

Regular Meeting  
**WINNETKA VILLAGE COUNCIL**  
**Police Department**  
**410 Green Bay Road**  
Winnetka, Illinois 60093  
October 18, 2011  
7:30 p.m.

Emails regarding any agenda item are welcomed. Please email [rbahan@winnetka.org](mailto:rbahan@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.

**AMENDED AGENDA**

- 1) Call to Order
- 2) Pledge of Allegiance to the Flag
- 3) Quorum
  - a) November 1, 2011, Regular Meeting
  - b) November 8, 2011, Study Session
- 4) Approval of Agenda
- 5) Consent Agenda
  - a) Village Council Minutes
    - i) September 13, 2011, Study Session ..... 2
    - ii) October 4, 2011, Regular Meeting ..... 5
  - b) Warrant Lists Nos. 1721 and 1722 ..... 9
  - c) Chlorine Scrubber Bids..... 10
  - d) Pavement Patching Contract..... 17
  - e) Resolution R-30-2011 – Authorizing the Second Amendment to the New Cingular Wireless PCS, Cell Site Agreement..... 18
- 6) Stormwater Update
- 7) Ordinances and Resolutions
  - a) Resolution R-31-2011: Pension Reform
- 8) Public Comment
- 9) Old Business
- 10) New Business
- 11) Reports
- 12) Appointments
- 13) Executive Session
- 14) Adjournment

**NOTICE**

All agenda materials are available at [villageofwinnetka.org](http://villageofwinnetka.org) (Council > Current Agenda), the Reference Desk at the Winnetka Library, or in the Manager’s Office at Village Hall (2<sup>nd</sup> floor).

Videos of the Regular Village Council meetings are televised on Channel 10, M-W-F-Sa-Su at 7:00PM, and on Channel 18 M-F-Su at 7:00AM or 7:00PM. Videos of meetings may also be viewed on a link at the Village’s web site: [villageofwinnetka.org](http://villageofwinnetka.org)

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 – Liz Rosenthal, at 510 Green Bay Road, Winnetka, Illinois 60093. 847.716.3540; T.D.D. 847.501.6041.

**MINUTES**  
**WINNETKA VILLAGE COUNCIL STUDY SESSION**

**September 13, 2011**

(Approved: xx)

A record of a legally convened meeting of the Council of the Village of Winnetka, which was held in the Police Department Classroom at 410 Green Bay Road on Tuesday, September 13, 2011, at 7:30 p.m.

- 1) Call to Order. President Tucker called the meeting to order at 7:32 p.m. Present: Trustees Arthur Braun, Gene Greable, Bill Johnson, Richard Kates, Chris Rintz and Jennifer Spinney. Absent: None. Also in attendance: Village Manager Robert Bahan, Village Attorney Katherine Janega, Community Development Director Mike D’Onofrio, Assistant Community Development Director Brian Norkus, and approximately 7 persons in the audience.

[Drafter’s Note: Stormwater Follow-up. In response to a question from President Tucker before the set agenda items, Manager Bahan reported that the sanitary sewer survey had been sent out, and a stormwater management report would be given at the October Study Session.]

- 2) Discussion: Coach House Amendments. Attorney Janega gave the history and background of coach houses and their status under the Winnetka Zoning Ordinance in Winnetka, and then explained possible Village Code amendments needed to allow existing coach house structures to be returned to residential use:

- Amend Chapter 17.04 – Introductory Provisions and Definitions.
- Change coach house units from nonconforming to permitted uses.
- Establish a procedure that includes pre-occupancy inspections for life safety compliance.
- Require registration of coach houses.

Attorney Janega noted that, consistent with the Plan Commission’s recommendations that restoring coach houses to residential uses be voluntary, the proposed amendments would give coach house owners more options, but would not require a change back to residential use.

The Council discussed the issue at length and questioned Assistant Community Development Director Norkus and Attorney Janega about some specifics in the proposed zoning amendments, including parking and occupancy density per unit.

Public comment: Margaret Posner, 959 Tower Manor, opposed the Council’s consideration of coach houses rather than flooding from stormwater runoff.

Attorney Janega summarized the issues that surfaced from the Council’s discussion, which included creating a detailed inventory of coach houses in the Village that covers the following: (i) coach houses currently in use; (ii) coach house parking arrangements; and (iii) the size of coach house units and number of potential occupants.

Trustee Rintz said he does not favor sending staff out to determine which coach houses are legally occupied, saying it’s not fair to penalize residents who might simply be unaware of the restrictions. He also did not favor further study of the issue, but prefers to deal with the matter as it currently stands.

Trustee Spinney viewed the coach house question as a property rights issue rather than an affordable housing one and said she did not think it worthwhile to spend a lot of time on it. She also thanked the Plan Commission for its dedicated work, and asked residents to trust the Council to work on the stormwater issues in a deliberate and thoughtful manner.

Trustee Braun said that the coach house recommendations came out of the Plan Commission's affordable housing report and that he did not understand why the Council was spending time on the issue. He said he could be in favor of inspecting coach houses for safety purposes that have been unoccupied for years, but added that the residents want the Council to focus on stormwater and that he favored deferring other matters.

President Tucker noted that no stormwater issues will be ready for discussion until the October Study Session, after the consultant's report has been finished, that the Council has never been a one-issue body, and that she trusts Staff to do the legwork required to get the discussion before the Council again as soon as possible.

Trustee Kates agreed with President Tucker and Trustee Spinney that discussing coach houses is not detracting from the stormwater problem, which has absolute priority over everything else.

Trustee Rintz said affordable housing was remanded to the Plan Commission long before this current Council was elected, and that a lot of volunteers in the community gave countless hours of their time to work on the issue and give their best advice to the Council. He agreed that the Council has never been one-dimensional in its focus, and that last April the Council directed staff to research various things in conjunction with the recommendations that were brought by the Plan Commission. He stated it would be a slap in the face of the Village's committees who have put in so much work at the Council's request, to now tell them that stormwater is the only topic the Council is interested in. He pointed out that doing so would be a good way to lose well-intentioned volunteers to the community, if their work products will not be used by the Council.

Manager Bahan explained that Staff put the timing of the affordable housing discussion before the Council and received direction to bring back the affordable housing recommendations in November after the Caucus tallies its survey results. He said clarification was given that a policy discussion could be held about coach houses while the Council waited for the drainage consultant to finish its stormwater report.

Trustee Johnson said it is a good thing the Council is not acting hastily and did not start on the recommended \$14 million stormwater project, as the July storm has proven that a 10-year storm protection is likely not enough for the current times. He agreed that coach houses are a property rights issue, and added that the property maintenance code is simply a tool to balance the rights of landlords and the protection of tenants.

Trustee Greable said the coach house issue did come to the fore as a result of the Plan Commission's study on affordable housing and added that the issue that is most important to residents is flood reduction.

Trustee Kates pointed out that the Council needs to have the report from its stormwater consultant before any action on flood reduction can be taken.

Becky Hurley, Chair of the Plan Commission, agreed that flooding is the Village's #1 priority at the moment, but said she felt there is plenty of time to work on other issues as well. She explained that Winnetka's Comprehensive Plan contains provisions that encourage diverse housing to benefit Winnetkans of all ages and lifestyles. She noted that this goal was reiterated when the Village's affordable housing plan was amended in 2005, and the Council assigned the Plan Commission to do an affordable housing study. She pointed out that the term "affordable housing" is an unfortunate moniker, as it has emotional connotations for many people; that the Plan Commission is tasked with looking beyond the state affordability standards and for unearthing solutions that are customized for Winnetka. She stated that the proposed amendments for coach houses benefit Winnetkans and property rights, and improve opportunities for residents to live in various styles of housing. Finally, she agreed that volunteers will not be found to serve the Village if their work is ultimately second-guessed, and if there is no recognition that they performed the task at the Council's request in the first place.

President Tucker thanked Ms. Hurley for her comments, and asked Mr. Bahan to place updates on the stormwater issue in the Village's newsletters so the community will be informed on the progress of this matter.

Manager Bahan reported that staff has placed stormwater updates on the website, along with a library of documents. He noted that it takes time to put recommendations together thoughtfully, and that staff wants the stormwater report to be their best work.

- 3) Executive Session. Trustee Braun moved to adjourn into Executive Session for the purpose of discussing Personnel Matters and Collective Bargaining, pursuant to Sections 2(c)(1) and 2(c)(2) respectively, of the Illinois Open Meetings Act. Trustee Johnson seconded the motion. By roll call vote, the motion carried. Ayes: Trustees Braun, Greable, Kates, Johnson, Rintz and Spinney. Nays: None. Absent: None. The Council adjourned into Executive Session at 9:14 p.m.

The Council reconvened into Regular Session at 10:34 p.m. Present: President Tucker, Trustees Braun, Greable, Kates, Johnson, Rintz and Spinney. Nays: None. Absent: None. Also present: Village Manager Rob Bahan.

- 4) Adjournment. Trustee Spinney, seconded by Trustee Johnson, moved to adjourn the meeting. By roll call vote, the motion carried. Ayes: Trustees Braun, Greable, Kates, Johnson, Rintz and Spinney. Nays: None. Absent: None. The meeting adjourned at 10:35 p.m.

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Recording Secretary

**MINUTES  
WINNETKA VILLAGE COUNCIL  
REGULAR MEETING  
October 4, 2011**

(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, October 4, 2011, at 7:30 p.m.

- 1) Call to Order. President Tucker called the meeting to order at 7:32 p.m. Present: Trustees Arthur Braun, Gene Greable, Bill Johnson, Richard Kates, and Jennifer Spinney. Absent: Trustee Chris Rintz. None. Also present: Village Manager Robert Bahan, Village Attorney Katherine Janega, Director of Public Works Steve Saunders, and approximately 7 persons in the audience.
- 2) Pledge of Allegiance. President Tucker led the group in the Pledge of Allegiance.
- 3) Quorum.
  - a) October 11, 2011, Study Session – to be held at the Community House, Room 101). All of the Council members present, with the exception of Trustee Braun, indicated that they expected to attend.
  - b) October 18, 2011, Regular Meeting. All of the Council members present indicated that they expected to attend.
- 4) Approval of the Agenda. Trustee Kates said he would like to highlight Item 5(f), the Pavement Management System, so the public would be aware of this great example of intergovernmental cooperation. Trustee Braun, seconded by Trustee Johnson, moved to approve the Agenda. By roll call vote. the motion carried. Ayes: Trustees Braun, Greable, Kates, Johnson, and Spinney. Nays: None. Absent: Trustee Rintz.
- 5) Consent Agenda
  - a) Village Council Minutes.
    - i) September 6, 2011, Regular Meeting.
    - ii) September 20, 2011 Regular Meeting.
  - b) Warrant Lists Nos. 1719 and 1720. Approving Warrant List No. 1719 in the amount of \$1,135,033.40, and Warrant List No. 1720 in the amount of \$1,248,067.84.
  - c) Park District Burn Request. Authorizing the Park District to conduct a controlled burn at Crow Island and Bell Woods. Previous burns have been successfully completed, following all requirements and conditions prescribed by the Winnetka Fire Chief.
  - d) Resolution R-29-2011: Amending AT&T Cell Site Agreement (Public Safety Building). Approves the First Amendment to the 1996 Cellular Antenna License Agreement between the Village of Winnetka and the New Cingular Wireless, PCS, LLC, substantially in the form present in Exhibit A.

- e) Change Order: Primary Cable. Authorizes the Village Manager to award a change order to the Okonite Company in the amount of \$69,434 for the purchase of primary cable at the unit prices bid, subject to the contract conditions.
- f) Pavement Management System – Municipal Partnering Program. Awards a contract to IMS Infrastructure Management Services, to provide a pavement condition evaluation and pavement management engineering services based on unit prices contained in their August 1, 2011 proposal, not to exceed \$32,000
- g) Holiday Lighting Program. Awards a one-year extension of the 2010 Holiday Lighting contract for the 2011 lighting season to Landscape Concepts Management, Inc., for \$36,068.50 – an amount equal to the 2010 price.

Trustee Braun, seconded by Trustee Johnson, moved to approve the foregoing items on the Consent Agenda by omnibus vote. By roll call vote, the motion carried Ayes: Trustees Braun, Greable, Kates, Johnson, and Spinney. Nays: None. Absent: Trustee Rintz.

6) Stormwater Update

- a) Policy Direction: Individual Stormwater Engineering Evaluation Program. Mr. Saunders reported that Staff had researched such programs in Wilmette and Glenview. He said that the two villages take different approaches to providing their residents with information on how to address drainage problems on their property, with Wilmette taking a hands-off approach and Glenview taking a more active and involved role.

Mr. Saunders described the two programs in detail, and noted that the engineering evaluation program is different from the backflow prevention program, as sanitary sewer backups are more of a health hazard than other types of basement flooding. He briefly reviewed the impact on the Village's budget should the Council approve a program that includes a Village contribution to the cost of the evaluation.

The Council asked questions and thoroughly discussed the issue. A suggestion was made to put on a forum for residents, to educate them about possible remedies for basement flooding, to preview the engineering evaluation program, and to possibly bring in engineers that can provide the evaluation services. All of the Trustees were in favor of such a program.

Attorney Janega cautioned that the Village is not able to set standards for the presenters, and the impression could be given that anyone who presents is sanctioned by the Village.

Trustees Braun and Greable favored creating an engineering evaluation program, and of providing some level of Village contribution to help the homeowners, because it might help the Village gather more information about flooding in the Village, and also because it is the compassionate thing to do in the aftermath of the severe flooding of last July.

Trustees Kates, Johnson and Spinney were in favor of creating an engineering evaluation program, but without providing Village funding, to protect the Village from liability and to conserve taxpayer funds for fixing the Village's infrastructure.

President Tucker said there was a consensus for having a seminar on best stormwater practices, and to move forward with a program similar to the Wilmette model, without

contributing Village funds. She added that the Council could change the model in the future, upon receiving more information.

Manager Bahan said Staff could bring back information about an open house and pursue a bulk-rate engineering assessment program, and defer a final decision on cost-sharing until after the infrastructure discussion next week.

Attorney Janega commented that she understood the Council's direction to staff was to devise a program that is a hybrid of the Wilmette and Glenview models.

7) Ordinances and Resolutions.

Ordinance M-16-2011 - Special Use Permit: 1025 Tower Road (BP Service Station) – Adoption. Attorney Janega reviewed and explained the amendments to the Ordinance, discussed with Trustee Kates the best language for dealing with the hours for fuel delivery, and recommended substituting the phrase “commercially reasonable efforts” for “best efforts.” Trustee Kates, seconded by Trustee Braun, moved to amend Ordinance M-16-2011 as presented in the agenda, with the additional modification. By voice vote, the motion carried.

There being no further questions or comments, Trustee Braun, seconded by Trustee Johnson, moved to adopt Ordinance M-16-2011. By roll call vote, the motion carried. Ayes: Trustees Braun, Greable, Kates, Johnson, and Spinney. Nays: None. Absent: Trustee Rintz.

8) Public Comment and Questions.

9) Old Business. None.

10) New Business. None.

10) Reports

a) Village President. President Tucker announced that Arthur Nielsen had passed away the previous day, and commented that the Village is in his debt for his contributions to the community, as well as the state and country. She also reported that the recent dedication of the Elm Street train station had been attended by METRA officials, the building contractor, Congressman Dold, State Representatives Biss and Gabel, and a representative of State Senator Schoenberg. She welcomed Willow Boutique to the Hubbard Woods business district, and called on residents to support Winnetka's businesses.

b) Trustees. None.

c) Attorney. Attorney Janega reported that the recent Open Meetings Act amendments will require all members of Boards and Commissions to take the Attorney General's online training beginning next year, and that she would so notify all such members.

d) Manager. Manager Bahan reminded the audience that the October 11<sup>th</sup> Study Session will be held at the Community House.

11) Appointments.

a) President Tucker announced the re-appointment of Paul Dunn to the Business Community Development Commission for a second full term, effective immediately.

Trustee Johnson, seconded by Trustee Spinney, moved to approve the appointment. By voice vote, the motion carried.

- b) President Tucker announced the re-appointment of Paul Dunn as the Business Community Development Commission's representative to the Plan Commission, effective immediately. Trustee Braun, seconded by Trustee Kates, moved to approve the appointment. By voice vote, the motion carried.
- c) President Tucker announced the appointment of Scott Madlener to the Environmental and Forestry Commission for a full term, effective immediately. Trustee Johnson, seconded by Trustee Braun, moved to approve the appointment. By voice vote, the motion carried.
- d) President Tucker announced the re-appointment of Louise Holland as Chair of the Landmark Preservation Commission for a full term, effective immediately. Trustee Braun, seconded by Trustee Johnson, moved to approve the appointment. By voice vote, the motion carried.
- e) President Tucker announced the re-appointment of Louise Holland as the Landmark Preservation Commission's representative to the Plan Commission, effective immediately. Trustee Braun, seconded by Trustee Spinney, moved to approve the appointment. By voice vote, the motion carried.

13) Executive Session. None.

12) Adjournment. Trustee Johnson, seconded by Trustee Kates, moved to adjourn the meeting. By roll call vote, the motion carried. Ayes: Trustees Braun, Greable, Kates, Johnson, and Spinney. Nays: None. Absent: Trustee Rintz. The meeting adjourned at 9:08 p.m.

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Recording Secretary

## AGENDA REPORT

SUBJECT:           **Warrant Lists Nos. 1721 and 1722**

PREPARED BY:     Robert Bahan, Village Manager

DATE:              October 13, 2011

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Warrants Lists Nos. 1721 and 1722 are enclosed in each Council member's packet.

**Recommendation:** Consider approving Warrants Lists Nos. 1721 and 1722.

## AGENDA REPORT

**Subject: Chlorine Scrubber Bids, Water Plant**

Prepared by: Brian Keys, Director Water & Electric

Ref.: Budget Presentation February 15, 2011

Date: October 13, 2011

The Water & Electric Department requested bids (Bid #011-023) for the purchase of one dry media chlorine scrubber unit for the water plant. Installation of a chlorine scrubber unit was identified in the *2008 Long-Term Water Plant Improvement Plan* as an optional safety improvement that may be required with future regulations. In the event of an unintentional chlorine release, the scrubber unit neutralizes the gas to maintain safety of the site and mitigate the consequences of a release.

The bid specification includes the procurement of the scrubber, training and commissioning of the unit. Installation of the ductwork, pad and utility connections will be accomplished by contractors and Village staff.

A bid notice was published in the Pioneer Press and bid notices were sent to the equipment manufacturer and various distributors. A unit manufactured by Purafil Environmental Systems was specified, but vendors were permitted to submit alternates that met or exceeded the technical requirements of the bid specification.

The following companies submitted bids:

<b>Company Name / Manufacturer</b>	<b>Bid</b>
PureAir Filtration	\$72,500.00
Purafil Environmental Systems	\$119,800.00

The Village's design firm, Rezek, Henry, Meisenheimer and Gende (RHMG) has reviewed both bids for compliance to the bid specification. Both bidders were deemed "responsive" with respect to providing the required information (i.e. bid bond, data sheets, etc.). PureAir bid an alternative unit manufactured by their company. RHMG has performed a technical review and assessment of the alternate unit proposed by Pure AirFiltration. As noted in the attached Exhibit A, RHMG has confirmed that the proposed unit meets or exceeds the technical requirements of the bid specification. In addition, customers have provided positive feedback on the manufacturer's equipment and support. Based on their review, RHMG has recommended acceptance of PureAir Filtration's bid.

Staff recommends accepting the lowest bid that meets the bid specification, which is PureAir Filtration. This will permit the purchase of the chlorine scrubber; an additional contract will be issued for the ductwork and pad construction. The FYE 2011 Budget for the Water Department (account #52-66-640-324) contains \$235,000 for the chlorine scrubber project.

**Recommendation:**

Consider authorizing the Village Manager to issue a purchase order to PureAir Filtration in the amount of \$72,500 for the purchase of the chlorine scrubber unit in accordance with the terms and conditions of Bid #011-023.



# Rezek, Henry, Meisenheimer and Gende, Inc.

CONSULTING ENGINEERS

October 11, 2011

Mr. Brian L. Keys  
Director of Water and Electric  
Village of Winnetka  
1390 Willow Road  
Winnetka, IL 60093

Re: Bid Review – Chlorine Gas Scrubber  
Village of Winnetka Water Treatment Plant  
Bid No. 011-023  
RHMG Project No. 21126000

Dear Mr. Keys:

We have reviewed the two (2) bids received by the Village for the chlorine gas scrubber to be installed at the Village's water treatment plant. The two responsive bids received by the Village and reviewed by RHMG are as follows:

Purafil Environmental Systems	Doraville, GA	\$119,800.00
PureAir Filtration	Norcross, GA	\$72,500.00

Both bidders have provided the required 5% bid bond with their submittals.

The bid form identified the Purafil chlorine scrubber unit as the base bid manufacturer. The bidding documents allowed for alternative chlorine scrubber manufacturers to submit a bid on the project. Since the PureAir chlorine scrubber unit was submitted as a substitute/alternative manufacturer, a thorough review of their submittal was warranted to confirm that the scrubber unit meets the intent and requirements of the specifications. The review process included evaluating the equipment against the specification requirements, installation reference checks to obtain information on the operation and maintenance of installed and operating chlorine scrubber equipment, and follow up discussions with PureAir Filtration. A summary of our review is provided herein.



Mr. Brian L. Keys  
 Village of Winnetka  
 Re: Bid Review – Chlorine Gas Scrubber  
 Village of Winnetka Water Treatment Plant  
 Bid No. 011-023

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The first step of the review process involved checking the PureAir chlorine scrubber unit parameters against the specification requirements. Table No. 1 below summarizes the comparison of the proposed PureAir scrubber unit against the requirements of the project specifications.

**Table No. 1 – Specification Comparison Review**

<b>Parameters</b>	<b>Specification</b>	<b>PureAir</b>
Materials of Construction	Aluminum 3003H-14	Aluminum 3003H-14
Wall thickness	0.125 inches	0.125 inches
Air Flow Rate	2,700 cfm	2,700 cfm
Chlorine Removal	810 lbs	1,050 lbs
Pounds of Media	6,300 lbs	7,000 lbs
Media Properties		
Crush Strength	35 – 70%	35 – 70%
Average Abrasion	4.5%	4.5%
Bulk Density	45 lbs/cu.ft.	50 lbs/cu.ft.
Average Pellet Diameter	1/8 inch	1/8 inch
Chlorine Removal	15% min. by weight	15% min. by weight
UL Class Rating	2	1
Ignitability ASTM 3466-76	300°C	300°C
Pressure Drop 12" of media		
Velocity 50 fpm	0.45 inches water column	0.45 inches water column
Velocity 100 fpm	1.85 inches water column	1.85 inches water column
Allowable Pressure Drop	8 inches water column	10 inches water column
Number of Reaction Stages	3	3
Blower motor HP	15	15
Sound Attenuation Equipment	Blower Enclosure and Discharge Silencer	Blower Enclosure and Discharge Silencer
Unit Dimensions	15'L x 5'W x 6'H	12'L x 5'W x 6'H

The PureAir chlorine scrubber unit was found to meet the requirements of the project specification as illustrated in the summary comparison table above. A few things to note from the comparison above are that the PureAir media has a density that is slightly greater than the specification requirement of 45 pounds per cubic foot. Because of the higher density, the total pounds of media to be provided with the PureAir unit will be 7,000 pounds. The 7,000 pounds of media will neutralize 1,050 pounds of chlorine which exceeds the 810 pound neutralization requirement. The additional 400 pounds of media does not raise any structural concerns with the



Mr. Brian L. Keys  
Village of Winnetka  
Re: Bid Review – Chlorine Gas Scrubber  
Village of Winnetka Water Treatment Plant  
Bid No. 011-023  
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proposed site location for the scrubber unit. The PureAir media also exceeds the UL Class 2 requirement with a UL Classification rating of 1.

The next step of the bid review process was to contact existing installations of PureAir chlorine scrubber units to check on the unit performance and the quality of support provided by PureAir to their customers. Seven (7) facilities were contacted mainly from cold weather climate installations similar to what would be expected for a northern Illinois installation. Each facility contacted provided positive feed back on the operation of the chlorine scrubber unit and also indicated that they had no maintenance concerns with the scrubber unit. Positive feed back was also received regarding the support and service provided by PureAir. A summary of the facilities contacted during the reference check are listed below. (The majority of the referenced units are greater than the 1,050 pound unit proposed for Winnetka.)

**Table No. 2 – Installation Reference Check Summary**

<b>Location</b>	<b>Year Installed</b>	<b>Comments / Installation Parameters</b>
City of Lethbridge, Canada	1990	2,350 lb unit, outside installation, aluminum construction, no operational problems, good support from PureAir
City of Mankato, MN	2007	2,350 lb unit, outside installation, aluminum construction, no operational problems, unit runs when chlorine room is occupied, good support from PureAir
Shenango WTP, PA	2003	2,350 lb unit, inside installation, fiberglass construction, no operational problems, good support from PureAir and good to work with
City of Port Hope, Canada	2005	150 lb unit, inside installation, stainless steel construction unit runs when chlorine room is occupied, good support from PureAir
City of Cambridge, MN	1994	2,350 lb unit, outside installation, stainless steel construction, no operational problems, good support from PureAir
City of Gretna, LA	2011	2,350 lb unit, outside installation, fiberglass construction, no operational problems, no problems with shop drawings, delivery times, startup and training, good support from PureAir



Mr. Brian L. Keys  
Village of Winnetka  
Re: Bid Review – Chlorine Gas Scrubber  
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**Table No. 2 (continued) – Installation Reference Check Summary**

<b>Location</b>	<b>Year Installed</b>	<b>Comments / Installation Parameters</b>
City of New Buffalo, MI	2010	3,820 lb unit, outside installation, aluminum structure, fiberglass shell, no problems with submittals, delivery times, startup and training, very good support from PureAir, the unit has experienced 3 chlorine releases and performed as specified with no problems

The final step in the bid review process involved follow up information and discussions with PureAir. The summary of our follow up conversations with PureAir Filtration is provided below.

- PureAir was formed in 2003 from Uni-Sorb Canada as an independent US operating and manufacturing company to service the US air filtration and gas scrubbing market. Uni-Sorb Canada has been in business for over 20 years.
- PureAir does not take any exceptions to the specifications and has indicated that they will manufacturer and deliver the chlorine gas scrubber unit and all accessory equipment per the project specifications and within the delivery times stated in the bidding documents.
- They have provided verification that they are a single source manufacturer and provider of equipment, media, and testing services. The manufacturing of the scrubber unit and media will be performed in their Georgia facility.
- Information regarding PureAir’s QA/QC manual has been provided.
- PureAir has 20 plus chlorine gas scrubber installations.
- PureAir has no concerns regarding the use of their equipment in this application; a remotely located scrubber and a long inlet duct to the unit.
- The Village’s requirement for prevailing wages will be adhered to for PureAir’s staff that is on-site for the installation checks, startup and training of the scrubber unit.
- PureAir Filtration has stated that they will provide the required performance, labor and materials bonding and project insurance as per the Village’s requirements.

Based on the bids received and our review summarized above we recommend that the Village of Winnetka award the procurement contract for the purchase of the chlorine gas scrubber unit to PureAir Filtration of Norcross, GA in the amount of \$72,500.00.



Mr. Brian L. Keys  
Village of Winnetka  
Re: Bid Review – Chlorine Gas Scrubber  
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If you should have any questions or need additional information regarding our evaluation please do not hesitate to contact me at our Mundelein office, 847-362-5959.

Sincerely yours,  
REZEK, HENRY, MEISENHEIMER AND GENDE, INC.

Marcia A. McCutchan, P.E., BCEE  
Executive Vice President

cc: Bryan McInturff – Village of Winnetka  
Brian Curley – Village of Winnetka

## Agenda Report

**Subject:**                    **Bid 11-024: Pavement Patching – Various Streets**

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

Date:                         October 13, 2011

On October 13, 2011, the Village received sealed bids for full-depth reconstructive patching of sections of various streets. Areas include locations on Cherry Street near Ridge Avenue, Hibbard Road (Tower to Westmoor), Tower Road (between Vernon and Greenwood), Elm Street near Birch Street, and Church Road. The contract calls for excavation of the pavement and base, and replacement with full-depth asphalt pavement.

<b>Contractor</b>	<b>Total Bid</b>
A. Lamp Concrete Contractors, Inc. Schaumburg, IL 60193	\$89,782.00
J.A. Johnson Paving Company Arlington Heights, IL 60005	\$89,861.00
Chicagoland Paving Contractors, Inc. Lake Zurich, IL 60047	\$99,900.00
Peter Baker & Son Co. Lake Bluff, IL 60044	\$114,166.00
Schroeder Asphalt Services, Inc. Huntley, IL 60142	\$132,853.00
Curran Contracting Company Crystal Lake, IL 60014	\$142,830.00

The low bid was submitted by A. Lamp Concrete Contractors, a qualified company that has performed numerous projects for the Village in the past.

**Budget Information.**

The project is funded through account 10-30-640-139: Pavement Reconstruction. The FY 2011-12 Budget contains \$1,100,000 in this account, of which about \$950,000 was expended for the 2011 Pavement Reconstruction contract.

**Recommendation:**

Consider awarding a contract to A. Lamp Concrete Contractors, Inc. of Schaumburg, IL for an amount not to exceed \$89,782 for pavement patching on various streets based on unit prices contained in their response to Bid 11-024.

## AGENDA REPORT

**SUBJECT:** Resolution R-30-2011 – Authorizing the Second Amendment to the New Cingular Wireless PCS, Cell Site Agreement

**PREPARED BY:** Brian Keys, Director Water & Electric  
Katherine S. Janega, Village Attorney  
Brian Norkus, Assistant Director of Community Development

**REF.:** January 15, 2008 Council Meeting, pp. 124-138  
June 15, 2010 Council Meeting, pp. 16-23

**DATE:** October 13, 2011

On January 15, 2008, the Village entered into a license agreement with New Cingular Wireless PCS LLC, which allowed certain wireless communication antennas and equipment to remain on the smokestack and within the Electric Plant for operation of New Cingular’s wireless telecommunications system. The equipment and antennas were originally installed pursuant to a 1989 license agreement between the Village and Cellular One-Chicago, New Cingular’s predecessor company. The new License Agreement addressed all equipment installed prior to November 1, 2007.

In June 2010, the Village Council adopted Resolution R-28-2010, amending the license agreement and granting New Cingular’s request to install a fiber optic connection between the cell equipment located within the plant and AT&T fiber located in the Tower Road right-of-way. New Cingular is now requesting approval of a second license amendment, to allow the installation of new coaxial cable and antennas, and additional carrier equipment within the leased room of the electric plant building. As with the original License Agreement and First Amendment, the addition of new equipment at the site expands New Cingular’s use of the facilities and requires Council approval.

The proposed modifications include three new antennas, installation of six tower mounted amplifiers, coaxial cable, and additional carrier equipment within New Cingular’s equipment shelter. The proposed changes are required to increase the speed and capacity of their mobile telephone network. There is no change to the propagation of the signal in this geographic area.

The three new antennas (72”x 12”x 6”) will be in addition to the six existing antennas (67”x 14”x 10”). One antenna will be installed in the center of each of the three two-antenna arrays now located on the smokestack of the power plant, as depicted in the drawings attached as Exhibit C-1. Six new 1-5/8” coaxial cables will be installed in addition to the twelve existing coaxial cables (7/8” and 1-1/4” coax) and six tower mounted amplifiers will be installed behind the new antennas to improve their overall sensitivity to receive weaker signals. Photo simulations have been included for reference (Exhibit B).

Due to the increase in the number of antennas, the Village utilized an independent engineer to evaluate the project and determine if reasonable steps were taken to minimize the size and footprint of the equipment. Dr. Allan Taflove of Northwestern University's electrical engineering department has conducted an assessment of the proposed antennas and confirmed that the third antenna per sector is required for the new wireless technology and also required to avoid degradation of their existing service. In addition, Village staff has reviewed the proposed modifications and identified no conflict with Water and Electric Department operations.

Village staff and New Cingular have tentatively agreed to the terms for the installation of the amplifiers, antennas and coaxial cable. This includes a \$5,630 increase in the annual lease payment, in addition to the \$3,000 increase under the First Amendment. Effective November 1, 2011, the annual lease payment will be \$52,500. The total license fee, as amended, will continue to be subject to the 4% annual escalator. All other requirements of the initial License Agreement, including compliance with all applicable Village permit requirements, remain unchanged.

The original license agreement was authorized by resolution. As such, this amendment, like the first amendment, must also be done by resolution. Resolution R-30-2011 authorizes the Second Amendment to the 2008 Cellular Antenna License Agreement between the Village of Winnetka and New Cingular Wireless PCS, substantially in the form attached to Resolution R-30-2011 as Exhibit A.

**Recommendation:**

Consider adoption of Resolution R-30-2011, approving the Second Amendment to the 2008 Cellular Antenna License Agreement between the Village of Winnetka and New Cingular Wireless PCS, substantially in the form presented in Exhibit A.

**RESOLUTION NO. R-30-2011**

**A RESOLUTION  
APPROVING THE SECOND AMENDMENT  
TO THE 2008 LICENSE AGREEMENT  
WITH NEW CINGULAR WIRELESS PCS, LLC,  
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 January 4, 2008, the Council of the Village of Winnetka (“Village Council”) adopted Resolution R-4-2008, authorizing a license agreement (“License Agreement”) with New Cingular Wireless PCS, LLC, (“New Cingular”), an Illinois limited liability corporation, 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 September 29, 1989, license agreement between the Village and New Cingular’s predecessor, Cellular One-Chicago; and

**WHEREAS**, on June 15, 2010, the Village Council adopted Resolution R-28-2010, approving an amendment to the License Agreement to allow the installation of conduit and fiber optic cables to connect New Cingular’s equipment at the Water and Electric Plant with AT&T fiber optic lines located in Tower Road (“First Amendment”); and

**WHEREAS**, New Cingular has requested approval of a second amendment to the License Agreement, to allow the installation of new coaxial cable and replacement antennas and additional carrier equipment within the leased room of the Electric Plant building; and

**WHEREAS**, Village staff has completed negotiations and has prepared a draft amendment for consideration by the Village Council, captioned “Second Amendment to 2008 Cellular Antenna Site License Agreement between the Village of Winnetka and New Cingular Wireless PCS” (“Second Amendment”), a copy of which is attached hereto as Exhibit A and incorporated herein by reference, as if set fully set forth herein; and

**WHEREAS**, the Village Council have determined that approving entering into a new License Agreement with New Cingular, substantially in the form attached, 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 “Second Amendment to the 2008 Cellular Antenna Site License Agreement between the Village of Winnetka and New Cingular Wireless PCS,” (“Second Amendment”), substantially in the form attached hereto as Exhibit A.

**SECTION 3:** Subject to approval of the final form of the First Amendment by the Village Attorney, the Village President and the Village Clerk are hereby authorized and directed to execute and seal the License Agreement, 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 take effect immediately upon its adoption.

**ADOPTED** this 18<sup>th</sup> day of October, 2011, pursuant to the following roll call vote:

AYES: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

Signed:

\_\_\_\_\_  
Village President

Countersigned:

\_\_\_\_\_  
Village Clerk

Market: IL/WI  
Cell Site Number: IL0062  
Cell Site Name: Winnetka Power Plant  
Fixed Asset Number: 10005098

**SECOND AMENDMENT  
TO THE 2008 CELLULAR ANTENNA SITE LICENSE AGREEMENT  
BETWEEN THE VILLAGE OF WINNETKA AND NEW CINGULAR WIRELESS PCS  
(Water & Electric Plant)**

**THIS SECOND AMENDMENT TO THE 2008 CELLULAR ANTENNA SITE LICENSE AGREEMENT BETWEEN THE VILLAGE OF WINNETKA AND NEW CINGULAR WIRELESS PCS (“Second Amendment”)**, dated as of the latter of the signature dates below, is by and between the Village of Winnetka, an Illinois home rule municipality having a mailing address of 510 Green Bay Road, Winnetka, IL 60093 (“**Licensor**”) and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 12555 Cingular Way, Suite 1300, Alpharetta, GA 30004 (“**Licensee**”).

**WHEREAS**, Licensor and Licensee entered into a “License Agreement Permitting a Cellular Antenna Site at the Water & Electric Plant (New Cingular Wireless)” dated November 1, 2007, whereby Licensor leased to Licensee certain Licensed Premises, therein described, that are a portion of the Land located at 725 and 735 Tower Road, Winnetka, Illinois 60093 (“**Agreement**”); and

**WHEREAS**, pursuant to Resolution R-28-2010, Licensor and Licensee entered into the “First Amendment to the Cellular Antenna Site License Agreement Between the Village of Winnetka and New Cingular Wireless PCS (Water & Electric Plant),” dated July 9, 2010, which amended the License Agreement to allow the installation of conduit and fiber optic cables to connect New Cingular’s equipment at the Water and Electric Plant with AT&T fiber optic lines located in Tower Road (“**First Amendment**”); and

**WHEREAS**, Licensee desires to change the Licensee Facilities by installing new antennas, amplifiers, cable and related equipment, which Licensor is willing to approve; and

**WHEREAS**, Licensor and Licensee desire to adjust the rent in conjunction with the modifications to the Agreement contained herein; and

**WHEREAS**, Licensor and Licensee desire to amend the Agreement to modify the notice section thereof; and

**WHEREAS**, Licensor and Licensee, in their mutual interest, wish to amend the Agreement accordingly, as set forth below.

**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:

**1. Licensee Facilities.** The definition of Licensee Facilities in Section 1 of the License Agreement, as amended by the First Amendment, shall be further amended to include the attached Exhibit C-1, which Exhibit C-1 shall hereby replace Exhibit C to the Agreement, as if fully set forth therein. Licensor agrees to grant Licensee the right to install the additional antennas, coaxial cables and other equipment depicted on the attached Exhibit C-1, subject to the following conditions:

(a) Licensee shall obtain all necessary permits required pursuant to Title 15 of the Winnetka Village Code, and shall submit final construction plans for review and approval, and for issuance of such permits; and

(b) the antennas shall be painted the same color as the existing antennas.

**2. License Fees.** Section 6 of the Agreement, as amended by the First Amendment is hereby deleted in its entirety and replaced with the following:

6. License Fees.

(a) Effective November 1, 2011, the annual License Fee shall be amended by increasing the current annual License Fee to Fifty-Two Thousand Five Hundred and No/100 Dollars (\$52,500.00) per year, subject to adjustments as provided in the following Section 6(b) ("Amended License Fee").

(b) For each year after the Term year ending October 31, 2012, the Amended License Fee shall be increased by Four Percent (4%) over the Amended License Fee charged in the immediately preceding Term year.

(c) The Amended License Fee, as set pursuant to Section 6(a) and (b), shall be due and payable on November 1 of each year.

**3. Notices.** Section 19 (d) of the Agreement and Section 5 of the First Amendment are hereby deleted in their entirety and replaced with the following:

**NOTICES.** All notices, requests, demands and communications hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows.

IF TO LICENSEE: New Cingular Wireless PCS, LLC  
By: AT&T Mobility Corporation,  
Attn: Network Real Estate Administration  
Re: Cell Site #:IL0062, Cell Site Name: Winnetka Power Plant (IL),  
FA No: 10005098  
12555 Cingular Way, Suite 1300, Alpharetta, GA 30004

With the required copy of legal notice sent to Licensee at the address above, a copy to the Legal Department:  
New Cingular Wireless PCS, LLC  
Attn: Legal Department,  
Re: Cell Site #: IL0062, Cell Site Name: Winnetka Power Plant (IL)  
FA No: 10005098  
15 E. Midland Ave., Paramus, NJ 07652-2939

A copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

IF TO LICENSOR: Village of Winnetka  
510 Green Bay Road  
Winnetka, IL 60093  
Attn: Village Manager

Either party hereto may change the place for the giving of notice to it by thirty (30) days prior written notice to the other as provided herein.

**4. Other Terms and Conditions Remain.** Except as expressly set forth in this Second Amendment, the License Agreement and First Amendment are otherwise unmodified and remain in full force and effect. Each reference in the License Agreement to itself shall be deemed also to refer to this Second Amendment.

**5. Capitalized Terms.** All capitalized terms used but not defined herein shall have the same meanings as defined in the Agreement and First Amendment.

**6. Licensee Representations.** Licensee represents that it has taken all steps necessary under law to enter into and be bound by this Second Amendment, and to authorize and empower Licensee's Real Estate & Construction Manager-IL/WI to sign this Second Amendment on Licensee's Behalf.

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

**"LICENSOR"**  
Village of Winnetka

By: \_\_\_\_\_  
Jessica B. Tucker, Village President  
Date: \_\_\_\_\_

[SEAL]  
ATTEST: \_\_\_\_\_  
Robert M. Bahan, Village Clerk

**"LICENSEE"**  
New Cingular Wireless PCS, LLC,  
a Delaware limited liability company

By: AT&T Mobility Corporation  
Its: Manager

By: \_\_\_\_\_  
Name: Scott A. Root  
Title: Real Estate & Construction Manager-IL/WI  
Date: \_\_\_\_\_

LICENSEE ACKNOWLEDGEMENT

STATE OF \_\_\_\_\_ )  
 ) ss:  
COUNTY OF \_\_\_\_\_ )

The undersigned, a notary public in and for said state, do hereby certify that on the \_\_\_\_ day of \_\_\_\_\_, 2010, personally appeared **Scott A. Root**, personally known to me or proved to me on the basis of satisfactory evidence to be **Manager of Network Implementations IL/WI** and the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in such capacity, and that by his signature on the instrument, the individual or the person upon behalf of which the individual acted, executed the instrument as their free and voluntary act, for the uses and purposes therein set forth.

\_\_\_\_\_  
Notary Public: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_

## **EXHIBIT C-1**

See the attached Construction Drawings comprised of 13 pages, dated August 3, 2011, and prepared by W-T Communication Design Group, LLC, 2675 Pratum Ave., Hoffman Estates, IL 60192.

**Notes:**

1. THIS EXHIBIT MAY BE REPLACED BY A LAND SURVEY AND/OR CONSTRUCTION DRAWINGS OF THE PREMISES ONCE RECEIVED BY LICENSEE.
2. ANY SETBACK OF THE PREMISES FROM THE PROPERTY'S BOUNDARIES SHALL BE THE DISTANCE REQUIRED BY THE APPLICABLE GOVERNMENTAL AUTHORITIES.
3. WIDTH OF ACCESS ROAD SHALL BE THE WIDTH REQUIRED BY THE APPLICABLE GOVERNMENTAL AUTHORITIES, INCLUDING POLICE AND FIRE DEPARTMENTS.

October 18, 2011

**R-30-2011  
Exhibit A**

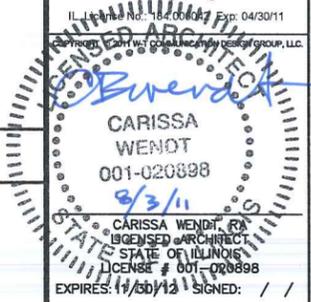
THESE DRAWINGS ARE PREPARED BASED ON RFDS  
 DATED: 04.01.11  
 REVISION: V02.1  
 GENERAL CONTRACTOR TO VERIFY AND INCORPORATE  
 MOST RECENT VERSION OF RFDS WITH "GOODMAN  
 NETWORKS" PRIOR TO CONSTRUCTION.



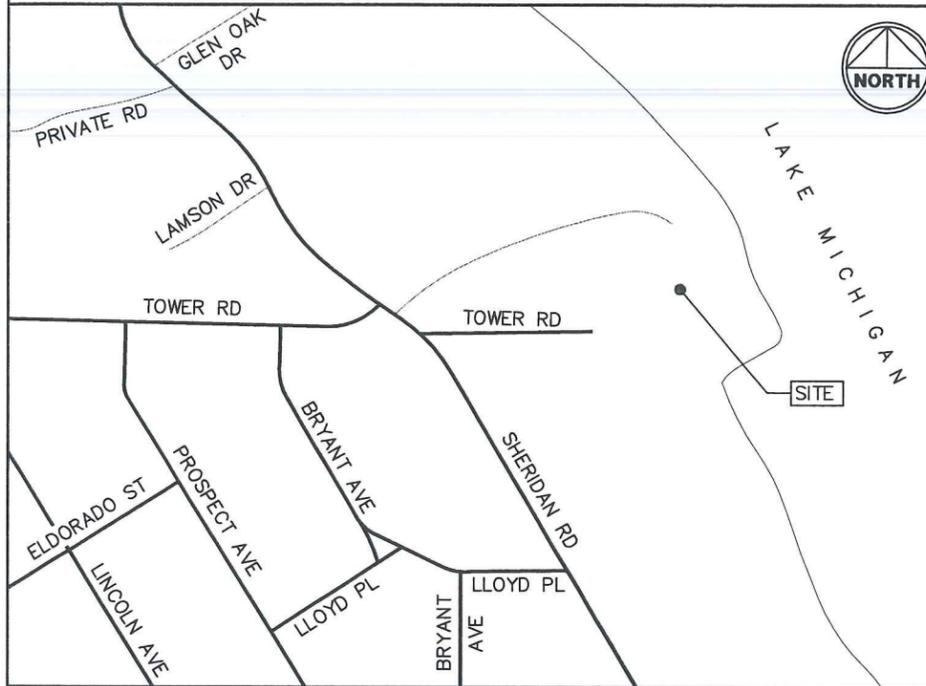
**SITE NAME:** WINNETKA  
**SITE NUMBER:** IL0062  
**SITE ADDRESS:** 725 TOWER ROAD  
 WINNETKA, ILLINOIS 60093  
**FA CODE:** 10005098

**WT**  
**W-T COMMUNICATION  
 DESIGN GROUP, LLC.**  
 WIRELESS INFRASTRUCTURE

2675 Pratum Avenue  
 Hoffman Estates, Illinois 60192  
 PH: (224) 293-6333 FAX: (224) 293-6444  
 www.wtengineering.com  
 IL License No: 18200007 Exp: 04/30/11



**VICINITY MAP**



**PROJECT SUMMARY**

**SCOPE OF WORK:** INSTALLATION OF NEW LTE, 3RD CARRIER, 4TH CARRIER AND FIBER EQUIPMENT IN EXISTING AT&T SHELTER. ADD (3) LTE ANTENNAS AT EXISTING RAD CENTER. INSTALL (12) NEW RRU UNITS ON NEW FIF RACKS IN EXISTING AT&T SHELTER.

**PROPERTY OWNER:** T.B.D.

**PROPERTY CONTACT:** T.B.D.

**PROPERTY COORDINATES:** LATITUDE: 42.11541°  
 LONGITUDE: -87.73100°

**ELEVATION (AMSL):** 596'

**JURISDICTION:** VILLAGE OF WINNETKA

**POWER COMPANY:** VILLAGE OF WINNETKA (847) 446-9550

**TELEPHONE COMPANY:** AT&T (800) 257-0902

**BUILDING CODES:** 2003 INTERNATIONAL BUILDING CODE  
 1999 NATIONAL ELECTRIC CODE

**APPROVALS**

AT&T CONSTRUCTION MGR.	DATE	GOODMAN ENGINEER	DATE
GOODMAN CONSTRUCTION MGR.	DATE	CONTRACTOR	DATE
PROPERTY OWNER	DATE	CONTRACTOR	DATE

**AT&T MOBILITY APPROVAL**

REAL ESTATE	DATE	OPERATION	DATE
RF	DATE		

**SHEET INDEX**

	REV
T-1 COVER SHEET	3
N-1 GENERAL NOTES	0
A-1 OVERALL ROOF PLAN	3
A-2 EQUIPMENT LAYOUT	3
A-2.1 COAX ROUTE	3
A-3 TOWER ELEVATION & ANTENNA ORIENTATION	3
A-4 ANTENNA DETAILS	1
A-5 CABLE MARKING DETAILS	1
A-6 DETAILS	3
E-1 UTILITY PLAN	2
E-2 UTILITY DETAILS & DIAGRAMS	1
SE-1 STRUCTURAL SHEET	A
SE-2 STRUCTURAL SHEET	A

**DRIVING DIRECTIONS**

DEPART FROM CHICAGO O'HARE INTERNATIONAL AIRPORT ONTO I-190 EAST. AT EXIT 1C, TAKE RAMP RIGHT FOR I-294 NORTH / TRI-STATE TOLLWAY TOWARD MILWAUKEE. TAKE RAMP RIGHT AND FOLLOW SIGNS FOR WILLOW RD. TURN RIGHT ONTO WILLOW RD. TURN LEFT ONTO GREEN BAY RD. TURN RIGHT ONTO OAK ST. TURN LEFT ONTO MAPLE ST. BEAR LEFT ONTO SHERIDAN RD. TURN RIGHT ONTO TOWER RD. ARRIVE AT 725 TOWER RD, WINNETKA, IL 60093.

**APPLICANT / LESSEE**

**NAME:** AT&T MOBILITY

**ADDRESS:** 930 NATIONAL PKWY, 4TH FLOOR  
 SCHAUMBURG, IL 60173

**DESIGN TEAM**

**DESIGNER:** GOODMAN NETWORKS  
 900 NATIONAL PKWY, SUITE 320  
 SCHAUMBURG, IL 60173

**CONTACT:** KAREN AMELIO  
 (214) 799-9439  
 KAmelio@GoodmanNetworks.com

**ENGINEER:** W-T COMMUNICATION DESIGN GROUP, LLC  
 2675 PRATUM AVE  
 HOFFMAN ESTATES, IL 60192  
 TEL: (224) 293-6333  
 FAX: (224) 293-6444

**PROJECT MANAGER:** RYAN MADSEN  
 Ryan.Madsen@WTEngineering.com



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

NOTE:  
 48 HOURS PRIOR TO DIGGING,  
 CONTRACTOR TO NOTIFY ALL  
 UTILITY COMPANIES TO LOCATE ALL  
 UNDERGROUND UTILITIES.



**COVER SHEET**  
 WINNETKA  
 IL0062  
 725 TOWER ROAD  
 WINNETKA, ILLINOIS 60093

REVISED PER CLIENT REVIEW	REVISED PER CLIENT REVIEW	REVISED PER CLIENT REVIEW	ISSUED FOR PERMIT	FOR REVIEW	REVISIONS	BY	CHK	APP'D
08.03.11	07.08.11	04.06.11	10.21.10	10.08.10				
3	2	1	0	A				

PROJECT NUMBER  
 T101062

DRAWING NUMBER  
**T-1**

THESE DRAWINGS ARE FULL SIZE AND ARE SCALABLE ON  
 11" X 17" SHEET SIZE AND ARE NOT REDUCED IN SIZE.

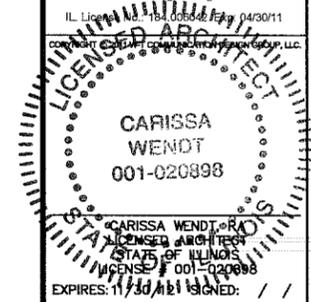




**W-T COMMUNICATION DESIGN GROUP, LLC.**  
WIRELESS INFRASTRUCTURE

2575 Pratum Avenue  
Hoffman Estates, Illinois 60192  
PH: (224) 293-6333 FAX: (224) 293-6444  
www.wtengineering.com

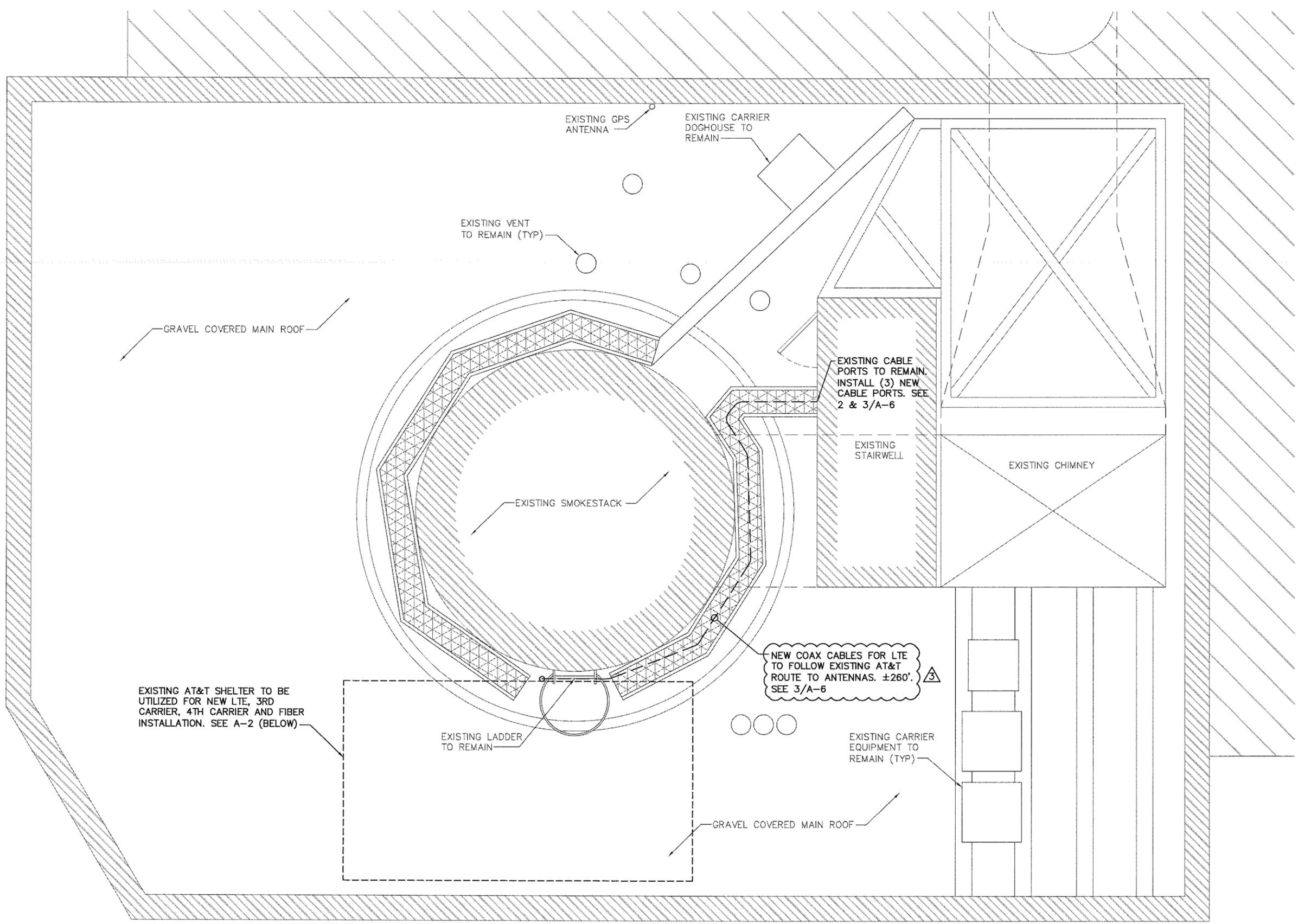
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**OVERALL ROOF PLAN**

WINNETKA  
L0062  
725 TOWER ROAD  
WINNETKA, ILLINOIS 60093

NO.	DATE	REVISIONS	BY	CHK	APP'D
3	08.03.11	REVISED PER CLIENT REVIEW	RSM	JKR	
2	07.08.11	REVISED PER CLIENT REVIEW	RSM	JKR	
1	04.06.11	REVISED PER CLIENT REVIEW	RSM	JKR	
0	10.21.10	ISSUED FOR PERMIT	RSM	JKR	
A	10.08.10	FOR REVIEW	RSM	JKR	



**OVERALL ROOF PLAN 1**  
SCALE: 1" = 5'-0"



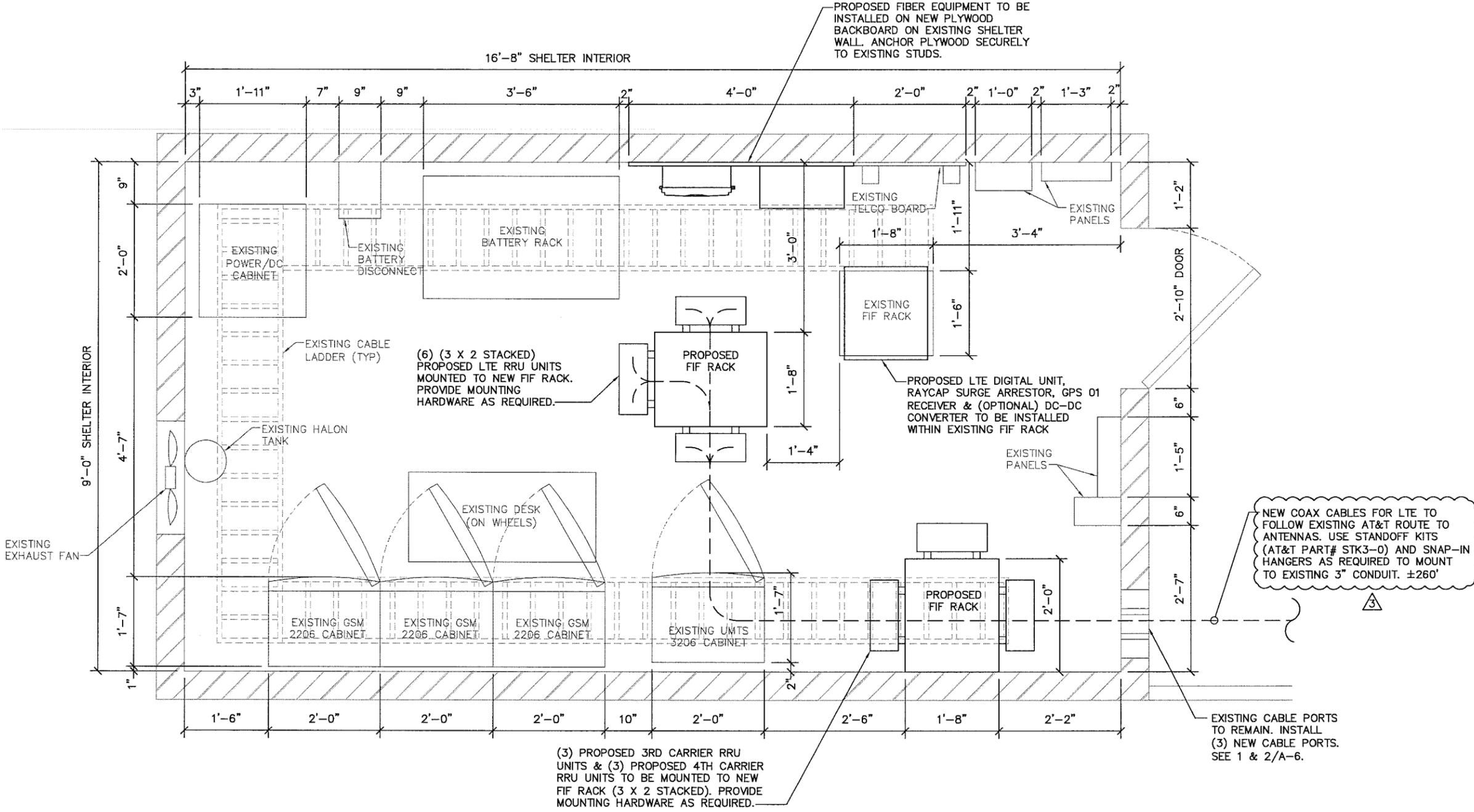
CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION TO ORIGINAL OR BETTER CONDITION

PROJECT NUMBER  
T101062

DRAWING NUMBER  
**A-1**

**NOTES:**

1. EXISTING SPACE FOR PROPOSED EQUIPMENT ASSUMED TO BE ADEQUATE. PRIOR TO INSTALLATION, COORDINATE FINAL LOCATION WITH CONSTRUCTION MANAGER.
2. COORDINATE WITH CONSTRUCTION MANAGER FOR THE PROVISION OF D.C. CIRCUIT BREAKERS AND OTHER ANCILLARY ITEMS TO SUPPORT THE NEW EQUIPMENT.
3. PROPERLY BOND ALL EQUIPMENT AND CONDUCTIVE SURFACES TO EXISTING GROUNDING PER NEC AND AT&T STANDARDS.



**EQUIPMENT LAYOUT**  
SCALE: 1/2" = 1'-0"



CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION TO ORIGINAL OR BETTER CONDITION



**EQUIPMENT LAYOUT**  
WINNETKA  
ILO062  
725 TOWER ROAD  
WINNETKA, ILLINOIS 60088

**WT**  
**W-T COMMUNICATION DESIGN GROUP, LLC.**  
WIRELESS INFRASTRUCTURE  
2675 Pratum Avenue  
Hoffman Estates, Illinois 60192  
PH: (224) 293-6333 FAX: (224) 293-6444  
www.wtengineering.com  
ILL. License No.: 184.006042 Exp: 04/30/11

COPYRIGHT © 2011 W-T COMMUNICATION DESIGN GROUP, LLC.  
**LICENSED ARCHITECT**  
CARISSA WENDT  
001-020898  
CARISSA WENDT, RA  
LICENSED ARCHITECT  
STATE OF ILLINOIS  
LICENSE # 001-020898  
EXPIRES 12/31/11

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	08.03.11	REVISED PER CLIENT REVIEW	RSM	JKR	
2	07.06.11	REVISED PER CLIENT REVIEW	RSM	JKR	
1	04.06.11	REVISED PER CLIENT REVIEW	RSM	JKR	
0	10.21.10	ISSUED FOR PERMIT	RSM	JKR	
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PROJECT NUMBER  
T101062  
DRAWING NUMBER  
**A-2**

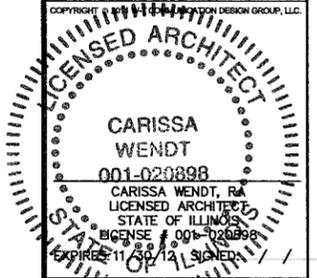
THESE DRAWINGS ARE FULL SIZE AND ARE SCALABLE ON 11" X 17" SHEET SIZE AND ARE NOT REDUCED IN SIZE.



**W-T COMMUNICATION  
DESIGN GROUP, LLC.**  
WIRELESS INFRASTRUCTURE

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Hoffman Estates, Illinois 60182  
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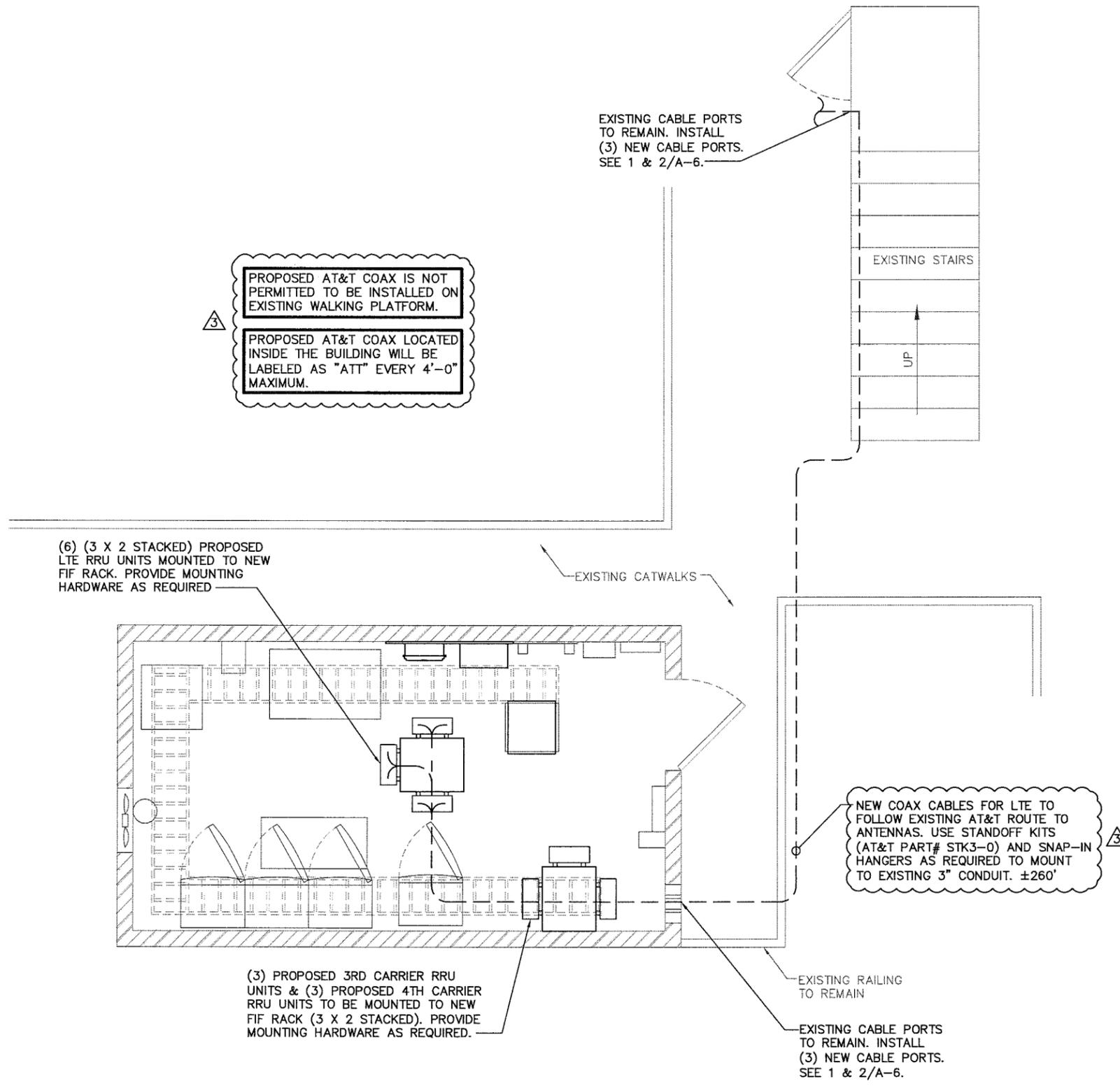
IL License No.: 184.006042 Exp: 04/30/11



COAX ROUTE

WINNETKA  
IL0062

726 TOWER ROAD  
WINNETKA, ILLINOIS 60089



**COAX ROUTE**  
SCALE: 1/4" = 1'-0"



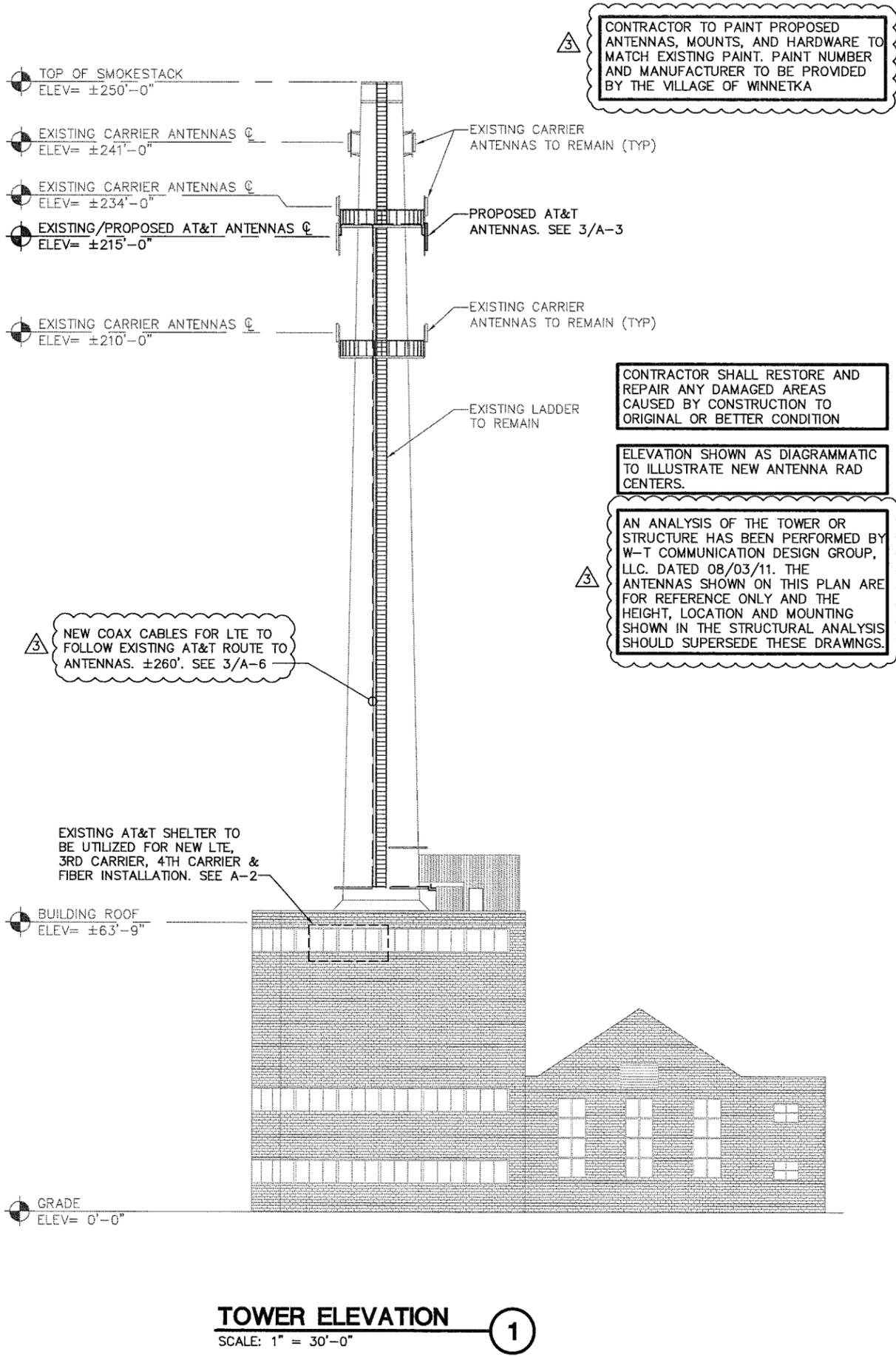
CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION TO ORIGINAL OR BETTER CONDITION

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	08.03.11	REVISED PER CLIENT REVIEW	RSM	JKR	
2	07.08.11	REVISED PER CLIENT REVIEW	RSM	JKR	
1	04.08.11	REVISED PER CLIENT REVIEW	RSM	JKR	
0	10.21.10	ISSUED FOR PERMIT	RSM	JKR	
A	10.08.10	FOR REVIEW	RSM	JKR	
		REVISIONS			

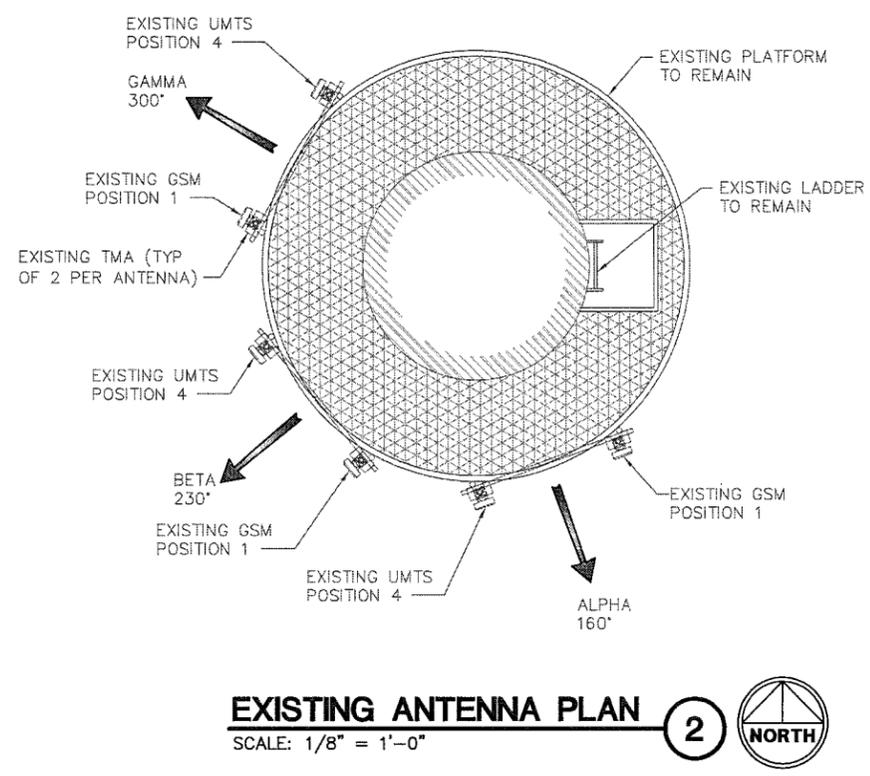
PROJECT NUMBER  
T101062

DRAWING NUMBER  
**A-2.1**

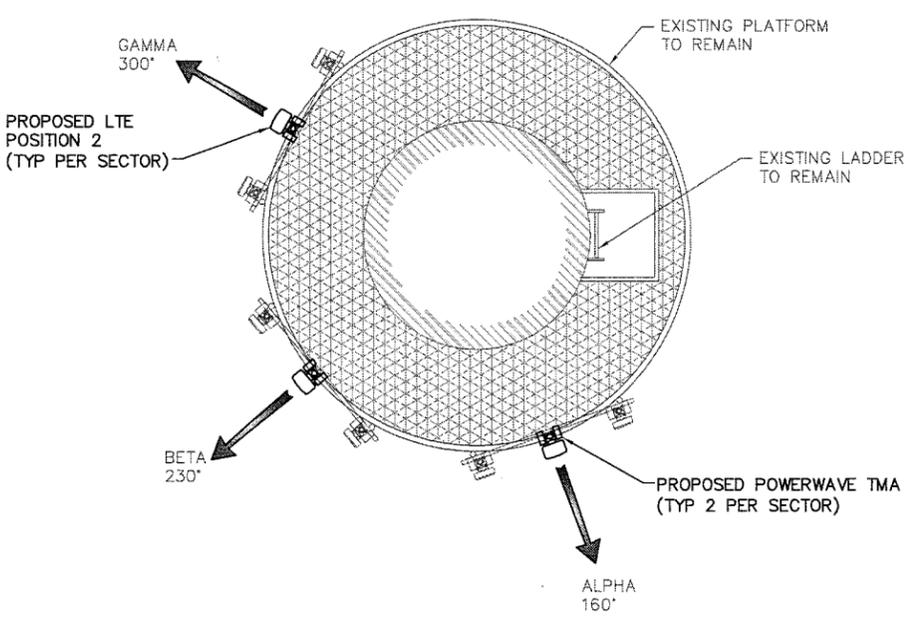
THESE DRAWINGS ARE FULL SIZE AND ARE SCALABLE ON 11" X 17" SHEET SIZE AND ARE NOT REDUCED IN SIZE.



**TOWER ELEVATION** 1  
SCALE: 1" = 30'-0"



**NEW ANTENNA PLAN** 3  
SCALE: 1/8" = 1'-0"



**W-T**  
**W-T COMMUNICATION DESIGN GROUP, LLC.**  
WIRELESS INFRASTRUCTURE  
2675 Pratum Avenue  
Hoffman Estates, Illinois 60192  
PH: (224) 293-6333 FAX: (224) 293-6444  
www.wtengineering.com  
IL License No.: 184-008042 Exp: 04/30/11

**LICENSED ARCHITECT**  
**CARISSA WENDT**  
001-020898  
CARISSA WENDT, R.A.  
LICENSED ARCHITECT  
STATE OF ILLINOIS  
LICENSE NO. 001-020898  
EXPIRES 03/31/12 SIGN

**GoodmanNetworks**  
Network Knowledge... Delivered

**at&t**

**TOWER ELEVATION & ANTENNA ORIENTATION**

**WINNETKA**  
IL0062  
726 TOWER ROAD  
WINNETKA, ILLINOIS 60093

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	08.03.11	REVISED PER CLIENT REVIEW	RSM	JKR	
2	07.08.11	REVISED PER CLIENT REVIEW	RSM	JKR	
3	04.06.11	REVISED PER CLIENT REVIEW	RSM	JKR	
4	10.21.10	ISSUED FOR PERMIT	RSM	JKR	
5	10.08.10	FOR REVIEW	RSM	JKR	

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PROJECT NUMBER  
T101062

DRAWING NUMBER  
**A-3**

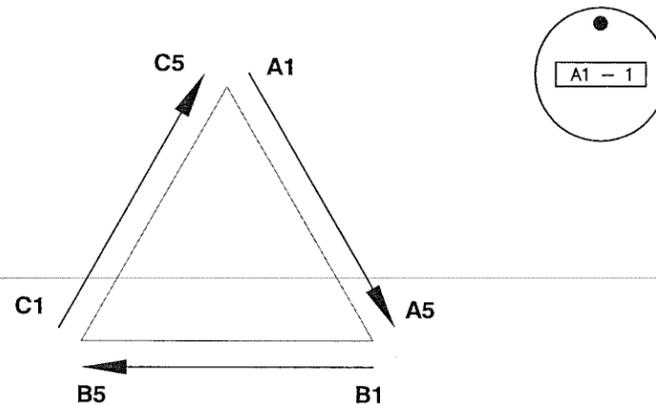


**COLOR CODE NOTES:**

- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE
- ALL COLOR BANDS INSTALLED AT THE TOWER TOP SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACING BETWEEN EACH COLOR
- ALL COLOR BANDS INSTALLED AT OR NEAR THE GROUND MAY BE ONLY 3/4" WIDE. EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS
- EACH MAIN COAX SHALL COLOR CODED WITH (1) SET OF 3" BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH 3/4" COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING
- ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" BANDS ON EACH END OF THE BOTTOM JUMPER
- ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE
- EACH COLOR BAND SHALL HAVE A MINIMUM OF (3) WRAPS AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING
- X-POLE ANTENNAS SHOULD USE "XX-1" FOR THE "+45" PORT, "XX-2: FOR THE "-45" PORT
- COLORBAND #4 REFERS TO THE FREQUENCY BAND: ORANGE=850, VIOLET=1900. USED ON JUMPERS ONLY
- RF FEEDLINE SHALL BE IDENTIFIED WITH A METAL TAG (STAINLESS OR BRASS) AND STAMPED WITH THE SECTOR, ANTENNA POSITION AND CABLE NUMBER.
- ANTENNAS MUST BE IDENTIFIED USING THE SECTOR LETTER AND ANTENNA NUMBER, WITH A BLACK MARKER PRIOR TO INSTALLATION

TO PROVIDE ADDITIONAL IDENTIFICATION RF CABLES SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, ANTENNA POSITION, AND CABLE NUMBER. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE. THE TAG SHOULD BE LABELED AS SHOWN IN FIGURE 1.

**FIGURE 1: CABLE MARKING TAGS**



**FIGURE 2: ANTENNA ORIENTATION**

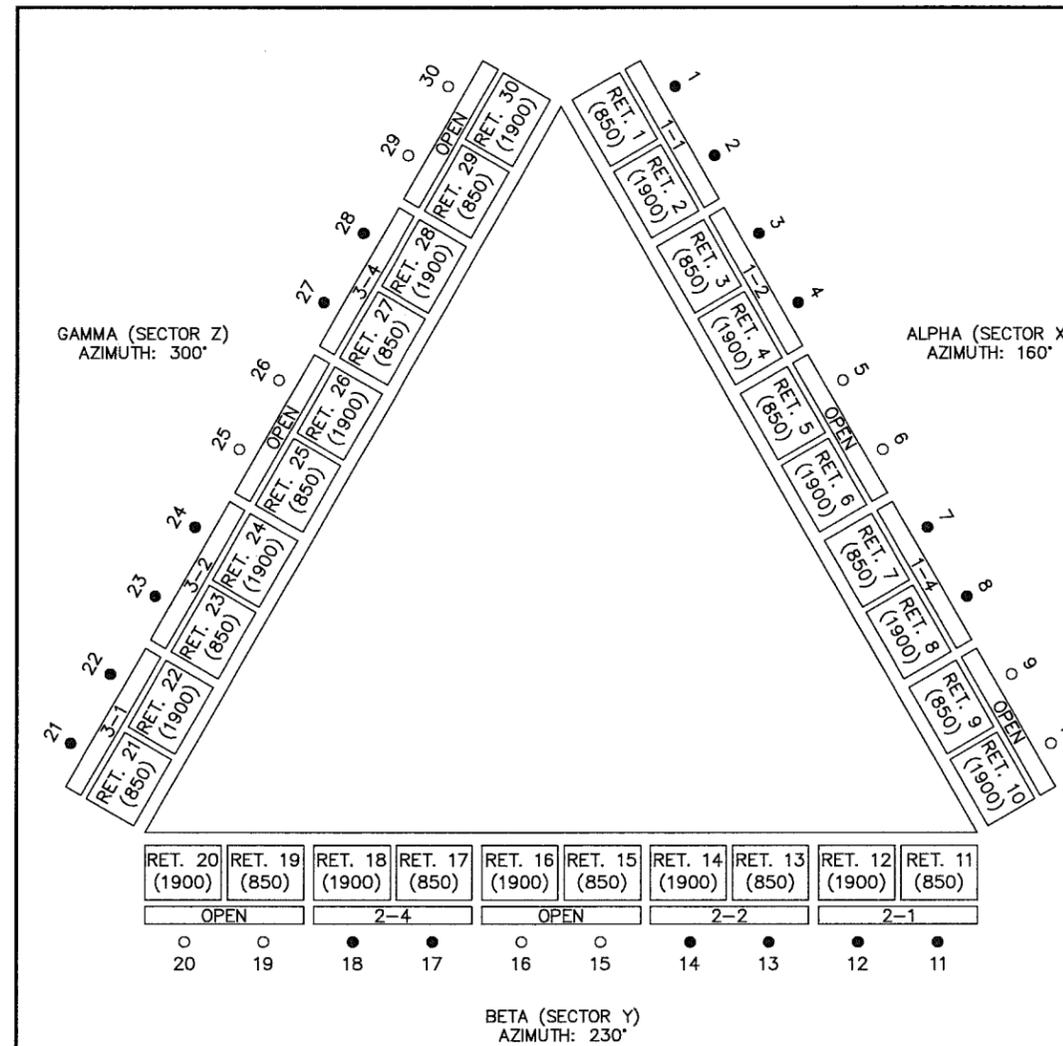
CABLE MARKING LOCATIONS TABLE		
TAPE	TAG	LOCATION
X		EACH TOP JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS
X		EACH MAIN COAX SHALL BE COLOR CODED (1) SET OF 3" WIDE BANDS NEAR THE TOP JUMPER CONNECTION AND WITH THE (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING
	X	MARKING TAGS SHALL BE ATTACHED AT CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER
X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

CABLE MARKING COLOR CONVENTION TABLE								
SECTOR ALPHA, A, X, #1	A1-1 +45	A1-2 -45	A2-1 +45	A2-2 -45	A3-1 +45	A3-2 -45	A4-1 +45	A4-2 -45
SECTOR ANTENNA PORT (+/-)	RED WHITE SLATE	RED WHITE BROWN	RED ORANGE SLATE	RED ORANGE BROWN	RED BROWN SLATE	RED BROWN BROWN	RED VIOLET SLATE	RED VIOLET BROWN
BAND (850/1900)	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET
SECTOR BETA, B, Y, #2	B1-1 +45	B1-2 -45	B2-1 +45	B2-2 -45	B3-1 +45	B3-2 -45	B4-1 +45	B4-2 -45
SECTOR ANTENNA PORT (+/-)	BLUE WHITE SLATE	BLUE WHITE BROWN	BLUE ORANGE SLATE	BLUE ORANGE BROWN	BLUE BROWN SLATE	BLUE BROWN BROWN	BLUE VIOLET SLATE	BLUE VIOLET BROWN
BAND (850/1900)	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET
SECTOR GAMMA, C, Z, #3	C1-1 +45	C1-2 -45	C2-1 +45	C2-2 -45	C3-1 +45	C3-2 -45	C4-1 +45	C4-2 -45
SECTOR ANTENNA PORT (+/-)	GREEN WHITE SLATE	GREEN WHITE BROWN	GREEN ORANGE SLATE	GREEN ORANGE BROWN	GREEN BROWN SLATE	GREEN BROWN BROWN	GREEN VIOLET SLATE	GREEN VIOLET BROWN
BAND (850/1900)	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET
SECTOR DELTA, D, #4	D1-1 +45	D1-2 -45	D2-1 +45	D2-2 -45	D3-1 +45	D3-2 -45	D4-1 +45	D4-2 -45
SECTOR ANTENNA PORT (+/-)	YELLOW WHITE SLATE	YELLOW WHITE BROWN	YELLOW ORANGE SLATE	YELLOW ORANGE BROWN	YELLOW BROWN SLATE	YELLOW BROWN BROWN	YELLOW VIOLET SLATE	YELLOW VIOLET BROWN
BAND (850/1900)	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET	ORANGE/ VIOLET

**CABLE COLOR CODING**

SCALE: NONE

1



**ANTENNA PLATFORM ASSIGNMENT**

SCALE: NONE

2



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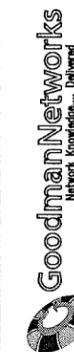
Professional Engineer, State of Illinois

LICENSED ARCHITECT

CARISSA WENDT  
001-020898

CARISSA WENDT, RA  
LICENSED ARCHITECT  
STATE OF ILLINOIS  
LICENSE NO. 001-020898

EXPIRES 11/30/11



CABLE MARKING DETAILS

WINNETKA  
IL 0082

726 TOWER ROAD  
WINNETKA, ILLINOIS 60093

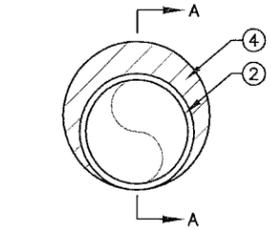
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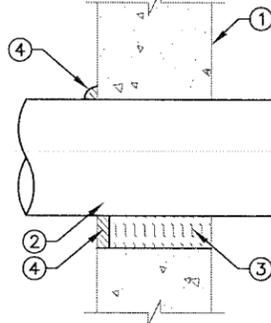
DRAWING NUMBER

**A-5**

U.L. SYSTEM NO. C-AJ-1150  
 CONDUIT THROUGH BEARING WALL SIMILAR TO U.L. DESIGN NO. U902  
 F RATING = 3-HR.  
 T RATING = 0-HR.



- FLOOR OR WALL ASSEMBLY --- MINIMUM 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS \*. MAX DIAMETER OF OPENING IS 8". SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
- THROUGH PENETRATIONS --- ONE METALLIC PIPE OR CONDUIT TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MINIMUM 0". (POINT CONTACT) TO MAXIMUM 1-3/8". THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:
  - STEEL PIPE --- NOMINAL 6" DIAMETER (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE.
  - IRON PIPE --- NOMINAL 6" DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE.
  - CONDUIT --- NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOMINAL 6" DIAMETER (OR SMALLER) STEEL CONDUIT.
- PACKING MATERIAL --- MINIMUM 4" THICKNESS OF MIN 4.0 PCF MINERAL WOOL BATTING INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
- FILL, VOID, OR CAVITY MATERIAL\* --- SEALANT --- MINIMUM 1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR AND WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MINIMUM 1/2" DIAMETER BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. W RATING APPLIES ONLY WHEN CP601S OR CP604 SEALANT IS USED.  
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC --- CP601S, CP604, CP606 OR FS---ONE SEALANT  
 \*BEARING THE UL CLASSIFICATION MARK



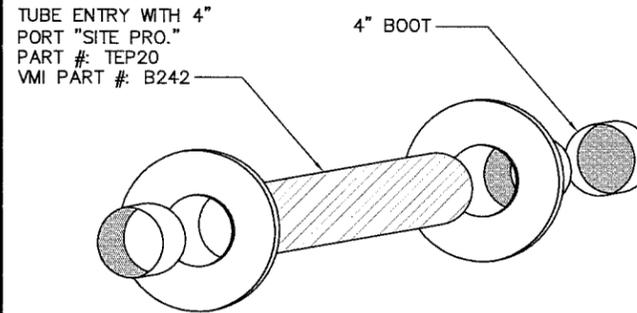
SECTION A-A

**OUTER WALL PENETRATION**

SCALE: NONE

1

NOTE:  
 IF EXISTING CONSTRUCTION VARIES FROM THIS DETAIL, AN EQUAL 3-HOUR U.L. PENETRATION APPROPRIATE FOR THE EXISTING WALL TYPE SHALL BE CONSTRUCTED

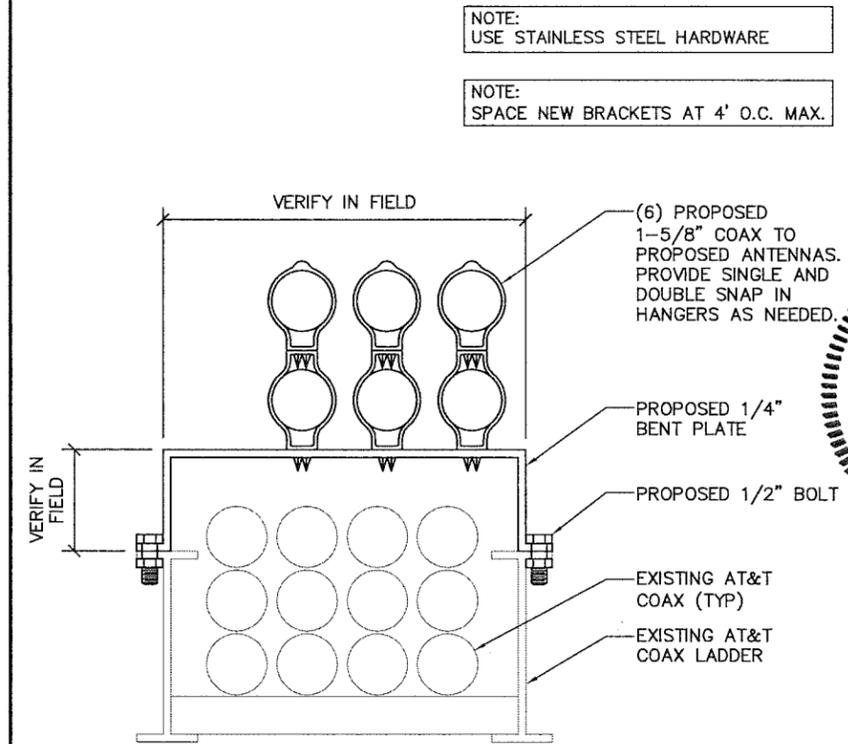


TUBE ENTRY WITH 4" PORT "SITE PRO."  
 PART #: TEP20  
 VMI PART #: B242

**PROPOSED CABLE PORT DETAIL**

SCALE: NONE

2



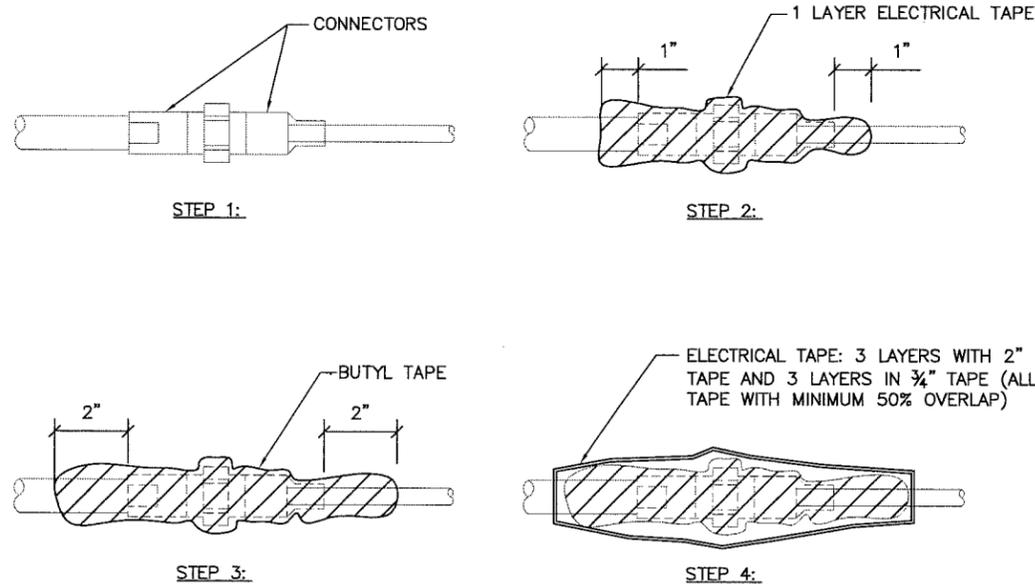
NOTE:  
 USE STAINLESS STEEL HARDWARE

NOTE:  
 SPACE NEW BRACKETS AT 4' O.C. MAX.

**COAX MOUNT DETAIL**

SCALE: NONE

3



STEP 1:

STEP 2:

STEP 3:

STEP 4:

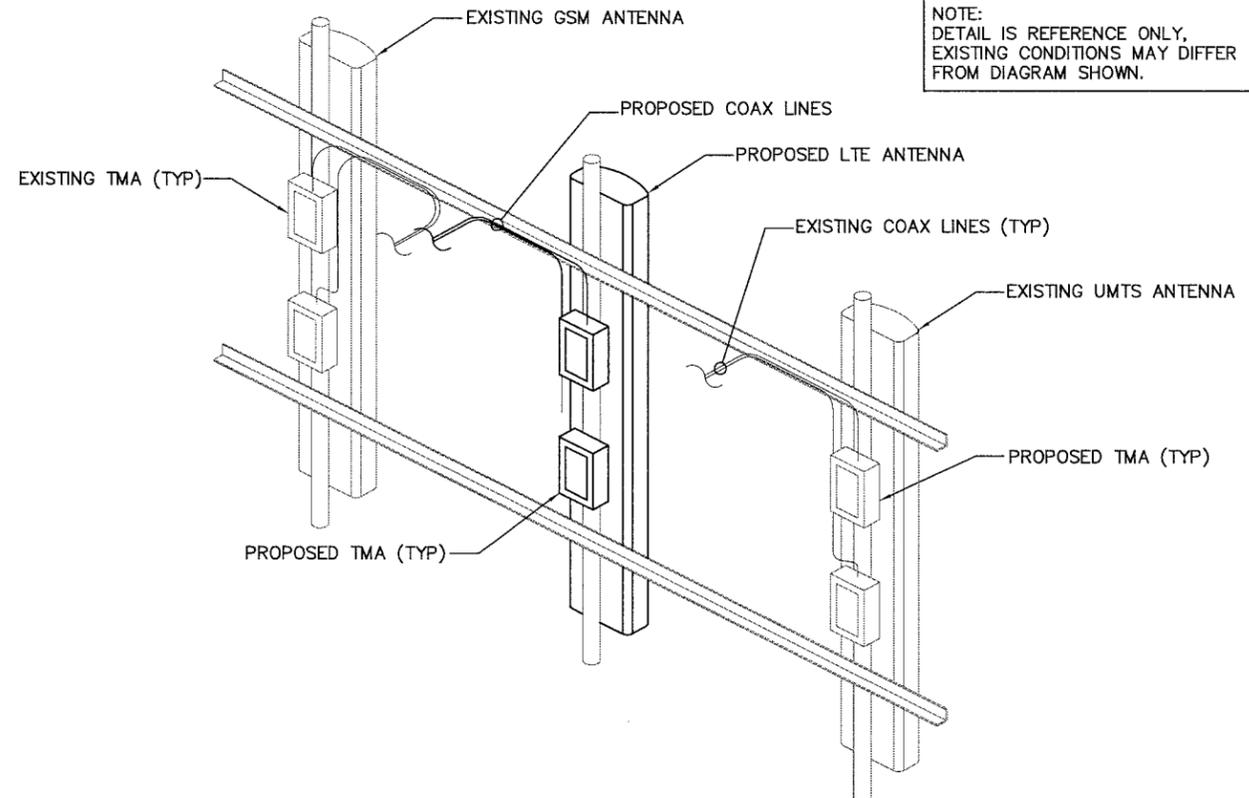
NOTES:

- ALL TAPE ENDS SHALL BE CUT (DO NOT STRETCH). COAT WITH 3M SCOTCHKOTE SPRAY SEALER.
- VERTICAL CONNECTIONS SHALL BE TAPED FROM THE BOTTOM UP SO OVERLAP MOVES WATER AWAY FROM CONNECTION, TYP.

**CABLE CONNECTOR WEATHERPROOFING**

SCALE: NONE

4



NOTE:  
 DETAIL IS REFERENCE ONLY, EXISTING CONDITIONS MAY DIFFER FROM DIAGRAM SHOWN.

**LTE ANTENNA SYSTEM - ISOMETRIC**

SCALE: NONE

5



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DETAILS  
 WINNETKA  
 IL 0082

725 TOWER ROAD  
 WINNETKA, ILLINOIS 60093



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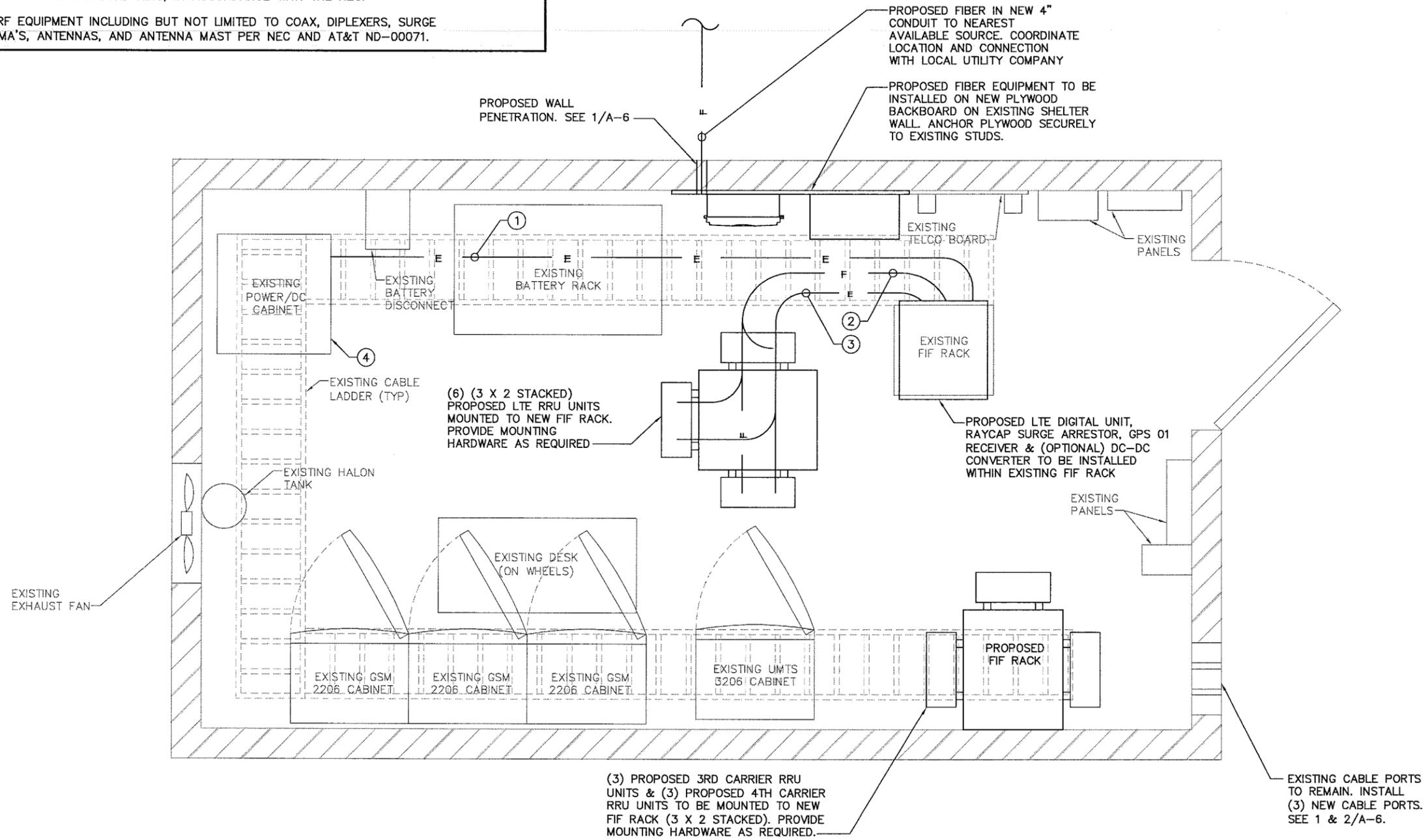
DRAWING NUMBER

**A-6**

**GROUNDING NOTES**

- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS PER NEC AND AT&T ND-00071.
- CONNECTIONS TO THE GROUND BAR SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH NEC, SHALL BE FURNISHED AND INSTALLED WITH POWER CIRCUITS TO BTS EQUIPMENT.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- GROUND ALL RF EQUIPMENT INCLUDING BUT NOT LIMITED TO COAX, DIPLEXERS, SURGE ARRESTERS, TMA'S, ANTENNAS, AND ANTENNA MAST PER NEC AND AT&T ND-00071.

- PROVIDE (4) #4/0 AWG STRANDED COPPER CONDUCTORS FROM THE EXISTING 24V DC POWER PLANT TO THE PROPOSED DC TO DC CONVERTER.
- PROVIDE (2) 1-PAIR FIBER CABLES FROM LTE RADIO IN EXISTING FIF RACK TO EACH LTE RRU UNIT MOUNTED TO NEW FIF RACK.
- PROVIDE (1) 2-CONDUCTOR #8 AWG WIRE FOR DC POWER BETWEEN RAYCAP SURGE PROTECTION UNIT MOUNTED IN THE EXISTING FIF RACK TO EACH LTE RRU UNIT MOUNTED TO NEW FIF RACK.
- PROVIDE (1) 20A DC CIRCUIT BREAKER (1 PER LTE RRU UNIT) AND (1) 20A DC CIRCUIT BREAKER FOR THE LTE DIGITAL UNIT.



**ELECTRICAL PLAN** 1 

SCALE: 1/2" = 1'-0"

**WT**

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**LICENSED ARCHITECT**

CARISSA WENDT  
001-020898

CARISSA WENDT, RA  
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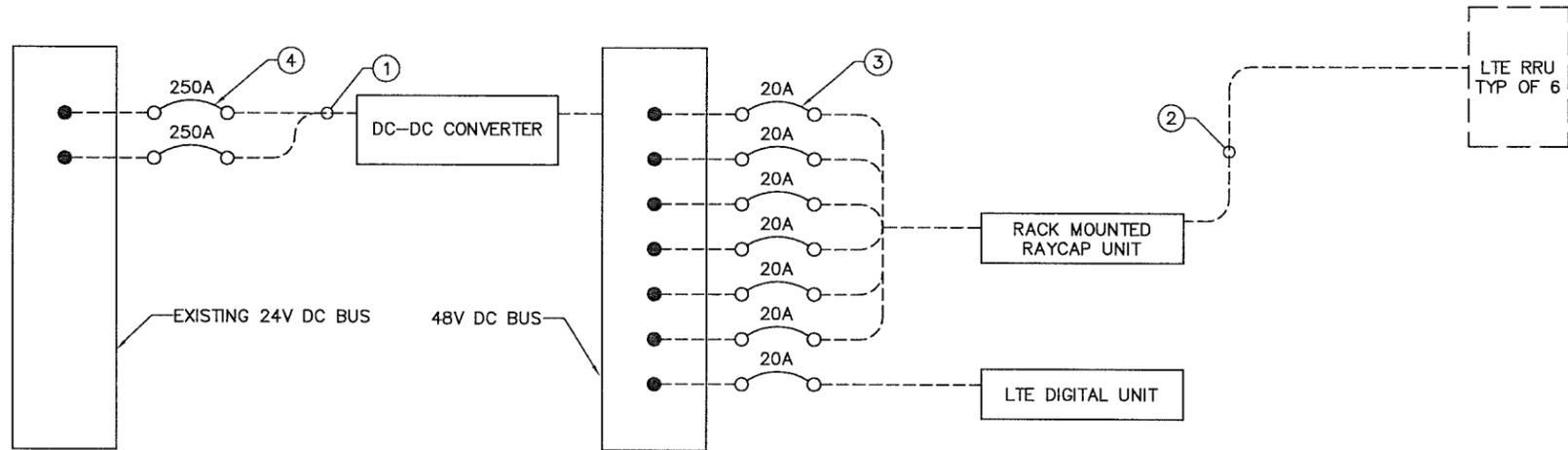
726 TOWER ROAD  
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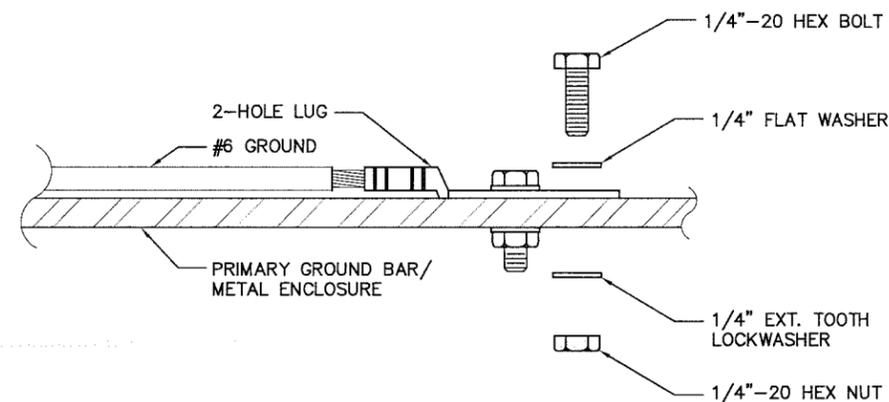
PROJECT NUMBER  
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DRAWING NUMBER  
**E-1**



- ① PROVIDE (4) #4/0 AWG STRANDED COPPER CONDUCTORS FROM THE EXISTING 24V DC POWER PLANT TO THE PROPOSED DC TO DC CONVERTER.
- ② PROVIDE (1) 2-CONDUCTOR #8 AWG DC WIRE FOR POWER FROM RAYCAP SURGE PROTECTION UNIT MOUNTED IN THE EXISTING FIF RACK TO EACH LTE RRU UNIT MOUNTED TO NEW FIF RACK.
- ③ PROVIDE (7) 20A DC CIRCUIT BREAKER (1 PER LTE RRU UNIT) AND (1) 20A DC CIRCUIT BREAKER FOR THE LTE DIGITAL UNIT.
- ④ PROVIDE (2) 250A DC CIRCUIT BREAKERS FOR THE PROPOSED DC TO DC CONVERTER.

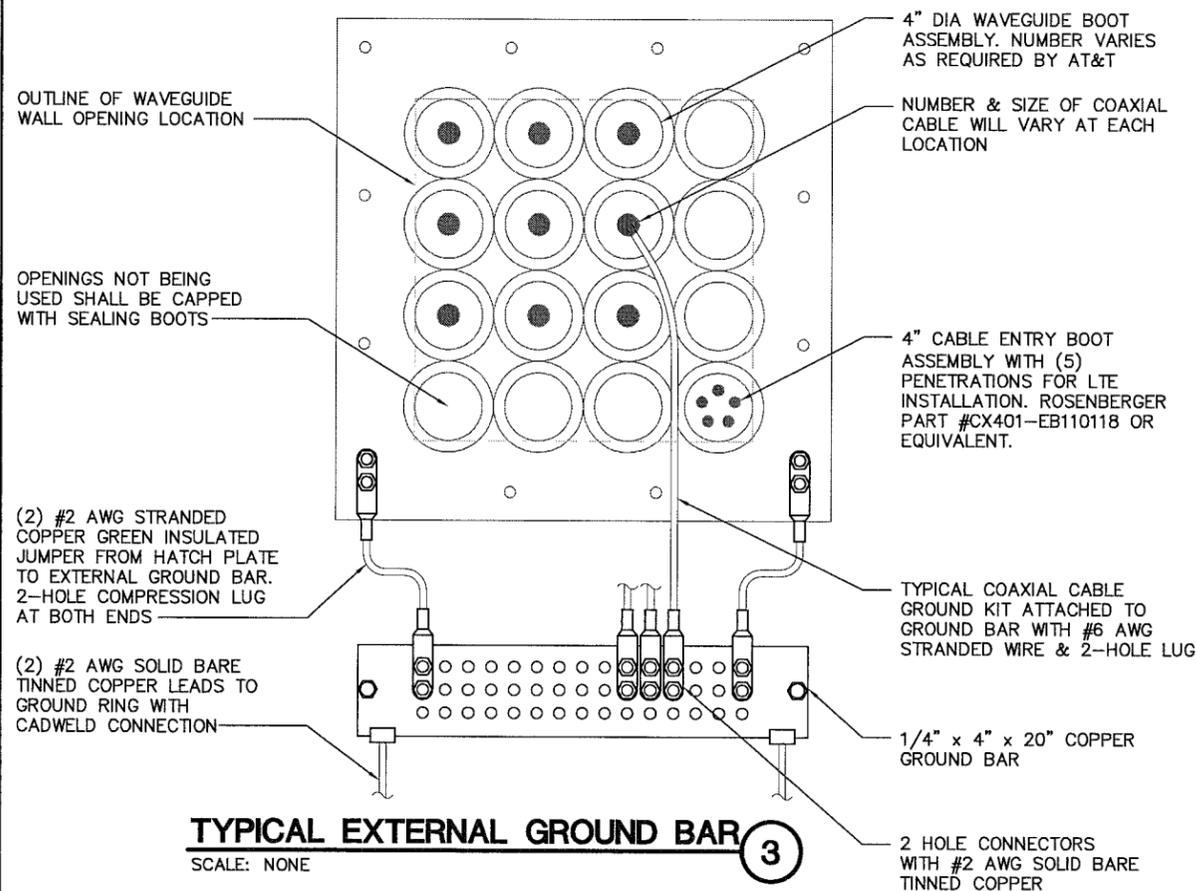
**DC ONE LINE DIAGRAM** ①  
SCALE: NONE



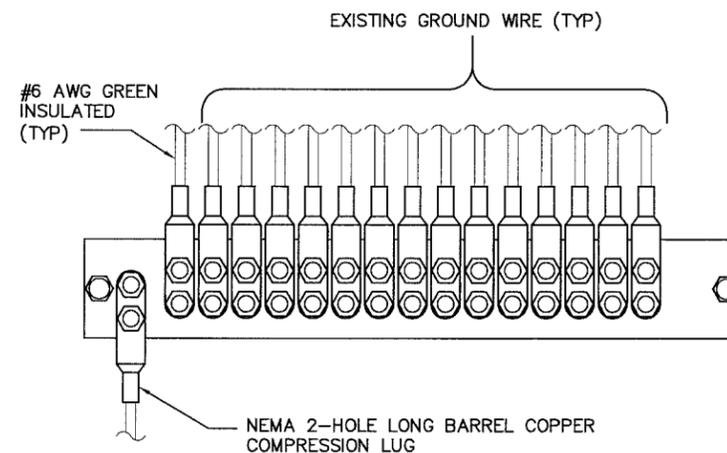
**INSTALLATION NOTES**

1. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF 2 EXPOSED THREADS
2. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT
3. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND
4. USE SOLID COPPER WIRE AND MECHANICAL 2-HOLE LUG FOR ALL EXTERIOR GROUNDING

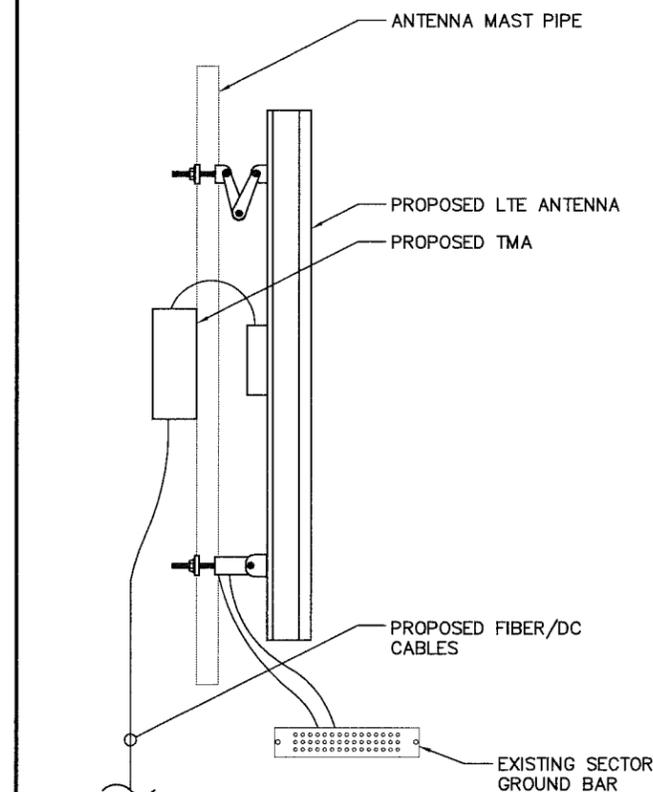
**MECHANICAL GROUND CONNECTION** ②  
SCALE: NONE



**TYPICAL EXTERNAL GROUND BAR** ③  
SCALE: NONE



**TYPICAL ANTENNA GROUND BAR** ④  
SCALE: NONE



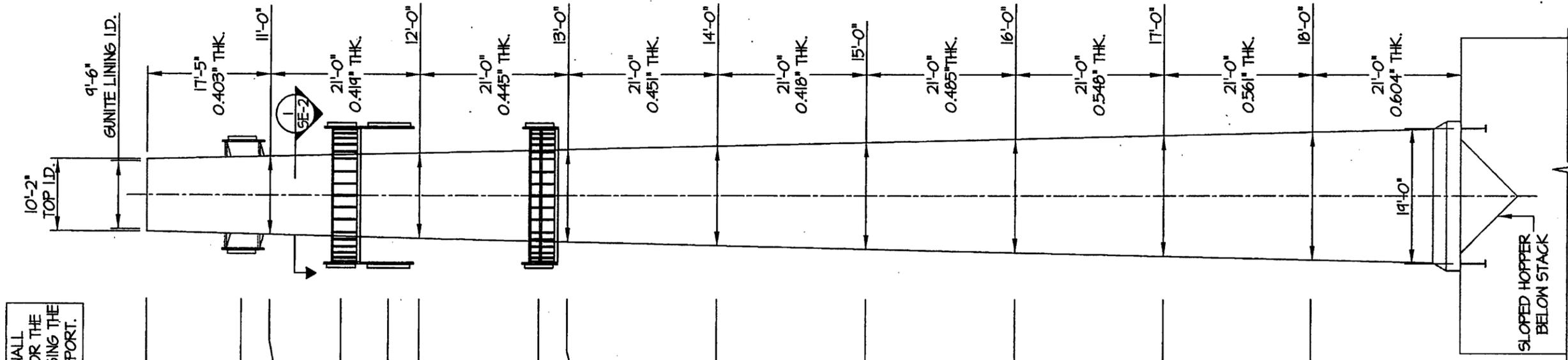
**LTE ANTENNA GROUNDING SCHEMATIC** ⑤  
SCALE: NONE

**W-T**  
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**E-2**  
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NOTE: THICKNESSES OF THE CHIMNEY WALL SHOWN ARE AVERAGE THICKNESSES FOR THE SECTIONS WHICH WERE CALCULATED USING THE MEASUREMENTS FROM THE CHIMNEY REPORT.

- 1/5 SMOKESTACK  
EL. ±249'-2"
- Ø / EXISTING ANTENNAS  
EL. ±235'-10"
- WALL THICKNESS CHANGE  
EL. ±231'-9"
- Ø / EXISTING ANTENNAS  
EL. ±221'-8"
- Ø / NEW ANTENNAS  
EL. ±215'-0"
- WALL THICKNESS CHANGE  
EL. ±210'-9"
- Ø / NEW CLEARWIRE ANTENNAS  
EL. ±193'-10"
- WALL THICKNESS CHANGE  
EL. ±189'-9"
- WALL THICKNESS CHANGE  
EL. ±168'-9"
- WALL THICKNESS CHANGE  
EL. ±147'-9"
- WALL THICKNESS CHANGE  
EL. ±126'-9"
- WALL THICKNESS CHANGE  
EL. ±105'-9"
- WALL THICKNESS CHANGE  
EL. ±84'-9"
- T/BUILDING ROOF  
B/STEEL SMOKESTACK  
EL. ±63'-9"

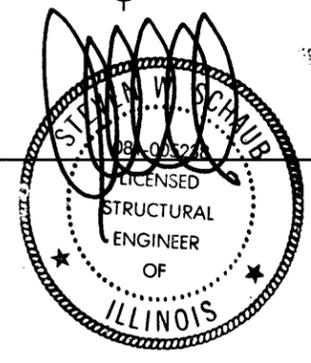
**CHIMNEY ELEVATION** ①  
SCALE: 1/16" = 1'

**NOTES:**

- EXISTING CONDITIONS WILL BE CHECKED AND VERIFIED IN FIELD BY THE CONTRACTOR PRIOR TO FABRICATION AND INSTALLATION. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED AND CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER IMMEDIATELY.
- W-T COMMUNICATION DESIGN GROUP, LLC. WAS PROVIDED WITH CHIMNEY INSPECTION REPORT BY 'BEDNASH CONSULTING, INC.' DATED MARCH 9, 2011. IT WAS PROPOSED TO ADD ANTENNAS AT ELEVATION 215'-0" FROM THE GROUND LEVEL. THE MAINTAINANCE ACTIONS, PER THE RECOMMENDATIONS LISTED IN THE REPORT, SHALL BE PERFORMED BEFORE THE INSTALLATION OF THE ANTENNAS.
- DO NOT SCALE DRAWINGS.

**NOTE:** PRIOR TO ANTENNA INSTALLATION, CONTRACTOR MUST REPAIR CHIMNEY AS PER INSPECTION REPORT PREPARED BY "BEDNASH CONSULTING, INC." DATED MARCH 9, 2011.

- INSTALL SAFETY CHAINS OR GATES AT THE LADDER OPENINGS OF THE LOWER PLATFORMS. SAFETY CHAINS OR SAFETY GATES ARE REQUIRED ACROSS THE LADDER OPENINGS OF THE ELEVATIONS 87'-0" AND 193'-10" PLATFORMS.



**CERTIFICATION**  
THE INFORMATION ON THIS DRAWING, WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, COMPLIES WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS, BUILDING CODES, AND ORDINANCES.

STEVEN W. SCHAUB, S.E.  
ILLINOIS R.A. LICENSE NO. 081-005238  
DATE: 04-06-11  
LICENSE EXPIRATION DATE: 11-30-2012

**W-T**  
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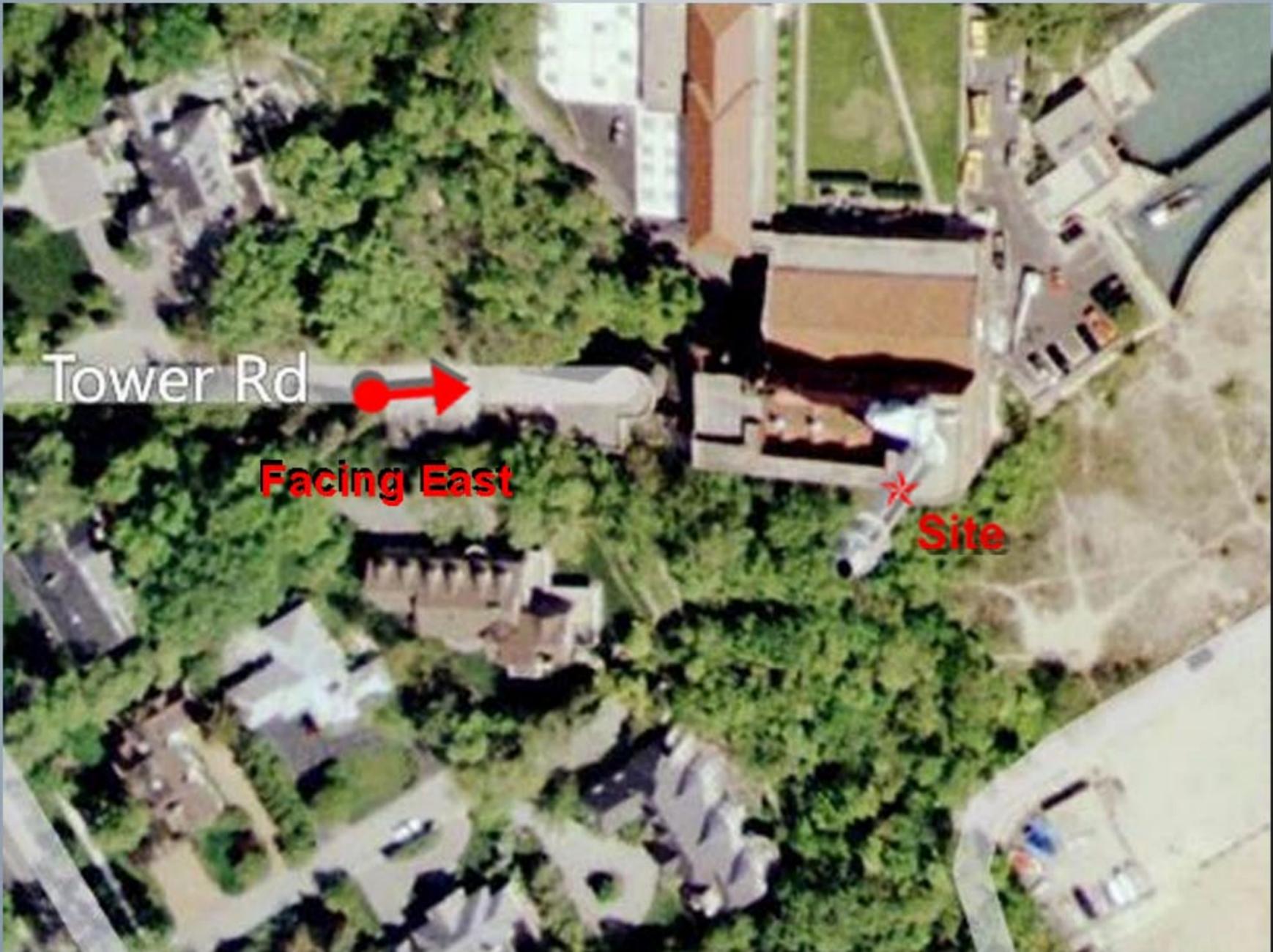
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NO.	DATE	REVISIONS	BY	CHK	APP'D
A	4.6.11	ORIGINAL ISSUE	BMS	NSF	SAD

PROJECT NUMBER: T101062  
DRAWING NUMBER: SE-1





**Disclaimer:** This photo simulation is an artist's depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.<sup>40</sup>



Existing AT&T  
Powerwave 7750  
Antenna To Remain  
(2 per sector)



**EXISTING**



Proposed AT&T  
Powerwave  
P65-16-XCH-RR  
Antenna  
(1 per sector)

Existing AT&T  
Powerwave 7750  
Antenna To Remain  
(2 per sector)



**PROPOSED**



**Disclaimer:** This photo simulation is an artist's depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.<sup>42</sup>

2 TMAs PER  
EXISTING  
ANTENNA  
(12 TOTAL)

Existing AT&T  
Powerwave 7750  
Antenna To Remain  
(2 per sector)



**EXISTING**



**Disclaimer:** This photo simulation is an artist's depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.<sup>43</sup>

2 TMAs PER  
EXISTING  
ANTENNA  
(12 TOTAL)

2 Proposed AT&T  
TMA's Per LTE  
Antenna (6 Total)

Existing AT&T  
Powerwave 7750  
Antenna To Remain  
(2 per sector)

Proposed AT&T  
Powerwave  
P65-16-XCH-RR  
Antenna  
(1 per sector)



**PROPOSED**

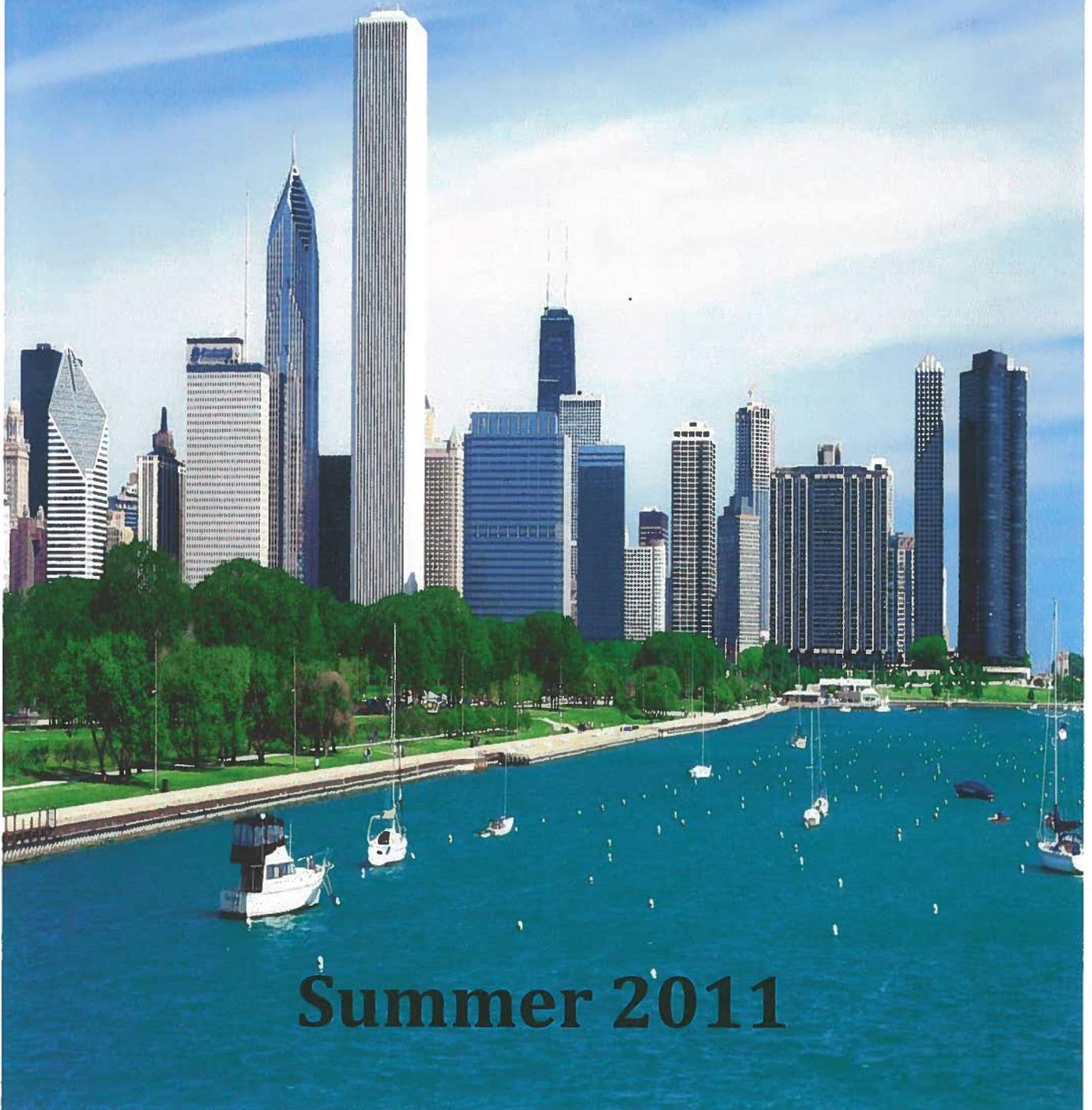


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# Lake Michigan Report Card

Senator Mark Kirk



Summer 2011

### ***Executive Summary***

*We need to protect Lake Michigan, the Crown Jewel of our environment and the source of drinking water for millions. To keep you informed on the health of the lake, I am publishing our first Lake Michigan Report Card. This Report Card assesses beach water quality, sewage pollution, mercury contamination, water levels and invasive species of the lake. It identifies how we can take action to protect Lake Michigan. The overall grade of Lake Michigan is a C.*

- 1) On beach water quality our grade is a D.
  - There are 52 public beaches in Illinois. According to the Illinois Department of Public Health, we had 579 beach closures or contamination advisories last year.
  - Persistent beach closures are a threat to public health and cost millions in lost revenue.
  - In response, Congress should enact the Beach Act to improve contamination warnings and assessment to lower the number of beach closings.
  
- 2) For sewage pollution our grade is a C.
  - More than 24 billion gallons of raw sewage are dumped into the Great Lakes each year.
  - In 2010 alone, 6.5 billion gallons were discharged into Lake Michigan from Chicagoland.
  - We need to set a federal date certain to ban sewage dumping in the Great Lakes, backed by steps to disinfect the Chicago River.
  - Senator Durbin and I introduced S. 147, The Great Lakes Water Protection Act, to set a date to ban all sewage dumping in the Great Lakes.
  
- 3) Mercury contamination receives an Incomplete.
  - Mercury can transform into a more toxic form, methylmercury, which bio accumulates in fish. When eaten, contaminated fish can cause nervous disorders, particularly in children.
  - Great Lakes states and Canadian provinces post mercury advisories for fish for inland water bodies but more data is needed to measure this threat in the Great Lakes.
  - The EPA should update its mercury tests annually, to report on the trend of mercury contamination in the lakes.
  
- 4) Our grade for water levels is a D.
  - Water levels have enormous effects on the lake's ecosystem, boating, navigation and fishing. Lake Michigan water levels declined since the 1990s.
  - Current water levels are about three feet below the level of 582 feet 25 years ago.
  - For every foot decline from the high, this section was downgraded a full letter grade.
  - Dredging to support boating and shipping is more expensive at lower water levels. Congress should respond by resolving any disputes holding up the Harbor Maintenance Act.
  
- 5) Our grade for cleaning up Superfund polluted sites is a B.
  - Polluted "Areas of Concern" surround the Great Lakes. For example, the US and Canada recognized Waukegan Harbor as such an area after Outboard Marine Corporation dumped PCBs in the harbor.
  - There are a total of 43 such polluted areas in the Great Lakes.
  - Cleanups began in 1990 and it seems now that the full restoration of Waukegan harbor is within reach.
  
- 6) Our last grade for invasive species is a C.
  - Keeping out invasive species, especially Asian carp, is imperative.

- Asian carp have not been found in the Great Lakes, but verified spawning populations are present about 150 miles away and eDNA results positive for Asian carp have been found above the barrier.
- Just last month three consecutive eDNA samples for carp were found in Lake Calumet, above the barrier, which was designed to keep the carp out.
- The Army Corps of Engineers should take every effort to up the voltage at the three electric dispersal barriers as a further deterrent for carp.

Based on all these considerations, our overall grade for the health of Lake Michigan is a C. There have been great strides in the last few years to enhance the restoration of natural habitat, reduce pollution and combat invasive species, but it is clear that we still have a long ways to go.

I will be working to advance the solutions above and I appreciate your help in protecting this Crown Jewel of the Midwest.

**SENATOR MARK KIRK'S LAKE MICHIGAN REPORT CARD**  
**Summer 2011**

**GOALS:** 1) Assess the health and status of Lake Michigan within the following categories: beach closures, sewage pollution, water levels, invasive species, and contamination remediation around the lakeshore. 2) Identify how local, state and federal leaders can restore and preserve Lake Michigan.

**BEACH WATER QUALITY**

➤ **Grade: D**

*Explanation:* The grade is based on number of beach closings; A = 0-100, B= 100-300, C= 300-500, D=500-700, F= 700+

	2006	2007	2008	2009	2010
<b>Beach Closures/ Contamination Advisories for Lake Michigan Beaches in Lake and Cook Counties</b>	577	807	537	628	579

Every year, thousands of beach closings are issued along the 815 freshwater beaches in the Great Lakes region. According to the Natural Resources Defense Council (NRDC), *Testing the Water 2011*, Illinois ranked 26<sup>th</sup> of 30 in state beach water quality based on percentages of samples exceeding the Environmental Protection Agency's (EPA) single-sample maximum. The single-sample standard for beach closures and advisory decisions in Illinois is 235 cfu/100 ml of *E. coli*. The NRDC report noted that 14 percent of the samples taken exceeded national water standards in 2010. In the report, the NRDC noted that Great Lakes beaches experienced 3,766 days of closings and advisories region-wide, a 14-percent increase from the 3,300 in 2009. This is a clear indicator that water pollution is on the rise.

There are 52 public beaches along Lake Michigan in Illinois. Over the last five years, annual totals for beach closings in Illinois continue above 500. According to the Illinois Department of Public Health, Illinois faced 628 beach closures or contamination advisories in 2009, up 17 percent from 2008. In 2010, 579 beach closures and advisories for beaches along Lake Michigan continue to be a health concern and impact cash-strapped budgets. A University of Chicago study showed swim bans at Chicago's beaches due to *E. coli* levels cost the local economy \$2.4 million in lost revenue every year. According to the Illinois Department of Public Health, the number of beach advisories and closings on the Lake Michigan shoreline in Illinois has remained above 500 a year over the last five years.

➤ **Action Item: Enact Beach Act**

This legislation would reauthorize the *Beaches Environmental Assessment and Coastal Health ("BEACH") Act*. The bill requires rapid testing methods to detect water contamination in four hours or less, faster notification and decision about closures and advisories within two hours and requires the EPA administrator to review grantees compliance with the BEACH act requirements.

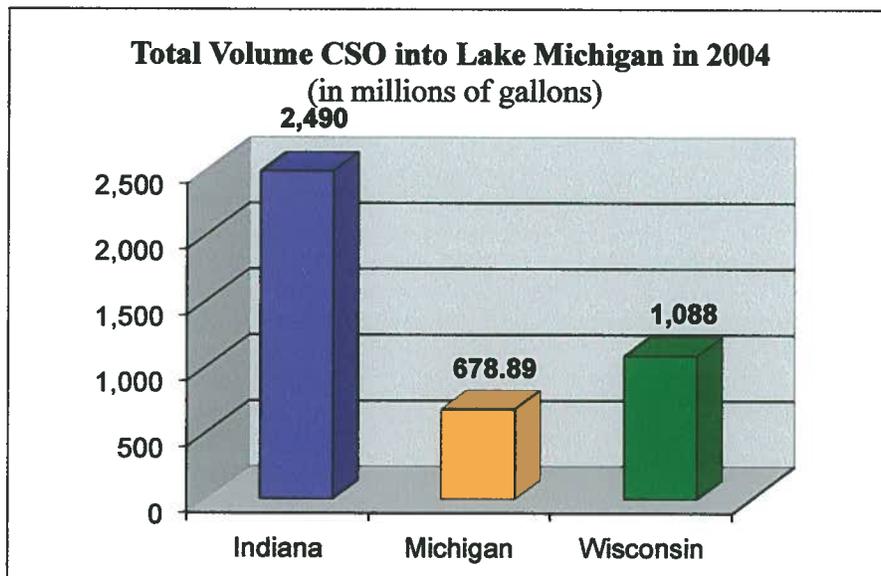
## **SEWAGE POLLUTION**

### ➤ **Grade: C**

*Explanation:* While sewage pollution has declined, millions of gallons of runoff and sewage overflow are dumped into Lake Michigan each year, devastating to the environment and causing beach closures.

The Great Lakes are the source of drinking water for 30 million Americans. Lake Michigan, the Crown Jewel of the Midwest, provides miles of beaches, habitat and water recreation to millions of Illinoisans.

Many cities along the Great Lakes do not have the necessary infrastructure to divert sewage overflows during times of heavy rainfall. More than 24 billion gallons of sewage are dumped in the lakes each year; Detroit alone dumps an estimated 13 billion gallons of sewage into the Great Lakes annually. Research conducted by the U.S. Environmental Protection Agency showed 30 communities contain a total of 347-combined sewer outflow (CSO) outfalls that discharge into the Lake Michigan basin. Eighteen of those communities are in Indiana, 11 are in Michigan, and one is in Wisconsin. According to data from the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), 6.5 billion gallons were discharged into Lake Michigan in 2010, and 107 million gallons were discharged into the lake from the Chicagoland area this year. Improving Chicago's storm water storage and treatment infrastructure is necessary to improve water quality in the area and mitigate direct public health implications of sewage pollution.



### ➤ **Action Item: Deadline to End Sewage Dumping in the Great Lakes, Disinfect the Chicago River**

Sewage dumping contributes to hundreds of beach closures along the Great Lakes each year. To fight back, Senator Richard Durbin (D-IL) and Senator Kirk introduced S. 147, *The Great Lakes Water Protection Act*, to give cities until 2031 to build the full infrastructure necessary to prevent sewage dumping into the Great Lakes. Violators of EPA sewage dumping regulations after 2031 will be subject to fines up to \$100,000 for each day a violation occurs. These fines will be directed to a newly established Great Lakes Clean-Up Fund within the Clean Water State Revolving Fund. Fines collected

would go into this fund and be reallocated to the states surrounding the Great Lakes for wastewater treatment, habitat protection, and wetland restoration.

As part of a local effort to improve water quality in the Chicago Area Waterway System (CAWS), it is time to clean up the Chicago River to ensure that it is safe for recreational activities such as boating and swimming. Chicago is the only major city that does not disinfect its wastewater. The EPA has called for an aggressive cleanup of the Chicago River and in June 2011, MWRDGC voted to disinfect the wastewater dumped into the Chicago River. Seventy percent of the water in the Chicago River is made up of sewage or “effluent” material. In the near-term, it is important to work with local and state officials to see that this is completed to reduce the threat to public health and the environment. The Chicago River supports over six million residents in the city and it is time to disinfect sewage effluent that is dumped into river that runs through the nation’s third largest city.

## **MERCURY CONTAMINATION**

### **➤ Grade: Incomplete**

*Explanation:* Gaps in our knowledge of mercury levels in the Great Lakes make it very difficult to accurately grade the status of mercury in Lake Michigan. There is currently not enough data collected on Lake Michigan to understand the levels of harmful mercury or methyl mercury within the water column.

Mercury (Hg) is an element that is found naturally in minerals, rocks, plants soil, water, and the air. As it enters the environment through soil and lakes, mercury can be converted to a more toxic form, called methyl mercury, by bacteria. Methylmercury (MeHg) is particularly concerning since large amounts of methyl mercury can accumulate in fish tissue.

Human exposure to methylmercury most directly occurs through consumptions of contaminated fish. Mercury is a neurotoxin that can cause permanent developmental effects in young children. Mercury can adversely affect the human nervous system, brain function, and cause birth defects. EPA estimates that more than 300,000 newborns in the U.S. are born with unsafe levels of mercury in their system every year.

Although mercury levels in Lake Michigan are poorly understood, direct effluent discharge from industrial facilities, runoff from urban areas and atmospheric deposition to surface water and the surrounding watershed are all likely pathways for mercury into the Great Lakes. Mercury and Polychlorinated Biphenyls (PCB's) are two of the most common contaminants in aquatic ecosystems.

Total mercury levels in sediment and fish will vary depending on the ecology of the areas and the ability of various organisms to sequester mercury from the environment. Inland lakes tend to have higher concentration for mercury than the Great Lakes. Lacking a consistent monitoring program, fish advisories of our inland lakes are a clear indicator that mercury levels are indeed a problem in the Great Lakes region. Currently all of the states and provinces on the Great Lakes Region have fish consumption advisories due to methylmercury contamination for inland lakes and their connecting waters. The Illinois Department of Public Health has issued a statewide methylmercury advisory for predator fish, including a variety of bass, walleye, pike, and catfish. Although, current fish advisories for mercury for the Great Lakes region are for inland water bodies, this should not discount the serious threat mercury poses to the environment and Lake Michigan.



Source: EPA National Fish and Wildlife Contamination Program, 2008

Data from a 2007 NOAA Report to Congress on Mercury Contamination in the Great Lakes illustrated that sediment mercury concentrations have declined since 1970s—a trend that was reconfirmed by the findings of Paul E. Drevnick, published in *Environmental Pollution* in May 2011. This study focuses on the historic and recent changes in mercury deposition in sediment core samples from the Great Lakes (Ontario, Michigan, and superior) and inland lakes and confirms that mercury levels in core sediments in Lake Michigan have declined in the last 30 years. Unfortunately, at the time of the NOAA report trends in mercury levels in biota for Lake Michigan were unidentifiable due to lack of data.

Analysis of mercury in core sediments and other aspects, such as surface water and fish tissue, are only pieces of greater understanding of the mercury fluxes in Lake Michigan water and the implications for human health. Currently, the Great Lakes Restoration Initiative is supporting mercury related projects throughout the Great Lakes Basin, including research that specifically targets mercury cycling and bioaccumulation in the Great Lakes. More data is greatly needed for a more comprehensive understanding of the cycling of mercury in the environment and the resulting accumulation in organisms.

➤ **Action Items:**

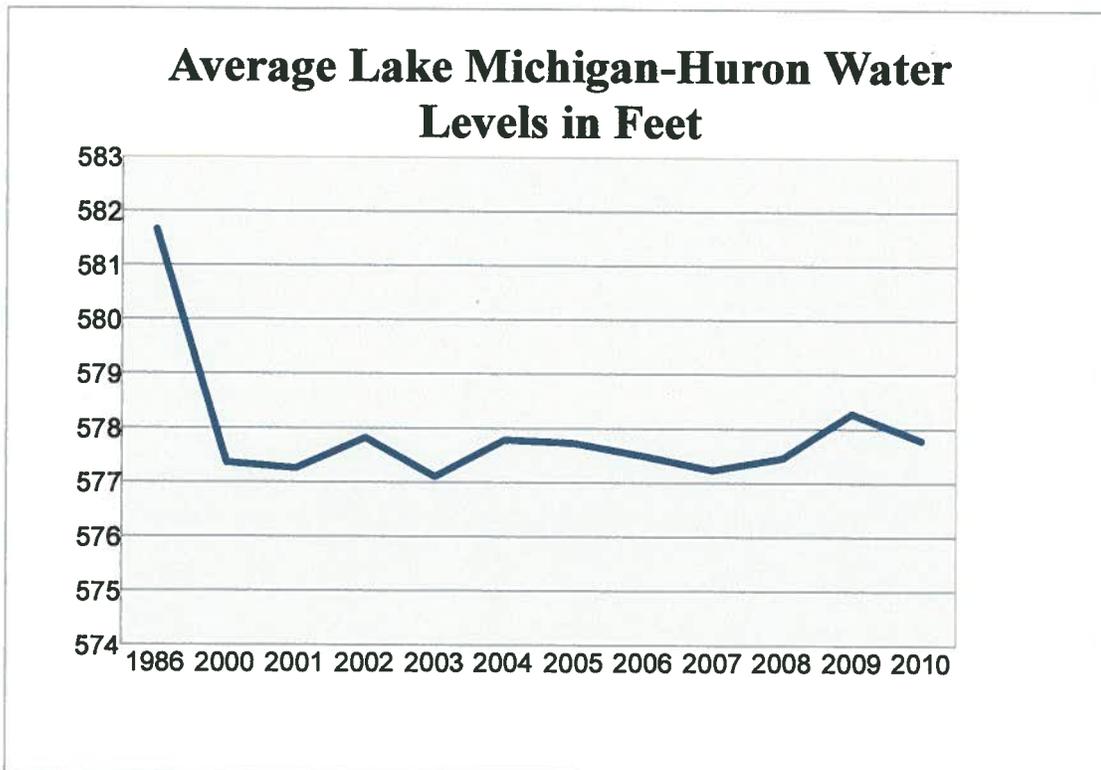
- 1) **EPA should review/update mercury monitors and tests**

The correlation between mercury cycling and the bioaccumulation in Lake Michigan organisms is poorly understood. The EPA must review and update its existing mercury monitoring protocols to achieve a better understanding of mercury levels in our water and should report to Congress the trend of mercury contamination in the lakes.

## LAKE MICHIGAN WATER LEVELS

➤ **Grade: D**

*Explanation:* This section uses the maximum historic water level recorded for Lake Michigan-Huron as the benchmark. For every foot water levels decrease from the maximum water level of 582 feet, a letter grade is deducted; A = 0-1ft, B= 1-2, C= 2-3, D= 3-4, F= 4+



Lake levels are an important factor in shoreline erosion and can affect the ability for shippers to navigate along the waterways smoothly and have negative implications on drinking-water intakes. Lake levels are naturally affected by precipitation, evaporation and runoff sources. Since the 1990s, water levels of Lake Michigan are on the decline.

According to the historic water level data from the Army Corps of Engineers, Lake Michigan-Huron water levels are below the long-term average by approximately  $\frac{1}{2}$  foot. Record high levels of 1986 were over three feet higher than the current average. Lake Michigan experienced the record maximums for water levels in 1986 at 582 ft. From data collected by the Army Corps, NOAA and the Canadian Hydrographic Service the daily water level average for Lake Michigan-Huron was 578.31ft as of August 1, 2011 - approximately a three-foot drop in lake levels in the last 25 years.

Low water levels affect recreational boating, commercial navigation, fishing, and aquatic ecosystems. While high water levels can cause severe erosions, low levels often effect commerce and require shippers to “light-load” their cargoes. According to NOAA’S Great Lakes Environmental Research Lab, carriers often carry five-to-eight percent less cargo and raw materials. The economic impacts of light loading are enormous. Some shippers estimate that every foot reduction in draft equates to a loss of \$250,000 to \$800,000 in cargo. Fluctuating water levels is only one natural physical process that affect the Great Lakes, but they have severe implications for our shorelines, ecosystems, and long-term decisions on water withdrawals for drinking water and agriculture.

➤ **Action Item:**

1) **Support the Great Lakes Compact**

The Great Lakes are a shared, international resource and it is important that all stakeholders are committed to their protection and will be stewards for future generations. In 2008, the Great Lakes –

St. Lawrence River Basin Water Resources Compact was formed to join the Great Lakes states and the federal government in a common pledge to protect the Great Lakes.

Withdrawals that occur in Ohio's Lake Erie basin not only impact Ohio, but also Indiana, Michigan, New York, Ontario, and Pennsylvania's waters. In this spirit the compact is an important commitment from the states with the common mission to regulate the water use of the Great lakes and reduce annual water diversions. While all the Great Lakes states have ratified the compact and a deadline of December 2013 was set to require all states to implement and register their water withdrawal and diversion plan. Moving forward, these plans of action will preserve the Great Lakes, which provide drinking water to over 30 million Americans.

## 2) Action Item: Enact *Harbor Maintenance Act of 2011*

While we cannot control the level of water in the Great Lakes directly, lake levels are vital information that greatly alters the environment and the shipping economy in the United States. The Senate is currently considering proposals that target specific concerns, such as dredging, which are exacerbated by sustained low water levels. Senator Carl Levin (D-MI) and Senator Kay Bailey Hutchison (R-TX) introduced, S. 412, the *Harbor Maintenance Act of 2011* to ensure funds in the harbor maintenance trust fund are used for intended purposes to address the maintenance dredging of our harbors. There is currently a balance of more than \$6 billion in the Harbor Maintenance Trust Fund (HMTF) that is not being used to address the backlog of maintenance dredging. This proposal would ensure that moving forward the annual funds deposited into the trust fund will be used for intended purposes and would help to address the current a dredging backlog of 18 million cubic yards in the Great Lakes.

## Cleanup of Superfund Polluted Sites

### **Grade: B**

*Explanation:* For over 25 years Waukegan Harbor has been recognized as an international area of concern along Lake Michigan. While the full remediation process has been arduous, plans for removing the contaminated sediment from the Harbor are in place. The full restoration of beneficial use of Waukegan Harbor and the ultimate delisting as an Area of Concern (AOC) is within reach.



Sediment contamination of toxic substances poses a serious threat to the water quality of the Great Lakes and its ecological habitat. There are a total of 43 AOCs along the Great Lakes both in the United States and Canada. There is one AOC identified and located along Lake Michigan at Waukegan Harbor in Lake County, Illinois. Remediation is the necessary next step to ensure that toxic substances are removed and the sediment is healthily restored for beneficial use.

The United States and Canada recognized Waukegan Harbor as an AOC within the Great Lakes region in 1981 after polychlorinated biphenyls (PCBs) were found in the harbor sediment in 1975. After further investigation of the area it was discovered that the PCBs were likely the result of the fluid used by the Outboard Marine Corporation (OMC) during its operation.

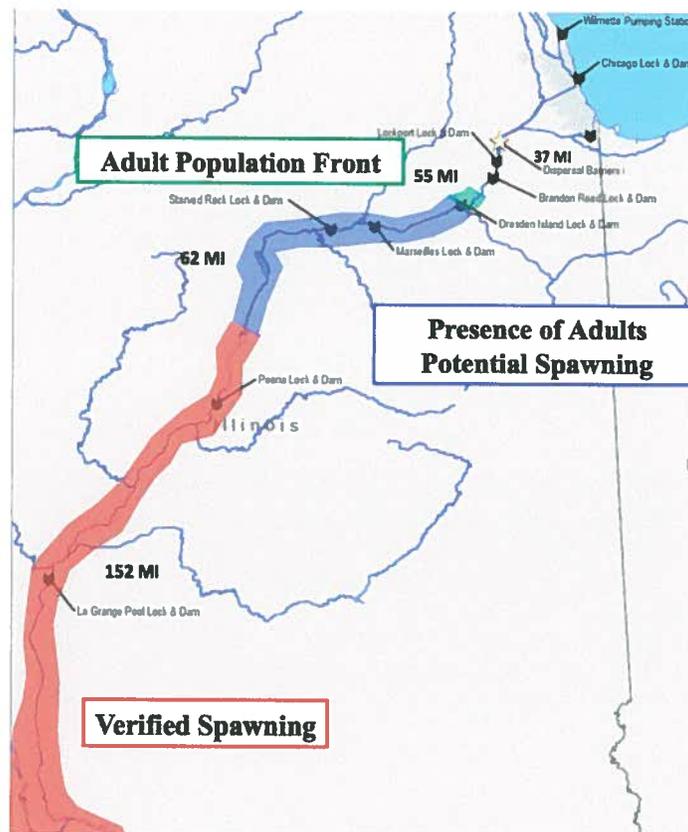
Remediation plans for Waukegan Harbor began in 1990. According to the EPA, approximately one million pounds of sediment with PCB was removed and placed in a confined disposal facility on site. Only sediment with 50 ppm PCB or greater was removed and residual contamination remained after the dredging. Over 30 years have passed since PCBs were discovered at Waukegan Harbor and the site is yet to be fully restored and delisted as an AOC in the Great Lakes. Through the coordination of the U.S. EPA, Illinois EPA, the Army Corps of Engineers, and the Waukegan Harbor Citizens Advisory Group (CAG) the final stages of the remediation plan are in place through the Superfund process. EPA is ready to move forward in the last phases of the cleanup of the harbor and store the waste close to the site in a fully contained and protected area.

- **Action Item: Work with local, state, and federal stakeholders to ensure the timely cleanup of Waukegan Harbor and the delisting of Waukegan Harbor as an Area of Concern on the Great Lakes**

## **INVASIVE SPECIES**

### **Grade for Lake Michigan: C**

*Explanation:* One of the greatest threats of invasive species to the Great Lakes is Asian carp. To date, Asian carp have not been found in Lake Michigan; however, populations of adult carp with potential for spawning are approximately 62 miles away from the Lake. The threat of invasive species has a long history in the Great Lakes. Sea lamprey and Zebra and Quagga mussels are examples of the havoc aquatic invasive species can have on an entire ecosystem. According to the Great Lakes Commission, sea lamprey caused the sharp decline in the harvest for lake trout from 5.5 million pounds to 402 pounds in Lake Michigan between 1946 and 1953. History shows us that we need to be more aggressive in protecting our Great Lakes fisheries from invasive species.



The Great Lakes region supports a \$7 billion fishing industry and hundreds of thousands of jobs. Keeping invasive species, including the destructive Asian carp, out of the Great Lakes is imperative to the health of the lakes and the jobs they support. According to the U.S. Fish and Wildlife Service (USFWS), more than 180 aquatic invasive species (AIS) are established in the Great Lakes. AIS have severe impacts on native aquatic ecosystems, as many degrade the livable environment of native species by consuming the native food supply. According to available information from the U.S. Geological Survey's (USGS) Nonindigenous Aquatic Species Database, 17 new aquatic species, including plants, viruses, crustaceans and algae have been collected and established in Lake Michigan since 2000.

Two of the greatest invasive species threat to the Great Lakes are several species of Asian carp - the silver and bighead carp - which are both swimming northward. Asian carp pose a serious threat to native populations of species because of their tremendous capability to consume plankton that other small species rely on as a major source of food.

According to the Great Lakes Fishery Commission, Asian carp can grow to be as much as 100 pounds and up to four feet long. Over the last two years, through the work of the Asian Carp Regional Coordinating Committee (ACRCC) and the Great Lakes Restoration Initiative (GLRI), we have seen great strides to address the threat of Asian carp and invasive species; however, we need to continue to evaluate our progress in mitigating the spread of invasive species.

To date, Asian carp have not been found in Lake Michigan; however, strong regional cooperation is necessary to halt the proliferation of Asian carp into the Great Lakes. Known populations of carp are growing below the Army Corp electric dispersal barriers, as demonstrated in the previous Figure. Three isolated discoveries of a single carp have occurred above the dispersal barriers, which are located 37 miles away from the Lake Michigan; however, it is unclear how these carp came to be above the barrier. The ACRCC developed the Asian Carp Control Strategy as a framework to halt the spread of Asian carp in the

Great Lakes, including the surveillance of environmental DNA (eDNA) to detect the indicators of DNA specific to Asian carp in the CAWS. eDNA sampling is a relatively new technology, beginning in 2009. While it may be a potential indicator for the presence of Asian carp, positive eDNA samples cannot conclude whether or not live Asian carp populations are present or even how Asian carp DNA came to be at the location.

As it is a relatively new methodology, further development of eDNA will provide greater context for eDNA results. The Figure below shows the annual results to date of positive eDNA sample for Asian carp along the CAWS. Already, as of July 2011, the Army Corps of Engineers has confirmed 13 eDNA samples tested positive for Asian carp. Without fully understanding what eDNA clearly exposes, it is clear that the dispersal barriers are withholding large spawning populations of Asian carp from traveling up the CAWS towards the Great Lakes.

	Total eDNA Samples Collected	Samples Positive for Asian Carp Above the Barriers
<b>2010</b>	1482	17
<b>2011</b> <i>To date</i>	898	13

➤ **Action Item: Increase voltage of electric barriers**

Keeping out invasive species, especially Asian carp, is imperative. Asian carp have not been found in the Great Lakes, but verified spawning populations are present about 150 miles away and eDNA results positive for Asian carp have been found above the barrier. Just last month three consecutive eDNA samples for carp were found in Lake Calumet, above the barrier, which was designed to keep the carp out.

The Army Corps of Engineers should take every effort to up the voltage at the three electric dispersal barriers as a further deterrent for carp.

**OVERALL HEALTH OF LAKE MICHIGAN**

➤ **Grade: C**

**PRELIMINARY SURVEY RESULTS**

**1,046 responses  
as of 10/17/2011**

Dear Winnetka Resident:

In light of the recent rain storm on Friday, July 22 and Saturday, July 23, 2011, the Village is conducting a Village-wide survey to get an accurate account of basement flood occurrences, and in particular, **sanitary sewer backups**. This information will be used to evaluate the existing sanitary sewer systems, as well as to plan for possible future sanitary sewer improvements.

Please take a few moments to fill out the attached survey and return it by Friday, September 23. The survey may also be returned via fax at 847-716-3599 or by email to [sanitarysewersurvey@winnetka.org](mailto:sanitarysewersurvey@winnetka.org) Residents may also access the survey on the Village website at [www.villageofwinnetka.org](http://www.villageofwinnetka.org). We thank you in advance for your help in this endeavor. If you have any questions, please contact the Public Works Department at 847-716-3568.

Steven M. Saunders, P.E.  
Director of Public Works/Village Engineer

1. Address \_\_\_\_\_, Winnetka, Illinois
2. How long have you lived at this address? \_\_\_\_\_ years
3. Was your home built before 1970? **192 NO 840 YES 9 DON'T KNOW**
4. Did you experience flooding in your house or basement or attached garage during the July 22-23, 2011 storm? **461 NO 580 YES**
5. If yes, please indicate the location(s) that water entered the building:  

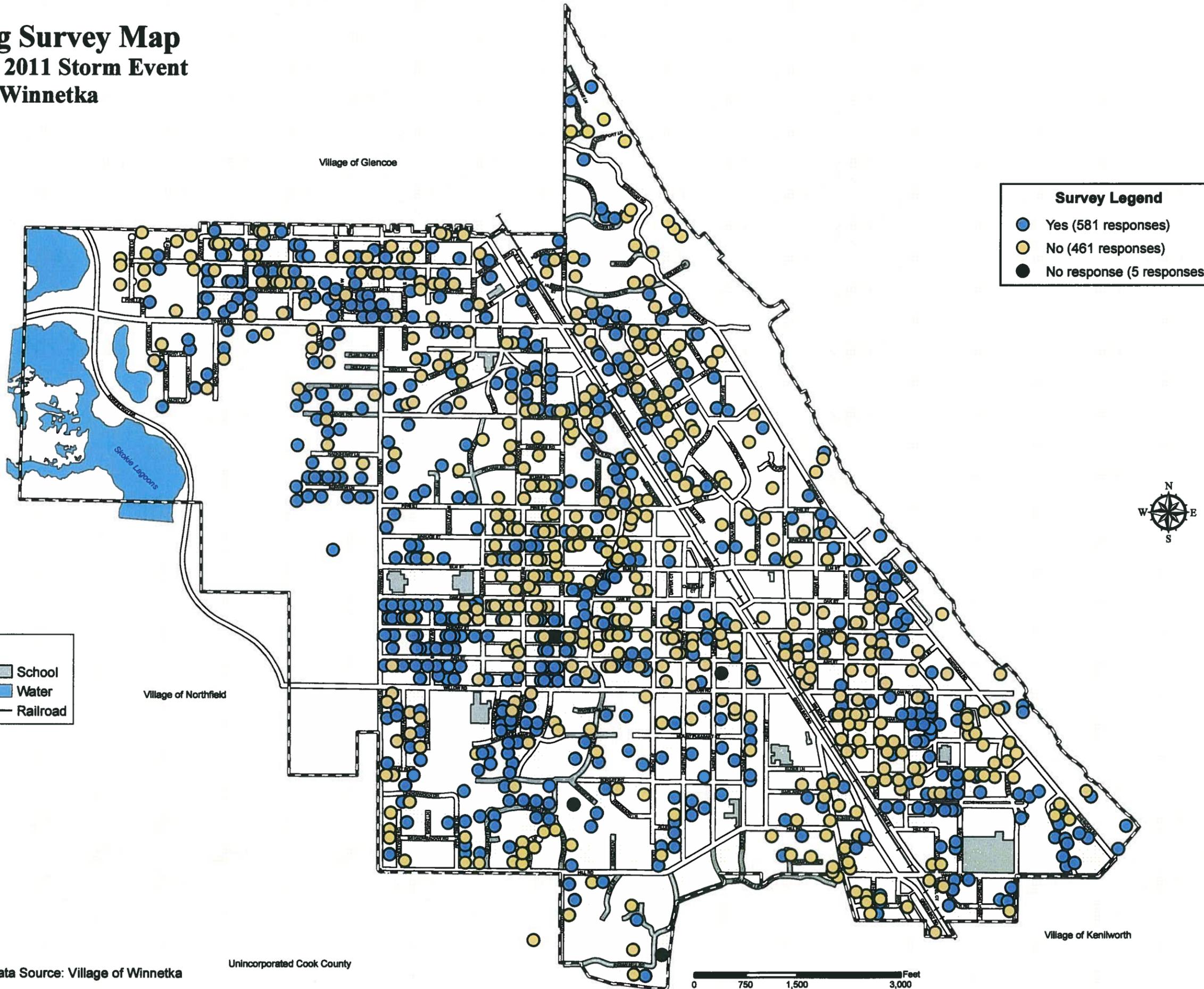
<b>274 Floor drain, laundry tub, shower or toilet</b>	<b>224 Wall floor seepage</b>
<b>175 Window well or doorway</b>	<b>72 Sump pump failure</b>
<b>24 Other _____</b>	<b>5 Not sure</b>
6. If water entered via floor drain, laundry tub, shower, or toilet, approximately what time did flooding commence? \_\_\_\_\_  
What time did flooding subside? \_\_\_\_\_
7. How much water did you get? (feet-inches) \_\_\_\_\_
8. If water entered via floor drain, laundry tub, shower, or toilet, approximately how many times in the last five years has this occurred? \_\_\_\_\_. Do you recall the approximate month/year of the occurrence(s)? \_\_\_\_\_
9. Does your building have any protection from sanitary sewer back-ups?  
**362 NO 133 YES 477 Not sure** **74 Blank**
10. If yes, indicate what type of protection and approximate date of installation:  
\_\_\_\_\_



# Flooding Survey Map

## July 23rd, 2011 Storm Event

### Village of Winnetka



**Survey Legend**

- Yes (581 responses)
- No (461 responses)
- No response (5 responses)

**Map Legend**

Village Boundary	School
Roads	Water
Private Roads	Railroad



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Data Source: Village of Winnetka

Unincorporated Cook County



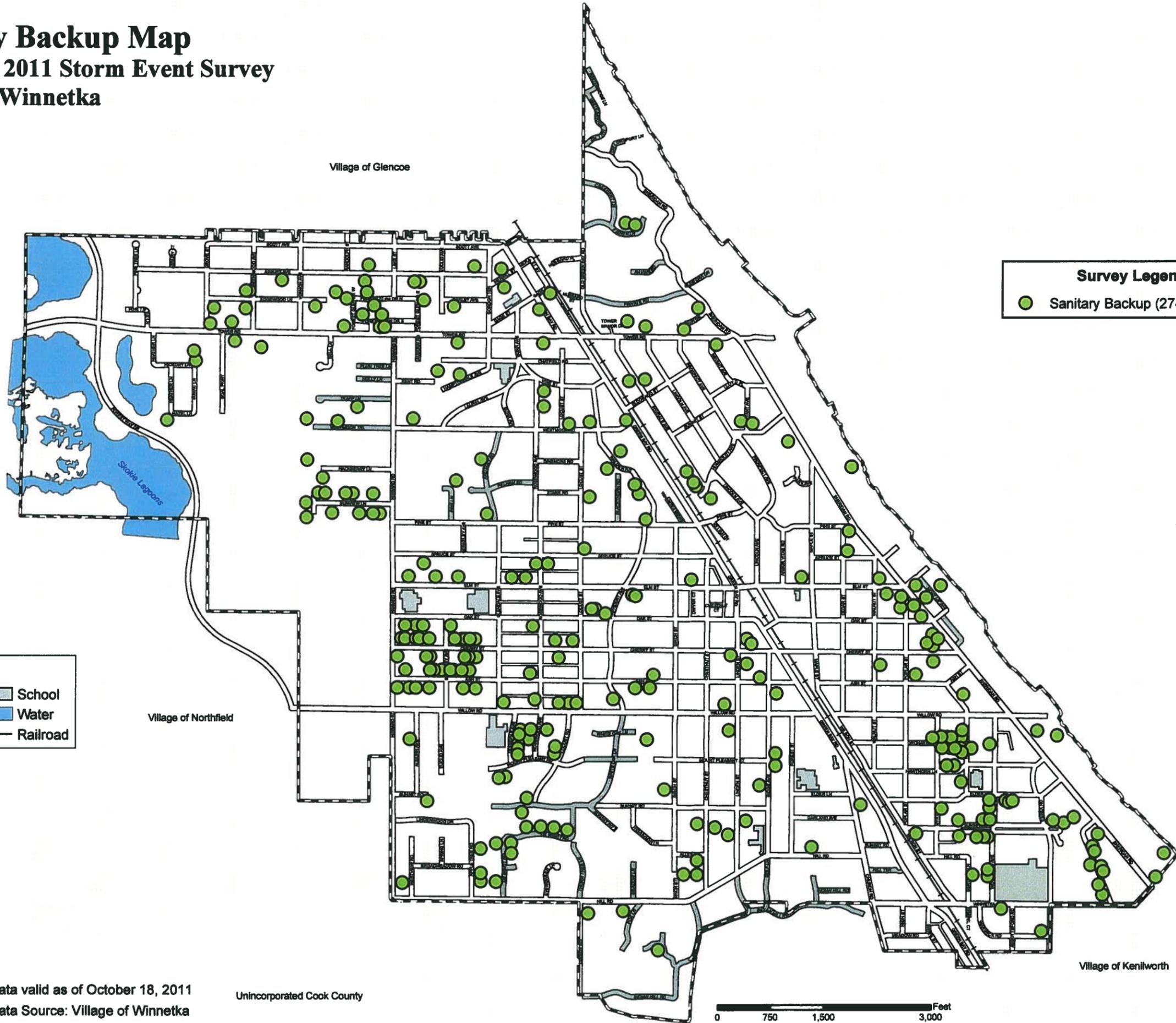
State Plane NAD 83 Illinois East  
October 18, 2011 EDV Flooding Survey



# Sanitary Backup Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



**Survey Legend**

- Sanitary Backup (274 responses)



**Map Legend**

Village Boundary	School
Roads	Water
Private Roads	Railroad



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Data valid as of October 18, 2011  
Data Source: Village of Winnetka

Unincorporated Cook County



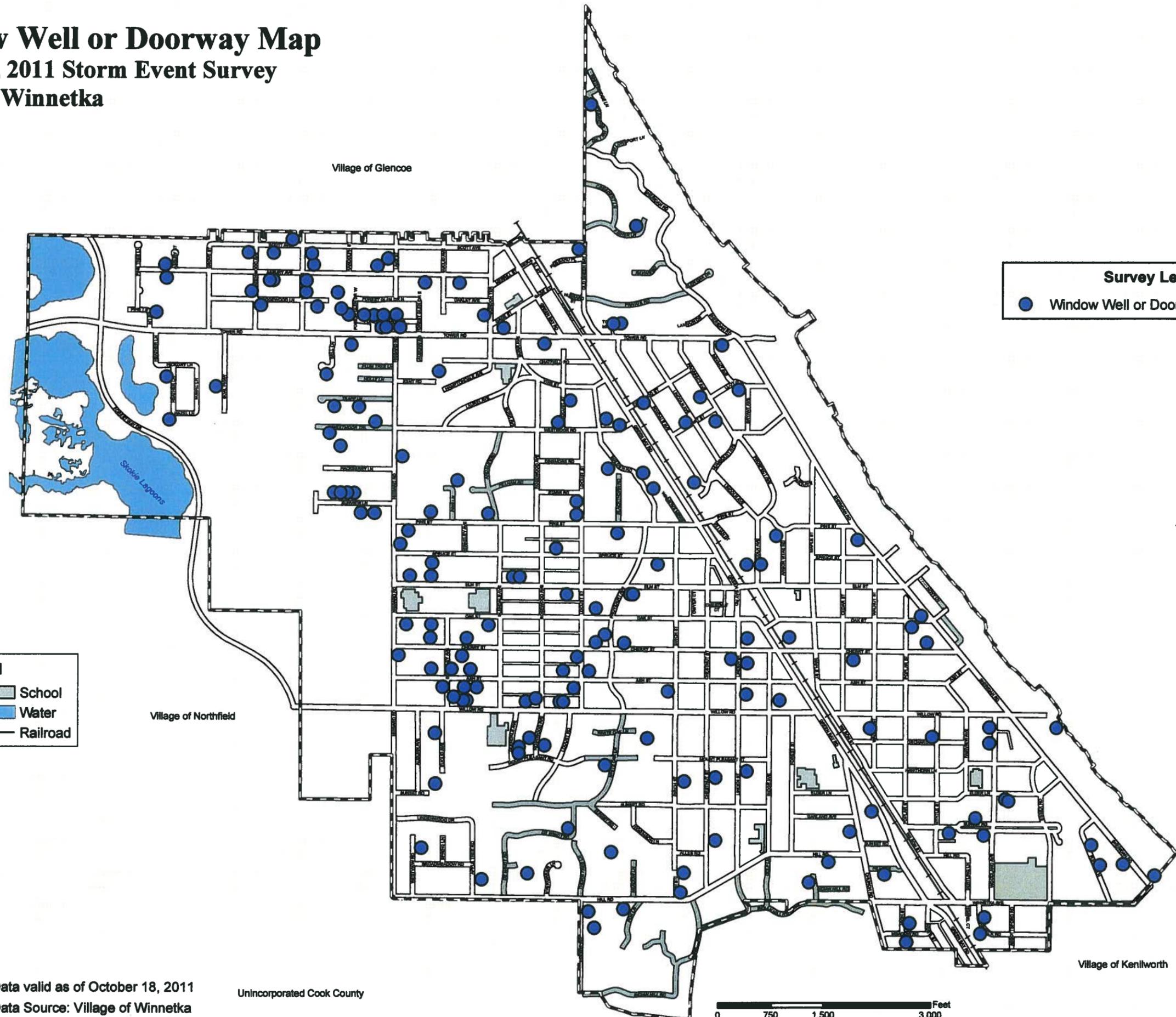
State Plane Nad 83 Illinois East  
October 18, 2011 EDV WaterEntryMap



# Window Well or Doorway Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



**Survey Legend**

- Window Well or Doorway (176 responses)



**Map Legend**

Village Boundary	School
Roads	Water
Private Roads	Railroad



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Data valid as of October 18, 2011  
Data Source: Village of Winnetka

Unincorporated Cook County



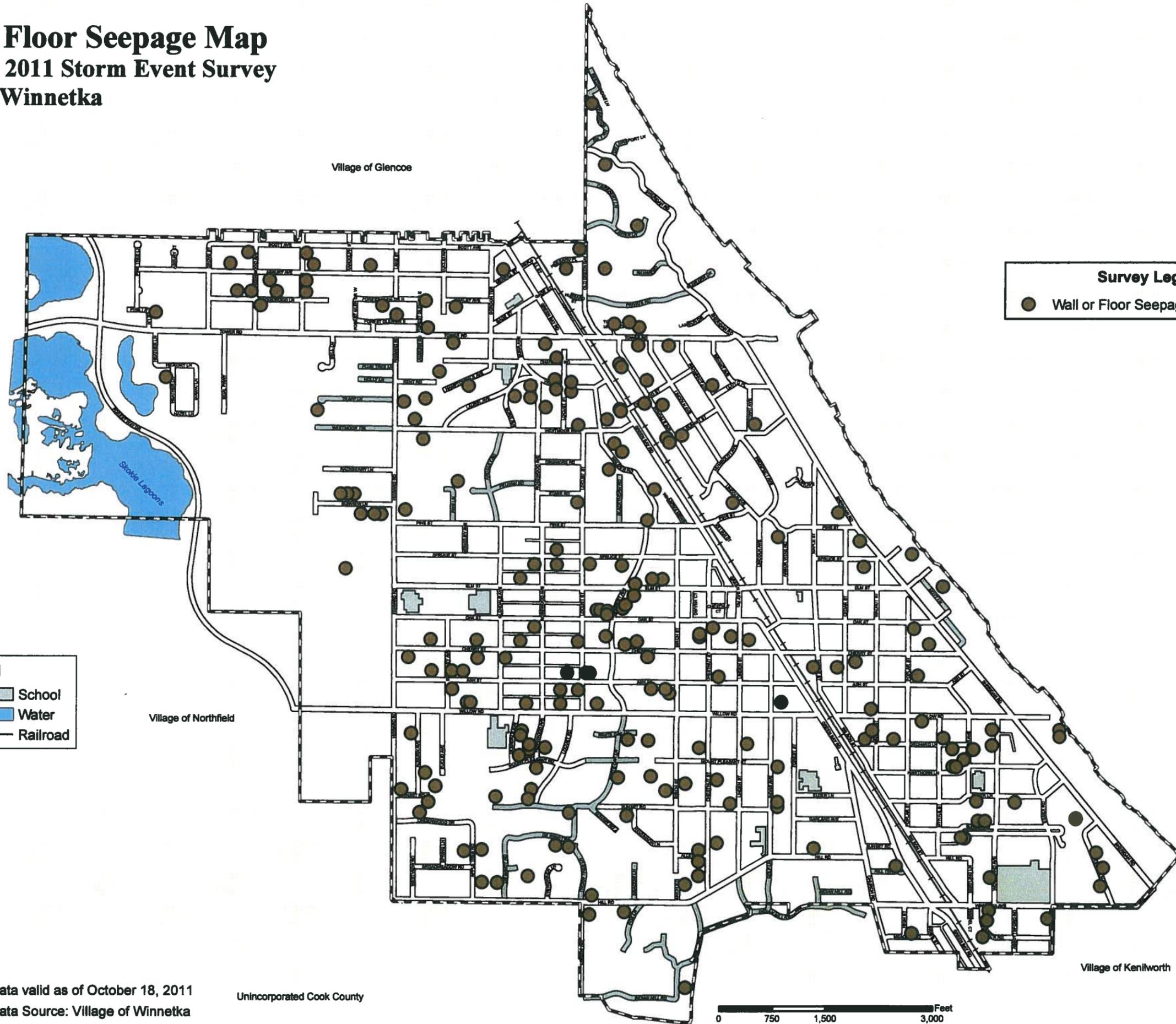
State Plane Nad 83 Illinois East  
October 18, 2011 EDV WaterEntryMap



# Wall or Floor Seepage Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



**Survey Legend**

- Wall or Floor Seepage (225 responses)



**Map Legend**

- Village Boundary
- Roads
- Private Roads
- School
- Water
- Railroad



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Unincorporated Cook County



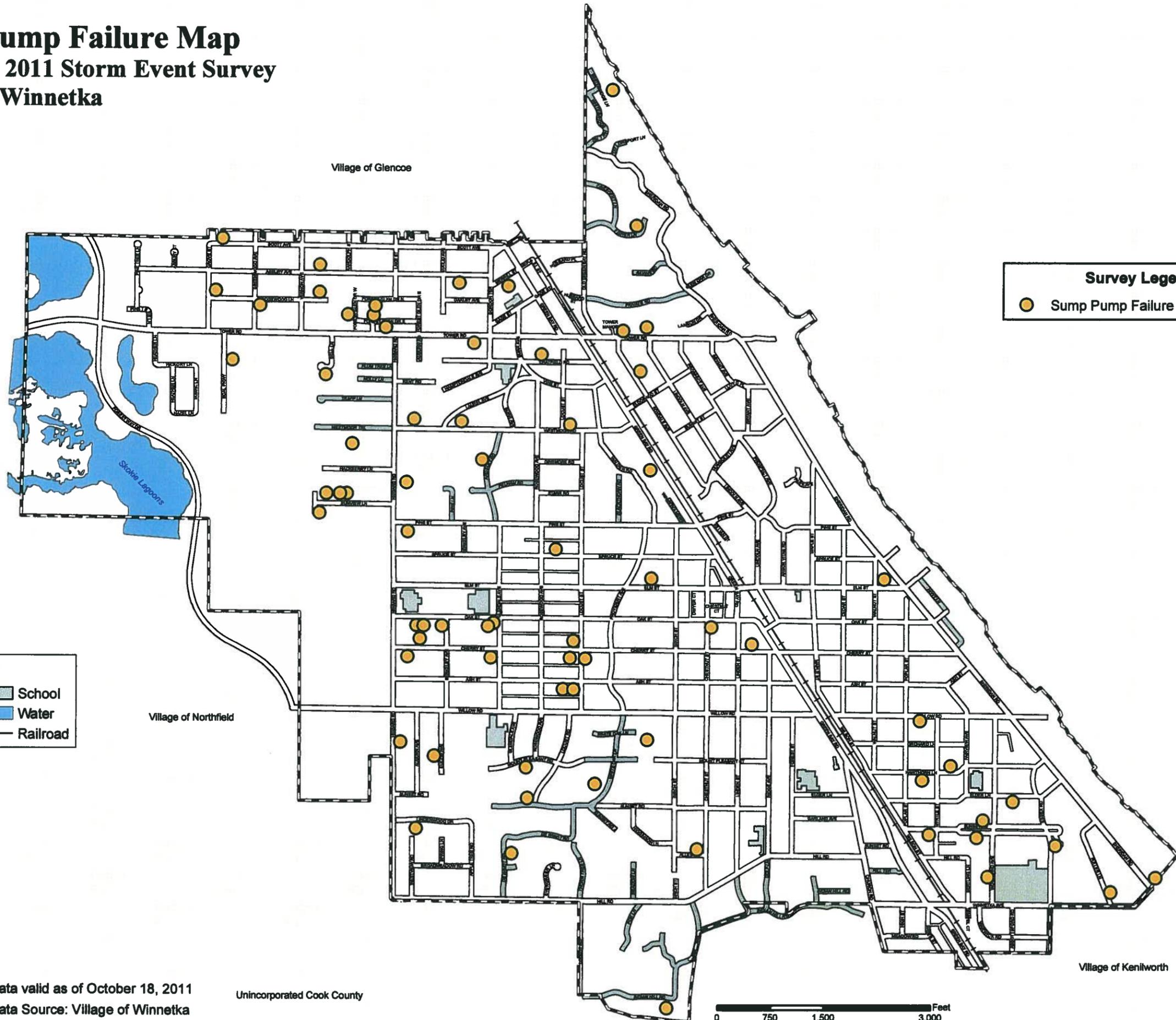
State Plane NAD 83 Illinois East  
October 18, 2011 EDV WaterEntryMap



# Sump Pump Failure Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



**Survey Legend**

- Sump Pump Failure (72 responses)

**Map Legend**

- Village Boundary
- Roads
- Private Roads
- School
- Water
- Railroad



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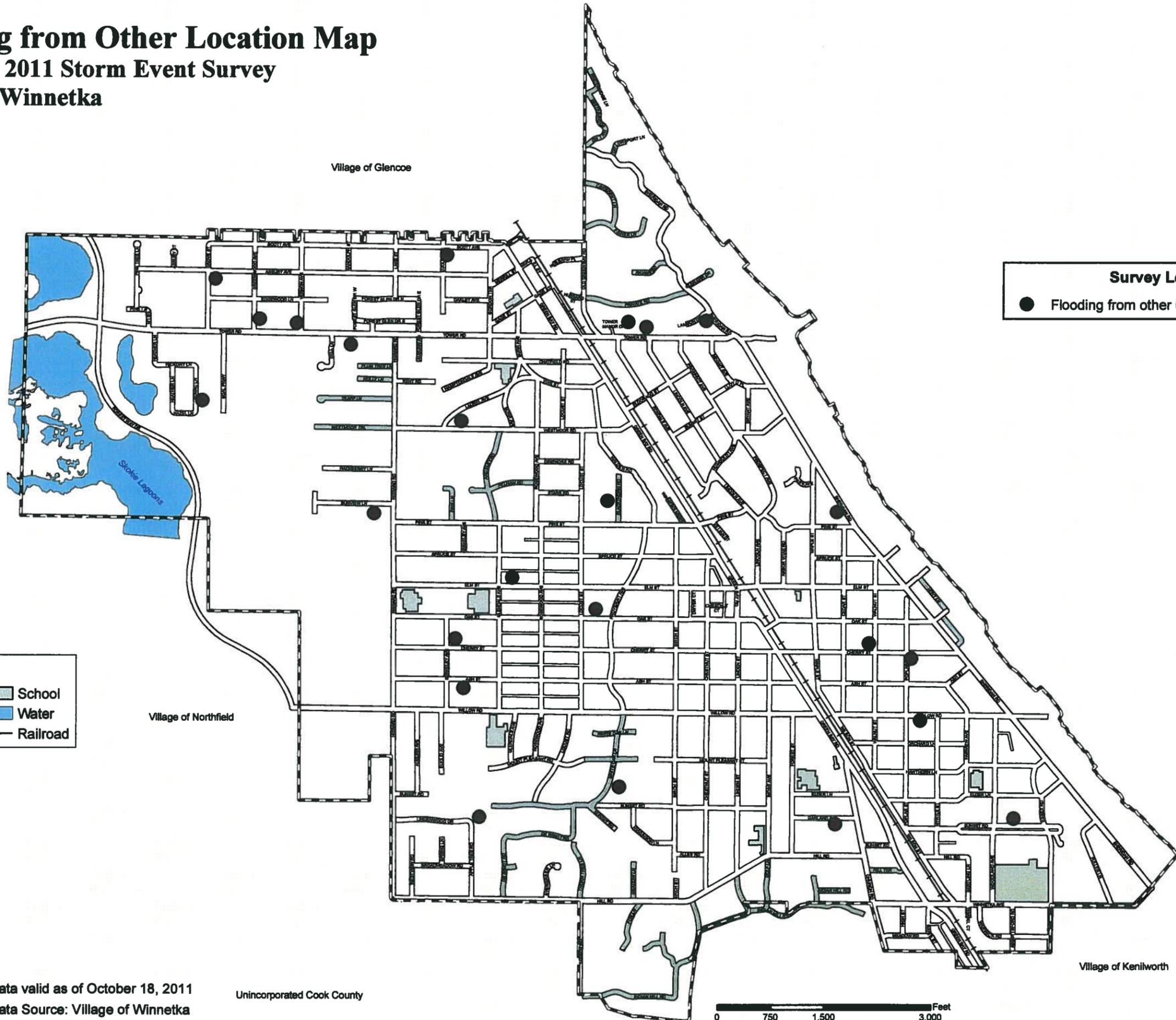
State Plane Nad 83 Illinois East  
October 18, 2011 EDV WaterEntryMap



# Flooding from Other Location Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



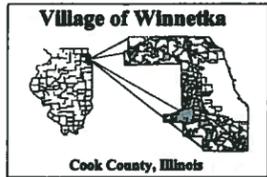
**Survey Legend**

- Flooding from other location (24 responses)



**Map Legend**

- Village Boundary
- Roads
- Private Roads
- School
- Water
- Railroad



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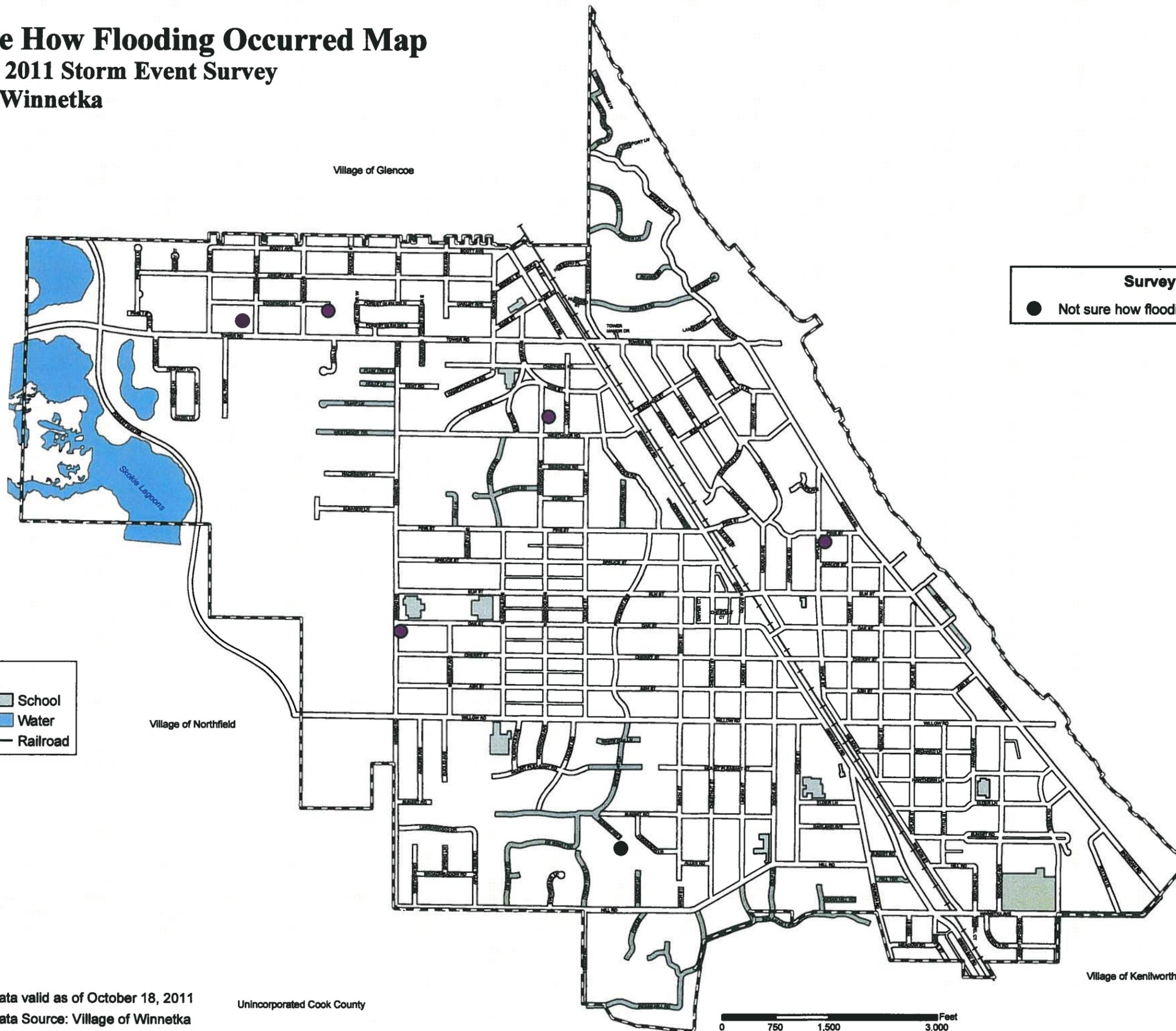
State Plane Nad 83 Illinois East  
October 18, 2011 EDV WaterEntryMap



# Not Sure How Flooding Occurred Map

## July 23rd, 2011 Storm Event Survey

### Village of Winnetka



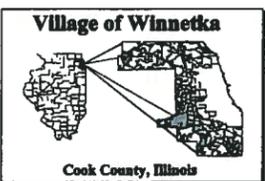
**Survey Legend**

- Not sure how flooding occurred (6 responses)



**Map Legend**

- Village Boundary
- Roads
- Private Roads
- School
- Water
- Railroad



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