environmental laws and regulations.

[Remainder of this page intentionally left blank.]

SECTION 8: This Ordinance is passed by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970

SECTION 9: This Ordinance shall take effect immediately upon its passage, approval and publication as provided by law.

PASSED this ____ day of _____, 2014, pursuant to the following roll call vote:

AYES: _____

NAYS: _____

ABSENT: _____

APPROVED this ____ day of _____, 2014.

Signed:

_____
Village President

Countersigned:

_____
Village Clerk

Published by authority of the President and Board of Trustees of the Village of Winnetka, Illinois, this ____ day of _____, 2014.

Introduced: June 24, 2014
Passed and Approved:

Agenda Item Executive Summary

Title: 925-931 Green Bay Road - Request to Extend Special Use and Variation - Intro/Adopt

Presenter: Michael D'Onofrio, Director of Community Development

Agenda Date: 06/24/2014

Consent: [ ] YES [✔] NO

[✔] Ordinance
[ ] Resolution
[ ] Bid Authorization/Award
[ ] Policy Direction
[ ] Informational Only

Item History:

June 4, 2013, Ordinance M-7-2013 approved for introduction
June 18, 2013, Ordinance M-7-2013 adopted
June 3, 2014, Policy Direction

Executive Summary:

On June 18, 2013, the Council adopted Ordinance M-7-2013 (Attachment B), which granted a special use and variation from the continuous street wall requirements for the commercial districts, to allow the owners of 925-931 Green Bay Road to construct a street-level parking lot, with a gateway, fountain and seating area at its entrance on Green Bay Road. The southern portion of the property, known as the Packard Building (925 Green Bay Road), was formerly occupied by The GAP, while the northern portion (929-931 Green Bay Road) is the site of a 12 space parking lot and a one-story, two-space commercial building with the southern portion formerly occupied by Bedside Manor and the northern space still occupied by Body and Sole.

Section 4A of the Ordinance requires construction of the parking lot to begin within 12 months, and Section 4B provides that both the special use and variation will expire if construction of the parking lot does not begin within 12 months.

The property owners have not filed for any permits and the commercial space in the Packard Building remains vacant.

The attorney for the owners has submitted a written request (Attachment C) seeking an extension of the special use (and by necessity, the variation), pursuant to Section 17.56.100A of the Zoning Ordinance, which provides:
"A special use permit shall become null and void if the construction or occupancy for which the permit was granted has not been actively pursued within one year and completed and occupied within eighteen (18) months following the date of Village Council approval, except that such time limits may be extended by the Village Council, at its discretion, following a written request to do so".

On June 3, 2014, the Council considered the applicant's request for an extension and directed Staff to prepare an ordinance extending the time limit to April 30, 2015.

Recommendation:

1. Consider waiving introduction of Ordinance M-6-2014. In order to waive introduction, it requires an affirmative vote of all present Council members.
2. Consider adoption of Ordinance M-6-2014, granting extension of the Special Use Permit and variation to allow for construction of a surface parking lot at 925-931 Green Bay Road. Adoption of the ordinance requires the concurrence of a majority of the Council.

Attachments:

1) Agenda Report
2) Attachment A - Ordinance M-6-2014
3) Attachment B - Ordinance M-7-2013
4) Attachment C - Letter Requesting Extension

AGENDA REPORT

TO: Village Council

PREPARED BY: Michael D'Onofrio, Director of Community Development

SUBJECT: 925-931 Green Bay Road – Ordinance M-6-2014

DATE: June 18, 2014

REF: June 3, 2014 Council Mtg. pp.42-56

Introduction

On June 18, 2013, the Council adopted Ordinance M-7-2013 (Attachment B), which granted a special use and variation from the continuous street wall requirements for the commercial districts, to allow the owners of 925-931 Green Bay Road to construct a street-level parking lot, with a gateway, fountain and seating area at its entrance on Green Bay Road. The southern portion of the property, known as the Packard Building (925 Green Bay Road), was formerly occupied by The GAP, while the northern portion (929-931 Green Bay Road) is the site of a 12 space parking lot and a one-story, two-space commercial building with the southern portion formerly occupied by Bedside Manor and the northern space still occupied by Body and Sole.

Section 4A of the Ordinance requires construction of the parking lot to begin within 12 months, and Section 4B provides that both the special use and variation will expire if construction of the parking lot does not begin within 12 months.

The property owners have not filed for any permits and the commercial space in the Packard Building remains vacant.

The attorney for the owners has submitted a written request (Attachment C) seeking an extension of the special use (and by necessity, the variation), pursuant to Section 17.56.100A of the Zoning Ordinance, which provides:

> *A special use permit shall become null and void if the construction or occupancy for which the permit was granted has not been actively pursued within one year and completed and occupied within eighteen (18) months following the date of Village Council approval, except that such time limits may be extended by the Village Council, at its discretion, following a written request to do so.*

Background

The Special Use Permit and variation were granted in order to allow the property owner, Packard Associates L.P., to construct a 40 car parking lot at 929-931 Green Bay Road. This parking lot would serve the tenant(s) of 925 Green Bay Road. In testimony by Packard Associates, it stated

that the parking lot is necessary to improve its ability to attract an anchor tenant to the 925 Green Bay Road building.

The parcel at 929-931 Green Bay Road is adjacent (north) to the 925 Green Bay Road. building, it measures 50' x 200'. It is occupied with a one-story commercial building measuring 3,350 square feet and a 12-space parking lot, accessible from a Green Bay Road driveway and from the adjoining public alley (Tower Court) to east.

The proposed parking lot would include all of the 929-931 Green Bay Road property. It would be accessed off Green Bay Road, with the existing 12' driveway widened to 16 feet. The lot would have a one way traffic pattern with vehicles entering from the west off Green Bay Road and exiting on the east to Tower Court, then north (Tower Court is one-way south to north) towards Gage Street, ultimately exiting on Merrill Street.

The 925 Green Bay Road building includes 12,500 square feet of ground floor commercial space, as well as twenty (20) residential apartment units on the second floor. Seventeen enclosed parking spaces are located at the rear of the Packard building accessed from Tower Court.

In addition to the parking areas, the parking lot will also have landscaping improvements, including a plaza area adjacent to Green Bay Road, a sidewalk which incorporates brick pavers, a low brick seat wall, a decorative archway feature and a landscape bed approximately 80 square feet in area.

Request

Attached is a letter from the law firm of Meltzer, Purtill & Stelle, LLC (Attachment C) which is representing the owners. The letter requests that an extension for the special use and variation be extended to April 15, 2015. The request is being made based on the current state of negotiations with a prospective tenant for the Packard Building and the existing lease term with Body and Sole.

Whether a request for a time extension is granted is within the sole discretion of the Village Council. The Council has the authority to grant or deny the request, with or without specific findings (but preferably with) and with or without conditions. This is different from an amendment to the ordinance which would require a public notice and hearing before the Zoning Board of Appeals.

It should be noted that within the past 12 months, Staff has had a number of conversations with the owners of Packard Associates. Furthermore, Staff has met on site with a prospective tenant and its architect for the Packard Building within the past several months. However, at this time, no plans or building permit applications have been submitted to the Village for the parking lot improvements.

At the June 3, 2014 Village Council meeting, this matter was up for policy direction. During discussion on the request for an extension several concerns were expressed. As a result, Ordinance M-6-2014 was drafted to address those concerns. First, in the recitals section of the ordinance the following are included:

- The finding that the property owner has "actively pursued" the construction of the parking lot.
- The finding that the extension request was timely and that the rescheduling of the Council's June 17th meeting made it impossible to take final action before June 18th (one year to date from original ordinance).

It should be noted that all the terms and conditions of the original ordinance remain in effect, with the exception of Subsections A and B of Section 3, which contained the expiration language. Finally, a new condition was added, Subsection C of Section 3, which states that any request for a further extension will be treated as a new application that will be subject to all applicable procedures.

Recommendation

1. Consider waiving introduction of Ordinance M-6-2014. In order to waive introduction, it requires an affirmative vote of all present Council members.
2. Consider adoption of Ordinance M-6-2014. Adoption of the ordinance requires the concurrence of a majority of the Council.

Attachments:

Attachment A: Ordinance M-6-2014
Attachment B: Ordinance M-7-2013
Attachment C: Correspondence from Meltzer, Purtill & Stelle LLC

ORDINANCE NO. M-6-2014

AN ORDINANCE
EXTENDING THE SPECIAL USE PERMIT AND VARIATION
GRANTED PURSUANT TO ORDINANCE M-7-2013
(925-931 Green Bay Road)

WHEREAS, the Village of Winnetka ("Village") is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970 and, pursuant thereto, has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village, including the power to regulate for the protection of the public health, safety and welfare; and

WHEREAS, the Village Council find that establishing standards for the use and development of lands and buildings within the Village and establishing and applying criteria for variations from those standards are matters pertaining to the affairs of the Village; and

WHEREAS, on June 18, 2013, the Village Council enacted Ordinance M-7-2013 ("Ordinance"), granting a variation and special use for the following described real estate (the "Subject Property"), which is commonly known as 925-931 Green Bay Road:

> Lot 3 in Block 5 in Jared Gage's Subdivision in Section 17 and 8, Township 42 North, Range 13 East of the Third Principal Meridian, in Cook County, Illinois;
>
> And also
>
> The southerly 50 feet of that part of the east half of the Northwest Quarter of said Factional Section 17, described as follows: Commencing at the Northeast corner of Lot 1 in Block 5 in Jared Gage's Subdivision aforesaid and running thence Southeasterly along the Easterly line of Lots 1,2 and 3 in said Block 5, a distance of 150 feet; thence running Easterly on a line of parallel with the southerly line of Gage Street extended, a distance of 50 feet; thence Northwesterly on a line parallel with the Easterly line of Lots 1,2 and 3 aforesaid, a distance of 150 feet to a point on the South line of Gage Street extended, and thence Southwesterly to the point of beginning, in Cook County, Illinois;
>
> And also
>
> Lots 4 and 5 in Block 5 in Jared Gage's Subdivision of part of Northwest Quarter of Fractional Section 17 and part of the East half of the Southwest Quarter of Fractional Section 8, all in Township 42 North, Range 13 East of the Third Principal Meridian;
>
> And also
>
> The Southerly 18 feet of strip of land 50 feet wide and 168 feet long lying Easterly of adjoining Lots 1, 2 and 3 and Northerly 18 feet of Lot 4 in Block 5 in Jared Gage's Subdivision aforesaid, all in Cook County, Illinois; and

WHEREAS, the Ordinance granted a special use permit and variation to allow the construction of a street-level parking lot on that portion of the Subject Property known as 929 - 931 Green Bay Road ("Parcel 1"), with streetscape amenities (collectively, the "Parking Lot"), as

depicted in Owner's Exhibit E, "Revised Site Plan," and Exhibit F, "Revised Arched Gateway Feature Concept," both prepared by The Lakota Group and dated April 18, 2013; and

WHEREAS, the owner has been in negotiations with a potential tenant for the Subject Property, but has not yet finalized the terms of a lease; and

WHEREAS, the building on Parcel 1 contains two retail spaces, both of which were under lease when it was purchased by the current owner; and

WHEREAS, although the tenant of one of the retail spaces on Parcel 1 has relocated, the other retail space remains occupied by a tenant whose lease does not expire until February of 2015; and

WHEREAS, the Owner has not yet begun construction of the proposed Parking Lot and cannot begin such construction until the building on Parcel 1 has been vacated and demolished; and

WHEREAS, Section 4.B of the Ordinance provides that the special use and variation granted by that Ordinance will expire if the construction of the Parking Lot did not commence within 12 months after the effective date of the Ordinance; and

WHEREAS, Section 17.56.100(A) of the Winnetka Zoning Ordinance, Title 17 of the Winnetka Village Code, provides that a special use permit shall become null and void if the construction or occupancy for which the special use is granted has not been "actively pursued" within one year and "completed and occupied" within 18 months following the date of Village Council approval; and

WHEREAS, Section 16.56.100 of the Winnetka Zoning Ordinance also provides that the time limits can be extended by the Village Council, at its discretion, following a written request to do so; and

WHEREAS, the Owner has submitted a timely written request to extend the special use and variation granted by the Ordinance to April 30, 2015, to allow time (i) for the tenant in the building on Parcel 1 to move after the lease for that space expires, and (ii) for the Owner to complete lease negotiations with a new tenant for the Subject Property; and

WHEREAS, the Village Council finds that, although construction of the Parking Lot will not begin within 12 months after the grant of the special use and variation, the Owner has actively pursued the work permitted by the Ordinance; and

WHEREAS, the Village Council finds that, although construction of Parking Lot cannot be completed and occupied within 18 months after the grant of the special use, the Owner has made reasonable efforts to pursue the work permitted by the Ordinance, in that the Owner has (i) continued efforts to negotiate a lease with a new tenant for the large commercial building on the Subject Property, (ii) has relocated one of the retail tenants from Parcel 1, and (iii) is continuing efforts to relocate the remaining tenant on Parcel 1; and

WHEREAS, at the regular meeting of the Village Council on June 3, 2014, the Village Council considered the Owner's written request for an extension and directed staff to prepare an ordinance granting the requested extension; and

WHEREAS, the Village Council meeting of June 17, 2014, was rescheduled for June 24, 2014, making it impossible for the Council to take final action on the Owner's extension request before June 18, 204; and

WHEREAS, this Ordinance has been placed on the Village Council's agenda and made available for public inspection at Village Hall and on the Village's web site, in accordance with Sections 2.04.040 and 2.16.040 of the Winnetka Village Code and applicable law.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Winnetka as follows:

SECTION 1: The foregoing recitals are hereby incorporated as the findings of the Council of the Village of Winnetka, as if fully set forth herein.

SECTION 2: That, subject to the terms and conditions hereinafter set forth, and pursuant to Section 17.56.100 of Chapter 17.56 of the Winnetka Zoning Ordinance, Title 17 of the Winnetka Village Code, the special use permit and variation granted by Ordinance M-7-2013 with respect to the Subject Property, commonly known as 925 - 931 Green Bay Road and located in the C-2 Retail Overlay Zoning District, is hereby extended from June 18, 2014, to and including April 30, 2015.

SECTION 3: The extension hereby granted shall be subject to the following conditions:

A. The construction of the Parking Lot shall commence no later than April 30, 2015.

B. The special use permit and variation granted by Ordinance M-7-2013 and extended by this Ordinance shall expire if construction of the Parking Lot is not commenced by April 30, 2015.

C. Any requests for further extensions of the special use and variation granted by Ordinance M-7-2013 shall be treated as a new application and shall be subject to public hearings before the Zoning Board of Appeals and such other subordinate bodies as may be required by Chapters 17.56 and 17.60 of the Winnetka Village Code at the time such new application is filed.

SECTION 4: Except as provided in Section 3 of this Ordinance, the terms and conditions of Ordinance M-7-2013 shall remain in full force and effect.

[Remainder of this page intentionally left blank.]

SECTION 5: This Ordinance is passed by the Council of the Village of Winnetka in the exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 6: This Ordinance shall take effect immediately upon its passage, approval and posting as provided by law.

PASSED this ___ day of _____, 2014, pursuant to the following roll call vote:

AYES: _____

NAYS: _____

ABSENT: _____

APPROVED this ___ day of _____, 2014.

Signed:

_____
Village President

Countersigned:

_____
Village Clerk

Published by authority of the President and Board of Trustees of the Village of Winnetka, Illinois, this ___ day of _____, 2014.

Introduced: June 24, 2014
Passed and Approved:

VILLAGE OF WINNETKA M-ORDINANCES / 2013 / ORDINANCE NO. M-7-2013
ORDINANCE NO. M-7-2013

AN ORDINANCE

GRANTING A SPECIAL USE PERMIT AND A VARIATION IN THE APPLICATION OF THE ZONING ORDINANCE OF THE VILLAGE OF WINNETKA, COOK COUNTY, ILLINOIS (925-931 Green Bay Road)

WHEREAS, the Village of Winnetka ("Village") is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970 and, pursuant thereto, has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village, including the power to regulate for the protection of the public health, safety and welfare; and

WHEREAS, the Village Council find that establishing standards for the use and development of lands and buildings within the Village and establishing and applying criteria for variations from those standards are matters pertaining to the affairs of the Village; and

WHEREAS, of the following described real estate (the "Subject Property"), which is commonly known as 925-931 Green Bay Road:

Lot 3 in Block 5 in Jared Gage's Subdivision in Section 17 and 8, Township 42 North, Range 13 East of the Third Principal Meridian, in Cook County, Illinois;

And also

The southerly 50 feet of that part of the east half of the Northwest Quarter of said Factional Section 17, described as follows: Commencing at the Northeast corner of Lot 1 in Block 5 in Jared Gage's Subdivision aforesaid and running thence Southeasterly along the Easterly line of Lots 1,2 and 3 in said Block 5, a distance of 150 feet; thence running Easterly on a line of parallel with the southerly line of Gage Street extended, a distance of 50 feet; thence Northwesterly on a line parallel with the Easterly line of Lots 1,2 and 3 aforesaid, a distance of 150 feet to a point on the South line of Gage Street extended, and thence Southwesterly to the point of beginning, in Cook County, Illinois;

And also

Lots 4 and 5 in Block 5 in Jared Gage's Subdivision of part of Northwest Quarter of Fractional Section 17 and part of the East half of the Southwest Quarter of Fractional Section 8, all in Township 42 North, Range 13 East of the Third Principal Meridian;

And also

The Southerly 18 feet of strip of land 50 feet wide and 168 feet long lying Easterly of adjoining Lots 1, 2 and 3 and Northerly 18 feet of Lot 4 in Block 5 in Jared Gage's Subdivision aforesaid, all in Cook County, Illinois; and

WHEREAS, the Subject Property is located in the Hubbard Woods business district, on the east side of Green Bay Road between Tower Road and Gage Street, in the C-2 Retail Overlay District of the C-2 (General Retail) Commercial Zoning District provided for in Chapter 17.44 of the Winnetka Zoning Ordinance, Title 17 of the Winnetka Village Code; and

WHEREAS, the Subject Property consists of two parcels: (a) a 10,000 square-foot rectangular parcel, commonly known as 929-931 Green Bay Road ("Parcel 1"), which is improved with a one-story, 3,350 square-foot commercial building in the northwest corner and a 12-foot wide driveway that leads to a 12-space parking area in the rear; and (b) a 20,000 square foot rectangular parcel that lies immediately to the south of Parcel 1, is commonly known as 925 Green Bay Road ("Parcel 2"), and is improved with a building commonly known as the "Packard Building;" and

WHEREAS, the building on Parcel 1 has two retail spaces that house *Body and Sole*, and *Bedside Manor*, two established retail sales businesses; and

WHEREAS, Packard Associates, L.P. ("Owner"), is the sole beneficiary of a trust that owns Parcel 2 and that recently purchased the Subject Property; and

WHEREAS, the Owner proposes to demolish the building located on Parcel 1 and to construct a 40-car street-level parking lot to serve tenants of the Packard Building on Parcel 2; and

WHEREAS, pursuant to Section 17.44.030 of Chapter 17.44 and Section 17.46.110 of Chapter 17.46 of the Winnetka Zoning Ordinance, street level parking lots are permitted only as a special use in the C-2 (General Retail) Commercial Zoning District; and

WHEREAS, on March 6, 2013, the Owner filed an application for a special use permit to allow the construction of the proposed street level parking lot on the Subject Property; and

WHEREAS, on March 14, 2013, the Owner also filed an application seeking the following variations from the development standards in Chapter 17.46 of the Winnetka Zoning Ordinance: (a) a variation from the requirements of the intensity of use of lot limitations of Section 17.46.040 to allow a combined impermeable lot coverage for the entire Subject Property of 29,258 square feet, whereas a maximum of 27,000 square feet is permitted, resulting in a variation of 2,258 square feet (8.37%); and (b) a variation from the front yard setback provisions of Section 17.46.040 (A) that require the creation of a continuous streetwall by aligning the front building lines of adjoining buildings; and

WHEREAS, the special use permit and zoning variations are being requested to allow the existing building, driveway and rear parking area on Parcel 1 to be removed and to be replaced

by a 40-space street level parking lot that will include the north 9.75 feet of Parcel 2 and will have a street frontage that consists of a widened driveway entrance, a narrow plaza area adjacent to the north building line of the Packard Building, a low brick seat wall with a fountain detail, a decorative column and archway feature and a landscape bed with an area of approximately 80 square feet; and

WHEREAS, the Owner's special use request is subject to the conditions and requirements set out in Sections 17.44.020 (B) and 17.46.110 of the Zoning Ordinance, as well as the conditions and requirements pertaining to special uses set forth in Chapter 17.56 of the Winnetka Zoning Ordinance; and

WHEREAS, on April 8, 2013, on due notice thereof, the Zoning Board of Appeals conducted a public hearing on the proposed special use and requested variations; and

WHEREAS, by the unanimous vote of the five members of the Zoning Board of Appeals present on April 8, 2013, the Zoning Board of Appeals has recommended to the Village Council that the requested special use permit for the street level parking be granted; and

WHEREAS, by the unanimous vote of the five members of the Zoning Board of Appeals present on April 8, 2013, the Zoning Board of Appeals has recommended to the Village Council that both of the requested variations be granted, although it also recommended that the Owner reduce the impermeable surface so as to bring the impermeable surface within the applicable limits and thereby eliminate the need for the variation from the intensity of use of lot limitations; and

WHEREAS, following the meeting of the Zoning Board of Appeals, the Owner modified the proposed parking lot plan to provide for increased usage of pavers rather than impermeable pavement, as a result of which the impermeable surface in the amended plan now complies with Section 17.46.040 of the Zoning Ordinance, and the Owner has accordingly withdrawn its request for a variation from that requirement; and

WHEREAS, on March 21, 2013, pursuant to Chapter 15.40 of the Village Code, the Design Review Board met to consider the Owner's proposed plan and provide comment on its consistency with the Village of Winnetka Design Guidelines; and

WHEREAS, at the request of the Owner, the meeting of the Design Review Board was continued to April 18, 2013, to enable the Owner to address the Design Review Board's comments; and

WHEREAS, at the Design Review Board's meeting on April 18, 2013, the Owner presented its revised plan with the conforming impermeable surface and, upon completing their discussion of Owner's revised proposal, the four members of the Design Review Board then present issued generally favorable comment on the modified plans, subject to the following recommendations: (a) adding two islands to the parking lot, one at the very rear and one on the north side, with

signage to help soften the appearance; (b) adding a second landscape island on the north side, which could be used as a base for growing vines to soften the appearance of the wooden fence; (c) using evergreens or coniferous trees at the front planting area; (d) eliminating the fountain to provide an uninterrupted seat wall; (e) reducing the width of the entrance from 16 feet to 14 feet; and (f) conforming to the 9-foot parking stall width, depending on engineering review; and

WHEREAS, on April 24, 2013, on due notice thereof, the Plan Commission considered the Owner's request for a special use and by the favorable vote of seven of the nine voting members of the Plan Commission then present, has found the proposed special use to be consistent with the Comprehensive Plan and has recommended that the special use permit for the street level parking be approved; and

WHEREAS, the evidence submitted by the Owner included a Traffic and Parking Study prepared by Kenig, Lindgren, O'Hara and Aboona, Inc. ("KLOA Study"), which evaluated existing roadway system characteristics, measured existing traffic volumes, conducted a parking survey and observed pedestrian volumes; and

WHEREAS, the KLOA Study concluded: (a) that the proposed parking lot will not change or negatively impact the pedestrian experience on Green Bay Road; (b) that left turns from Green Bay Road to the Subject Property will have a minimal impact on southbound traffic; (c) that the proposed special use will generate minimal additional traffic; and (d) the proposed parking lot will ensure that there is adequate parking for future retail use at the Packard Building without exacerbating parking conditions on Green Bay Road; and

WHEREAS, the separate proceedings before the Zoning Board of Appeals and the Plan Commission both included questioning of the Owner by members of the Zoning Board of Appeals and the Plan Commission; and

WHEREAS, two owners of properties located within 250 feet of the Subject Property appeared at the hearings of the Zoning Board of Appeals and the Plan Commission, with one speaking in favor of the Owner's proposal, and the other speaking against it; and

WHEREAS, neither the two owners who appeared, nor any other owners of properties located within 250 feet of the Subject Property submitted any other evidence or requested an opportunity to cross-examine witnesses at either the Zoning Board of Appeals hearing or the Plan Commission meeting; and

WHEREAS, the record also includes testimony from neighboring third parties who operate businesses in the vicinity and who inquired about specifics of the Owner's plan, with some speaking in favor and some speaking in opposition; and

WHEREAS, no one who sought to comment on the Owner's proposal at the Zoning Board of Appeals, the Plan Commission or the Design Review Board was denied the opportunity to do so;

and

WHEREAS, the proceedings of the Zoning Board of Appeals and Plan Commission conformed with all requirements of their procedural rules, the Winnetka Village Code and applicable statutes of the State of Illinois; and

WHEREAS, the Village Council has not received any written protests opposing the proposed special use, as provided in Section 17.56.050 of the Zoning Ordinance; and

WHEREAS, the Village Engineer has reviewed the KLOA Study and has reported (a) that the study methodology is in keeping with sound traffic engineering principles and practice; and (b) that he concurs with the KLOA Study's conclusions (i) that the proposed parking lot will not have a significant impact on traffic flow or congestion on the adjacent street system and (ii) that, with the full occupancy of the retail space in the Packard Building, additional convenient parking is necessary to avoid negatively impacting parking availability in the immediate vicinity; and

WHEREAS, the Village Engineer has recommended that the Owner provide a detailed signage plan as part of the permit application to assure that ingress, egress and the network of one-way roads are properly communicated; and

WHEREAS, the Village Engineer has also commented on the width of the proposed parking spaces, and has observed that, while the 9.0-foot width recommended by the Design Review Board is preferable, the proposed 8.5-foot width for the new parking spaces is within the acceptable range; and

WHEREAS, subject to the terms and conditions of this Ordinance, the proposed special use will neither endanger nor be detrimental to the public health, safety, comfort, morals or general welfare, in that the proposed parking lot: (a) will provide a substantial number of off-street parking spaces to support the commercial use of the first floor of the Packard Building; (b) will add to the inventory of accessible parking spaces by placing such spaces in close proximity to the Packard Building; and (c) will add a pedestrian friendly plaza and seat wall on the east side of Green Bay Road; and

WHEREAS, subject to the terms and conditions of this Ordinance, the proposed special use will not substantially diminish or impair property values in the immediate vicinity, and will not be substantially injurious to the use and enjoyment of land in the immediate vicinity, in that: (a) the new surface parking area will enhance the viability of the commercial space on the first floor of the Packard Building; (b) the streetscape improvements at the entry to the parking lot will improve the appearance of the east side of Green Bay Road north of the Packard Building and may draw additional pedestrian traffic to the vicinity; and (c) the new parking area will relieve parking demand on the street, freeing on-street parking for other uses in the vicinity; and

WHEREAS, subject to the terms and conditions of this Ordinance, adequate measures have been taken to provide ingress and egress in a manner that minimizes pedestrian and vehicular traffic

congestion in the public ways, in that: (a) the driveway entrance to the proposed parking lot will be in the same area as an existing curb cut, and (b) the proposed parking lot will have one-way, eastbound traffic, with ingress from Green Bay Road and egress through the rear of the Subject Property to northbound Tower Court, thereby directing traffic away from pedestrian areas; and

WHEREAS, the proposed special use enhances off-street parking, reduces demand for on-street parking and all utilities, access roads, drainage and other facilities necessary for the operation of the special use already exist; and

WHEREAS, because the proposed special use will increase off-street parking and because the design and materials used in the streetscape component of the proposed special use will be consistent with or complementary to the existing Packard Building, which is an established feature in the immediate vicinity, the proposed special use is consistent with the *Winnetka 2020* objective to ensure that commercial development is appropriate to the character of and minimizes the adverse impact on its surrounding neighborhood; and

WHEREAS, because of the pre-existing infrastructure, the proposed special use is consistent with the goals and objectives of *Winnetka 2020*, in particular its objectives: (a) to limit development so as to prevent the need for significant increases in infrastructure; (b) to ensure that development proposals minimize the potential adverse impact on pedestrian character, on-site parking, traffic patterns, congestion, open space, storm water management and Village infrastructure; (c) to ensure that new development does not decrease the public parking supply, particularly on-street parking that supports retail use; and (d) to ensure that new development does not decrease the public parking supply; and

WHEREAS, the proposed special use is also consistent with the goals and objectives of *Winnetka 2020* to maintain the essential quality, viability and attractiveness of the Village's business districts while encouraging new economic development consistent with the character of the Village and the individual business districts; and

WHEREAS, there are practical difficulties associated with carrying out the strict application of the Zoning Ordinance with respect to the Subject Property in that (a) the proposed parking lot will alleviate on-street parking and improve the economic viability of the Packard Building; (b), the proposed parking lot cannot be constructed without a curb cut, which necessarily makes a continuous streetwall impossible; and (c) the landscaping and streetscape improvements along the Green Bay Road property line of Parcel 1 will visually mask the flat parking surface behind it; and

WHEREAS, subject to the terms and conditions of this Ordinance, the requested variation will not alter the essential character of the neighborhood, in that: (a) the proposed parking lot will not alter the Packard Building, which will remain the most visible aspect of the Subject Property; (b) the streetscape components of the parking lot on Parcel 1 are proposed to be constructed with materials that are similar or complementary to the Packard Building on Parcel 2; and (c) the

entrance to the proposed parking lot will be in the same general area as the driveway to the parking area behind the building currently on Parcel 1; and

WHEREAS, the requested variation will not impair an adequate supply of light and air because the proposed parking lot will be an open area located at street level; and

WHEREAS, the requested variations will not increase the hazard from fire and other dangers to the Subject Property because the entire parking lot will not have any building enclosures and will conform with applicable construction and safety codes; and

WHEREAS, the requested variation will not contribute to congestion on the public streets, as the variation is necessitated by the proposed off-street parking and pertains only to the impact of the proposed Parking Lot on the streetwall aspect of the Subject Property; and

WHEREAS, there is no evidence that the requested variations will otherwise impair the public health, safety, comfort, morals, and welfare of the inhabitants of the Village.

WHEREAS, the requested variation is in harmony with the general purpose and intent of the Winnetka Zoning Ordinance, in that it: (a) maintains the scale and character of the existing commercial neighborhood; (b) protects and respects the justifiable reliance of existing residents, business people and taxpayers on the continuation of existing, established land use patterns; and (c) otherwise promotes the public health, safety, comfort, morals and welfare by supporting the economic viability of the Packard Building, which is a significant commercial property in Hubbard Woods, by alleviating on-street parking demand, and by providing a new streetscape amenity in the Hubbard Woods business district; and

WHEREAS, this Ordinance has been placed on the Village Council's agenda and made available for public inspection at Village Hall and on the Village's web site, in accordance with Sections 2.04.040 and 2.16.040 of the Winnetka Village Code and applicable law.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Winnetka as follows:

SECTION 1: The foregoing recitals are hereby incorporated as the findings of the Council of the Village of Winnetka, as if fully set forth herein.

SECTION 2: That, subject to the terms and conditions hereinafter set forth, and pursuant to Section 17.44.030 of Chapter 17.44 and Section 17.46.110 of Chapter 17.46 of the Winnetka Zoning Ordinance, Title 17 of the Winnetka Village Code, a special use permit is hereby granted with respect to the Subject Property, commonly known as 925 - 931 Green Bay Road and located in the C-2 Retail Overlay Zoning District, to allow the construction of the proposed street-level parking lot on that portion of the Subject Property known as 929 - 931 Green Bay Road ("Parcel 1"), with streetscape amenities (collectively, the "Parking Lot"), as depicted in Owner's Exhibit E, "Revised Site Plan," and Exhibit F, "Revised Arched Gateway Feature Concept," both

prepared by The Lakota Group and dated April 18, 2013.

SECTION 3: That, subject to the terms and conditions hereinafter set forth, the Subject Property, commonly known as 925 - 931 Green Bay Road and located in the C-2 Retail Overlay Zoning District, is hereby granted a variation from the front yard setback provisions of Section 17.46.040 (A) Chapter 17.46 of the Winnetka Zoning Ordinance, Title 17 of the Winnetka Village Code, that require the creation of a continuous streetwall by aligning the front building lines of adjoining buildings, to allow the construction of the proposed street-level parking lot on that portion of the Subject Property known as 929 - 931 Green Bay Road ("Parcel 1"), with streetscape amenities (collectively, the "Parking Lot"), as depicted in Owner's Exhibit E, "Revised Site Plan," and Exhibit F, "Revised Arched Gateway Feature Concept," both prepared by The Lakota Group and dated April 18, 2013 .

SECTION 4: The variations and special use permit hereby granted shall be subject to the following terms and conditions, which shall be incorporated into final plans and documentation for the proposed Parking Lot:

A. The construction of the Parking Lot shall commence within 12 months after the effective date of this Ordinance.

B. The special use permit and variation shall expire if construction of the Parking Lot is not commenced within 12 months after the effective date of this Ordinance.

C. Nothing in this Ordinance shall be deemed as granting a certificate of appropriateness of design approval for the proposed Parking Lot, which shall remain subject to final approval, as provided in Chapter 15.40 of the Winnetka Building Code, Title 15 of the Winnetka Village Code.

D. The construction of the Parking Lot shall be in accordance with the plans and elevations identified as Exhibit E, "Revised Site Plan," and Exhibit F, "Revised Arched Gateway Feature Concept," dated April 18, 2013, as prepared by The Lakota Group and presented in the Village Council's agenda materials ("Proposed Plans").

E. The Parking Lot shall include the 9.75-foot paved strip along the north edge of Parcel 2, as depicted in the Proposed Plans.

F. The Parking Lot shall meet all accessibility standards of the Americans with Disabilities Act.

G. All spaces in the Parking Lot shall comply with the Traffic Engineering Handbook published by the Institute of Transportation Engineers, as required by Section 17.46.110 (G) of the Winnetka Village Code.

H. The Village of Winnetka shall not be responsible for enforcing parking restrictions in the

Parking Lot, except as may be provided in a written agreement with the Owner that has been approved by the Village Council in the manner provided by law.

I. The Owner shall be responsible for posting and enforcing any parking restrictions in the Parking Lot; provided that, except as authorized by Village Code, no parking enforcement shall include the impoundment of any parked vehicles in place through the use of a Denver Boot or similar immobilizing device.

J. Employee parking shall be prohibited in the Parking Lot, and all employees of any businesses located in the Packard Building shall use the upper level of the Scott Avenue Parking Deck.

K. The Parking Lot shall have a single lane of one-way traffic, with all vehicles entering the Parking Lot from Green Bay Road and exiting at the rear of the property onto northbound Tower Court.

L. The Owner shall install a fence no higher than 6.5 feet high along the north property line of Parcel 1, to screen the view of the property to the north, unless the Owner obtains a variation pursuant to Chapter 17.60 of the Winnetka Zoning Ordinance to allow the fence to be of a greater height.

M. Evergreens or coniferous plantings shall be used in the landscaped area along the Green Bay Road frontage of the Parking Lot.

N. The width of the Parking Lot entrance driveway shall be reduced from 16 feet to 14 feet, on the same center line now depicted in the site plan.

O. The vertical clearance of the arch shall be sufficient to allow unimpeded access by all Fire Department vehicles, as determined by the Winnetka Fire Chief.

P. Final details of landscape plans, signage, lighting, material samples for the area along the north wall of the Packard Building shall be submitted with the construction permit application for the Parking Lot, and shall be subject to review and comment by the Design Review Board as provided in Chapter 15.40 of the Winnetka Village Code.

Q. The types and placement of traffic signage, whether on or off site, shall comply with all applicable standards, as determined by the Village Engineer. Owner shall be responsible for the cost of all such signage, regardless of its type or location.

SECTION 5: The stipulations, conditions and restrictions set forth in the foregoing Section 3 of this Ordinance may be modified or revised from time to time by the Village Council following public notice and hearing, following the procedures specified in Section 17.56 of the Winnetka Village Code for processing special use applications.

SECTION 6: This Ordinance is passed by the Council of the Village of Winnetka in the

exercise of its home rule powers pursuant to Section 6 of Article VII of the Illinois Constitution of 1970.

SECTION 7: This Ordinance shall take effect immediately upon its passage, approval and posting as provided by law.

PASSED this 18th day of June, 2013, pursuant to the following roll call vote:

AYES: Trustees Adams, Buck, Corrigan, and Kates

NAYS: None

ABSENT: Trustees Braun and McCrary

APPROVED this 18th day of June, 2013.

Signed:

s/E. Gene Greable

Village President

Countersigned:

s/Robert M. Bahan

Village Clerk

Published by authority of the President and Board of Trustees of the Village of Winnetka, Illinois, this 18th day of June, 2013.

Introduced: June 4, 2013

Passed and Approved: June 18, 2013

ATTACHMENT C

MELTZER, PURTILL & STELLE LLC

ATTORNEYS AT LAW

MPS LAW

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May 23, 2014

Mr. Michael D'Onofrio
Director of Community Development
Village of Winnetka
510 Green Bay Road
Winnetka, IL 60093

Re: 925-931 Green Bay Road / Ordinance No. M-7-2013

Dear Mike:

Section 4.A. of Ordinance No. M-7-2013 (copy enclosed) requires the commencement of construction of the parking lot approved for construction at 929-931 Green Bay Road by June 18, 2014, the 12-month anniversary of the effective date of the Ordinance. I am sending you this letter to request an extension of that date since our client, which has been diligently pursuing tenants for the property situated at 925 Green Bay Road (the Packard Building), has not yet fully negotiated and signed any leases for such property.

As you will recall, when the Village considered the approval of a special use permit for the construction of a surface parking lot on the property situated at 929-931 Green Bay Road our client was involved in negotiations with a specific retail tenant who had expressed a strong interest in occupying the Packard Building. In fact, that prospective tenant was contemplating the leasing of approximately 18,250 square feet of ground floor area which would have required our client to also acquire the building situated at 915 Green Bay Road. After several months of negotiations and then a period of time during which the prospective tenant suspended negotiations with our client, the prospective tenant renewed its negotiations with our client. At that time, however, it expressed an interest in leasing a smaller space, one containing approximately 12,500 square feet, situated solely within the Packard Building. More recently, our client has been advised that the prospective tenant would need to delay finalizing a lease due to corporate restructuring it was undertaking.

While discussions continued with the prospective retail tenant our client initiated discussions with Body and Sole, one of the current occupants of the 929-931 Green Bay Road property, for purposes of negotiating an early termination of Body and Sole's tenancy which is scheduled to expire on February 28, 2015. It is currently uncertain as to whether or not our client will be successful in obtaining that early termination.

{HFRANCKE: CORR: 01366148.DOCX : }

MPS LAW

To afford itself the time it needs to conclude its negotiations with both the prospective tenant and Body and Sole, and in light of the fact that Body and Sole may not be vacating its leased space until February of next year, our client is respectfully requesting an extension of the date to commence construction of the subject parking lot to April 30, 2015.

We would appreciate it if this request could be placed on the Village Council's June 3rd meeting agenda. Please let me know if that will be possible.

As always, your cooperation is appreciated. I look forward to hearing from you.

Very truly yours,

MELTZER, PURTILL & STELLE LLC

Harold W. Francke

cc: Kathy Janega
Larry Hillman
Marty Becker

{HFRANCKE: CORR: 01366148.DOCX : }

Agenda Item Executive Summary

Title: Resolution R-20-2014: Attorney Janega Commendation

Presenter: Robert M. Bahan, Village Manager

Agenda Date: 06/24/2014

Consent: ☐ YES ☑ NO

☐ Ordinance
☑ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

None.

Executive Summary:

Katherine (Kathy) Janega has served as Winnetka's Village Attorney since 1993. She will retire June 30, 2014.

Recommendation:

Adopt Resolution R-20-2014, recognizing Attorney Janega for her service and many contributions to the Village of Winnetka.

Attachments:

1) Resolution R-20-2014

RESOLUTION NO. R-20-2014

THE VILLAGE COUNCIL OF WINNETKA, ILLINOIS
June 24, 2014

WHEREAS, the Village of Winnetka has benefitted enormously from the outstanding and professional services of Katherine S. Janega who has faithfully served as its Village Attorney since November, 1993, during which tenure she served six Village Councils; and

WHEREAS, Ms. Janega became the Village's first in-house counsel in 1998, after serving as Village Attorney while a principal in the Chicago firm of Rosenthal, Murphey, Coblentz & Janega; and

WHEREAS, after receiving her Juris Doctorate from Loyola University School of Law (Chicago) in 1977, she held a judicial clerkship for an Illinois Appellate Court Judge and then entered private practice in 1980; and

WHEREAS, the Village has benefitted greatly from her expertise in issues relating to local government, municipal utility, and land-use law, as well as her successful defense of the Village in State and federal court cases; and

WHEREAS, over Ms. Janega's 21 year tenure, she developed the legal framework to support the implementation of significant Village laws and policies, including home rule, special events, planned developments, telecommunications, hands-free cell phone ban, construction and demolition recycling, liquor licensing, ethics, and establishment of a stormwater utility; and

WHEREAS, her representation of five regional councils of government in the Chicago metropolitan area, comprising over 200 municipalities, has helped to resolve matters of public utilities franchising, restructuring of electrical rates, and establishment of new area codes; and

WHEREAS, Ms. Janega's teaching and professional development speaking engagements on topics including land-use law, municipal issues, First Amendment, sunshine laws, and professional responsibility, have benefitted both the Village and the greater legal profession; and

WHEREAS, she has been an invaluable professional resource for the Village Council, lower boards and commissions, and Village Staff, sharing her experience and knowledge, negotiating agreements, and improving key legal instruments, which has resulted in the betterment of the organization.

NOW THEREFORE, BE IT RESOLVED that the Village Council, on behalf of the Village of Winnetka and Village staff, commends Katherine S. Janega for her unselfish and tireless dedication to serving our community and extends to her sincere appreciation for her contributions to this Village; and

BE IT FURTHER RESOLVED that Katherine S. Janega transmits this Village greater and more beautiful than it was transmitted to her.

_____
E. Gene Greable, Village President

Attest:

_____
Robert M. Bahan, Village Clerk

Agenda Item Executive Summary

Title: R-21-2014 - Appointing New Village Attorney

Presenter: E. Gene Greable, Village President

Agenda Date: 06/24/2014

Consent: ☐ YES ☑ NO

☐ Ordinance
☑ Resolution
☐ Bid Authorization/Award
☐ Policy Direction
☐ Informational Only

Item History:

None

Executive Summary:

The Village Attorney is appointed by the Village President, by and with the approval of the Village Trustees.

After conferring with the Council and Village Manager, the Village President determined that the Village should retain outside counsel to succeed the current Village Attorney, who will retire at the end of June.

Eight firms that concentrate in municipal law were invited to submit their qualifications. The Village President, along with Trustee Kates and the Village Manager, reviewed the qualifications of the firms and interviewed candidates.

After further discussion and negotiations, the Village President has decided to submit the appointment of Peter M. Friedman of Holland & Knight, LLP, for approval by the Trustees.

Resolution R-21-2014 appoints Mr. Friedman as Village Attorney, effective July 1, 2014.

Recommendation:

Consider adopting Resolution R-21-2014, titled "A Resolution Appointing Peter M. Friedman Village Attorney."

Attachments:

Resolution R-21-2014 - "A Resolution Appointing Peter M. Friedman Village Attorney"

RESOLUTION NO. R-21-2014

A RESOLUTION
APPOINTING PETER M. FRIEDMAN
VILLAGE ATTORNEY

WHEREAS, the Village of Winnetka (the "Village") is a home rule municipality in accordance with Article VII, Section 6 of the Constitution of the State of Illinois of 1970, pursuant to which it has the authority, except as limited by said Section 6 of Article VII, to exercise any power and perform any function pertaining to the government and affairs of the Village; and

WHEREAS, Section 2.28.010 of the Winnetka Village Code, creates the office of Village Attorney and further provides for the appointment of the Village Attorney by the Village President with the approval of the Trustees; and

WHEREAS, the Village President has recommended that Peter M. Friedman of Holland & Knight, LLP, be appointed to an indefinite term as Village Attorney.

NOW THEREFORE, be it resolved by the Council of the Village of Winnetka as follows:

SECTION 1: That Peter M. Friedman of the law firm of Holland & Knight, LLP, is hereby appointed Village Attorney, effective July 1, 2014.

SECTION 2: The Village Attorney shall serve for an indefinite term, until a successor is appointed by Resolution of the Village Council.

SECTION 3: This Resolution shall be in full force and effect immediately upon its adoption.

ADOPTED this 24th day of June, 2014, by the following roll call vote of the Council of the Village of Winnetka.

AYES: _____

NAYS: _____

ABSENT: _____

Signed:

_____
Village President

Attest:

_____
Village Clerk

Agenda Item Executive Summary

Title: Willow Road Stormwater Tunnel Engineering Review Point #1: Concept Review and Permitting Plan

Presenter: Steven M. Saunders, Director of Public Works/Village Engineer

Agenda Date: 06/24/2014

Consent: ☐ YES ☑ NO

☐ Ordinance
☐ Resolution
☐ Bid Authorization/Award
☑ Policy Direction
☐ Informational Only

Item History:

On January 21, 2014, the Village awarded a contract to MWH Americas, Inc. to provide engineering services for the proposed Willow Road Stormwater Tunnel and Area Drainage Improvements project. The project consists of a new storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the Village eastward towards Lake Michigan. This project would combine improvements for 5 drainage areas into a single project with a cost estimate of $34.5 million. The engineering contract was structured to recognize these questions and decision points, without obligating the Village to complete engineering services in their entirety for the project. Structuring the contract in this way allowed the Village to advance the project on a step by step basis, with intermediate review points for Council approval before advancing to the next phase. The current Review Point #1 occurs after the completion of Concept Review, Permit Plan, and Hydrologic/Hydraulic Model Verification.

Executive Summary:

The purpose of this Review Point #1 is to report on these initial tasks and determine policy direction on next steps for the project. MWH has identified the following conclusions and recommendations:

"The planning and review analyses performed to date confirm that the Willow Road STADI Project can provide flood-prone portions of Winnetka with a significant reduction in the risk of structure or major roadway flooding for local rainfall events up to the 1% Annual Chance Storm. Moreover, these and previous analyses suggest that this approach may be the only technically feasible option for providing the reliable supplemental drainage capacity needed to meet the Village's performance objectives.

However, a comprehensive water quality management plan must be developed to demonstrate how the project can be implemented without adverse impacts on conditions in Lake Michigan or at Winnetka's beaches. An overall strategy for such a plan has been developed and submitted to the IEPA for review and comment. Feedback received from the agency will serve to inform activities related to the collection of supplemental water quality data and the development and submittal of a project-specific Joint Permit Application.

Significant details of the proposed project remain to be defined, and it appears likely that submittal of a Joint Permit Application will be necessary to drive decisions regarding permit issuance and overall acceptance of the project. As such, MWH requests authorization from the Village to proceed with preliminary engineering and phase 1 permitting tasks as outlined in the project scope of services, and with the final development and implementation of a supplemental program of water quality sampling and analysis. Activities associated with these tasks will lead to the collection of additional water quality data, survey results, and geotechnical information that are needed to move the project forward to a 30% design and complete the initial Joint Permit Application to the IEPA, U.S. Army Corps of Engineers, and the Illinois Department of Natural Resources. As part of that design effort, an updated opinion of probable construction costs will be prepared to assess how changes in project details and requirements may impact the current construction budget."

Recommendation:

1. Review MWH work progress to date including the Concept Review Memo, Alternative Sizing Memo, and Permitting Action Plan.
2. Provide policy direction:
   a. Consider authorizing MWH to proceed with preliminary engineering and Phase 1 permitting tasks as outlined in the project scope of services, an expenditure of an additional $636,986 in engineering fees; and
   b. Consider authorizing MWH to proceed with the final development and implementation of a supplemental program of water quality sampling and analysis pursuant to Illinois EPA indications that additional information will be necessary, for a cost not to exceed $125,000 including purchase of necessary sampling equipment.

Attachments:

Agenda Report
1. MWH Review Point #1 Summary Memo
2. MWH Concept Review Memo
3. MWH Alternative Sizing Memo
4. MWH Permitting Action Plan
5. MWH Water Quality Sampling Plan

Agenda Report

Subject: **Willow Road Stormwater Tunnel Engineering Review Point #1: Concept Review and Permitting Plan**

Prepared By: Steven M. Saunders, Director of Public Works/Village Engineer

Date: June 18, 2014

On January 21, 2014, the Village awarded a contract to MWH Americas, Inc. to provide engineering services for the proposed Willow Road Stormwater Tunnel and Area Drainage Improvements project. The project consists of a new storm sewer beneath Willow Road that would convey water from a roughly 900-acre drainage area on the west side of the Village eastward towards Lake Michigan. This project would combine improvements for 5 drainage areas into a single project with a cost estimate of $34.5 million. This project would provide benefits to the North Willow Road, South Willow Road, Provident Avenue, Cherry Street Outlet, and the Winnetka Avenue Underpass Study areas for the 100-year design storm event. These 5 drainage areas include approximately 2,500 properties, and a total of about 1,200 acres. The proposed improvement consists of an 8-foot diameter storm sewer underneath Willow Road running from approximately Glendale Avenue to Lake Michigan. The project includes construction of additional storm sewers connected to the tunnel to provide relief to 5 drainage basins affected by frequent and/or severe stormwater flooding, and construction of a below ground outlet structure to control water velocity and prevent erosion. The project concept also includes implementation of distributed water quality measures in the form of structural and non-structural Best Management Practices (BMPs) such as rain gardens, bio-swales, permeable pavements, catch basin inserts, oil & grit separators, etc. to control water quality impairments as close to their sources as possible.

When MWH's contract was awarded, the project was at the preliminary, conceptual engineering stage, and a significant amount of engineering is required to bring the project to the stage where construction contracts can be executed. Importantly, there were and are also many questions about the project to be answered, permits to be acquired, and decisions to be made by the Village, before construction contracts can be awarded. Therefore, the engineering contract was structured to recognize these questions and decision points, without obligating the Village to complete engineering services in their entirety for the project. Structuring the contract in this way allowed the Village to advance the project on a step-by-step basis, with intermediate review points for Council approval before advancing to the next phase. The current Review Point #1 occurs after the completion of Concept Review, Permit Plan, and Hydrologic/Hydraulic Model Verification. The Village Council is able to review and discuss advanced preliminary engineering and determine to:

- Direct CONSULTANT to proceed with additional activities in accordance with the current scope, schedule, and budget;
- Negotiate a revised scope, schedule, and budget for additional tasks and direct CONSULTANT to proceed with the revised scope; or
- Suspend services pending further direction from the CLIENT.

MWH has completed all the necessary sub-tasks to reach the Review Point #1 milestone, and their work to date is summarized in **Attachment #1: Willow Road Stormwater Tunnel and Area Drainage Improvements Project Review Point 1 Summary.**

MWH's first task was to undertake a project concept review. A key item of this task was a thorough review of the proposed project concept to further evaluate and refine the conceptual engineering previously performed by Christopher B. Burke Engineering, Ltd. (CBBEL). MWH obtained all of the hydrologic and hydraulic modeling previously performed for the project and performed a complete validation analysis on model inputs, assumptions, calculations, and outputs. MWH also modeled the effects on system performance of implementing two possible green infrastructure scenarios – moderate implementation and aggressive implementation. MWH's conclusions are:

1. The conceptual modeling reasonably portrayed existing and proposed conditions consistent with the conceptual level of the engineering study, and that the project concept, size, and scope are valid. The modeling accurately reflects statistical precipitation durations and intensities, and reflects the Village's land-use and development characteristics for the purpose of calculating runoff from precipitation events. Proposed conceptual pipe sizing is generally accurate, and modeled flood depths for existing and proposed conditions are reasonable.
2. The modeling will need to be expanded and refined as project engineering advances, in order to support the additional level of detail and refinement required for advanced and final engineering design documents.
3. The modeling indicates that the Village's conceptual approach of implementing green infrastructure BMPs as part of water quality management may be able to reduce design flow rates for portions of the proposed project but will not eliminate the need for a major relief sewer project to achieve the Village's desired flood risk reduction goals.
4. As engineering progresses, modeling will become more detailed, and it is likely that minor revisions and changes to the proposed pipe sizes and alignments will occur.

MWH's concept review is shown in **Attachment #2: MWH Concept Review Memo**, and their detailed model review is contained in **Attachment #3: MWH Alternative Sizing Memo**.

The second major task for MWH prior to this Review Point #1 is the development of a Permitting Action Plan for the project. MWH's plan is shown in **Attachment #4: Permitting Action Plan**. As has been previously detailed, the Village will require permits from a number of agencies for the proposed project, including a joint permit from

the US Army Corps of Engineers, the Illinois Department of Natural Resources, and the Illinois Environmental Protection Agency. Other permits include a new National Pollutant Discharge Elimination System (NPDES) individual permit as a municipal separate storm sewer system community, a Watershed Management Permit from the Metropolitan Water Reclamation District, IDOT permits for construction within State rights-of-way, a permit from the Union Pacific Railroad for tunneling beneath the railroad cut, and a permit from the North Cook County Soil & Water Conservation District for soil erosion and sediment control.

Among these permitting agencies, the key permit for the project will be the joint permit from the US Army Corps of Engineers, the Illinois Department of Natural Resources, and the Illinois Environmental Protection Agency. Because the key factor in obtaining this permit is the quality of water being discharged by the proposed project, the critical element of MWH's permitting plan is a water quality management plan. MWH and Village staff have had several discussions with the Illinois EPA, including a meeting with EPA staff in Springfield, to clarify the EPA's water quality goals, concerns, and requirements, so that the permitting plan can be structured to address these areas. A summary of these discussions is shown in the Permitting Action Plan.

The proposed water quality management strategy and plan are shown in the Permitting Action Plan (**Attachment #4**) and includes:

- Source control strategies and good housekeeping measures intended to reduce the level of pollutants that can be washed off land surfaces in stormwater runoff (public education regarding pet waste management and fertilizer use, consistent and effective street sweeping, and ongoing sanitary sewer inspection and rehabilitation);
- Stormwater best management practices intended to promote infiltration to the degree practical (rain gardens, permeable pavement, etc.), thereby reducing the total volume of runoff that must be conveyed, stored, and discharged to surface waters;
- Stormwater best management practices intended to slow down the peak rate of runoff from catchments to storm sewers or drainage paths and provide for distributed removal of pollutants (rain barrels, bioswales, filter strips, and detention areas);
- Stormwater flow control and diversion measures constructed to maintain, to the degree possible, existing flow paths for low and moderate flows tributary to the Skokie River;
- Distributed stormwater treatment units selected to provide for the removal of pollutants at intermittent points in the modified drainage system where peak flows are manageable (biofilters for solids, nutrients, or bacteria; hydrodynamic separators; oil and grease separators); and
- End-of-the-pipe water quality management measures designed to provide for removal of critical pollutants to the degree practical based on available technology.

MWH has presented a preliminary version of this proposed water quality management strategy to the Illinois EPA.

During discussions with the Illinois EPA, EPA staff made clear that there are two items where it is likely that additional preliminary work and data gathering will be necessary in order to provide information deemed critical by EPA staff for reviewing a proposed permit application. First, EPA staff indicated that additional water quality sampling will be necessary to effectively evaluate any permit application. Specifically, EPA provided a listing of 28 parameters for which they would like water quality sampling data. The Village has sampling data for some of these parameters, but additional sampling will be required for the remaining parameters. EPA staff also indicated a need for additional composite and time-dependent sampling during wet-weather and snowmelt events to more fully evaluate current baseline water quality during a variety of conditions. MWH has developed and proposed a supplemental water quality sampling program outlined in **Attachment #5: Water Quality Sampling Plan**. The estimated cost for this additional sampling, which was specifically excluded from the engineering contract, is $125,000, including the Village purchasing the necessary automated sampling equipment. It is anticipated that this sampling equipment will be useful and necessary to the Village for future and ongoing permit-related water-quality sampling activities.

Second, it was communicated that an important part of the EPA's permit review will be a detailed alternative analysis. While the previous drainage studies performed for the Village by CBBEL lay a significant amount of groundwork in identifying and discussing alternatives to the proposed Lake Michigan outlet at Willow Road, Illinois EPA staff indicated that they will require details and clarifications about the feasibility of conveyance and storage options coupled with infiltration and runoff reduction through BMPs, as an alternative to diverting excess runoff from western Winnetka east to Lake Michigan. The preliminary calculations MWH performed using the updated modeling and the two green infrastructure scenarios developed during the alternative sizing process indicate that it is unlikely that sufficiently large runoff reductions could be achieved to obviate the need for stormwater storage on parcels owned by the Cook County Forest Preserve District. However, given the EPA staff's interest in alternatives, a more detailed alternative review will be necessary to more fully calculate the potential runoff reductions from green infrastructure scenarios.

The purpose of Review Point #1 is to report on these initial tasks and determine policy direction on next steps for the project. MWH has identified the following conclusions and recommendations as indicated in **Attachment #1**:

"The planning and review analyses performed to date confirm that the Willow Road STADI Project can provide flood-prone portions of Winnetka with a significant reduction in the risk of structure or major roadway flooding for local rainfall events up to the 1% Annual Chance Storm. Moreover, these and previous analyses suggest that this approach may be the only technically feasible option for providing the reliable supplemental drainage capacity needed to meet the Village's performance objectives.

However, a comprehensive water quality management plan must be developed to demonstrate how the project can be implemented without adverse impacts on conditions in Lake Michigan or at Winnetka's beaches. An overall strategy for such a plan has been developed and submitted to the IEPA for review and comment. Feedback received from the agency will serve to inform activities related to the collection of supplemental water quality data and the development and submittal of a project-specific Joint Permit Application.

Significant details of the proposed project remain to be defined, and it appears likely that submittal of a Joint Permit Application will be necessary to drive decisions regarding permit issuance and overall acceptance of the project. As such, MWH requests authorization from the Village to proceed with preliminary engineering and phase 1 permitting tasks as outlined in the project scope of services, and with the final development and implementation of a supplemental program of water quality sampling and analysis. Activities associated with these tasks will lead to the collection of additional water quality data, survey results, and geotechnical information that are needed to move the project forward to a 30% design and complete the initial Joint Permit Application to the IEPA, U.S. Army Corps of Engineers, and the Illinois Department of Natural Resources. As part of that design effort, an updated opinion of probable construction costs will be prepared to assess how changes in project details and requirements may impact the current construction budget."

MWH's contract is structured to allow the Village to move the project forward in phases. Phase 1 activities are shown below:

Phase I/Task/Subtask Description	**Task Value**
Phase 1 – Permitting	
Task 1.1A – Preliminary Engineering: Review and Planning Task 1.1.1 – Concept Review Task 1.1.2 – Permit Plan Task 1.1.3 – Hydrologic and Hydraulic Model Verification	$107,612
Task 1.1B – Preliminary Engineering: Field Investigations/Design Task 1.1.4 – Phase 1 Field Investigations Task 1.1.5 – Preliminary Design	$478,456
Task 1.1C – Preliminary Engineering: Phase 1 Permitting	$79,952
Task 1.2 – Phase 1 Project Management	$49,328
Task 1.3 – Phase 1 Project Outreach	$29,250
Task 1.4 – Construction Management Selection Process	$54,220
Phase 1 Total	**$798,818**

MWH has proposed, and staff recommends, authorizing MWH to complete the remaining Phase I activities to bring the project to the point of submitting for the necessary environmental permits, with the exception of Task 1.4 – Construction Management Selection Process, which should be deferred to Phase II. This would result in an authorization to expend an additional $636,986 in engineering fees ($798,818 less $107,612 of Task 1 and less $54,220 for Construction Management), plus $125,000 for additional water quality sampling as requested by the Illinois EPA.

Recommendation:

1. Review MWH work progress to date including the Concept Review Memo, Alternative Sizing Memo, and Permitting Action Plan.
2. Provide policy direction:
    a. Consider authorizing MWH to proceed with preliminary engineering and Phase 1 permitting tasks as outlined in the project scope of services; and
    b. Consider authorizing MWH to proceed with the final development and implementation of a supplemental program of water quality sampling and analysis pursuant to Illinois EPA indications that additional information will be necessary, for a cost not to exceed $125,000 including purchase of necessary sampling equipment.

Attachments:

1. MWH Review Point #1 Summary Memo
2. MWH Concept Review Memo
3. MWH Alternative Sizing Memo
4. MWH Permitting Action Plan
5. MWH Water Quality Sampling Plan

ATTACHMENT #1
MWH Review Point #1 Summary Memo

MWH®

BUILDING A BETTER WORLD

June 18, 2014

Mr. Steve Saunders
Director of Public Works/Village Engineer
Village of Winnetka
1390 Willow Road
Winnetka, Illinois 60093

Subject: Willow Road Stormwater Tunnel and Area Drainage Improvements Project
Review Point 1 Summary

Dear Mr. Saunders:

MWH has completed the tasks leading up to Review Point 1 from the Scope of Services for design engineering for the proposed Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI). Results from the completed tasks are presented in the following interim deliverables submitted to the Village as draft documents:

- Concept Review Memo
- Permitting Action Plan
- Alternative Sizing Memo

Additional materials prepared during this stage of the project and provided to the Village for review include:

- Water Quality Monitoring Plan Outline

These documents provide an overview of additional tasks that we believe will be critical to the continued progress of the project once we are authorized to proceed with the preliminary engineering portion of our scope.

The balance of this letter provides a summary of key findings from the work completed to date as well as recommendations for next steps required to advance design and permitting elements of the project.

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Chicago, Illinois 60604-2608 United States

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www.mwhglobal.com

Key Finding 1 – Project Effectiveness

Construction of a network of relief storm sewers draining to a new Lake Michigan outfall is an effective alternative for significantly reducing the risk of structure flooding or major roadway closures due to intense local rainfall within the project area. During intense local rainfall events, the capacity of typical storm sewer systems is exceeded and drainage depends on the natural topography of the area. Most of the locations in Winnetka that have been severely impacted by flooding are centered on localized low spots where excess stormwater accumulates when the capacity of the local storm sewer system is exceeded. The proposed project will provide these areas with a reliable, high capacity outlet, and reduce the potential for flooding to depths that impact adjacent structures or roadways for events up to the 1% Annual Chance (100-year) Storm.

The development of significant additional drainage capacity in the project area is required to provide the desired level of flood risk reduction. If implemented by others, regional flood control measures designed to reduce flood levels on the Skokie River could improve outlet capacity for the existing drainage system and reduce the potential for overbank flooding impacts to the west side of Winnetka. However, such projects would not provide the additional internal drainage capacity needed to reduce the risk of flooding in low areas during intense storm events. As an alternative, new storm sewers discharging to the Skokie River could be designed to provide the needed additional capacity; but these conveyance improvements would need to be paired with very large detention storage facilities given the existing constraints on the rate at which Winnetka can discharge stormwater to the River. Previous analyses have shown that construction of the needed storage volume (up to 167 acre-feet) would require the acquisition of more open space than is statutorily available given restrictions on the use of Cook County Forest Preserve District property for new engineered flood control facilities. Lastly, while stormwater Best Management Practices (BMPs) or green infrastructure could be used to reduce the total volume and peak rate of stormwater runoff from the project area, current estimates suggest that the type of reductions that are realistically achievable within Winnetka would account for only about a 15% reduction in the volume of storage required. This reduction is significant, but is not sufficient to make an improvement system discharging to the Skokie River feasible for providing flood protection for the 1% Annual Chance Storm.

Key Finding 2 – Water Quality Management Needs

Stormwater runoff is a key component of the natural hydrologic cycle that sustains Lake Michigan. By directing stormwater runoff to the Lake, the STADI Project contributes to the natural process that replenishes and sustains the lake. However, given the value of Lake Michigan as a regional water resource, and Winnetka's beaches as a local treasure, it is clear that the STADI Project must provide for the effective management of the quality of the stormwater that will be discharged to the Lake and the Skokie River. Initial discussions with permitting agencies have confirmed that the development of a reliable plan for addressing water quality will be the greatest concern for this project.

To be acceptable, the STADI Project will have to include practical water quality management elements capable of limiting the levels of pollutants that will be discharged to the receiving waters. Pollutants of particular concern include: bacteria (*E. coli*, fecal coliform), nutrients (phosphorus, nitrogen), total dissolved solids, and chlorides (commonly associated with de-icing salts). Given the magnitude and variability of stormwater flows in the project area, construction of end-of-pipe

treatment facilities capable of meeting all of the identified water quality requirements is not feasible in terms of space or cost. Rather, a comprehensive water quality management program that includes source control, management of initial flows, use of distributed stormwater treatment technologies, and select end-of-pipe water quality measures will provide the best option for achieving the project's water quality objectives.

Specific details of the required water quality management program will be developed as supplemental water quality monitoring and preliminary engineering for the project proceed. At a minimum, it is expected that the program would include the following elements:

- Source Control Measures
  - Public education/ordinances regarding fertilizer application, pet waste management, etc.
  - Municipal good housekeeping measures (e.g., street sweeping)
  - Sanitary sewer maintenance and rehabilitation to identify and remove cross-connections
  - Promotion of BMPs such as rain gardens, water friendly landscaping, or permeable pavements where feasible
- Initial Flow Management
  - Design of diversions to maintain existing drainage patterns toward the Winnetka Avenue Pump Station for initial flows while providing for effective relief of high flows to the proposed relief storm sewer system
- Distributed Stormwater Treatment
  - Installation of catch basin inserts and/or inlet biofilters in areas identified as being potentially significant sources of pollutants
  - Installation of stormwater treatment devices (e.g., stormwater filters, solids separators, oil/grease separators) at selected locations within the storm sewer collection system
- End-of-Pipe Treatment
  - Design of the new outfall structure to provide for sediment and floatables capture as well as energy dissipation

MWH has submitted general information regarding this approach to the IEPA for review and comment. Input from the agency will be used to direct water quality modeling efforts and strategy refinements during preliminary engineering.

<u>Key Finding 3 - Design Concept Refinements</u>

Review of the engineering planning performed during the development of the Willow Road STADI concept together with additional utility information and modeling analyses suggest that opportunities exist to refine the proposed project concept during the performance of preliminary and detailed engineering design tasks. The modeling approach and assumptions used for the development of the STADI concept were reasonable and appropriate for a planning level analysis of this type of project. However, further evaluations of potential improvement alignments and relief sewer sizing options indicate that it may be possible to reduce the total length of relief sewer required, the diameter of selected segments of relief sewer, and/or the overall level of disruption associated with project implementation by refining the original concept. Specific adjustments to the original plan may include:

- Modification of the horizontal and vertical alignments for the primary relief storm sewer under Willow Road to allow for construction of new sewer between Hibbard Road and a point east of Sheridan Road as an 8-foot diameter tunnel with limited surface disruption;
- Modification of alignments for segments of relief storm sewer previously proposed in Glendale Avenue, Provident Avenue, Essex Road, and Sheridan Road to allow for continued use of existing large diameter storm sewer and easier construction of proposed new storm sewers;
- Development of preliminary configurations for stormwater collection and/or diversion at connection points between the existing drainage network and the proposed relief sewer system; and
- Consideration of the potential benefits (in terms of reduced relief sewer size) that could be provided by some level of green infrastructure implementation as part of the proposed STADI Project.

Figure 1 (included at the end of this letter) shows the refined sewer alignments developed during the review and planning phase of the project. Figure 2 (included at the end of this letter) provides a summary comparison of the length and diameter of relief storm sewer associated with the previous improvement concept and the MWH Refined Concept. Although the MWH Refined Concept requires significantly more storm sewer construction by tunneling, initial simulations suggest it could potentially reduce both the total length and the average diameter of relief sewer required by up to 10% over the prior concept. The Refined Concept also allows for continued use of more of the Village's existing storm sewer infrastructure. Further evaluation of system refinements and relative project costs will be performed during preliminary design efforts to establish a 30% design plan that provides a cost-effective solution while reliably meeting the project performance criteria and controlling construction impacts on the community.

Key Finding 4 – Green Infrastructure Implementation

As indicated above, a significant number of stormwater quality BMPs elements will be necessary to achieve the water quality requirements for implementation of the Willow Road STADI. Conceptual analyses have been performed to evaluate how alternative levels of green infrastructure implementation might also impact the total volume of stormwater discharged from the proposed system to Lake Michigan and the length and size of the relief sewer network required. As shown in Table 1, simulations suggest that, if practical, widespread implementation of green infrastructure within the community could significantly reduce the total volume of stormwater discharged from the proposed relief sewer system to Lake Michigan, especially for relatively frequent storm events. However, the reduction in total discharge volume does not correlate directly to a decrease in the length or size of relief sewer needed. The length of required relief storm sewer is driven primarily by the distance from the identified low areas to the proposed outlet. Regardless of the total volume of flow to be captured, relief sewers must still be constructed to each of the flood-prone locations.

Reductions in the average size of the relief storm sewer required under the moderate and aggressive green infrastructure implementation scenarios appear possible, but are limited to only 2% or 5% of the average size for the MWH Refined Concept scenario.

Table 1 -
Potential Green Infrastructure Reductions in Discharge Volume and Relief Sewer Requirements

	Moderate Green Infrastructure Scenario	Aggressive Green Infrastructure Scenario
Estimated Discharge Volume		
50% Annual Chance Event	-31%	-64%
10% Annual Chance Event	-22%	-49%
1% Annual Chance Event	-10%	-27%
Reduction in Req'd Length of Relief Sewer	0%	0%
Average Diameter of Relief Sewer	-2%	-5%

Conclusions and Recommendations

The planning and review analyses performed to date confirm that the Willow Road STADI Project can provide flood-prone portions of Winnetka with a significant reduction in the risk of structure or major roadway flooding for local rainfall events up to the 1% Annual Chance Storm. Moreover, these and previous analyses suggest that this approach may be the only technically feasible option for providing the reliable supplemental drainage capacity needed to meet the Village's performance objectives.

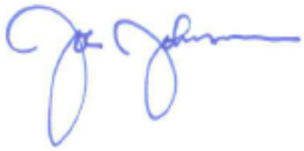
However, a comprehensive water quality management plan must be developed to demonstrate how the project can be implemented without adverse impacts on conditions in Lake Michigan or at Winnetka's beaches. An overall strategy for such a plan has been developed and submitted to the IEPA for review and comment. Feedback received from the agency will serve to inform activities related to the collection of supplemental water quality data and the development and submittal of a project-specific Joint Permit Application.

Significant details of the proposed project remain to be defined, and it appears likely that submittal of a Joint Permit Application will be necessary to drive decisions regarding permit issuance and overall acceptance of the project. As such, MWH requests authorization from the Village to proceed with preliminary engineering and phase 1 permitting tasks as outlined in the project scope of services, and with the final development and implementation of a supplemental program of water quality sampling and analysis. Activities associated with these tasks will lead to the collection of additional water quality data, survey results, and geotechnical information that are needed to move the project forward to a 30% design and complete the initial Joint Permit Application to the IEPA, U.S. Army Corps of Engineers, and the Illinois Department of Natural Resources. As part of that design effort, an updated opinion of probable construction costs will be prepared to assess how changes in project details and requirements may impact the current construction budget.

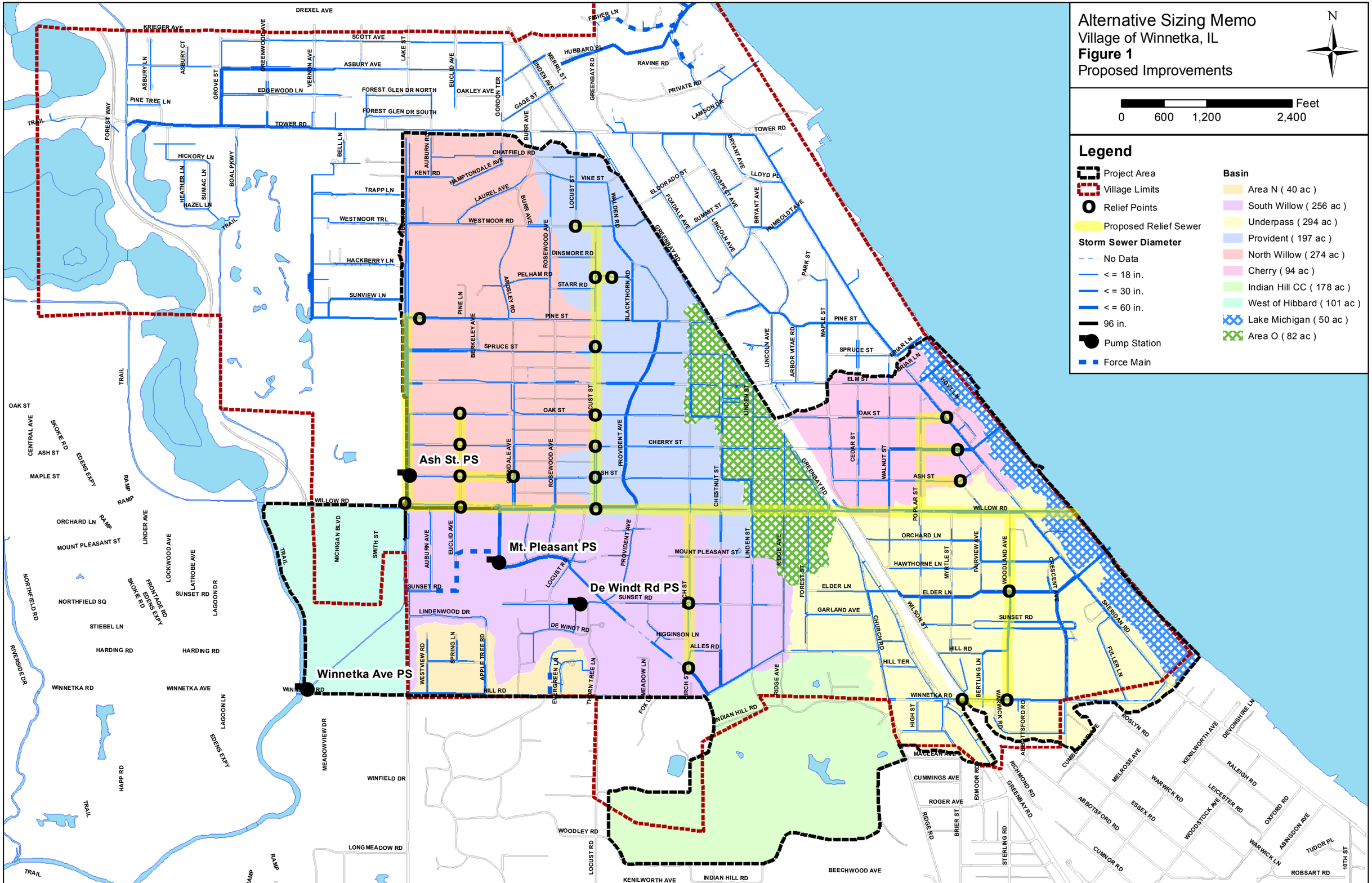
MWH recognizes both the importance of the Willow Road STADI Project to the Village of Winnetka, and the significance of the challenges that must be addressed to advance the project to detailed design and implementation. We trust that the findings presented in this summary and the referenced interim deliverables provide you with the information necessary to make an informed decision regarding the path forward.

MWH appreciates this opportunity to be of service to the Village of Winnetka. We look forward to the opportunity to discuss these findings with you further and would be happy to answer any questions you have regarding the work completed to date. Please feel free to contact me at 312.831.3821 or joe.johnson@mwhglobal.com.

Very truly yours,



T. Joe Johnson, P.E., PMP
Vice President


Alternative Sizing Memo
Village of Winnetka, IL
Figure 1
Proposed Improvements
N
Feet
0
600
1,200
2,400
Legend
Project Area
Village Limits
Relief Points
Proposed Relief Sewer
Storm Sewer Diameter
No Data
< = 18 in.
< = 30 in.
< = 60 in.
96 in.
Pump Station
Force Main
Basin
Area N (40 ac)
South Willow (256 ac)
Underpass (294 ac)
Provident (197 ac)
North Willow (274 ac)
Cherry (94 ac)
Indian Hill CC (178 ac)
West of Hibbard (101 ac)
Lake Michigan (50 ac)
Area O (82 ac)
Ash St. PS
Mt. Pleasant PS
De Windt Rd PS
Winnetka Ave PS

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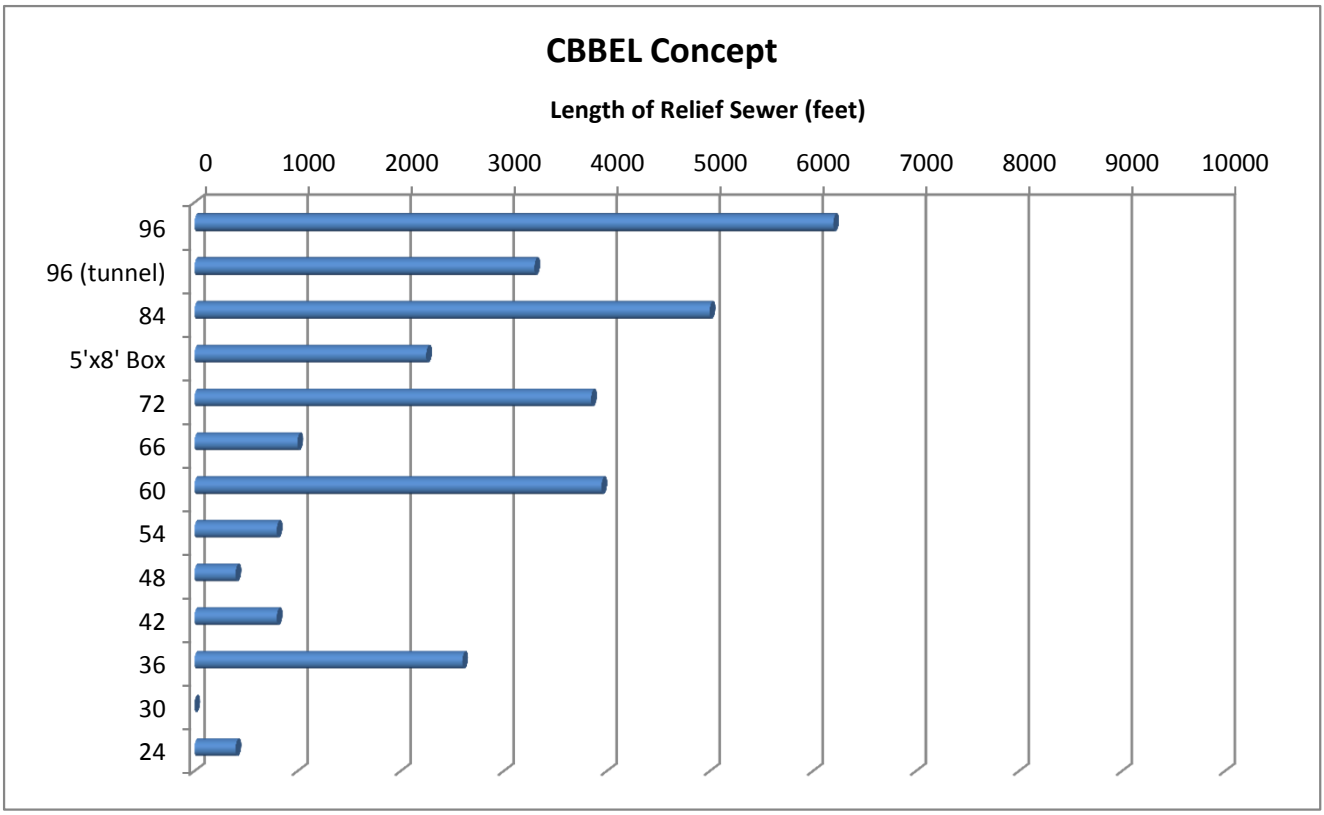

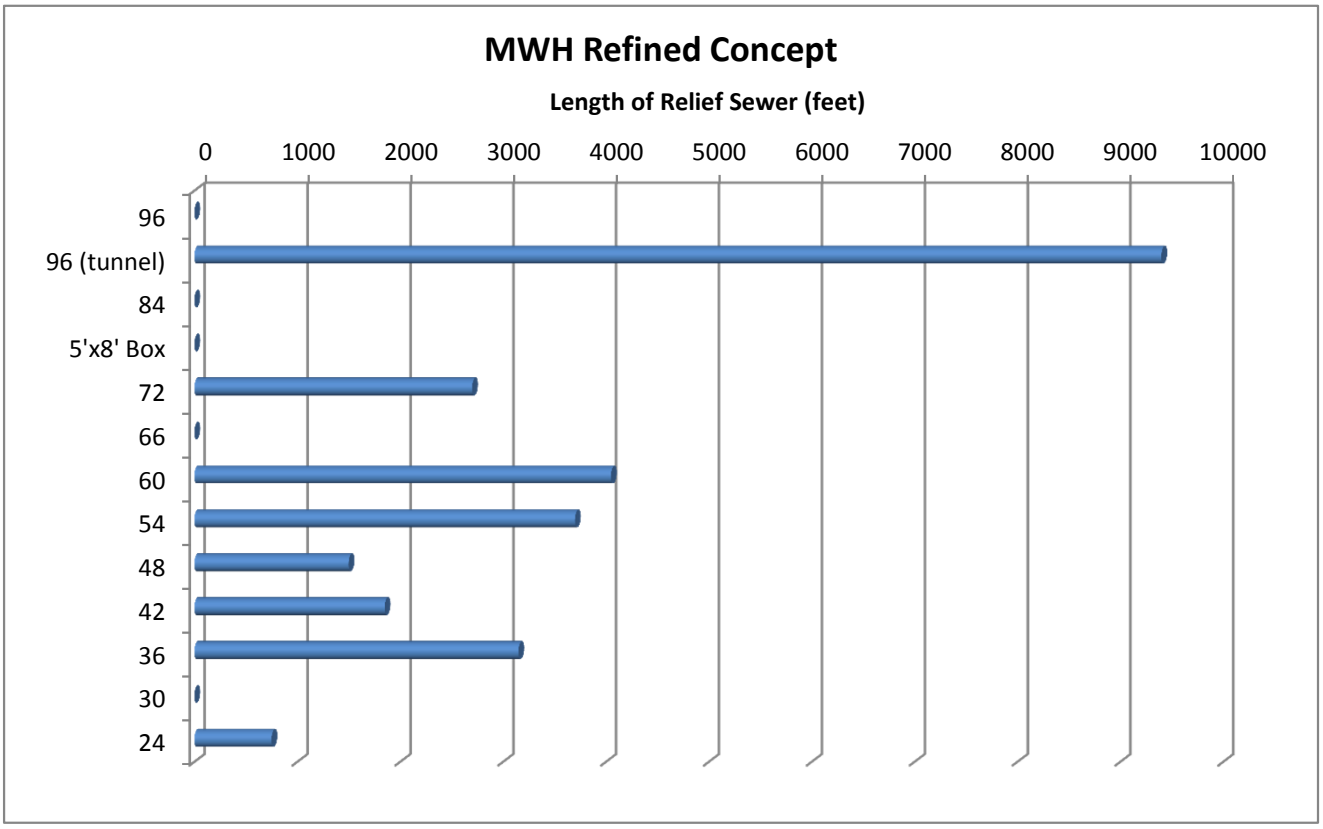

Figure 2

REQUIRED SEWER IMPROVEMENT LENGTHS
WILLOW ROAD STADI PROJECT

Village of Winnetka, Illinois

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ATTACHMENT #2
MWH Concept Review Memo

WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS CONCEPT REVIEW MEMO

Prepared for: Village of Winnetka, Illinois

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Date: June 18, 2014

Quality Assurance Statement

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1. INTRODUCTION

On February 26, 2014, Village of Winnetka staff and MWH representatives participated in a half-day Concept Review Workshop focusing on key issues related to the proposed Willow Road Stormwater Tunnel and Area Drainage Improvements Project (STADI). The Concept Review Workshop was scheduled to provide an opportunity for the participants to jointly:

- review key features of the proposed project concept,
- discuss issues that have the potential to significantly impact the design, implementation, and/or performance of the proposed project, and
- develop consensus as to specific actions and decisions that will need to be made during the balance of the design and permitting effort.

Workshop participants are listed in Table 1 below.

Table 1 – Willow Road STADI Concept Review Participants

Village of Winnetka	MWH
Rob Bahan – Village Manager	Rick Bolliger - Environmental Scientist
Megan Pierce – Asst. to Village Manager	Mohammad Djavid, Ph.D., P.E. - Lead Geotechnical Engineer
Steve Saunders, P.E. – Village Engineer/ Director of Public Works	Dan Gallagher, P.E. – Project Engineer/Lead Civil Engineer
Jim Johnson, P.E. – Program Manager	Joe Johnson, P.E., PMP Project Manager
	Nick Stepina Civil/Environmental Engineer

The workshop was structured around five key questions pertaining to the proposed project.

- Question 1 – What reduction in flood risk do we expect the project to achieve?
- Question 2 – What are the water quality goals/constraints that we expect the project to meet?
- Question 3 – What is the preferred alignment for the required sewers?
- Question 4 – What should be the balance between tunnel and open cut sewer construction?
- Question 5 – What level of green infrastructure implementation is achievable/desired within the Village of Winnetka?

The discussion related to each question was initiated by having each participant provide some brief initial thoughts pertaining to the topic. MWH staff then presented currently available information related to the topic and the STADI project, and facilitated discussion of each question. Each period of discussion was used to establish a level of consensus among the workshop participants on each of the questions.

It is important to note that this workshop was conducted at the outset of the STADI permitting and preliminary design effort. As a result, detailed information related to specific project features was not always available. However, the discussion and interaction achieved through the workshop provided a solid foundation for the continued engineering and analysis of key project features and challenges. The balance of this document presents observations and recommendations related to the final design and implementation of the Willow Road STADI Project based on the discussions from the Concept Review Workshop and subsequent analysis of key project elements.

2. QUESTION 1 – WHAT REDUCTION IN FLOOD RISK DO WE EXPECT THE PROJECT TO ACHIEVE?

2.1. Background

The frequently stated objective of the Willow Road STADI Project is to keep water out of homes/structures in Winnetka for events up to the 1% annual risk storm event. However, "flooding" in Winnetka can take several forms and can be the result of a range of different factors. As such, it is important to define the specific objectives of the proposed improvements and communicate them clearly to the community.

2.2. Discussion and Analysis

Flooding as experienced by residents of the Village of Winnetka can take several forms.

- Overland flooding of structures
- Basement flooding due to backup from sanitary sewers
- Basement flooding due to seepage and/or failure of sump pumps
- Flooding of streets
- Flooding of open space, parkways, and/or yards

Maps presented in the 2009 *Village of Winnetka Flood Risk Reduction Assessment*[1] prepared by Christopher B. Burke Engineering, Ltd. illustrate the type and distribution of flooding complaints collected by the Village after the September 2008 storm event. This mapping shows that the community's experience of flooding during this severe storm event included a mix of the flooding conditions identified above.

2.2.1. Conditions that Contribute to Flooding in Winnetka

Review of conditions in Winnetka show that a number of factors contribute to this flooding.

- **Relatively flat topography with poorly draining soils and undefined surface drainage paths** – Ground elevations within the developed portion of the Village of Winnetka south of Tower Road range from approximately 610 feet to nearly 660 feet above mean sea level (msl). Lower ground elevations occur along the Lake Michigan shoreline bluff and beach areas, but these areas are naturally tributary to the lake and will not contribute to the proposed Willow Road STADI project.

  The natural topographic divide between the Lake Michigan watershed and the Skokie River watershed runs generally along Green Bay Road, at the highest points in the Village. On each side of the divide, the ground generally slopes toward the respective receiving water. However, overland drainage paths are poorly defined, and there are a number of low-lying areas within the Village that lack positive overland drainage outlets. When severe storms occur,

[1] *Village of Winnetka Flood Risk Reduction Assessment*, prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. September 2009.

stormwater runoff that cannot be conveyed by the existing storm sewer system collects in these low spots contributing to surface flooding of streets, yards, and in some cases, structures.

- **High flood levels on the Skokie River East Ditch and Skokie River** – More than 29 square miles of developed watershed are tributary to the Skokie River upstream of Willow Road. This includes watershed area tributary to the Skokie River East Ditch that runs along the western edge of the Village, area tributary to the mainstem of the Skokie River and Skokie Lagoons upstream of the Willow Road Dam, and area tributary to the Skokie River West Ditch that runs along the eastern side of the Edens Expressway. During severe storm events within the watershed, flood levels in these waterways can approach elevations that contribute to an increased risk of flooding across the western portion of Winnetka. Table 2 provides a summary of flood elevation data along the Skokie River East Ditch and Mainstem at points adjacent to Winnetka. At flood levels below about elevation 624, the west side of Winnetka is protected against overbank flooding from the ditch and river by a line of high ground that runs along the waterway. However, at flood levels above elevation 624, the potential exists for the East Ditch to overtop the high ground and flood low-lying areas to the east.

Table 2 – Skokie River Watershed Characteristics

	Skokie River East Ditch - Tower Road	Skokie River East Ditch - Pine Street	Skokie River Mainstem Willow Road	Skokie River Mainstem Winnetka Avenue
10% Annual Risk Flood Level – FEMA FIS (NAVD 88)	N/A	N/A	622.7	622.5
10% Annual Risk Flood Level – DWP (NAVD 88)	622.1	622.1	622.0	621.9
1% Annual Risk Flood Level – FEMA FIS (NAVD 88)	N/A	N/A	625.2	624.9
1% Annual Risk Flood Level - DWP (NAVD 88)	624.6	624.7	624.6	624.5

Sources: Flood Profiles – Skokie River, Cook County, IL and Incorporated Areas. Federal Emergency Management Agency. August 2008. Sheets 86P, 87P. Table 19.

Detailed Watershed Plan – North Branch of the Chicago River and Lake Michigan Watershed. Prepared for the Metropolitan Water Reclamation District of Greater Chicago by HDR. January 2011. Table 3.4.13.B.

Areas most vulnerable to overbank flooding from the East Ditch include the golf course, athletic fields, and open space west of Hibbard Road, as well as low-lying rear yards west of Hibbard Road between Hackberry Lane and Sunview Lane, low-lying intersections east of Hibbard Road at Berkeley Avenue and Ash Street, Cherry Street between Hibbard Road and Glendale Avenue, and low areas in the Sunset Road/De Windt Road area.

- **Limited capacity in aging storm sewer and drainage systems** – In low-lying areas throughout Winnetka, the existing storm sewer and drainage infrastructure provides the primary outlet for runoff. When the capacity of the drainage network is exceeded, runoff collects in low spots and begins to pond up to the point where it reaches an overland flow path to a lower area.

Table 3 provides a summary of sewer system capacity determined through computer modeling performed as part of previous flood risk reduction studies for the Village of Winnetka. As indicated, the existing drainage systems typically have capacity to convey runoff from less than a 2-year (50% annual risk) storm event. For more severe storms, excess runoff that cannot be conveyed by the drainage system will flow overland toward low points, and then pond until the level reaches the next overflow elevation. During extreme events, the capacity of much of the existing system will be overwhelmed and natural topography and surface drainage paths will control the movement of runoff toward low points and outlets.

Table 3 – Existing Storm Sewer System Level of Protection

Drainage Subsystem	Storm Sewer Capacity	Select Flooding Locations	1% Annual Chance Inundation Depths (ft)
South of Willow Road	Less than 2-year	Sunset and White Oak	1.2
		Sunset and Locust	3.2
		Thorntree	3.2
Oak/Cherry/Ash	Less than 2-year	Berkeley and Oak	2.1
		Berkeley and Cherry	2.1
		Berkeley and Ash	2.1
Pine/Spruce	Less than 2-year	Pine East of Hibbard	2.5
Provident Avenue	Less than 2-year	Westmoor West of Locust	2.6
		Blackthorn Road	2.6
		Provident and Willow	1.2
Cherry Avenue	Between 2-year and 5-year	Sheridan – Oak to Cherry	1.9
Underpass	Less than 2-year	Winnetka Avenue Underpass	7.0
		UP Pedestrian Underpass	Not Indicated
		Fuller Lane	Not Indicated

Sources: Flood Risk Reduction Assessment. Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. September 2009.

Supplemental Flood Risk Reduction Assessment. Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. June 2011. Exhibit 10.

- **Limited capacity and potential for wet weather inflow and infiltration into the separate sanitary sewer system** - Backups of sanitary wastewater into basements during major storm events is typically the result of excessive levels of wet weather infiltration and/or inflow into the sanitary sewer system, capacity restrictions in the sanitary sewer system, or a combination of the two factors. As the Village of Winnetka operates separate sanitary and storm sewer systems, the proposed Willow Road STADI Project is not intended to directly address issues in the sanitary sewer system. For example, the Willow Road STADI Project will not result in any change in the capacity of the Village's existing sanitary sewer system. Improvements aimed at specifically addressing deficiencies in the Village's sanitary sewer system are being addressed as part of other efforts including a Sanitary Sewer Evaluation Study and related system rehabilitation projects. The proposed storm sewer improvements are, however, intended to significantly improve drainage within the community and reduce the severity and duration of surface flooding. By reducing the extent and duration of surface flooding, the project will indirectly reduce the likelihood that ponded runoff will find its way into the sanitary sewer system as inflow or infiltration and contribute to basement backups.

2.2.2. Conceptual Improvement Approach

The conceptual Willow Road STADI Project is intended to provide significant additional conveyance and outlet capacity to the portion of the Village located north and south of Willow Road. The new storm sewers proposed will augment the capacity of the existing drainage system, and direction of the new trunk storm sewer to Lake Michigan will increase the outlet capacity available to the system.

Within the project area, approximately 438 acres of area are currently tributary to storm sewer systems that discharge to Lake Michigan through existing storm sewer outfalls at Elder Street, Willow Road, Cherry Street, and Elm Street. The remainder of the study area consists of about 1008 acres of land tributary to storm sewer systems that discharge west toward the Skokie River. It should be noted that the area tributary to the Skokie River outfall includes approximately 178 acres located south of the Winnetka village limits, but naturally tributary to the Village's drainage system near Birch Street and Hill Road. Table 4 provides a listing of the existing drainage subsystems in Winnetka south of Tower Road, their respective areas and primary and relief outfall locations. Under existing conditions, all flow from each subsystem goes to the same outfall location.

Table 4 – Winnetka Drainage Subsystems South of Tower Road – Existing Conditions

Drainage Subsystem	Tributary Area (acres)	Primary Outfall/ Receiving Water	Relief Outfall/ Receiving Water
Skokie River Watershed	**1127**		
Provident Avenue	197	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Area O	81	MWRD Interceptor	
Willow South	256	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Indian Hill Golf Course	178	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Area N	40	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Willow North	274	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
West of Hibbard	101	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Lake Michigan Watershed	**438**		
Cherry Street	94	Elm Street Outfall, Cherry Street Outfall/ Lake Michigan	Elm Street Outfall, Cherry Street Outfall/ Lake Michigan
Underpass	294	Willow Road Outfall, Elder Lane Outfall/ Lake Michigan	Willow Road Outfall, Elder Lane Outfall/ Lake Michigan
Lake Michigan Shoreline	50	Lake Michigan	Lake Michigan
Tributary Areas			
Skokie River		1127	1127
- *Winnetka Pump Station*		*1127*	*1127*
Lake Michigan		438	438
- *Elm St, Cherry St Outfalls*		*94*	*94*
- *Willow Rd, Elder Ln Outfalls*		*294*	*294*
- *Lake Michigan Direct Runoff*		*50*	*50*

Under the proposed concept plan, the relative distribution of tributary area would remain generally the same for initial flows up to the capacity of the existing drainage systems. However, once runoff rates exceed the capacity of the existing system, excess flow from approximately 80% of the area normally tributary to the Skokie River (905 acres) would be captured and conveyed toward Lake Michigan through the proposed relief storm sewer system. The proposed new storm sewer would also provide conveyance capacity for relief flows from the Cherry Street and Underpass areas currently tributary to the lake. Table 5 shows the approximate distribution of tributary area for initial flows and relief conditions under the proposed concept.

Table 5 – Winnetka Drainage Subsystems South of Tower Road – Proposed Conditions

Drainage Subsystem	Tributary Area (acres)	Primary Outfall/ Receiving Water	Relief Outfall/ Receiving Water
Skokie River Watershed	**1127**		
Provident Avenue	197	Winnetka Pump Station/ Skokie River	Willow Road Tunnel/ Lake Michigan
Area O	81	MWRD Interceptor	MWRD Interceptor
Willow South	256	Winnetka Pump Station/ Skokie River	Willow Road Tunnel/ Lake Michigan
Indian Hill Golf Course	178	Winnetka Pump Station/ Skokie River	Willow Road Tunnel/ Lake Michigan
Area N	40	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Willow North	274	Winnetka Pump Station/ Skokie River	Willow Road Tunnel/ Lake Michigan
West of Hibbard	101	Winnetka Pump Station/ Skokie River	Winnetka Pump Station/ Skokie River
Lake Michigan Watershed	**438**		
Cherry Street	94	Elm Street Outfall, Cherry Street Outfall/ Lake Michigan	Willow Road Tunnel/ Lake Michigan
Underpass	294	Willow Road Outfall, Elder Lane Outfall/ Lake Michigan	Willow Road Tunnel/ Lake Michigan
Lake Michigan Shoreline	50	Lake Michigan	Lake Michigan
Tributary Areas			
Skokie River		1127	222
- *Winnetka Pump Station*		*1046*	*141*
- *MWRD Interceptor*		*81*	*81*
Lake Michigan		438	1343
- *Elm St, Cherry St, Elder Ln, Willow Rd Tunnel Outfalls*		*388*	*1293*
- *Lake Michigan Direct Runoff*		*50*	*50*

Additional hydrologic and hydraulic modeling is being performed to accurately quantify the relative changes in stormwater discharges to the Skokie River and Lake Michigan that will result from full implementation of the proposed Willow Road STADI Project. This analysis includes confirmation of appropriate relief points in the existing drainage system and determination of the appropriate diversion elevations at the relief points. Relief point elevations will be refined as the project moves through design to provide for effective management of initial flows as well as provision of relief conveyance capacity at levels that reduce the risk for severe flooding.

2.3. Consensus

The following statements summarize the consensus reached by participants in the Concept Review Workshop related to flood risk reduction expectations for the Willow Road STADI Project.

- The Willow Road STADI Project will be designed to significantly reduce the risk of structure flooding and major roadway closures resulting from inadequate stormwater drainage throughout the project area for rainfall events up to a 1% annual chance rainfall storm event. The project will provide a significant reduction in the risk of structure flooding to more than 1200 acres of area within the Village, and allow for maintenance of traffic through the Winnetka Avenue underpass beneath the Union Pacific Railroad tracks during the design storm event.
- The STADI project will function independent of conditions on the Skokie River East Ditch and the mainstem Skokie River for flood elevations up to 624 feet above sea level. At river stage levels greater than elevation 624 feet, floodwater from the ditch and/or river can overtop the bank areas to the east and contribute to surface flooding of low lying areas in the western part of the Village. While the proposed project will greatly improve the Village's ability to collect and convey stormwater to suitable receiving waters, it is not intended to directly address overbank flooding from the Skokie River East Ditch or to provide for removal of specific areas from the FEMA mapped floodplain.
- It is expected that the improved surface drainage to be provided by the project will reduce the potential for infiltration or inflow into the Village's sanitary sewer system by reducing the extent and duration of potential surface ponding of runoff. The reduction of inflow and infiltration will indirectly reduce the potential for sanitary sewer backup in the area. However, the proposed Willow Road STADI project is not intended to address specific sanitary sewer capacity issues in the system.

3. QUESTION 2 – WHAT ARE THE WATER QUALITY GOALS/CONSTRAINTS THAT WE EXPECT THE PROJECT TO MEET?

3.1. Background

Stormwater quality and the impacts of stormwater discharges on the quality of receiving streams continue to be issues of increasing regulatory and public attention. In Illinois, municipal separate storm sewer systems (MS4s) are regulated under the Illinois Environmental Protection Agency's (IEPA) National Pollutant Discharge Elimination System (NPDES) Phase II Permit Program. Additionally, water quality standards for Illinois are established by the Illinois Pollution Control Board under Sections 302 and 303 of 35 Illinois Administrative Code. Section 302 defines general water quality standards, while Section 303 pertains to water use designations and site specific water quality standards applicable to lakes and streams. Finally, the IEPA continues to establish Total Maximum Daily Load limits for impaired waterways throughout the state. A TMDL for *E. coli* bacteria concentrations at Lake Michigan beaches was established by the agency in July 2013, and studies are currently in progress to establish TMDLs to address identified impairments for pH, fecal coliform, and dissolved oxygen within the Skokie River.[2] Compliance with these regulatory requirements and heightened public concern regarding water quality in Lake Michigan are major issues that must be addressed as part of the Willow Road STADI Project.

3.2. Discussion and Analysis

The Village has indicated on multiple occasions its commitment to implementing the Willow Road STADI Project in a manner that is consistent with all regulatory requirements for the protection of water quality. The Village's Stormwater Master Plan sets as a basic goal the protection of water quality in Lake Michigan and the Skokie River. Results from water quality sampling and analysis performed during the master planning effort were compared against water quality standards to identify pollutants of particular concern. During the Concept Review Workshop, Village staff reinforced the need for development of specific water quality management goals and measures as part of the Willow Road STADI Project.

3.2.1. Water Quality Regulations and Parameters of Concern

Of the agencies that will have to issue a permit authorizing the proposed new Willow Road outfall to Lake Michigan, it is expected that the IEPA and MWRDGC will have the greatest concern about the water quality impacts that could be associated with the proposed new outfall. The U.S. Army Corps of Engineers and the Illinois Department of Natural Resources will most likely focus most of their attention on other aspects of the project including the impacts of outfall construction on the shoreline and lake, and the effects of the proposed project on diversion accounting for Lake Michigan.

Water quality regulations expected to be of particular importance for this project include:

- Illinois Pollution Control Board General Water Quality Standards
- Illinois Pollution Control Board Lake Michigan Water Quality Standards
- IEPA Total Maximum Daily Load for *E. coli* at Lake Michigan Beaches

[2] *Upper North Branch Chicago River Watershed TMDL Stage 1 Report.* Prepared for the Illinois Environmental Protection Agency by AECOM, Inc. December 2009.

- NPDES Phase II Stormwater Permit Regulations

The review of these regulations and stormwater quality data collected during the development of Winnetka's Stormwater Master Plan[3] identified 6 likely parameters of particular concern for the Willow Road STADI outfall. These include:

- Total Dissolved Solids
- Nitrate
- Ammonia
- Total Phosphorus
- Fecal Coliform (*E. coli* will likely be the bacterial parameter of concern due to the recently established TMDL for Lake Michigan beaches)
- Chlorides

In addition, it is expected that the project will have to include provisions for the management of other pollutants, such as suspended solids, oil and grease, floatables, metals, and/or salts that could contribute to degradation of water quality at the outfall location. Guidance regarding specific limits that will have to be met for these parameters will be sought through communication and coordination with the IEPA and MWRDGC during the ongoing project design and permitting effort. In addition, the Village will continue to communicate with representatives from the Village of Kenilworth who are involved in a similar permitting effort for a new stormwater outfall to Lake Michigan.

3.2.2. Historic Water Quality Issues

One indication of historic water quality issues along Winnetka's Lake Michigan shoreline is the annual number of times beaches have been closed on account of water quality concerns related to bacteria. Figure 1 shows the number of beach closings for each of the Village's three beaches over the past 13 years. It is important to note that prior to 2012 beach closings noted may have been due to water quality issues <u>or</u> rip currents. Data presented for 2012 and 2013 show only closings attributable to water quality issues.

In general, water quality-related beach closings have been relatively rare. However, between 2007 and 2011, water quality concerns resulted in a high number of beach closings at Elder Beach. Through field investigations conducted in 2011, the Village identified multiple defects in its sanitary sewer system upstream of the Elder Beach outfall. After these defects were repaired, the number of water quality related closings at the beach declined significantly.

MWH has requested additional near shore water quality data for Lake Michigan from the IEPA for use in characterizing baseline conditions in Winnetka. In 2010, the IEPA started gathering water quality data from 25 sites in an area from the Lake Michigan shore out to 3.1 miles offshore (or 98 feet in depth, whichever comes first). The sites were sampled in May, July, and September of 2010 at a depth of 1.5 feet below the surface. Samples were analyzed for a range of parameters including chloride, fluoride, total metals, total nutrients, total solids, dissolved solids, volatile solids, and sulfate. Additional analyses

[3] *Village of Winnetka Stormwater Master Plan – Draft.* Prepared for the Village of Winnetka, Illinois by Baxter and Woodman Consulting Engineers. December 2013.

were performed on samples taken from a subset (20%) of the sites.[4] These data will be used along with other water quality information to provide an understanding of baseline water quality conditions along Winnetka's Lake Michigan shoreline.

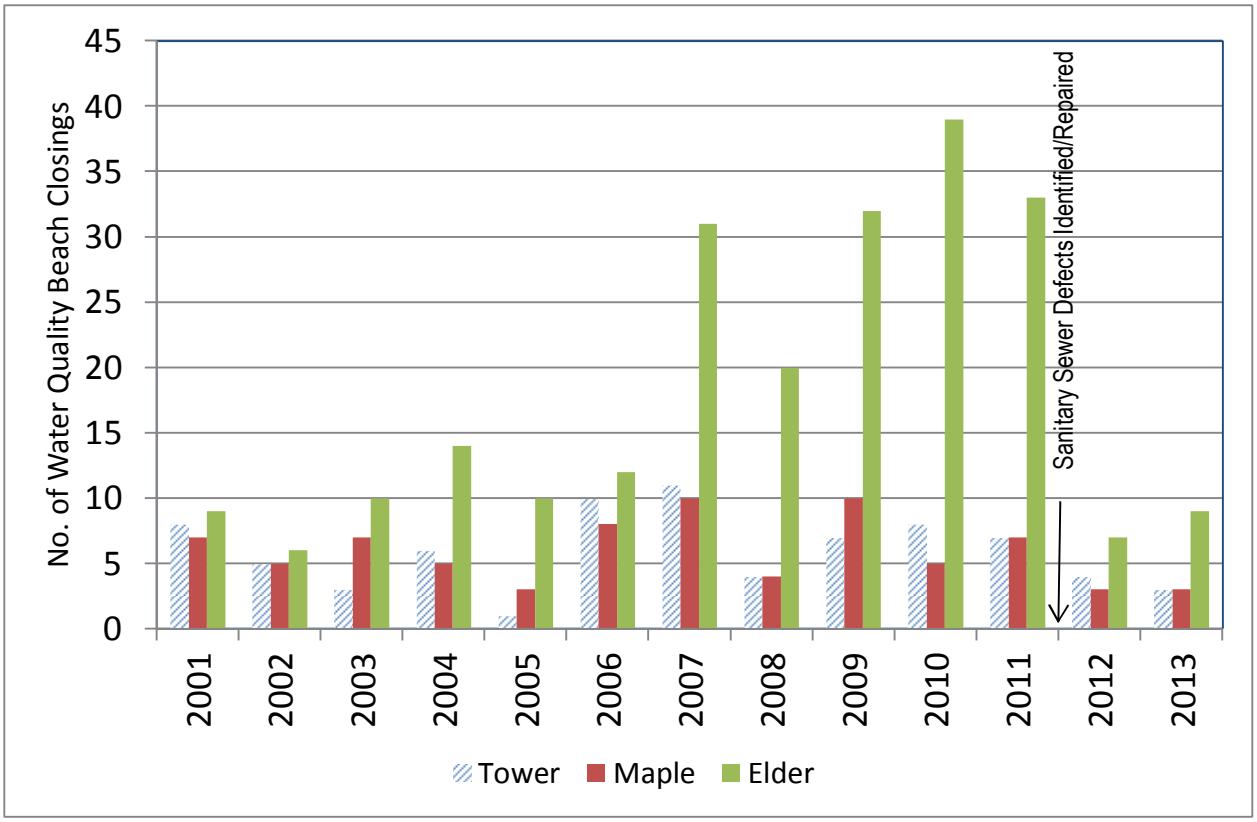

Figure 1 – Historic Beach Closings ***(Source: Winnetka Park District, February 2014)***

3.2.3. Water Quality Management Strategy

Meeting the identified water quality requirements will require the integration of a comprehensive water quality management plan into the overall Willow Road STADI Project. Since the requirements may include a combination of concentration and loading limits, management of both the quantity (volume) and quality of stormwater will be needed. The current strategy for meeting these objectives involves efforts at multiple points within the proposed project.

- **Source Control Measures** – Control of stormwater runoff volumes and/or pollutant wash-off as close to the source of the runoff as possible has significant benefits throughout the drainage system. Every gallon of water that infiltrates into the ground is one less gallon to be conveyed to an outfall, and one less gallon to carry pollutants to a receiving stream. While the amount of water than can be absorbed by the soil in Winnetka is limited, efforts to take advantage of the infiltration capacity that is available will be considered. Measures to reduce the accumulation of pollutants on paved and turf surfaces between rain events also have the potential to provide significant value. Public education programs encouraging appropriate use of fertilizers and management of pet waste can complement community

[4] http://www.epa.state.il.us/water/surface-water/lake-michigan-mon.html. March 2014.

activities such as street sweeping and bird control measures to reduce the amounts of pollutants available to be washed into the drainage system during storm events.

- **Management of Initial Flows** – Winnetka's location along the drainage divide between the Lake Michigan and Skokie River watersheds creates the potential for management of the distribution of stormwater discharges between the two basins. As indicated previously, about one third of the area tributary to Winnetka's drainage systems in the project area presently drains to Lake Michigan outfalls. Runoff from the other two thirds of the area drains toward the Skokie River. While the Village is committed to maintaining the quality of both water bodies, the characteristics of the lake and river differ significantly.

  A second element of the water quality management strategy for the Willow Road STADI Project includes maintenance of the existing drainage patterns for the initial stormwater flows, thereby reducing the potential for increased pollutant loadings to Lake Michigan from relief flows from areas west of Green Bay Road. Hydrologic and hydraulic modeling results will be used to confirm the capacity of the existing drainage networks and establish design criteria for overflow and diversion structures that will convey water to the stormwater tunnel system and new Lake Michigan outfall.

- **Distributed Stormwater Treatment Options** – A third element of the Village's water quality management strategy will include the installation of distributed stormwater treatment systems at key points where flow is conveyed into the tunnel system. Treatment systems may include hydrodynamic separators designed to remove solids or floatables, and conventional or enhanced stormwater filters. The intent of these systems is to reduce pollutant concentrations in stormwater overflows from the existing storm sewer system as the water transfers to the proposed tunnel system. Potential locations for these types facilities may include:

  - Near the intersection of Pine Street and Hibbard Road
  - Along Berkeley Avenue between Oak Street and Ash Street
  - Near the south end of Birch Street and at the intersection of Birch and Sunset Road
  - Near the intersection of Pine Street and Blackthorn Road
  - Near the intersection of Willow Road and Provident Avenue
  - Along Winnetka Avenue between the Union Pacific Railroad (UPRR) Viaduct and Essex Road
  - Along Elder Lane west of Sheridan Road
  - Cherry Street and Oak Street west of Sheridan Road

  Distributed treatment systems may also be suitable for use at major junctions in the existing storm sewer systems (Spruce Street, Cherry Street, Elder Lane) that currently discharge to Lake Michigan.

- **End of Pipe Treatment Systems** – A final element of the Village's water quality management strategy for the Willow Road STADI Project may include some type of end-of-pipe treatment near the system's proposed outfall to the lake. However, given the variability and magnitude of the flows anticipated from the tunnel system, cost-effective end-of-pipe treatment options may be limited. Concepts anticipated for evaluation as part of the overall water quality management plan for the STADI Project include provisions for capture of sediment, solids, or floatable material, as well as features designed to dissipate energy and limit the potential for erosion near the system's outfall. Depending on the design hydraulic profile for the system, there may also be potential for the incorporation of some level of

stormwater filtration or wetlands treatment at the bluff leading from the east end of Willow Road down to the Lake Michigan shore. Further evaluation of the need for and cost-effectiveness of potential end-of-pipe treatment systems will be performed as additional modeling of proposed flows and discussions with regulatory agencies proceed.

Table 6 provides a summary listing of several categories of water quality parameters of primary concern for the Willow Road STADI Project, their primary sources, and the type of water quality management systems that may be considered as preliminary design efforts for the project continue.

Table 6 – Winnetka Stormwater Quality Management Options

Parameter of Concern	Primary Sources	Source Control Measures	Distributed Treatment Options	End of Pipe Treatment Options
Solids, Metals	Erodible surfaces, paved surfaces	Street Sweeping, Sumps, permeable pavement, filter strips, bio-swales	Hydrodynamic separator, stormwater filter, biofilter	Hydrodynamic separator, treatment wetlands, sedimentation
Nutrients (nitrogen, phosphorus)	Fertilized turf areas	Education, filter strips, rain gardens	Biofilters, stormwater filter	Treatment wetlands
Floatables, Oil and Grease	Paved surfaces	Education, inlet hoods, bioswales, filter strips	Stormwater filter	Oil/water separator, baffle/hood
Bacteria (*E. coli)*	Wildlife, pet waste, leaking sewers	Education, bioswales, rain gardens, biofilters, sewer repairs	Enhanced biofilters	Disinfection systems

3.3. Consensus

The following statements summarize the consensus reached by participants in the Concept Review Workshop related to water quality management expectations for the Willow Road STADI Project.

- The Village of Winnetka is committed to meeting the water quality standards associated with the construction of the proposed new stormwater outfall to Lake Michigan. The Village and MWH will coordinate closely with regulatory and permitting agencies to clearly define water quality expectations for the project, and will evaluate water quality management systems necessary to meet the requirements during project design.
- A water quality management strategy that includes source control, first-flush management, distributed stormwater treatment, and some level of end-of-pipe treatment will likely be necessary to meet the performance criteria relevant for this project. It is the Village's intent to formulate a project-specific water quality management strategy and develop that strategy through ongoing coordination with the IEPA related to the permitting of the proposed project.
- Winnetka's beaches are clearly a tremendous asset to the community. Historic beach closing data illustrate the potential impact that water quality management failures can have on that asset. At the same time, current studies are likely to result in regulatory limits on discharges of stormwater pollutants to the Skokie River. The Village is committed to a continued program of actions focused on management of the quality of stormwater runoff throughout Winnetka, not just in the Willow Road STADI Project area.

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4. QUESTIONS 3 AND 4 – WHAT IS THE PREFERRED ALIGNMENT FOR THE REQUIRED SEWERS? WHAT SHOULD BE THE BALANCE BETWEEN TUNNEL AND OPEN CUT SEWER CONSTRUCTION?

4.1. Background

The concept plan developed for the Willow Road STADI Project calls for the construction of approximately 31,000 feet of new large diameter storm sewer, with about 3,800 feet proposed for construction as tunnel.[5] Other sections of sewer, including significant lengths of 8-foot diameter pipe were proposed for construction using open cut techniques along relatively narrow streets through residential areas. Based on early reviews of the project concept and prior experience in the northern part of Cook County, MWH has indicated that the Village may want to consider an alternative approach involving construction of a significantly larger portion of the proposed project as tunnel. Given the disruption expected to be associated with construction of large diameter storm sewer in relatively narrow residential neighborhoods, MWH believes that the overall cost of constructing some additional portions of the project as tunnel may be highly competitive as compared to the total cost of open cut construction and restoration.

4.2. Discussion and Analysis

Village staff has confirmed that the proposed storm sewer alignments developed for the Willow Road STADI Project are conceptual in nature and may be adjusted where necessary to improve project performance or reduce project costs. Staff also noted that public concern regarding the specific alignments of the proposed sewers as shown on the conceptual plan has been relatively limited. To date, contacts regarding sewer alignments have been limited to a few residents and the local school district. It is expected that community interest in the specific alignments and proposed construction techniques for the various sewer segments will increase as the project design and permitting efforts progress.

Conceptual plans for the Willow Road STADI Project also envisioned the coordination of storm sewer construction along the western portion of Willow Road in Winnetka with planned improvements and jurisdictional transfer of the roadway from IDOT to the Village of Winnetka. If open cut sewer construction is proposed along the western end of the STADI Project in Willow Road, coordination with the transfer would make sense. However, if the new storm sewer being constructed along the west end of Willow Road were to be installed by tunneling, the need for coordination of the two projects would be eliminated. Under this approach, the two projects could be programmed and implemented independent of each other.

The MWH design team will proceed with consideration of factors that may impact both the horizontal and vertical alignment of the proposed storm sewer improvements as described below.

[5] *Willow Road Stormwater Tunnel: Feasibility Report.* Prepared by Steven M. Saunders, Director of Public Works/Village Engineer. Village of Winnetka. December 2012.

4.2.1. Factors Affecting Sewer Alignments

The sewer alignments presented in the concept plan for the Willow Road STADI Project generally follow the alignment of existing storm sewers serving areas east and west of Green Bay Road and extend to low-lying areas identified as historic flooding locations. As preliminary design efforts for the project progress other factors are being considered and may warrant adjustments in the proposed alignments. For example, Sheridan Road north and south of Willow Road is an IDOT highway with an old MWRDGC interceptor sewer running beneath it. Obtaining permission from IDOT and the MWRDGC to construct a large diameter storm sewer within the existing right-of-way and in close proximity to aging infrastructure is likely to be very difficult. As an alternate, it may be possible to provide the required improved drainage to critical low areas north and south of Willow Road with trunk sewers located in Poplar Street and Woodland Avenue.

Similarly, the conceptual alignment for large diameter sewers in Glendale Avenue and Oak Street would require extensive construction immediately adjacent to two schools. An alternative alignment involving tunneling of large diameter sewer along Willow Road and Hibbard Road could significantly reduce the impact of construction on these sensitive areas while still providing connections for drainage of critical low areas along Berkeley Avenue between Oak and Willow.

A third area where an alternate alignment may be warranted is at the northern end of the proposed Provident Avenue storm sewer. Under the conceptual plan, the new sewer is proposed to run north from Pine Street along Blackthorn Road to serve low-lying areas near Westmoor Road and Locust Street and along Walden Road. However, Blackthorn Road is a narrow, private roadway along which large diameter sewer construction would likely be very disruptive. In this area, constructability and right-of-way acquisition issues will need to be carefully evaluated before a final alignment is adopted.

4.2.2. Factors Affecting Sewer Profiles and Construction Methods

The vertical alignment or profile of the proposed storm sewer improvements will also be impacted by a number of factors not explicitly addressed during project development. Critical factors affecting the vertical alignment of the sewers include:

- Overflow elevations at connections with existing storm sewers – The configuration of connections between existing storm sewer systems and the proposed STADI system will be influenced by the elevation of the existing pipes. In general, it is expected that the new storm sewers will need to be constructed lower than the existing pipes so as to provide a positive outlet. Final layouts of the proposed connections will also consider the need to achieve appropriate flow splits between first-flush flows and peak stormwater flows.

- Conflicts with MWRDGC Interceptors – Several major interceptors ranging in diameter from approximately 33-inches up to 8 feet run through the Village of Winnetka and cross the conceptual alignments developed for several pieces of the Willow Road STADI system. An initial review of record drawings provided by the MWRDGC suggests that these interceptors will constrain the vertical alignment of sewer segments, particularly at the Willow Road/Green Bay Road location, where proposed sewers cross or run along Sheridan Road, and along Winnetka Avenue east of the Union Pacific Rail Road (UPRR) viaduct. Not only will proposed improvements need to pass over or under the existing interceptors; appropriate measures must also be taken to protect the existing pipe during construction.

  MWRDGC currently has plans to line its interceptor in Winnetka Avenue in the summer of 2014, and to rehabilitate its interceptor under Sheridan Road in the next few years. Consideration should be given to opportunities to coordinate construction activities in similar areas where possible.

- Other utility conflicts – Potential conflicts with other existing utilities could directly impact the proposed profile for the Willow Road STADI Project. Information regarding Winnetka's existing water distribution network and sanitary sewer

collection system has been provided by the Village and is being reviewed. Efforts are currently in progress to assemble existing utility data from the non-municipal entities with utility infrastructure in Winnetka. As information is received, key elements can be added to the early project plan maps and used to adjust/refine the proposed vertical alignments for the system.

- Required Sewer Depth and Subsurface conditions – MWH's prior experience has found that costs for tunneling can be comparable to total costs for open cut construction of sewers 60-inches in diameter and larger more than about 15 feet below grade. In addition, as the length of tunneled sewer increases (up to the point where an additional shaft is required), the approach tends to become more cost effective. Initial soil borings suggest that conditions in Winnetka are likely suitable for construction of sewers in the 60-inch to 96-inch diameter range through soft ground tunneling. Further evaluation of likely construction methods will be performed as horizontal and vertical alignments for the proposed improvements are better defined, and additional geotechnical information is gathered.

4.3. Consensus

The following statements summarize the consensus reached by participants in the Concept Review Workshop related to sewer alignments and potential construction methods for the Willow Road STADI Project.

- Previous analyses have indicated that the primary segment of proposed trunk storm sewer for the Willow Road STADI Project will be constructed within the Willow Road right -of-way to a new outfall to Lake Michigan. Data reviewed to date confirm that this is a suitable alignment for the primary segment of proposed trunk sewer.
- Proposed storm sewer alignments presented in previous reports describing the Willow Road STADI Project are generally conceptual and subject to revision based upon preliminary design investigations. The final routes will depend upon consideration of final analyses of relief points, utility conflicts, constructability issues, opportunities for coordination with other construction activities, community input, traffic control considerations, and other factors.
- To date there has been limited public concern expressed regarding the proposed alignment of the new storm sewers. Once preliminary engineering tasks are authorized, the technical team will work to develop and document alignments that reflect appropriate consideration of the factors described above. Subsequently, the alignments developed will be presented to the community and individual concerns addressed as part of the final improvement design.
- Village staff recognizes the significant reduction in disruption that can be achieved through the construction of portions of the proposed storm sewer improvements by tunneling. MWH's technical team will evaluate the relative balance between sewer to be constructed as tunnel and sewer to be constructed using open cut methods during the preliminary design of the project. Key considerations will include potential conflicts with existing MWRDGC interceptor sewers and/or other major utilities, subsurface conditions as indicated by past borings and confirmed through additional field investigations, and the need for surface connections to other existing or proposed storm sewers.
- MWH should meet with the MWRDGC, the Illinois Department of Transportation, and the Union Pacific Railroad (UPRR) to clarify agency requirements related to large diameter sewer construction with their respective rights-of-way. During the meeting with MWRDGC, MWH should clarify the agency's plans for relining of existing interceptors in Winnetka Avenue (planned for Summer 2014) and beneath Sheridan Road (planned for the next few years).

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5. QUESTION 5 – WHAT LEVEL OF GREEN INFRASTRUCTURE IMPLEMENTATION IS ACHIEVABLE/DESIRED WITHIN THE VILLAGE OF WINNETKA?

5.1. Background

As indicated previously, some level of stormwater best management practices (BMPs) will likely need to be implemented as part of the Willow Road STADI Project to meet the water quality requirements associated with a new stormwater discharge to Lake Michigan. These BMPs may include Village projects constructed within the public right-of-way or on municipally-owned property, or projects implemented by private organizations or property owners in support of the overall water quality management effort associated with the project.

In planning for these elements of the overall project, the characteristics of the community and its residents must be considered. Specifically, green infrastructure improvements proposed as part of the project must be:

- suitable for the natural conditions that exist within the project area,
- of the type and magnitude that will be accepted by the community, and
- improvements that can be sustainably managed by the Village.

For example, soil characteristics are a key factor impacting the suitability of many types of stormwater BMPs for particular applications. Appendix A to this document includes data from the Natural Resources Conservation Services National Cooperative Soil Survey. These data provide a high level indication of the subsurface water management capabilities of soils in the Willow Road STADI Project area. As shown in the soils map provided, the subsurface water management capabilities of soils throughout most of the area east of Hibbard Road and between Tower Road and Winnetka Avenue are rated as "Very limited". As such, BMP's that rely on significant infiltration of stormwater are not well-suited for the area. Rather, BMPs that can be effective in the project area will be those that provide temporary storage (detention) or water quality benefits not dependent upon infiltration.

5.2. Discussion and Analysis

The Village of Winnetka has considered how it might support or implement several potential stormwater BMPs as part of ongoing stormwater management or other infrastructure improvement projects. Potential BMPs that have been considered for implementation within public rights-of-way include:

- Permeable driveway aprons – The Village has considered promoting the use of permeable pavement or pavers for the construction of driveway aprons within the public right-of-way. The goal of the aprons would be to reduce total impervious area, increase the time of concentration for stormwater runoff, and potentially provide for the removal of some pollutants. Given the characteristics of the soils in the project area, this type of improvements would likely have to include over excavation of subsurface soils, placement of stone below the proposed surface system, and installation of a drain outlet.
- Permeable streets – Consideration has been given to the use of permeable pavement for streets within Winnetka. However, concerns regarding the long-term performance of such systems and the limited space within the pavement

limits along residential streets throughout much of the Village have historically prevented any significant use of permeable pavement by the Village. In light of these concerns and the limitations of area soils for effective infiltration, the use of permeable pavement for traffic lanes in Village streets is not considered an appropriate BMP for the area.

- Permeable alleys – A limited number of neighborhoods in Winnetka have concrete alleys that could be converted to permeable pavement. While many of the same concerns identified for permeable streets exist for alleys, the alleys are typically less heavily travelled than primary streets, and permeable pavement systems have been designed for use in these types of applications in other communities.
- Bioswales – While bioswales constructed within public rights-of-way can provide benefits in terms of both stormwater quantity reduction and stormwater quality improvements, the relatively narrow, tree-lined streets that exist throughout Winnetka are not well-suited for bioswale construction. Opportunities for effective use of bioswales are more likely to exist in large open space areas where they can be incorporated into natural surface drainage paths.
- Rain Gardens – Rain gardens constructed with public rights-of-way can provide opportunities for increased capture and detention of localized stormwater runoff. Opportunities for effective implementation of rain gardens will be considered as detailed design of project elements proceeds.

Areas within the Village that may be more suitable for implementation of significant stormwater BMPs include large properties with a mix of open space or significant impervious areas. Examples include the New Trier High School campus, the North Shore Country Day School campus, Skokie, Crow Island, and Greeley Schools and parks in the community and along the lakefront. Efforts will be made to engage these property owners as preliminary design for the Willow Road STADI Project proceeds.

The potential for implementation of stormwater BMPs on private property by residents within the Village was also discussed. Staff indicated that while some level of participation may be achievable through a program of public education and the credit allowances included in the Village's stormwater utility program, aggressive, widespread implementation of BMPs on private property within the community as part of the project would likely be difficult.

Based on these discussions, hydrologic and hydraulic model simulations of the proposed Willow Road STADI Project will be performed to assess the impact that implementation of stormwater BMPs could have on the sizing of major project elements. Data from the Village's Geographic Information System (GIS) will be used to classify areas within drainage subcatchments as pervious, impervious roofs, impervious roadways, impervious alleys, or other impervious surfaces. These data will provide a basis for estimating the relative potential for implementation of BMPs within the project area. Results from simulations that consider either limited or moderate implementation of BMPs will be compared against baseline results that reflect existing conditions in the community so as to quantify the impact of both BMP implementation scenarios.

5.3. Consensus

The following statements summarize the consensus reached by participants in the Concept Review Workshop related to green infrastructure implementation associated with the Willow Road STADI Project. These concepts will guide ongoing evaluation of options for effective use of stormwater BMPs as part of the overall Willow Road STADI Project.

- The Village recognizes the benefits that stormwater best management practices can provide relative to reductions in the volume, peak flow rates, and quality of stormwater runoff. As such, the Village is committed to encouraging "the

use of stormwater best management practices throughout the Village to reduce runoff volumes and improve the quality of stormwater runoff."[6]

- However, given the limitations of the natural soils within Winnetka, it does not appear that stormwater best management practices alone can provide the desired reduction in flooding risk for extreme events up to the 1% Annual Chance Storm. Rather, stormwater best management practices will be incorporated into the Village's stormwater management efforts as a complement to, not a replacement for, proposed traditional stormwater management infrastructure.

The design analysis for the Willow Road STADI Project should consider options for the effective implementation of stormwater BMPs within the community as a means of reducing peak stormwater flows and improving the quality of stormwater runoff. Scenarios will be considered for both a moderate level of implementation primarily within public rights-of-way and large public properties (schools, parks, etc.), and more aggressive implementation that would include additional installation of BMPs by private property owners.

[6] *Village of Winnetka Stormwater Master Plan – Draft.* Prepared for the Village of Winnetka, Illinois by Baxter and Woodman Consulting Engineers. December 2013.

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APPENDIX A

NRCS SOILS DATA

NATIONAL COOPERATIVE SOIL SURVEY

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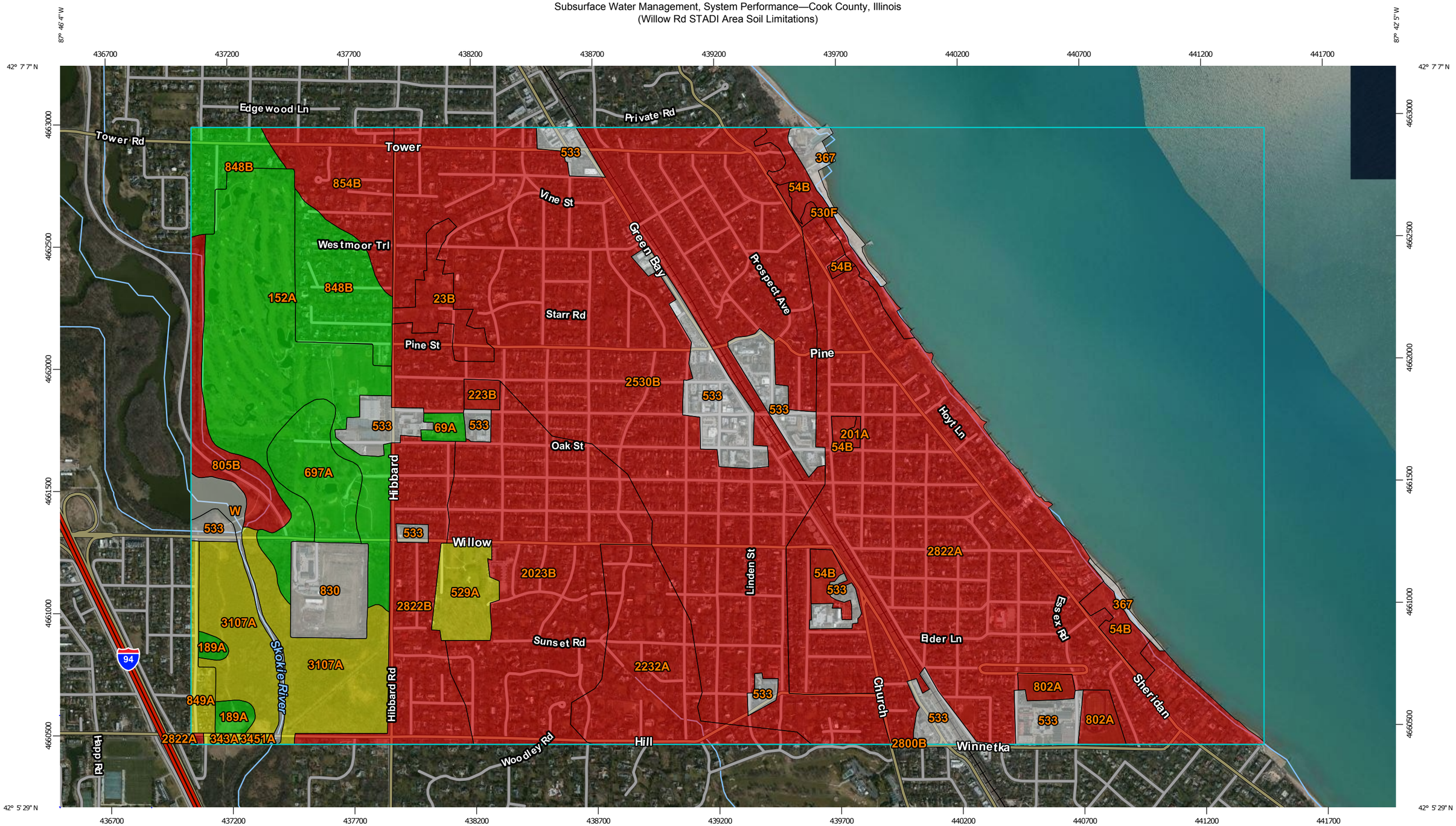
Subsurface Water Management, System Performance—Cook County, Illinois
(Willow Rd STADI Area Soil Limitations)



Map Scale: 1:14,800 if printed on B landscape (17" x 11") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

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

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Lines

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Points

Very limited

Somewhat limited

Not limited

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 7, Dec 8, 2013

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

Date(s) aerial images were photographed: Jan 1, 1980—Mar 28, 2012

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

Subsurface Water Management, System Performance

Subsurface Water Management, System Performance— Summary by Map Unit — Cook County, Illinois (IL031)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
23B	Blount silt loam, 2 to 4 percent slopes	Very limited	Blount (90%)	Dense layer (1.00)	20.3	0.7%
				Slow water movement (0.75)		
54B	Plainfield loamy sand, 1 to 6 percent slopes	Very limited	Plainfield (94%)	Drainage not required (1.00)	23.0	0.8%
				Clogging of tiles with sand (0.76)		
69A	Milford silty clay loam, 0 to 2 percent slopes	Not limited	Milford, drained (93%)		4.6	0.2%
152A	Drummer silty clay loam, 0 to 2 percent slopes	Not limited	Drummer (90%)		155.9	5.6%
189A	Martinton silt loam, 0 to 2 percent slopes	Not limited	Martinton (92%)		7.7	0.3%
201A	Gilford fine sandy loam, 0 to 2 percent slopes	Very limited	Gilford (94%)	Clogging of tiles with sand (1.00)	1.4	0.1%
223B	Varna silt loam, 2 to 4 percent slopes	Very limited	Varna (90%)	Dense layer (1.00)	4.5	0.2%
				Slow water movement (0.75)		
343A	Kane silt loam, 0 to 2 percent slopes	Somewhat limited	Kane (92%)	Clogging of tiles with sand (0.14)	1.9	0.1%
367	Beaches	Not rated	Beaches (99%)		12.9	0.5%
529A	Selmass loam, 0 to 2 percent slopes	Somewhat limited	Selmass (92%)	Clogging of tiles with sand (0.18)	22.7	0.8%
530F	Ozaukee silt loam, 20 to 30 percent slopes	Very limited	Ozaukee (95%)	Dense layer (1.00)	14.9	0.5%
				Slow water movement (0.75)		
533	Urban land	Not rated	Urban land (90%)		116.6	4.2%

Subsurface Water Management, System Performance— Summary by Map Unit — Cook County, Illinois (IL031)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
697A	Wauconda silt loam, 0 to 2 percent slopes	Not limited	Wauconda (92%)		33.8	1.2%
802A	Orthents, loamy, nearly level	Very limited	Orthents, loamy, nearly level (90%)	Dense layer (1.00)	14.2	0.5%
				Drainage not required (1.00)		
805B	Orthents, clayey, undulating	Very limited	Orthents, clayey, undulating (91%)	Dense layer (1.00)	28.3	1.0%
				Slow water movement (0.75)		
830	Landfills	Not rated	Orthents, landfill (90%)		30.6	1.1%
848B	Drummer-Barrington-Mundelein complex, 1 to 6 percent slopes	Not limited	Drummer (40%)		66.5	2.4%
			Barrington (30%)			
			Mundelein (25%)			
849A	Milford-Martinton complex, 0 to 2 percent slopes	Somewhat limited	Milford (54%)	Dense layer (0.27)	10.8	0.4%
854B	Markham-Ashkum-Beecher complex, 1 to 6 percent slopes	Very limited	Markham (40%)	Dense layer (1.00)	48.8	1.8%
				Slow water movement (0.75)		
			Ashkum (30%)	Dense layer (1.00)		
			Beecher (25%)	Dense layer (1.00)		
				Slow water movement (0.75)		
2023B	Alfic Udarents, clayey-Urban land-Blount complex, 2 to 4 percent slopes	Very limited	Alfic Udarents, clayey, moderately deep water table (42%)	Dense layer (1.00)	187.8	6.8%
				Slow water movement (0.75)		
			Blount (15%)	Dense layer (1.00)		
				Slow water movement (0.75)		
2232A	Orthents, clayey-Urban land-Ashkum complex, 0 to 2 percent slopes	Very limited	Orthents, clayey (45%)	Dense layer (1.00)	83.1	3.0%

Subsurface Water Management, System Performance— Summary by Map Unit — Cook County, Illinois (IL031)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
				Slow water movement (1.00)		
			Ashkum (15%)	Dense layer (1.00)		
2530B	Alfic Udarents, clayey-Urban land-Ozaukee complex, 2 to 4 percent slopes	Very limited	Alfic Udarents, clayey, deep water table (42%)	Dense layer (1.00)	602.0	21.8%
				Drainage not required (1.00)		
				Slow water movement (0.75)		
			Ozaukee (15%)	Dense layer (1.00)		
				Slow water movement (0.75)		
2800B	Urban land-Psamments complex, gently sloping	Not rated	Urban land (65%)		0.1	0.0%
2822A	Alfic Udarents, clayey-Urban land-Elliott complex, 0 to 2 percent slopes	Very limited	Alfic Udarents, clayey, moderately deep water table (42%)	Dense layer (1.00)	408.7	14.8%
				Slow water movement (0.75)		
			Elliott (15%)	Dense layer (1.00)		
				Slow water movement (0.75)		
2822B	Alfic Udarents, clayey-Urban land-Elliott complex, 2 to 4 percent slopes	Very limited	Alfic Udarents, clayey, moderately deep water table (42%)	Dense layer (1.00)	77.9	2.8%
				Slow water movement (0.75)		
			Elliott (15%)	Dense layer (1.00)		
				Slow water movement (0.75)		
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	Somewhat limited	Sawmill (95%)	Frequent or very frequent flooding (0.70)	95.9	3.5%

Subsurface Water Management, System Performance— Summary by Map Unit — Cook County, Illinois (IL031)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Somewhat limited	Lawson, frequently flooded (95%)	Frequent or very frequent flooding (0.70)	1.3	0.0%
W	Water	Not rated	Water (100%)		13.3	0.5%
Subtotals for Soil Survey Area					**2,089.3**	**75.7%**
Totals for Area of Interest					**2,759.1**	**100.0%**

Subsurface Water Management, System Performance— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Very limited	1,514.8	54.9%
Not limited	268.5	9.7%
Somewhat limited	132.5	4.8%
Null or Not Rated	173.5	6.3%
Totals for Area of Interest	**2,759.1**	**100.0%**

Description

The ratings for Subsurface Water Management, System Performance are based on the soil properties that affect the capacity of the soil to be drained. The properties that affect the subsurface system performance include depth to a water table, salinity, flooding, sodicity, sand content, soil reaction, hydraulic conductivity, soil density, gypsum content, and subsidence.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as that listed for the map unit. The percent composition of each component in a particular map unit is given so that the user will realize the percentage of each map unit that has the specified rating.

A map unit may have other components with different ratings. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

ATTACHMENT #3
MWH Alternative Sizing Memo

WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS ALTERNATIVE SIZING MEMO

Prepared for: Village of Winnetka, Illinois

Project Manager: Joe Johnson, P.E., PMP

Date: June 18, 2014

Quality Assurance Statement

Office Address	175 W. Jackson Blvd., Suite 1900, Chicago, IL 60604
Prepared by	William An, Nick Stepina, Joe Johnson
Reviewed by	Jeff Pelletier, Chris Young, Ben Emerson
Approved for Issue by	Joe Johnson

Revision Schedule

Rev No.	Date	Description	Prepared By	Reviewed By	Approved By
1	06/18/14	Review Point 1 Submittal	WA,NS,TJJ	JP,RCY,BE	TJJ
2					
3					
4					

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1. INTRODUCTION

Hydrologic and hydraulic modeling analyses provide basic information critical to the design and permitting of the proposed Willow Road Stormwater Tunnel and Area Drainage Improvements Project (STADI). This Alternative Sizing Memo documents tasks completed during the Concept Review phase of the STADI design effort and provides a basis for subsequent preliminary design activities. These tasks include:

- review of hydrologic and hydraulic modeling performed by others as the basis for development of the project concept,
- description of model modifications and refinements made or proposed to support preliminary design, permitting, and final design,
- documentation of updated simulations of the proposed STADI concept, and
- presentation of results from simulations of alternative versions of the proposed STADI project.

For the purpose of this review, the Willow Road STADI project area is defined as the part of the Village of Winnetka shown in Figure 1. This area has an irregular boundary that runs generally along Willow Road, Hibbard Road, Tower Road, Green Bay Road, Elm Street, Lake Michigan, and a drainage divide south of or along Winnetka Avenue. In total, this area includes approximately 1,565 acres of land.

The project area includes ten drainage sub-areas as listed in Table 1. Three of the sub-areas (Cherry, Underpass, Lake Michigan Shoreline) drain toward Lake Michigan via three existing storm sewer outfalls and sheet flow directly to the lake. Six other drainage sub-areas currently drain west toward the Skokie River via networks of storm sewer, open ditches, pumping stations, and overland flow paths. The Winnetka Pumping Station located just north of Winnetka Road along the Skokie River, serves as the primary outlet from the west side of the project area to the Skokie River. The remaining sub-area (Area O) is served by separate storm and sanitary sewers, but both sewer systems discharge to the Metropolitan Water Reclamation District of Greater Chicago's North Shore Intercepting Sewer No. 7 located along Green Bay Road.

The Willow Road STADI concept developed by Christopher B. Burke Engineering, Ltd. (CBBEL) is proposed to provide direct relief storm sewer capacity for six of the sub-areas listed in Table 1.[1] As proposed, the project does not provide direct relief sewer capacity for the Lake Michigan Shoreline, Area N, Area O, and the Skokie River sub-areas.

[1] *Village of Winnetka, Flood Risk Reduction Assessment. 25-, 50-, and 100-year Protection.* Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. October 2011.

Table 1 –Willow Road STADI Project Area: Drainage Sub-areas

Drainage Subsystem	Total Area (acres)	Tributary Waterway	Storm Sewer Outfalls	Overland Flow Outfalls
Cherry Street	94	Lake Michigan	Elm Street Cherry Street	Elm Street overflow toward lake
Underpass Area	294	Lake Michigan	Willow Road Elder Lane	Minor overland dis-charges to south
Lake Michigan Shoreline	50	Lake Michigan	None	Sheet flow to Lake
Provident Avenue	197	Skokie River	Willow Road Storm Sewer	None
Area O	81	MWRD Interceptor[1]	Willow/Green Bay Interceptor Conn.	None
Willow South	256	Skokie River	Winnetka Pumping Station	Overland flow to Forest Preserve
Indian Hill Golf Course	178	Skokie River	Winnetka Pumping Station	Skokie Ditch near Hill Rd/Chestnut
Area N	40	Skokie River	Winnetka Pumping Station	Forest Preserve ditch to west
Willow North	274	Skokie River	Winnetka Pumping Station	Flow across Hibbard north of Pine
West of Hibbard	101	Skokie River	Winnetka Pumping Station	Sheet flow to Forest Preserve Ditch
Total Study Area - Lake Michigan Systems - Skokie River Systems	 *438* *1127*	 Lake Michigan Skokie River		

[1] *Most excess flow that cannot be drained by the interceptor will flow overland toward the Skokie River.*

Alternative Sizing Memo
Village of Winnetka, IL
Figure 1
Project Area

N

0 600 1,200 2,400 Feet

Legend

- Project Area
- Village Limits

Storm Sewer Diameter

- No Data
- < = 18 in.
- < = 30 in.
- < = 60 in.
- 96 in.
- Pump Station
- Force Main

Basin

- Area N (40 ac)
- Indian Hill CC (178 ac)
- South Willow (256 ac)
- Underpass (294 ac)
- Provident (197 ac)
- North Willow (274 ac)
- Cherry (94 ac)
- West of Hibbard (101 ac)
- Lake Michigan (50 ac)
- Area O (82 ac)

Ash St. PS

Mt. Pleasant PS

De Windt Rd PS

Winnetka Ave PS

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2. MODELING REVIEW

Hydrologic and hydraulic models developed as part of previous engineering studies performed for the Village of Winnetka were obtained and reviewed from CBBEL[2] and Baxter and Woodman.[3] Reviews focused on the use of the existing models for permitting, preliminary design, and final design engineering for the Willow Road STADI project.

The general approach used for the development and application of these models included consideration of both storm sewer infrastructure and select overland flow paths within the study area. Separate flow conduits are included in the models to represent both sewers and significant overland flow paths. This approach is valid for the analysis of surface flooding issues associated with extreme rainfall events. More detailed comments related to the structure and results from the existing models follow.

2.1. Model Areas

Existing and proposed condition models for drainage sub-systems in the project area were obtained from CBBEL and Baxter & Woodman. All of the models were originally developed using the XP-SWMM modeling software. Table 2 summarizes characteristics of the models received.

Table 2 – Previously Developed Hydrologic/Hydraulic Models for the STADI Project Area

Model Description	Areas Modeled	Developed by	Model Date	Modeling Software
Cherry Street Outlet Area – Existing Condition	Cherry Street Area	CBBEL	2/13/2014	XP-SWMM 2010
Underpass Study Area - Existing Condition	Underpass Area	CBBEL	2/13/2014	XP-SWMM 2012
Willow Road North and South – Existing Condition	North Willow, South Willow, Provident Areas	CBBEL	2/13/2014	XP-SWMM 2012
Area N – Existing Condition	Area N	Baxter & Woodman	2/12/2012	XP-SWMM
Area O – Existing Condition	Area O	Baxter & Woodman	11/20/2012	XP-SWMM
Willow Road Stormwater Tunnel - Proposed Condition	North Willow, South Willow, Provident Areas, Cherry Street Area, Underpass Area(1)	CBBEL	2/13/2014	XP-SWMM 2012

(1) Underpass area included in overall model as inflow hydrographs, not as individual subcatchments

[2] Ibid.

[3] *Flood Risk Reduction Assessment – Additional Study Areas.* Prepared for the Village of Winnetka by Baxter & Woodman, Inc. December 2012.

Proposed condition models provided by CBBEL included both independent models for the Cherry Street and Underpass Areas and an integrated model for the entire Willow Road STADI Project. While the integrated model is the most complete representation of the proposed STADI concept, the model provided includes only inflow hydrographs from the Underpass Area, not the full representation of the existing and proposed Underpass sewer systems. In simulations provided by CBBEL, Areas N and O were not considered tributary to the Willow Road STADI and were not included in the existing and proposed conditions models. However, given that Area N is tributary to the Winnetka Avenue Pumping Station, it is recommended that it be incorporated into future model runs to provide an accurate analysis of the flow to the pumping station.

2.2. Model Development Observations

2.2.1. Representation of Existing Drainage Infrastructure

Model representations of the Village's existing drainage infrastructure were spot checked and found to be consistent with the Village's available GIS data. Alignments of existing storm sewers, connectivity, and inverts were found to match reasonably with the GIS. The storm sewer segments included in the models appear to represent almost all of the existing storm sewer shown on the Village's GIS. In addition, segments of the Skokie Ditch and the Forest Preserve Ditch are represented in the models as open channel sections.

Notable segments of storm sewer not represented in the models include storm sewer draining the Village's public works facility on Willow Road (12-inch and 15-inch storm sewer running from west to east in Willow Road) and the existing 36-inch storm sewer in Willow Road draining the Union Pacific North Line railroad tracks east to an outfall to Lake Michigan. As noted above, the model also does not include any representation of the storm sewer and drainage channels leading from Area N to the Winnetka Avenue Pumping Station.

The proposed condition models for the STADI project area include representations of four stormwater pumping stations as listed in Table 3 below.

Table 3 –Modeled Stormwater Pumping Stations: STADI Project Area

Pumping Station	Tributary Area	Modeled Capacity (cfs)
Ash Street/Hibbard Road	Oak St: Glendale to Hibbard	8.0
De Windt Road	Sunset Rd, De Windt Rd west of Skokie Ditch	1.6
Mt. Pleasant Road	Skokie Ditch and tributary areas	21.6
Winnetka Avenue	STADI Project Area west of Green Bay Road	134

In the model, the pump stations are represented as being either on (running at rated capacity) or off based on upstream level in the storm sewer system. No explicit representation of multiple pumps, pump curves, or wet well volumes are included in the model.

2.2.2. Drainage Sub-area and Catchment Delineation

Information provided by CBBEL and Baxter and Woodman indicates that drainage catchments included in the sub-area models were defined primarily on the basis of the extent of the existing storm sewer systems. Catchment boundaries are consistent with the limits of areas that drain to specific segments of the storm sewer system as shown in Figure 2.

As provided, the models that represent the STADI project area include a total of 146 drainage catchments ranging in size from less than 1 acre to 178 acres. The largest catchments cover the Indian Hill Golf Course, areas west of Hibbard Road tributary to the Forest Preserve Ditch, and the portion of the Willow North Sub-area located north of Westmoor Road.

2.2.3. Catchment Hydrologic Parameters

The previously developed models of the STADI project area all used the Soil Conservation Service (SCS) curve number approach as the basis for calculating runoff rates and volumes for specific rainfall events. Key input parameters required for this approach include:

- Catchment tributary area – total area within the catchment
- Catchment curve number – indication of soil type, relative imperviousness of land surfaces, and antecedent moisture conditions
- Time of Concentration – measure of the time required for runoff from the farthest extent of the catchment to reach to catchment loading node.

Curve numbers used for most of the catchments in the STADI model are in the range of 68.4 to 95.5, indicating a mix of pervious and impervious surfaces typical of suburban residential areas. Lower curve numbers were used to represent several large catchments consisting primarily of developed or undeveloped open space.

Times of concentration used in the models ranged from 5 to 157 minutes. Variations in times of concentration are typically associated with varying flow path lengths, ground surface slopes, extent of depressional areas, and catchment shapes. The average time of concentration within the STADI project area is about 27 minutes; however, a number of catchments in both the South Willow and North Willow areas have been assigned times of concentration of 5 to 10 minutes. Times of concentration less than 15 minutes are very conservative and generate very high peak flows in hydrologic models. We recommend that these values be reviewed as preliminary design proceeds to confirm that the design flows being used are reasonable.

Table 4 provides a summary of average catchment areas, curve numbers, and times of concentration used in the concept model. Estimated distributions of land development types generated from the Village's Geographic Information System (GIS) are provided in the table for comparison and show a reasonable correlation with the average curve numbers.

The SCS curve number method for generating runoff hydrographs is a widely accepted and appropriate approach for conceptual project planning. However, because the approach uses a single value to represent a wide range of factors that may affect the volume and rate of runoff from a given catchment, the curve number approach does not allow for direct input of variables such as pervious and impervious area, soil type, and infiltration characteristics. As a result, curve number values can be somewhat subjective and are difficult to use to accurately represent the types of changes in hydrology associated with implementation of green infrastructure or stormwater best management practices. As design efforts related to the STADI project proceed, consideration will be given to the use of more explicit representations of catchment characteristics based on the land surface data extracted from the Village's GIS mapping.

Table 4 – Estimated Land Surface Distribution and Model Hydrologic Parameters

	Model Hydrologic Parameters			% of Drainage Sub-area			
	Average Catchment Size (acres)	Average Curve Number	Ave. Time of Concen-tration (minutes)	Roof	Driveway, Parking and Sidewalk	Streets	Pervious
Cherry	5.2	86.9	19.2	14%	15%	12%	59%
Underpass	7.1	86.4	34.3	16%	16%	10%	58%
Provident	11.0	81.3	30.3	17%	15%	9%	59%
North Willow	5.5	84.1	20.1	15%	12%	8%	65%
South Willow	30.9	73.6	31.8	7%	7%	4%	82%

2.2.4. Representation of Major Overland Flow Paths

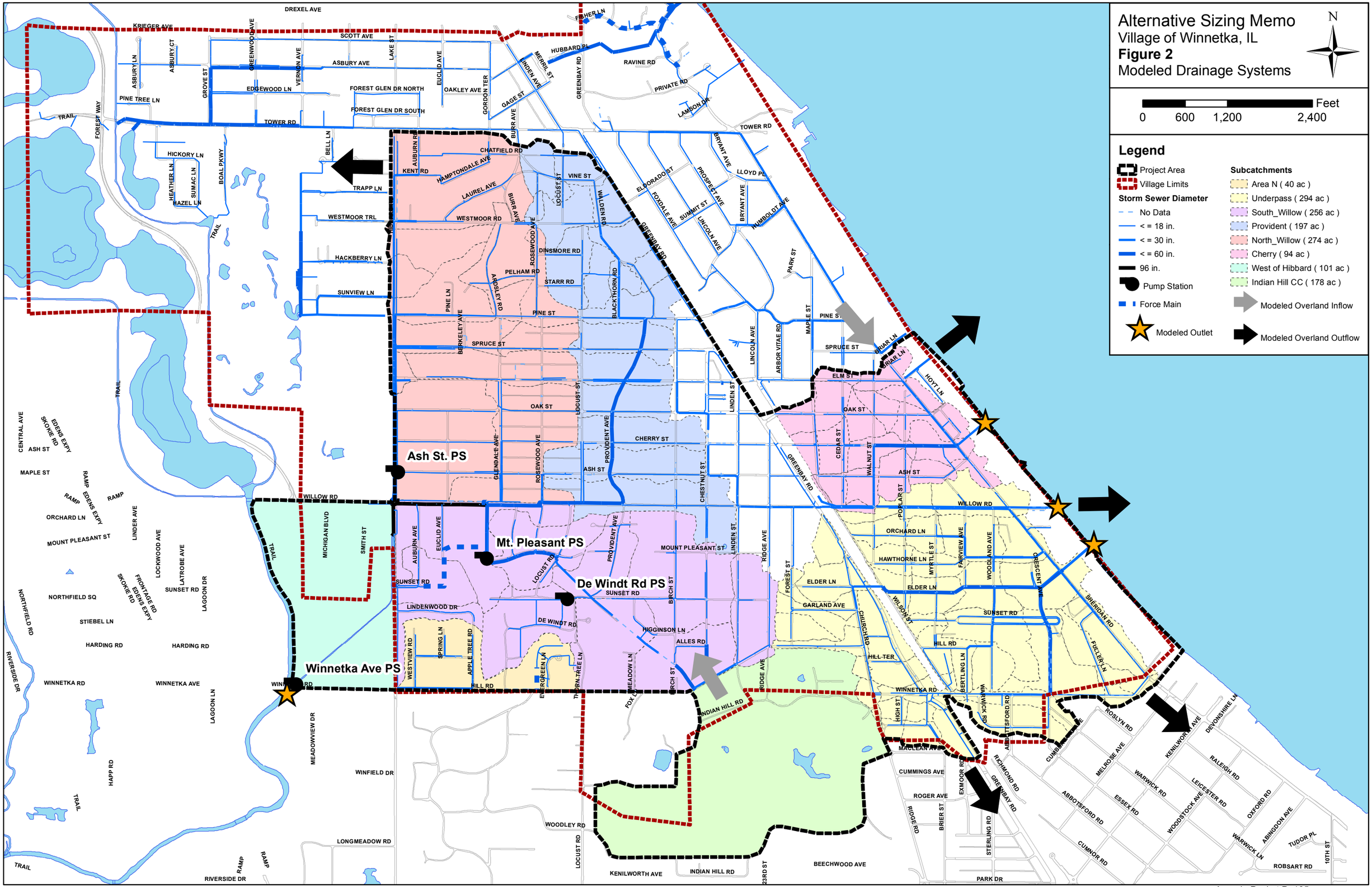
Previous analyses have indicated that the storm sewer systems in Winnetka generally have the capacity to convey runoff from storms less intense than a 2-year to 5-year rainfall event.[4] During extreme events, such as those for which the STADI is being developed, the capacity of the storm sewers is rapidly exceeded and drainage is controlled primarily by natural overland drainage paths. Surface flooding under these conditions is most evident in low-lying areas that lack a positive overland flow path. The models developed by CBBEL recognize this and include selected representations of overland flow paths to allow water that cannot be conveyed by storm sewers to move from point to point and collect at low points. These features have been represented using several methods (open channels, weirs, storage nodes).

Overland flow paths included in the CBBEL models follow the alignments of most of the existing storm sewers in the STADI area, thereby allowing flow that cannot be conveyed by the sewers to flow overland along the route of the sewer. Additional overland flow paths are included in the models at locations where excess runoff is expected to drain toward and collect in a low lying area (e.g. Berkeley and Cherry, north of De Windt Road and west of Thorntree Lane, and between Oak Street and Cherry Street west of Sheridan Road).

Overland flow outfalls are also included in the CBBEL models at:

- Elm Street (to Lake Michigan)
- Cherry Street (to Lake Michigan)
- Willow Road (to Lake Michigan)
- Elder Lane (to Lake Michigan)

[4] *Village of Winnetka Flood Risk Reduction Assessment.* Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. September 2009.


Alternative Sizing Memo
Village of Winnetka, IL
Figure 2
Modeled Drainage Systems
N
Feet
0
600
1,200
2,400
Legend
Project Area
Village Limits
Storm Sewer Diameter
No Data
< = 18 in.
< = 30 in.
< = 60 in.
96 in.
Pump Station
Force Main
Modeled Outlet
Subcatchments
Area N (40 ac)
Underpass (294 ac)
South_Willow (256 ac)
Provident (197 ac)
North_Willow (274 ac)
Cherry (94 ac)
West of Hibbard (101 ac)
Indian Hill CC (178 ac)
Modeled Overland Inflow
Modeled Overland Outflow
Ash St. PS
Mt. Pleasant PS
De Windt Rd PS
Winnetka Ave PS

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- Sheridan Road/Kenilworth Avenue (to south along Sheridan Road)
- Brier Street/Maclean Avenue (to south along Brier Street)
- Hibbard Street/Westmoor Trail (to west toward Skokie River along Westmoor Trail)
- Winnetka Road at Pump Station (to Skokie River)

These overland flow outfalls represent locations where excess flow that cannot be conveyed by the storm sewer system discharges to receiving streams overland, or leaves the study area flowing toward an adjacent area.

2.2.5. Representation of Outlet Conditions

Lake Michigan and the Skokie River serve as the drainage outlets for the STADI project area. In the models provided to MWH, all outfalls are treated as having a free discharge condition. In reality, Lake Michigan functions as a fixed elevation outfall where changes in water level occur seasonally, but would not change during the course of an individual storm event. The Winnetka Pumping Station outfall for the western part of the project area is a pumped outlet to the Skokie River. Conditions at the discharge of the pumping station may vary over a range of 4-5 feet depending on flood stages along the river, while levels upstream of the pumping station will depend upon pump operations and upstream flows. Future design simulations should consider a more explicit representation of outlet conditions for both Lake Michigan and the Skokie River. Outlet conditions to be considered include:

- Lake Michigan Outlet Conditions
  - Long-term average lake level (578.9 USGS)
  - High lake level of record (582.4 USGS)
- Skokie River at the Winnetka Avenue Pumping Station Discharge
  - Normal water level (approx. 616 USGS)
  - High Stage – top of the east berm at Winnetka Avenue (approx. 626 USGS)
  - Required pump station shutdown level (624 USGS)
- Upstream of Winnetka Avenue Pumping Station
  - Normal water level (approx. 616 USGS)
  - Design high water level (approx. 620 USGS)

2.2.6. Proposed Storm Sewer Improvements

Proposed storm sewer improvements associated with the Willow Road STADI project were represented by CBBEL as new or replacement pipe segments in the models of the tributary drainage sub-systems. New pipes were input for alignments where there was no existing storm sewer. In areas where a new storm sewer was proposed along the alignment of an existing pipe, either a new parallel pipe was added at the same elevation as the existing pipe, or the diameter of the existing pipe was increased without changing the pipe invert or slope. Proposed vertical alignments were generally at or above the elevation of MWRD interceptors crossing the project area.

For the purpose of the conceptual analysis performed by CBBEL, connections between the existing system and the proposed improvements were generally made at junctions with no detailed representation of diversions. As a result, limited flow is directed west through the existing storm sewer network in the CBBEL simulations. More detailed representations of flow diversions have been included in modeling performed as part of this task and are discussed in later sections of this document.

2.3. Model Results

Model simulations were performed using the existing and proposed condition models provided by CBBEL and Baxter and Woodman. Simulations were performed using both the original XP-SWMM models provided by CBBEL and Baxter and Woodman and InfoWorks models created by MWH using the CBBEL and Baxter and Woodman data. As part of the InfoWorks model conversion, the separate models developed by CBBEL for the Willow Road STADI project were integrated into a single model representing the full project area. Results from XP-SWMM and InfoWorks models were compared to confirm that results from both models were consistent. As shown in Table 5, the model results showed reasonable agreement between models and with the estimated flooding depths previously presented by CBBEL for most areas. A difference of approximately 1 foot in predicted flood elevations was noted in the Sunset Road/De Windt Road area and appears to be due to variations in the representation of overland flow paths in this area. Reviews of the existing condition model representation in this area are ongoing.

Table 6 provides a similar comparison of results for the CBBEL proposed conditions scenario. These results show consistent agreement between model predicted flood elevations for all locations except the Winnetka Avenue Underpass. The difference in predicted flood elevations at the underpass is attributable to changes in the configuration of the model to reflect realistic relief sewer elevations relative to the existing grades. A more detailed summary of peak flows and discharge volumes from the CBBEL proposed conditions simulation is provided in Table A-1 included in Appendix A to this document.

Flooding depth elevations in both Tables 5 and 6 are referenced to low ground elevations defined in the model based on available topographic mapping. Predicted flood depths shown on some previous exhibits were based on surveyed low entry elevations for adjacent structures (which may be higher than actual ground elevations). Refinements to the model to reflect both flooding depths above grade and flooding depths above critical low entry elevations will be made as part of the preliminary design process.

All of the results shown are for 2-hour rainfall events. Previous analyses performed by CBBEL determined that a 2 hour storm represented the critical duration event for the Winnetka system. Simulations for longer duration storm events would be expected to produce generally lower peak flows and associated flooding depths.

Table 5 – Existing Condition Model Results Comparison

		Max. Water Surface Elevation (ft)		Estimated Flooding Depth (ft)	
Location	Selected Flooding Elevation (ft)	XP-SWMM	InfoWorks	XP-SWMM	InfoWorks
Sheridan: Oak to Cherry	614	615.7	615.5	1.7	1.5
Winnetka Ave. Underpass	611	617.7	617.7	6.7	6.7
Westmoor: West of Locust	655	657.5	657.5	2.5	2.5
Blackthorn and Walden	647	649.0	649.1	2.0	2.1
Hibbard and Pine	623	625.7	625.8	2.7	2.8
Berkeley: Ash to Oak	621.4	623.0	623.1	1.6	1.7
Provident and Willow	624.5	625.8	625.9	1.3	1.4
Sunset Road and White Oak Lane	622.5	623.7	624.6*	1.2	2.1*
Between Sunset Road and De Windt Road	620	623.5	624.5*	3.5	4.5*
Meadow Lane and Skokie Ditch	621	623.6	624.6*	2.6	3.6*

* Flood elevations in this area are impacted by the representation of overland flow paths. InfoWorks representations of the flow paths are under review.

Table 6 – CBBEL Proposed Condition Model Results Comparison

		Max. Water Surface Elevation (ft)		Estimated Flooding Depth (ft)	
Location	Approx. Ground Elevation (ft)	XP-SWMM	InfoWorks	XP-SWMM	InfoWorks
Sheridan: Oak to Cherry	614	613.8	613.9	0.0	0.0
Winnetka Ave. Underpass	611	611.7	612.6	0.7	1.6*
Westmoor: West of Locust	655	656.5	656.7	1.5	1.7
Blackthorn and Walden	647	648.6	648.6	1.6	1.6
Hibbard and Pine	623	622.9	623.3	0.0	0.3
Berkeley: Ash to Oak	621.4	622.2	622.4	0.8	1.0
Provident and Willow	624.5	621.8	622.1	0.0	0.0
Sunset Road and White Oak Lane	622.5	622.2	622.3	0.0	0.0
Between Sunset Road and De Windt Road	620	622.2	622.1	2.2	2.1
Meadow Lane and Skokie Ditch	621	622.3	622.4	1.3	1.4

* Proposed relief sewer elevations adjusted in the InfoWorks model to account for actual ground elevations in the Underpass area.

2.4. Model Review Summary

The modeling used to develop the proposed Willow Road STADI concept provides a reasonable basis for the proposed improvement concept. Data in the model appear to reasonably reflect the existing infrastructure and development conditions in the project area. The representation of both overland flow paths and subsurface conveyance features (storm sewers) is necessary for the analysis of conditions associated with extreme storm events.

To advance the model as a tool for continued design analysis the separate sub-area models provided were integrated and inflow hydrographs used to represent connections between adjacent sub-systems were eliminated. Simulation results generated with the refined model are described in Section 3. As design efforts continue, MWH will consider the need for/value of further refinements to the existing and proposed condition models. Potential refinements may include improved representation of catchment hydrology, critical overland flow paths, and outlet conditions, development of more detailed horizontal and vertical alignments for proposed sewers, confirmation of critical ground elevations along the proposed sewer alignments, and establish of preliminary design conditions for connections to relief sewers intended to serve low-lying areas or relieve key existing storm sewers. The need for refinements to the model will also be considered as requirements for water quality and pollutant loading analyses needed for preparation of project permitting materials are confirmed.

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3. ANALYSIS OF ALTERNATIVE CONFIGURATIONS

3.1. Refined Willow Road STADI Model

Refinements have been made to the proposed Willow Road STADI Project concept and proposed conditions model to more thoroughly consider several factors including:

- Provisions for continued use of existing drainage infrastructure in the project area,
- Maintenance of existing flow paths for runoff from relatively frequent events,
- Impacts of MWRD interceptors on feasible vertical alignments for proposed improvements,
- Constructability issues.

The proposed refinements to the project concept and results from the refined model are described below.

3.1.1. Flow Capture and Diversion

Continued use of existing drainage infrastructure where possible is a basic principle of the proposed Willow Road STADI Project. Implementation of this principle requires that the proposed improvements be designed so that stormwater runoff from the project area drains initially to existing storm sewers or conveyance paths, and is directed to the proposed new sewers only when the existing system (sewers and overland flow routes) cannot accommodate the flow. This approach to the management of runoff from the project area has been incorporated into the Refined Willow Road STADI model through the use of diversion weirs at connection points between existing and proposed systems. In some cases, the modeled weir crest is set a specified height above the invert of the existing storm sewer so that flow only passes over the weir to the relief system when the flow depth in the system reaches a certain level. In other cases, a theoretical weir is set at just above the rim elevation of the existing load point manhole so that flow from an area only drains to the tunnel after it has started to pond on the ground.

3.1.2. Modified Horizontal and Vertical Sewer Alignments

The concept plan previously developed for the Willow Road STADI Project showed proposed relief storm sewers generally following the routes of existing large diameter sewers in the Winnetka system. MWH has reviewed the proposed horizontal and vertical alignments of the new sewers and developed a refined concept that would provide several benefits over the original concept:

- Allow segments of existing large storm sewer to be maintained (Willow Road – west, Glendale Avenue, Provident Avenue, Blackthorn Road, Essex Road).
- Facilitates maintenance of existing flow paths to the west for typical rain events.
- Avoids the need for large diameter sewer construction in IDOT's Sheridan Road right-of-way and along the alignment of the MWRDGC's existing North Shore Intercepting Sewer No. 1.
- Avoids the need for large diameter sewer construction along private roads (Blackthorn Road).
- Provides a vertical alignment that considers the location of existing MWRDGC interceptors and allows consideration of tunneling as a viable means of construction along the full length of Willow Road.

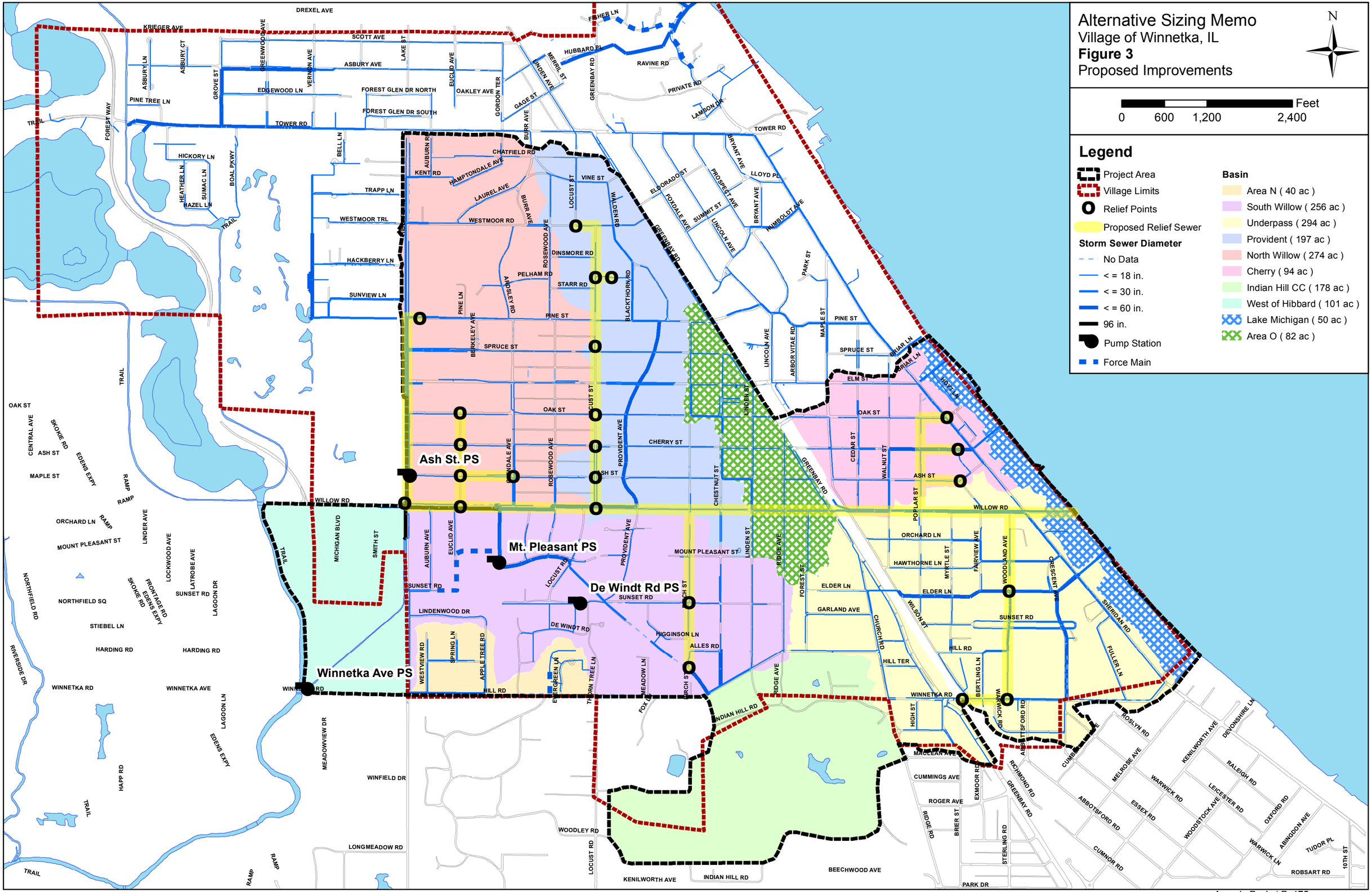
Stormwater flow relief points and refined alignments for new storm sewer improvements proposed as part of the Willow Road STADI Project are shown in Figure 3. Figure 4 provides a summary of the length and diameter of relief sewer required for the Refined Concept as compared to the conceptual plan originally developed for the project. While the Refined Concept requires significantly greater length of sewer tunnel construction, it achieves a roughly 10% reduction in the total length of new storm sewer required and an approximately 10% reduction in the average size of new sewer required.

3.1.3. Refined Concept Performance

Model simulations were completed to assess the performance of the refined concept for the Willow Road STADI Project. Results are shown in Table 7 along with results from simulations of the previous concept. As shown, the refined concept provides flood reduction benefits generally equivalent to or greater than those that would be provided by the previous concept plan. Table A-2 (in Appendix A) provides a summary of peak flow and discharge volumes for the refined concept simulation. A comparison between these results and results shown in Table 6 for the CBBEL model show an increase in the peak discharge rate from the proposed Willow Road Tunnel to Lake Michigan, but a slight decrease in the discharge volume. The change in peak discharge rate is the result of adjustments in the configuration of the proposed improvements. Further refinements will be considered during preliminary design to manage the peak rate of discharge from the new outfall.

Table 7 – Refined Willow Road STADI Model Results Comparison – Estimated Flooding Depths

		Max. Water Surface Elevation (ft)		Estimated Flooding Depth (ft)	
Location	Approx. Ground Elevation (ft)	Previous Concept	Revised Concept	Previous Concept	Revised Concept
Sheridan: Oak to Cherry	614	613.9	613.9	0.0	0.0
Winnetka Ave. Underpass	611	612.6	610.1	1.6	0.0
Westmoor: West of Locust	655	656.7	655.5	1.7	0.5
Blackthorn and Walden	647	648.6	647.6	1.6	0.6
Hibbard and Pine	623	623.3	623.6	0.3	0.6
Berkeley: Ash to Oak	621.4	622.4	622.6	1.0	1.2
Provident and Willow	624.5	622.1	623.8	0.0	0.0
Sunset Road and White Oak Lane	622.5	622.3	622.2	0.0	0.0
Between Sunset Road and De Windt Road	620	622.3	622.2	2.3	2.2
Meadow Lane and Skokie Ditch	621	622.4	622.1	1.4	1.1


Alternative Sizing Memo
Village of Winnetka, IL
Figure 3
Proposed Improvements
N
Feet
0
600
1,200
2,400
Legend
Project Area
Village Limits
Relief Points
Proposed Relief Sewer
Storm Sewer Diameter
No Data
< = 18 in.
< = 30 in.
< = 60 in.
96 in.
Pump Station
Force Main
Basin
Area N (40 ac)
South Willow (256 ac)
Underpass (294 ac)
Provident (197 ac)
North Willow (274 ac)
Cherry (94 ac)
Indian Hill CC (178 ac)
West of Hibbard (101 ac)
Lake Michigan (50 ac)
Area O (82 ac)
Ash St. PS
Mt. Pleasant PS
De Windt Rd PS
Winnetka Ave PS

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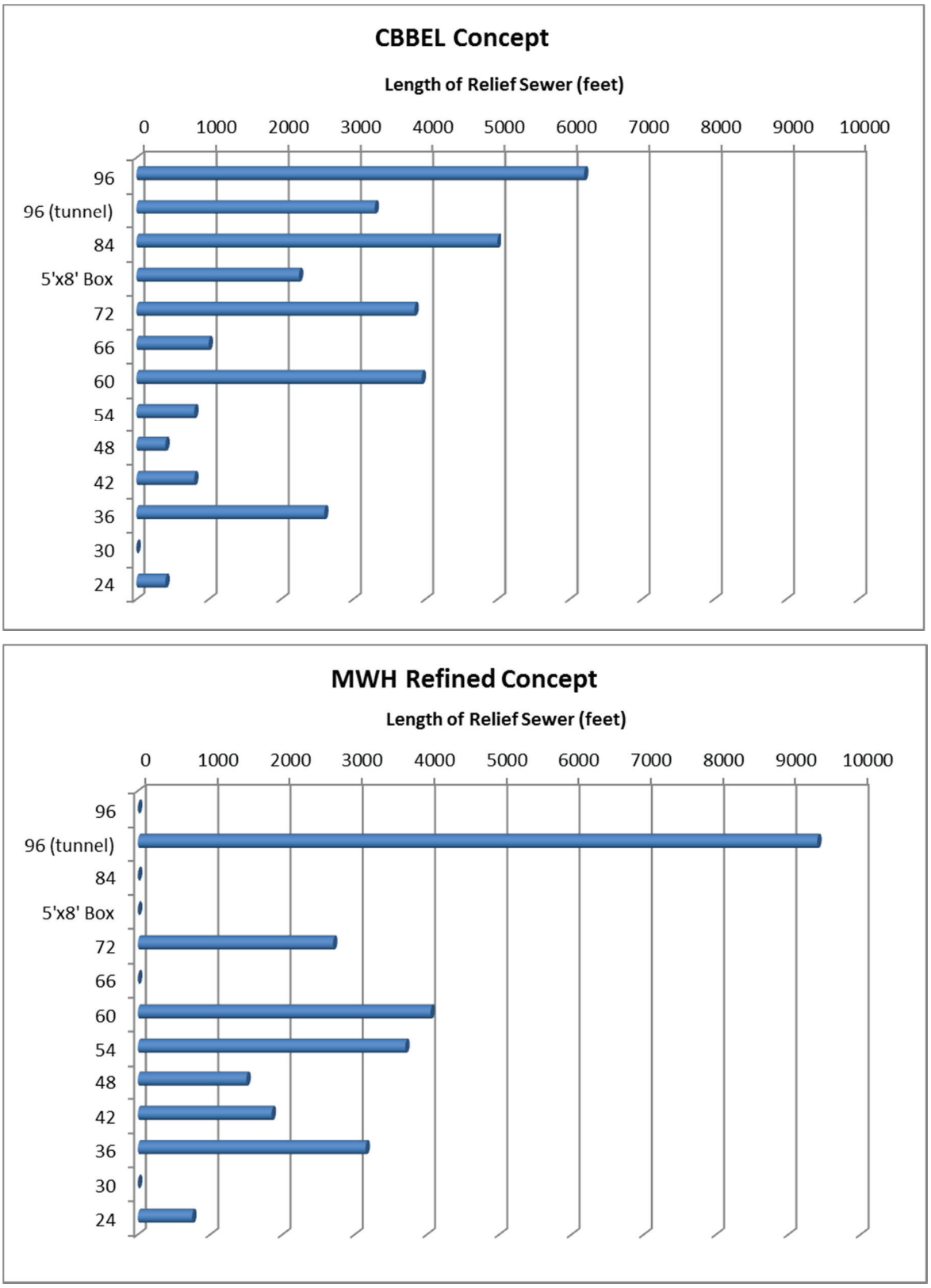

Figure 4 – Comparison of Required Relief Sewer Length and Diameter

Table 8 provides a comparison between the relative volume of stormwater discharged to the Skokie River and Lake Michigan for the previous and revised project concepts. The results demonstrate the improvement in maintenance of flows to the Skokie River achieved by modifications to the concept. As expected, a significant portion of the total volume from the large storm events is discharged to Lake Michigan under both concepts since the drainage infrastructure serving the western part of Winnetka has very limited capacity. However, under the revised concept, a significantly greater portion of the runoff volume from more frequent events continues to go toward the Skokie River outlet. This outcome is most dramatically shown in the results from a continuous simulation of conditions for the full 12 month period between October 2010 and September 2011. For this period, the portion of the discharge routed to Lake Michigan is limited to about 63% of the total runoff volume.

Table 8 – Refined Willow Road STADI Model Results Comparison – Discharge Volumes

	Discharge Volume to Skokie River		Discharge Volume to Lake Michigan	
	Previous Concept	Revised Concept	Previous Concept	Revised Concept
2-year Storm (50% Annual Chance Event)	19%	29%	81%	71%
10-year Storm (10% Annual Chance Event)	15%	24%	85%	76%
100-year Storm (1% Annual Chance Event)	20%	18%	80%	82%
Water Year 2011 (Oct 2010 through Sept 2011)	22%	37%	78%	63%

As preliminary engineering of the project proceeds, effort will be made to continue to refine the configuration of relief and diversion points between the existing and proposed storm sewers so as to further limit the overall increase in runoff volume directed to Lake Michigan. The overall balance between the lake and river discharges will remain constrained by the capacity of the existing drainage infrastructure serving the western part of the community and the regulatory limit on discharge rate from the Winnetka Road Pumping Station to the Skokie River.

3.2. Green Infrastructure Implementation Scenarios

Additional model simulations have been performed to assess, at a conceptual level, the impacts that the implementation of green infrastructure or stormwater best management practices could have on peak stormwater flow rates and discharge volumes within the Willow Road STADI Project area. Given the current approach used to characterize the hydrologic conditions in the area, two input parameters (curve number, time of concentration) have been used to represent two specific green infrastructure scenarios. These adjustments are intended to be generally representative of a moderate level of green infrastructure implementation. As preliminary engineering on the project proceeds, additional hydrologic input parameters may be used to more explicitly reflect the land surface and development characteristics of the Winnetka drainage areas. This approach would allow for more explicit modeling of specific green infrastructure measures and their impacts on anticipated flow and flooding conditions.

3.2.1. Moderate Green Infrastructure Implementation Scenario

One potential approach to the implementation of green infrastructure to the Village of Winnetka's stormwater program could focus primarily on the use of best management practices on public property and within public rights-of-way to promote infiltration to the degree possible, slow down the movement of runoff, and remove pollutants from runoff before it enters the Village's storm sewer system. Technologies consistent with this approach include use of permeable pavement for driveways, sidewalks, and public parking areas, or construction of bioretention systems in parkways behind curbs. Options for significant infiltration of stormwater within Winnetka are limited due to the clay character of the soils throughout the community. Also, the narrow pavement widths and lack of parking lanes along most streets in the community limit the potential for use of permeable pavement with street rights-of-way since permeable pavements are not judged to be suitable for traffic lanes in areas like Winnetka where the subgrade cannot be efficiently drained after a rainfall event.

In order to assess the potential benefits of a moderate level of green infrastructure implementation on the Winnetka STADI Project, model simulations were performed using a modified set of hydrologic input parameters. Adjustments were made to the curve numbers and times of concentration in the model as follows:

- Where existing condition curve numbers for individual catchments were greater than 85, the curve numbers were reduced by 10%. Existing condition curve numbers below 85 were not changed.
- Times of concentrations were recalculated and adjusted upward for selected catchments in the model.

These conditions would represent a scenario where green infrastructure is used to reduce runoff from areas with a relatively high current level of imperviousness (curve number greater than 85), or to slow down the rate of discharge from areas with low times of concentration. Examples would include the use of permeable pavement and/or bioswales over portions of parking areas at public facilities, or the installation of bioretention filters in the curb lines of selected streets draining toward flood prone areas.

Results from the moderate green infrastructure simulation are summarized in Table A-3 in Appendix A. Comparison of these values against results from the refined concept model (Table A-2) shows that the moderate adjustments in hydrologic parameters could potentially lead to reductions in both peak discharge and total discharge flow. As shown in Table 9, theoretical reductions in peak discharge at the proposed tunnel outlet could range from 31% for a 2-year storm to 10% for a 100-year storm. Theoretical reductions in total discharge volume from all Lake Michigan outfalls in the model are estimated to range from 32% for a 2-year storm to 11% for a 100-year storm.

Table 9 – Estimated Moderate Green Implementation Impacts

	Proposed Willow Road Tunnel Discharge Volume (ac-ft)			Proposed STADI Project Area Lake Michigan Discharge Volume (ac-ft)		
	Revised Concept	Moderate Green	Net Change	Revised Concept	Moderate Green	Net Change
2-year Storm (50% Annual Chance Event)	26.2	18.1	-31%	43.7	29.8	-32%
10-year Storm (10% Annual Chance Event)	66.7	51.9	-22%	98.0	76.7	-22%
100-year Storm (1% Annual Chance Event)	184	165	-10%	245	217	-11%

The results presented in Tables A-3 and 9 suggest that moderate implementation of green infrastructure could potentially reduce both the peak stormwater flows that will control sizing of the recommended sewer improvements and the total volume of stormwater that would be discharged to the lake. However, as would be expected, the relative reduction in discharge volume decreases with increasing storm severity. Thus the percent reduction in discharge volume for a 100-year storm is less than for the 2-year storm. In addition, the level of green infrastructure considered in this analysis does not eliminate the need for a major relief sewer project to achieve the Village's desired flood reduction goals.

3.2.2. Aggressive Green Infrastructure Implementation Scenario

A second potential approach to the implementation of green infrastructure to the Village of Winnetka's stormwater program could focus on the implementation of best management practices on both public and private property. Under this scenario, the Village would implement green infrastructure within public rights-of-way as described above and promote the implementation of site-specific green measures by property owners throughout the community (e.g., conversion of impervious surfaces to pervious surfaces, installation of rain barrels, rain gardens, or bioswales to delay runoff and reduce peak discharge rates). Adjustments made to the model curve numbers and times of concentration to reflect this more aggressive green infrastructure implementation scenario include:

- Reduction of catchment curve numbers greater than 75 to a value of 75. Existing condition curve numbers below 75 were not changed.
- Times of concentrations were recalculated and adjusted upward for selected catchments in the model.

These conditions would be representative of a scenario where green infrastructure is used widely to reduce runoff from areas with a moderate level of imperviousness (curve number greater than 75), and to slow down the rate of discharge from areas with low times of concentration. Examples would include the use of permeable pavement for portions of parking areas at public facilities, driveways, and/or sidewalks, use of bioswales or rain gardens on private property to slow the rate of runoff toward the storm sewer system, and the installation of bioretention filters in the curb lines of selected streets draining toward flood prone areas.

Results from the aggressive green infrastructure simulation are summarized in Table A-4 in Appendix A. Comparison of these values against results from the refined concept model (Table A-2) show that the aggressive adjustments in hydrologic parameters could lead to reductions in both peak discharge and total discharge flow. As shown in Table 10, theoretical reductions in peak discharge at the proposed tunnel outlet could range from 64% for a 2-year storm to 27% for a 100-year storm. Theoretical reductions in total discharge volume from the all Lake Michigan outfalls in the model are estimated to range from 63% for a 2-year storm to 28% for a 100-year storm.

Table 10 – Estimated Aggressive Green Implementation Impacts

	Proposed Willow Road Tunnel Discharge Volume (ac-ft)			Proposed STADI Project Area Lake Michigan Discharge Volume (ac-ft)		
	Revised Concept	Moderate Green	Net Change	Revised Concept	Moderate Green	Net Change
2-year Storm (50% Annual Chance Event)	26.2	9.4	-64%	43.7	16.3	-63%
10-year Storm (10% Annual Chance Event)	66.7	34.0	-49%	98.0	52.1	-47%
100-year Storm (1% Annual Chance Event)	184	134	-27%	245	177	-28%

The results presented in Tables A-4 and 1 suggest that aggressive implementation of green infrastructure could potentially further reduce both the peak stormwater flows that will control sizing of the recommended sewer improvements and the total volume of stormwater that would be discharged to the lake. Again, as would be expected, the relative reduction in discharge volume decreases with increasing storm severity. Thus the percent reduction in discharge volume for a 100-year storm is less than for the 2-year storm. And, as previously noted, the level of green infrastructure considered in this analysis does not eliminate the need for a major relief sewer project to achieve the Village's desired flood reduction goals.

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4. MODEL REVIEW AND ALTERNATIVE SIZING SUMMARY

The conceptual modeling used to develop the proposed Willow Road STADI project reasonably represented the Village's existing drainage infrastructure and the areas tributary to the storm sewer network, drainage channels, and pumping stations for planning purposes. However, review and use of the existing models determined that further refinements to the previously developed models are needed to effectively support ongoing preliminary engineering design and permitting activities. Specific refinements recommended include the following:

- Individual models used in the conceptual analysis of the proposed project have been integrated to create comprehensive models of existing and proposed conditions that explicitly include the entire Willow Road STADI project area. Prior to the start of preliminary engineering, MWH and Village staff should complete a final review of the area to be served by the Willow Road STADI Project.
- The representation of overland flow routes and surface ponding is important for the development of an improvement plan that meets the Village's objectives for flood risk reduction during extreme storm events. The conceptual modeling approach used accounts for selected overland flows and ponding locations during extreme events. Further refinements to the overland flow representations will be considered during ongoing design efforts where needed to provide additional detail.
- Refinements have been made to the model to allow for more detailed representation of runoff capture and diversion elements within the Willow Road STADI Project. Details related to the configuration of flow capture and diversion facilities will continue to be refined during ongoing design efforts. These measures are needed to maintain existing flow patterns for low flows from frequent rainfall events while allowing high flows to pass to the relief storm sewer system.
- The level of flood risk reduction proposed in the conceptual plan for the Willow Road STADI Project can be achieved using an alternative plan of sewer improvements (modified horizontal and vertical alignments) that reflects further consideration of existing storm sewer capacity, major utility obstructions (MWRD interceptor sewers), and factors which would impact constructability and disruption. Preliminary engineering efforts will focus on the further development of these alternative alignments.
- Theoretical simulations of two levels of potential green infrastructure implementation within the STADI Project Area suggest that green infrastructure features may be able to significantly reduce peak design flow rates for portions of the relief sewer system and the total volume of stormwater discharged to the proposed new outfall to Lake Michigan. However, the benefits of the green infrastructure implementation scenarios considered are not sufficient to eliminate the need for a major relief sewer project to achieve the Village's desired flood reduction goals. During the preliminary engineering phase of the project, further analysis should be performed to refine final sizing and design features for both green infrastructure elements and the proposed relief storm sewer system so as to achieve an appropriate balance between efforts to reduce runoff, increase the quality of stormwater runoff, and provide the desired level of flood risk reduction in Winnetka.

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APPENDIX A

MODEL SIMULATION RESULTS SUMMARIES

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Table A-1 - Willow Road STADI Project: CBBEL Concept Model Simulation Summary

Location	2-year Storm		10-year Storm		100-year Storm	
	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)
Elm St Overland Flow Outfall	0	0.0	0	0.0	5	0.1
Cherry St Storm Sewer Outfall	0	0.0	0	0.0	81	6.5
Cherry St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Willow Rd Tunnel Outfall	281	40.6	574	84.7	889	188.9
Willow Rd Overland Flow Outfall	0	0.0	0	0.0	59	4.6
Elder Ln Storm Sewer Outfall (27-inch dia)	39	4.6	54	8.8	65	13.7
Elder Ln Storm Sewer Outfall (2'x3' box)	67	8.4	85	14.8	105	23.2
Elder Ln Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Brier Dr Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Sheridan Rd Overland Flow Outfall	0	0.0	3	0.1	43	3.4
Winnetka Pump Station Outfall	134	12.9	134	19.8	134	59.2
Winnetka Pump Station Overland Flow Outfall	0.0	0.0	0	0.0	0	0.0

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Table A-2- Willow Road STADI Project: Refined Concept Model Simulation Summary

Location	2-year Storm		10-year Storm		100-year Storm	
	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)
Elm St Overland Flow Outfall	0	0.0	0	0.0	2	<0.1
Cherry St Storm Sewer Outfall	19	2.1	29	3.4	49	5.6
Cherry St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Willow Rd Tunnel Outfall	175	26.2	470	84.7	1026	183.8
Willow Rd Overland Flow Outfall	0	0.0	3	0.1	56	5.6
Elder Ln Storm Sewer Outfall (27-inch dia)	49	5.6	62	10.3	66	16.1
Elder Ln Storm Sewer Outfall (2'x3' box)	78	9.8	99	17.2	106	26.6
Elder Ln Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Brier Dr Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Sheridan Rd Overland Flow Outfall	0.0	0.0	5	0.3	63	6.9
Winnetka Pump Station Outfall	138	17.6	134	30.4	134	52.2
Winnetka Pump Station Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0

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Table A-3 - Willow Road STADI Project: Moderate Green Infrastructure Simulation Summary

Location	2-year Storm		10-year Storm		100-year Storm	
	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)
Elm St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Cherry St Storm Sewer Outfall	12	1.4	23	2.9	39	5.3
Cherry St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Willow Rd Tunnel Outfall	116	18.1	330	51.9	882	164.6
Willow Rd Overland Flow Outfall	0	0.0	0	0.0	47	4.3
Elder Ln Storm Sewer Outfall (27-inch dia)	31	3.6	59	8.2	66	14.6
Elder Ln Storm Sewer Outfall (2'x3' box)	54	6.8	94	13.8	106	24.2
Elder Ln Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Brier Dr Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Sheridan Rd Overland Flow Outfall	0.0	0.0	1	<0.1	41	4.2
Winnetka Pump Station Outfall	134	22.1	134	33.3	134	53.8
Winnetka Pump Station Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0

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Table A-4 - Willow Road STADI Project: Aggressive Green Infrastructure Simulation Summary

Location	2-year Storm		10-year Storm		100-year Storm	
	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)	Peak Flow (cfs)	Discharge Volume (ac-feet)
Elm St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Cherry St Storm Sewer Outfall	8	0.9	18	2.3	33	4.6
Cherry St Overland Flow Outfall	0	0.0	0	0.0	0	0.0
Willow Rd Tunnel Outfall	54	9.4	200	34.0	728	133.9
Willow Rd Overland Flow Outfall	0	0.0	0	0.0	30	2.5
Elder Ln Storm Sewer Outfall (27-inch dia)	16	1.9	49	5.7	64	13.1
Elder Ln Storm Sewer Outfall (2'x3' box)	31	4.1	77	10.0	103	21.6
Elder Ln Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Brier Dr Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0
Sheridan Rd Overland Flow Outfall	0.0	0.0	0	0.0	12	1.4
Winnetka Pump Station Outfall	134	16.7	134	32.9	134	51.1
Winnetka Pump Station Overland Flow Outfall	0.0	0.0	0.0	0.0	0.0	0.0

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ATTACHMENT #4
MWH Permitting Action Plan

PERMITTING ACTION PLAN

WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS

Prepared for: Village of Winnetka, Illinois

Project Manager: Joe Johnson, P.E., PMP

Date: June 18, 2014

Quality Assurance Statement

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Revision Schedule

Rev No.	Date	Description	Prepared By	Reviewed By	Approved By
1	6/18/2014	Review Point 1 Submittal	RB	JAS, CY, BE	TJJ
2					
3					
4					

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1. INTRODUCTION AND RESEARCH

The Village of Winnetka (Village) retained the services of MWH Americas, Inc. (MWH) to provide engineering design services for the Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI) project. Phase I of the STADI project scope of work includes the preparation of a Permitting Action Plan. Phase I permitting activities focus on the identification of permitting requirements and limitations that must be met for the project and the development of the project concept through preliminary engineering design (30% drawings). This Permitting Action Plan consists of three parts:

- Background Research: research, compile, and review relevant information
- Permit Identification and Agency Meetings: identify permits required for the STADI project and make initial contact with regulatory agencies
- Permitting Approach: prepare an action plan for permitting the STADI project

1.1. Site Location and Description

The Village's STADI project is a major capital effort formulated to reduce the risk of severe flooding throughout areas of the Village north and south of Willow Road. Over the past 5 years, residents in many parts of the STADI project area have been impacted by flooding associated with major rainfall events. Village officials have committed to providing residents in flood-prone areas with protection against flooding for events up to the 1% annual chance storm.

The current STADI project design includes a large-diameter storm sewer under Willow Road, with trunk lines leading to flood-prone areas of concern that cannot be managed by the existing drainage network, to provide flood relief for extreme events by directing flows towards a new outfall to Lake Michigan.

1.2. Previous Regulatory Efforts

The Village and their previous consultants researched regulatory issues for the STADI project and met with regulatory agencies prior to 2014. Preliminary project concepts were discussed with the United States Army Corps of Engineers (USACE) Chicago District, the Illinois Environmental Protection Agency (IEPA), and the Illinois Department of Natural Resources (IDNR). These efforts are summarized in Table 1.

Table 1 – Previous Regulatory Research

Agency	Description	Date
USACE, IDNR, & IEPA	Review of preliminary designs for discharge structure at Lake Michigan	May 10, 2012
USACE	Initial contact with Kate Bliss of the USACE regarding the proposed STADI project	November 2011

2. BACKGROUND RESEARCH

MWH researched, compiled, and reviewed existing information related to permitting efforts for the STADI project (Table 2).

Table 2 – Background Research

Data	Source (Date)
Village of Winnetka Stormwater Master Plan	Baxter & Woodman (December 2013)
Laboratory Results from Stormwater Water Quality Sampling (9/18/2012, 9/25/2012, 11/12/2012, 3/11/2013, and 4/29/2013)	Baxter & Woodman (September 2012 – April 2013)
Summary of Beach Closings Due to Bacteria (2001-2013)	Winnetka Park District (emailed February 3, 2014)
Total Maximum Daily Load and Implementation Plan for Shoreline Segments in Suburban Cook County, Illinois. Pathogen Indicators: (*Escherichia coli*).	IEPA (May 15, 2013)
IEPA General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)	Village Website (http://www.villageofwinnetka.org/departments/public-works/)
MS4 Permit Annual Report (March 2012-March 2013)	Village Website (http://www.villageofwinnetka.org/departments/public-works/)
Lake Michigan Water Quality Standards	35 Illinois Administrative Code (IAC) Part 302 Subpart E
Skokie River Water Quality Standards (General Use)	35 IAC Part 302 Subpart B
Village Agenda Report, Willow Road Stormwater Tunnel Project: Feasibility Report	Steve Saunders, Village Engineer (September 5, 2012)
Village Agenda Report, Stormwater Update	Steve Saunders, Village Engineer (May 15, 2012)
Village of Winnetka Stormwater Relief Tunnel – Outfall Feasibility Study	Baird & Associates (June 25, 2012)

3. PERMIT IDENTIFICATION AND AGENCY MEETINGS

Based on the available background information and a review of the scope of the overall project, MWH identified the following permits as being required for the construction of the STADI project:

- Clean Water Act Section 404/401 Joint Permit*
  - U.S. Army Corps of Engineers (USACE)
  - Illinois Environmental Protection Agency (IEPA) – Division of Water Pollution Control
  - Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR)
- Watershed Management Permit*
  - Metropolitan Water Reclamation District of Greater Chicago (MWRD)
- National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit*
  - Illinois Environmental Protection Agency (IEPA) – Bureau of Water
- National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities
  - Illinois Environmental Protection Agency (IEPA) – Bureau of Water
- Permit for Construction in IDOT Right-of-Way
  - Illinois Department of Transportation (IDOT)
- Permit for Union Pacific Railroad Pipeline Crossing
  - Union Pacific Railroad
- Soil Erosion and Sedimentation Control Plan Review
  - North Cook County Soil and Water Conservation District

An initial permit tracking matrix summarizing basic data related to each of these permits has been prepared and is included as Appendix A to this document.

Based on initial reviews of the permitting requirements, permits associated with the proposed new discharge to Lake Michigan (noted above with an *) were determined to be critical to the project schedule and are the focus of this permitting plan. Basic information pertaining to the other permits expected to be required during the design and construction phases of the project is summarized in this memo, but actions required to secure these permits are not addressed in this document. Detailed plans for acquisition of these permits will be developed during the preliminary engineering phase of the project.

MWH made initial contact with the regulatory agencies responsible for aspects of the proposed Lake Michigan outfall to discuss permit requirements and considerations. Contact with agencies (phone and/or face-to-face) was intended to achieve the following:

a. Confirmation/identification of the key point of contact for permitting discussions with each agency
b. Confirmation of the specific rules/regulations that will govern each agencies review of the project's permit application
c. Identification of issues that the agency believes will be critically important in the review of the permit application as well as public discussion regarding the project.

Results of these contacts are described in the following sections.

3.1. CWA 404/401 Joint Permit Process - USACE

The USACE Chicago District is the lead point of contact for the joint permit application process that also includes the IEPA and the IDNR. The STADI project will require submittal of a joint permit application. However, the role of each agency in the review of the application and issuance of related permits will vary. Instructions that describe the overall structure and format of the Joint Permit Application are included in Appendix B to this Permitting Action Plan.

Regulatory Authority: Section 404 of the Clean Water Act (CWA)
Section 10 of the Rivers and Harbors Act

Point of Contact

Regulatory Branch
231 South LaSalle Street, Suite 1500
Chicago, Illinois 60604
Ms. Kate Bliss (312-846-5542)

Phone (312) 846-5530
lrcregweb@usace.army.mil

Permitting Process & Timeframe

The joint permit application process typically consists of a pre-application meeting, preparation of detailed design drawings (to at least 30% design), submittal of a permit application, and consultation with associated regulatory agencies (e.g., state and federal threatened and endangered species, historic and cultural resources, soil erosion and sediment control). USACE permits fall within one of three categories, depending on the nature of the impact: Nationwide, Regional, or Individual. Regional and Nationwide permits cover projects with routine or minor impacts and have quicker turn-around times (0-4 months). Individual permits cover projects that do not fit within a Regional or Nationwide permit category. Individual permits take more time to process (6-12+ months) and require a public notice period.

Typically, a delineation of wetland/waters and a jurisdictional determination (JD) are required to quantify a project's impacts on waters of the United States. For the Chicago District, delineations should be conducted during the growing season (April 15 – October 15) and should include a qualitative habitat assessment and a Floristic Quality Inventory.

The applicant may be required to provide measures to mitigate for impacts to waters of the U.S. The USACE determines the appropriate quantity of mitigation required for each permit.

For Individual Permit applications, the applicant must demonstrate that alternatives have been thoroughly reviewed and analyzed in accordance with CWA Section 404(b)(1). The permit application should include enough information to allow the USACE to determine that the chosen alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA).

The Ordinary High Water Mark (OHWM) for Lake Michigan is 581.5 feet International Great Lakes Datum (IGLD). If the project avoids impacts below the OHWM, the USACE may not have to issue a permit. If the project impacts areas below the OHWM (e.g., by extending the outfall structure into the lake or by installing an energy dissipation structure below the OHWM), the USACE will require a permit and will evaluate the project for impacts on navigation, safety, near-shore sediment transport processes, and aesthetics.

The degree of impact below the OHWM will determine the timeframe for the USACE permit process. Given the strong public interest in this project to date, the public notice period for this permit application may attract public comments that need to be addressed. Therefore, if an individual permit is required, the permitting process is anticipated to take no less than 12 months after a complete permit package is received by the USACE.

Meeting/Discussion with Agency

MWH contacted Ms. Kate Bliss of the USACE Regulatory Branch (312-846-5542) by telephone on March 13, 2014 to discuss the potential regulatory issues related to the proposed STADI project. The following is a brief summary of the conversation:

- Ms. Bliss was familiar with this project. There have been two pre-application meetings to date (November 2011 and May 2012). The USACE Pre-Application number for this project is 2011750.
- Ms. Bliss recalled discussing several outfall options that extended into Lake Michigan and had impacts below the OHWM.
- If the proposed outfall is above the OHWM (581.5 IGLD), minor impacts from construction may fall under a Regional Permit (e.g. RP #7).
- If all work is above the OHWM, it is possible that no permit would be required and that a “letter of no objection” could be issued by the USACE.
- An outfall extending into the lake would require an Individual permit.
- Public interest review factors should be considered when preparing the permit application (33 CFR 320.4).
- The general policy from USACE is to collect documentation for permit applications that is commensurate with the level of public involvement and scrutiny.
- Ms. Bliss strongly suggested having another pre-application meeting. The meeting should include USACE and IDNR, with IEPA invited via conference call.

3.2. CWA 404/401 Joint Permit Process - IEPA

The IEPA regulates compliance with state water quality (WQ) standards for construction projects through the issuance of CWA Section 401 Water Quality Certifications (WQCs). For the STADI project, the IEPA is primarily concerned with potential impacts on the water quality of receiving water bodies. In order to receive a WQC, the permit application must demonstrate that the proposed action will protect the designated uses of the receiving water body, will meet applicable water quality standards, and will meet the Illinois anti-degradation regulations. The IEPA also establishes Total Maximum Daily Load (TMDL) limits for impaired water bodies in Illinois.

Regulatory Authority: CWA Section 401
State water quality standards (Lake Michigan and General Use WQ standards)
Illinois Antidegradation Standard (35 IAC 302.105)
TMDLs for impaired water bodies

Point of Contact

IEPA Bureau of Water, Division of Water Pollution Control, Facility Evaluation Unit
1021 North Grand Avenue East
P.O. Box 19276, Springfield, Illinois 62794-9276
(217) 782-3362
Ms. Marcia Willhite, Bureau of Water Chief (217-782-1654)

Permitting Process & Timeframe

A joint permit application is typically submitted to the lead agency (USACE) and the lead agency distributes the application to other agencies, such as IEPA. For Nationwide and Regional permits, the 401 WQC is generally pre-approved and does not require detailed review by IEPA. However, for an Individual Permit, an individual 401 WQC is required and the process includes a public notice period.

For complicated or potentially contentious projects that require an individual WQC, a pre-application meeting with IEPA is strongly recommended. This provides a good first opportunity to discuss project alternatives and how those alternatives may impact the regulatory process. The IEPA can provide general regulatory guidance and may suggest that additional data would aid in the permitting process (e.g., water quality data, water quality modeling results, details of green infrastructure improvements). The applicant can then take regulatory constraints into account while preparing the detailed project design.

The Individual WQC process can take 6-12+ months, depending on character of the potential projects impacts and on the quantity and content of the comments received during the public notice period.

Meeting/Discussion with Agency

The Village and MWH have participated in multiple phone calls and one face-to-face meeting with IEPA in 2014 to discuss the permitting challenges for the STADI project. Notes from several of these discussions are documented in the following pages.

March 13, 2014 Phone Conversation with Marcia Willhite

- Ms. Willhite has received interest from environmental groups and politicians regarding discharges to Lake Michigan.
- Ms. Willhite was happy to hear from the Village and was glad that the Village would like to continue discussing the project and permitting in more detail.
- Ms. Willhite stated that it would be best if the Village could figure out a way to avoid discharges to Lake Michigan. If that is not possible, green infrastructure should be incorporated into the project design to reduce the volume of water going to Lake Michigan.
- Ms. Willhite mentioned that a similar stormwater project was being proposed in a nearby municipality [Kenilworth]. IEPA has provided them with direction on how to characterize their stormwater quality. IEPA will provide the Village with similar direction.
- When asked about how TMDLs would impact current and future discharges to Lake Michigan and the Skokie River, Ms. Willhite explained that technical TMDL staff would attend an upcoming meeting and could answer those questions in more detail.

March 31, 2014 Conference Call with IEPA

Attendees

- IEPA: Marcia Willhite, Jeff Hutton, Al Keller, Amy Walkenbach, Dan Heacock, Bob Mosher
- Village of Winnetka: Steve Saunders
- MWH: Joe Johnson, Rick Bolliger

Discussion

- (Rick) Introduction
- (Joe) Project Background (Flooding history, existing stormwater system, Skokie River and Lake Michigan outfalls, flood control alternatives investigated, proposed project, and ongoing design efforts)
- (Rick) Plans and goals for April 10 meeting in Springfield
- (Rick) Brief review of permitting concerns (401 WQC, *E. coli* TMDL for Lake Michigan beaches, in progress TMDL for Skokie River, MS4 permit updates, public feedback and perception, other agencies)
- (Marcia) IEPA Permitting
    - Members of public and elected officials have contacted IEPA expressing concern about the project
    - Stormwater management and WQ impacts have recently been emphasized by the Director of IEPA
    - IEPA encourages communities to address flooding issues, but WQ must be emphasized
    - Stormwater runoff reduction should be part of project (retain water on-site; reduce pollutant loading; install green infrastructure), even if it has little impact on large storm events
    - A thorough alternative analysis must be provided with the permit application

- (Bob) Characterization of stormwater quality
  - IEPA will email a list of constituents suggested for characterizing WQ
  - WQ characterization should take seasonality into account (e.g., chloride in winter)
  - Applicant should be aware of Illinois anti-degradation policy and Lake Michigan WQ standards
- (Amy) TMDLs
  - IEPA would expect Winnetka to comply with the Lake Michigan beach *E. coli* TMDL (geometric mean of 126 cfu/100 mL)
  - The Skokie River TMDL is in progress and is expected to be finalized in approximately 18 months.
- (Marcia) Similar Recent Projects or Permits
  - IEPA is not aware of any similar outfalls permitted in Illinois. Outfalls for McCormick Place and Loyola were constructed in 2005 and 2010, respectively. [The McCormick Place was a large outfall to Lake Michigan, but was primarily for rooftop water runoff. The Loyola outfall was a 30-inch pipe for a renovated campus area that included abundant stormwater best management practices.]
- (Steve) It is the Village's intent to comply with WQ standards.

Tasks (prior to April 10th Meeting)

- MWH will provide (1) WQ data, (2) Alternatives Investigated, and (3) Agenda for April 10th
- IEPA will provide (1) WQ characterization constituent list, (2) nearby TMDLs status, (3) Lake Michigan impairment list, and (4) nearby WQ sampling stations and/or data

April 10, 2014 Meeting with IEPA – IEPA Offices, Springfield, IL

Attendees

- IEPA: Marcia Willhite, Jeff Hutton, Al Keller, Amy Walkenbach, Dan Heacock, Bob Mosher, Darren Grove
- Village of Winnetka: Rob Bahan, Steve Saunders
- MWH: Joe Johnson, Rick Bolliger
- Baetis Environmental Services: David Pott

- (Joe) Introduction
- (Joe, Steve) Overview of Flooding Problems
- (Joe, Steve) Flood Control Alternatives Evaluated
- (Joe) Proposed Improvements
- (Rick) WQ Data and Constraints
- (Joe) WQ Protection Strategy
- (All) Questions and Discussion
  - IEPA encourages the Village to engage interested parties early in the process
  - The Village did not initially seek to provide 100-year flood protection. But several recent severe flood events triggered a change in design to provide 100-year protection.
  - The stormwater tunnel under Willow Road was not the first option explored by the Village. Detention options were considered, but there was not enough open land area and/or statutorily available land to provide the necessary acre-feet of storage.

- The current design efforts are exploring the possibilities for directing first flush runoff to the Skokie River and for using the tunnel itself as storage for some smaller rain events.
- Stormwater runoff WQ data was collected by Village in 2012 and 2013, but did not address all parameters of concern on the list provided by IEPA.
- The Lake Michigan beaches *E. coli* TMDL has a geometric mean end-of-pipe standard of 126 cfu/100 mL. There is no mixing zone allowed for this standard. The agency expects to consider this requirement as it works to update and re-issue the NPDES MS4 Permits for communities with Lake Michigan Beaches, but no firm time frame is currently established for this process. A permit application for a new outfall to Lake Michigan would certainly need to consider this requirement.
- The developers of the Lake Michigan beaches *E. coli* TMDL created a spreadsheet that calculates loading. IEPA will share that spreadsheet with the Village.
- IEPA would like to hear about innovative technology that would help stormwater to meet the WQ standards.

Following the meeting, IEPA provided the following list of parameters as suggestions for characterization of Winnetka's stormwater discharges. IEPA noted that the same list has recently been provided to the Village of Kenilworth for their consideration in evaluating options for potential new stormwater discharges to Lake Michigan.

Ammonia	Cyanide (total)	Nitrate
Arsenic	*E. coli*	Oil (hexane soluble or equivalent)
Barium	Fluoride	Phenols
Biochemical Oxygen Demand	Iron (total)	Phosphorus (total)
Cadmium	Iron (dissolved)	Selenium
Chloride	Lead	Silver (total)
Chromium (hexavalent)	Manganese	Sulfate
Chromium (total)	Mercury (Method 1631 or equivalent)	Total Suspended Solids
Copper	Nickel	Zinc
Cyanide (weak acid dissociable)		

May 14, 2014 Submittal of Supplemental Information to IEPA

On May 14, 2014, MWH submitted supplemental background information on the proposed Willow Road STADI project to the IEPA in an effort to clarify the agency's expectations related to the aspects of the permitting process listed below.

- Hydrologic and Hydraulic Modeling
- Alternative Evaluation Requirements
- Water Quality Management

A copy of the correspondence is provided in Appendix B. In follow-up communications, the Agency has indicated that the data and information the Village is proposing to assemble is the type of information that it would expect to require in support of its evaluation of the permit application for the Willow Road STADI Project.

3.3. CWA 404/401 Joint Permit Process – IDNR

The IDNR is concerned with construction in public bodies of water (such as Lake Michigan), construction within the regulatory floodway, preserving the State's natural resources, and the Lake Michigan allocation/diversion. IDNR permit reviews related to the proposed Willow Road STADI Project are anticipated to focus on proposed construction/project impacts along the Lake Michigan shoreline, the proposed transfer of water between the Skokie River and Lake Michigan watersheds, and potential environmental project impacts on threatened and endangered species or natural areas.

Regulatory Authority:

Illinois Rivers, Lakes, and Streams Act (615 ILCS, 1994)
Illinois Regulation of Public Waters (17 IAC Part 3704)
Floodway Construction in Northeastern Illinois Rules (17 IAC Part 3708)
Illinois Endangered Species Protection Act
Illinois Natural Areas Preservation Act
Fish and Wildlife Coordination Act (16 U.S.C. 661-664)

Point of Contact:

Illinois Department of Natural Resources/Office of Water Resources
Lake Michigan Management Section
160 N. LaSalle Street, Suite S-700
Chicago, Illinois 60601
Mr. Dan Injerd, Lake Michigan Program Manager (321-793-3123)

Permitting Process & Timeframe

A joint permit application is typically submitted to the lead agency (USACE) and the lead agency distributes the application to other agencies, such as IDNR. For projects that involve Lake Michigan, the permit application is reviewed by the IDNR-OWR Lake Michigan Management Section. The IDNR may also address construction within floodways, impacts to endangered species, and protection of natural areas.

To consult with IDNR about potential sensitive species or natural resources known to occur near the project site, an application can be submitted online to the IDNR EcoCAT website (http://www.dnrecocat.state.il.us/ecopublic/).

Meeting/Discussion with Agency

Phone Call with Dan Injerd (03/03/2014)

Key points from the discussion follow:

- MWH introduced the project and noted that MWH is currently involved in the review and evaluation of the proposed concept, including initial outreach to the key permitting agencies.
- Mr. Injerd noted that he was somewhat familiar with the project based on a previous meeting he attended with the USACE, the Village, CBBEL, and Baird. He also noted that he has received several calls in the past few months from individuals interested in the project and IDNR's role in its permitting.

- Mr. Injerd commented that recently Lake Michigan shoreline projects seem to be viewed as more controversial. Common issues of concern that he has seen raised include: the public trust doctrine and its relationship to beach access, and the need for a thorough analysis of project alternatives.
- MWH described the current approach to the development of a project permitting plan, including initial phone contacts with the key permitting agencies followed by face-to-face meetings.
- Mr. Injerd confirmed that he will serve as the primary point of contact for discussions related to IDNR's role in the permitting of the STADI project. Highly visible and/or controversial projects may also attract the attention of others within IDNR.
- Mr. Injerd confirmed that IDNR will evaluate the permit application against its Section 3704 Rules pertaining to the regulation of public waters (which were recently amended). Mr. Injerd noted that the rules do not necessarily require a public hearing as part of the permit review process.
- The potential role of the IDNR's Coastal Management staff in the evaluation of the project was also discussed. Mr. Injerd noted that while the Coastal Management Team does not have specific regulatory or permitting requirements defined that would govern this project, the Coastal Management Team would likely want to review the proposed project and participate in a discussion of non-point pollutant sources to the Lake. He noted that the Coastal Management Team may also have responsibility for a Federal Consistency Review.

3.4. NPDES MS4/Stormwater General Permit/Storm Water Pollution Prevention Plan (SWPPP)

The IEPA regulates stormwater discharges from qualifying communities in Illinois through the General Storm Water Permit program for Small Municipal Separate Storm Sewer Systems (MS4). The Village of Winnetka is an MS4 community in Illinois. Its existing stormwater discharges are presently covered by the IEPA's General Permit ILR10 for Phase II MS4 communities in Illinois. While the current general permit expired on March 31, 2014, the IEPA has indicated to the MS4 permittees that existing discharges will continue to be permitted under ILR10 pending development and issuance of updated permits.

The IEPA also regulates provisions for the management of stormwater at construction sites greater than 1 acre in area under the NPDES Stormwater Program. Given the proposed scope of the Willow Road STADI Project, a Storm Water Pollution Prevention Plan will likely need to be prepared and submitted in conjunction with the project. Reference information pertaining to the MS4 and Construction Activities Permits is provided in Appendix C.

Regulatory Authority: Illinois Environmental Protection Act
Illinois Pollution Control Board Rules and Regulations (35 IAC C.I)
Federal Clean Water Act

Point of Contact

IEPA Bureau of Water
1021 North Grand Avenue East,
P.O. Box 19276, Springfield, Illinois 62794-9276
(217) 782-3397
Ms. Marcia Willhite, Bureau of Water Chief (217-782-1654)
Ms. Melissa Parrott (217-782-0610)

Permitting Process & Timeframe

General NPDES Permit No. ILR40 authorizes discharges of stormwater from MS4s communities in Illinois, such as the Village. As noted above, the current general permit, which expired on March 31, 2014, will remain in effect until the IEPA updates or replaces the General Permit.

Meeting/Discussion with Agency

During the previously mentioned meetings and conference calls with IEPA (refer to Section 3.2), the MS4 permits were discussed. The following summarizes the discussions about the Village's MS4 permit in relation to the STADI project:

- When asked about the MS4 permits and how the updates will be handled to account for TMDLs (e.g., the Lake Michigan beaches *E. coli* TMDL), IEPA staff stated that the agency was considering preparing individual MS4 permits for communities along Lake Michigan. The update to the MS4 general permit will include language to address these stormwater water quality issues, but the deadline for the updated MS4 is not known. The current MS4s will continue to function until the new language is finalized.
- In June 2014, IEPA notified the Village that it will be sending a letter to Winnetka requesting submission of an application for an individual MS4 permit. The application will need to include information on the proposed Willow Road STADI Project as well as the Village's other stormwater outfalls. Upon receipt of the application, the IEPA will

proceed with preparation of a draft individual MS4 permit for the community and release of the draft permit for public review and comment. IEPA has indicated that the individual MS4 permitting process will be independent of the Joint Permit Application process specific to the Willow Road STADI Project. However, the agency noted that it typically works with the other Joint Permit agencies to try and coordinate public notice activities.

3.5. MWRD Watershed Management Permit

The MWRD has permitting authority over the construction or modification of sewer systems and stormwater management infrastructure within the MWRD service area, including new discharges to Lake Michigan. As the Village is located within the MWRD service area and the proposed project will have impacts on stormwater management and riparian areas along Lake Michigan, a Watershed Management Permit will be required. Details related to the permitting process are contained in the MWRD's Watershed Management Ordinance and Technical Guidance Manual available on the MWRD website[1].

Regulatory Authority: Metropolitan Water Reclamation District Act (70 ILCS 2605)
Watershed Management Ordinance

Point of Contact

MWRD
Engineering Department, Local Sewer Systems Section
100 East Erie, Chicago, IL, 60611
312-751-3255

Permitting Process & Timeframe

A new outfall to Lake Michigan within MWRD's service area but outside of the City of Chicago will require a Watershed Management Permit. The Applicant must fill out a permit application, including all elements that apply to the project, and submit the application with the appropriate fee to MWRD for review. Sample forms for that are expected to be required as part of the Willow Road STADI Project Watershed Management Permit at included in Appendix D.

Components of the Watershed Management Permit for the Willow Road STADI are anticipated to include:

- General Project Description
- Erosion and Sediment Control Submittal (Section 302)
- Stormwater Management Submittal (Section 303)
- Wetland Submittal (Section 305)
- Riparian Submittal (Section 306)
- Sewer Construction Submittal (Section 307)
- Maintenance and Monitoring Plan Submittal (Section 310)

The current Watershed Management Ordinance does not specify a timeline for the review of Watershed Management Permits. However, given the scope and character of the Willow Road STADI project, it is recommended that the Watershed Management Permit be prepared and submitted concurrently or promptly after the Joint Permit Application. Approval of the Watershed Management Permit will likely depend upon approval of the Joint Permit Application.

[1] http://www.mwrd.org/pv_obj_cache/pv_obj_id_4985C2CD4FAB1ABFC7726C7E8F2A7E3E199B7200/filename/WMO.pdf

Meeting/Discussion with Agency

Informal Discussion with Catherine O'Connor (March 17, 2014)

Because the proposed Willow Road STADI Project involved the construction of a new stormwater outfall to Lake Michigan, the project will be subject to permitting review by the MWRD. The permitting process will be governed by the Watershed Management Ordinance adopted by the Board of Commissioners on October 3, 2013 (and subsequently amended on April 17, 2014). Specific sections of the ordinance related to the permit process are likely to include all of the sections listed previously.

In addition, it is expected that the MWRD will have a significant interest in reviewing design plans for the construction of new storm sewer improvements that will cross or run parallel to its existing interceptor sewers within the project area.

MWRD has indicated an interest in working with the Village of Winnetka to reduce the risk and severity of flooding within the community, and a desire to actively participate in discussions regarding the project, its benefits, and provisions to mitigate potential impacts.

3.6. Other Permits

Other permitting processes that will be required for the implementation of the proposed Willow Road STADI relate more directly to the detailed design and construction phases of the project. As such, these permits will be addressed in greater detail as the project proceeds into preliminary engineering and preparation of the 30% design documents. The other permits expected to be required include:

- Permit for Construction in Illinois Department of Transportation (IDOT) Right –of-Way
    - A sample permit application and IDOT contact information are provided in Appendix E.

- Union Pacific Railroad (UPRR) Permit for Utility/Pipeline Crossing of Railroad Right-of-Way
    - Reference and contact information pertaining to the UPRR permit process is provided in Appendix F.

- Soil Erosion and Sedimentation Control Plan Review (North Cook County Soil and Water Conservation District)
    - Reference and contact information pertaining to the NCCSWCD process is provided in Appendix G.

4. PERMITTING APPROACH AND STRATEGY

This final section of the Permitting Action Plan describes proposed actions necessary to advance the permitting process for the Willow Road STADI Project. This plan is intended to be fluid and shall be modified as necessary while the project proceeds.

Taking into account the background research and the initial contacts with regulatory agencies, it appears that the Joint Permit is the key regulatory process for the STADI project, with the 401 Water Quality Certification from the IEPA providing the greatest regulatory challenge. Water quality limitations on storm sewer discharges and feedback during the public notice period appear to be the two primary challenges for the 401 Water Quality Certification process. Details related to the configuration and appearance of the proposed new outfall to Lake Michigan will also be important to the permitting process.

It is recommended that the permitting strategy for this project be tailored to the specific requirements identified by permitting agencies and stakeholders, and be based on several key principles:

- **Quantitative characterization of the flow and pollutant loadings associated with current and proposed future conditions within the Willow Road STADI project area** – Conceptual modeling tools used to develop the original project should be refined and improved to provide for simulation of flow and pollutant loadings under various conditions. Historic and new water quality data will need to be used to provide key inputs to the models.
- **Development and documentation of the basis for a water quality management strategy that is capable of meeting the requirements set for the Willow Road STADI Project** - Depending on final decisions related to the interpretation of current water quality standards and monitoring/compliance requirements, this strategy will need to include a combination of:
    - Source control strategies and good housekeeping measures intended to reduce the level of pollutants that can be washed off land surfaces in stormwater runoff (public education regarding pet waste management and fertilizer use, consistent and effective street sweeping, ongoing sanitary sewer inspection and rehabilitation);
    - Stormwater best management practices intended to promote infiltration to the degree practical (rain gardens, permeable pavement, etc.), thereby reducing the total volume of runoff that must be conveyed, stored, and discharged to surface waters;
    - Stormwater best management practices intended to slow down the peak rate of runoff from catchments to storm sewers or drainage paths and provide for distributed removal of pollutants (rain barrels, bioswales, filter strips, detention areas);
    - Stormwater flow control and diversion measures constructed to maintain, to the degree possible, existing flow paths for low and moderate flows tributary to the Skokie River;
    - Distributed stormwater treatment units selected to provide for the removal of pollutants at intermittent points in the modified drainage system where peak flows are manageable (biofilters for solids, nutrients, or bacteria; hydrodynamic separators; oil and grease separators); and
    - End-of-the-pipe water quality management measures designed to provide for removal of critical pollutants to the degree practical based on available technology.

- **Formulation of a water quality management plan that is maintainable and sustainable –** All of the measures and technologies being considered for incorporation into the project Water Quality Management Plan will require some degree of maintenance and operation. Provisions for effective maintenance of water quality management measures and clear definition of long-term maintenance responsibilities will be essential to the longer-term success of the project.

To implement this strategy, the following actions should be considered:

1. **Water Quality Sampling and Analysis**

   The Village collected water quality data in 2012 and 2013 at several existing stormwater outfalls. Parameters for which the samples were tested included many, but not all, of the parameters suggested by the IEPA for characterization of Winnetka's stormwater. In addition, the existing data collection effort did not include analysis of samples taken at different times during individual storm events or include wintertime water samples required to characterize chlorides in winter runoff.

   To adequately characterize the water quality characteristics of the Village's stormwater, it is recommended that a program of additional water quality sampling and analysis be implemented. The goal of the proposed plan should be to characterize discharges from the Village of Winnetka to Lake Michigan and the Skokie River for the water quality parameters identified by the IEPA during several rainfall events. Specific elements of the sampling and analysis program that will need to be considered include:

   - Composite sampling of discharges during several wet weather events (Summer 2014) with analysis of the full range of parameters identified by IEPA
   - Time-dependent sampling of discharges during 2-3 wet weather events (Summer 2014) with analysis of select parameters identified by IEPA
   - Composite sampling of discharges during several wet weather or snow melt events (Fall/Winter 2014-2015) with analysis of select parameters associated with snow and ice control

   MWH has developed a proposed strategy for additional water quality sampling to address the gaps in the existing water quality dataset and is working to obtain IEPA review of the program. The strategy is presented in a separate document titled *Water Quality Monitoring Plan Outline.* Upon receipt of input from IEPA, MWH will work with the Village to finalize the scope of work and additional budget required for implementation.

2. **Expanded Alternative Review**

   The Joint Permit Application requires documentation of a thorough review of project alternatives. While the analyses performed by Christopher B. Burke Engineering, Ltd. during development of the project concept provide a foundation for the alternative analysis, it is anticipated that reviewing agencies will expect to see a more comprehensive summary of alternatives considered, including potential options that include the implementation of green infrastructure to potentially reduce peak flows and volumes. Initial reviews of the potential impact of green infrastructure scenarios are provided as part of the Alternative Sizing analysis performed by MWH. A formal alternative analysis summary document will be developed as part of the Joint Permit Application process.

3. **Water Quality Modeling**

   Using the results of the 2012 and 2013 water quality sampling along with research from peer-reviewed journals, wash-off rates and/or loadings should be incorporated into the hydrologic and hydraulic (H&H) model of the proposed

sewer system. This modeling will provide the basis for estimating pollutant loadings for various system configurations, and for evaluating alternatives for meeting the water quality standards established for the project.

4. **Green Infrastructure Plan**

   During initial meetings with the IEPA, the agency indicated that green infrastructure must be included in the project design as a means for reducing the need for direct stormwater discharges to Lake Michigan and for reducing estimated pollutant loadings in runoff. Initial model simulations of two levels of basin-wide green infrastructure implementation have shown that while green infrastructure can be used to achieve modest reductions in peak flows and discharge volumes, it must be provided together with significant conventional infrastructure to achieve the performance goals set by the Village for this project. At the same time, conventional stormwater management systems must be complimented with green infrastructure elements to achieve the critical level of pollutant loading reductions at various points within the proposed project. As preliminary engineering efforts proceed, the hydrologic, hydraulic, and water quality models described above will be used together with site-specific data to determine how best to integrate green and gray infrastructure so as to meet both flood risk reduction and water quality management objectives.

5. **Public Outreach**

   During the April meeting with members of the Willow Road STADI Project team, the IEPA strongly encouraged the Village to reach out early and often to interested stakeholders to discuss the project and stakeholder concerns. In particular, the groups and individuals who are currently opposed to the project should be invited to learn about elements of the proposed project and discuss their concerns. MWH will work with the Village to prepare a public outreach plan that focuses on these issues and provides for structured communications with the Village Council, local residents and business owners, and external stakeholder groups.

6. **Wetland Delineation**

   Prior to submittal of the joint permit application, a wetland delineation must be performed during the growing season and incorporated into the permit package. The delineation will include the lake outfall area, the bluff, and any other open areas that would be disturbed (temporarily or permanently). This work should be coordinated with other field investigations required to support preliminary engineering design of key facilities to be located near the new outfall to Lake Michigan.

7. **Preliminary Engineering – Outfall and Water Quality Management Systems**

   A joint permit application will need to include 30% design drawings for key project elements to allow for an effective review. Early preliminary design efforts should focus on the new Lake Michigan outfall structure and key water quality management structures to be incorporated into the system.

8. **Prepare and Submit Joint Permit Application**

   Once materials from the various permitting activities described above are compiled, an initial joint permit application can be developed and submitted to facilitate ongoing discussions with the key permitting agencies.

A tentative schedule for initial elements of this plan related to the water quality management strategy is presented in Exhibit 1.

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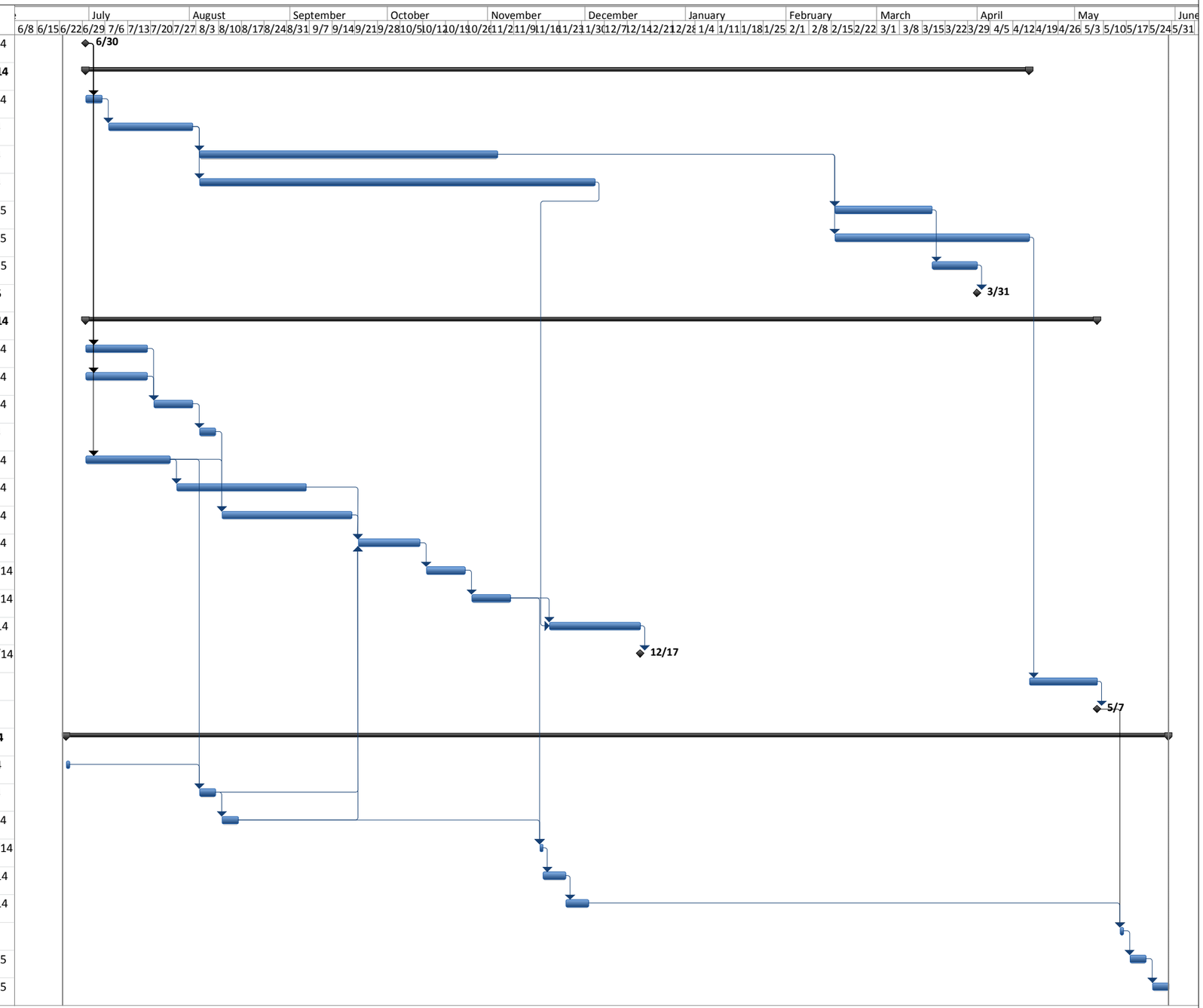
EXHIBIT 1 - POTENTIAL SCHEDULE - WATER QUALITY MANAGEMENT PLANNING - WILLOW ROAD STADI PROJECT

ID		Task Mode	Task Name	Duration	Start
1			NTP with Permitting Efforts	0 days	Mon 6/30/14
2			**Water Quality Sampling and Analysis**	**209 days**	**Mon 6/30/14**
3			Review Sampling/Analysis Plan with IEPA (Conf Call)	5 days	Mon 6/30/14
4			Procure/Install samplers	20 days	Mon 7/7/14
5			Collect water quality samples - Summer	66 days	Mon 8/4/14
6			Perform water quality analyses - Summer	88 days	Mon 8/4/14
7			Collect water quality samples - Winter	22 days	Mon 2/16/15
8			Perform water quality analyses - Winter	44 days	Mon 2/16/15
9			Demobilize Samplers	10 days	Wed 3/18/15
10			Water Quality Sampling and Analysis Complete	0 days	Tue 3/31/15
11			**Water Quality Management Plan**	**224 days**	**Mon 6/30/14**
12			Adapt H&H model for water quality simulations	15 days	Mon 6/30/14
13			Develop basis for pollutant loading/wash-off rates	15 days	Mon 6/30/14
14			Perform existing conditions WQ simulations	10 days	Mon 7/21/14
15			Perform "with project - no WQ mgmt" simulations	5 days	Mon 8/4/14
16			Research WQ management technologies, options	20 days	Mon 6/30/14
17			Formulate WQ management plan to meet standards	30 days	Mon 7/28/14
18			Perform "with project - WQ mgmt" simulations	30 days	Mon 8/11/14
19			Prepare/submit first draft WQ Management Plan	15 days	Mon 9/22/14
20			Client review of WQ Management Plan	10 days	Mon 10/13/14
21			Finalize/submit draft WQ Management Plan	10 days	Mon 10/27/14
22			Update WQ Management Plan based on Summer sampling	20 days	Thu 11/20/14
23			Submit updated WQ Management Plan	0 days	Wed 12/17/14
24			Update WQ Management Plan based on Fall/Winter sampling	15 days	Fri 4/17/15
25			Submit updated WQ Management Plan	0 days	Thu 5/7/15
26			**Outreach/Coordination Efforts**	**244 days**	**Tue 6/24/14**
27			WQ Management Briefing 1 to Village Council	1 day	Tue 6/24/14
28			WQ Management Briefing 1 with IEPA (Conf Call)	5 days	Mon 8/4/14
29			WQ Management Briefing 1 with Stakeholders	5 days	Mon 8/11/14
30			WQ Management Briefing 2 to Village Council	1 day	Mon 11/17/14
31			WQ Management Briefing 2 with IEPA (Conf Call)	5 days	Tue 11/18/14
32			WQ Management Briefing 2 with Stakeholders	5 days	Tue 11/25/14
33			WQ Management Briefing 3 to Village Council	1 day	Fri 5/15/15
34			WQ Management Briefing 3 with IEPA (Conf Call)	5 days	Mon 5/18/15
35			WQ Management Briefing 3 with Stakeholders	5 days	Mon 5/25/15



Project: Permitting Plan Schedule
Date: Wed 6/4/14

Task		Summary		External Milestone		Inactive Summary		Manual Summary Rollup		Finish-only	
Split		Project Summary		Inactive Task		Manual Task		Manual Summary		Deadline	
Milestone		External Tasks		Inactive Milestone		Duration-only		Start-only		Progress	

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Appendix A

Permit Tracking Matrix

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Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI) Project

Permit Tracker

Permit	Lead Agency & Contact Information	Permit Category	Responsible Party to Obtain Permit	Responsible Party to Prepare Permit Application	Permit Fee	Anticipated Permit Schedule	Current Status Notes	Current Status ID[2]
CWA 404/401 Joint Permit Individual Permit	USACE Chicago District Regulatory Branch 231 South LaSalle Street, Suite 1500 Chicago, Illinois 60604 Ms. Kate Bliss (312-846-5542)	Regulatory	Village	MWH	TBD	6-12+ months	Spring 2014 – Pre-application meetings and discussions with agency.	
CWA 404/401 Joint Permit 401 Water Quality Certification	IEPA Bureau of Water, Division of Water Pollution Control, Facility Evaluation Unit 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 Ms. Marcia Willhite (217-782-1654)	Regulatory	Village	MWH	TBD	6-12+ months	Spring 2014 – Pre-application meetings and discussions with agency.	
CWA 404/401 Joint Permit State Waters, Floodway, State T&E Species	IDNR-OWR Lake Michigan Management Section 160 N. LaSalle Street, Suite S-700 Chicago, Illinois 60601 Mr. Dan Injerd (321-793-3123)	Regulatory	Village	MWH	TBD	<12 months	Spring 2014 – Pre-application meetings and discussions with agency.	
NPDES MS4, Stormwater General Permit, SWPPP	IEPA Bureau of Water 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 Ms. Melissa Parrott (217-782-0610)	Regulatory & Operation	Village	MWH	TBD	TBD	Spring 2014 – Pre-application meetings and discussions with agency.	
MWRD Watershed Management Permit	MWRD Engineering Department, Local Sewer Systems Section 100 East Erie, Chicago, IL, 60611 312-751-3255	Regulatory	Village	MWH	TBD	TBD	Spring 2014 – Pre-application meetings and discussions with agency.	
Soil Erosion and Sedimentation Control Plan Review	North Cook County Soil and Water Conservation District 2358 Hassell Road, Suite B, Hoffman Estates, IL 60169 847/885-8830	Construction	Village or Contractor	TBD	TBD	TBD		

DRAFT FOR REVIEW

[2] Red = Not Started; Yellow = Ongoing; Green = Complete

Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI) Project

Permit Tracker

Permit	Lead Agency & Contact Information	Permit Category	Responsible Party to Obtain Permit	Responsible Party to Prepare Permit Application	Permit Fee	Anticipated Permit Schedule	Current Status Notes	Current Status ID[2]
Construction in IDOT Right-of-Way	Illinois Department of Transportation (IDOT)	Construction	Contractor	MWH	TBD	TBD		
Structural Review for Facilities Under Railroad	Union Pacific Railroad TBD	Construction	TBD	TBD	TBD	TBD		
State Review of Potential Impacts to State T&E, Natural Area, and Wetlands	EcoCAT http://dnr.illinois.gov/EcoPublic/	Construction	Village	MWH	TBD	TBD		
Coastal Management Plan Review	Illinois Coastal Management Program (ICMP) IDNR, Coastal Management Program Office 160 N. LaSalle Street, Suite S-703 Chicago, IL 60601 Diane Tecic (312-814-0665)	Regulatory	Village	MWH	TBD	TBD		

Appendix B

Supplemental Background Information Submitted to IEPA

May 14, 2014

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MWH®

BUILDING A BETTER WORLD

May 14, 2014

Ms. Marcia Willhite, Director
Bureau of Water
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

Subject: Supplemental Background Information
Willow Road Stormwater Tunnel and Area Drainage Improvements
Village of Winnetka, Illinois

Dear Ms. Willhite:

As a follow-up to our phone conversation last week, MWH is providing supplemental background materials related to the Village of Winnetka's proposed Willow Road Stormwater Tunnel and Area Drainage Improvements Project. These materials have been developed to provide your staff with additional information pertaining to the project and provide a basis for continued discussions regarding the Village's approach to the design and permitting of the improvements. In particular, we are hoping to get feedback from you and your staff regarding the direction in which the Village is proceeding as it works to advance the project toward preliminary engineering and formal permitting.

Please distribute the attached materials to your staff for review as appropriate. Next week, I will follow-up with you to see if we can schedule a conference call with these individuals to discuss any comments or suggestions that they can offer before the end of May. In June, we expect to schedule and conduct meetings with several stakeholder groups, and we would very much like to have feedback from your team prior to those discussions.

Thank you for your continued cooperation in this matter. Should you or your staff have questions or comments related to the attached materials, please do not hesitate to contact me at joe.johnson@mwhglobal.com or 312.831.3821.

Very truly yours,

Joe Johnson, P.E., PMP
Project Manager

175 West Jackson Boulevard
Chicago, Illinois 60604-2608 United States

TEL +1 312 831 3000
FAX +1 312 831 3999
www.mwhglobal.com

SUPPLEMENTAL BACKGROUND INFORMATION
WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS PROJECT

Village of Winnetka, Illinois

Based on discussions held with IEPA staff during a meeting in Springfield on April 10, 2014 the Village of Winnetka has continued its activities related to the development of the Willow Road Stormwater Tunnel and Area Drainage Improvements (STADI) Project. This document provides a summary of recent progress and describes additional efforts proposed to support future project permitting activities.

Hydrologic and Hydraulic Modeling

Hydrologic and hydraulic modeling performed to develop the original STADI project has been refined to allow for the simulation of project performance for both individual design storms and for long-term (12 month) historic rainfall data sets. Model simulations completed using the Innovyze InfoWorks CS software have been performed to consider alternate improvement configurations, review preliminary relief sewer sizing, determine the peak discharge and total discharge volume at existing and proposed outfall locations, and assess the potential impact that implementation of stormwater best management practices could have on design flows.

The model results have confirmed that a relief sewer system can reduce the risk of structure flooding in low-lying parts of the Village to a 1% annual risk level. The attached figure shows the location of the proposed storm sewer improvements. Simulations have also been used to identify necessary relief points in the existing sewer system as shown in the figure and to develop preliminary configurations for relief connections. These analyses have confirmed that relief connections can be designed so as to maintain historic flow patterns for frequent rainfall events (up to about a 50% annual chance event). Specifically, relief connections can be designed so that the initial flush of stormwater runoff from the western part of the project area will continue to flow to the Winnetka Avenue Pumping Station for discharge to the Skokie River. During less frequent events that produce higher levels of runoff, excess flow that cannot be conveyed to the Skokie River due to capacity limitations will be diverted to the relief sewer system and discharged to Lake Michigan.

MWH expects to continue to use the hydrologic and hydraulic model of the Willow Road STADI Project to continue to support preliminary engineering and permitting activities. Results from model simulations will be included in the permit application backup to provide clear documentation of the proposed basis for system sizing and operation. We would also expect to use the model as the basis for high level water quality modeling of potential pollutant loadings associated with individual design storms and/or historic rainfall data.

Would this approach be considered appropriately responsive to the Agency's decision making process such that it should be expanded and further developed for inclusion in our permit application materials?

Expanded Alternative Evaluation

The Village recognizes that documentation of a robust evaluation of alternatives will be an important part of the permit application for a new stormwater discharge to Lake Michigan. Alternatives involving a combination of detention storage and conveyance improvements were analyzed as part of the original planning for reducing flood risks in Winnetka and documented in previous reports[1,2]. However, those analyses did not consider any large-scale implementation of stormwater best management practices (BMPs) within the community. In response to comments from various stakeholders, the Village is working to expand the prior alternative evaluation to document the potential changes that a structured program of BMP implementation could have on detention storage requirements. Results from this new analysis will be incorporated into a summary document that provides a concise, but comprehensive review of the alternatives considered.

Alternatives that may be considered in the expanded review include:

- No action alternative/No reduction in flood risk
- Regional (watershed level) flood risk reduction projects
- Local conveyance/detention alternatives (no transfer of runoff to Lake Michigan watershed)
- Local conveyance/detention alternatives with stormwater BMPs (no transfer of runoff to Lake Michigan)
- Stormwater tunnel and area drainage improvements project (includes transfer of some runoff to Lake Michigan)
- Stormwater tunnel and area drainage improvements project with stormwater BMPs (includes transfer of some runoff to Lake Michigan)
- Diversion of excess stormwater to MWRD interceptor system for treatment prior to discharge

Do Agency staff believe that the scope of this proposed alternative review would satisfy the alternative evaluation requirement of the permitting process?

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[1] *Village of Winnetka Flood Risk Reduction Assessment*. Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. CBBEL Project No. 08-0671. September 2009.

[2] *Village of Winnetka Flood Risk Reduction Assessment, 25-, 50-, and 100-year Protection.* Prepared for the Village of Winnetka by Christopher B. Burke Engineering, Ltd. CBBEL Project No. 08-0671. October 2011.

Water Quality Management Strategy

The Village recognizes that a well-defined strategy for management of the quality of stormwater that will be discharged from the proposed Willow Road STADI Project will be a critical element of its permit application. The Village also recognizes that this project is charting new territory for the IEPA, being one of the first major new stormwater outfalls to Lake Michigan proposed since the adoption of the total maximum daily load (TMDL) for *E. coli* at Lake Michigan beaches in Illinois. We are committed to working with the IEPA to develop a practical and implementable approach to this project that protects the quality of Lake Michigan and Winnetka's beaches, while providing for the managed discharge of stormwater runoff to the lake.

As a follow-up to our discussions in April, the project team has researched the practices and technologies currently being used for other projects, as well as guidance developed by other regulators. We have examined the list of pollutants of concern provided by IEPA and considered the specific features of the proposed Willow Road STADI Project. Observations from our analysis include:

- The discharge of stormwater runoff to Lake Michigan is an important natural process critical to the long-term sustainability of the lake ecosystem. However, the quality of the runoff must be managed so that the hydrologic benefits associated with runoff to the lake are not offset by adverse impacts on water quality.

- Given the magnitude and variability of stormwater flows, the current state-of-practice for managing runoff quality in most areas appears to be based on a combination of pollutant source control through structural and non-structural best management practices (including public education), and select decentralized treatment of runoff at points in drainage systems where flow rates are manageable. Examples of end of pipe treatment that we have identified generally focus on capture of settleable solids/sediment, floatable materials, and oil and grease. Examples involving disinfection of stormwater discharges have typically focused only on very low flow discharges.

- Published information suggests that programs that include effective BMP implementation and select decentralized treatment along with public education and good housekeeping measures are the current standard being used for managing the quality of stormwater discharges to sensitive waterways.

Given these findings, the Village proposes to proceed with the development of a project-specific water quality management program for the Willow Road STADI Project that includes the following elements:

1. Characterization of stormwater and pollutants of concern – The project team will review TMDL and water quality standards as well as results from baseline analysis of stormwater to identify key pollutants of concern. The list of parameters provided by IEPA in April will serve as a starting point for this process.

   In addition, the Village is currently evaluating plans for a near-term program of additional stormwater quality sampling and analysis. While detailed plans have not been finalized pending review of program costs and resource commitments, the monitoring plan is currently envisioned to include dry and wet weather sampling and analysis at up to four (4) locations in the project area. Sampling would include both composite samples gathered to provide an "event mean concentration" for pollutants and time sequenced samples that could be used to assess the relative concentration of certain pollutants in stormwater over the course of individual storm events ("first flush" analysis). Goals would be to generate results for at least four (4) independent wet weather events during the summer/fall of 2014, and for at least two runoff/snow melt events during the winter of 2014/2015.

2. Identification of pollutant sources within tributary area – Land use, development, and maintenance practices within the project area will be reviewed as the basis for identifying likely sources of the key pollutants of concern.

3. Identification of potential source control and distributed treatment actions – The project team will identify measures, technology, and/or procedures that can be used to reduce the level of pollutants contained in stormwater runoff from the project area. Area specific constraints (limited permeability soils, limited pavement widths/rights-of-way, etc.) will be considered in the evaluation of potential options. Examples of measures, technologies, and /or procedures that may be considered include:

   a. Illicit Discharge Detection/Correction Program
      i. Dry weather discharge monitoring
      ii. Ongoing sanitary sewer system evaluation/repair
   b. Non-Structural BMPs
      i. Municipal good housekeeping measures (street sweeping, stormwater pollution control plans, staff training, snow/ice control best practices, etc.)
      ii. Public education related to pet waste management, illegal dumping
      iii. Public education related to landscaping, private property BMP implementation
      iv. Ordinance implementation
      v. Wildlife management programs

vi. Beach maintenance/protection programs

c. Structural BMPs
   i. Public right-of-way BMP measures
   ii. BMP implementation coordinated with other public entities (Park District, School District, etc.)

d. Decentralized Flow Management/Treatment
   i. In-line detention
   ii. inlet/catch basin inserts
   iii. solids separation units, filtration units

e. Discharge Treatment
   i. solids separation, floatables control, oil/grease separation
   ii. low flow disinfection?
   iii. Energy dissipation

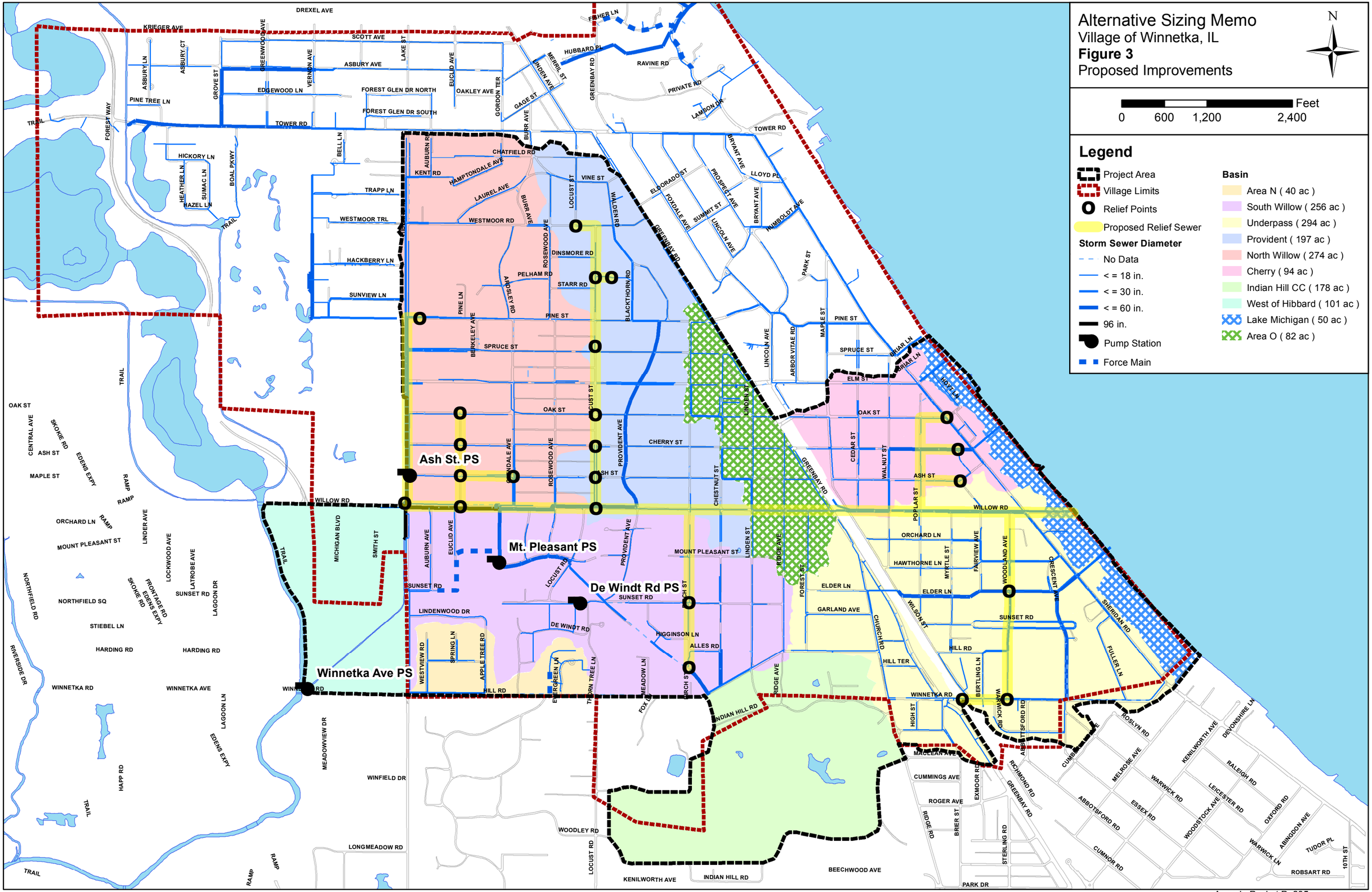
4. Prioritize actions – The project team will work to evaluate and prioritize feasible measures for phased implementation as part of the Willow Road STADI Project or other village programs/projects. Emphasis will be placed on actions that can provide significant benefit in the short-term.

5. Discharge Monitoring Program – The Village would expect to implement some level of ongoing discharge monitoring as a means of tracking the performance of the implemented measures. While final details would need to be developed during the permitting process, it is expected that the monitoring would include sampling of the discharge from the major outfalls in the project area for at least one significant storm event per year.

It should be noted that the general structure of the proposed water quality management strategy is based on guidance published by the Michigan Department of Natural Resources and Environment in 2010 for Municipal Separate Storm Sewer Systems (MS4s) working to comply with TMDLs for *E. coli* in surface waters.[3]

Details of the water quality management strategy to be developed as part of the Willow Road STADI Project will continue to be defined as the project proceeds into preliminary engineering and formal permit application preparation. However, the Village would like to get feedback from the Agency regarding the overall approach that is proposed. **Would this approach be considered appropriately responsive to the Agency's decision making process such that it should be expanded and further developed for inclusion in our permit application materials?**

[3] *Addressing E. coli Total Maximum Daily Loads in Municipal Separate Storm Sewer System Permits.* Water Bureau Compliance Assistance. Michigan Department of Natural Resources and Environment. Revised April 7, 2010.


Alternative Sizing Memo
Village of Winnetka, IL
Figure 3
Proposed Improvements
N
Feet
0
600
1,200
2,400
Legend
Project Area
Village Limits
Relief Points
Proposed Relief Sewer
Storm Sewer Diameter
No Data
< = 18 in.
< = 30 in.
< = 60 in.
96 in.
Pump Station
Force Main
Basin
Area N (40 ac)
South Willow (256 ac)
Underpass (294 ac)
Provident (197 ac)
North Willow (274 ac)
Cherry (94 ac)
Indian Hill CC (178 ac)
West of Hibbard (101 ac)
Lake Michigan (50 ac)
Area O (82 ac)
Ash St. PS
Mt. Pleasant PS
De Windt Rd PS
Winnetka Ave PS

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Appendix C

Joint Permit Application Instructions

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PERMIT REQUIREMENTS FOR THE STATE OF ILLINOIS

JOINT APPLICATION PROCESS

Construction projects in Illinois waterways, floodplains and wetlands often require both State and Federal authorization. This application packet is designed to simplify the approval process for the applicant seeking project authorizations from the U.S. Army Corps of Engineers (USACE), The Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR) and the Illinois Environmental Protection Agency (IEPA). Please refer to the map on page 11 for agency addresses and telephone numbers. Each of these agency's authorities and requirements are briefly explained in the following paragraphs. Application forms are available from any of the listed agencies.

Anyone proposing to construct, operate or maintain any dam, dock, pier, wharf, sluice, levee, dike, building, utility and road crossings, piling, wall, fence or other structure in; or dredge, fill or otherwise alter the bed or banks of any stream, lake, wetland, floodplain or floodway subject to State or Federal regulatory jurisdiction should apply for agency approvals. The appropriate copy of the **joint application form, drawings,** and **copy of any additional support information** should be sent to each of the regulatory agencies. Approvals may be required by any or all of the agencies. Applications filed simultaneously with USACE, IDNR/OWR, and IEPA will be processed concurrently in an independent manner, and should result in expedited receipt of all agency determinations. If a permit is not required by one or more of the agencies, they will inform the applicant and the other agencies.

Coordination with the regulatory and other review agencies is recommended as early as possible during the project planning stage. This allows revisions or other measures necessary to meet agency requirements to be made before project plans are finalized.

AGENCY AUTHORITIES AND REQUIREMENTS

1. The basis for the **U.S. Army Corps of Engineers** regulatory function over public waterways was formed in 1899 when Congress passed the Rivers and Harbors Act of 3 March 1899. Until 1968, the Rivers and Harbors Act of 1899 was administered to protect only navigation and navigable capacity of this nation's waters. In 1968, in response to a growing national concern for environmental values, the policy for review of permit applications with respect to Sections 9 and 10 of the Rivers and Harbors Act was revised to include additional factors (fish and wildlife conservation, pollution, aesthetics, ecology, and general Welfare) besides navigation. This new type of review was identified as a "public interest review."

The Corps of Engineers regulatory function was expanded when Congress passed the Federal Water Pollution Control Act Amendments of 1972 and the Clean Water Act Amendments in 1977. The purpose of the Clean Water Pollution Act was to restore and maintain the chemical, physical, and biological integrity of this nation's waters. The "waters of the United States" regulated by the Corps of Engineers under Section 404 of the Clean Water Act includes wetlands.

The Corps of Engineers is responsible for determining the jurisdictional limits of wetlands and other Waters of the United States. Applicants may, however, elect to have a qualified representative conduct the appropriate preliminary wetland delineation for submittal with the permit application. All such determinations are subject to verification and confirmation by the Corps of Engineers. Although applicants are not required to provide a wetland delineation, these can assist in reducing delays associated with normal permit processing. Contact the appropriate Corps District Office for additional information.

WITH YOUR HELP ILLINOIS WATERS CAN BE PROTECTED FOR FUTURE GENERATIONS

2. **The Illinois Department of Natural Resources/Office of Water Resources** regulatory authority is the Rivers, Lakes and Streams Act (615 ILCS, 1994). Under this authority, permits are required for dams, for any construction within a public body of water; and for construction within floodways. Generally, floodway projects also require local authorization. In addition, floodway map revision approvals may be required by IDNR/OWR and by the Federal Emergency Management Agency (FEMA) for major projects. Information and specific project requirements may be obtained as follows:

For Lake Michigan – All projects in or along Lake Michigan are subject to the Regulation of Public Waters rules (17 Illinois Administrative Code, Part 3704). Joint permits are required for any work in Lake Michigan from IDNR/OWR and IEPA. Contact the Illinois Department of Natural Resources/Office of Water Resources, Lake Michigan Management Section, 160 N. LaSalle Street, Suite S-700, Chicago, Illinois 60603, (312) 793-3123, or on the web www.dnr.illinois.gov/WaterResources/Pages/Permit%20Programs.aspx.

For Cook, Lake, McHenry, DuPage, Kane and Will Counties – All projects within designated floodways are subject to the Floodway Construction in Northeastern Illinois Rules (17 Illinois Administrative Code Part 3708). Dams are subject to the Rules for Construction and Maintenance of Dams (17 Illinois Administrative Code, Part 3702). All projects in public waters are subject to the Regulation of Public Waters Rules (17 Illinois Administrative Code, Part 3704). All other Floodway construction projects are subject to the Construction in Floodways of Rivers, Lakes and Streams rules (17 Illinois Administrative Code, Part 3700). Contact the Illinois Department of Natural Resources/Office of Water Resources, Northeastern Illinois Regulatory Programs Section, 2050 West Stearns Road, Bartlett, Illinois 60103, (847) 648-3100 ext 2025 or on the web www.dnr.illinois.gov/WaterResources/Pages/Permit%20Programs.aspx.

For the remainder of the State – Dams are subject to the Rules for Construction and Maintenance of Dams (17 Illinois Administrative Code, Part 3702). All projects in public waters are subject to the Regulation of Public Waters rules (17 Illinois Administrative Code, Part 3704). All other Floodway construction projects are subject to the Construction in Floodways of Rivers, Lakes and Streams rules (17 Illinois Administrative Code, Part 3700). Contact the Illinois Department of Natural Resources/Office of Water Resources, Downstate Regulatory Programs Section, One Natural Resources Way, Springfield, Illinois 62702-1271, (217) 782-3863, or on the web www.dnr.illinois.gov/WaterResources/Pages/Permit%20Programs.aspx.

The **Illinois Department of Natural Resources** is also responsible under Illinois Statutes for conserving and preserving the State's natural resources.

Under the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-664) the Department is given permit review responsibilities relative to Corps of Engineers permit applications.

Under the Illinois Endangered Species Protection Act and the Illinois Natural Areas Preservation Act, the Department is responsible for reviewing actions that are authorized, funded or performed by units of state and local government, if the action will change environmental conditions. Questions pertaining to natural resource reviews should be addressed to the Illinois Department of Natural Resources, Division of Ecosystems & Environment, Impact Assessment, One Natural Resources Way, Springfield, Illinois 62702-1271, (217) 785-5500. To submit a request for consultation on-line, go to http://dnr.illinois.gov/EcoPublic/.

3. **The Illinois Environmental Protection Agency** provides water quality certification pursuant to Section 401 of the Clean Water Act. This certification is mandatory for all projects requiring a Section 404 Permit from the Corps of Engineers. In addition to determining that the proposed work will not violate the applicable water quality standards, the IEPA also makes a determination of additional permit and regulatory requirements pursuant to the Illinois Pollution Control Board rules and regulations. Additional permits may be required for activities such as the construction of sanitary sewers, water mains, sewage and water treatment plants, landfill and mining activities, special waste hauling and disposal (of dredged material). Separate applications are necessary for these other permits.

Individual 401 Water Quality Certification

If it is determined that your project is not covered by an Illinois EPA certified Section 404 nationwide or regional permit issued by the Corps of Engineers and an individual 401 water quality certification is required for your project, you must submit the information specified below and in blocks 9 through 12 in the instructions for dredge and/or fill material to be discharged. In accordance with 35 Ill. Adm. Code Part 302.105, applicants for an individual 401 water quality certification shall provide the Illinois EPA with an anti-degradation report discussing the items listed below, including supporting documentation. In regards to the anti-degradation requirements, it is recommended that you contact the Illinois EPA Water Quality Standards Unit at 217-558-2012 or on the web at epa.401.docs@illinois.gov prior to submittal of your application.

- An assessment of the alternatives to the proposed project that will result in a reduced pollutant load to the water body, no load increase or minimal environmental degradation. Alternatives that result in no discharge to the water body and changes in the location of the activity must be addressed in the submittal. Further, the assessment of alternatives must consider all technically and economically reasonable measures to avoid or minimize the pollutant loading;

- If a pollutant load increase or environmental degradation cannot be avoided (e.g. wetlands are filled), a complete mitigation plan must be provided or reasons provided why mitigation is not proposed;

- Identification and characterization (e.g., the current physical, biological and chemical conditions) of the water body affected by the proposed project and the water body's existing uses, including a wetland delineation report and drainage area (in acres) of the impacted water bodies at the downstream limits of the project area;

- Consideration of the fate and effects of parameters that are proposed to increase the pollutant loading;

- The quantity of the pollutant load increase to the water body. Increases in pollutant loading must be protective of all existing uses of the impacted water body;

- The potential impacts of the proposed project on the water body. The proposed activity must be conducted in a manner that water quality standards are not violated;

- The purpose and anticipated benefits of the proposed project. Benefits for the applicant as well as benefits to the community at large must be discussed.

If an individual 401 Water Quality Certification is required, it is recommended that you contact the Illinois EPA, Bureau of Water, Division of Water Pollution Control, Facility Evaluation Unit, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276, (217) 782-3362, or on the web at epa.401.docs@illinois.gov regarding application and anti-degradation assessment requirements.

4. If the project involves the construction of a power plant, utility pipelines, electric transmission of distribution lines, Illinois Commerce Commission approval may be required.

5. Also, depending on the location and type of work to be performed, there may be additional local government approvals required.

INSTRUCTIONS

General

Provide a complete and accurate application (form, drawings, and support information) concerning your project. If the application is incomplete or unacceptable, it will be returned. This usually results in delaying the evaluation of your application.

Four copies of the application form and drawing sheets are required. Submit one copy of the completed application form and drawings to each agency specified on the bottom of each form. The mailing address and telephone number of each agency is provided beginning on Page 8. The copy labeled "Applicant's Copy" is for the applicant's records. Send one copy to the appropriate Corps of Engineers office, one copy to the Illinois EPA and one copy to the appropriate Illinois DNR office. In addition, if available, sending an electronic copy of your application, plans, drawings, etc. to each agency would be appreciated. The application form may be photocopied.

IF YOU NEED ASSISTANCE IN FILLING OUT THE APPLICATION FORM, PLEASE CALL ANY AGENCY OFFICE LISTED.

Additional information may be required by any or all of the agencies before further processing of your application may proceed. The applicant will, however, be notified of such needs by the agencies.

Specific instructions on completing the form and the information to be provided on the drawings are provided below.

DISCLOSURE STATEMENT
Information in the application is a matter of public record. Disclosure of the information is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

18 United States Code, Section 1001, provides that who ever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

APPLICANTS MUST OBTAIN ALL APPROVALS BEFORE WORK CAN BE STARTED. PROCEEDING WITHOUT THE REQUIRED PERMITS IS AGAINST STATE AND FEDERAL LAWS AND MAY RESULT IN LEGAL PROCEEDINGS AND FINES.

SPECIAL INSTRUCTIONS FOR COMPLETING THE JOINT APPLICATION FORM

Blocks 1 and 2 For Agency Use. To be completed by Corps of Engineers and/or Illinois Department of Natural Resources and/or Illinois Environmental Protection Agency.

Block 3(a and b) Applicant(s). The applicant(s) shall be the person(s), firm(s), corporation(s), etc who have or will have the responsibility for the property on which the project will be located by reason of ownership, easement, or other agreement. If the property is not presently owned by the applicant, attach an explanation of any easements or rights-of-way which have been or will be obtained or how such land will be acquired. If a project is being proposed by a lessee, the lessee and lessor should be joint applicants. In some instances, agency staff may request additional information on all parties having a legal or equitable interest in the involved land.

Applicant's Name. Enter the name of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.
Address of Applicant. Please provide the full mailing address of the party or parties responsible for the application.
Email Address of Applicant. Please provide the email address of the party or parties responsible for the application.
Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours. Include a fax number if available.
List all applicants. Space has been provided for the listing of two applicants. Attach an additional sheet (marked Block 3) if more space is needed.

Block 4 – Authorized Agent. If the applicant designates an authorized agent for the purpose of obtaining the permits, list the name, address, email address, phone and fax numbers of the authorized agent in Block 4. During the permit process, all correspondence, such as requests for additional information, will be sent to the authorized agent.
Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.
Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone and fax numbers where he / she can be reached during normal business hours.
Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 5. Names and Mailing Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the water body or aquatic site or whose property is in visual reach where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 5.
Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 6. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Rolling Hills Subdivision, or Edsall Commercial Center.

Block 7. Project Location.
Latitude and Longitude. Enter the latitude and longitude of where the proposed project is located.
UTMs Northing and Easting. Enter the Northing and Easting coordinates of where the proposed project is located. Include coordinate system information.
Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.
Other Location Descriptions. Please provide the Section, Township, and Range of the site, and / or local Municipality that the site is located in or near, as well as the County, State and Zip code.
Name of Waterway. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is an unnamed stream, identify the waterway the tributary stream enters. If a large river or stream, include the river mile of the proposed project site if known.

Directions to the Site. On a separate sheet, please provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream is within the vicinity of the project, include the river mile of the proposed project site, if known.

Block 8. Project Description. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 7.

Block 9. Project Purpose and Need. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.
If additional space is needed, attach an extra sheet of paper marked Block 8.

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED. If the project requires an individual 401 water quality certification from Illinois EPA, provide Illinois EPA with the anti-degradation assessment report, material analysis data, mitigation plan and other information identified in item 3 under Agency Authorities and Requirements of these instructions.

Block 10. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other water body, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 11. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards and Acres. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description agrees with your illustrations. Discharge material includes: soil, rock, sand, clay, concrete, etc.

Block 12. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a water body. If more space is needed, attach an extra sheet of paper marked Block 11.

Block 13. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, if mitigation is required. If additional space is needed, attach an extra sheet of paper marked Block 12.

Note: You will need to submit additional information for evaluation of the permit application, including a wetland delineation report; avoidance, minimization and alternatives analysis report; and mitigation plan. This information must be submitted to Illinois EPA, prior to completion of review and public notice of an anti-degradation assessment for the individual 401 water quality certification. This information will also be required by the Corps of Engineers prior to issuance of the Section 404 permit.

Block 14. Date activity is proposed to commence and completed. Please provide the date (if known) that you intend to start work, as well as the date work should be completed.

Block 15. Is Any Portion of the Work Already Complete? Provide all background information on those portions of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, and acres or square feet filled if discharge occurred in a wetland or other water body. If the work was done under an existing Corps permit, identify the authorization, if possible.

Block 16. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 17. Consent to enter property listed in Block 7.

Block 18. Application Verification. The signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).
The application must be signed by each applicant. However, the application may be signed by a duly authorized agent (Name in Block 4) if this form is accompanied by a statement by the applicant(s) designating the agent.

NOTE:

a. If the applicant is a corporation, the president or other authorized officer shall sign the application form.
b. If the applicant is a county, city or other political subdivision, the application form shall be assigned by an appropriate authorized officer.
c. If the applicant is a partnership, each partner shall sign the application form.
d. If the applicant is a trust, the trust officer shall sign the name of the trustee by him (or her) as trust
e. officer. A disclosure affidavit must be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interest therein.

DRAWINGS AND ILLUSTRATIONS

General Information.
Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity/Location Map, a Plan View and a Typical Cross-Section Map. Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.
Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section).
While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

Certified engineering plans may be submitted in lieu of the drawing sheets if the magnitude of the project warrants.

(1) A vicinity/location map which shows:
   a. project site;
   b. name of waterway;
   c. name of and distance to local town, community or other identifying location such as roads; and
   d. north arrow.

(2) A plan (overhead) view of the project showing:
   a. existing wetland boundary and shoreline of all waterways, including the normal water surface elevation (if mean sea level datum is not used, adjustment should be indicated):
   b. adjacent property lines and ownership as listed in the application form;
   c. principal dimensions of the structure or work and extent of encroachment into the waterway (as measured from a fixed structure or object);
   d. floodway/floodplain lines if established and if known;
   e. north arrow; and
   f. graphic or numerical scale.

(3) A cross-sectional view of the project showing:
   a. wetland boundary and/or shoreline, elevations, extent of encroachment, principal dimensions of the work as shown in plan view; and
   b. graphic or numerical scales (horizontal and vertical).

AGENCY MAILING ADDRESSES

Send appropriate copies of the completed application to each agency listed below. (Agencies are specified at the bottom of each sheet in the packet.)

For U.S. Army Corps of Engineers (refer to the IL Regulatory Jurisdictional Boundary Map for your District office):

U.S. Army Corps of Engineers, Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, IL 61204-2004

U.S. Army Corps of Engineers, Chicago District
ATTN: Regulatory Branch
231 South LaSalle Street, Suite 1500
Chicago, IL 60604

US Army Corps of Engineers, St. Louis District
ATTN: Regulatory Branch
1222 Spruce St.
St. Louis, MO 63103-2833

U.S. Army Corps of Engineers, Louisville District
ATTN: Regulatory Branch
P.O. BOX 59
Louisville, KY 40201-0059

U.S. Army Corps of Engineers, Memphis District
ATTN: Regulatory Branch
167 North Main, B-202
Memphis, TN 38103-1894

Your application to the Illinois Environmental Protection Agency should request Section 401 water quality certification.

Illinois Environmental Protection Agency
Bureau of Water
Division of Water Pollution Control
Facility Evaluation Unit
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

For the Illinois Department of Natural Resources

For the majority of the state (but not for the Chicago District):

Illinois Department of Natural Resources
Office of Water Resources
Downstate Regulatory Programs Section
One Natural Resources Way
Springfield, IL 62702-1271

For Cook, Lake, McHenry, DuPage, Kane and Will Counties (including all of Chicago District):

Illinois Department of Natural Resources
Office of Water Resources
Northeastern Illinois Regulatory Programs Section
2050 West Stearns Road
Bartlett, IL 60103

For Lake Michigan:

Illinois Department of Natural Resources
Office of Water Resources
Lake Michigan Management Section
160 N. LaSalle Street
Suite S-700
Chicago, IL 60601

In addition, you should complete and submit the attached certification sheet to the Illinois State agencies (the Illinois Department of Natural Resources and the Illinois Environmental Protection Agency) along with your application. The Corps of Engineers does not require this certification.

IMPORTANT:

Mitigation for wetland or stream impacts resulting from your proposed actions may be a permit requirement. Prior to completing your application, it is recommended that you read through the Wetland Mitigation information for the Chicago District, available on the Web at: http://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/Mitigation.aspx. This may help you avoid or minimize wetland and stream impacts, thus reducing or eliminating the requirement for mitigation.

Illinois State Permit Applicants

Illinois State Law requires individuals to certify that they are not delinquent in the payment of child support before State agencies can accept applications for State permits, certifications, etc. You must complete the following statement and include it with copies of the joint permit applications you send to the Illinois Department of Natural Resources and the Illinois Environmental Protection Agency. The Corps of Engineers does not require a copy of this statement.

WARNING: Failure to fully complete one of the following certifications will result in rejection of this application. Making a false statement may subject you to contempt of court.

I hereby certify, under penalty of perjury, that I am not more than 30 days' delinquent in complying with a child support order [5 ILCS 100/10-65(c)].

_____ _____

Applicant's Signature Applicant's Social Security Number

OR

I hereby certify, under penalty of perjury, that the permit applicant is a governmental or business entity and, therefore, not subject to child support payment requirements.

_____

Applicant's Name

_____

Applicant's Representative Signature and Title

Appendix D

NPDES MS4 Stormwater and Construction Activities Permit Information

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Illinois Environmental Protection Agency

www.epa.state.il.us

Pat Quinn, Governor

Phase II Storm Water

General Storm Water Permit for Small Municipal Separate Storm Sewer Systems (MS4)

- Storm Water Home
- Industrial
- Construction
- MS4
- Related Links
- Storm Water Forms
- Storm Water Pollution Prevention Plan
- Urbanized Area List
- Contact Us
- General Permits
- Notices of Intent

Phase I of the NPDES Storm Water program began in 1990 and required medium and large municipal separate storm sewer systems (MS4s) to obtain NPDES coverage. The expanded Phase II program began in March 2003 and required small MS4s in urbanized areas to obtain NPDES permits and implement six (6) minimum control measures. An urbanized area as delineated by the Bureau of Census is defined as a central place or places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 people and an overall population density of at least 500 people per square miles. (See list of MS4s.)

The General Storm Water Permit for MS4s was reissued on February 20, 2009 with an effective date of April 1, 2009. The expiration date is March 31, 2014. Significant changes have been made in the permit based on comments received by the Agency.

1. The reissued permit requires consideration by permittees of incorporation of green infrastructure concepts into their storm water program. For more information see USEPA's Managing Wet Weather with Green Infrastructure. exit epa
2. The Agency now requires, for purposes of public notification and participation, that the Notice of Intent (NOI) for your construction site projects be submitted to the Agency electronically and be placed on the permittee's website. Your projects are still automatically covered under the construction site activities general permit ILR10 pursuant to this permit.
3. The Agency has also developed e-mail addresses for the electronic submission of your Notice of Intent and annual reports.

MS4 Permit Requirements:

1. Develop a storm water management program comprised of best management practices (BMPs) and measurable goals for each of the following six minimum control measures:
   - Public education and outreach on storm water impacts
   - Public involvement and participation
   - Illicit discharge detection and elimination
   - Construction site storm water runoff control
   - Post construction storm water management in new development and redevelopment
   - Pollution prevention/good housekeeping for municipal operations

   For full descriptions of each measure, including examples of BMPs and measurable goals, see link below.

   Measurable Goals Guidance for Phase II Small MS4s exit epa

2. Submit a completed Notice of Intent. Operators can choose to share responsibilities for meeting the Phase II program requirements. Those entities choosing to do so may submit jointly with other municipalities or governmental entities.The NOI form may be submitted electronically to: epa.ms4noipermit@illinois.gov.

   NOI for MS4
   General Storm Water Permit for MS4

3. Submit an annual report to IEPA in June of each year. The annual report should be submitted electronically to: epa.ms4annualinsp@illinois.gov. The report must include:

   - The status of compliance with the permit conditions, including an assessment of the BMPs and progress toward the measurable goals;
   - Results of any information collected and analyzed, including monitoring data;
   - A summary of the storm water activities planned for the next reporting cycle;
   - A change in any identified best management practices or measurable goals;
   - If applicable, notice of relying on another governmental entity to satisfy some of the permit obligations.

   Annual Facility Inspection for MS4

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Illinois Environmental Protection Agency

www.epa.state.il.us

Pat Quinn, Governor

Phase II Storm Water

General Storm Water NPDES Permit For Construction Activities

- Storm Water Home
- Industrial
- Construction
- MS4
- Related Links
- Storm Water Forms
- Storm Water Pollution Prevention Plan
- Urbanized Area List
- Contact Us
- General Permits
- Notices of Intent

Construction activities can include road building, construction of residential houses, office buildings, industrial sites, or demolition.

Land Disturbance means exposed soil due to clearing, grading, or excavation activities.

Larger common plan of development or sale describes a situation in which multiple construction activities are occurring, or will occur, on a contiguous area.

An operator is the person or persons with either operational control of construction project plans and specifications, or day-to-day operational control of activities necessary to ensure compliance with storm water NPDES permit conditions.

Under Phase I, operators were required to obtain permit coverage for construction activity that resulted in a total land disturbance of 5 acres or more or less than 5 acres if they were part of a "larger common plan of development or sale" with a planned land disturbance of 5 acres or greater. Phase II reduces that project size to 1 acre or more.

Construction Permit Requirements:

1. Develop and submit an electronic copy of a Storm Water Pollution Prevention Plan (SWPPP) along with the NOI for the projects to: epa.constilr10swppp@illinois.gov.

   Developing Pollution Prevention Plans and Best Management Practices - Summary Guidance exit epa

   a. SWPPP must be retained at the job site from the date of project initiation to the date of final stabilization.
   b. Initial application fee schedule
      1. Projects received prior to January 1, 2010 the application fee is $500.
      2. Projects received after January 1, 2010 with less than 5 acres land disturbance, the fee is $250.
      3. Projects received after January 1, 2010 with 5 acres or more land disturbance, the fee is $750.

2. Submit a completed Notice of Intent electronically or by mail.

   a. Unless notified by the Agency with a Notice of Incompleteness letter, coverage under the Storm Water General NPDES permit is automatic, and operators are authorized to discharge storm water from construction sites under the terms and conditions of the permit 30 days after the date the NOI is received by the Agency, provided the project has received sign-off from IDNR and IHPA that the project complies with endangered species

and historic preservation laws and the appropriate application fee has been received by the Agency.

NEW Electronic Submission of NOI for Construction

- Mail submission of NOI for Construction
- Incidence of Non-Compliance for Construction
- General Storm Water Permit for Construction Activities
- General Storm Water NPDES Permit For Construction Activities:Frequently Asked Questions Regarding Changes to Sites/Projects after a Notice of Intent has been Filed

3. Submit a completed Notice of Termination (NOT)

   a. The permittee must submit a Notice of Termination (NOT) to the Agency after the land disturbing activities are complete and the site has been finally stabilized. USEPA considers that a site has been finally stabilized when all land disturbing activities are complete and a uniform perennial vegetative cover with a density of 70 percent of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been used. The Notice of Termination form is available below.

- Notice of Termination for Construction

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Appendix E

MWRD Watershed Management Permit Materials

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WATERSHED MANAGEMENT PERMIT

Watershed Management Permit No. _____

METROPOLITAN WATER RECLAMATION DISTRICT
OF GREATER CHICAGO
100 EAST ERIE, CHICAGO, ILLINOIS, 60611 www.mwrd.org

INSTRUCTIONS FOR COMPLETING PERMIT FORM: Submit four typed copies of permit application (nine pages) and any required WMO schedules listed below; do not leave any blank spaces; use "X" for checking applicable information. Also submit four copies of location map and plans. Submit two copies of specifications, if specifications are not part of the plan sheets. Address all correspondence to the Local Sewer Systems Section; for any inquiries or assistance, telephone (312) 751-3255.

NAME AND LOCATION:

Name of Project (as shown on plans): _____

Location of Project (street address or with respect to two major streets): _____

_____

Municipality (Township, if unincorporated) _____

Section_____, Township_____ N, Range _____ E

PIN (include all PINs for project): _____

☐	Project Information (Required in all cases)	WMO Schedule A	(Page 5 of 9)
☐	Sewer Summary (Required in all cases)	WMO Schedule B	(Page 6 of 9)
☐	Sewer Connections (Required in all cases)	WMO Schedule C	(Page 7 of 9)
☐	Detention & Stormwater Management Facilities (WMO)	WMO Schedule D	(3 Pages)
☐	Detention & Stormwater Management Facilities (Legacy)	WMO Schedule D_{Legacy}	(4 Pages)
☐	Lift Station and/or Force Main	WMO Schedule E	(2 Pages)
☐	Characteristics of Waste Discharge	WMO Schedule F	(2 Pages)
☐	Treatment or Pretreatment Facilities	WMO Schedule G	(2 Pages)
☐	Hazard Areas (Floodplain / Floodway /Riparian Areas)	WMO Schedule H	(2 Pages)
☐	Affidavit Relative to Compliance with Article 7	WMO Schedule J	(1 Page)
☐	Affidavit of Disclosure of Property Interest	WMO Schedule K	(2 Pages)
☐	Notice of Requirements for Storm Water Detention	WMO Schedule L	(2 Pages)
☐	Current Survey of Property Interests	Exhibit A	
☐	Outfall, Direct Connection, District Owned or Leased Property	WMO Schedule O	(1 Page)
☐	Soil Erosion and Sediment Control (Required in all cases)	WMO Schedule P	(2 Pages)
☐	Recording and Maintenance	WMO Schedule R	(2 Pages)
☐	Wetlands and Wetland Buffer Areas	WMO Schedule W	(2 Pages)

Refer to Table 1 of § 201 of Article 2 of Watershed Management Ordinance for applicable Permitting Authority.

OTHER DOCUMENTS: Indicate title, number of pages and originator_____

_____

NOTE: ATTACH FEE PAYMENT VOUCHER AND PAYMENT IF APPLICABLE

DISTRICT USE ONLY

Application received: _____WMO Permit issued: _____WRP:_____

Issued by: ☐ DISTRICT ☐ Authorized Municipality

WMO SCHEDULE A

Watershed Management Permit No. _____

PROJECT INFORMATION

1. **NAME OF PROJECT** _____
(as shown on the plans)

2. **APPURTENANCES** (check all applicable items)

☐ Siphon ☐ Drop Manholes ☐ Lift Station (Submit Sch. E) ☐ Outfalls (Submit Sch. O)

☐ Stream Crossing ☐ Direct Connections to District → Describe _____

3. **RECEIVING SANITARY/COMBINED SEWER SYSTEM**

A. System that project will connect to is:
☐ Existing ☐ Proposed /Under Construction → District Permit # _____

List owners of all sewers from project to District interceptor_____

_____

4. **RECEIVING STORM SEWER SYSTEM TRIBUTARY TO WATERWAY**

A. System that project will connect to is:
☐ Existing ☐ Proposed /Under Construction → District Permit # _____

List owners of all sewers from project to waterway _____

_____

5. **EXISTING LIFT STATION**

☐ No ☐ Yes → Receiving system includes existing lift station

If yes, indicate location _____

6. **FLOOD PROTECTION AREAS**
Does any part of the project area impact the following? (Check all applicable items)

☐ Floodplain/Floodway/Riparian (Schedule H) ☐ Wetlands/Riparian (Schedule W)

7. **SIZE OF PROJECT**

		Impervious area within project	
A. Total contiguous ownership	_____ acres	C. Before development	_____ acres
B. Development Area	_____ acres	D. After development	_____ acres

8. **STORMWATER MANAGEMENT**

A. Is project in the service area of an existing District permitted detention facility?
☐ No ☐ Yes → District Permit No. _____

B. Is stormwater management provided under this permit?
☐ No ☐ Yes → Required by: ☐ District (Submit Sch. D) ☐ Other

C. Type of stormwater management

☐ Runoff Control ☐ Volume Control ☐ Detention Storage

WMO SCHEDULE B

Watershed Management Permit No. _____

SEWER SUMMARY

PROJECT NAME: _____
(as shown on the plans)

1. **Sewer Summary,** including all service sewers from the building envelope, stubs and risers:
   Include all sewers (Sanitary and Storm) in combined sewer area
   Include all sanitary sewers in separate sewered areas

Pipe Size (in.)							
Total length (ft.)							
Min. slope used (%)							
Pipe Material *							
Total manholes							
Total cleanouts							
Catch Basin/Inlets							

* Pipe material and joint specifications must be shown on plans. See Technical Guidance Manual for acceptable specifications.

Sewer construction in floodplain: ☐ No ☐ Yes → FPE _____ ft.

Identify manholes in floodplain _____

Note: All sanitary/combined sewer structures shall have above ground openings located above the FPE or shall be constructed with watertight, bolt down covers/lids.

2. **NATURE OF PROJECT** (Check all that apply)

Brief description _____

☐ Publicly financed

☐ Sewer extension to serve future development

☐ Sewer system serving a subdivision

☐ Storm sewers in combined sewer area

☐ Off-site trunk sewer to serve subdivision

☐ Service connections to serve buildings (Sch. C)

☐ Other _____

3. **SEWER EXTENSIONS**

Is any part of the proposed project is designed to service future connections (not included in Schedule C)? If so, then check yes below and submit service area map and estimate of population equivalent to be served.

☐ NO ☐ YES → ☐ Service area map

☐ P.E. estimate submitted

Watershed Management Permit No. _____

WMO SCHEDULE D
WATERSHED MANAGEMENT FACILITIES

Name of Project: _____

A. DEVELOPMENT INFORMATION

1) Total parcel area: _____acres
2) Total development area on the parcel: _____acres

B. SITE VOLUME CONTROL REQUIREMENTS

1) Existing impervious area of development: _____acres
2) Proposed impervious area of development: _____acres
3) Gross volume control storage required (0.083 X Line B.2): _____acre-feet
4) Volume control storage allowance. Do site constraints prevent the use of retention-based practices in full? ☐ Yes ☐ No
   If yes, explain and complete B.4.a, B.4.b, and B.4.c _____
   a. Percent reduction in impervious area (B.1 – B.2)/B.1: _____%
   b. Volume control storage allowance (Line B.4.a/5%)(0.25)(Line B.3): _____acre-feet
   c. Volume control treated by a flow through practice: _____acre-feet
5) Net volume control storage required (Line B.3 – Line B.4.b – Line B.4.c): _____acre-feet
6) Volume control storage provided (must be greater than line B.5) :_____acre-feet

C. SITE DETENTION REQUIREMENTS

1) Type of stormwater detention facility (check one)

   ☐ Reservoir
   ☐ Parking Lot
   ☐ Offsite Facility
   Location_____

   ☐ Other
   Specify_____

2) Release Rate Determination
   A) Existing conditions 100-year runoff rate for the development: _____cfs
   (if the development contains depressional storage)

   B) Gross allowable release rate: _____ cfs
   (lesser of Line C.2.A or 0.30 x Line A.2)

   C) Unrestricted release rate: _____ cfs
   (assume 0 cfs if equivalent upstream area is being diverted to the detention facility)

   D) Unrestricted native planting area
      i. Area: _____ acres
      ii. Reduction in release rate: _____ cfs (0.30 x Line C.2.D.i)

E) Net allowable release rate: _____ cfs
(Line C.2.B – Line C.2.C - Line C.2.D.ii)

3) Detention Volume Determination
(Submit calculations for items C.3.A through C.3.H)

a. Methodology
   - ☐ Nomograph
   - ☐ Hydrologic model (select modeling software and indicate version)
     - ☐ HEC-HMS _____
     - ☐ TR-20 _____
     - ☐ WIN TR-20 _____

b. Composite CN for the development: _____
c. Reduced CN for the development: _____
d. Time of concentration for the development: _____ minutes
e. Required detention volume at actual release rate: _____ acre-feet
f. Actual detention volume provided at HWL: _____ acre-feet
g. Actual release rate: _____ cfs at HWL _____ ft (NAVD 88)
(cannot be greater than Line C.2.E)
h. Outlet control structure (provide details and calculations)
   i. Orifice
      1. Type:_____
      2. Discharge coefficient:_____
      3. Diameter: _____in
      4. Orifice invert elevation _____ft (NAVD 88)
   ii. Weir
      1. Weir length: _____ ft
      2. Weir invert elevation: _____ ft (NAVD 88)

D. UPSTREAM TRIBUTARY AREA

1) Upstream tributary drainage area: _____acres
A) Ratio of upstream tributary area to development area:_____
B) Composite CN for upstream tributary area: _____
C) Time of concentration for upstream tributary area: _____ minutes
D) 100-year peak flowrate for upstream tributary area: _____ cfs
E) Detention facility drawdown time:_____ hours

Watershed Management Permit No. _____

WMO SCHEDULE D
WATERSHED MANAGEMENT FACILITIES

2) Describe bypass system type details: ☐ Overflow weir ☐ Restrictor

Orifice diameter: _____ in Orifice invert elevation: _____ ft (NAVD 88)

Orifice type and discharge coefficient: _____

Weir length: _____ ft Weir invert elevation: _____ ft (NAVD 88)

Name _____ Title _____

Signature_____ Date _____

Engineering Firm _____

PE
SEAL

Watershed Management Permit No. _____

WMO SCHEDULE F
CHARACTERISTICS OF WASTE DISCHARGES

NOTE: WMO SCHEDULE G - TREATMENT OR PRETREATMENT FACILITIES MUST ALSO BE COMPLETED AND SUBMITTED WITH SCHEDULE F.

1. Name of Project: _____

2. Flow Data: Average daily flow: Existing: _____ gpd. Proposed: _____ gpd.
Maximum daily flow: Existing: _____gpd. Proposed: _____ gpd.

3. Waste Characteristics: Complete the following table as indicated. If toxic organics are present, indicate on next page.

Required for all cases			**Required when discharging to waterway or storm sewer or to the Elgin Sanitary District**		
Constituent	Raw Waste (mg/1)	Treated Waste (mg/1)	Constituent	Raw Waste (mg/1)	Treated Waste (mg/1)
Biochemical Oxygen Demand, 5 – day (BOD5)			Ammonia Nitrogen (as N)		
Chemical Oxygen Demand (COD)			Arsenic (Total)		
Cadmium (Total)			Barium		
Chromium (Total)			Fluoride		
Chromium (Hexavalent)			Iron (Dissolved)		
Copper (Total)			Manganese (Total)		
Cyanide (Total)			Phenols		
Iron (Total)			Phosphorus (as P)		
Lead (Total)			Silver (Total)		
Mercury (Total)			Sulfate (as SO4)		
Nickel (Total)			Total Dissolved Solids		
Fats, Oils & Greases			Fecal Coliform (Counts /100ml)		
Suspended Solids					
Zinc (Total)					
pH Range					
Temperature, max.					
Radioactive Wastes Present					

Watershed Management Permit No. _____

WMO SCHEDULE F
CHARACTERISTICS OF WASTE DISCHARGES

NOTE: IF ANY OF THESE ITEMS ARE PRESENT ATTACH SEPARATE SHEET(S) LISTING ITEM(S) WITH RAW AND TREATED WASTE CONCENTRATION IN mg/l

4. TOXIC ORGANIC PRIORITY POLLUTANTS

BASE/NEUTRAL EXTRACTABLES	
1. N- Nitorsodiumethylamine	☐
2. Bis (2 chloroethyl)ether	☐
3. 1, 3-Dichlorobenzene	☐
4. 1, 4-Dichlorobenzene	☐
5. 1, 2 -Dichlorobenzene	☐
6. Bis(2-chloroisopropyl)ether	☐
7. Hexachloroethane	☐
8. N-Nitrosodi-n-propylamine	☐
9. Nitrobenzene	☐
10. lsophorone	☐
11. Bis(2-chloroethoxy)methane	☐
12. 1, 2, 4 -Trichlorobenzene	☐
13. Naphthalene	☐
14. Hexachlorobutadiene	☐
15. Hexachlorocyclopentadiene	☐
16. 2-Chloronapthalene	☐
17. Acenaphthylene	☐
18. Dimethylphthalate	☐
19. 2, 6-Dinitrotoluene	☐
20. Acenaphthene	☐
21. 2,4-Dinftrotoluene	☐
22. Fluorene	☐
23. Diethylphthalate	☐
24. 4-Chlorophenyl phenyl ether	☐
25. N-Nitrosodiphenylamine	☐
26. Diphenylhydrazine	☐
27. 4-Bromophenyl phenyl ether	☐
28. Hexachlorobenzene	☐
29. Phenanthrene	☐
30. Anthracene	☐
31. Di-n-butylphthalate	☐
32. Fluoranthene	☐
33. Benzidine	☐
34. Pyrene	☐
35. Butyl benzyl phthalate	☐
36. Benzo(a)anthracene	☐
37. Chrysene	☐
38. 3, 3-Dichlorobenzidine	☐
39. Bis(2-ethylhexyl)pthalate	☐
40. Di-n-octylphthalate	☐
41. Benzo(b)fluoranthene	☐
42. Benzo(k)fluoranthene	☐
43. Benzo(a)pyrene	☐
44. Indeno(l, 2, 3-cd)pyrene	☐
45. Dibenzo(a, h)anthracene	☐
46. Benzo(ghi)perylene	☐

PURGEABLES	
1. Chloromethane	☐
2. Bromomethane	☐
3. Vinyl chloride	☐
4. Chloromethane	☐
5. Dichloromethane	☐
6. Acrolein	☐
7. Acrylonitrile	☐
8. Trichlorofluoromethane	☐
9. 1, 1 Dichloroethene	☐
10. 1, 1-Dichloroethane	☐
11. trans-1, 2-Dichloroethene	☐
12. Chloroform	☐
13. 1, 2 -Dichloroethane	☐
14. 1, 1, 1-Trichloroethane	☐
15. Carbon tetrachloride	☐
16. Bromodichloromethane	☐
17. 1, 2 -Dichloropropane	☐
18. cis-1, 3-Dichloropropene	☐
19. Trichloroethene	☐
20. Benzene	☐
21. Dibromochlromethane	☐
22. trans-1, 3-Dichloropropene	☐
23. 1, 1, 2-Trichloroethane	☐
24. 2-Chloroethyl vinyl ether	☐
25. Bromoform	☐
26. Tetrachloroethene	☐
27. 1, 1, 2, 2 -Tetrachloroethane	☐
28. Toluene	☐
29. Chlorobenzene	☐
30. Ethylbenzene	☐

ACID EXTRACTABLES	
1. Phenol	☐
2. 2-Chlorophenol	☐
3. 2-Nitrophenol	☐
4. 2, 4 -Dimethylphenol	☐
5. 2, 4,- Dichlorophenol	☐
6. p-Chloro-m-cresol	☐
7. 2, 4, 6 -Trichlorophenol	☐
8. 2, 4 - Dinitrophenol	☐
9. 4-Nitrophenol	☐
10. 4, 6-Dinitro-o-cresol	☐
11. Pentachlorophenol	☐

PESTICIDES & PCBs SINGLE PEAK	
1. α-BHC	☐
2 β-BHC	☐
3. γ-BHC (Lindane)	☐
4. δ-BHC	☐
5. Heptachlor	☐
6. Aldrin	☐
7. Heptachlor epoxide	☐
8. Endosulfan I	☐
9. Dieldrin	☐
10. 4, 4'-DDE	☐
11. Endrin	☐
12. Endosulfan 11	☐
13. Endrin aldehyde	☐
14. 4, 4' DDD	☐
15. Endosulfan sulfate	☐
16. 4, 4'-DDT	☐
MULTIPLE PEAK	
17. Chlordane	☐
18. Toxaphene	☐
19. PCB-1221	☐
20. PCB-1232	☐
21. PCB-1016 (1242)	☐
22. PCB-1248	☐
23. PCB-1254	☐
24. PCB-1260	☐
(Total PCB)	

Watershed Management Permit No. _____

WMO SCHEDULE H
FLOODPLAIN/FLOODWAY & RIPARIAN ENVIRONMENTS

Name of Project: _____

Type of Development (check one below):

☐ Single-family home ☐ Residential Subdivision ☐ Multi-family residential

☐ Non-residential ☐ Right-of-way ☐ Open space

1) Provide the Cook County FIRM panel(s) for the site:_____

2) Is there regulatory floodplain located onsite? ☐ Yes ☐ No
If yes, provide the name(s) of the flooding sources: _____
_____

3) Is there Zone A floodplain within 100 feet of the project site or does the site require a project-specific floodplain study? ☐ Yes ☐ No

4) If the answer to (2) or (3) is yes, provide the BFE on the project site to the nearest 0.1 ft. If more than one BFE, list each individually: _____ft, NAVD 88

5) Provide the elevation source(s) of the BFE(s) from (4):_____

6) If the development includes a new building, an addition to an existing building, or substantial improvement to an existing building in the regulatory floodplain, provide the lowest floor elevation:_____ft, NAVD 88

7) Does the project result in fill in the floodplain? ☐ Yes ☐ No
If yes, provide the floodplain fill and compensatory storage quantities below:

Floodplain Fill (acre-feet)		Compensatory Storage Provided (acre-feet)	
_____	0 -10 Year	_____	0 -10 Year*
_____	10 - 100-Year	_____	10 - 100-Year*
_____	Total	_____	Total**

*Must be at least 1.0 times the floodplain fill
** Must be at least 1.1 times the floodplain fill

8) Is any part of the development in the regulatory floodway? ☐ Yes ☐ No
If yes, describe appropriate use: _____

Watershed Management Permit No. _____

WMO SCHEDULE H
FLOODPLAIN/FLOODWAY & RIPARIAN ENVIRONMENTS

_____

_____

9) Does the development involve a waterway with greater than one square mile of tributary area? ☐ Yes ☐ No

10) If answer to (8) or (9) is yes, provide a copy of the IDNR-OWR Floodway Construction Permit for the development.

11) Is there riparian environment located onsite? ☐ Yes ☐ No
If yes, check the conditions that apply:

☐ Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)

☐ Isolated Waters (30-ft buffer from OHWM)

☐ Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)

12) If answer to (11) is yes, does the proposed development result in adverse impacts to the riparian environment? ☐ Yes ☐ No

13) If answer to (12) is yes, prepare riparian submittal and provide a brief description of the impacts and mitigation below: _____

_____

_____

Name _____ Title _____

Signature_____ Date _____

Engineering Firm _____

PE SEAL

Watershed Management Permit No. _____

WMO SCHEDULE O
OUTFALL, DIRECT CONNECTIONS TO DISTRICT FACILITIES, AND IMPACTS TO DISTRICT OWNED OR LEASED PROPERTY

INSTRUCTIONS: Use only for direct connections to District facilities outside the City of Chicago (City), direct discharge into waterways outside the City, or developments impacting District owned or leased property outside the City. Submit typed forms in **quadruplicate**, complete all information or indicate non-applicability, submit **two** copies of location map, plot plan, direct connection, and/or outfall details. (Additional material, such as plans and profiles, design report, specifications, calculations etc, which will describe the project more adequately, is desirable and may be required.)
Note: Written approval from the District shall be obtained prior to entering any District facilities including, but not limited to: TARP and interceptor manholes.

1. **NAME AND LOCATION**

Name of project (as shown on Plans): _____

Location: _____ Receiving District WRP/Lift Station _____

2. **TYPE OF CONNECTION**

A. Authorization is requested for connection to:

☐ District interceptor facility ☐ District TARP facility

☐ Discharge into receiving water with new or reconstructed outfall. Indicate new or reconstructed: _____

☐ District owned reservoir or other facility (pump station, water reclamation facility, etc).

Describe: _____

B. Nature of discharge to District facility:

☐ Sanitary sewage ☐ Stormwater ☐ Other (describe): _____

Location of facility: _____

Structure Name and No. _____ Contract No. _____

3. **OUTFALLS**

A. Nature of discharge into receiving water

☐ Stormwater ☐ Cooling/process water or treatment system effluent (describe): _____

☐ Other (describe) _____

Name of receiving waterway: _____

Location of outfall: _____
Indicate nearest street and bank (e.g. N,S,E,W) of waterway

Owner: _____ Invert elevation: (NAVD 88) _____ (CCD) _____ Size _____ Material _____

Note: Submit outfall detail with all pertinent elevations. The detail should show the waterway section with normal/high water elevations.

B. Backflow prevention (submit details)

☐ Check valves ☐ Flap gates ☐ Energy dissipation (describe) _____
Refer to TGM for requirements

4. **DEVELOPMENT IMPACTING DISTRICT OWNED OR LEASED PROPERTY**

☐ No ☐ Yes ⟶ Location: _____

Describe development: _____
Notes: 1. Must obtain approval letter from District Law Department. 2. Submit copy of lease agreement.

Describe mitigation such as erosion control or District infrastructure relocation (if applicable): _____

_____

5. **ADDITIONAL INFORMATION** (if applicable)

If project discharges directly or indirectly into a City/Village combined sewer, the receiving combined sewer does ( ), does not ( ), have an overflow. Overflow discharges to (name of waterway): _____ by means of _____

If connection to District facility is involved, indicate project distance to nearest City/Village sewer: _____ ft;

Location: _____

Watershed Management Permit No. _____

WMO SCHEDULE P
SOIL EROSION AND SEDIMENT CONTROL

Name of Project: _____

Type of Development (check one below):

☐ Single-family home ☐ Residential Subdivision ☐ Multi-family residential

☐ Non-residential ☐ Right-of-way ☐ Open space

1) Total proposed disturbed area: _____acres

2) Does the site's stormwater discharge directly to:

   ☐ Waters of the State ☐ Storm Sewer ☐ Combined Sewer

   If Waters of the State, provide name of receiving water body:_____
   _____

3) If answer to (1) is ≥ one acre or part of a larger planned common development ≥ one acre , provide IEPA NPDES ILR10 Permit Number*: _____
   If ILR10 permit coverage applies, provide a signed copy of ILR10 Notice of Intent (NOI)
   *If all site stormwater discharges, including construction dewatering, drain to a combined sewer system, ILR10 permit coverage is not required

4) Summary of soil erosion and sediment control practices:

			Area Controlled (sq ft)	Permanent (P), Temporary (T), OR Both (B)
Silt fence	_____	(ft)	_____	_____
Entrance/exit control	_____	(quantity)	_____	_____
Vegetative control	_____	(sq ft)	_____	_____
Interceptor ditches	_____	(ft)	_____	_____
Berms	_____	(ft)	_____	_____
Inlet control	_____	(quantity)	_____	_____
Sediment basins	_____	(cu yd)	_____	_____
Debris basins	_____	(cu ft)	_____	_____
Desilting basins	_____	(cu ft)	_____	_____
Silt traps	_____	(cu ft)	_____	_____
Mulching and matting	_____	(cu ft/sq ft)	_____	_____
Other	_____	(indicate)	_____	_____

5) Does the development involve work in or adjacent to any flood protection areas?
   ☐ Yes ☐ No

Watershed Management Permit No. _____

WMO SCHEDULE P
SOIL EROSION AND SEDIMENT CONTROL

If yes, check all conditions that apply:

☐ Floodplain ☐ Wetland/Buffer ☐ Riparian Environment

6) If the answer to (5) is yes, describe how flood protection areas will be protected from erosion and sedimentation: _____
_____
_____

7) Provide topographical or plan maps of construction area and indicate erosion control practices, including a sequence of major construction activities.

8) Drainage area (above and including construction site): _____acres

9) Slope categories of construction site:

		Area (acres)	Disposition of Collected Sediment
9.1	0 – 2 % Slope	_____	_____
9.2	2 – 4 % Slope	_____	_____
9.3	4 – 6 % Slope	_____	_____
9.4	≥ 6% Slope	_____	_____

10) Check the following conditions that apply:

☐ Erosion control practices identified above will be constructed in accordance with the Illinois Urban Manual, 2012

☐ Plans or specifications for the above referenced erosion control practices are attached

Co-Permittee _____ Title_____

Signature_____ Date _____

Company/Agency _____

WMO SCHEDULE R **Watershed Management Permit No.** _____

OFFICE OF THE RECORDER OF DEEDS OF COOK COUNTY

SPACE RESERVED
PLACE STICKER HERE
PROOF OF EXECUTED
RECORDATION DOC#

NOTICE OF WATERHSED MANAGEMENT PERMIT REQUIREMENTS AND OBLIGATIONS OF PERPETUAL MAINTENANCE & OPERATION

Name of Project: _____

A. NOTICE IS HEREBY GIVEN that the undersigned is (select one) (the owner and record title holder),(a principal beneficiary of Land Trust No. _____ held by _____ as Trustee), (an Officer _____
(Name of Trust Holder) (Official capacity)
of _____ Corporation), (a General Partner _____ partnership),
(Name of Corporation) (Name of Partnership)

(a Managing Member of _____ Limited Liability Company ("LLC")), which is the record title holder of the property
(Name of Partnership)
is the record title holder of the property or properties shown on the attached plat of survey and legally described on the attached sheet(s; said recordation document and or record plans, attached hereto as Exhibit "R" and specifically incorporated by reference herein; said property being developed and built up for the benefit or use of more than one owner or user, is subject to the rules and regulations of the Metropolitan Water Reclamation District of Greater Chicago ("District") governing stormwater maintenance and operation requirements.

B. NOTICE IS FURTHER GIVEN that a Watershed Management Permit ("Permit") District Permit No.: _____
(covering the project indicated and designated by the number shown above) has been granted by the District with respect to the property described in Exhibit "R", for the development and/or redevelopment and/or construction of a qualified sewer system as shown on the permit and accompanying documents on file with the District.

***C. NOTICE IS FURTHER GIVEN** that the following facilities contemplated for construction under the permit on file with the District requires perpetual maintenance and operation by the co-permittee and / or the current property owner, to meet the requirements of the watershed management permit:

	Applicability	
A) Volume Control Facilities	☐ Yes	☐ No
B) Detention Facilities (Existing and Proposed)	☐ Yes	☐ No
C) Offsite or Trade-off Detention Facilities	☐ Yes	☐ No
D) Stormwater Management System(s) Component(s)	☐ Yes	☐ No
E) Native Planting Conservation Area(s)	☐ Yes	☐ No
F) Compensatory Storage Area(s)	☐ Yes	☐ No
G) Wetland/Buffer Mitigation Area(s)	☐ Yes	☐ No
H) Riparian Environment Mitigation Area(s)	☐ Yes	☐ No
I) Qualified Sewer Construction	☐ Yes	☐ No
J) Other _____ (Include attachments as necessary)	☐ Yes	☐ No

D. THIS NOTICE, after it has been recorded, shall not be withdrawn, rescinded or removed, except after the District requirements relative to obligation of perpetual maintenance and operation of facilities have been satisfied with respect to the entire property described in Exhibit "R", and a written release from the obligations hereunder is obtained from the District.

Schedule R is to be executed by owner and furnished to District for proof of recordation. Owner is to pay all expenses for recording after construction and as-built survey is complete and prior to RFI to obtain return on deposit. Submit one original and one copy of the executed and recorded Schedule R along with record drawings, maximum size 30"x 36". The information provided on the record drawings must be legible when it is recorded (microfilmed). All documents submitted for filing must comply with the Illinois Plat Act and additional requirements as set forth by the County Recorder of Deeds.

*Select all boxes as appropriate

Revised April 24, 2014
(OVER)

WMO Schedule R (Continued) Watershed Management Permit No. _____

This notice is intended to be given to any party or parties hereinafter acquiring any interest in the aforedescribed property, or dealing with said property in any manner whatsoever, notifying them of the requirements for obligation of perpetual maintenance and operation for facilities for said property as provided herein. The owner hereby certifies that the property is recorded in the office of the Cook County Recorder of Deeds.

Signed by owner and record title holder dated
this _____day of _____20__.

Impress Corporate Seal Here

CHOOSE A, B, C, or D

A (for individual owner) _____ Owner

B (for Partnership) _____ General Partner

C (for Limited Liability Company) _____ Managing Member

D (for Corporation _____ President

_____ Corporate Secretary

E (for property in a land trust) _____ Individual holding power of direction

NOTARIZATION OF OWNER'S SIGNATURE

NOTE: (For individual, Partnership or Corporation) (if title to property is held in land trust, the trust officer must countersign in space provided.)

CHOOSE A, B, C, D, or E, same as above

State of _____
}
County of _____} ss.

A INDIVIDUAL OWNER

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that _____ personally known to me to be the same person(s) whose name (s) (is) (are) subscribed to the foregoing instrument appeared before me this day in person, and acknowledged that (he) (she) signed, sealed and delivered the said instrument as (his) (her) free and voluntary act, for the uses and purposes therein set forth, or,

B PARTNERSHIP

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that _____ personally known to me to be a general partner of the _____ partnership, personally

known to me to be the same person(s) whose name (s) (is) (are) subscribed to the foregoing instrument appeared before me this day in person, and acknowledged that (he) (she) signed, sealed and delivered the said instrument as (his) (her) free and voluntary act, for the uses and purposes therein set forth, or,

C Limited Liability Company (LLC)

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that _____,Managing Member of , is personally known to me to be the same person whose name is subscribed to the preceding instrument as Managing Member, appeared before me this day in person, and acknowledged that (he) (she) signed, sealed and delivered the said instrument as Managing Member of the LLC, as (his) (her) free and voluntary act, and the free and voluntary act of the LLC, for the uses and purposes therein set forth, or,

D CORPORATION

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that

_____, President of _____, and _____,

Secretary of the corporation, are personally known to me to be the same persons whose names are subscribed to the preceding instrument as President and Secretary respectively, appeared before me this day in person and acknowledged that they signed and delivered the instrument as President and Secretary of the corporation, and affixed the corporate seal of the corporation, pursuant to authority given by the Board of Directors of the corporation, as their free and voluntary act, and as the free and voluntary act of the corporation, for the uses and purposes there stated.

Given under my hand and official seal, this __
day of _____, 20__.

_____

Commission expires _____ , 20__ (Notary Public)

E LAND TRUST

COUNTERSIGNATURE

_____ _____ held by _____ as Trustee.
(Trust Officer) (Trust No.) (Name of Trustee)

Watershed Management Permit No. ☐

WMO SCHEDULE W
WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

Name of Project: _____

Type of Development (check one below):

☐ Single-family home ☐ Residential Subdivision ☐ Multi-family residential

☐ Non-residential ☐ Right-of-way ☐ Open space

***If multiple wetlands are located onsite, fill out separate Schedule W for each**

1) Is there wetland or farmed wetland on the development site? ☐ Yes ☐ No

   A) If yes, submit a request for jurisdictional determination to the US Army Corps of Engineers (Corps) and provide a copy of the determination letter.

   B) Is the onsite wetland isolated? ☐ Yes ☐ No

   C) Is the onsite wetland considered to be a high quality isolated wetland? ☐ Yes ☐ No

   D) If applicable, will the onsite isolated wetland or associated buffer be impacted by the development? ☐ Yes ☐ No If yes, see Steps 3 and 8.

   E) Is the onsite wetland Corps regulated? ☐ Yes ☐ No

   F) If applicable, will the onsite Corps regulated wetland be impacted by the development? ☐ Yes ☐ No If yes, provide a copy of Corps permit.

   G) If answer to 1.(F) is no, will the associated wetland buffer be impacted by the development? ☐ Yes ☐ No If yes, see Steps 3 and 8.

2) Is wetland or farmed wetland located within 100 feet of the development site?
   ☐ Yes ☐ No

   If yes, does the wetland buffer extend onto the development? ☐ Yes ☐ No
   If yes, is the buffer impacted by the development? ☐ Yes ☐ No
   If yes, see Steps 3 and 8.

3) If the answer to either (1.C), (1.D), (1.F), (1.G) or (2) is yes, prepare a wetland/buffer submittal and briefly describe the impacts and proposed mitigation below: _____

   _____

   _____

   _____

Watershed Management Permit No. ☐

WMO SCHEDULE W
WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4) Is there riparian environment located onsite? ☐ Yes ☐ No
If yes, check the conditions that apply:

☐ Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)

☐ Isolated Waters (30-ft buffer from OHWM)

☐ Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)

5) If answer to (4) is yes, does the proposed development result in adverse impacts to the riparian environment? ☐ Yes ☐ No

6) If answer to (5) is yes, prepare riparian submittal and provide a brief description of the impacts and mitigation below: _____
_____
_____

7) Is detention proposed in the wetland? ☐ Yes ☐ No If yes, proceed to 7(A) and 7(B)

A) Is the wetland regulated by the Corps and a Corps permit is required for the development? ☐ Yes ☐ No
If yes, did the Corps approve placing detention in the wetland? ☐ Yes ☐ No
If no, detention is not allowed in the wetland
If yes, complete the required hydrologic study

B) Is the wetland isolated? ☐ Yes ☐ No
If the isolated wetland is considered high quality, detention is not allowed
If yes, complete the required hydrologic study

8) If answers (1.D) (1.F) (1.G) (2) (6) and (7) are yes, prepare wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application.

Name _____ Title _____

Signature_____ Date _____

Company/Agency _____

GENERAL CONDITIONS OF THE PERMIT

1. **Definitions**. The definitions of Appendix A of the Watershed Management Ordinance are incorporated into this Watershed Management Permit by reference. Additionally, the following words and phrases shall be defined as follows:
   a) **Building and Occupancy Permit**. Building and Occupancy Permit issued by the Municipality.
   b) **Design Engineer**. A Professional Engineer who prepares plans and specifications for the project, and signs the Watershed Management Permit Application.
   c) **General Conditions**. General Conditions contained in a Watershed Management Permit.
   d) **Inspection Engineer.** A Professional Engineer who inspects the development to ensure compliance with the design plans, specifications, a Watershed Management Permit, and the Watershed Management Ordinance.
   e) **Permit.** Watershed Management Permit.
   f) **Special Conditions.** Special conditions of this Watershed Management Permit.

2. **Adequacy of Design**. The schedules, plans, specifications and all other data and documents submitted for this Permit are made a part hereof. The Permit shall not relieve the Design Engineer of the sole responsibility for the adequacy of the design.. The issuance of this Permit shall not be construed as approval of the concept or construction details of the proposed facilities and shall not absolve the Permittee, Co-Permittee or Design Engineer of their respective responsibilities.

3. **Joint Construction and Operation Permits.** Unless otherwise stated by the Special Conditions, the issuance of this Permit shall be a joint construction and operation permit, provided that the Permittee or Co-Permittee has complied with all General and Special Conditions.

4. **Allowable Discharges.** Discharges into the Sanitary Sewer system constructed under this Permit shall consist of sanitary Sewage only. Unless otherwise stated by the Special Conditions, there shall be no discharge of industrial wastes under this Permit. Stormwater shall not be permitted to enter the Sanitary Sewer system. Without limiting the general prohibition of the previous sentence, roof and footing drains shall not be connected to the Sanitary Sewer system.

5. **Construction Inspection.** All erosion and sediment control facilities, Stormwater Facilities, Detention Facilities, and Qualified Sewer Construction shall be inspected and approved by an Inspection Engineer acting on behalf of the Permittee or the Owner of the project, or by a duly authorized and competent representative of the Inspection Engineer. No sewer trenches shall be backfilled except as authorized by the Inspection Engineer after having inspected and approved the sewer installation.

6. **Maintenance.** Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, Sanitary Sewer lines, systems or facilities constructed hereunder or serving the facilities constructed hereunder shall be properly maintained and operated at all times in accordance with all applicable requirements. It is understood that the responsibility for maintenance shall run as a joint and several obligation against the Permittee, the Co-Permittee, the property served, the Owner and the operator of the facilities, and said responsibility shall not be discharged nor in any way affected by change of ownership of said property, unless the District has authorized assignment of the permit.

7. **Indemnification.** The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless the Metropolitan Water Reclamation District of Greater Chicago ("District", "MWRD", or "MWRDGC") and its Commissioners, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the District and its Commissioners, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the District and its Commissioners, officers, employees, servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

   The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless an Authorized Municipality and its elected officials, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the Authorized Municipality and its elected officials, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the Authorized Municipality and its elected officials, officers, employees,

servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

8. **Sewer Construction by District.** Permittee understands and acknowledges that the District has the right and power to construct and extend sewer service facilities and render such services within the area to be served by the project for which this Permit is issued, and that by the District constructing and extending such sewer service facilities and rendering such services, the facilities constructed by the Permittee under this Permit may decrease in value, become useless or of no value whatsoever, the Permittee may also sustain a loss of business, income and profits.

   Therefore, by accepting this Permit and acting thereon, the Permittee, for itself, its successors and assigns, does remise, release and forever discharge the District and its Commissioners, officers, employees, servants, and agents of any and all claims whatsoever which Permittee may now have or hereafter acquire and which Permittee's successors and assigns hereafter can, shall, or may have against the District and its Commissioners, officers, employees, servants, and agents for all losses and damages, either direct or indirect, claimed to have been incurred by reason of the construction or extension at any time hereafter by the District of sewer service facilities in the service area contemplated by this Permit, the rendering of such services, which District facilities and services decrease the value of the facilities constructed by the Permittee under this Permit, make same useless or of no value whatsoever, including but not limited to, any and all damages arising under 70 ILCS 2605/19; the taking of private property for public use without due compensation; the interference with the contracts of Permittee; the interference with Permittee's use and enjoyment of its land; and the decrease in value of Permittee's land.

9. **Third Parties.** Regarding Qualified Sewer Construction, this Permit does not grant the right or authority to the Permittee: (a) to construct or encroach upon any lands of the District or of any other parties, (b) to construct outside of the territorial boundaries of the District except as allowed under an extraterritorial service agreement, (c) to construct or encroach upon the territorial boundaries of any units of local government within the District, (d) to connect to or discharge into or be served by (directly or indirectly) any sewer or sewer system owned or operated by third parties.

10. **Costs.** It is expressly stipulated and clearly understood that the Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, or facilities for which the Permit is issued shall be constructed, operated and maintained at no cost to the District.

11. **Other Sewer Construction.** The District reserves the right, privilege and authority to permit others to reconstruct, change, alter and replace all sewers and appurtenances thereto at the point of connection of any sewerage system to a District interceptor and/or in public right-of-ways of District easements, and to introduce additional Sewage flow through this connection into the intercepting sewer of said District.

12. **Change of Use.** This Permit shall be incorporated in the Building and Occupancy Permit for the Building or Buildings served under this Permit. The Owner or occupant of any Building served under this Permit shall not cause, or permit, a change of use of the Building to a use other than that indicated in this Permit without first having obtained a written permission from the Executive Director of the District.

13. **Interceptors Overloading.** The District hereby serves notice that its interceptors may flow full and may surcharge, and flooding of the proposed system may occur. The Permittee agrees that the proposed systems shall be constructed, operated and maintained at the sole risk of the Permittee.

14. **Transferability.** This Permit may not be assigned or transferred without the written consent of the Executive Director of the District or Enforcement Officer of an Authorized Municipality. However, a Sole Permittee may be required to assign or transfer the Permit when divesting itself of ownership to a third-party and should notify the District prior to such divestment so that the District may determine whether assignment to the new owner is necessary.

15. **Termination.** The District has the right to enforce or revoke a Permit issued by either the District or an Authorized Municipality as outlined in Article 12 of the Watershed Management Ordinance.

    It is understood and agreed that in the event the Permittee shall default on or fail to perform and carryout any of the covenants, conditions or provisions of this Permit and such default or violation shall continue for sixty (60) days after receipt of notice thereof in writing given by the Executive Director of the District, then it shall be lawful for the District at or after the expiration of said sixty (60) days to declare said Permit terminated. The Permittee agrees that immediately upon receipt of written notice of such termination it will stop all operations, discontinue any discharges and disconnect the sewerage system or facilities constructed under this Permit. If the Permittee fails to do so, the District shall have the right to disconnect said system. The Permittee hereby agrees to pay for any costs incurred by the District for said disconnection.

16. **Rights and Remedies.** The various rights and

remedies of the District contained in this Permit shall be construed as cumulative, and no one of them shall be construed as exclusive of any one or more of the others or exclusive of any other rights or remedies allowed by applicable rules, regulations, ordinances and laws. An election by the District to enforce any one or more of its rights or remedies shall not be construed as a waiver of the rights of the District to pursue any other rights or remedies provided under the terms and provisions of this Permit or under any applicable rules, regulations, ordinances or laws.

17. **Expiration.** This Permit shall expire if construction has not started within one (1) year from the date of issue. Construction under an expired Permit is deemed construction without a Permit. All construction under this Permit shall be completed within two (2) years after start of construction. If conditions so warrant, an extension may be granted. For publicly financed projects (e.g. special assessments) the one (1) year period indicated will be considered from the date of final court action.

18. **Revocation.** In issuing this Permit, the District or Authorized Municipality has relied upon the statements and representations made by the Permittee or his agent. Any incorrect statements or representations shall be cause for revocation of this Permit, and all the rights of the Permittee hereunder shall immediately become null and void.

19. **Advance Notice.** The Permittee shall give the District or Authorized Municipality advance notice of at least two working days prior to the following: mobilization and installation of Erosion and Sediment Control Practices; excavation for Qualified Sewer Construction, Major Stormwater Systems, and Detention Facilities; and commencement of construction under this Permit. When advance notice is given, the Permittee shall provide the Permit number, municipality and location.

20. **Compliance with Plans and Specifications.** All construction shall be in accordance with the plans and specifications submitted for this Permit and made a part hereof. No changes in, or deviation from the plans and specifications which affect capacity, maintenance, design requirements, service area or Permit requirements shall be permitted unless revised plans have been submitted to, and approved by the District or Authorized Municipality. The Permit together with a set of the plans and specifications (revised plans and specifications, if any) shall be kept on the jobsite at all times during construction and until final inspection and approval by the District or Authorized Municipality.

21. **Testing and Approval.** All construction under this Permit shall be subject to inspection, testing and approval by the District. All testing shall be made, or caused to be made, by the Permittee at no cost to the District and in the presence of the District representative. Upon satisfactory completion of construction, the Permittee and the owner shall submit, or cause to be submitted, a completion certificate and request for approval on the form prescribed by the District. No sewer or other facilities shall be put in service until all the conditions of the Permit have been satisfactorily met.

22. **Record Drawings.** Before final inspection and approval by the District or an Authorized Municipality, the Permittee shall furnish, or cause to be furnished to the District or an Authorized Municipality, a set of Record drawings for the site stormwater plan, Detention Facilities, Stormwater Facilities, and Qualified Sewer Construction, or a statement that the project was constructed in accordance with the original plans and specifications.

23. **Compliance with Rules and Regulations.** The Permittee hereby expressly assumes all responsibilities for meeting the requirements of all applicable rules, regulations, ordinances and laws of Local, State and Federal authorities. Issuance of this Permit shall not constitute a waiver of any applicable requirements.

24. **Severability.** 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.

25. **Property Rights.** This Permit does not convey any property rights of any sort, or any exclusive privilege.

26. **Conflict with Other Conditions.** In the case of conflict between these General Conditions and any other condition(s) in this permit, the more stringent condition(s) shall govern.

ENGINEERING CERTIFICATIONS

Watershed Management Permit No. _____

CERTIFICATE BY DESIGN ENGINEER: I hereby certify that the project described herein has been designed in accordance with the requirements set forth in this application and all applicable ordinances, rules, regulations, local, state and federal laws, and design criteria of the issuing authority; that the storm drainage and sanitary sewer system designed for this project are proper and adequate; that where the design involves one or more connections to an existing local sewer system, the capacity of said system has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

Comments, if any: _____

Engineering Firm: _____ **Telephone:** ( ) _____ - _____

Address: _____ **City:** _____ **Zip:** _____

P.E. SEAL

Signature: _____ **Date:** _____
(Name and Title)

CERTIFICATE BY MUNICIPAL OR SYSTEM ENGINEER: The application and the drawings, together with other data being submitted with this application, have been examined by me and are found to be in compliance with all applicable requirements. The manner of drainage is satisfactory and proper in accordance with all state and local requirements, including but not limited to the Watershed Management Ordinance. The existing local sewer system to which the project discharges has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

I hereby certify that the project area is within the municipal corporate limits. ☐ YES ☐ NO

Owner of Local Sewer System: _____
Municipal Engineer: _____ **Telephone:** _____
Address: _____ **City:** _____ **Zip** _____

P.E. SEAL

Signature: _____ **Date:** _____
(Name and Title)

CERTIFICATE BY INSPECTION ENGINEER: I hereby certify that construction of the project will be in substantial compliance with the data and the plans submitted with this application; that approval will be obtained from the issuing authority prior to making any changes that would affect capacity, maintenance, design requirements, service area or the Permit requirements; that a set of RECORD drawings, signed and sealed by the undersigned Engineer will be furnished to the District or an Authorized Municipality before testing and approval by the District or Authorized Municipality of the completed work.

Engineering Firm: _____ **Telephone:** _____

Address: _____ **City:** _____ **Zip** _____

P.E. SEAL

Signature: _____ **Date:** _____
(Name and Title)

SPECIAL CONDITIONS

Watershed Management Permit No. _____

This Permit is issued subject to the General Conditions and the following Special Conditions:

☐ **NONE** ☐ **SEE ATTACHED**

If Permit is granted:

☐ **Please return two (2) copies of the Permit to the Permittee; or**
☐ **Please mail one (1) copy to Permittee and one (1) copy to the person designated below:**

Name: _____

Address: _____

CERTIFICATE BY APPLICANTS: We have read and thoroughly understand the conditions and requirements of this Permit application, and agree to conform to the Permit conditions and other applicable requirements of the District. It is understood that construction hereunder, after the Permit is granted, shall constitute acceptance by the applicants of any Special Conditions that may be placed hereon by the District or an Authorized Municipality. It is further understood that this application shall not constitute a Permit until it is approved, signed and returned by the Director of Engineering of the District or Enforcement Office of an Authorized Municipality.

PERMITTEE **The project area is within municipal corporate limits.** ☐ Yes ☐ No ☐ Not Applicable	**CO-PERMITTEE** **(Co-Permittee is Property Owner)** Title to property is held in a land trust: ☐ Yes ☐ No If yes, Co-Permittee shall be beneficiary with Power of Direction
Municipality _____	Owner _____
Address _____	Address _____
City _____ Zip _____	City _____ Zip _____
Signature _____	Signature _____
Name _____ (Print)	Name _____ (Print)
Title _____	Title _____
Date _____ Phone _____	Date _____ Phone _____

REVIEW AND APPROVAL BY THE DISTRICT OR AUTHORIZED MUNICIPALITY
Reviewed by: _____ **Date** _____ (Local Sewer Systems) or (Professional Engineer)
Approved for Issue:
Approved by: _____ **Date** _____ (For the Director of Engineering) or (Enforcement Officer)

Appendix F

IDOT Right-of-Way Construction Permit Forms

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Illinois Department of Transportation

Region One
UTILITY PERMIT

Public Improvement ☐ Yes ☐ No
IDOT Permit No. _____
Utility Reference No. _____

I (We) _____ , _____
Name of Applicant — Mailing Address

_____ , _____ , hereinafter termed the Permittee,
City — State & Zip

request permission and authority to occupy, and to do certain work herein described on, the right-of-way of the State highway

known as _____ , Section _____ ,
from _____ to _____ in _____ County. The work
is described in detail below and/or on the attached sketch or plans.

This permit covers the operation and presence of specified equipment, material or facility on the right-of-way that may be related to the authorized work. **A copy must be present when crews or equipment occupy highway right-of way. Failure to comply is cause to stop all construction.**

This permit is subject to conditions and restrictions of Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System. **The removal, relocation or modification of facilities permitted to occupy the right-of-way is governed by Section 9-113 of the Illinois Highway Code, as amended by Public Act 92-0470. The Permittee agrees to comply with the requirements of these laws and with all terms and conditions established by this permit. This permit is subject to revocation by the Department on violation of the terms and conditions governing its use.**

Should you have any questions concerning this Utility Permit, please contact our Region One Utility Coordinator, Mr. Steve Rosato at (847) 705-4258, Fax # (847) 705-4597.

_____
Signature of Agent for Permittee — Date

_____
Name of Permittee (Print or Type)

_____
Mailing Address

_____
City — State — Zip

The work authorized by this permit shall be completed within _____ days ***(by _____)*** after the date of approval by the Department otherwise the permit will be considered null and void.

Public Improvement Projects only: The anticipated letting date is _____

This permit allowing occupancy and work on state right-of-way is approved. **The Utility Coordination Council established by the Department in the area covered by this permit is Region One.**

_____ _____
Deputy Director of Highways, Region One Engineer — Date

This permit is subject to the conditions and restrictions **established in accordance with the Illinois Highway Code and** Part 530 of Title 92 of the Illinois Administrative Code including but not limited to the following:

(1) The applicant represents all parties in interest and shall furnish material, do all work, pay all costs and shall in a reasonable length of time restore the damaged portions of the highway to a condition similar or equal to that existing before the commencement of the described work, including any ***landscape restoration*** necessary. (See Section 530.250 **of Title 92**).

(2) The proposed work shall be located and construction to the satisfaction of the District Engineer or his duly authorized representative. No revisions or additions shall be made to the proposed work on the right-of-way without the written permission of the District Engineer or his duly authorized representative (See Section 530.200 **of Title 92**). **In certain circumstances the Department may require that the construction plans and/or the as-built documents be sealed by an Illinois Registered Professional Engineer.** ***Typical of such projects would be petroleum or gas pipelines.***

(3) The applicant shall at all times conduct the work in such a manner as to minimize hazards to vehicular and pedestrian traffic. All signs, barricades, flaggers, etc., required for traffic control shall be furnished by the applicant. (See Section 530.240 **of Title 92**).

(4) The applicant must ascertain the presence of Highway Authority Agreements established in accordance with 35 Ill. Admin. Code Section 742.1020 in the path of its proposed installation and take precautions to protect its workers, human health and the environment in those areas. (See Section 530.240 **of Title 92**). Where contamination is encountered through excavation in the ROW, it should be managed offsite and IDOT's generator number for the appropriate county may be used.

(5) The applicant shall not trim, cut or in any way disturb any trees or shrubbery along the highway without the approval of the District Engineer or his duly authorized representative. (See Section 530.600 **of Title 92**).

(6) **The facilities authorized to occupy the right-of-way by this permit are subject to removal, relocation or modification by the permittee at no expense to the State on notice given by the Department in accordance with Section 9-113 of the Illinois Highway Code, as amended. Participation by the permittee in the UTILITY Coordination Council identified on page one of this permit is required as a condition of this permit. Permittee shall cooperate with the Department with the scheduling of any removal, relocation or modification deemed necessary for highway or highway safety purposes, and, if Utility Coordination Council participation is required by this permit, with the activities of the council identified on the first page of this permit. (See Section 9-113 of the Illinois Highway Code.)** ***Use of and compliance with current IDOT Traffic Control Standards will be required.***

(7) If the applicant and the District cannot agree either on whether the permit should be issued or on what conditions would be appropriate, the applicant may, within 30 days of the issuance of written notice of the District's position, appeal the District's determination to the Chief of the Department's Central Bureau of Operations. (See Section 530.900 **of Title 92**).

(8) The permittee agrees to fully comply with the following legal obligations in advance of entering and while upon any Right-of-way within the Illinois State Highway System.

a) Only a permit issued by the Department under this Part will satisfy the "written consent" requirement of Section 9-113 of the Illinois Highway Code (the Code).

b) A permit from the Department grants a license only to undertake certain activities in accordance with this Part on a State right-of-way, and does not create a property right or grant authority to the permittee to impinge on the rights of others who may have an interest in the right-of-way. Such others might include an owner of an underlying fee simple interest if the right-of-way is owned as an easement or dedication of right of way, an owner of an easement, or another permittee.

c) It shall be the responsibility of the permittee to ascertain the presence and location of existing above-ground or underground facilities on the highway right-of-way to be occupied by their proposed facilities. The Department will make its permit records available to a permittee for the purpose of identifying possible facilities. When notified of an excavation or when requested by the Department, a permittee shall locate, physically mark, and indicate the depth of its underground facilities within 48 hours excluding weekends and holidays.

d) The permittee shall avoid conflicts with any existing underground or above-ground facilities on or near the highway right-of-way. Both the Department and J.U.L.I.E. are to be contacted for assistance during the application process.

e) The permittee shall comply with all other applicable laws relating to the placement of utility lines.

f) The issuance of a utility permit by the Department does not excuse the permittee from complying with any existing statutes, local regulations or requirements of other Department (e.g., oversize and overweight vehicles) or the requirements of other State agencies including, but not limited to, the following:

Illinois Commerce Commission, Illinois Department of Agriculture
Illinois Department of Natural Resources, Illinois Department of Mines and Minerals
Illinois Environmental Protection Agency, Illinois Historic Preservation Agency

g) Rights of abutting and underlying property owners are protected by common law and Sections 9-113 and 9-127 of the Code. The permittee will address these rights prior to initiating activities on State right-of-way. The Department will not be a party in any negotiations between the utility and abutting property owners.

h) In no case shall the permit give or be construed to give an entity any easement, leasehold or other property interest of any kind in, upon, under, above or along the State highway right-of-way.

i) Each person responsible for a utility, in place on the effective date of this Part, on a State highway right-of-way shall notify the Department in writing, if that facility does not comply with this Part. The Department shall treat such a notice as a request for a variance under Section 530.130. Until informed that a variance will not be granted, a person responsible for a pre-existing utility will not be in violation of this Part. The failure to provide such notice constitutes a violation of this Part and of the utility accommodation permit (if any) and would justify the imposition of the sanctions set forth in Section 530.810.

Work to be coordinated with Department Representatives:

_____ Phone ( ) _____
IDOT Resident Engineer (Public Improvements)

_____ Phone ( ) _____
IDOT Maintenance Yard

Utility Contact Person: _____ Phone ( ) _____

Work to be done by:

Contractor: _____

Daytime Phone: ( ) _____ Emergency Phone: ( ) _____

Traffic control operation:

Number of lane closures: _____ Time of closures: _____

Revised 03.01.09

Most Requested ...
State Links ...

OTHER RESOURCES

Accountability
Amtrak
Bicycling
Chief Procurement Office
Circle Interchange
County Engineers
Diversity Matters!
Events
Environment
High Speed Rail
IDOT Safety
Illiana Corridor
Illinois Procurement Bulletin
Inspector General
IPASS
Motorcycling
Multi-State Locomotive
Procurement
Office of Business &
Workforce Diversity
Office of Quality Compliance &
Review
Planning and Programming
Procurement Communications
Public Partners
Public Transportation
Secretary of State
Truckers

Subscribe to IDOT in Motion
Email: Join

Privacy by SafeSubscribe℠
For Email Marketing you can trust

Utility Permits Contacts
Region 1 - District 1
201 West Center Court
Schaumburg, Illinois 60196-1096

Back

CONTACT	PHONE	EMAIL
Region One Engineer - John Fortmann	(847) 705-4110	
Engineer of Program Development - John Fortmann	(847) 705-4118	
Project Support Engineer - José Dominquez	(847) 705-4358	José.Dominquez@illinois.gov
Utilities Coordinator (Utility Permits) - Steve Rosato	(847) 705-4258	Steve.Rosato@illinois.gov
Agreements Technician - Raymond Ritchie	(847) 705-4238	Raymond.Ritchie@illinois.gov
Railroad Engineer - Andy Rabadi	(847) 705-4256	Andy.Rabadi@illinois.gov
Arterial Operations Engineer - Cory Jucius	(847) 705-4411	Cory.Jucius@illinois.gov
Expressway Operations Engineer - Julia Fox	(847) 705-4157	Julia.Fox@illinois.gov
Landscape Section / Roadside Management Specialist - Rick Wanner	(847) 705-4172	Rick.Wanner@illinois.gov
Traffic Permit Engineer (Highway Permits) - Tom Gallenbach	(847) 705-4130 (847) 705-4131 Receptionist	Thomas.Gallenbach@illinois.gov
After Normal Business Hours Call Communications Center: (847) 705-4612		

About IDOT in Motion

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Appendix G

Union Pacific Railroad Pipeline Crossing Permit Materials

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BUILDING AMERICA®

Utilities Installations

A crossing is a pipeline or wireline that enters the railroad company's trackage from one side of the right-of-way to the other side of the right of way in as near a straight line as possible. These installations should follow Procedures for Pipeline Crossings or Procedures for Wireline Crossings. Or, you may use our new online application process.

An encroachment is a pipeline or wireline that enters the railroad company's right-of-way and either does not leave the right of way or follows along the right of way for some distance. These installations should follow Procedures for Encroachments.

This online application process will allow you to complete an application for a wireline or a pipeline crossing electronically, and will save you time and money - avoiding the delays, expense and uncertainty of mailing applications to us. Due to the complexities of encroachments you cannot submit an online application for an encroachment

If an installation entails both an encroachment and a crossing, procedures for both must be followed. However, only one Application Form [6K PDF] needs to be filled out. This single application must be accompanied by both the appropriate Exhibit "A" document (describing the crossing) and complete engineering plans (detailing the encroachment).

If the installation method for this utility is to involve the use of a directional drilling method, specific guidelines established by the Railroad must be met. Union Pacific Railroad follows AREMA Manual for Railway Engineering Chapter 1 - PART 5 Pipelines. To purchase a copy of these AREMA guidelines send an Application to AREMA [http://www.arema.org/files/pubs/forms/UP_Special_Order_for_Part_5_Pipelines.pdf].

Procedures

Rush Handling

- Only crossing applications can be "**Rushed**"
- Pipeline crossings over 40 inches cannot be "**Rushed**"
- Deviations from standard engineering specifications cannot be "**Rushed**"
- Encroachment applications cannot be "**Rushed**".

Rush Application Form [4K PDF], (print a copy, complete and mail with check), and

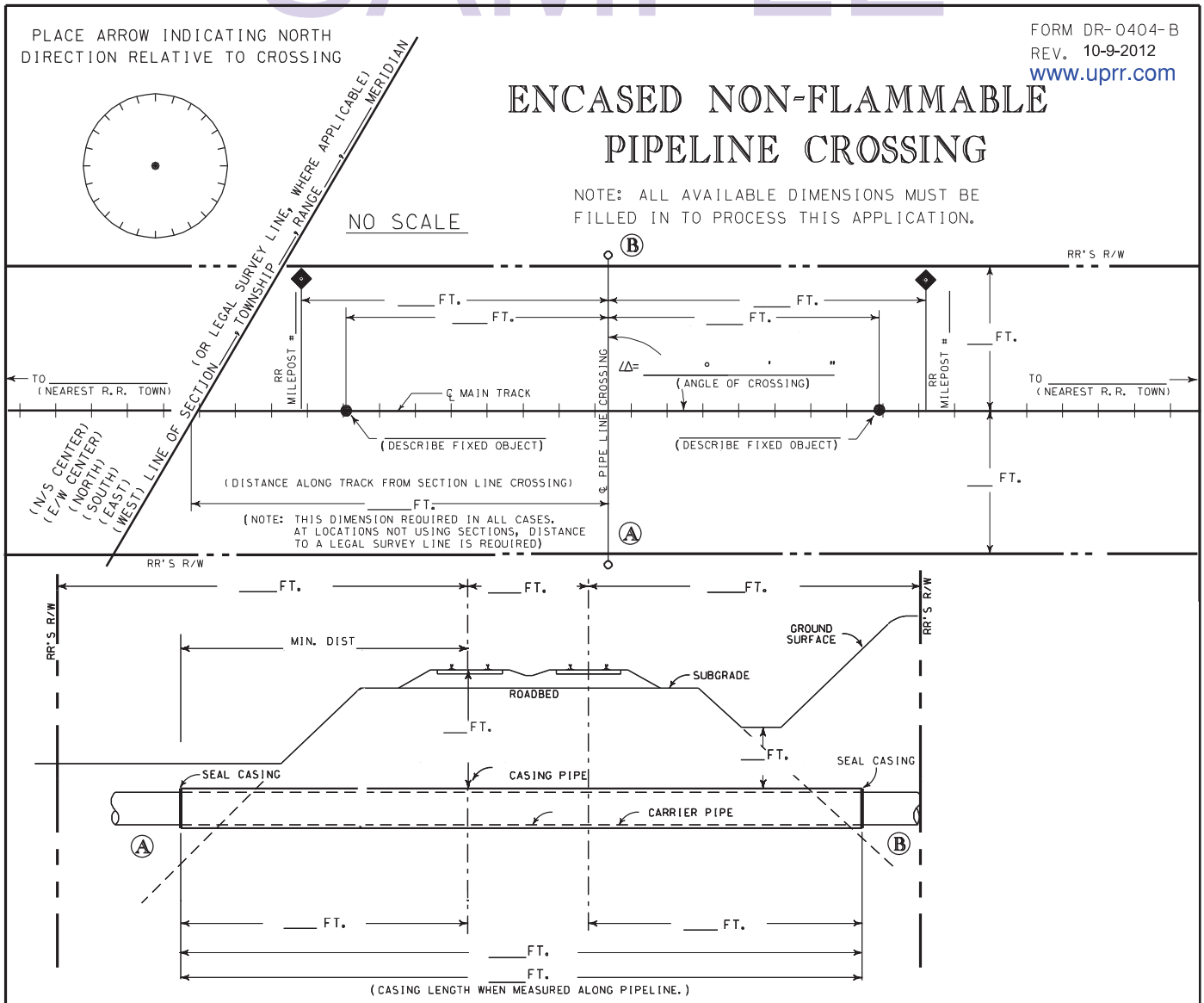
- Rush Fee of $3,055

SAMPLE

FORM DR-0404-B
REV. 10-9-2012
www.uprr.com

ENCASED NON-FLAMMABLE PIPELINE CROSSING

NOTE: ALL AVAILABLE DIMENSIONS MUST BE FILLED IN TO PROCESS THIS APPLICATION.



NOTE:
REFER TO AREMA VOLUME 1 PART 5 FOR REQUIREMENT RELATING TO PIPELINE CROSSINGS.

A) IS PIPELINE CROSSING WITHIN DEDICATED STREET ?_____YES;_____NO;
B) IF YES, NAME OF STREET _____
D) DISTRIBUTION LINE _____ OR TRANSMISSION LINE _____
C) CARRIER PIPE :
COMMODITY TO BE CONVEYED_____
OPERATING PRESSURE_____PSI
WALL THICKNESS_____;DIAMETER_____;MATERIAL_____;
E) CASING PIPE :
WALL THICKNESS_____;DIAMETER_____;MATERIAL_____;
NOTE :CASING MUST HAVE 2" CLEARANCE BETWEEN GREATEST OUTSIDE DIAMETER OF CARRIER PIPE AND INTERIOR DIAMETER OF CASING PIPE. WHEN FURNISHING DIMENSIONS, GIVE OUTSIDE OF CARRIER PIPE AND INSIDE OF CASING PIPE.
F) METHOD OF INSTALLING CASING PIPE UNDER TRACK(S):
_____DRY BORE AND JACK (WET BORE NOT PERMITTED) ;
_____TUNNEL ; OTHER_____
G) WILL CONSTRUCTION BE BY AN OUTSIDE CONTRACTOR?_____YES;_____NO;
H) DISTANCE FROM CENTER LINE OF TRACK TO NEAR FACE OF BORING AND JACKING PITS WHEN MEASURED AT RIGHT ANGLES TO TRACK_____ (30' MIN.)
I) APPLICANT HAS CONTACTED 1-800-336-9193, U. P. COMMUNICATION DEPARTMENT, AND HAS DETERMINED FIBER OPTIC CABLE_____DOES ;_____DOES NOT ; EXIST IN VICINITY OF WORK TO BE PERFORMED . TICKET NO._____

EXHIBIT "A"

(FOR RAILROAD USE ONLY)

UNION PACIFIC RAILROAD CO.

_____
(SUBDIVISION)

M. P _____ E. S. _____

ENCASED _____ CROSSING AT

_____
(NEAREST CITY) (COUNTY) (STATE)

_____
(APPLICANT)

RR FILE NO._____ DATE_____

WARNING

IN ALL OCCASIONS, U. P. COMMUNICATIONS DEPARTMENT MUST BE CONTACTED IN ADVANCE OF ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE.
PHONE : 1-800-336-9193

PERMIT TO BE ON RAILROAD PROPERTY
FOR NONINTRUSIVE CIVIL ENGINEERING SURVEY WORK

RECITALS:

The undersigned party seeking permission to be on Railroad property is hereinafter called "Permittee".
Due to the nature of Railroad operations, Railroad property can be a dangerous place for people and/or property. Railroad's safety rules and practices shall be strictly observed and followed at all times while on Railroad property.

WHEREAS, Permittee desires to obtain temporary permission to enter and be on or about the tracks and/or property of the **UNION PACIFIC RAILROAD COMPANY** (hereinafter called "Railroad"), for the purpose of performing nonintrusive civil engineering survey work, without the use of vehicles and/or machinery on Railroad's property; and

WHEREAS, the Railroad is willing to allow the Permittee temporary permission to be on or about its premises for the purpose aforesaid on the terms and conditions stated herein:

NOW THEREFORE, Railroad grants to Permittee temporary permission to be on or about the tracks and/or property of the Railroad for the purpose above stated, subject to the following conditions:

1. Before exercising any privilege under the permission herein given, Permittee shall contact the Railroad Superintendent's office having jurisdiction over the property involved.

2. Permittee shall become familiar with and strictly observe Railroad's safety rules and all other rules, regulations, or directions of Railroad's Superintendent or his representatives.

3. Permittee shall agree to the terms and conditions of this instrument, and shall so evidence by his execution of same.

4. The above recited permission is granted solely upon the condition that Permittee shall and hereby does agree to indemnify, protect and save harmless, Railroad from any and all loss or damage that Railroad may sustain or become liable for, caused by, resulting from, or by reason of any injury to or death of any persons whomsoever, or destruction of property of any kind to whomsoever belonging, howsoever suffered or caused, regardless of whether caused solely or contributed to in part by the negligence or fault of the Railroad, in or incident to or in connection with the aforesaid work on Railroad's property hereinabove referred to. Public Agencies shall indemnify Railroad as herein described to the extent allowed by law.

5. Upon completion of your work, but in no event later than the last day of the term of this agreement, Permittee will remove all of his tools, equipment, and other property of any kind whatsoever, and restore Railroad's property to substantially the same condition that existed prior to the performance of your work hereunder.

6. This permit may be revoked at any time by the Railroad, but if not revoked shall expire at the end of the last date written below.

PLEASE complete the following information and execute in the space marked "By". You should then email this application long with a map of the location to recontracts@up.com. Alternatively, for a $100.00 administrative fee, you may mail the application and map with the fee to the address listed below. (Faxed applications are not accepted.) After execution on behalf of the Railroad Company, one copy will be returned to you. You must KEEP your fully-executed copy in your possession at all times while on Railroad property. It MUST be shown on request to any Railroad employee or official.

Your Company Name:_____
Your Client's Name:_____
Street Address: _____
City, State, Zip: _____
Phone:_____**Fax:** _____
Email: _____
Purpose of Survey:_____
_____
_____
_____
Date Work to Begin: _____**Ending:**_____
(30-day max.)
Location of Survey: _____
_____
(City, State/Lat Long)
BY: _____
Printed Name and Title: _____
Date: _____

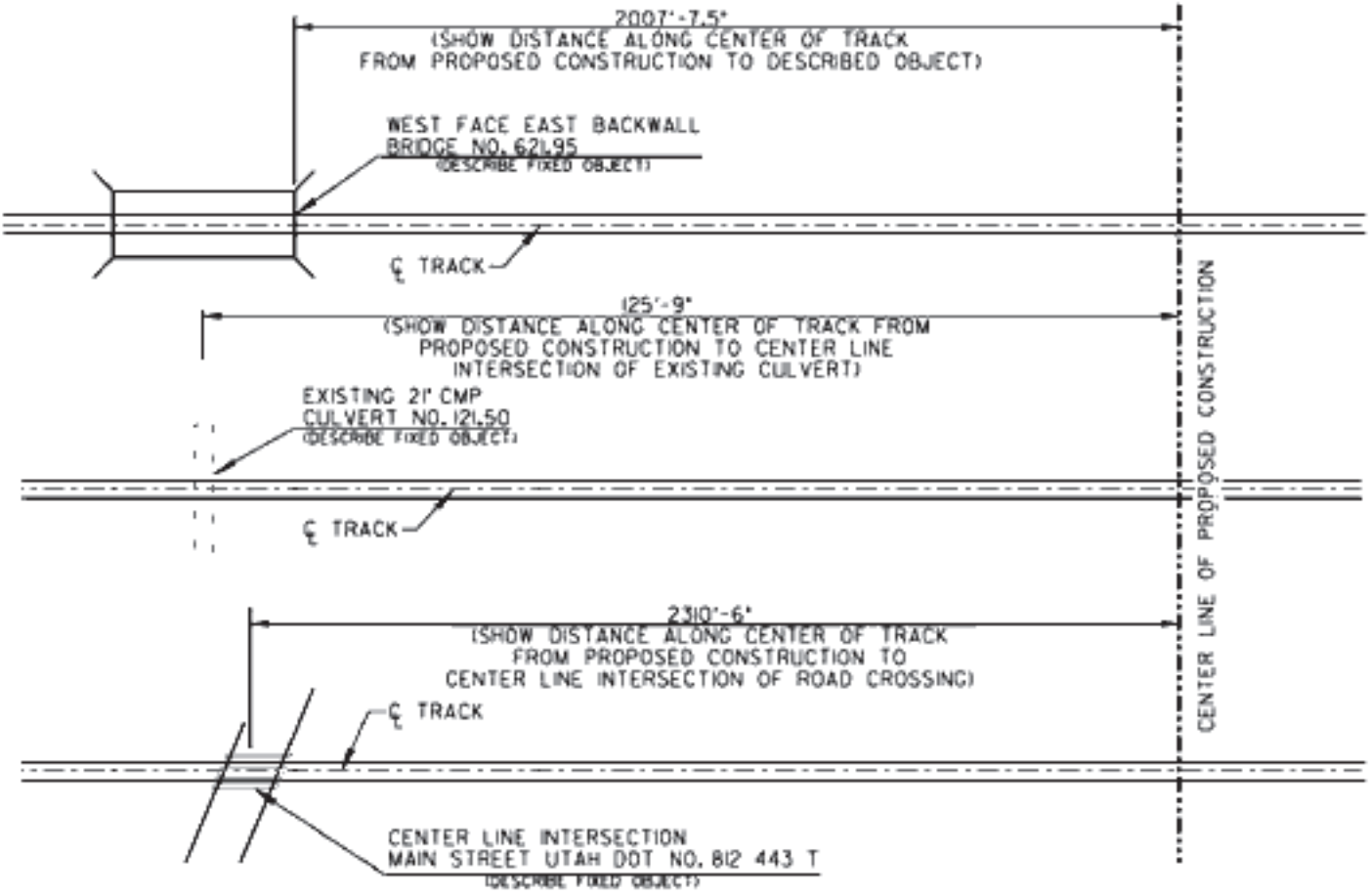
UNION PACIFIC RAILROAD COMPANY

BY:_____
Title: _____

Real Estate - Contracts
Union Pacific Railroad Company
1400 Douglas St. – STOP 1690
Omaha, NE 68179

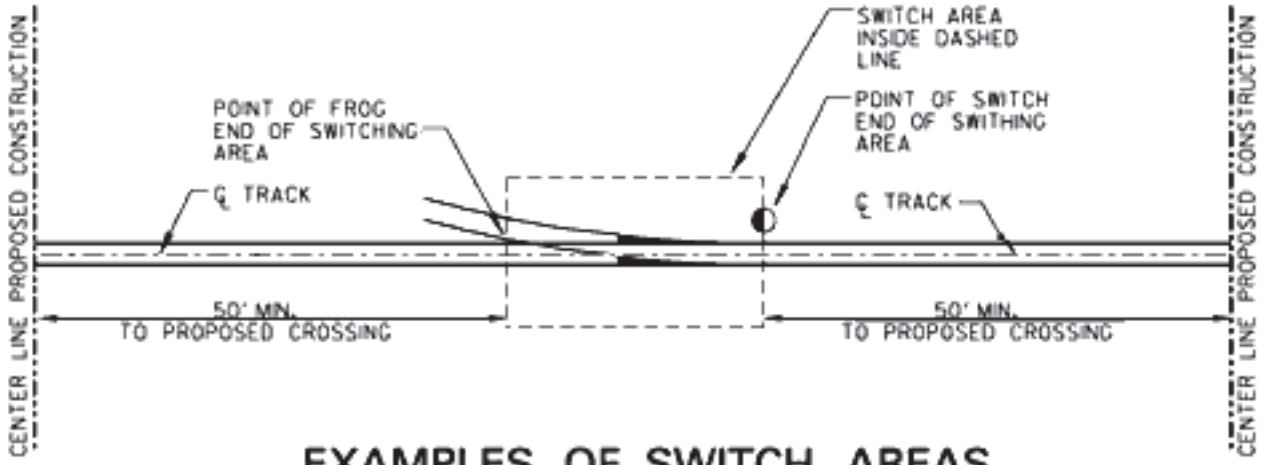
Phone: (402) 544-8600

FAXED APPLICATIONS ARE NOT ACCEPTED



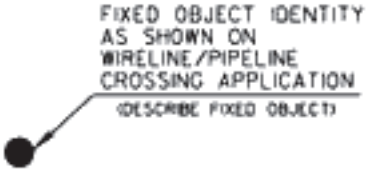
EXAMPLES OF FIXED OBJECTS AND HOW TO IDENTIFY EACH

NO SCALE



EXAMPLES OF SWITCH AREAS

NO SCALE



EXAMPLE OF NORTH
DIRECTION INDICATOR

FORM DR-0297-E
REV. 06-30-98

BUILDING AMERICA®

Pipeline Installation Procedures for Crossings

Procedures for New Pipeline Crossings

1. If it is necessary to enter the railroad company's property to conduct a survey for the completion of required location information in this application, the Permit To Be On Railroad Property for Utility Survey [13K PDF] form must be printed, executed and returned following the instructions given in the permit.
2. Please complete our online application process and avoid the time delays, expense and uncertainty of mailing the application to us. Please review the Sample Copy of Exhibit "A" which is provided to enable you to complete the form as accurately as possible. Union Pacific Railroad follows AREMA Manual for Railway Engineering Chapter 1 - PART 5 Pipelines. To purchase a copy of these AREMA guidelines send an Application to AREMA [http://www.arema.org/files/pubs/forms/UP_Special_Order_for_Part_5_Pipelines.pdf] If there is a valid reason why compliance with the railroad standards is not possible, these reasons must be clearly explained or the application will be rejected and returned to you for further explanation. You must complete the question on the Exhibit "A" that indicates you have called the Fiber Optic Hot Line and include the ticket number that you have been given.
3. If possible, please provide a city, county or topographical map of the area, showing the proposed installation.
4. When using a street name on the application that has been changed, please include the current name as well as any previous name. Many of the old railroad company maps do not reflect these name changes.
5. Please refer to the information on Fixed Object Identity for examples to assist you in locating "fixed objects." Your crossing must be tied to one of these objects.
6. Generally, agreement processing time will be approximately 30 to 45 days. Please allow sufficient lead time for document handling prior to desired construction date. Before construction begins, agreements must be executed by the Licensee and Contractor, if applicable, and returned to this office. Verbal authorizations will not be permitted or granted. Generally, a minimum of 48 hours' advance notice after execution of an agreement will be required prior to entry.
7. License fees and insurance certificates, if required, must be submitted at the time you execute and return the agreement. Because license fees are based on property values, we will only be able to provide you with fee information after your application has been reviewed and approved.
8. If you require rush handling of your application, please print a copy of the Rush Handling form [5K PDF], complete and return the form in an envelope labeled "RUSH."
9. Depending on the scope of the work and proximity to our tracks we may require that Railroad Protective Liability Insurance be obtained, in addition to general liability insurance. We have acquired a blanket Railroad Protective Liability Insurance policy which may allow inclusion of your project under our coverage for an additional charge. We've found that in many instances it may be cheaper for the contractor do this than to obtain their own coverage. However, we do encourage you to shop around, as you may find a more favorable rate. An application form and additional information on Railroad Protective Liability Insurance through UPRR can be found in this section.
10. Licensee shall have in place and in full force during the life of the agreement General Liability, Automotive Liability and Worker' Compensation and Employer's Liability. See General Insurance Requirements.
11. Note: Only Applications that are prepared on our standard application form identified as Exhibit "A" will be accepted.
12. Questions? Need Assistance? Check the map of Pipeline, Wireline, Right of Entry and Drainage Contacts for the names of those who can help.

Procedures

Please submit Online Application Form for Pipeline Installations.

Pipeline Installation

ONLINE APPLICATION FORM
› Exhibit "A" – Flammable
› Exhibit "A" – Non-Flammable
› Exhibit "A" – Gas Line
› **Send an Application to AREMA [http://www.arema.org/files/pubs/forms/UP_Special_Order_for_Part_5_Pipelines.pdf]**

BUILDING AMERICA®

Insurance Requirements

Licensee shall, at its own sole cost and expense, procure the following kinds of insurance and promptly pay when due, all premiums for that insurance. The following insurance shall be kept in force during the life of this Agreement:

- Commercial General Liability Insurance
- Business Automobile Liability Insurance
- Worker's Compensation Insurance
- Railroad Protective Liability Insurance (during construction or maintenance only)

The limits of coverage under each of the required insurance policies will be based on the activity and risk involved with the specific project. Specific insurance requirements will be provided to you in the agreement covering your project when it is approved by the Railroad.

- Railroad Protective Liability Insurance - For Projects Under $10,000,000 and do not exceed 12 months
- Sample Insurance Certificate for Drainage Facility
- Sample Insurance Certificate for Environmental Right of Entry
- Sample Insurance Certificate for Movie Productionl Right of Entry
- Sample Insurance Certificate for Private Road Crossing - Commercial
- Sample Insurance Certificate for Private Road Crossing - Residential - Farm
- Sample Insurance Certificate for Right of Entry
- Sample Insurance Certificate for Pipeline Crossing and Encroachment
- Sample Insurance Certificate for Wireline Crossing and Encroachment

BUILDING AMERICA®

Railroad Protective Liability Insurance - For Projects Under $10,000,000 and do not exceed 12 months

Overview

When working within Union Pacific Railroad's right of way, your company will be required to obtain Railroad Protective Liability Insurance for the project.

For RPLI application requests, you may be asked by your insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

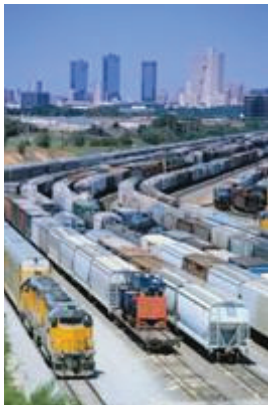
Obtaining this insurance for smaller projects can be a time-consuming and costly purchase for the contractor. With the Railroad Protective Liability Program made available by Union Pacific through a national broker, MARSH, your company may save both time and money. Visit MARSH website uprr.marsh.com [http://uprr.marsh.com/#MARSH] for an application and contact information.

Click the below link for Railroad Protective Liability Insurance application.

Railroad Protective Liability Insurance Application Form [http://uprr.marsh.com/]

Railroad Protective Liability Insurance

July 15, 2011



OVERVIEW

When working within Union Pacific Railroad's right of way, your company will be required to obtain Railroad Protective Liability Insurance for the project.

For RRPLI application requests, you may be asked by your insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

Obtaining this insurance for smaller projects can be a time-consuming and costly purchase for the contractor. With the Railroad Protective Liability Program made available by Union Pacific through a national broker, your company may save both time and money. In as little time as it takes to complete a single-page application and send a check, the Railroad Protective Liability coverage is in place. We consider this program a time saver in obtaining Railroad Protective Liability insurance.

PLEASE READ - there have been some modifications/enhancements to this site and the Railroad Protective Liability Application.

- This program is for **projects Under $10,000,000 and that do not exceed 12 months**.
- If you are utilizing an old application, please begin to use the most updated version to ensure your request is fulfilled accurately and promptly.
- **The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote.**

SAMPLE INSURANCE REQUIREMENTS

Licensee shall, at its own sole cost and expense, procure the following kinds of insurance and promptly pay when due, all premiums for that insurance. The following insurance shall be kept in force during the life of this Agreement:

- Commercial General Liability Insurance
- Business Automobile Liability Insurance
- Worker's Compensation Insurance
- Railroad Protective Liability Insurance (during construction or maintenance only)

The limits of coverage under each of the required insurance policies will be based on the activity and risk involved with the specific project. Specific insurance requirements will be provided to you in the agreement covering your project when it is approved by the Railroad.

If you elect to take advantage of the program, please **do not** send your application for this insurance coverage to the Union Pacific Railroad. Please make your premium check payable to Marsh, USA and send with your application via US Mail (do not send via Express Mail to P.O. BOX) to:

Marsh, USA Inc.
P.O. Box 846015
Dallas, TX 75284

If you need the Railroad Protective Insurance immediately, you can either email or fax a copy of the completed application and a copy of your check to the email addresses or fax numbers listed below.

Contact Marsh, USA with any coverage or premium questions.

Phone:	(800) 729-7001	
Fax:	(816) 556-4362	
Attn:	Donna McLaughlin	e-mail address: **donna.mclaughlin@marsh.com**

The information contained in this publication provides only a general overview of subjects covered, is not intended to be taken as advice regarding any individual situation, and should not be relied upon as such. Insureds should consult their insurance and legal advisors regarding specific coverage issues. All insurance coverage is subject to the terms, conditions, and exclusions of the applicable individual policies. Marsh cannot provide any assurance that insurance can be obtained for any particular client or any particular risk.

Statements concerning legal matters should be understood to be general observations based solely on our experience as insurance brokers and risk consultants and should not be relied upon as legal advice, which we are not authorized to provide. All such matters should be reviewed with the client's own qualified legal advisors in these areas. This document or any portion of the information it contains may not be copied or reproduced in any form without the permission of Marsh Inc., except that clients of any of MMC companies need not obtain such permission when using this report for their internal purposes so long as this page is included with all such copies or reproductions. Marsh is part of the family of MMC companies, including Kroll, Guy Carpenter, Mercer, and the Oliver Wyman Group (including Lippincott and NERA Economic Consulting).

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RAILROAD PROTECTIVE LIABILITY APPLICATION
FOR BRIDGE CONSTRUCTION AND PROJECTS OVER $10,000,000
INSURED (RAILROAD): Union Pacific Railroad
ADDRESS: 1400 Douglas Street- Stop 1690; Omaha, NE 68179-1690

Union Pacific Folder #: **DOT Project #:**

Designated Contractor: _____
Address: _____
Is designated contractor the: _____General Contractor or _____ Subcontractor?
Name of Owner for who work is being performed: _____
Address: _____
Limits of Liability: Each Occurrence_____ Aggregate_____
Number of trains per day: Passenger _____ Freight _____ Unscheduled _____
Physical characteristics of work:
a) Total cost of construction:
b) Cost of job within 50 feet of Railroad's property:
c) Description of job:
d) Description of job within 50 feet:
e) Location of the job (please include the county and zip code):

Is construction: _____ Parallel to _____ Over _____ Under _____ or on the RR tracks_____
Term of job: Est. start date:
Flagman Provided? :
Other work performed by Railroad employees? :
Will there be any track work while there are active trains?
If construction involves movement of track, please explain:

Demolition of bridge(s): Yes____ No_____
Use of Explosives: Yes_____ No_____

Contractor's Profile

General Liability Carrier:
Limits:
Term Dates of Policy:
OCIP or WRAPUP Program:
Umbrella Carrier:
Limits:
Term Dates of Policy:

Will the contractor hold Railroad harmless for this project?
Will Railroad be an additional insured on the contractor's GL policy?
Will the contractual exclusion for work within 50 ft. of a railroad be deleted on the contractor's GL and Umbrella policies?

Date:
Signature of Applicant:

SAMPLE ONLY-RIGHT OF ENTRY

ISSUE DATE (MM/DD/YY)

CERTIFICATE OF INSURANCE

PRODUCER INSURANCE COMPANY NAME ADDRESS CITY, STATE, ZIP CODE	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
	COMPANIES AFFORDING COVERAGE
	COMPANY LETTER A
INSURED Licensee's NAME ADDRESS CITY, STATE, ZIP CODE	COMPANY LETTER B
	COMPANY LETTER C
	COMPANY LETTER D
	COMPANY LETTER E

COVERAGES

THIS IS TO CERTIFY THAT THE POLICES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAME ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES . LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE(MM/DD/YY)	POLICY EXP. DATE(MM/DD/YY)	LIMITS	
GENERAL LIABILITY OR				GENERAL AGGREGATE	$10,000,000
				PRODUCTS-COMP/OP AGG.	$5,000,000
				PERSONAL & ADV. INJURY	$5,000,000
❒ ❒ CLAIMS MADE ❒ OCCUR.				EACH OCCURRENCE	$5,000,000
❒ OWNERS & CONTRACTOR'S PROT.				FIRE DAMAGE (ANY ONE FIRE)	NA
❒				MED. EXPENSE(ANYONE PERSON)	NA
AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$2,000,000
❒					
❒				BODILY. INJURY (PER ACCIDENT)	
❒				PROPERTY DAMAGE)	
EXCESS LIABILITY				EACH OCCURRENCE	
❒				AGGREGATE	
❒					
WORKER' COMPENSATION				X STATUTORY LIMITS	
AND				EACH ACCIDENT	$500,000
EMPLOYER'S LIABILITY				DISEASE - POLICY LIMIT	$500,000
				DISEASE - EACH EMPLOYEE	$500,000
OTHER: Pollution Liability (when required by agreement)				GENERAL AGGREGATE	$10,000,000
				EACH OCCURRENCE	$5,000,000

CGL Policy is endorsed to include Union Pacific Railroad as Additional Insured as required by agreement.
CGL Policy is endorsed to include "Contractual Liability Railroads" as required by agreement.
Auto Liability Policy is endorsed to include "Certain Operations In Connection With Railroads" as required by agreement.
Auto Liability Policy is endorsed to include Union Pacific Railroad as Additional Insured as required by agreement.
Policy is endorsed with Motor Carrier Act Endorsement MCS 90 as required by agreement.
Punitive damages (one of the following statements must be included):

1. Policies are silent concerning punitive damages.
2. Insurance coverage may not lawfully be obtained for any punitive damages that may arise under this agreement.
3. All punitive damages are prohibited by all states in which this agreement will be performed.

Workers' Compensation Policy is endorsed waiving subrogation for Workers' Compensation and Employers Liability in favor of Union Pacific Railroad.
Railroad Protective Liability as required by agreement with Railroad as named insured with limits of not less than $2.0 million per occurrence and an aggregate of $6.0 million. A binder stating policy is in place must be provided to Railroad until policy is forwarded to Railroad.

CERTIFICATE HOLDER	CANCELLATION
UNION PACIFIC RAILROAD CO Real Estate Department ATT: <@<Contract Administrator>@> 1400 Douglas St STOP 1690 OMAHA, NE 68179-1690	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE
ACCORD 2S-3(7/90)	ACCORD CORPORATION 1990.

SAMPLE ONLY-PIPELINE CROSSING/ENCROACHMENT

ISSUE DATE (MM/DD/YY)

CERTIFICATE OF INSURANCE

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INSURED Licensee's NAME ADDRESS CITY, STATE, ZIP CODE	COMPANY LETTER B COMPANY LETTER C COMPANY LETTER D COMPANY LETTER E

COVERAGES

THIS IS TO CERTIFY THAT THE POLICES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAME ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES . LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE(MM/DD/YY)	POLICY EXP. DATE(MM/DD/YY)	LIMITS	
GENERAL LIABILITY OR				GENERAL AGGREGATE	$4,000,000
				PRODUCTS-COMP/OP AGG.	$2,000,000
				PERSONAL & ADV. INJURY	$2,000,000
☐ ☐ CLAIMS MADE ☐ OCCUR.				EACH OCCURRENCE	$2,000,000
☐ OWNERS & CONTRACTOR'S PROT.				FIRE DAMAGE (ANY ONE FIRE)	NA
☐				MED. EXPENSE(ANYONE PERSON)	NA
AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$2,000,000
☐					
☐				BODILY. INJURY (PER ACCIDENT)	
☐				PROPERTY DAMAGE)	
EXCESS LIABILITY				EACH OCCURRENCE	
☐				AGGREGATE	
☐					
WORKER' COMPENSATION				X STATUTORY LIMITS	
AND				EACH ACCIDENT	$500,000
EMPLOYER'S LIABILITY				DISEASE - POLICY LIMIT	$500,000
				DISEASE - EACH EMPLOYEE	$500,000
OTHER:				GENERAL AGGREGATE EACH OCCURRENCE	

CGL Policy is endorsed to include Union Pacific Railroad as Additional Insured as required by agreement.
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ACCORD 2S-3(7/90)	ACCORD CORPORATION 1990.

UP: Real Estate Managers contact information - Results
Real Estate Managers contact information - Results
https%3A%2F%2Fwww.uprr.com%2Freus%2Fcontacts%2Fmgrcontacts%2FsearchResult.cfm
Page Received From Server On: April 28, 2014 06:39 PM CT

Search Result

Function Type	State	County	Manager Name	Phone Number	Email Address
Wire/Pipe//Rights of Entry	IL	All	Justin K. Mahr	(402) 544-8571	Send e-mail

Top of Page

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Appendix H

NCCSWCD Soil Erosion and Sedimentation Control Plan Review

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North Cook County Soil & Water Conservation District

Soil Erosion & Sediment Control Program

Soil Erosion and Sediment Control Plan Review Form

Interagency Coordination Agreement (ICA)

The Chicago District, Army Corps of Engineers (Corps) administers a permit program under section 404 of the Clean Water Act, which regulates various activities in waters of the United States, including wetlands. As a condition of permit issuance, the Corps requires appropriate soil erosion and sediment control measures to be implemented and maintained until the construction site is re-vegetated and stabilized. The Corps reviews the impacts of a proposed project with the supposition that soil erosion from the site will be negligible. However, the Corps has frequently observed that many permittees fail to implement and maintain appropriate erosion and sediment control measures. As a result, the impact of the project becomes more than minimal. Construction site erosion has been identified as a significant source of pollution in Illinois lakes and streams. Sediment deposition from water erosion results in the loss of sensitive or threatened fish species and reduced food supplies, reduced channel capacity, reduced storm water conveyance and storage functions and crates safety and nuisance issues.

In May of 1997 the North Cook County Soil & Water Conservation District entered into an Interagency Coordination Agreement (ICA) with the USDA- Natural Resources Conservation Service and the United States Army Corps of Engineers - Chicago District.

The intent of the ICA is to utilize technical expertise of the SWCD and the NRCS. The SWCD reviews an applicant's soil erosion and sediment control plan (SESC) and determines if the plan meets technical standards. Applicants are required to give the SWCD the information necessary to conduct an adequate technical review of the plan. The Corps will use the SWCD's opinion, in part, to ensure that the impacts of the project are not more than minimal. The SWCD representative should attend pre-construction meetings and will periodically inspect the site during active construction.

The United States Army Corps of Engineering retains the final decision about soil, water and the other natural resources, and any issues, opinions, findings, or actions resulting from the ICA plan reviews.

North Cook County Soil & Water Conservation District
WE'VE MOVED ---- NEW OFFICE ADDRESS & PHONE NUMBERS
2358 Hassell Road, Suite B, Hoffman Estates, IL 60169
847/885-8830 Fax: 847-885-8843

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North Cook County Soil & Water Conservation District

FOR OFFICE USE

_____ DATE RECIEVED

_____ ICA #

SOIL EROSION AND SEDIMENT CONTROL PLAN REVIEW

FOR OFFICE USE ONLY SWCD Application No.: _____
Meets technical standards_____ Does not meet technical standards_____
Date all Information received: _____Reviewed by: _____ Fee Paid: _____Check No.: _____
In-Stream: yes no

	APPLICANT (Owner/Developer)	Erosion Control Consultant/Engineer
Business Name		
Address City/State/Zip		
Contact Name		
E-Mail Address		
Phone		
Fax		

Current Project Name and Phase number: _____ **Location (Municipality):**_____

Job site contact person: _____ **E-Mail Address:** _____

On site Contact's Phone number: (_____) -_____-_____ **Fax number:** (_____) -_____-_____

Village/Municipal contact person: _____ **Phone #** (_____)-_____-_____

Township, range, & section: _____ **Nearest Intersection:** _____

Proposed land use: _____ **Acreage of disturbance:** _____

Army Corps application number (if applicable):_____

Construction start date: _____ **Anticipated construction completion date:** _____

The applicant agrees to the following conditions:

1. Submit all required information listed on the following pages for each phase of development, regarding the soil erosion and sediment control (SE/SC) plan. Submit one complete SE/SC plan set for review. Upon plan approval, submit two sets of the final SE/SC Plan. One stamped & signed copy will be returned. The stamped set is to be kept on the project site.
2. Upon submittal of this application, pay the applicable fee (fee worksheet attached), in accordance with total acres of disturbance to the original topography and/or vegetation, in-stream and wetland disturbance, and the length of the project. A refundable pre-construction notification fee will also be included.
3. If the SWCD does not receive all required items within **30 days**, the item that has been submitted may be mailed back to you.
4. Notify representatives of the Soil and Water Conservation District of the pre-construction meeting.
5. Allow SWCD, NRCS, or Army Corps of Engineers District representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary SE/SC practices have been installed and are functioning properly.
6. Upon commencement of earthwork or construction, document SE/SC practices with all information being accurate and complete.
7. Comply with the SWCD's written and verbal recommendations regarding:
   A. The SE/SC plan and corrections or changes made thereto.
   B. Installation and maintenance requirements of the SE/SC practices on-site.
8. Pay additional costs incurred by the SWCD in response to repeated non-compliance issues.
9. If any changes occur to the plans, schedules, etc., the applicant shall be responsible for notifying the Soil and Water Conservation District.
10. If SWCD is not contacted (in writing) prior to commencement of construction, the pre-construction notification fee will be forfeited.
11. If construction does not commence within 36 months of plan approval, the project will be closed. Fees will not be returned.

Upon receipt of all required information, the SE/SC plan will be reviewed within **15 working days** and all involved parties will be notified whether or not the plan meets technical standards.

Applicant's Signature: _____ **Date:** _____

2358 Hassell Road, Suite B
Hoffman Estates, IL. 60169
PH: 847-885-8830
FX: 847-885-8843
R.McAndless@northcookswcd.org

REVISED JUNE 2013

Table 1	SESC Fee Schedule	Review Fee	Inspection Fee
Section 1	Initial Application Fee		
	Single Family Home <1 acre	$100.00	
	Commercial Site not part of a larger development <1	$250.00	
	Construction Site 0- 4 acres	$211	$638
	Construction Site 5-9 acres	$260	$788
	Construction Site 10-14 acres	$341	$1024
	Construction Site 15-19 acres	$374	$1365
	Construction Site 20-29 acres	$390	$2048
	Construction Site 30-39 acres	$423	$2048
	Construction Site 40-49 acres	$455	$2340
	Construction Site 50-59 acres	$488	$2574
	Construction Site 60-69 acres	$520	$3432
	Construction Site 70-79 acres	$536	$3432
	Construction Site 80-89 acres	$585	$3861
	Construction Site 90-99 acres	$618	$3861
	Construction Site 100-199 acres	$650	$4290
	Construction Site 200-299 acres	$699	$5506
	Construction Site 300-399 acres	$764	$5756
	Construction Site 400-499 acres	$796	$6167
**	> 500 acres contact SWCD for a modified fee		
Section 2	In-Stream or Stream-side work Fee		
	0-2 Month project length	$500	
	2-4 Month project length	$1000	
	4-6 month project length	$1500	
	6-8 month project length	$2000	
	8-10 month project length	$2500	
	10-12 month project length	$3000	
Section 3	Utilities, Railroads, or Linear Projects		
	$300.00 for each wetland impacted/crossed	$300 per wetland	
Section 4	Re-Submittal Fee		
	1/3 of the Original Review Fee	1/3 of Review	
Section 5	Re-Approval Fee		
	$80.00	$80	
Section 6	Non Compliance Fee		
	Will be notified by letter – Billable at	$65/hr	

For a fee calculator, see next page.

**For projects > 500 acres or any other unique project as determined by the SWCD Board of Directors, a modified fee schedule may be developed on an individual basis, based upon the size, complexity, and duration.

ALL FEES ARE SUBJECT TO YEARLY INCREASES.

SEND REQUIRED INFORMATION WITH FEE PAYABLE TO:

North Cook Co. SWCD
2358 Hassell Road
Suite B
Hoffman Estates, IL. 60169

Phone: 847-885-8830
Fax: 847-885-8843

WWW.NORTHCOOKSWCD.ORG

This review will be issued on a non-discriminatory basis without regard to race, color, religion, national origin, age, gender, handicap or marital status.
The North Cook County Soil and Water Conservation District is a non-taxing nonprofit local government.

REVISED JUNE 2013

Fee Calculator and Worksheet

Step 1: Review Fee			
Acres of disturbance*		_____	Line 1
Enter review fee using table 1	$	_____	Line 2
Step 2: Inspection Fee			
Length of project (whole years)		_____	
NOTE: Prorated fees (partial years) will be invoiced & may delay your application.			Line 3
Enter inspection fee using table 1	$	_____	Line 4
Multiply line 3 and line 4	$	_____	Line 5
Step 3: In-Stream or Stream-Side Work Fee (If not applicable, enter $0 in line 7 and go to step 4)			
Length of Work (months – round up)		_____	Line 6
Enter fee using table 2	$	_____	Line 7
Step 4: Linear Project (If not applicable, enter $0 in line 10 and go to step 5)**			
Enter the number of impacted wetlands on line 8		_____	Line 8
Wetland impact fee	$	360	Line 9
Multiply line 8 and line 9	$	_____	Line 10
Step 5: Total Fee			
Pre-construction notification fee for projects 1 acre+ (Refundable)	$	500	Line 11
Sum Lines 2, 5, 7, 10 & 11	$	_____	Line 12

For all projects above 500 acres in size or any other unique project as determined by the NCCSWCD Board of Directors, a modified fee schedule will be developed on an individual basis, based upon the size, scope, complexity, and duration of the project.

*****Linear projects refer to roadway or utility projects***

Please remit this worksheet with your payment.

Total Fee = Review Fee + Inspect fee + In-Stream Fee* + Wetland Impact Fee* + Pre-construction notice fee

*if applicable

Site Plan Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

1. Existing site conditions and natural resources present, including:

_____Site boundaries and adjacent lands which accurately identify site location.
_____Buildings, roads and utilities.
_____Topography, vegetation, drainage patterns, subwatershed delineation, critical erosion areas, and any subsurface drainage tiles.
_____Wetland and floodplain delineation. Please show the boundaries on the construction plans.
_____Adjacent areas that affect or are affecting the project site, e.g. drainage onto or through the site affecting wetlands, streams, lakes, and drainage areas downstream.
_____Vicinity map.
_____Show areas where trees and vegetation are to be preserved.
_____Map legend, including north arrow and scale on all materials submitted.

2. Final site conditions, including:

_____An accurate depiction of post-construction appearance, e.g. utilities, roads, buildings, open space.
_____Locations, dimensions, cross sections and elevations of all (temporary and permanent) stormwater management facilities (including sediment basins), plus inlet and outlet locations.
_____Surface flow direction, including sheet flow and concentrated flow direction.
_____Post-construction topography, **final contours should be easily distinguished** (2 foot contour is preferred) including subwatershed delineations.

3. A complete soil erosion and sediment control plan, including:

_____Location and detailed drawings of all permanent and temporary soil erosion and sediment control practices.
_____A schedule outlining the installation of the practices with the responsible parties identified.
_____Inspection, and maintenance schedules with responsible parties identified.
_____Seeding information: rates, species, dates, fertilization, temporary or permanent.
_____Location and dimension of all temporary soil and aggregate stockpiles.
_____Details and plan concerning construction site dewatering.

4. Locations, dimension & phase timeline of all land disturbing activities, including:

_____Designate construction limits, areas that will be disturbed and areas of wetland fill.
_____Describe grading and building schedule and phasing timeline.
_____Create and Submit a construction sequence for any in-stream work and/or critical areas.

Narrative Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

_____**Project description** - Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.

_____**Existing site conditions**- A description of the existing topography, vegetation, drainageways, subsurface drain tile, buildings, roads and utilities.

_____**Adjacent areas** - A description of neighboring areas such as streams, lakes, residential areas, roads, etc. which might be affected by the land disturbance. Describe any adjacent or neighboring activities that may affect the soil erosion and sediment control plan.

_____**Off-site areas**- Will any other areas be disturbed? Describe any off-site land disturbing activities.

_____**Critical areas** - A description of areas on the site which have potentially serious problems, e.g. steep or long slopes, channels, intermittent streams, and side hill seeps.

_____ **Soil erosion and sediment control measures**- A description of the methods which will be used to control erosion and sedimentation on the site. Control methods should meet the standards in section 4 of the Illinois Urban Manual.

_____**Construction Sequence**- A sequence of events for construction in and near creeks, streams, or other critical areas.

_____**Permanent stabilization**- A brief description including specifications of how the site will be stabilized after construction is completed.

_____C**alculations**- Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc.. Include pre and post development runoff.

_____**Detail drawings**- Include detail drawings form the Illinois Urban Manual. Any structural practices used that are not referenced to the Illinois Urban Manual or local handbooks should be explained and illustrated with detail drawings.

_____**Operation and Maintenance** - Provide a schedule of maintenance for all temporary and permanent erosion and sediment control practices to ensure that they perform properly. Identify the parties responsible for maintenance.

ATTACHMENT #5

MWH Water Quality Sampling Plan

WILLOW ROAD STORMWATER TUNNEL AND AREA DRAINAGE IMPROVEMENTS WATER QUALITY MONITORING PLAN OUTLINE

Prepared for: Village of Winnetka, Illinois

Project Manager: Joe Johnson, P.E., PMP

Date: May 30, 2014

Quality Assurance Statement

Office Address	175 W. Jackson Blvd., Suite 1900, Chicago, IL 60604
Prepared by	David Pott
Reviewed by	Richard Bolliger
Approved for Issue by	Joe Johnson, P.E., PMP

Revision Schedule

Rev No.	Date	Description	Prepared By	Reviewed By	Approved By
1	5/30/14	Draft to Steve Saunders, Jim Johnson	D. Pott	R. Bolliger	J. Johnson
2					
3					
4					

DRAFT

Disclaimer

This document contains information from MWH which may be confidential or proprietary. Any unauthorized use of the information contained herein is strictly prohibited and MWH shall not be liable for any use outside the intended and approved purpose.

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1. PROPOSED WATER QUALITY SAMPLING PLAN OUTLINE

1.1. Why are we sampling?

- Determine the characteristics of stormwater runoff from Winnetka so we have a basis for designing our proposed water quality management systems
- Gain an understanding of the variability of stormwater quality over the course of a storm so that we can assess the role that management of the "first flush" will play in the overall water quality management plan
- Because IEPA expects us to present water quality data as part of our permit application
- To establish a basis for anticipated future sampling under the anticipated individual MS4 permit

1.2. Where do we propose to sample and why?

1.2.1. Cherry Street Outfall to Lake Michigan

- Existing outfall sampled previously by B&W
- Provides representative indication of stormwater quality for primarily residential catchment that currently discharges to Lake Michigan

1.2.2. Elder Lane Outfalls to Lake Michigan

- Existing discharge sampled previously by B&W
- Provides representative indication of stormwater quality from mixed residential/business/institutional catchment that currently discharges to Lake Michigan

1.2.3. Hibbard Road Box Culvert Outfall to Skokie River

- Existing discharge sampled previously by B&W
- Provides representative indication of stormwater quality from primarily residential catchment from which excess flow will be diverted to Lake Michigan

1.2.4. Indian Hill/Hill Road/Birch Street Ditch

- Point of significant inflow to Winnetka system from Indian Hill area, including Indian Hill Golf Club
- Potential external source of significant nutrient, bacteria loadings

1.3. When do we proposed to conduct the sampling?

- Summer/Fall 2014 (August - October) – Goal is to capture data for 3-4 significant rainfall events with automated samplers, 3-4 dry-weather grab samples, and 3-4 grab samples for E. Coli and Fecal Coliform.
- Winter 2015 (mid Feb through mid March) – Goal is to capture data from 1-2 snowmelt events with automated samplers (or grab samples, weather permitting) and one dry-weather sample.

1.4. What kind of samples do we proposed to collect?

1.4.1. Dry weather samples

- Grab sample collected after at least 48 hours without rainfall

1.4.2. Wet weather samples

- Flow-weighted (or rainfall-weighted) composite samples collected over the course of a rainfall event so as to provide the basis for calculation of event mean concentrations
- Time-sequenced samples collected over the course of a rainfall event so as to provide an indication of the variability of pollutant concentrations over the course of a storm

1.5. For what parameters will analyses be conducted?

- Overall list is based on parameters identified by IEPA plus parameters for which compliance with water quality standards is a concern. Hardness and pH will also be determined as levels may impact some of the analytical methods. A preliminary listing of parameters is provided in Table 1. The final parameter list will be determined after further communication with IEPA and the Village. For example, there is some question as to whether total metals or dissolved metals should be considered.
- Flow data will be collected at all sites at 15 minute intervals using velocity-depth sensors installed in conduits just upstream of the identified discharge points
- Rainfall data will be obtained from the Cook County/ISWS gauge west of Hibbard Road and from a temporary gauge to be installed east of Green Bay Road at a location to be coordinated with Village staff.

Table 1 – Preliminary List of Parameters to be Analyzed

STORET Code	Description	Category	Detection Limit	Applicable Regulation	Water Quality Standard	Estimated Analytical Cost
00061	Flow, Stream, Instantaneous	PHY				
00154	Sulfate (as S) Whole Water	ION		35 IAC 302.504	500 mg/L	$26.25
00310	BOD, 5-day, 20 deg (Biochemical Oxygen Demand)	PHY				$30.00
00400	pH (standard units)	PHY	0.1 mg/L	35 IAC 302.535	15 mg/L	$10.00
00556	Oil & Grease (Freon Extr.-Grav Meth Tot, Rec)	PHY	0.1 mg/L	35 IAC 302.504	10 mg/L	$45.00
00610	Nitrogen, Ammonia, Total (as N)	NUT		35 IAC 302.504	0.007 mg/L	$26.25
00620	Nitrate Nitrogen Total (as N)	NUT	0.005 mg/L	35 IAC 302.504	0.022 mg/L	$26.25
00665	Phosphorus, Total (as P)	ION				$26.25
00718	Cyanide, weak acid dissociable, water, whole (grab)	OTH		35 IAC 302.504	500 mg/L	$26.25
00720	Cyanide, Total (as CN) (grab not to exceed 24 hours)	ION	0.1 mg/L	35 IAC 302.504	hardness dependent	$26.25
00900	Hardness, Total (as CaCO3)	ION	0.05 mg/L	35 IAC 302.504	0.05 mg/L	$25.00
00940	Chloride, Total in Water	ION	0.5 mg/L	35 IAC 302.504	1 mg/L	$26.25
00951	Fluoride, Total (as F)	ION	0.001 mg/L	35 IAC 302.504	hardness dependent	$26.25
01002	Arsenic, Total (as As)	MET	0.01 mg/L	35 IAC 302.504	0.016 mg/L	$8.44
01007	Barium, Total (as Ba)	MET				$8.44
01027	Cadmium, Total (as Cd)	MET				$8.44
01032	Chromium, Hexavalent (as Cr)(grab)	MET				$26.25
01034	Chromium, Total (as Cr)	MET		35 IAC 302.504	1 mg/L	$8.44
01042	Copper, Total (as Cu)	MET	0.05 mg/L	35 IAC 302.504	0.05 mg/L	$8.44
01045	Iron, Total (as Fe)	MET	0.15 mg/L	35 IAC 302.504	0.15 mg/L	$8.44
01046	Iron, Dissolved (as Fe)	MET				$18.75
01051	Lead, Total (as Pb)	MET				$8.44
01055	Manganese, Total (as Mn)	MET				$8.44
01067	Nickel, Total (as Ni)	MET	0.005 mg/L	35 IAC 302.504	0.01 mg/L	$8.44
01077	Silver, Total (as Ag)	MET	0.005 mg/L	35 IAC 302.504	0.001 mg/L	$8.44
01092	Zinc, Total (as Zn)	MET		35 IAC 302.504	1,700 ng/L	$8.44
01147	Selenium, Total (as Se)	MET	1 mg/L			$8.44

Table 1 – Preliminary List of Parameters to be Analyzed

STORET Code	Description	Category	Detection Limit	Applicable Regulation	Water Quality Standard	Estimated Analytical Cost
31625	Fecal Coliform, MF, M-FC, 0.7 µm	BAC		TMDL	126/100 mL (geomean)	$25.00
32730	Phenolics, total Recoverable (grab)	VOC		35 IAC 302.505	200/100 mL (geomean)	$26.25
71900	Mercury, Total (as Hg) (using USEPA Method 1631 or equivalent) (grab)	MET				$125.00
85801	TSS, Total Suspended Solids in Water	OTH		35 IAC 302.503	6.5 to 9.0	$15.00
99906	Escherichia Coliform (E. Coli)	BAC	1 mg/L			$22.50

1.6. What equipment will be required to conduct the sampling program?

- Flow Meters (can be purchased by Village, or rented) - Four sewer flow meter units with depth and velocity sensors as well as data loggers
- Rain Gauge (can be purchased by Village, or rented) - One tipping bucket or digital rain gauge with a data logger
- Automatic Samplers - Four ISCO Sequencing Samplers (6712 Serial Sampler or equivalent)
- Accessories - Batteries, Cables, Sample Bottles, Tubing, Safety Equipment, Lock, Protective Cover

1.7. Who will be responsible for sampling and analysis tasks?

- Program Planning, Coordination, Equipment acquisition - MWH
- Flow Meter Installation – Village or Subcontractor to MWH
- Rain Gauge Installation – Village or Subcontractor to MWH
- Sampler Installation – Village or Subcontractor to MWH
- Equipment Maintenance – Village or Subcontractor to MWH
- Sample Collection – To be determined
- Sample Preparation/Transport to Lab - MWH
- Sample Analysis and Reporting – testing laboratory
- Data Analysis - MWH